



HAL
open science

Accounting for social utility : The creation of an SP&L (social profit and loss) approach for the fashion industry

Mathilde Asseman

► To cite this version:

Mathilde Asseman. Accounting for social utility : The creation of an SP&L (social profit and loss) approach for the fashion industry. Business administration. HESAM Université, 2023. English. NNT : 2023HESAC023 . tel-04306636

HAL Id: tel-04306636

<https://theses.hal.science/tel-04306636>

Submitted on 25 Nov 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

ÉCOLE DOCTORALE ABBÉ GRÉGOIRE
Laboratoire interdisciplinaire de recherches en sciences de l'action

THÈSE

présentée par : **Mathilde ASSEMAN**

soutenue le : **12 Octobre 2023**

pour obtenir le grade de : **Docteur d'HESAM Université**

préparée au : **Conservatoire national des arts et métiers**

Discipline : **Sciences de Gestion et du Management**

Accounting for social utility

**The creation of an SP&L (social profit and loss)
approach for the fashion industry**

THÈSE dirigée par :
Philippe DURANCE, professeur du CNAM

et co-encadrée par :
Andrée-Anne LEMIEUX , professeur à l'IFM

Mme Madina RIVAL, Professeur des Universités, LIRSA, CNAM
Mme Roberta COSTA ALFONSO, Professeur des Universités, ISAE Supméca
Mme Vanessa WARNIER, Professeur des Universités, IAE Lille
M. Rodolphe DURAND, Professeur des Universités, HEC
M. Philippe AGHION, Professeur au Collège de France

Présidente
Rapporteuse
Rapporteuse
Examinateur
Invité

**T
H
È
S
E**

Affidavit

Je soussigné / soussignée, Mathilde Asseman, déclare par la présente que le travail présenté dans ce manuscrit est mon propre travail, réalisé sous la direction scientifique de Philippe Durance et d'Andrée-Anne Lemieux, dans le respect des principes d'honnêteté, d'intégrité et de responsabilité inhérents à la mission de recherche. Les travaux de recherche et la rédaction de ce manuscrit ont été réalisés dans le respect de la charte nationale de déontologie des métiers de la recherche.

Ce travail n'a pas été précédemment soumis en France ou à l'étranger dans une version identique ou similaire à un organisme examinateur.

Fait à Paris, le 15.05.2023

Mathilde Asseman

Affidavit

I, undersigned, Mathilde Asseman, hereby declare that the work presented in this manuscript is my own work, carried out under the scientific direction of Philippe Durance and of Andrée-Anne Lemieux, in accordance with the principles of honesty, integrity and responsibility inherent to the research mission. The research work and the writing of this manuscript have been carried out in compliance with the French charter for Research Integrity.

This work has not been submitted previously either in France or abroad in the same or in a similar version to any other examination body.

Paris, 05/15/23

Mathilde Asseman

Acknowledgements

First and foremost I am extremely grateful to my supervisors, Prof. Durance and Dr. Lemieux, for their invaluable advice, continuous support, and patience during my PhD. Their immense knowledge and plentiful experience have encouraged me in all the time of my academic research and daily life. My gratitude extends to the Institut Français de la Mode and to the Conservatoire National des Arts et Métiers for providing me with the opportunity to undertake my studies at the LIRSA and within the Chair Sustainability IFM-Kering. Additionally, I would like to express gratitude to the Maison Chloé, and especially to Riccardo Bellini and Aude Vergne for their trust in my perspective and in my work, and for their continuous support throughout the research process. Their invaluable trust and collaboration over the past three years proved absolutely instrumental in shaping this document and research work. I would like to express my gratitude to my husband, Rodolphe, without whose encouragement and generosity it would have been impossible for me to complete my study. My appreciation also goes out to my family and friends for their support all through my studies.

Summary (French)

Contextualisation

Notre travail de recherche intervient à un moment de transformation au sein de l'industrie de la mode. Depuis les années 1970, l'industrie de la mode est marquée par des phénomènes tels que la fragmentation de la chaîne d'approvisionnement, fragmentation notamment corrélée aux choix de délocalisation. Cette fragmentation de la chaîne d'approvisionnement a provoqué à la fois une perte de visibilité et une perte de contrôle sur des données opérationnelles cruciales concernant les parcs fournisseurs, données cependant nécessaires à une gestion opérationnelle efficace. Cette perte de contrôle et de visibilité s'avère complexe à naviguer pour les entreprises de la mode à une époque où l'accent est placé sur la communication et le reporting autour des pratiques sociales et environnementales de celles-ci.

En interne, les entreprises souhaitent d'une part accroître leur visibilité et leur contrôle des risques inhérents à la production, et d'autre part davantage maîtriser l'efficacité de l'allocation des leurs ressources. En externe, les entreprises visent à rendre compte de leurs pratiques, et à communiquer autour de leurs produits avec véracité.

Une sélection d'entreprises de mode a en outre choisi de prendre des mesures progressives pour devenir des *benefit corporations*, étendant leur objet social et visant à faire de la soutenabilité un élément central de leurs modèles commerciaux. L'accès, le contrôle, la traduction des informations sociales et environnementales dans un langage lié à la performance et à la création de valeur deviennent de fait des enjeux majeurs pour l'intégration stratégique des facteurs sociaux et environnementaux dans les formats de prise de décision et de modèles commerciaux. Cependant, au sein de l'industrie de la mode, le manque de méthodologies et d'outils de gestion

permettant l'accès, l'évaluation et la gestion des pratiques sociales et environnementales crée un obstacle à une gestion efficace des pratiques sociales et environnementales et à une intégration stratégique complète.

Démarche de recherche-intervention autour de la création d'un SP&L pour et chez Chloé

Nous avons déployé une démarche de recherche-intervention en collaboration avec la marque Chloé, marque certifiée B Corp en 2021, devenue société à mission en 2023, et qui œuvre à une intégration complète et stratégique des facteurs sociaux et environnementaux au sein de son business model et de ses opérations. L'objectif était de développer un outil de gestion d'entreprise et de données pour, d'une part accéder et évaluer les pratiques sociales positives au sein de la chaîne de valeur des entreprises, d'autre part, traduire les pratiques sociales en termes de performance, et troisièmement, de reconnecter la performance sociale à la création de valeur.

Choix de rédaction en anglais

Ce document a été rédigé en anglais en alignement avec la pratique étendue, dans l'industrie du luxe, de proposer des formats opérationnels et stratégiques systématiquement rédigés en anglais. L'anglais est également une langue majoritairement mobilisée par notre partenaire industriel dans ses formats de communication, reporting et gestion, internes et externes. Ce choix de rédaction nous a en outre permis d'interroger des termes et concepts clés en gestion (*accountability*, *accounting* par exemple en dialogue avec la responsabilité des entreprises) en prenant en compte leurs définitions en français et en anglais, et ainsi enrichir nos analyses.

Problématisation et hypothèses

Dans ce document, nous abordons les logiques historiques, les facteurs contextuels de la création d'une approche SP&L (social profit and loss) pour l'industrie de la mode, ainsi que les

principales opportunités et limites de son déploiement. Les résultats des travaux de recherche initiés en collaboration avec Chloé sont l'open source et le déploiement du SP&L en mars 2023, ainsi que les travaux de recherche contextualisant l'approche de manière critique.

En partant de la mission initiale portée par Chloé, et en tenant compte des spécificités des entreprises de bénéfices et des chaînes de valeur de l'industrie de la mode, nous analysons dans quelle mesure les outils de gestion d'entreprise et les outils de visualisation de données pourraient permettre aux entreprises de relier impact, performance et création de valeur. En analysant les caractéristiques intrinsèques du SP&L, nous analysons les rôles joués par l'accès (ou la mesure), la traduction (ou l'évaluation) et le levier de gestion (ou la visualisation), pour favoriser l'efficacité, l'optimisation et la création de valeur lors de l'allocation de ses ressources par une entreprise.

L'approche SP&L en elle-même est une approche basée sur l'obtention et la gestion de données, une approche comptable ainsi qu'une approche orientée vers l'utilité de la prise de décision. Créer afin de concilier utilité et valeur pour des facteurs traditionnellement extra-financiers, le SP&L est essentiellement conçu afin de devenir un outil de gestion des affaires et des données visant à faciliter la prise de décision au sein des organisations de mode. L'idéation, le développement et la mise en œuvre d'un SP&L pour l'industrie de la mode nous ont amenés à observer, analyser et articuler à la fois les facteurs contextuels de l'outil, et à anticiper à la fois ses capacités et ses limites en tant qu'outil de gestion d'entreprise.

Dans le cadre de nos travaux de recherche, nous abordons ainsi comment un outil de gestion d'entreprise et de visualisation de données peut être développé et mis en œuvre pour fournir des moyens supplémentaires d'accès, de traduction et de gestion des données et des ressources, en particulier lorsqu'il s'agit des pratiques sociales positives au sein de l'industrie de la mode - et plus particulièrement au sein d'une entreprise avec un objet social étendu, et un modèle économique fondés sur ces pratiques sociales positives. Nous explorons comment les outils de

gestion d'entreprise représentent un mécanisme essentiel pour le double processus d'*accounting* et d'*accountability*, de responsabilité et de contrôle essentiel à l'opérationnalisation de la RSE, et à son intégration stratégique au sein des entreprises. Nous explorons également les manières dont les outils de visualisation de données peuvent représenter un levier utile pour la prise de décision, via la création d'une forme de dynamique visuelle créant une conversation entre facteurs de performances. Ces facteurs de performance incluent les facteurs sociaux et environnementaux, souvent uniquement considérés dans des formats fondés sur une logique de «compromis» (trade-off).

Cadre d'analyse

Notre cadre d'analyse est donc double. En premier lieu, en raison de la nature du travail de recherche (développement d'une méthodologie pouvant être déployée comme outil de gestion d'entreprise), nous avons mobilisé la littérature sur la sociologie et la généalogie des outils de gestion pour guider le processus de développement et de déploiement de SP&L. Nous avons en outre mobilisé la littérature récente sur le big data, en nous concentrant sur l'opérabilité des systèmes et le traitement du big data, afin de prendre du recul, d'analyser et d'anticiper l'intégration de nouvelles informations dans les systèmes de données et les formats décisionnels existants. Dans un deuxième temps, nous avons analysé les cadres et facteurs historiques, contextuels et conceptuels qui ont façonné le développement de l'outil de gestion d'entreprise. Nous avons ainsi articulé utilitarisme, intégration stratégique RSE, paradoxes organisationnels et intégration de la théorie des parties prenantes dans les modèles et processus d'affaires afin de mieux appréhender les structures qui ont joué un rôle déterminant dans la création du SP&L et dans sa mise en œuvre.

Contributions

Tout au long de nos travaux de recherche, nous avons cherché à fournir de nouvelles perspectives potentielles sur les cadres conceptuels des outils émergents de gestion des données sociales. Nous avons donc analysé l'idéation et le développement de l'outil à travers plusieurs prismes : philosophiques, organisationnelles, économiques, sociologiques, généalogiques et de big data. Pour chaque élément analysé dans ce document, nous avons systématiquement cherché à fournir soit une approche systémique, soit une approche conversationnelle, qu'il s'agisse de comprendre le contexte de développement de nouvelles approches de comptabilité intégrative et de gestion des impacts, ou qu'il s'agisse d'analyser les outils et les approches en elles-mêmes. Nous avons ainsi cherché à fournir trois types de contributions : (1) de nouvelles propositions de cadres conceptuels pour les organisations cherchant à intégrer stratégiquement la RSE, (2) de nouvelles propositions de cadres de données opérationnelles pour les organisations mettant en œuvre des outils de gestion des données sociales, et (3) la méthodologie et les cadres de déploiement pour un SP&L, en tant que méthodologie et tant qu'outil de gestion des données sociales, développé et implémenté au sein de l'industrie de la mode.

- Cadre conceptuel sur l'utilité de l'allocation des ressources

En termes de cadres conceptuels pour les outils émergents de gestion des données sociales, nous proposons d'abord qu'héritant de l'utilitarisme, les organisations de manière croissante à agir en tant qu'agents moraux, en créant un suivi des effets des choix opérationnels sur les parties prenantes, en maximisant les résultats positifs comme facteur d'efficacité de la prise de décision et en utilisant une comptabilité de la performance afin d'évaluer les résultats sociaux.

Nous mettons l'accent sur l'héritage utilitariste de la responsabilité des entreprises, la théorie des parties prenantes, la RSE stratégique et la comptabilité intégrée. Nous émettons l'hypothèse

que les « arbitrages » actuellement perçus entre financier et extra-financier résultent en partie de la transposition d'une approche de comptabilité « d'utilité », imaginée pour rationaliser les formes de gouvernement public, aux stratégies d'allocation des ressources des entreprises.

- Cadre conceptuel autour des perspectives critiques de la comptabilité intégrée, et des évolutions des formats de comptabilité

Nous proposons une *overview* des perspectives critiques sur la comptabilité et analysons les réinterprétations actuelles des formats P&L (EP&L, SP&L). Nous proposons d'abord qu'en dépit de leur standardisation apparente, les formats P&L peuvent être interprétables et interprétés, avec une certaine plasticité. Nous proposons également que l'élément central des formats de comptabilité se situe dans une allocation efficace des ressources, pourrait et devrait évoluer si les notions de performance et d'efficacité intègrent des notions liées à l'impact social et environnemental, ainsi qu'une série étendue de parties prenantes. Pour les entreprises souhaitant transformer leur business model et/ou étendre leur objet social nous proposons une double prise en compte de la gestion des coûts par activité incluant des facteurs de performance sociaux et environnementaux, afin d'optimiser l'allocation des ressources en créant de la valeur pour un périmètre étendu de partie-prenantes tout en réduisant les effets nocifs sur l'environnement.

- Cadre conceptuel autour de l'intégration des parties prenantes et du partage de valeur dans la gestion des opérations afin d'accélérer l'intégration stratégique de la RSE

Nous proposons un panorama thématique de la RSE stratégique, mettant en évidence les leviers et les traductions opérationnelles des démarches RSE (défensives, promotionnelles, stratégiques). Nous proposons en outre des critères opérationnels pour l'intégration stratégique

de la RSE. Nous précisons ainsi le rôle de la comptabilité et de la gestion des données opérationnelles étendues dans le cadre de l'intégration stratégique de la RSE.

Nous mobilisons une approche des parties prenantes pour préciser et élargir les critères de la RSE stratégique à travers trois hypothèses : (a) dépendance fondamentale et niveau d'influence directe sur les parties prenantes par le biais des activités commerciales principales, (b) initiative et volonté, coût et valeur, grâce aux enseignements tirés de la RSE et la théorie des jeux ajustée les via l'inclusion parties prenantes, (c) quatre leviers de distribution et de redistribution de la valeur.

Nous fournissons une étude de cas concernant les leviers pour distribuer et potentiellement redistribuer la valeur, étude qui nous a permis de mieux comprendre les intersections entre l'interaction des parties prenantes et la distribution de la valeur en tant qu'outil pratique pour intégrer stratégiquement la RSE dans la prise de décision. Nous émettons en outre l'hypothèse que le contrôle de la valeur et la (re)distribution ou (ré)allocation de la valeur pourraient aider les décideurs à ne pas penser la RSE en termes d'externalités ou dans un format de « compromis », mais comme une partie intrinsèque des activités, des opérations et valeur pour gérer efficacement.

- Modèle opérationnel de gestion des données et d'allocation des ressources

En analysant les réalités spécifiques de l'industrie, nous identifions la redéfinition des modèles d'affaires (objets sociaux étendus) et la volonté de reprendre le contrôle des chaînes de valeur comme moteurs principaux du développement de méthodologies de comptabilité intégrée. En analysant les priorités communiquées dans les rapports de développement durable publiés par les groupes de luxe européens, nous constatons en outre que l'éco-conception, la traçabilité et la circularité sont identifiées comme des priorités stratégiques, rendant l'accès, le contrôle, la rationalisation et l'optimisation essentiels à la prise de décision stratégique et opérationnelle.

Nous suggérons donc de définir un modèle économique de contrôle total, que nous définissons comme un modèle économique fonctionnant efficacement à partir d'une visibilité totale sur l'activité et d'une allocation efficace et inclusive des ressources.

Nous proposons en outre prioriser l'efficacité inclusive de la répartition des coûts, à la traduction des résultats en valeurs financières. Nous proposons que des facteurs centraux tels que l'interopérabilité des systèmes de gestion des données et l'utilisation centrale des formats d'allocation des ressources puissent faciliter l'intégration opérationnelle de la RSE et des externalités et accroître l'acceptabilité de la RSE. Nous proposons une double gamme d'analyse de l'utilité décisionnelle: un spectre risque-valeur (gestion des risques, optimisation et création de valeur), et une intégration et couverture opérationnelles, afin d'assurer que la prise de décision couvre à la fois l'intégration opérationnelle de la RSE et son spectre complet.

En nous concentrant sur le SP&L en tant qu'outil de gestion d'entreprise et de données, nous proposons de créer un pont entre une approche sociologique des outils de gestion d'entreprise, une approche généalogique des outils de gestion d'entreprise et une approche de recherche liée aux mégadonnées des outils de gestion d'entreprise.

En mobilisant cette triple approche et perspective, nous analysons les parcours et les systèmes de traitement des données sociales, caractérisons les processus de données et les exigences de crédibilité, et soulignons le défi des systèmes de données pour fournir une forme de cohérence, ou d'immuabilité des résultats, sur laquelle la prise de décision pourrait être basée.

Nous fournissons une analyse des fonctionnalités de visualisation de données utilisées pour faciliter et soutenir la prise de décision. Nous proposons d'inclure une approche partenariale dans la visualisation des données. En nous appuyant sur la proposition de Kaufman (2019) comparant la *business intelligence* à un système cognitif socio-technique apportant de la valeur, nous proposons d'inclure un mécanisme de contrôle des coûts, et par catégories de partie-prenantes.

Sur le fondement de ce cadre théorique, nous recommandons de situer systématiquement l'analyse de la création de valeur, et de prendre en considération (1) le déséquilibre de pouvoir dans l'allocation des coûts et la gestion de la technologie, ainsi que la corrélation entre le coût et le contrôle narratif, et (2) les parties prenantes au sein des coûts-bénéfice d'analyse, tout en évaluant le potentiel de valeur des outils de gestion de données.

Nous proposons ainsi qu'un élément clé manquant dans les systèmes actuels de gestion des données est l'intégration de l'analyse des parties prenantes, et que le manque d'intégration des parties prenantes dans le système de gestion des données marginalise leur prise en compte dans la prise de décision et les cadres stratégiques associés.

Nous émettons ainsi l'hypothèse que ce manque d'intégration des parties prenantes, et de la distribution de valeur par partie prenante, conduit à une prise de décision inefficace, directement et dans un temps plus long, car la performance et l'efficacité sont uniquement associées à la création de valeur pour les actionnaires et, en partie, les clients.

Ainsi, afin d'intégrer stratégiquement la RSE, nous proposons d'intégrer (1) une approche partenariale à la collecte de données d'activité (une collecte de données adaptée par partie prenante), et (2) d'anticiper la collecte de données sociales et environnementales liées à l'activité. Une intégration plus poussée des parties prenantes dans les cadres et processus de gestion des données ne résout cependant pas la double question du contrôle : (1) d'abord qui détient le contrôle des données, et (2) qui, ou quelle partie prenante, bénéficie éventuellement de la gestion du contrôle.

Nous proposons de fait de mettre l'accent sur l'inclusion de l'analyse des coûts, en intégrant de nouveaux critères de performance incluant un éventail complet d'acteurs, afin de quantifier l'utilité et l'efficacité de l'allocation des ressources de manière inclusive. Nous pensons que cet aspect est souvent négligé dans les stratégies de système de gestion des données, ce qui conduit à une manière sous-efficace de collecter, d'analyser et de mobiliser les données sociales et

environnementales dans les processus décisionnels. Nous soulignons ainsi l'importance de lier un modèle de contrôle à une focalisation sur les coûts inclusifs afin de maximiser l'efficacité de la prise de décision de manière inclusive, et d'offrir une « visibilité complète des coûts », afin de trouver une alternative nécessaire aux externalités, triple bottom lines et proposition de modèle de contrôle systémique de compromis, y compris la portée des parties prenantes et la visibilité totale des coûts.

- Le développement d'une approche SP&L pour l'industrie de la mode et du luxe

Enfin, nous fournissons la méthodologie complète et les formats de déploiement du SP&L développé en collaboration avec la marque de mode Chloé. D'un point de vue méthodologique, le SP&L présente plusieurs facteurs innovants: il couvre à la fois les risques et les facteurs de performance potentiellement positifs (va au-delà des facteurs de risque et des facteurs de conformité), couvre les chaînes de valeur des entreprises, permettant ainsi une analyse multi-niveau facilitant la prise de décision : analyse par organisation, fournisseur, collection, produit et matériel. Il se concentre sur l'intégration systématique des facteurs sociaux à l'analyse de l'allocation des ressources et au contrôle des coûts afin de mieux intégrer stratégiquement l'impact social dans les modèles commerciaux et la prise de décision.

Nous proposons dans ce document, en dernier lieu, une analyse critique de la SP&L du point de vue des paradoxes organisationnels, généalogique, sociologique et du contrôle des données pour mettre en évidence les limites et les apports futurs possibles aux approches comptables intégrées.

En développant, en intégrant et proposant en open source une méthodologie et un outil de gestion (SP&L) pour l'industrie de la mode, nous avons pu tester nos hypothèses et nos résultats tout au long de notre processus de recherche, ainsi que souligner l'importance d'évoluer d'une RSE défensive (atténuation et évitement des risques) vers un modèle de contrôle total, y

compris l'évaluation des performances sociales positives. Par son utilisation complète, l'approche SP&L, pleinement intégrée dans les processus de données et les processus opérationnels, et présentant des informations clés intégrées dans des modèles d'allocation des ressources incluant chaque partie prenante des entreprises, pourrait représenter une étape vers une création et une distribution plus inclusive de valeur par les entreprises.

Mots-Clés

Création de valeur, performance, impact social, P&L, outil de management, données, mode

Summary (English)

Our research work comes at a time of transformation within the fashion industry. Since the 1970s, the fashion industry has been marked by phenomenon such as supply chain fragmentation linked to delocalization choices. This supply chain fragmentation provoked both a loss of visibility and a loss of control when it comes to crucial supplier data, necessary for efficient operational management. This loss of both control and visibility further proves challenging for fashion companies at a time of renewed focus on discussing and positively impacting social and environmental practices within their operational or influential reach. Internally, companies aim to further control risks and resource allocation efficiency. Externally, companies aim to report on practices and communicate around products effectively, and with veracity. A selection of fashion companies further elected to take incremental steps towards becoming benefit corporations, extending their social object and aiming at making sustainability a core of their business models. The access, control, translation of social and environmental information into performance and value-adjacent language is thus crucial for the strategic integration of both social and environmental factors within decision-making and business models formats. However, within the fashion industry, a lack of methodologies and management tools enabling the access, evaluation and management of social and environmental practices creates an obstacle to efficient social and environmental practice management and full strategic integration.

We deployed a research-intervention approach for the brand Chloé, a brand that became B Corp certified in 2021, a *société à mission* in 2023 and works towards a full integration of social and environmental factors within its business model and operations. The goal was to develop a business and data management tool to first access and evaluate positive social practices within

the companies' value chain, secondly, translate social practices in performance terms, and thirdly, relink social performance to value creation.

In this document, we discuss the historic rationales and contextual factors for the creation of an SP&L (social profit and loss) approach for the fashion industry, as well as the main opportunities and limitations for its deployment. The results of the research work initiated in collaboration with Chloé are the open source and deployment of the SP&L in March 2023, and the research work critically contextualizing the approach.

Within our research work, we thus address how a business management and data visualization tool can be developed and implemented, to provide additional means of access, translation and resources management when it comes to the social positive within the fashion industry – and more particularly within a corporation towards a benefit-based juridical status and business model. We explore how business management tools represent an essential mechanism for the accountability (and control) process that is essential to CSR, and can help integrating CSR within businesses. We further explore how data visualization tools represent a leverage for utility-based decision-making, by highlighting the dynamics between financial, social and environmental forecasts and outcomes which are often considered “trade-offs”, being instrumental in informing decisions, without becoming in themselves substitutions for vision or strategy.

Therefore, based on the initial task from Chloé, and taking into account the specificities of both benefit corporations and the fashion industry value chains, we analyze the extent to which business management tools and data visualization tools could enable companies to link back impact and value creation. Further, by analyzing the SP&L intrinsic features, we analyzed the roles played by access (or measurement), translation (or evaluation), and management leverage (or visualization), in fostering efficiency, optimization and value creation when allocating resources.

The SP&L approach in itself is a data approach, an accounting approach, and a utility-oriented approach. Meant to reconcile utility and value for traditionally extra-financial factors, the SP&L was essentially meant to become a business and data management tool aimed at facilitating decision-making within fashion organizations. The ideation, development and implementation of an SP&L for the fashion industry led us to observe, analyze and articulate both the contextual factors for the tool, and to anticipate both its capacities and limitations as a business management tool. Our conceptual framework is therefore dual. First and foremost, because of the nature of the research work (developing a methodology which can be deployable as a business management tool), we mobilized the literature regarding sociology and genealogy of management tools in to guide the SP&L development and deployment process. We further mobilized recent big data literature, focusing on system operability and big data treatment, in order to gain perspective, analyze and anticipate the integration of new information within existing data systems and decision-making formats. Secondly, we analyzed the historical, contextual, and conceptual frameworks and factors which shaped the development of the business management tool. We therefore articulated utilitarianism, CSR strategic integration, organizational paradoxes, and the integration of the stakeholder theory within business models and processes in order to get a better grasp of the structures which proved instrumental to the creation of the SP&L and to its implementation.

Throughout our research work, we aimed to provide potential new perspectives on conceptual frameworks for emerging social data management tools. We therefore analyzed the tool ideation and development through several lenses. This included philosophical, organizational, economic, sociological, genealogical, and big data lenses. For each item analyzed in this document, we systematically aimed at providing either a systemic or a conversational approach, either when it comes to understanding the context of development for new integrative

accounting and impact management approaches, or when it comes to analyzing the tools and approaches themselves.

Throughout our research work, we aimed to provide three types of contributions: (1) new conceptual frameworks propositions for organizations seeking to strategically integrate CSR, (2) new operational data frameworks propositions for organizations implementing social data management tools, and (3) a proposition for an SP&L developed and implemented within the fashion industry, as a methodology and as a business and data management tool.

In terms of conceptual frameworks for emerging social data management tools, we first propose that inheriting from utilitarianism, organizations increasingly aim to act as moral agents, monitoring outcomes on stakeholders, maximizing positive outcomes as a factor of decision-making efficiency, and using performance accounting in order to evaluate social outcomes. We therefore propose that for benefit corporations, the focus on accountability and responsibility from corporations, stakeholder theory, strategic CSR, and integrated accounting are derived from an utilitarian perspective, often unrecognized. We find that current perceived “trade-offs” between financial and extra-financial are in part the result of the transposition of a public utility accounting approach to corporation resource allocation strategies.

We provide an overview of critical perspectives on accounting, and analyze current reinterpretations of P&L formats (EP&L, SP&L). We first propose that despite standardization, P&L formats can be interpreted, with a level of plasticity. Providing an analysis of the factors of alignment or differentiation between EP&L and P&L, we offer a case-study for the place given for interpretation with the initial intentions to (1) extend a normative framework, and extend activity-based cost management to systematically and strategically include externalities to (2) improve decision-making processes and results on stakeholders and their environment.

In terms of contextual factors for the ideation and development of integrated accounting formats, we provide a thematic overview of strategic CSR, showcasing the drivers and

operational translations for CSR approaches (defensive, promotional, strategic). We further propose operational criteria for CSR strategic integration. We precise the role of managerial accounting in the context of CSR strategic integration. We mobilize a stakeholder approach to precise and expand the criteria for strategic CSR through three hypotheses: (a) core dependency and level of direct influence over stakeholders through core business activities, (b) agency, cost and value, through learnings from CSR and stakeholder-adjusted game theory, (c) four value distribution and redistribution leverages. We provide a small case-study regarding leverages to distribute and potentially redistribute value. This helped us gain better insights into the intersections between stakeholder interaction and value distribution as a practical tool to strategically integrate CSR within decision-making. We further hypothesize that value control and value (re)distribution or (re)allocation could help decision-makers not think about CSR in terms of externalities or within a “trade-off” format, but as an intrinsic part of activities, operations and value to manage efficiently.

Analyzing specific industry realities within the fashion industry which shaped the ideation and development of new integrated accounting methodologies, we find two main drivers: the redefinition of business models (extended social objects) and the strive to regain control over value chains. Analyzing published priorities in sustainability reports from European luxury groups, we further find that eco-conception, traceability and circularity are identified as strategic priorities, making access, control, rationalization and optimization essential for strategic and operational decision-making. We therefore suggest defining a full control business model as a business model functioning efficiently from full activity visibility and from efficient and inclusive resource allocation, shifting from outcome translation towards inclusive cost allocation efficiency. We propose that central factors such as data management systems interoperability, and the central use of resource allocation formats could facilitate the operational integration of CSR and externalities and increase the acceptability of CSR. We

propose a dual range of analysis for decision-making utility: a risk-to-value spectrum (risk management, optimization and value creation), and operational integration and coverage, in order to ensure that decision-making covers both the operational integration of CSR and its full spectrum.

Focusing on the SP&L as a business and data management tool, we provide a bridge between a sociological approach, a genealogical approach, and a big data-related research approach to business management tools. Mobilizing this multi-pronged approach and perspective, we analyze social data journeys and processing systems, characterize data processes and credibility requirements, and highlight the challenge of data systems to provide a form of consistency, or results immutability, upon which decision-making could be based. We provide an analysis of data visualization features used to facilitate and support decision-making. We propose to include a stakeholder approach in data visualization. Building on Kaufman's (2019) proposition of business intelligence as a socio-technical cognitive system providing value, we propose to include a mechanism for cost control and output range per stakeholder category. Based on this theoretical framework, we recommend to systematically situate the value creation analysis, and to take into consideration (1) power imbalance in cost allocation and technology management, as well as correlation between cost and narrative control, and (2) stakeholder within cost-analysis benefit, while assessing the value potential of data management tools. We propose that a key missing element in current data management systems is the integration of stakeholder analysis, and that the lack of integration of stakeholders within data management system marginalizes their consideration in decision-making and associated strategic frameworks. We hypothesize that this lack of integration leads to inefficient decision-making, directly and over time, as performance and efficiency are solely associated with value creation for shareholders and, partially, clients. We adapt Kaufmann's (2019) data intelligence cognitive system, with a fuller stakeholder integration. In this way, in order to strategically integrate CSR, we suggest

integrating (1) a stakeholder approach to activity data collection (a data collection tailored per stakeholder), and (2) anticipating social and environmental data collection related to activity. A more advanced integration of stakeholders within data management frameworks and processes does not however resolve the dual question of control: (1) who holds the data control, and (2) who, or which stakeholder, possibly benefits from control management.

In this way, based on our findings, we propose a focus on making cost analysis inclusive, by integrating new performance criteria including a comprehensive range of stakeholders, in order to quantify the utility and efficiency of resource allocation in an inclusive way. We believe that this aspect is often neglected from data management system strategies, which leads to a sub-efficient way of collecting, analyzing and mobilizing social and environmental data in decision-making processes. We therefore highlight the importance of linking a control model to an inclusive cost focus in order to maximize decision-making efficiency in an inclusive way, and provide a “full cost visibility”, in order to find a necessary alternative to externalities, triple bottom lines and trade-off Systemic control model proposal, including stakeholder scope and full cost visibility.

Lastly, we provide the full methodology and implementation formats for the SP&L developed in collaboration with the fashion brand Chloé. From a methodological point of view, the SP&L has several innovative factors: it covers both risks and potentially positive performance factors (goes beyond risk factors and compliance factors), covers corporations’ value chains, thus enabling multi-level analysis facilitating decision-making: analysis per organization, supplier, collection, product and material. It focuses on systematically integrating social factors to resource allocation analysis and cost control in order to better strategically integrate social impact within business models and decision-making. We lastly provide a critical analysis of the SP&L from organizational, genealogical, sociological and data control perspectives to highlight limitations and possible future contributions to integrated accounting approaches. By

developing, integrating and open sourcing a Social Profit and Loss methodology and management tool for the fashion industry, we were able to test our hypothesis and findings throughout our research process. We also highlighted the importance of evolving from a defensive CSR (i.e. risk mitigation) towards a full control model, including the assessment of positive social performance. In full use, the SP&L approach, in alignment with strategic redefinition and fully integrated within data processes and operational processes, with insights highlighted within resource allocation models for each stakeholder, could represent a step towards inclusive value creation and distribution amongst stakeholders.

Key words

Value, performance, social impact, profit & loss, business management tool, data, fashion

Table of Contents

- Acknowledgements..... 3**
- Summary (French) 4**
- Summary (English) 15**
- Introduction 31**
- Conceptual Framework 41**
 - A) Analyzing the SP&L as a business and data management tool..... 42
 - B) Analyzing perceived trade-offs and organizational paradoxes 43
 - C) Recognizing, capturing and maximizing decision-making utility 44
 - D) Strategically integrating CSR and attributing value 46
- Research Questions 47**
- Research Hypothesis 48**
- Epistemology..... 48**
- Research Posture 49**
- In practice: positioning and integration within the research field 50**
- Plan 52**
- Overview of the main contributions and findings 52**
 - A) Conceptual frameworks propositions for the historic rationales to the development of new integrated management tools 53
 - B) Conceptual frameworks propositions for the contextual factors leading to the creation and development of new management tools, such as the SP&L..... 54
 - C) Pragmatic frameworks propositions to facilitate social and environmental data access, visibility in order to rationalize operational processes..... 56
 - D) The SP&L approach and methodology 58
- Part I Accounting for decision-making utility: an analysis of the conceptual frameworks and contextual factors which shaped the SP&L..... 60**
 - 1. A fundamentally utilitarian influence 61**
 - 1.1 A fundamentally utilitarian perspective and four main factors of influence..... 61
 - 1.2 The influence of utility accounting towards integrated accounting 66
 - 1.3 Act utilitarian: businesses as benefit-centered ecosystems 69
 - 1.4 Utility-inherited stakeholder theory and value (re)distribution as basis for benefit corporations 71

1.5 Fundamental evolutions from utilitarianism	77
2. Integrative accounting and accounting formats: evolutions and critical perspectives	79
2.1 The main rationales for integrative accounting tools	80
2.2 Perspectives on impact accounting and value creation	82
2.3 Thematic overview of critical perspectives on impact-related accounting	89
2.4 Interpreting P&L frameworks: the EP&L and the SP&L	93
3. The strategic integration of CSR	101
3.1 Thematic overview of strategic CSR	101
3.2 Role of managerial accounting and system interoperability in strategically integrating CSR	106
3.3 Mobilizing a stakeholder approach to expand and precise the criteria for strategic CSR	109
3.4 The case for a full control model, and for cost control perspective shift.....	122
4. Analyzing the Gap between Social and Environment Impact Focus	131
4.1 Intrinsic links and differentiation factors between social impact measurement and environmental impact measurement.....	132
4.2 A definition process marked by its scope and its politicization	133
4.3 The emergence of social impact measurement-focused research	135
4.4 The development of practical tools and experimental methodologies.....	136
4.5 Monetization, trade-offs and total assessments methodologies	137
4.6 Typologies of social and environment tool: per audience and per maturity level ...	138
5.Fashion industry realities which justify the creation and development of an SP&L approach.....	144
5.1 Reform and redefinition: rationales and features for new benefit corporations.....	144
Part II The SP&L as a business, performance and data management tool.....	163
6. Analyzing management tools from paradoxical, sociological and genealogical perspectives	164
6.1 Defining a business management tool from a sociological perspective, in a context of paradoxes management	164
6.2 Analyzing the genealogy of business management tools.....	168
6.3 A social analysis of business management tools.....	173
7. Analyzing data journeys and data processing systems	178

7.1 Characterizing data mobility, plasticity and journey	178
7.2 Characterizing data processes and evolutions in information processing.....	181
8. Visualization, Decision-Making and Value Creation.....	187
8.1 Analysis of data visualization features to facilitate and support decision-making ..	187
8.2 Value creation from big data analysis frameworks and data management tools	191
9. Adapting data management tools to increase social and environmental utility	198
9.1 Analyzing the integration of stakeholders within data management systems.....	199
9.2 The integration of stakeholders within control and value creation mechanisms	202
Part III The SP&L: approach, methodology and first implementation process.....	206
10. SP&L approach rationale & overall presentation	207
10.1 The SP&L approach rationale & overall presentation	207
10.2 Getting the full activity picture	209
10.3 Complementing existing frameworks and approaches.....	210
11. Stakeholders & Impact Scope	216
11.1 Stakeholders	216
11.2 Impact Scope	219
12. SP&L Steps	222
12.1 Steps Overview	222
12.2 Open Source and Documentation.....	223
12.3 Step 1: Social Auditing	224
12.4 Step 2: data collection and measurement	224
12.5 Step 3: data verification process.....	225
12.6 Step 4: performance evaluation.....	226
12.7 Step 5: performance visualization	238
12.8 Taking Action.....	240
13. Limitations	241
14. Critical perspective on the SP&L, from organizational paradoxes, genealogical, social and data control perspectives	243
14.1 The SP&L, from an organizational paradoxes' perspective	243
14.2 The ideation, development and implementation of the SP&L, from a genealogical perspective.....	246
14.3 The SP&L within its Ecosystem: stakeholder and power balance analysis.....	252

14.4 The dual nature of the SP&L: as a performance approach and as a data and activity control management tool.....	253
Conclusion.....	256
Bibliography	261
Annexes	271
Annex 1. Conference paper, The Centre for Sustainable Design at UCA, Epsom, 23 rd International Conference: Accelerating Sustainability in Fashion, Clothing, Sportswear & Accessories, 2021, March 15 th -21 st	271
Annex 2. Accelerating Sustainability: in Fashion, Clothing and Textiles, M. Charter, B.Pan, S.Black, 2023, Routledge	282
Annex 3. SP&L Approach presentation and open-source page on Chloé’s website	292
Annex 4. SP&L Methodology.....	299
Annex 5. SP&L Approach Metrics and Evaluation framework.....	335
Annex 6. SP&L Approach Github and Data Framework.....	341
Annex 7. SP&L Approach Data Visualization and Dashboard example	350
Annex 8. SP&L Approach Survey Questions (English)	351

Figures and Tables

Figure 1: Four main factors of influence from utilitarian frameworks for benefit corporations	63
Figure 2: Vocabulary equivalence from utilitarian texts to benefit corporations	63
Figure 3: Interpretation of the utilitarian system for organizations	64
Figure 4: interpretation of the utilitarian system for modern benefit corporations	65
Figure 5: Calculating the utilitarian ethical value of an action with the Felicific Calculus thought out by Jeremy Bentham.....	67
Figure 6: Derived algorithm to estimate the utilitarian ethical value of an action with the Felicific Calculus, derived from the work of Jeremy Bentham (source: Mike Sinn, How to Calculate Morality using the Utilitarian Calculator, 2012).....	67
Figure 7: identified stakeholders, from Freeman to B Lab	72
Figure 8: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative’s identification of stakeholders for SLCA (2021).....	73
Figure 9: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative’s identification of stakeholders for SLCA (2021), placed throughout a product lifecycle	74
Figure 10: benefit corporations factors of alignment and evolution from Utilitarianism	78
Figure 11: hypothesized pre-conditions for the development and continuous use of accounting tools	82
Figure 12: Environmental value creation investigations from positive research, based on Deegan (2013).....	85
Figure 13: value accounting hypothesis for social and environmental outcomes.....	85
Figure 14: social value accounting hypothesis.....	86
Figure 15: Current activity-based social and environmental accounting and valuation options	87
Figure 16: Specific valuation approaches for the EP&L, Impact Valuation and Mutual P&L	88
Figure 17: Main critiques of impact accounting, based on Morales and Sponem (2015).....	89
Figure 18: French and Anglo-Saxon P&L Models main features, based on Zuca and Tinta (2012)	94
Figure 19: P&L stage and associated type of performance analysis.....	95
Figure 20: four factors of convergence between the EP&L and SP&L approaches	97
Figure 21: four factors of divergence between the EP&L and SP&L approaches.....	99

Figure 22: the SP&L features, process and interpretation and identification as P&L framework	99
Figure 23: the EP&L features, process and interpretation and identification as P&L framework	100
Figure 24: thematic overview of responsive CSR approaches, derived from Yousfi & Loukil (2021).....	103
Figure 25: drivers and translation for CSR defensive, promotional and strategic approaches	104
Figure 26: schematization of Visser’s (2016) criteria for CSR strategic integration.....	106
Figure 27: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative’s identification of stakeholders for SLCA (2021).....	110
Figure 28: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative’s identification of stakeholders for SLCA (2021), placed throughout a product lifecycle	111
Figure 29: direct, indirect or influence level hypothesis depending on type of resource allocation	112
Figure 30: stakeholder’s relation to core activities	112
Figure 31: stakeholder’s dependency on core activities.....	113
Figure 32: stakeholder level of dependency and core relation to business activities.....	114
Figure 33: stakeholder affected by CSR-related decision-making.....	116
Figure 34: CSR initiative cost-bearing per stakeholder category	117
Figure 35: CSR initiative projected benefit level per stakeholder category	117
Figure 36: Projected agency level per stakeholder per CSR-related decision-making type ..	118
Figure 37: Agency, Cost and Value factors per strategic CSR-related decision-making process	118
Figure 38: four redistribution levers for corporation towards value chain partners.....	120
Figure 39: Full data control model schematization proposition.....	126
Figure 40: Decision-making Full Data Control Framework	127
Figure 41: Communication Full Data Control Framework	127
Figure 42: IT System Integration proposition for social and environmental output data	128
Figure 43: scope of targeted audiences for social and environmental measuring tools.....	140
Figure 44: Adoption framework for social and environmental tools, using life cycle analysis stages	142

Figure 45: Overview of B Corp certified or Société à Mission in the fashion industry.....	152
Figure 46, fashion industry drivers, challenges and initiatives, derived from Riemens, Asseman and Lemieux (2023)	156
Figure 47: key objectives and focus areas from three European luxury fashion groups	157
Figure 48: key objectives and focus areas from three European luxury fashion groups per action scope.....	159
Figure 49: key CSR goals alignments between three of the main Luxury fashion groups, per action scope	160
Figure 50: common luxury key CSR goals, analyzed in terms of action scope, data access and link to benefit	161
Figure 51: Interpretation in situ of Smith and Lewis' (2011) organizational paradoxes	166
Figure 52: Interpretation in situ of Smith and Lewis' (2011) organizational paradoxes, highlighting the place performance management tools in the process.....	167
Figure 53: three main analytical frameworks, derived from Ghaffari (2013).....	169
Figure 54: standard creation in three focuses, derived from Ghaffari (2013).....	172
Figure 55: Main sociology perspectives on management tools before 2013, from Ghaffari (2013)	174
Figure 56: Social analysis of management tools, adapted from Chiapello and Gilbert (2013)	176
Figure 57: Intrinsic and external data value evolution.....	181
Figure 58: Big data system pre-requisites and perimeter focus	182
Figure 59: Data qualities, process requirements and related uses.....	185
Figure 60: Data credibility requirements, for both data assessment and data processing system, aligned on Paik's proposition (2019)	186
Figure 61: Ethical risks associated with performance visualization, per stakeholder category	189
Figure 62: Interpretation of Kaufmann's proposition of business intelligence as a socio-technical cognitive system with a simplified articulation between data stages	193
Figure 63: Interpretation of Kaufmann's proposition of business intelligence as a socio-technical cognitive system – per data stage	194
Figure 64: projected costs and added value for the implementation and use of data management systems, per stakeholder category	196
Figure 65: Cost control and output range, per stakeholder category	197

Figure 66: adaptation of Kaufmann’s data intelligence cognitive system, integrating relevant stakeholders to this perspective.....	201
Figure 67: adaptation of Kaufmann’s data intelligence cognitive system, with a fuller stakeholder integration	202
Figure 68: Interpretation of Kaufmann’s proposition of business intelligence as a socio-technical cognitive system – data effectuation stage	204
Figure 69: Systemic control model proposal, including stakeholder scope and full cost visibility	205
Figure 70: documentation mobilized within the SP&L conceptualization	215
Figure 71: Main impact categories selected per stakeholder category.....	217
Figure 72: Impact categories selected for the “Worker” stakeholder category.....	217
Figure 73: Impact categories selected for the “Local Communities” stakeholder category ..	218
Figure 74: Impact categories selected for the “Society” stakeholder category.....	218
Figure 75: Impact categories selected for the “Clients” stakeholder category	218
Figure 76: Overall SP&L approach impact scope for workers	220
Figure 77: Overall SP&L approach impact scope for local communities, society and clients	221
Figure 78: Detail of SP&L impact categories and metrics.....	228
Figure 79: Grading process per impact metric with associated calculation method	229
Figure 80: Evaluation Rationales Overview	230
Figure 81: Means Maturity Grading Proposition	233
Figure 82: mandatory and optional metrics for data completion	235
Figure 83: size criteria for data completion	237
Figure 84: example for an organization SP&L dashboard.....	239
Figure 85: example for an organization SP&L dashboard.....	240
Figure 86: Interpretation in situ of Smith and Lewis’ (2011) organizational paradoxes	244
Figure 87: Interpretation in situ of Smith and Lewis’ (2011) organizational paradoxes, highlighting the place performance management tools hold in the process	246
Figure 88: standard creation in three focuses, derived from Ghaffari (2013).....	249
Figure 89: three main analytical frameworks, derived from Ghaffari (2013).....	251
Figure 90: Process and implementation of the SP&L within data management systems	251
Figure 91: adaptation of Kaufmann’s data intelligence cognitive system, with a stakeholder focus	253

Introduction

Opening his essay on moral philosophy as a key factor to comprehend modern bureaucracies, McIntyre (1992) stated that “the practical world of business and government is haunted by unrecognized theoretical ghosts”. In the fashion industry, this could be translated to a familiar “everything old can be made new again”, a reiterative creative and strategic process based intuitively or consciously on past work and theories, instrumental to the trend system and fashion companies’ own business models. In the case of fairly new and expanding benefit corporations, one of these theoretical ghosts could very well be utilitarianism, and utility-based decision-making. When in November 2020¹ fashion brand Chloé’s Chief Executive Officer and President Riccardo Bellini, in an interview given to fashion-business review Women’s Wear Daily about Chloé’s shift to a purpose-driven business model, disclosed his intention for Chloé to create “a social profit and loss account, akin to an EP&L, which is believed to be a first for the industry”, there was something old, something new and something borrowed about the very concept. Something old, or as McIntyre (1992) stated “an unrecognized theoretical ghost” in the creation of a utility-focused tool aimed to inform and maximize the efficiency of decision-making to benefit all stakeholders, something new, in creating an open source methodology with possibly innovative features, scopes and applications, and in the specific focus on positive social impact, and something borrowed in creating a methodology which would build on, and possibly complement, both the EP&L² (Environmental Profit & Loss), a pioneering tool developed by Kering in 2013 allowing the assessment and valuation of the environmental impact throughout the supply chain of fashion houses, and traditional P&L frameworks.

¹ <https://wwd.com/feature/chloe-purpose-sustainability-women-1234652507/>

² <https://www.kering.com/fr/developpement-durable/mesurer-notre-impact/notre-ep-l/qu-est-ce-qu-un-ep-l/>

In September 2020, Chloé officially started an industry and academic collaboration with the Conservatoire National des Arts et Métiers (Laboratoire Interdisciplinaire des Sciences de l'Action), and the Institut Français de la Mode (IFM-Kering Sustainability Chair) by co-financing a Cifre PhD contract to develop the SP&L methodology, deploy the tool within its own systems and activity perimeters, and open source it in 2023 for other brands, within or outside of the fashion industry, to critique, consider or perhaps even deploy. The effort was part of three larger conversations: one, how to gain better visibility on both social and environmental practices within the supply chain, two, how to systematically integrate social and environmental impacts, with a common valuation or vocabulary, within fashion businesses' business models, accounting and reporting formats, and three, how to better capture, translate and highlight the potentially positive social impact of the fashion industry. This new perspective on responsibility, accountability, resource and value management could be part of what created for businesses philosophically and juridically a need for status redefinition, and operationally a need for social and environmental performance accounting, for instance through the use of extended P&L formats, to rationalize financial, social and environmental resource allocation outcomes.

Between 2020 and 2023, Chloé has been progressing further and further into becoming “a force for good”, which could be translated into “a moral agent” within and beyond its own industry. In 2020, Chloé communicated a purpose “Women Forward. For a Fairer Future.”. In 2021, Chloé became B Corp-certified³, being the first luxury fashion brand in the market of B Corps to do so. In 2023, went a step further by juridically becoming a “société à mission”. The evolution was achieved with the nomination of, and open and constant confidence vote for Gabriela Hearst as Artistic Director, and Aude Vergne as Chief Sustainability Officer. With

³ <https://www.bcorporation.fr/b-corp/2862/>

this came the mission to creatively and strategically integrate social and environmental impacts as a systemic decision-making factor. Operationally and throughout the three-year evolution this meant that, as Riccardo Bellini stated “every time we [Chloé] launch a new product, we ask ourselves how we can decrease that environmental impact: how can we use the power of our sourcing to create a larger value for our communities and stakeholders⁴”, describing the a “constant trade-off” throughout the decision-making process.

The SP&L became in 2020, along with the B Corp certification, a joined focus for both the operation team, and for the new and expanding Sustainability team. The role of the methodology for the SP&L approach was to first access (or enable) and then translate (or analyse and manage) new social insights in a way which would better inform decision-making processes, and maximize decision-making utility while facing operations trade-offs. The work around the SP&L was structured over two years to develop, implement, deploy and open source the tool in March 2023, with an initial peer review in 2021, a private-sector peer review (auditing consulting firm) in 2022 and an industry-led consultation around the tool organized in 2022 by the Fédération de la Haute Couture et de la Mode (FHCM). The tool was first operationally tested through a research-developed beta version, before being produced and integrated within Chloé’s systems in early 2023 to enable some of its initial immediate features (reporting, resource allocation accounting, and supplier’s selection) to be used.

In many ways, the SP&L approach, Benefit Corporations and the B Corp certification, could be considered direct heirs to the utilitarianism philosophy, re-using its concepts, terms and main equation with a translation of the keywords. In this way, contemporary work on benefit-based thinking, value distribution, and stakeholder theory could be considered as a re-iteration of utilitarian perspectives from the 18th and 19th century, namely from Jeremy Bentham (1832)

⁴ https://wwd.com/fashion-news/designer-luxury/gabriela-hearst-chloe-ceo-business-interview-bellini-1235503741/?sub_action=logged_in

and John Stuart Mill (1843). Benefit corporations⁵ formats appear as a relatively new solution for businesses to evolve and transition their juridical and strategic models from *profit-centered systems*, accounting for capital flows to guide decision-making, towards *benefit-centered ecosystems*, accounting for financial outcomes and value creation towards their stakeholders and their environments in order to guide decision-making. The critique of benefit corporations as hybrids formats serving two incompatible purposes (Schlossberger 2016) seems to cascade from a set familiar and historical questions: what is the utility of a business? Can we create value towards people through informed decision-making, and how do we account for it? How do we communicate around it? We seemingly had a series of propositions to answer these questions starting in the 1830s. Utilitarian offered the following equation “How do we maximize the utility of our choices to maximize happiness?” which we translated and updated to “How can our decisions benefit and create value for all of our stakeholders?”. A contemporary translation of “act utilitarian” could be that the rationale for decision-making in organizations should always be the maximization of positive social impact, with a focus on valued consequences, or, in contemporary terms, outcomes. Actions can and are to be evaluated from the social benefits they create, or in 18th and 19th century terms, from the “happiness and pleasure” that they produce, with utility as a guiding principle for taking action.

If the main terms and equation remains eerily similar, there two major evolutions from the 1830s to the 2020s. First of all, there was a shift in focus and in application for utility thinking, from public to private governance and activity management. The utility reasoning which was for Bentham meant to be applied to public organizations and principles of efficient governance is now applied to businesses’ governance. A second factor of evolution is the pre-eminence of business data management, facilitating information access and treatment, and data visualization

⁵ <https://www.bcorporation.net/en-us/> also, see Levillain K, Segrestin B, Hatchuel A (2021), La mission: une norme de gestion comme fondement de la gouvernance de l’entreprise responsable, in *Revue Internationale de droit économique*, 2021/2 (t.XXXV)

tools facilitating information translation and providing systematic aid and support for decision-making. As the result of a “practical problematization” (Berthelot, 1996) the creation and deployment of the SP&L can thus be analysed dually: in terms of what it achieves to do (its utility, or performance), and in terms of the role it plays and what it translates from the organization that sponsored it (the role it plays and use within the organization). This comes down to analysing the SP&L in terms of intrinsic capacities (a business management and data visualisation tool which translates and highlights social performance), but also in terms of its scope and the role it serves within organization (systematically integrating a form of social data within decision-making processes, and provide insights which will facilitate interactions regarding what is being measured, evaluated and valued through the use of the tool). In the conclusion of her book “Sociology of business management tools”, Eve Chiapello (2013) remarks that social facts can be both masked and revealed by sociotechnical analysis, and that business management tools have become in themselves “indispensable mediators of social relations”. A part of creating the SP&L we thus had to both consider its possible added-value as a management tool in itself, in the role its plays in gaining the necessary insights to better manage outcomes, and as a tool for interaction and communication within, and possibly outside of, the business, it serves.

The pre-requisite to create SP&L, and first role for the methodology was to ensure a systematic access to social practices information for a selection of stakeholders, in order to better consider this information for resource allocation, at multiples levels: per product, per supplier and for overall activities within a given timeframe (collection) or financial year. Thus in itself, the SP&L had to possess two key features: one focused on access, by providing a new solution to collect social data and measure social impact throughout the value chain since “you cannot

improve what you can't measure"⁶ and one focused on positive impact translation, by finding a way to translate positive outcomes into factors of value, to enable this information to be computed and analysed within a resource allocation framework. The key role for the tool was then to translate social practices information into positive social performance indicators, harmonized, comparable and monitorable over time, which could then be integrated into resource allocation analysis and make the P&L picture more dynamic and anchored within a reality that includes stakeholders and their environment. Describing the current direction for the brand, Bellini told in February 2023 WWD that "What unites us, especially in those difficult moments, is this shared conviction and shared ambition to prove something that today does not exist." In that way, the difficult role of the SP&L was to make possible a decision-making process which systematically included social information, facilitated by social performance factors which could be monitored over time, and accounted for.

Further, by specifically choosing a "P&L" basis, the tool was had to possess the capacity to integrate social practices within at minimum, an outcome-based framework, and more efficiently perhaps, within a resource allocation analysis framework. A P&L in itself can be considered the representation of an input-output model, and/or of a resource allocation equation, based on an efficiency hypothesis linking resource allocation and (positive or negative) value. In that particular equation, the ideal outcome, or "profit" generates positive value creation, traditionally benefiting shareholders, through (efficient or non-efficient) resource allocation, or "loss". The additional of "Social" to "P&L" creates a new paradigm for resource allocation: that resource allocation efficiency be considered not only for all relevant stakeholders (based on stakeholder theory), but through an enriched social key performance social indicators offer.

⁶ https://wwd.com/fashion-news/designer-luxury/gabriela-hearth-chloe-ceo-business-interview-bellini-1235503741/?sub_action=logged_in

If a P&L is an activity picture presenting an equation between resource allocation and value generated, the SP&L in itself, even as an enriched P&L or updated format, is far from being new, and could be considered a new reiteration of an older utilitarian equation, a felicific calculus⁷ aimed at optimizing social positive outcomes and maximizing happiness for each decision taken using a standardized scaling system, with updated vocabulary. Businesses, as moral agents, aim to maximize the social utility of their decisions (in their case, resources allocation, with resources and leverages being time and money), and in modern terms benefit stakeholders, or in utilitarian terms maximize their stakeholder's happiness which each decision taken.

The role of the SP&L, as an interpretation of a P&L was hence dual: enabling a P&L analysis by providing access to relevant and comparable data (or providing data evaluable consistently according to a set of standards), and creating the basis for a resource allocation analysis, associating resources to evaluated practices in a way to would translate a level of efficiency. This interpretation is partially, but not entirely aligned with the interpretation of the EP&L as a P&L. A decade ago the EP&L filled three gaps within the fashion industry value chains. First and foremost, the access to comparable environmental data for operations and the supply through the selection of six measurable environmental key performance indicators, including Co2 emissions, water consumption, water pollution, land use, air pollution and waste production, or in other word a panoramic view of environmental activity outcomes from raw material acquisition to products' retail. Secondly, the visualization of outcomes at several levels for organizations, including the outcomes for overall activities, product and materials. Thirdly, the translation of quantified outcomes into value, by mobilizing financial proxies, in order to

integrate the results of the environmental assessment within existing accounting format such as performance reporting, accounting and traditional P&Ls.

The SP&L was meant at its inception to mirror both the access and multi-visualization dimensions, but differed from the EP&L from the start in two different ways. First, the focus for the methodology and upcoming tool was on its utility for decision-making, which meant providing a resource allocation analysis feature without necessarily using financial proxies. In that way, monetization was approached less as a final translation and more as the result of resource allocation analysis, or the result of an equation without the use of proxies. Secondly, the focus on social impact enables the assessment of potential positive impact factors, meaning factors that go beyond the assessment risk levels for stakeholders due to companies' activities. In this way the goal for the methodology was less to focus on monetizing negative outcomes and risk levels, or on systematically relating environmental risk mitigation to operational decision-making, and more on capturing social value creation, and capacity-building efforts' efficiency. Beyond the type of criteria that were measured and translated, the methodology had to be adapted to reflect the specific focus on positive impact, while still providing a way to co-visualize social and environmental outcomes together, and within resource allocation and impact forecast formats. In both cases however, the first use of P&L formats was to provide accessibility, visibility and control, in order to facilitate decision-making (or accounting), and secondarily to facilitate integrative business performance reporting over time (or accountability through reporting processes).

Further, the creation of the SP&L approach had to not overlap but to pragmatically complement existing social measurement and evaluation processes in place. First of all, it had to complement social auditing processes, as well as other literature on human rights and due diligence, or hot-spot analysis which focus on supplier's practices by ensuring that no workers mobilized on a given brand's product face no risk. Secondly, the SP&L had to complement positive impact

certifications such as the B Corp certifications, with a focus mainly on operations and headquarters, containing a set of governance and relation to the supply chain criteria, but no harmonized criteria throughout value chains. Thirdly, the new methodology had to complement the UNEP (2021) proposition for social lifecycle analysis (S-LCA), focusing on assessing the impact per product on six types of stakeholders (workers, children, value chain partners, society, client and local communities). In the same way, the SP&L approach had to complement the current effort by the French government on social labelling for products, with a focus on communicating human right diligence data per product. The creation of the SP&L had to both complement and integrate innovative features when relevant from experimental methodologies such as social lifecycle costing & inventories (SLCC, SLCI), which provide value distribution and redistribution propositions at the product level. Lastly, the SP&L had to complement existing propositions for Social Return on Investment (SROI) methodologies, which focus on valuing the social impact of targeted investments.

All of these methodologies represented parts of a social impact puzzle that the SP&L approach strived to bridge and at times, complement to present a fuller and coherent activity picture including social practices and outcomes. This meant filling the gaps and potentially creating added-value by concentrating on enabling a systemic positive social practices data collection all throughout fashion value chains' scope, quantified, harmonized and comparable over time in order to enable reporting and accounting. Four axis thus guided the development of the SP&L: one, ensuring and enabling an harmonized data collection per stakeholder through the value chain to provide, two, comparable data over time to enable three reporting, accounting and resource allocation analysis, and four sufficient data to provide a multi-level analysis for product, collection and activity social outcomes through data visualization tools. The results, a methodology, associated business management and data visualization tool, were communicated via the open source of the methodology note and deployment formats, including data

assessment, evaluation, code, and visualisation templates, in March 2023 on Chloé's ecommerce site.

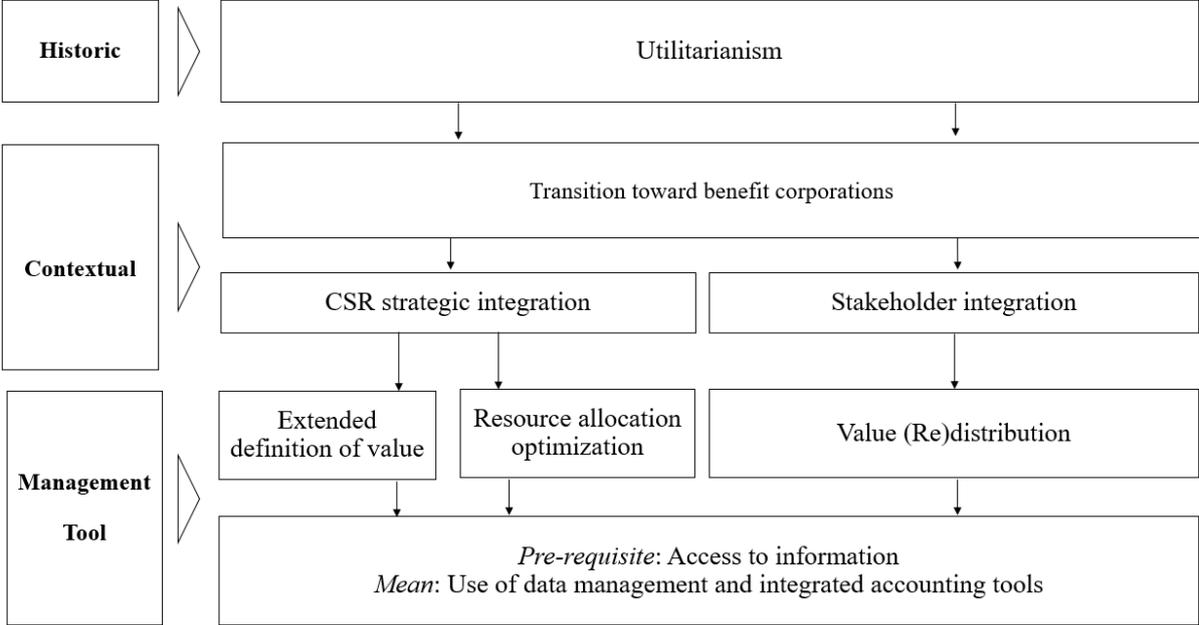
Research Methodology and Approach

Conceptual Framework

The SP&L approach in itself is a data approach, an accounting approach, and a utility-oriented approach. Meant to reconcile utility and value for traditionally extra-financial factors, the SP&L was essentially meant to become a business and data management tool aimed at facilitating decision-making within fashion organizations. The ideation, development and implementation of an SP&L for the fashion industry led us to observe, analyse and articulate both the contextual factors for the tool, and to anticipate both its capacities and limitations as a business management tool.

Our conceptual framework is therefore dual. First and foremost, because of the nature of the research work (developing a methodology which can be deployable as a business management tool), we mobilized the literature regarding sociology and genealogy of management tools in to guide the SP&L development and deployment process. We further mobilized recent big data literature, focusing on system operability and big data treatment, in order to gain perspective,

analyse and anticipate the integration of new information within existing data systems and decision-making formats. Secondly, we analysed the historical, contextual, and conceptual frameworks and factors which shaped the development of the business management tool. We therefore articulated utilitarianism, CSR strategic integration, organizational paradoxes, and the integration of the stakeholder theory within business models and processes in order to get a better grasp of the structures which proved instrumental to the creation of the SP&L and to its implementation.



Schematization of the analytic structure mobilized for the research work on the SP&L

A) Analyzing the SP&L as a business and data management tool

The rationale and *raison d’être* for the research work was the creation of a social profit & loss approach, which meant developing the methodology basis for a business management tool, and for a data visualization tool. The very first axis for our conceptual framework is thus the sociology of management tools. Chiapello (2013) describes our societies as “increasingly

regulated by mechanisms that claim to be management”, with “the place of tools (standards, indicators, dashboards, information systems, etc.)” becoming “considerable”, emphasizing “that management tools which have emerged from businesses have gained a significant importance in the social economy, and beyond the realm of businesses”. Since the 1990s, research in sociology, political science, social psychology and management science has begun to focus on these objects, constituting an important but very fragmented scientific production. Throughout the conception, implementation, deployment of the SP&L as a business management tool and the publication as an open-source methodology, we mobilized the insights of sociology of management tools in order to consider critical insights at each relevant stage of the process.

B) Analyzing perceived trade-offs and organizational paradoxes

The SP&L approach as a methodology, and as a business tool, is first and foremost an attempt to bridge several gaps: the first being the gap in access when it comes to harmonized and comparable social data, and the second being the gap in a common vocabulary for social, environmental and financial activity outcomes. Chloé’s CEO and President Riccardo Bellini described a “constant trade-off” in the decision-making process, which could be considered to be a product of the type of environmental, social and financial available, but also could be directly derived from the utilitarian, or moral perspective applied to benefit corporations. In that way, we mobilized within our conceptual framework organizational paradoxes theories (Cameron, 1986, Poole, 1989, Lewis, 2000), which focus on the nature and management of competing demands. Foundational work on paradox in organizations emerged starting in the late 1970s and 1980s, across several fields and disciplines including philosophy, psychodynamics, psychology, political science, communications, sociology, negotiations and conflict resolution. Underlying the theory of paradox is ontologies of dualism – two opposing elements that

together form an integrated unity and dynamism of ongoing change. Scholars have defined paradox as tensions that are contradictory, interdependent, and persistent, noting their dynamic, everchanging, cyclical nature. We focused on paradoxes management, and more particularly on belonging paradoxes, organizing paradoxes and performance paradoxes. Mobilizing organization paradoxes enabled us to get better insights when it comes to both the context of the SP&L creation but also when it comes to its intended uses.

C) Recognizing, capturing and maximizing decision-making utility

In order to find the roots to those paradoxes and competing demands we mobilized utilitarian philosophy and the prism of morality for businesses. When directed toward making social, economic, or political decisions, a utilitarian philosophy would aim for the betterment of society as a whole. Utilitarianism is a tradition of ethical philosophy that is associated with Jeremy Bentham and John Stuart Mill, two late 18th- and 19th-century British philosophers, economists, and political thinkers. Mobilizing a utilitarian perspective, actions are righteous in proportion to their promotion of happiness for all beings. In this, Mill and utilitarianism assume that an action or practice is fair (with respect to any alternative action or practice) if it leads to the greatest possible balance of beneficial consequences (happiness for Mill) or at the least possible balance of bad consequences. Consequences, or outcomes and performances, are hence consider to be the central analytical focus. Mill argues that the concepts of duty, obligation and right are subordinate to, and determined by, which maximizes the benefits and minimize the negative consequences. Applied to organizations, this perspective provides an open question regarding the notion of morality and utility in organizations, translated in a modern way by the notions of mission and purpose, and their responsibility to stakeholders.

Assessing social performance meant focusing on stakeholders theory. In 1984, R. Edward Freeman originally detailed the Stakeholder Theory of organizational management and business ethics that addresses morals and values in managing an organization. His book “Strategic Management: A Stakeholder Approach” identifies and models the groups which are stakeholders of a corporation, and both describes and recommends methods by which management can give due regard to the interests of those groups. That view is in opposition to the long-held shareholder theory proposed by economist Milton Friedman (1970) that in capitalism, the only stakeholders a company should care about are its shareholders - and thus, its bottom line. Friedman’s view is that companies are compelled to make a profit, to satisfy their shareholders, and to continue positive growth. This theory, closely linked to utilitarianism, could also be considered in the way decision-making utility relates the outcomes on stakeholders. In this way, we mobilized the body of work rationalizing trade-offs and decision-making theory, for instance game theory, relating decision-making mechanism to stakeholder theory and CSR. Game theory is a theoretical framework for conceiving social situations among competing players. Game theory can be considered as one of the sciences of strategy, or at least the optimal decision-making of independent and competing actors in a strategic setting. The pioneers of game theory were mathematician John von Neumann and economist Oskar Morgenstern in the 1940s. Since 2008, a few researchers (Sacconi, 2008, Lozano, 2011, Zhu and Li, 2013) applied at the least partially the game theory to CSR settings, relating game theory to stakeholder theory, with CSR being defined as “a multi-stakeholder model of corporate governance and fiduciary duties naturally emerging from a critical assessment of the incomplete contracts view of the firm based on concepts like as authority and residual rights of control.” (Sacconi, 2008). We would like to go further, on one hand, by linking Game Theory to both Stakeholder Theory and strategies linked to the strategies of CSR integration within

organizations, and on the other hand, by linking Game Theory to both Stakeholder Theory and Value Attribution.

D) Strategically integrating CSR and attributing value

Beyond assessing social performance, the necessity to assess social performance in a way that could be integrated within reporting and accounting formats which include social, environmental and financial insights led us to mobilize the body of work on strategic CSR, or the analysis on how to integrate CSR within business models and processes, as opposed to treating it as a separate matter. The interaction between corporate social responsibility (CSR) and value creation has been analysed since the 1970s, with at its very core the question of whether or not CSR should be integrated within corporations' processes, activities and culture or remain collateral (Bosch-Badia, 2013). The value creation of CSR has been thoroughly researched, from risk reduction to its capacity to create long term value and profits, to create competitive edges for companies through the contribution to innovation cycles (Vilanova, Lozano, Arenas, 2009), for instance by creating new opportunities (Bosch-Badia, 2013). CSR has often been dualized depending on its potential for value creation and profit for corporations through integration within companies' culture, activities and processes. On one hand, CSR as a mean to return profits to society (as opposed to an investment) corresponds to residual CSR (Freeman, Harrison, Wicks, Palmar, Colle, 2010), responsive CSR (Porter & Kramer, 2006), collateral CSR (Bosch-Badia, 2013) and peripheric CSR (Levillain, 2015). On the other hand strategic CSR (Porter & Kramer) or integrated CSR (Freeman, Harrison, Wicks, Palmar, Colle, 2010) correspond to the capacity of companies to identify and solve social issues and simultaneously to create profit, aligning with the proposition of shared value (Porter & Kramer, 2011) as an end goal for corporations. The latter also corresponds to Benabou and Tirole's (2009) win-win perspective on CSR from a corporation's viewpoint. This specific conceptual

framework helped guiding us while conceptualizing how social performance outcomes could be integrated within updated reporting and accounting formats which would include environmental and social factors of performance, or key performance indicators in order to guide decision-making.

Research Questions

Throughout the conception, implementation and deployment of the SP&L we addressed how a business management and data visualization tool was developed and implemented to provide additional means of access, translation and resources management when it comes the social positive within the fashion industry – and more particularly within a corporation towards a benefit-based juridical status and business model. We explored how business management tools represent an essential mechanism for the accountability (and control) process that is essential to CSR, and can help integrating CSR within businesses. We further explored how data visualization tools represent a leverage for utility-based decision-making, by highlighting the dynamics between financial, social and environmental forecasts and outcomes which are often considered “trade-offs”, being instrumental in informing decisions, without becoming in themselves substitutions for vision or strategy.

Therefore, based on the initial task from Chloé, and taking into account the specificities of both benefit corporations and the fashion industry value chains, we studied the extent to which business management tools and data visualization tools could enable companies to link back impact and value creation. Further, by analysing the SP&L intrinsic features, we analysed the roles played by access (or measurement), translation (or evaluation), and management leverage (or visualization), in fostering efficiency, optimization and value creation when allocating resources.

Research Hypothesis

Throughout the thirty months working with our industry partner developing the SP&L approach we tested the following research hypothesis: first of all the specificity of assessing positive social outcomes and impacts (1), secondly, the necessity to bridge the activity scope gap and harmonize data collection and assessment throughout value chains (2), thirdly, the use of visualization as a leverage for decision-making, (3), the specificity P&L feature as a framework for rationalizing activity outcomes, and for informing and potentially optimizing resource allocation (4), and the possible use of resource allocation frameworks such as an interpreted P&L to relink social outcomes, performance and value (5).

Epistemology

Regarding my own research posture, I aimed to follow the radical (pragmatic) constructivist current, taking into consideration the three hypotheses of Avenier (2018), namely that each human being has his own experience of reality, that it is not possible to rationally (objectively) know reality and that the subject and the object studied are inextricably linked. I therefore considered throughout my research process that any knowledge is situated and that the knowledge context has an influence on the experience of reality and therefore on the knowledge produced. It seemed relevant to me to consider within the framework of this research that the validity of the knowledge produced is based on its usefulness for action (pragmatism), including in other situations (for other actors). The epistemological perspective that is chosen is that an independent reality exists and that knowledge does not belong to an objective or ontological

reality but concerns a world constituted by experiences (Von Glaserfeld, 1988). Generalization and conceptualization are possible, and qualitative methods are preferred, in particular participant observation. The choice of a radical (pragmatic) constructivist current is also coherent with a utilitarian approach to CSR, as both focus on a knowledge produced based on its utility (or usefulness for action).

Research Posture

We used a research-intervention posture in order to develop the content regarding the development of the SP&L methodology and its deployment. The research-intervention stems from management sciences (Hatchuel and Malet, 1986, Girin, 1990, Hatchuel, 2000) with a “managerial, operational and prespective change” (Bedin, 2013) view and perspective. Research-interview seems relevant as the research on the SP&L stems from a response to a commission, given rise to “interactive, complex, even unprecedented productions (Bedin, 2013). This posture was inherited from research-action (Lewin, 1959), praxeological research (Ardoino, 1980), applied research (De Ketele, Roegiers, 1991), collaborative research (Charlier, Déjean, Donnay, 2004), and fundamental field research (Clot, 2009). The research being sponsored, circumscribed by a convention, we find ourselves in a specific praxeological configuration, which involve the researcher as placed both in a scientific posture and in a posture of response to a business and social demand, as an interface but also as a source to provide an analytical picture of reality and possible forecasts. From this research posture is produced a “practical problematization” (Berthelot, 1996), which is answered by a work of research which produces interactions with and integrates actors in a system of intervention involving both the research team and practitioners.

In practice: positioning and integration within the research field

The goal with our research approach and positioning was to confront theory and practice, research perspective and *in-situ* realities and observations. The objective was also for the interaction between research perspective and industry realities to both help form a new pragmatic approach, and enable the deployment of a new integrated management tool.

As a solution developed for a practical problematization *in situ*, the work on the SP&L therefore led to a full operational integration, from a horizontal perspective within the organization (product owners from several activity segments) and a visibility from a vertical perspective (access to top management from several activity segments, and experts advising on strategy). The work on the SP&L also led to increasing interactions with organizations from the same industry, experts on Sustainability within and outside of the fashion industry, and representants from fashion federations. It also provided visibility on the full process of information integration and use, and product lifecycles.

In practice, the research work meant a direct operational integration within the newly formed Sustainability team of the organization, managed and led by a newly appointed Chief Sustainability Officer, who was also appointed to the company's Board. The team, independent from Operations, oversees four action pillars, with one "product owner" or "head of" directly responsible for each pillar: responsible sourcing (1), environmental impact management (2), local communities and social impact management (3), and teams (4). Three of those four pillars (responsible sourcing, environmental impact management, social impact management) are directly related to operations, while the fourth pillar (teams) is mostly related to human resources. The research work on social impact management and development of the SP&L approach and tool lead to interactions with five teams, aside from the Sustainability team: Operations, IT, Finance, Digital and Human Resources teams. This provided the opportunity to

interact directly with product owners from Operations over the course of more than two years, as well as with Digital and IT product owner over the course of more than a year. The research work also led to interactions with the Sustainability Board, as well as with the CEO of the company, at the initiative of the research work and SP&L tool creation.

The role within the organization consisted of being the product owner for the creation, development and publication of a new methodology and tool, the SP&L. This pragmatically meant from an operational perspective providing critical perspectives on responsible sourcing and strategic topics from a social impact perspective, creating and overseeing the implementation of the tool, overseeing and planning the strategic and operational use of the tool, and providing specific training on social impact and social impact management.

The first year was dedicated to the operational work on social impact, responsible sourcing and compliance, which provided the necessary insights for the creation and development of the SP&L. The research work was thus focused around internal interactions within the organization, interactions with suppliers and interactions with external experts on social impact. The second year was dedicated to the testing and review of the SP&L, which led to interactions with other brands from the fashion industry, a consulting firm active within the industry, and external experts. The third year was dedicated to the strategic implementation of the SP&L, as well as to the open source of the tool, which led to increased interactions with top managers, as well as with IT and Digital teams for both the integration of the tool within IT systems, and the publication of the tool on the ecommerce site. The third year was also focused on training and on the anticipation of the use of the SP&L tool.

Plan

In order to answer our research questions and to validate or invalidate our hypothesis, we will address our topic through four lenses: the historical, conceptual influences and contextual factors which shaped the conception of the SP&L approach (I), a tryptic of sociological, genealogical and big data approaches to, integrated management and accounting tools (II), before presenting the SP&L methodology and providing a specific case study of the development and deployment of the tool (III).

Overview of the main contributions and findings

Throughout our research work on the ideation, development, implementation and open source of the SP&L within a fashion brand, we aimed to provide potential new perspectives on conceptual frameworks for emerging management tools for corporations, integrating social and/or environmental performance factors. We therefore analyzed the tool ideation and development through several lenses. This included philosophical, organizational, economic, sociological, genealogical, and big data lenses. For each item analyzed in this document, we systematically aimed at providing either a systemic or a conversational approach, either when it comes to understanding the context of development for new integrative accounting and impact management approaches, or when it comes to analyzing the tools and approaches themselves.

This led us to develop and propose several types of contributions, from conceptual frameworks to practical analytical framework, which we will detail below. We classified our main contributions in four main sections, which follow the plan and content of this thesis document:

- (A) *Conceptual frameworks for the historical rationales leading to the creation and development of new management tools*, such as the SP&L. We detail our findings and

conceptual framework propositions related the use and reinterpretation of utilitarian ideas, formats and vocabulary in a modern, benefit-oriented context for corporations.

(B) *Conceptual frameworks for the contextual factors leading to the creation and development of new management tools, such as the SP&L.* We detail drivers for the ideation of new integrated accounting tools such as the SP&L, mobilizing perspectives on strategic CSR, as well as critical perspectives on accounting. We further provide a comparative literature review regarding the development of social and environmental management tools.

(C) *Pragmatic frameworks propositions to facilitate social and environmental data access and visibility, in order to rationalize operational processes.* We detail contributions regarding new data control and management tools and processes, created from creating a dialogue between sociological and big data approaches to business management tool analysis. Those frameworks are aimed at facilitating social and environmental data visibility, management and help further integrating social and environmental factors into decision-making, operations business models.

(D) *The SP&L approach and methodology,* which presents the main contributions from the ideation, implementation and open source of the SP&L.

A) Conceptual frameworks propositions for the historic rationales to the development of new integrated management tools

In Part I (chapters 1 & 2), we propose that, inheriting from utilitarianism, organizations increasingly aim to act as moral agents, monitoring outcomes on stakeholders, maximizing positive outcomes as a factor of decision-making efficiency, and using performance accounting

in order to evaluate social outcomes. We therefore propose that benefit corporations, the focus on accountability and responsibility from corporations, stakeholder theory, strategic CSR, and integrated accounting are derived from a utilitarian perspective, often unrecognized. We find that current perceived “trade-offs” between financial and extra-financial are in part the result of the transposition of a public utility accounting approach to corporation resource allocation strategies. We further propose that the pre-conditions for the development and continuous use of accounting tools stem from the systematic use of techniques such as instant randomization in modern science, and from collective utility and individual accountability as factors of democracy and modern government (chapter 2).

We hypothesize that the factor of heritage from utilitarianism and modern government approach is the mobilization, translation and adaptation of existing financial accounting formats and frameworks to include social and environmental factors. We thus provide an overview of critical perspectives on accounting, and analyse current reinterpretations of P&L formats (EP&L, SP&L). We first propose that despite standardization, P&L formats can be interpreted, with a level of plasticity. Providing an analysis of the factors of alignment or differentiation between EP&L and P&L, we offer a case-study for the place given for interpretation with the initial intentions to (1) extend a normative framework, and extend activity-based cost management to systematically and strategically include externalities to (2) improve decision-making processes and results on stakeholders and their environment (chapter 2).

B) Conceptual frameworks propositions for the contextual factors leading to the creation and development of new management tools, such as the SP&L.

We provide a thematic overview of strategic CSR (chapter 3), showcasing the drivers and operational translations for CSR approaches (defensive, promotional, strategic). We further propose operational criteria for CSR strategic integration. We precise the role of managerial accounting in the context of CSR strategic integration. We mobilize a stakeholder approach to precise and expand the criteria for strategic CSR through (3) hypothesis: (a) core dependency and level of direct influence over stakeholders through core business activities, (b) agency, cost and value, through learnings from CSR and stakeholder-adjusted game theory, (c) four value distribution and redistribution leverages. We provide a small case-study regarding leverages to distribute and potentially redistribute value helped us gain better insights into the intersections between stakeholder interaction and value distribution as a practical tool to strategically integrate CSR within decision-making. We further hypothesize that value control and value (re)distribution or (re)allocation could help decision-makers not think about CSR in terms of externalities or within a “trade-off” format, but as an intrinsic part of activities, operations and value to manage efficiently.

In chapter 4, we analyze the gaps between social and environmental impact research. We find both contextual (geopolitics, technology) and sociological (acceptation) rationales for the ten-year gap between social and environmental research and methodological advancement. Doing so, we provided a dual analysis of the emergence of social and environmental impact research focuses and methodologies, mobilizing two typologies (targeted audience for use, and adoption framework.) Analyzing the industry realities (chapter 5) which shaped the ideation and development of new integrated accounting methodologies within the fashion industry, we find two main drivers in the redefinition of business models (extended social objects) and the strive to regain control over value chains. Analyzing published priorities in sustainability reports from European luxury groups, we further find that eco-conception, traceability and circularity are

identified as strategic priorities, making access, control, rationalization and optimization essential for strategic and operational decision-making.

C) Pragmatic frameworks propositions to facilitate social and environmental data access, visibility in order to rationalize operational processes.

Based on our findings disclosed in Part I, chapter 1-5, we suggest defining a full control business model as a business model functioning efficiently from full activity visibility and from efficient and inclusive resource allocation. Shifting from outcome translation towards inclusive cost allocation efficiency. We propose that central factors such as data management systems interoperability, and the central use of resource allocation formats could facilitate the operational integration of CSR and externalities and increase the acceptability of CSR. We propose a dual range of analysis for decision-making utility: a risk-to-value spectrum (risk management, optimization and value creation), and operational integration and coverage, in order to ensure that decision-making covers both the operational integration of CSR and its full spectrum.

In Part II of this document, we discuss business and data management tools from sociological, genealogical, and big data perspectives.

In chapter 7, we aim to provide a bridge between sociology of management tools and big data-related research when analysing business management tools. We analyze data journeys and processing systems, characterize data processes and credibility requirements, and highlight the challenge of data systems to provide a form of consistency, or results immutability, upon which decision-making could be based. We propose to rationalize analytical frameworks in alignment with organizational processes (focus on standard creation, industrial rationalization, and uses).

We further find that the genealogical approach can provide a basis to analyze three stages in coherence with each other: the intrinsic rationale, the industrial implementation and the use.

In chapter 8, we provide an analysis of data visualization features used to facilitate and support decision-making. We propose to include a stakeholder approach in data visualization. Building on Kaufman's (2019) proposition of business intelligence as a socio-technical cognitive system providing value, we propose to include a mechanism for cost control and output range per stakeholder category. Based on this theoretical framework, we recommend to systematically situate the value creation analysis, and to take into consideration (1) power imbalance in cost allocation and technology management, as well as correlation between cost and narrative control, and (2) stakeholder within cost-analysis benefit, while assessing the value potential of data management tools.

In chapter 9, we propose that (1) a key missing element in current data management systems is the integration of stakeholder analysis and (2) that the lack of integration of stakeholders within data management system marginalizes their consideration in decision-making and associated strategic frameworks. We hypothesize that this lack of integration leads to inefficient decision-making, directly and over time, as performance and efficiency are solely associated with value creation for shareholders and, partially, clients. We adapt Kaufmann's (2019) Kaufmann's data intelligence cognitive system, with a fuller stakeholder integration. In this way, in order to strategically integrate CSR, we suggest integrating (1) a stakeholder approach to activity data collection (a data collection tailored per stakeholder), and (2) anticipating social and environmental data collection related to activity. A more advanced integration of stakeholders within data management frameworks and processes does not however resolve the dual question of control: (1) first of who holds the data control, and (2) of who, or which stakeholder, possibly benefits from control management.

In this way, based on our findings, we propose a focus on making cost analysis inclusive, by integrating new performance criteria including a comprehensive range of stakeholders, in order to quantify the utility and efficiency of resource allocation in an inclusive way. We believe that this aspect is often neglected from data management system strategies, which leads to a sub-efficient way of collecting, analysing and mobilizing social and environmental data in decision-making processes. We therefore highlight the importance of linking a control model to an inclusive cost focus in order to maximize decision-making efficiency in an inclusive way, and provide a “full cost visibility”, in order to find a necessary alternative to externalities, triple bottom lines and trade-off Systemic control model proposal, including stakeholder scope and full cost visibility

D) The SP&L approach and methodology

In Part III, chapter 10-12 of this document, we provided the full methodology for the SP&L. From a methodological point of view, the SP&L has several innovative factors: it covers both risks and potentially positive performance factors (goes beyond risk factors and compliance factors), covers corporations’ value chains, thus enabling multi-level analysis facilitating decision-making: analysis per organization, supplier, collection, product and material. It focuses on systematically integrating social factors to resource allocation analysis and cost control in order to better strategically integrate social impact within business models and decision-making. Further, in Part III, chapter 13, we provide a critical analysis of the SP&L from a organizational paradoxes, genealogical, sociological and data control perspectives to highlight limitations and possible future contributions to integrated accounting approaches.

Part I

Accounting for decision-making utility: an analysis of the conceptual frameworks and contextual factors which shaped the SP&L

1. A fundamentally utilitarian influence

In this first chapter we will focus on the fundamental grounding and heritage for the SP&L and benefit-thinking from utilitarian thinkers (1.1), Jeremy Bentham's hedonistic calculus as the initial proposition for modern impact accounting (1.2), the heritage from utilitarian perspectives for benefit corporations as new organization models (1.3) for stakeholders-focused and redistributive models (1.4) before analysing the main evolutions from the utilitarian perspective (1.5).

1.1 A fundamentally utilitarian perspective and four main factors of influence

In the last page of his *General Theory* (1915), John Maynard Keynes stated that “the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist (...) I am sure that the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas”. In order to best apprehend and comprehend the development of a social profit and loss approach and business tool for the fashion industry, we first need to analyse the context of development (industry rationales and organization rationales), and parallelly attempt to recognize the philosophical and economic influences which form consciously and unconsciously form its very basis. The first, and perhaps the main “unrecognized theoretical ghost” (McIntyre, 1992) to point out and discuss for the development of Chloé's SP&L approach could be utilitarianism. We thus first consider the influence of utilitarianism over the rationale of integrative profit and loss frameworks (social, or environmental profit and loss approaches), and by extension, of the stakeholders' benefit-

oriented corporations they directly aim to serve. In this way, we argue that modern questions regarding perceived trade-offs between the creation of value for shareholders or stakeholders, or the way to integrate social and environmental impact within decision-making processes can be considered as a re-iteration of utilitarian perspectives from the 19th century, namely from Jeremy Bentham(1832) and John Stuart Mill (1843), themselves influenced by the teachings of Epicurus (On Nature) himself using Diogenes as a source.

Utilitarianism questioned the morality of decision-making and mobilized utility as a guiding principle, defining utility as “that property in any object, whereby it tends to produce benefit, advantage, pleasure, good or happiness (...) or to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest are considered” and utility to what we now, and after Sen (1990, 1999, 2004) name stakeholders “if that party be the community in general, then the happiness of the community: if a particular individual, then the happiness of that individual”. In more contemporary terms, a translation of “act utilitarian” could be that the rationale for decision-making in organizations should always be the maximization of positive social impact. Another perspective would be to consider, with modern lenses, that utilitarian focused on and valued consequences, outcomes and impact in the evaluation of decision-making rather than intentions, centering around efficiency and maximization rather than moral absolutes. Actions can and are to be evaluated from the social benefits they create, or in 19th century terms, from the “happiness and pleasure” that they produce. Utility as a guiding principle for action is used as decision-making guidelines: as principles for “acting utilitarian” (every time we act, we should act for the greater good and for the greater number of people), and “rule utilitarianism” (which enables us to refrain from acts that might maximize utility in the short run, and instead follow rules that will maximize utility for the majority of the time).

What, then, for both businesses seeking to strategically integrate social and environmental impact, and for the practical tools that they develop and use to achieve social and environmental

impact integration within their business model and decision-making frameworks, could be the main factors of influence taken for utilitarianism? There appears to be four: the self-definition and capacity to act as a moral agent, or in modern terms as a “force for good”⁸ (1) utility maximization as a role and responsibility (2) with a focus on positive ends or consequences for decision-making, or in modern terms “positive social impact” (3) through the use of “system” or equation frameworks to create recommendations (4). Those key factor of influence are schematized below (schematization 1, with a proposition for term or vocabulary equivalency in schematization 2).

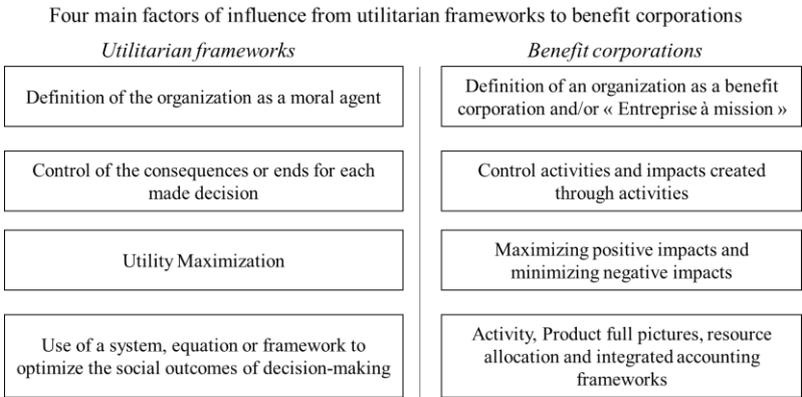


Figure 1: Four main factors of influence from utilitarian frameworks for benefit corporations

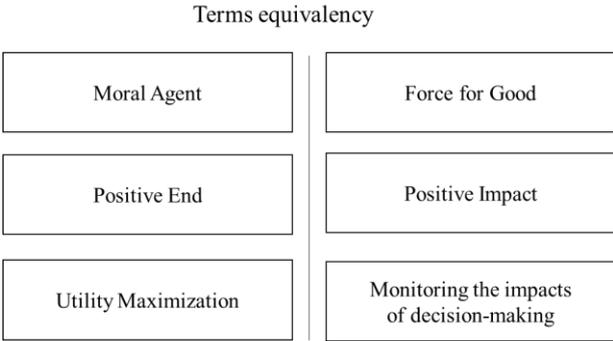


Figure 2: Vocabulary equivalence from utilitarian texts to benefit corporations

Those four dynamic criteria could be linked in the following way (see schematization 3 below): the pre-requisite of organization to define themselves as moral agents (1), with an intrinsic role

⁸ <https://www.bcorporation.net/en-us/>

and responsibility to control, and thus account for, the consequences (or ends) of each made decision (2), with the possibility of optimization, or utility maximization (3), using a system, equation or framework as an accountability mean.

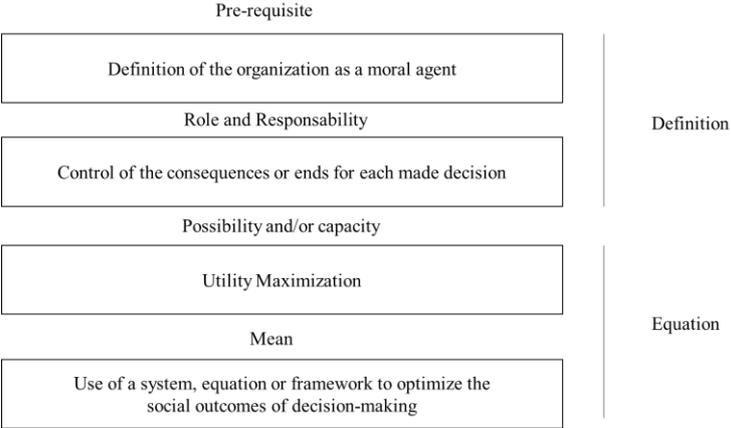


Figure 3: Interpretation of the utilitarian system for organizations

With a contemporary translation of the vocabulary we obtain the following dynamic terms for the utilitarian equation (schematization 4, below): the pre-requisite for organization to define themselves as benefit corporations, or mission-led organizations (1), with an intrinsic role and responsibility to control, and thus account for, the impacts of their core activities (2), with the possibility of optimization, or utility maximization for positive impact and minimization for negative impacts (3), using a tools which provide the activity full picture and the result of resource allocations: for instance integrated P&Ls, or at the product level, lifecycle analysis (4).

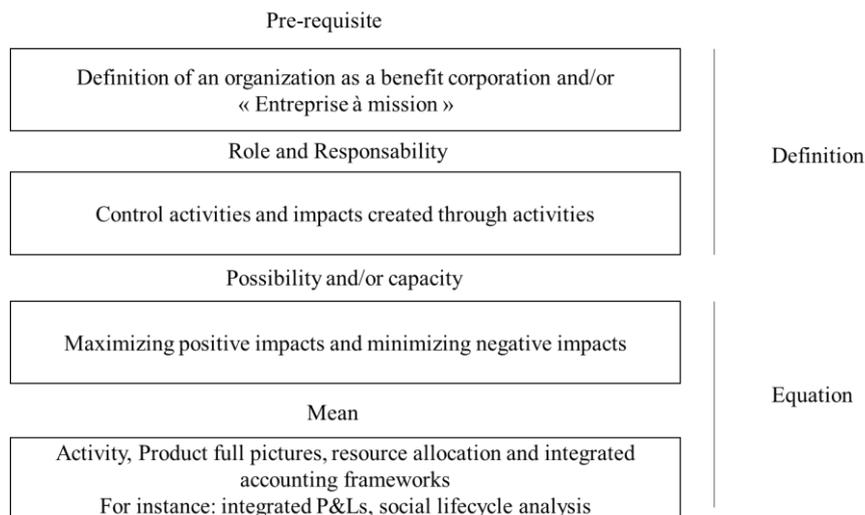


Figure 4: interpretation of the utilitarian system for modern benefit corporations

The basis for this utilitarian system may thus lie in the very possibility to control, and to account for the consequences of decision-making. This may emanate first from the possibility to capture and influence human beings' experiences within a form of influenceable and independent system, with a variation based on choices and decision-making processes. The philosophy of Epicurus (341–270 B.C.E.) involved a view of the goal of human life, centered around happiness. In this case happiness can be defined as a result from the absence of mental disturbance or physical pain, and captured or influenced through the creation of an interdependent and complete advice system and structure. Jeremy Bentham took this rationale one step further by proposing a form of positive impact accounting through his felicific accounting, which can be viewed as a direct influence on integrated accounting in its various forms: impact monetization, return on social or environmental investment, weighted accountability and/or integrated P&Ls.

In this way, we aim to detail how the initial utilitarian equation has been updated with contemporary terms, and explore the consequence of this influence for businesses and for their accounting and accountability processes.

1.2 The influence of utility accounting towards integrated accounting

In the fourth chapter of his “Introduction to the Principles of Morals and Legislation” (1789), Jeremy Bentham imagined and developed a solution to account for utility, with his utility calculus, also called felicific calculus (see figure 5, below) which can be translated into a felicific algorithm (see figure 6, below). Bentham’s utility calculus or algorithm was a decision-making tool to maximize positive impacts, designed to measure the value of pleasure (positive end) or pain (negative end) than an action is likely to cause individuals or communities. In more contemporary terms, this can be translated to the crucial question of how can businesses account for the social value of their actions?

In providing a pragmatic set of criteria, Bentham introduced the possibility of tangible standards on how to maximize happiness and avoid unhappiness from the most individuals concerned by a specific action or decision. His proposition could enable what we now call profit and loss as resource allocation frameworks to ensure the efficiency of decision-making, by completing two essential criteria: performance indicators which could be compared over time following a set of tangible standards. Bentham’s proposition was a quantitative one, taking into account seven circumstances, to account for either pain (negative end) or pleasure (positive end): four surrounding value (*intensity, duration, certainty or uncertainty, propinquity or remotes*), two surrounding effects (*fecundity, purity*) and one centered around the number of individuals affected by the action (*extent*). The value for each person involved was then derived from the difference, for each action, between the sum of the pleasure and the sum of the pain. From Bentham’s utilitarian standpoint, not only was it possible to create criteria to assess happiness, but it was recommended to value numerically and quantitatively happiness following what we could align on a form of *social efficiency of decision-making, or social performance of decision-making*. While the impact per action or decision is quantified and calculated, Bentham did not

factor resources into the equation, nor did he separate value-centric (input) variables such as intensity, duration, certainty or propinquity, from effect-centric (output) variables such as fecundity or purity, or from scope-centric variables such as impact extent, which greatly differs from current input-output accounting systems.

Impact Variable	Focus	Associated Metric	Unit	Quantification
Intensity	Value-centric	Intensity of Pain and Happiness?	Posend, derived from “positive end result”	Between 1 & 10
Duration	Value-centric	How long does the pain or happiness last?	Posend, derived from “positive end result”	Between 1 & 10
Certainty	Value-centric	How likely is it that the happiness or pain will occur?	Posend, derived from “positive end result”	Between 1 & 10
Propinquity or remoteness	Value-centric	How soon will the happiness or pain happen?	Posend, derived from “positive end result”	Between 1 & 10
Fecundity	Effect-centric	The probability that the action will produce other pleasures.	Posend, derived from “positive end result”	Between 1 & 10
Purity	Effect-centric	The likelihood that the action will not cause further pain, or that happiness is not followed by pain	Posend, derived from “positive end result”	Between 1 & 10
Extent	Scope-centric	How many people will be affected?	Posend, derived from “positive end result”	Between 1 & 10

Figure 5: Calculating the utilitarian ethical value of an action with the Felicific Calculus thought out by Jeremy Bentham

$$U = \sum_{i=1}^{P_{total}} \int_{t=0}^{\infty} I_i(t) dt$$

Figure 6: Derived algorithm to estimate the utilitarian ethical value of an action with the Felicific Calculus, derived from the work of Jeremy Bentham (source: Mike Sinn, How to Calculate Morality using the Utilitarian Calculator, 2012)

Whether we consider them in terms of consequences, outcomes, ends, benefits, impacts, or externalities, the assessment of decision making's finalities on people in the short and long run are still very much a contemporary issue. Without any access to impact-related data, metrics, variables, qualification or quantification processes and results, decision-making remains partly uninformed, anemic and inefficient, relying on partial (financial) information, since impact and value remain decorrelated. It is especially crucial for benefit-corporations, looking to maximize their decision-making process and optimize their activities. If the question remains the same, what changed is both the vocabulary in itself, and the transposition of an existing problem to corporations which rely on its solution to operate with full efficiency. The consequence of this transposition is the systematic relation established in corporations between impact and value, or impact and valued benefit.

The proposition to create a social performance accounting tool capable to collect, measure, evaluate, visualize or perhaps even monetize social impact data in the same vocabulary (quantification, or using monetization as a unit) as environmental and financial data could appear as a form of pure innovation when taken in an early 2020s context. It is however not only an extension of existing tools with complementary scopes and capacities (such as environment profit and loss and social risk assessments for suppliers and social impact lifecycle tools) but a translation and reiterations of existing propositions from utilitarian philosophers, specifically Jeremy Bentham, looking to relate back morals to action by relating back impact to value.

1.3 Act utilitarian: businesses as benefit-centered ecosystems

Benefit corporations⁹ formats appear as a relatively new solution for businesses to evolve and transition their juridical and strategic models from *profit-centered systems*, accounting for capital flows to guide decision-making, towards *benefit-centered and utility-motivated ecosystems*, accounting for financial outcomes and value creation alongside outcomes on and value creation towards their stakeholders and their environments in order to guide decision-making. This evolution can be traced to both an expanding definition and perceived importance of stakeholders within businesses, and the possibility of integrated accounting to guide decision-making in the short and long run, through the creation of new data management and accounting tools (André, 2012). At the core of benefit corporations appears to be a dual innovation which took roots in the late 1990s, and revived in the early 2010s, based on the possibility of rethinking and valorizing benefit rather than profit through integrated reporting and accounting, and on an extended understanding and valorization of stakeholders.

Benefit corporations rely on a strategy and structural operational model which can relate financial, social and environmental impacts to values, whereas they are performance or monetized values, in order both to access information and to inform decision-makers and guide operations' efficiency and optimization. However, both data collection systems and integrated reporting and accounting frameworks needed to support business models including social and environmental outcomes strategically are partial, controversial and/or in development. In effect, the tools and methodologies available appear to remain uncomprehensive, either not covering value chains uniformly or not covering the full scope of action's outcomes (financial, social and environmental). Benefit corporations can thus still be considered to remain in a state of transition due to incomplete access to impact information, and difficulties to translate impact into value. This enables the question of whether or not benefit corporations fully strategically

⁹ <https://rb.gy/v8ytuz>

integrate impact costs and benefits to linger, projecting at times a schizophrenic or hybrid image (Schlossberger, 2016) torn between *intent* and *reality*.

The critique of benefit corporations as hybrids formats serving two incompatible purposes (Schlossberger, 2016) forms a way to ask oneself again a series of familiar utilitarian questions: what is the utility of a business, could it be translated into what is the *purpose* or *mission* of a business, and towards *which stakeholder*? Can we *create value* towards people through informed decision-making, and how do we *account for it*? How do we *communicate around it*? Seemingly, we had a series of propositions to answer these questions starting in the 18th century. One could infer that the role of contemporary benefit organizations is to “*act utilitarian*” (involving maximizing benefits relative to costs for a given decision-making) while governing bodies should, according to utilitarian thinkers, “*rule with utilitarianism*” (which involves following rules that are established in order to achieve the greatest net positive consequence over time). Of course, this reasoning was not applied to businesses but rather to governing bodies, mobilizing concepts now used in finance and economy: what amounts to efficiency, rationalization, optimization and maximization.

One could argue that the first innovative factor of contemporary benefit corporations is to apply the “*act utilitarian*” rule as the very guiding principle to businesses instead of governments and administrations, and the second being the mobilization of data management and computing tools to systematically access and manage activity outcomes, in a way and in a scope that were previously impossible.

Linking back the utilitarian perspective and corporations’ CSR approaches has been already addressed, but primarily in order to showcase that hybrid business models seemingly meets dead ends in when they deem to link back impact and financial benefit. In her work on CSR, utilitarianism and capabilities approaches, Cécile Renouard (2010) highlights the perceived limitations in using CSR as a “tool to improve the competitive advantage or the financial

performance of a company”. She quotes the works Husted and Salazar (2006) and Jones (1995) who attempted to relate and highlight the possible connection between social performance and financial performance, evoking that the approach is partial by failing to capture the comprehensive social experience of individuals, for instance relational capital, individual freedom and human development (developed for instance in Sen’s body of work). This approach infers that the intent behind integrating extra-financial impact within strategies is solely to better financial performance.

However, we could argue that the goal for benefit corporations through strategically integrating social and environmental impacts in their business model is rather to optimize their performances on the three fronts: social, environmental and financial, as opposed to providing a quantified or monetized justification for financial performance only – intrinsic performance efficiency, rather than monetization for monetization’s sake. In that way, the intent and end-goal for decision-making can be related to outcome and integrated (social, environmental and financial) performance maximization, making impact assessment tool instrumental to organizations’ efficiency. In that regard, the contribution from utilitarianism to management and management tools has not been fully considered: little to no work has centered around the utilitarian contribution when it comes to providing the tools to capture and link back impact and value, through efficiency analysis or resource allocation frameworks (P&Ls).

1.4 Utility-inherited stakeholder theory and value (re)distribution as basis for benefit corporations

By becoming “*forces for good*”, or *acting utilitarian*, that is to say voluntarily as moral or ethical agents, organizations are increasingly meant to control the outcomes they create through their activities on people and their environment. One of the key factors to becoming a benefit corporation is to identify one’s own organization’s stakeholders, a term based on R. Edward

Freeman’s stakeholder’s theory. In 1984, R. Edward Freeman originally detailed the stakeholder theory of organizational management and business ethics that addresses morals and values in managing an organization. His book “Strategic Management: A Stakeholder Approach” identifies and models the groups which are stakeholders of a corporation, and both describes and recommends methods by which management can give due regard to the interests of those groups. Stakeholders, as defined by Freeman, are groups that are either affected by, or can affect the achievement of a firm’s objectives.

In his original model, Freeman identified six stakeholders for firms: government, competitors, shareholders, customers, suppliers and civil society. In 2022, B Lab, the organization which created the B Corp certification, identified six stakeholders for corporations: workers, community, customers, suppliers, investors, and environment. We can consider that four of the stakeholders remained aligned (figure 7, below): customers, suppliers, shareholders (investors), and civil society (community, though it may not constitute an exact match), however two of the stakeholders differ from Freeman’s proposition to B Lab’s: in Freeman’s model, competitors and government were identified as stakeholders, replaced in B Lab’s proposition for workers, and environment.

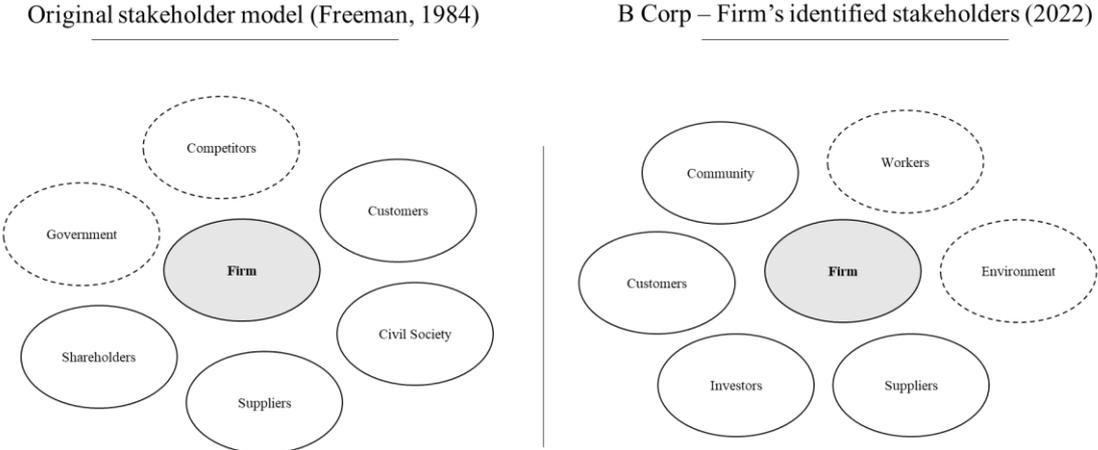


Figure 7: identified stakeholders, from Freeman to B Lab

This evolution, focusing workers and environment and perhaps concentrating on the direct value chain of companies when identifying stakeholders, for the most part aligns with the proposition to identify stakeholders at the product lifecycle level. The UNEP (UN Environment Programme), the Social Life Cycle Alliance and the Life Cycle Initiative, in their 2021 Methodological Sheets for Subcategories in Social Life Cycle Assessment¹⁰ (S-LCA) (2021) identify (figure 8, below) six stakeholders (workers, value chain partners or suppliers, local communities, society, consumers and clients), four of which directly align with Freeman’s and B Lab’s propositions (workers, value chain partners, local communities, consumers). More modern propositions (B Lab, UNEP, Social Life Cycle Alliance and Life Cycle Initiative) hence appear to systematically include suppliers (or value chain partners), clients and workers directly involved in production and product lifecycles (figure 9, see below), and provides societal (children, society, environment) stakeholders to provide a fuller activity outcomes’ picture.

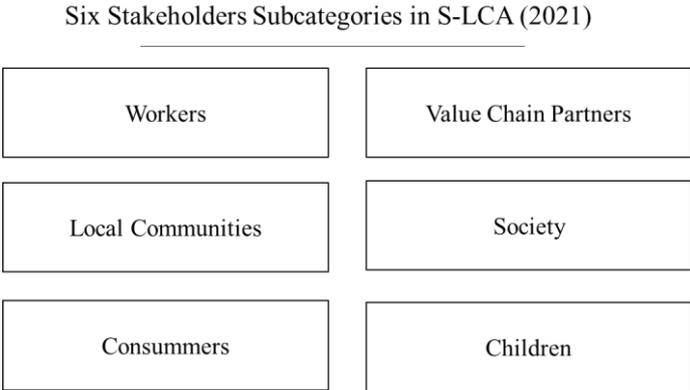


Figure 8: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative’s identification of stakeholders for SLCA (2021)

¹⁰ <https://www.lifecycleinitiative.org/library/methodological-sheets-for-subcategories-in-social-life-cycle-assessment-s-lca-2021/>

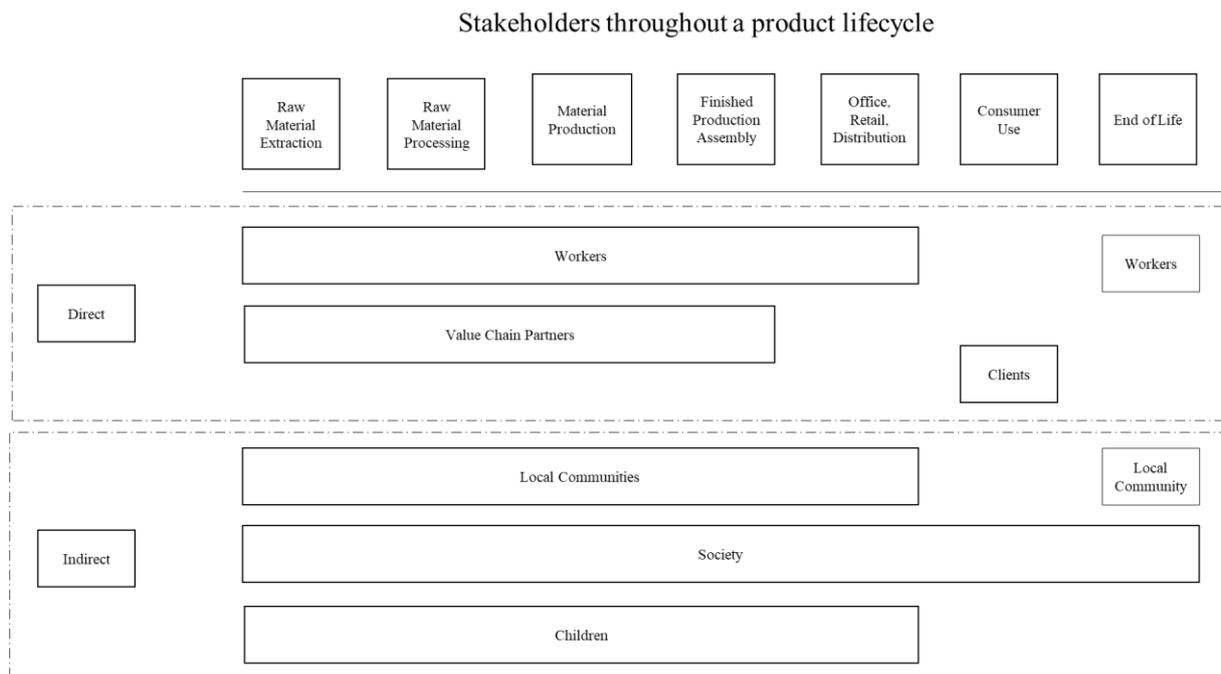


Figure 9: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative's identification of stakeholders for SLCA (2021), placed throughout a product lifecycle

Stakeholders propositions, from Freeman to S-LCA, could be considered as modern expressions of the utilitarian propositions of maximizing social outcomes, by detailing profiles or categories to monitor social outcomes all throughout product lifecycles and activities.

Focusing on the end-goal, or consequences of decision-making from a moral perspective can present two additional factors of alignment with utilitarian perspectives and bodies of work. From the perspectives of Bentham (1832), Hume (1740) and Mill (1843), moral agents should promote overall human welfare by acting in ways that result in the greatest total beneficial consequences minus harmful consequences: a form of “cost-benefit” calculus which applies universally, meaning to all who are affected by a decision, not just an individual or an organization (through corporate profit maximization). Freeman’s view was drawn in opposition to the long-held shareholder theory proposed by economist Milton Friedman (1970), who stated that in capitalist systems, the only stakeholders a company is responsible to, and should account for, is its shareholders - and by extension, the sole focus of a company should be on its own bottom line. Friedman’s view is that companies are compelled, and should be held accountable

to, make a profit, to satisfy their shareholders, and to continue positive growth. Freeman's perspective, however, creates an additional layer to companies' responsibility factor, by relating accountability to ethics and morality.

The stakeholder's theory, at its core, seeks the answer to the question "For whose benefit... should the firm be managed?" (Phillips, 2003) Mobilizing utility-based decision-making, each decision forms an equation which is a source of constant tensions, or which highlights perceived trade-offs between a firm's own interest (bottom line, shareholder's interest coming first), and stakeholder's interests, and systematically involving moral questions while proceeding with resource allocation.

Including stakeholders within a utility-aligned resource allocation equation however means considering the power interplay between stakeholders. Willer, Lovaglia and Markovsky (1997) describe the power dynamic amongst stakeholders as "the structurally determined potential for obtaining favored payoffs in relations where interests are opposed". In that way, power conflicts amongst stakeholders, or moral conflicts from a decision-maker point of view may stem from an allocation of resources which are controlled and concentrated (1), essential to operational performance (2), and have no viable substitutes (3). The question however, remains the extent to which the decision-making when it comes to resource allocation is entirely concentrated, or at least partly shared. Philipps (1997) first discusses the concept of "stakeholder fairness" (drawing, amongst others, on the perspective of Rawls (1964)), stating that "obligations of fairness" are created whenever parties accept benefits of a mutually beneficial cooperative arrangement and is a primary form of legitimacy. Philipps (2003) further introduces the notion of derivative legitimacy, a form a legitimacy generated from a stakeholder's group's power to affect a firm and its stakeholders (which could apply to activists, civil society, and non-profit organizations for instance).

In that way, if the stakeholders theory is aligned on utilitarianism in that it seeks to always maximize benefits for most people who are concerned by a given decision-making process, then moral obligations are “central to our stakeholder’s culture construct” (Jones, 2007), and by extension central to benefit corporations models and processes. The controllable scope for benefit corporations includes not only its activities, but also stakeholders and their environment, progressing from a profit-driven *system*, to a utility-motivated *ecosystem*. This ecosystem is impacted by each decision, making a firm responsible and accountable for their resources allocation at all times, creating the need for a panoramic and systemic view of the activity scope, directly and over time. This creates a direct justification for firm’s accountability for their activities’ outcomes on their stakeholders and their environments, and a further need for accounting business tools to control and monitor the outcomes of activities beyond a restrictive notion of profit and losses.

In the extended outcome (impact, and utility) equation, it then appears essential to clarify stakeholders and their relation (or access) to power and resource allocation in order to provide a fair, or moral, utility-based decision-making process. The notions of “fairness”, “justice” and “justifications” ever-present and relevant for benefit corporations business models could be a product and heritage from utility-thinking, with two major differences explored with stakeholder’s theory: morality (and by extension responsibility and accountability) is volunteered, and monetary or financial value creation is central: when shared fairly amongst stakeholders, it represents a fair and mutually beneficial scenario in theory. In that way, beyond mobilizing the notions of equity and performance, businesses integrating utility-thinking and stakeholders’ accountability and focus create a basis for thinking about fairness in terms of value distribution, and value redistribution amongst stakeholders, with value allocations scenario ranging from fair (distributed, and redistributed) to unfair (centralized). The moral role and obligation of benefit corporations is then to (1) control how value is distributed amongst

stakeholders and (2) control and anticipate how to redistribute value amongst stakeholders in order to maximize benefits for all. In a discussion regarding the new roles for corporations, DEAL (Doughnut Economics Action Lab)¹¹ states that companies should consider “a way of thinking to bring about the regenerative and distributive dynamics this century (21st) calls for”. In that line of thinking, efficiency amounts to value fairly distributed amongst stakeholders per resource allocation and production. We can then hypothesize that utility-based modern equations, such as a social or environmental profit & loss approaches, in their intrinsic link to both morality (control, accountability and fairness) and performance efficiency as end goals, are a heritage from a utilitarian perspective, and would benefit from clarifying their own features in order to further facilitate solving the reiterations of ethical, or justice problems.

1.5 Fundamental evolutions from utilitarianism

Based on our research, we hypothesized that benefit corporations aligned on utilitarianism based on four factors: the organization acts as a moral agent (1), monitoring outcomes on stakeholders (2), maximizing positive outcomes as a factor of decision-making efficiency (3) and using performance accounting in order to evaluate social outcomes (4).

We also highlighted four factors which translate an evolution from utilitarianism: corporations acting as moral agents (1), monetary value as the main resource to allocate (2), fair value distribution and redistribution to maximize efficiency or positive impacts (3), and the possible use of data computing and visualization tools to facilitate data evaluation and decision-making processes (4), (see figure 10, below).

¹¹ <https://doughnuteconomics.org/>

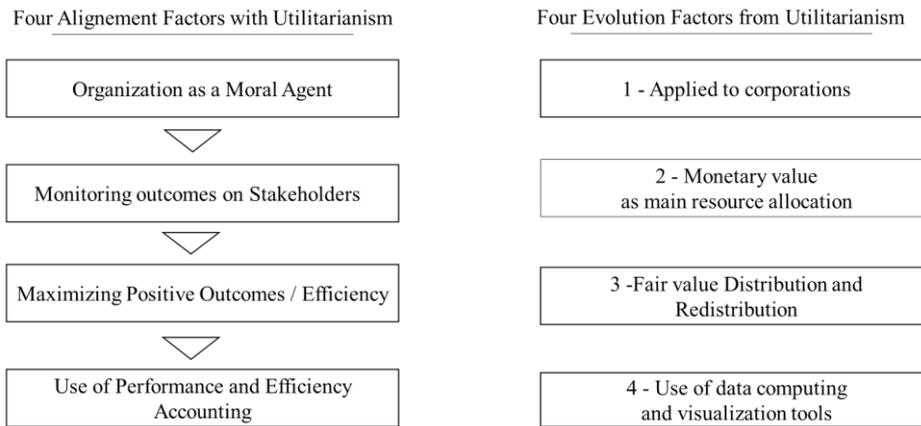


Figure 10: benefit corporations factors of alignment and evolution from Utilitarianism

In that way, we can hypothesize that the utility equation is the very basis for benefit-oriented business models seeking to strategically integrate social and environmental impact, and to maximize the positive impacts of their decisions on their stakeholders and the environment. The utility-inspired equation can be translated to the two questions which formed the background for the brand Chloé’s Social Profit & Loss approach: (1) How can we measure, evaluate and highlight positive social impact? and (2) How can we maximize resource allocation while including social impact within a profit & loss format? Recognizing the heritage from utilitarianism hence provided the context for both the creation of the SP&L approach and for its integration within the evolutive benefit corporation model seeking to strategically integrate social and environmental impacts within their strategies and decision-making processes. However, recognizing the evolutions from utilitarianism also means highlighting the specific difficulties linked to adapting the utility model to corporations: throughout our second chapter, we will analyze the basis for perceived decision-making tradeoffs, the integration of externalities, the use of performance data, distribution and redistribution theories and scenari, and inclusive decision-making formats.

2. Integrative accounting and accounting formats: evolutions and critical perspectives

In the previous chapter, we analysed the fundamental influence the utilitarian perspective had over current benefit corporations, and over the SP&L as a possibly instrumental mechanism for impact managing. We further made a proposition to link back utilitarian felicific calculus to modern integrated accounting. We hypothesized that one of the main evolutions from utilitarianism is the translation of utility-based thinking from government towards corporations. In this chapter, we further hypothesize that monetary value creation being the main leverage for corporations, there are two ways to integrate for a company to “act utilitarian” and integrate utility-based thinking: one (1) is controlling the positive outcomes of their activity to maximize their positive outcomes and minimize their negative outcomes towards stakeholders and their environment, and the second (2) is using resource allocation and targeted investments to create value for shareholders, stakeholders and their environment. As in the case of felicific accounting, control over outcomes in order to maximize the benefits from decision-making can be achieved through the use of accounting frameworks, or in other words, accountability is achieved through the use of accounting tools.

In this chapter, focusing on impact accounting, we will analyse the main rationales for creating and maintaining accounting tools, (2.1), develop the existing perspectives on value accounting when it comes to social and environmental impacts (2.2), provide a thematic overview of critical perspectives on impact-related accounting, (2.3), and analyse the interpretations and uses of P&L frameworks, providing a case study on the EP&L (Kering’s Environmental Profit & Loss approach) and on the SP&L (Chloé’s Social Profit & Loss approach) as two interpretations of a P&L framework (2.4).

2.1 The main rationales for integrative accounting tools

In the conclusion of their editorial in the 23rd volume of *Critical Perspective on Accounting*, McKernan and McPhail (2012), stated that “Accountability is after all an invention of modernity”. Which characteristics associated with modernity could have been a fertile soil both for the development of accounting tools and for their systemic use? We develop three hypothesis: first, the use of instant randomization enabling evolution monitoring processes in modern science (based on Deleuze, 1981) (1), secondly the use of accounting as a “technology of rule” (Rose, 1991) for democratic systems and related organisations (2), and thirdly the possibility for men to both “made calculable” (Miller, 1992, based on Nietzsche, 1887) and accountable (3). After exploring those three hypotheses, we will discuss the consequences of normative, or action and utility-focused value creation accounting when it comes to accounting for corporate activities’ outcomes on people and their environment (4).

In 1981, during his class on Bergson, Cinema and Movement, Deleuze stated that modern science “was born from the moment it said: movement must be defined from any, or random, instants [as opposed to privileged instants, or *thesis*] (...) This means you cannot analyse an instant by considering it privileged compared to the next instant, or in other words, a random instant is an instant equidistant from another.” What is discussed by Deleuze regarding cinema and its relation with movement, could be applied to the invention and popularization of accounting tools for management. In this way, modern science would be linked to the possibility of instant randomization and instants’ equidistance, making it possible to access, compare and monitor decision-making and resource allocation’s outcomes over time. Modern science, and modern management, would thus rely on the possibility of accounting for changes and evolutions during a given time period, based on the hypothesis that every instant is equidistant and can be randomized. This would in turn provide a strong rationale for the creation and popularization of accounting tools.

Beyond considering instants as random and equidistant, what could make accounting both an invention of modernity and the preferred form of outcomes monitoring for contemporary businesses, could be its use to as a “technology of rule” (Rose, 1991) to govern and manage democratic systems. Rose (1991) analysing the case of National Income Accounting in the eighteen-century in the US, and based on previous studies (*see* Buck, 1982, Cline Cohen, 1982, and Foucault, 1979) demonstrating the relation between numbers and politics, explored the specifics links between democracy, a mentality of government, and accounting, defining democratic power as “calculated power, calculating power and requiring citizens who calculate about power”. In this way, the historic use of accounting as control and monitoring system to govern in democratic systems could partly explain its relevance today, for both government bodies and corporations.

Requiring “citizens who calculate about power” (Rose, 1991), as well as “calculable selves” (Miller, 1992) could be the third factor of the emergence of integrative accountability within modern democracy and organizations: social impact can be measured, citizens can self-regulate, and citizens are responsible, and held accountable, for their behaviours which is monitored directly and over time through accounting technologies. In their Editorial “Accountability and Accounterability”, McKernan and McPhail (2012) discuss Miller’s (1992) analysis of “calculative technologies of accountancy” capacities to create “calculable selves” and “calculable spaces”, based on Nietzsche’s (1887) work on the emergence of accountability. Nietzsche hypothesized the precondition of the emergence of responsibility, the capacity for promising and accountability, is that man can be “made calculable”, or in other words that social impact and human experience can be both measured and monitored. For Miller, this means that calculation is instrumental “to the production of sovereign subjects capable of bearing responsibility and accountability”, shaping an “accountable self”, capable of responsible self-governance, being “brought into existence through the calculations that

accorded it visibility”. Hoskins (1996), identified accountability as “the quantified evaluation of human performance”, finding the first “human accounting” to have emerged around 1800 while “human performance becomes the object of accounting”, measuring “targets”.

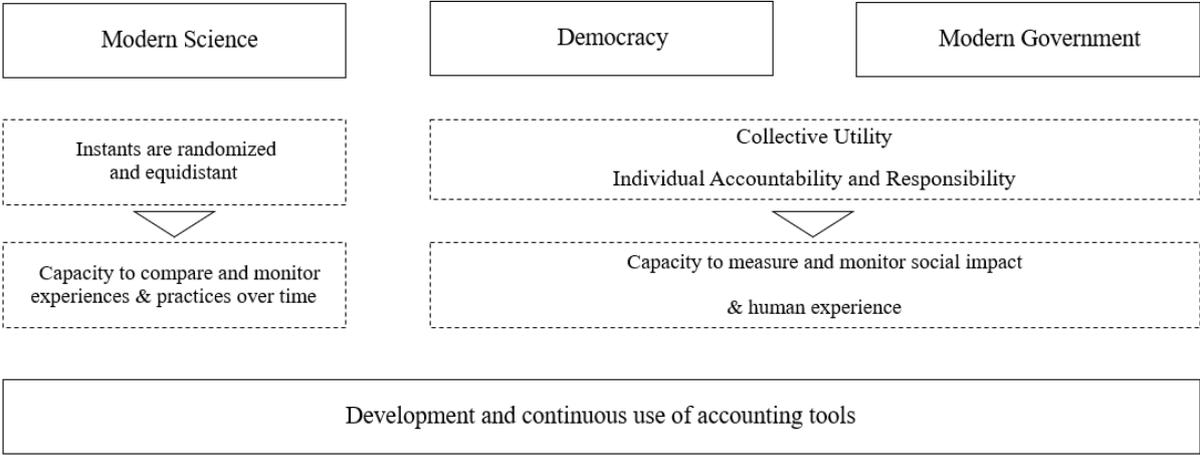


Figure 11: hypothesized pre-conditions for the development and continuous use of accounting tools

2.2 Perspectives on impact accounting and value creation

The evolution with businesses becoming “benefit corporations” and acting as moral agents or “forces for good” (term used by B Lab, managing the B Corp certification for corporations), could be that businesses become agents who both “calculate about power” (Rose 1991) and become in a same movement “calculable selves” (Miller 1992), voluntarily being held accountable for their behaviour, and requiring accounting tools to explicit the results of their activities, while using value creation as their main leverage. The benefit corporation’s vision could a normative, “purposive action”-based (Bryer, 2014), or in other words a utility-based vision focused on the outcomes of decision-making and resource allocation. Gray and Milne (2015) state that “the point in social and environmental accounting research is that it is what you do (i.e the selected problem/issue focus) that matters. How you do it (assuming you do it well) is, at least, relatively unimportant and possibly even largely irrelevant”. The point of accounting tools applied to benefit corporations could then focus entirely around the efficiency

and utility, and to estimate the degree of alignment of the results with both the purpose the corporation has set for itself and publicised. However this would mean extending the resource allocation framework to include the outcomes on stakeholders, and their environment.

Critiquing Daniel Thornton's 2013 paper on green accounting, Deegan (2013) states that there is a "widespread but not universal acceptance that organisations should provide accounts of not only their financial performance, but also of their social and environmental performance", new data entrees mobilizing "a traditional financial reporting framework": "there have been various suggestions across time that traditional financial reporting frameworks, albeit with some modification, have relevance to calls for greater corporate accountability". In 1993, Thornton demonstrated the difficulties of mobilizing a traditional double entry system to account for environmental and social effects caused by corporations. "The role of accountants" that Deegan criticizes in his work would seemingly be to integrate social and environmental impact within resource allocation analysis by accounting for it, as the "underlying premise" of accounting is "that if accountants do not measure something then it effectively does not exist". Deegan in his work recalls that in 1992, the same year as the Earth's Summit, the European Union released "Towards Sustainability", as part of a Fifth Action Programme, suggesting for the accounting profession to have a role in implementing costing systems internalizing environmental costs, calling for "a redefinition of accounting concepts, rules, conventions and methodology so as to ensure that the consumption and use of environmental resources are accounted for as part of the full cost of production, and reflected in market prices" In this way, if the responsibility of organizations as moral agents is to account for their outcomes on people and the environment, the role of the accountant, which Deegan criticizes, is to calculate and integrate those new outcomes within existing financial accounting framework, therefore making impact management both evident and strategic in a same movement.

Mobilizing existing financial accounting framework means translating outcomes in terms of value creation or destruction. In “The Normative Origins of the Positive Theories” Tinker (1982) remarks that “accounting deals primarily with the question of value”. The traditional proposed basis for the evaluation of outcomes utility, or purposive action, is through quantitative performance and value distribution efficiency analysis, which require accounting tools developing “a double entry-perspective of value creation, i.e to count not only its profits (as been abundantly done by its promoters), but also its losses (a question which has rarely been addresses) (Bourguignon, 2005). This constitutes the very rationale for the creation of social, or environmental profit & loss accounts, as updated formats for utility and performance efficiency accounting.

Deegan (2013) provided in his article an overview of the solutions developed by “mainstream positive research” when it comes impact accounting, or investigating “the link between social and environmental performance”. The first segment is researchers who explored the impact of management accounting and control systems on environmental practices and operational performances (Gomez-Conde et al, 2019) in order to have additional insights into the possibilities for corporations of benefitting from environmental management systems (Feng & Wang, 2016). A second segment of research has been dedicated to better understand the possible correlations between environmental performance and productive efficiency (Burnett & Hansen, 2008).

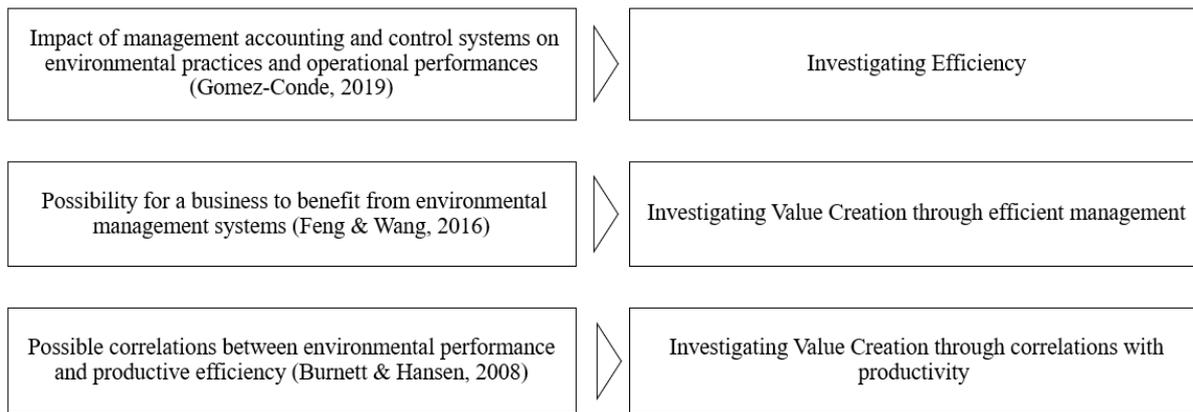


Figure 12: Environmental value creation investigations from positive research, based on Deegan (2013)

Based on Deegan’s overview, we can hypothesize that there are four kind of ways accounting approaches have been mobilized to assess value creation when it comes to social and environmental corporate activity outcomes (see figure 13, below): negative outcome monetization or risk factor monetization (1), operational efficiency (direct performance and value creation over time) (2), over time value or targeted investment value creation (3), and intrinsic innovation value forecasts (4).

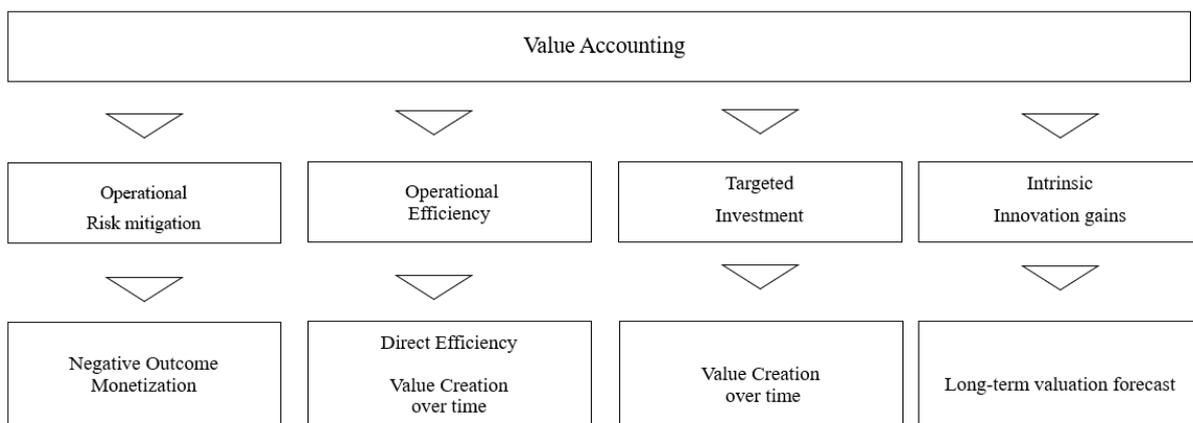


Figure 13: value accounting hypothesis for social and environmental outcomes

Deegan states that the proposed solutions are “grounded in the traditional understandings of financial accounting and have taken the form of revived versions of full cost accounting or double-entry bookkeeping (Thornton for instance), and the evaluation, depreciation, and capitalisation of natural ‘assets’”. In 1992, year of the Earth Summit, the main “impact” focus

seemed to be on environmental impact, with the necessity to monitor and mitigate environmental outcomes, relating activities with risk factors on a given ecosystem. In this case, we can hypothesize that an efficient decision would equal a decision which limits the risk of impacting negatively, or distressing, ecosystems.

The case for accounting for social impact in terms differs from its environmental counterpart, as it opens the possibility to account for shared value creation amongst stakeholders (through value distribution and redistribution), through pricing, through targeted investment for one or more stakeholders and monitored over time, and/or monitored using performance efficiency factors (*see* figure 14, below).

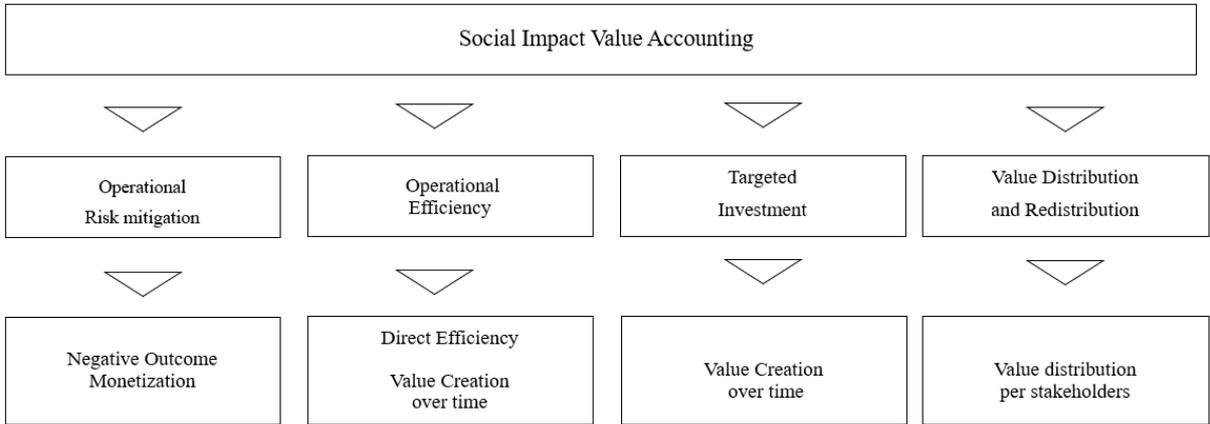


Figure 14: social value accounting hypothesis

Currently, a set of methodologies are in test or in use in order to provide corporations a basis to account for, and/or value their social and environmental outcomes. We adapted Stroehle and Murthy (2018)’s proposition regarding the existing frameworks for multi-capital accounting, reporting and valuation, in order to provide a typology of the methodologies in use, and of their link to valuation (*see*, figure 15, below).

Methodology	Quantification or Valuation Approach
Integrated Reporting	Qualitative and quantitative information
Triple Bottom Line	Measures are tracked annually in absolute units
Impact Valuation	Use of a valuation coefficient based on existing market prices or costs to society
Integrated P&L	Adjustment of traditional financial P&L along the value chain. Use of valuation coefficients to revise the P&L by adding material monetized values.
Mutual P&L	Cost-based technique, built on financial investments within a project-based business intervention.

Figure 15: Current activity-based social and environmental accounting and valuation options

Out of the five methodologies mobilized in this typology, two (integrated reporting and triple bottom line) do not require valuation nor monetization, as measures are tracked in absolute units for social and environmental outcomes. The goal is to provide a systematic overview of social, environmental and financial outcomes at the activity level, without mobilizing outcome translation coefficients. The purposes of integrated reporting and triple bottom lines are often transparency and communication-oriented. The three other methodologies within this typology (impact valuation, integrated P&Ls and mutual P&Ls) mobilize a form of valuation process. Impact valuations mobilize a valuation coefficient based on either existing market prices, or costs to society. They are often associated with human rights or environmental risk factors. Integrated P&L constitute form an updated version for traditional financial P&Ls, covering outcomes throughout the value chain, mobilizing valuation coefficients to translate outcomes into monetary value in order to revise the P&L format by adding material monetized value. Lastly, Mutual P&Ls are focused on valuing the outcomes of project-based and financial investments, mobilizing a cost-based technique. Mutual P&Ls aim to provide an estimation for the level of added-value per investment. Those three approaches appear to be aimed at

translating outcome into value, and to be essentially internal resource allocation frameworks, rather than communication-driven frameworks.

The main two valuation propositions (*see*, figure 16 below) are (1) the net-present value of non-financial capital for integrated P&L and Impact Valuation propositions and (2) the estimated cost of investment for corporations to maintain non-financial capital, mobilized for Mutual P&Ls.

Methodology	Specific Valuation Approach
Integrated P&L Impact Valuation	Net Present Value of non-financial capital for external stakeholders
Mutual P&L	Cost of Investment for firm to maintain non-financial capital

Figure 16: Specific valuation approaches for the EP&L, Impact Valuation and Mutual P&L

None of those frameworks however currently actively account for potentially positive impact, creating a gap in the impact spectrum. In the case of social impact, many factors of potentially positive impact occupational factors could be measured, such as training, job quality, gender equality, well-being, diversity and inclusion, and the payment of living wages. However, as valuation options are risk or cost-to-society-centric, valuing potentially positive impact would require a different outcome translation proposition. Social impact, though it constituted the initial focus for utilitarian theories and models, has not been the prime focus when adapting accounting in the 1980s to integrate externalities, but perhaps offers a promising case study for linking back value creation and utility, through operational efficiency, capacity-building targeted investments, and value distribution and redistribution amongst stakeholders (*see*, figure 14). In that way, we can consider that the possibility to account for positive impact when it comes to social impact, beyond risk mitigation and negative impact monetization, offers new possibilities when it comes to adapting accounting frameworks, assessing and optimizing value

creation by ensuring its distribution amongst stakeholders. Those hypotheses were tested while implementing the Social Profit & Loss Approach (part IV).

2.3 Thematic overview of critical perspectives on impact-related accounting

“*You too can have a critical perspective*”: this slogan appeared on badges handed out at conferences by Tony Tinker and David Cooper to promote their journal, *Critical Perspectives on Accounting*. The many contributions throughout the years highlight that far from being a neutral form of measurement and communication framework, accounting frameworks as objects, and accountants by extension, were, and are, the topic of active discussions. In 2015 Morales and Sponem created an overview, itself published in *Critical Perspective on Accounting*, of those critical contributions. Based on our own reading of publications in the journal, and on the work of Morales and Sponem, we sorted the critical contributions into four sections, based on their focus (*see*, figure 17 below): (1) critique of the variability of terms and concepts mobilized in accountability frameworks, (2) the lack of representation for stakeholder’s imbalance in accounting, (3) the gap between experience and representation and (4) the role of accounting in the over-regulation of stakeholders.

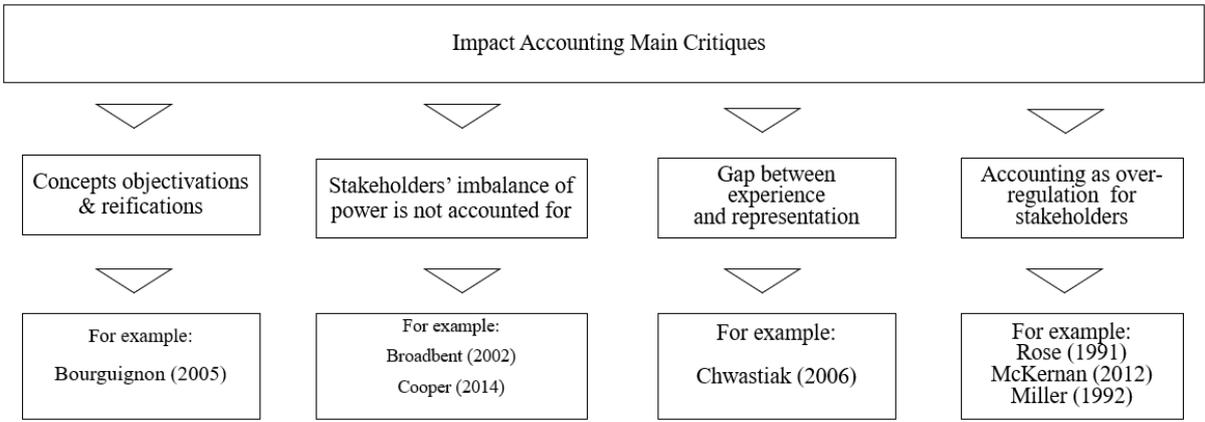


Figure 17: Main critiques of impact accounting, based on Morales and Sponem (2015)

The first range of critiques concern the apparent objectivation and reification of concepts mobilized in accounting frameworks. If language is a symbolic medium through which we represent and simultaneously create the world we live in (Potter 1996, McLaren, 1997), the term value could prove to be both normative and biased towards a managerial vision. Cousins and Sikka further stated that “information is never neutral as it is shaped by prior definitions and ideologies.” In that way, the representations resulting from accounting processes could by themselves form a political act, in that they produce particular understandings that limit subject positions (McLaren and Giroux, 1997). Bourguignon (2005) for instance contests the appearing objectivation and neutrality of value creation, amongst other terms of the profit & loss frameworks and equations. Doing so, she mobilizes the Marxist concept of reification as a shift from subjectivity to objectivity. Bourguignon assesses that the reification of P&L concepts and terms serves a normative purpose (which we can translate to making terms objectives in enable an equation which serves action). However, the “reification” process enables the “masking (of the) real world in order to maintain it”. In other words, if serving a politicized perspective, the profit & loss equation, and the value equation cannot be neutral, but are treated as such to justify decision-making. The work of Kaplan and Norton (1996) showcases that terms can vary depending on stakeholder’s perception, first and foremost “value” as an equation term and concept. Kaplan and Norton’s value scoreboard focused on the customer’s perception for value, and on the need to deliver the value propositions that will attract and retain customers in targeted market segments. Terms of accountability frameworks and equations can be simplified and appear neutral in a way that serve the vision of governments, accountants, management, with the risk of translating only one interpretation of value propositions fitting a top-down vision.

The second range of critique for integrated accounting lies in the absence of representation for stakeholder’s imbalance of power. Cousins and Sikka (1993) stated that accountability comes from all production being a co-operative and social effort which creates numerous social

interdependencies”. However, resource control is usually centralized amongst “few hands”. Cousins and Sikka thus highlight the tendency of accountability to “affect the discretion and autonomy of those who are in position of power”, furthering by itself an imbalance amongst stakeholders. For Cousins and Sikka, pragmatically, the prioritization of social concerns can serve that purpose. Further, Morales, quoting Broadbent (2002) states that “critical accounting must be questioning of the particular power of any group to define what is appropriate”, by defining the terms or the use of accounting tools. Cooper (2014) advises that critical research on accounting must strive to highlight and to clarify the political, social and human complexities of accounting institutions and thus “reintroduce the political interests of agents in the analysis” (Morales, 2015).

The third range of critiques towards integrating accounting appear to focus on the gap between stakeholder’s experience and the experience’s representation within accounting frameworks. Chwastiak (2006), for instance, criticized the appearing rationality of performance measures in their lack of representation of reality, stating that managerial accounting has contributed to disciplining labour by elevating instrumental rationality. Chwastiak’s paper demonstrated the consequences of this instrumentalization through two gaps from reality: first by examining the role planning, programming and budgeting played in changing visibilities in the Department of Defense in such a way that the U.S. leaders believed that the Vietnam War could be won through the proper management of resources. Secondly, in demonstrating how this representation of the war clashed with the U.S. soldiers’ experience of combat. In doing so, Chwastiak demonstrated the limitations of accounting processes to provide a source of rational support in managing a war. Chwastiak also demonstrated the risk of measuring performance in situation of crisis, a process which in this case created unintended negative consequences.

The fourth range of critique focuses on accounting as an over-regulation of stakeholders. Miller (1992) stated that calculative accountability is about controlling the future, and making the

future an extension of the present: “the calculative technologies of accountancy seek to render the future knowable, calculable, and amenable to control. Many of the routine calculations of accountancy bring the future into the present”. Based on contributions from Foucault (*On Governmentality*, 1979), and Derrida and Stiegler (1996), we can hypothesize that from a critical point of view, the main use of accountability is first to control, and secondly to provide certainty and rationally anticipate outcomes, making it impossible to, as Derrida wrote, “leave the possibility of the future open” for stakeholders, and more generally for individuals. Rose (1991) stated that “Democracy, in its modern mass liberal forms, requires numerate and calculating citizens, numericized civic discourse and a numericized programmatic of government”.

In that way, many authors provided critical positions on accounting, and particularly integrated accounting, highlighting the illusion of neutrality when it comes to the terms of accounting equation, the inner power imbalance in which stakeholders got to choose the terms and mobilize the results, and the dual risk in over-using accounting formats: first over-regulating individuals which accounting and utility formats aim to serve, and secondly providing counter-productive results as the results of gaps and bias in the equation and analysis. However, in their recent work, Bigoni and Mohammed (2023) affirm that critiquing accounting is by itself unsustainable, as it nourishes rather than combats the systems in place accounting formats serve, or in their own words “In the Anthropocene, there is no critical perspective on accounting that does not act to facilitate global ecological collapse.” Quoting Wright and Nyberg’s text *Climate Change, Capitalism and Corporations* (2015), Bigoni and Mohammed highlight a diametrical opposition between capitalism and the notion of global ecological sustainability, as “capitalism is a class form of society given over to the perpetual production of surpluses” (Harvey, 2010, p. 166). Their main argument relies on the fact that, as Deleuze and Guattari (2000) stated “capitalism is capable of carrying to a certain point its own critique – that is, the critique of the

processes by which it re-enslaves what within it tends to free itself or to appear freely”, while historically accounting itself as played a pivotal role in the birth and development of capitalism (Chiapello, 2007). Bigoni and Mohammed suggest that critique is in itself a part of capitalist processes, and given the “inextricable imbrication of accounting and capitalism (...) all notions of sustainable accounting are exercises in futility that serve rather than abate ecological collapse”.

2.4 Interpreting P&L frameworks: the EP&L and the SP&L

While many researchers focused on analysing the uses and evolutions of P&L frameworks, for instance their capacity to integrate social and environmental factors, few researchers focused solely on analysing the key features of a P&L, and on its possible interpretations. Before focusing on new reinterpretations of the P&L framework, including Kering’s Environmental Profit & Loss Account, and Chloé’s Social Profit & Loss Approach, which this research work actively participated in creating, we will first attempt to define the main features and possible rationales for P&Ls.

In their analysis of the Profit & Loss account as a major tool to assess a company’s performance, Zuca and Tinta (2012) stated the results of a company represent for managers a way to measure efficiency: recorded results are noted in a P&L framework which role is to provide a rationale for the results (1), and provide a rational basis for decision-making (2) in order to coordinate business activity. In that way, we can hypothesize that a P&L is an accounting tool, both in its capacity to measure efficiency, but also in its capacity to narrate and explicit the rationales for the corporate results.

Zuca and Tinta emphasize the traditional role of the P&L as a financial statement which allows the highlighting of “partial results of the three main activities (exploitation, financial, and extraordinary)” as well as aggregate activity results. Zuca and Tinta insist on two concepts: one

on hand, performance, and on the other, efficiency. Performance can be measured with a set of indicators and rated criteria (traditionally profit, profitability, growth factor and brand image), however the indicators are set at the discretion of businesses and can vary from organization to organization. Man and Gadau (2010) analysed two propositions for framework standardization: the IAS 1, and the IV Directive of EEC. They showcase how each of the propositions can be interrelated through different approaches, for instance classifying the expenses by nature, or by function (*see* below, reproductions of Man and Gadau’s analysis):

The profit or loss of the exercise, with the classification of the expenses by nature	The profit or loss of the exercise, with the classification of the expenses by function	The simplified form list of the profit and loss account, with the classification of the expenditures by their nature	The simplified form list of the profit and loss account, with the classification of the expenditures by their functions
Incomes Other incomes The stocks variation Immobilized production Consumption of raw materials and consumables Personnel expenses Expenses regarding the depreciation The corporal immobilizations depreciation Other expenses The financing costs The percent of profit of associated enterprise The profit before taxation Income tax expenses Profit or loss from continuing activities Profit or loss from discontinuous activities The profit or loss of the exercise	Incomes Cost of sales The gross margin Other incomes Distribution costs Administrative expenses Other expenses The financing costs The percent of profit of associated enterprise The profit before taxation Income tax expenses Profit or loss from continuing activities Profit or loss from discontinuous activities The profit or loss of the exercise	The net turnover The stocks variation of the finished goods and the production in progress The exercise production Other operating incomes Operating expenditures Adjustments of value of the tangible, intangible immobilizations and circulating assets Other operating expenditures Incomes from participating interest, from other investments, and loans Receivable interest and other similar incomes Payable interests and other similar expenditures Profit/loss of the current activity Extraordinaire incomes Extraordinaire expenditures The result of the extraordinaire activity Income tax The result of the financial exercise	The net turnover The cost of sales Profit/loss The distribution cost (including the depreciations and the provisions) General administrative expenses (including the depreciations and the provisions) Other operating incomes Financial incomes Financial expenses The income tax of the current profit of the exercise The net profit/loss of the current activity Extraordinaire incomes Extraordinaire expenditures

Source: International standard IAS 1

Source: The IV Directive of EEC

In their own work, Zuca and Tinta synthesized two visions of a P&L: the French Model and the Anglo-Saxon Model, with the French Model focusing on detailing concept of production’s items and the nature of expenses, rather than creating a P&L model solely focused on sources of income and function-classified expenses, as it is the case in the anglo-saxon model. (*see*, figure 18 below). As in the dual propositions by Mau and Gadau, the drawn line for the listed items depends on either the nature of expenses (French P&L Model) or on their function (Anglo-Saxon model).

P&L Model	Main Features
French P&L Model	Concept of Production (sold one, stocked one, capitalized one) Nature of Expenses (intermediate management balances, highlighting the value division amongst stakeholders)
Anglo-Saxon Model	Based on sales as a sole source of income Expenses are classified by function

Figure 18: French and Anglo-Saxon P&L Models main features, based on Zuca and Tinta (2012)

The focus on listing the expense items however can sum up a P&L to a list of monetized expenses. We hypothesize than rather than looking at the list of expense items, one can look at a P&L from its intended use’s perspective: a resource-allocation performance analysis to guide decision-making.

The three main features of a P&L analysis are often a version of the following three steps: cost analysis, revenue analysis, and margin analysis. The main purpose of a P&L is often to detect factors of performance, or underperformance in order to guide future decision-making and associated resource allocation. We can translate the main three steps in terms of efficiency in the following way (*see* figure 19, below): analysing costs, or detailing resource allocation (1), analysing revenue, or analysing the adjusted efficiency of resource allocation (2), and analysing margins, or analysing the efficiency of value distribution or redistribution (3).

P&L Stage	Associated analysis to monitor performance
Analyze Costs	Resource Allocation Detailing
Analyze Revenue	Adjusted efficiency of resource allocation
Analyze Margin	Efficiency of value distribution and redistribution

Figure 19: P&L stage and associated type of performance analysis

We hypothesize that, rather than a list of monetized items, the P&L is a performance-centric narration tool aimed at clarifying the efficiency of each resource allocation. Its item format, which can be standardized enables interpretations in order to guide decision-makers in the most efficient and tailored way. With those perspectives in mind, we now aim to address two reinterpretations of the P&L: Kering’s EP&L¹² (Environmental Profit & Loss Account) first

¹² <https://www.kering.com/fr/developpement-durable/mesurer-notre-impact/notre-ep-l/>

published in 2013, and Chloé's SP&L (Social Profit & Loss Approach), inspired by Kering's EP&L proposition and published in March 2023.

The EP&L, a collaboration of the luxury group Kering with the brand Puma, then owned by the Kering Group, was open-sourced in 2013 and constituted a pioneering proposition within the fashion and luxury industry. Kering's EP&L (Environmental Profit & Loss Account) constituted the first step towards integrated accounting. The methodology covers six environmental outcomes, assessed throughout brand's supply chains and operations. Using valuation coefficient, the environmental outcomes are then translated into financial data, which is then included within an extended financial P&L, now revised to include materiality value. Chloé's SP&L (Social Profit & Loss Approach) was created to complement and mirror two existing approaches: first, complementing the SP&L in assessing the social outcomes of brand's activities, and secondly social auditing, a process which assesses the level of social risks within brand's supply chain, which the SP&L as methodology meant to complement by assessing potential positive social impacts (beyond risk, and beyond legislation).

They are many factors of convergence between EP&L and SP&L, starting with the analysis scope: both approaches cover their activity scope (supply chain and operations), enabling a performance visualization for activities and for products. Both approaches were created in order to enable integrated reporting (for transparency) and accounting (for resource allocation and decision-making). Lastly, both approaches were created in order to monitor internal resource allocation, and to progress towards systematically integrating social and/or environmental outcomes within decision-making processes. Those four factors of convergence are schematized below (*see*, figure 20, below).

1. Strategic aim	Optimizing resource allocation Strategically integrating impact
2. Scope	Cover supply chain and operations
3. Outcome Visualization	Activity, products, materials
4. Framework integration	Integrated Reporting (Transparence, Communication) Integrated Accounting (Internal performance analysis)

Figure 20: four factors of convergence between the EP&L and SP&L approaches

The first key difference between the two P&L approaches lies in its main object. The EP&L addresses six factors of environmental impact: Co2 emissions, water consumption, water pollution, soil use, air pollution and waste production. The SP&L addresses factors of positive social impact, for four stakeholders, and assesses, for instance for workers (both for direct and indirect employment) occupational job quality, gender quality, training offer, well-being offer, diversity and inclusion, and the payment of a living wage (a wage covering the essential need of a worker's family).

Beyond the social or environmental focus, the difference lies in the difference between a risk mitigation (or cost to society) approach and a value creation approach, which constitutes the second key difference between both P&L approaches. For risk valuation, an insurance-based (for instance health could be monetized using DALYs – loss of human life, which is then monetized aligned on the estimation of the cost of a year in a life provided by the OECD) process can enable a monetization through the use of a valuation proxy or coefficient. However, we hypothesize when it comes to positive impact valuation, the main way to value is through assessing the efficiency of resource allocation, monitored capacity-building and the monitoring of targeted investments over time (*see*, figure 14). Associating positive impact and value

creation is thus addressed in the SP&L in three ways: (1) assessing direct efficiency, (2) monitoring efficiency over time in correlation with other performance factors for targeted resource allocation and (3) as in mutual P&L, valuing the efficiency and dynamics of investment-based projects over time.

The third key difference between the two approaches is the use (or lack thereof) of secondary data and estimations. While in order to provide monetization, the EP&L relies on valuation coefficient and at times on industry proxies, the SP&L only relies on primary data, obtained through a supplier and internal data collection process, and authenticated through a tier-led data verification process. This difference is key in the choice and use of valuation processes.

The fourth, and perhaps main, key difference is the interpretation of a P&L as a framework. The EP&L focuses on monetizing cost-to-society and risk mitigation through coefficient valuation in order to directly integrate environment outcomes to the existing financial accounting framework. The SP&L approach focuses on clarifying the efficiency of resource allocation through first and foremost translating social outcomes into performance degrees, in order to complement and adjust the existing performance P&L factors, mobilizing valuation in midterm and long-term analysis. This choice was made first and foremost to systematically integrate social impact within performance analysis, within resource allocation analysis and in this way, within decision-making processes, clarifying the social utility of each choice, enabling social investment efficiency accounting (short term) and social investment value accounting (long term). This third and key difference can be thus be explained by a diverging interpretation of a P&L: on one hand, as a monetized technical documentation and on the other hand, as a basis for resource allocation optimization (*see*, figure 21, below)

1. Main Object	Environmental Impact or Social Impact Risk Mitigation or Positive Impact
2. Valuation Approach	EP&L: use of valuation coefficient SP&L: use of performance grading, meant for direct efficiency analysis, and over time valuation
3. Data	Primary data exclusively or use of secondary data
4. P&L interpretation	Technical cost and revenue documentation Or Resource Allocation Optimization basis

Figure 21: four factors of divergence between the EP&L and SP&L approaches

Below are recapped (figure, 22, SP&L and figure 23, EP&L) the main features, processes for both tools, as well as their interpretation of P&L as frameworks.

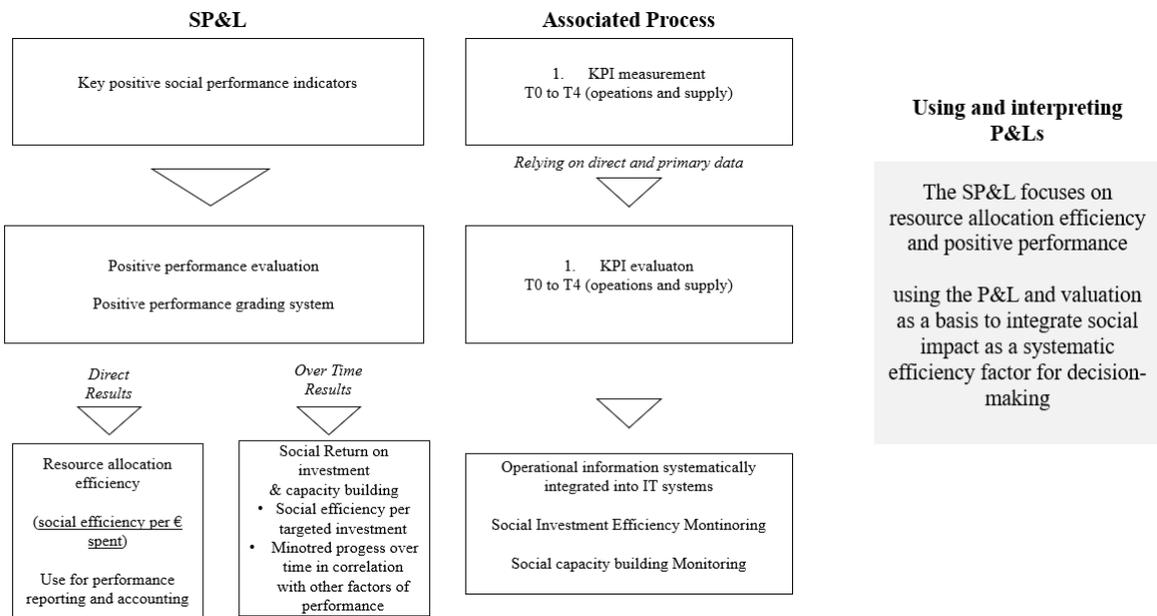


Figure 22: the SP&L features, process and interpretation and identification as P&L framework

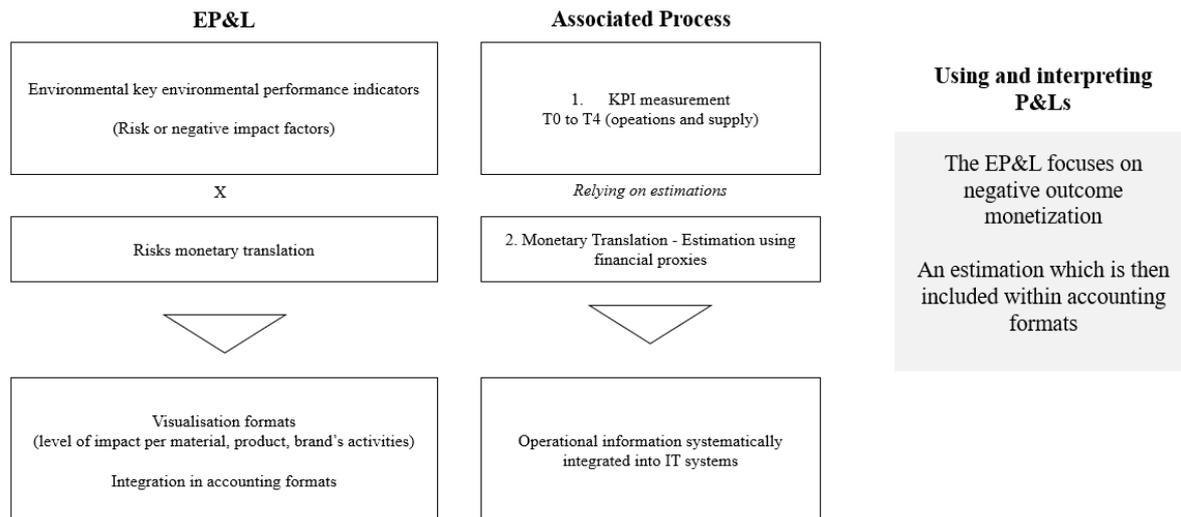


Figure 23: the EP&L features, process and interpretation and identification as P&L framework

In this way, both Kering's EP&L, and Chloé's SP&L offer a case-study for the place given for interpretation with the initial intentions to (1) extend a normative framework, and extend activity-based cost management to systematically and strategically include externalities to (2) improve decision-making processes and results on stakeholders and their environment.

In our first chapter, we detailed the correlations between utility-thinking, benefit corporations and accounting processes. Throughout this chapter we discussed the rationales, critiques and interpretations for utility-focused accounting tools, with a specific focus on the current reinterpretation of P&L frameworks in order to integrate social and environmental outcomes strategically. In our next chapter, we will analyse the research on CSR strategic integration, and focus on the uses of business management tools to provide solutions for the operational integration of CSR.

3. The strategic integration of CSR

In the previous chapter, we analyzed the role of impact accounting for current benefit corporations, observing that impact accounting tools are created in order to provide solutions for the operational integration of social and environmental impacts within new and evolutive benefit corporations.

In this chapter, we focus on the research propositions on the strategic integration of corporate social responsibility within core business processes and associated decision-making formats. We first will provide a thematic overview of strategic or embedded CSR (3.1), analyse the role of managerial accounting and system interoperability in strategically integrating CSR (3.2), then provide two propositions to go beyond the existing literature on CSR strategic integrations: with first, a stakeholder and value distribution approach (3.4), and secondly, a case for a full control perspective (3.4).

3.1 Thematic overview of strategic CSR

Before focusing on what strategic CSR is defined as, we will first define the concepts strategic CSR has been opposed to, or built against. In other words, we will first define the cases in which a corporate CSR approach is not considered as being strategically integrated within organizations. Strategic CSR has been opposed to first and foremost to Responsive CSR. Aguinis and Glavas (2015) define Responsive CSR strategies as “not able to integrate CSR as a hardcore of the business global strategy”. In other words, a CSR approach does not enable the strategic integration of CSR when it does not enable the integration of CSR within the core of an organization’s operations and processes. Responsive CSR in itself covers a range of

strategies: Aguinis and Glavas (2015) identify three specific approaches to CSR: defensive (1), promotional (2) and charitable (3).

A defensive CSR approach, correlated by Yousfi & Loukil (2021) to the “first age of CSR” links CSR to profitability, or in other words CSR decisions and approaches are “undertaken (only) when they are profitable”. Bertrand (2010) has however noted that this approach could not lead to a sustainable business model as “thinking of socially and environmentally activities to drive more returns cannot lead to sustainable development”, adding that focusing on “actions enhancing the corporate reputation” are a “poor vector of innovation”.

Promotional CSR is differentiated from Defensive CSR in that it relies on relationship to stakeholders, and on stakeholder’s perceptions. A promotional CSR approach relies on, and works on the perceptions from stakeholders in order to shape and enhance a corporation’s image. Yousfi & Loukil consider promotional CSR as derived from the “age of social marketing”. Lefebvre (2012) associates this approach with to the need of stakeholders to see businesses taking “responsible initiatives transforming the real world”. An optimal promotional CSR strategy creates an alignment between the interests of shareholders, and stakeholders through shaping businesses’ initiatives to enhance their perceptions of it, and (Singh and Dhir, 2019) reduce reputational risk through increasing visibility. In that way, promotional CSR relies on a marketing dimension, partially integrated within a set of targeted projects, investments and policies within a corporation.

Charitable CSR is associated by Yousfi & Loukil as “the philanthropic age of CSR”. Derived from the philanthropic role of organizations, a perspective stating that investors have the responsibility to raise funds to better serve communities (Carnegie, 1889) and in that way provide an indirect value redistribution. Marsh (2018) and Bereskin and Hsu (2016) stated that philanthropy could initiative and encourage partnerships which would in turn increase creativity, create opportunities and carry innovation. However, a mismatch is possible between

a corporation’s main activities, including their own resource management and their philanthropic resource management, creating a form of cognitive dissonance, or fundamental misalignment.

We have provided a schematization of the three main responsive approaches to CSR below (see, figure 24, below). We can interpret Yousfi & Loukil’s overview of non-strategic CSR approaches by observing that:

- Defensive CSR, by only being undertaken when associated with financial value or risk prevention, is only partially integrated within processes.
- Promotional CSR, by mainly or only being undertaken to enhance stakeholder’s perceptions, through marketable initiatives, projects and policies in only partially integrated within processes.
- Charitable CSR, focusing on indirect value redistribution through targeted investments and fundraising, is often fully separated (for instance, through the creation of a dedicated process or of a separate organization or foundation) from processes, thus fully can be considered unintegrated.

Defensive CSR	Promotional CSR	Charitable CSR
<i>CSR Age</i> “First age of CSR”	<i>CSR Age</i> “Age of social marketing”	<i>CSR Age</i> “Philanthropic Age of CSR”
<i>Approach</i> Only undertaken when valuable or to prevent risks	<i>Approach</i> Undertaken to enhance stakeholders’ perceptions	<i>Approach</i> Value redistribution towards communities
<i>Means</i> Internal risk prevention systems	<i>Means</i> Marketable projects, initiatives, collaborations and policies	<i>Means</i> Investments Fundraising
<i>Level of integration within processes</i> Partially integrated within some corporation’s processes		<i>Level of integration within processes</i> External processes Peripheral

Figure 24: thematic overview of responsive CSR approaches, derived from Yousfi & Loukil (2021)

If the creation of a separate entity or of a separate value distribution flow might be the main factor preventing charitable CSR to become strategic CSR, we can further hypothesize that the sole focus on reputational value (positive or negative) defensive and promotional CSR, prevents in both cases the full integration within the operational processes of a corporation. By focusing on preventing risks (defensive CSR) or enhancing the reputation of a corporation (promotional CSR), both approaches are communication-driven before being operationally integrated, which leads to a solely partial integration within processes. Our first hypothesis is thus that for CSR to become fully integrated in processes, the origin factor has to emanate from operations, rather than from communication (*see*, figure 25, below).

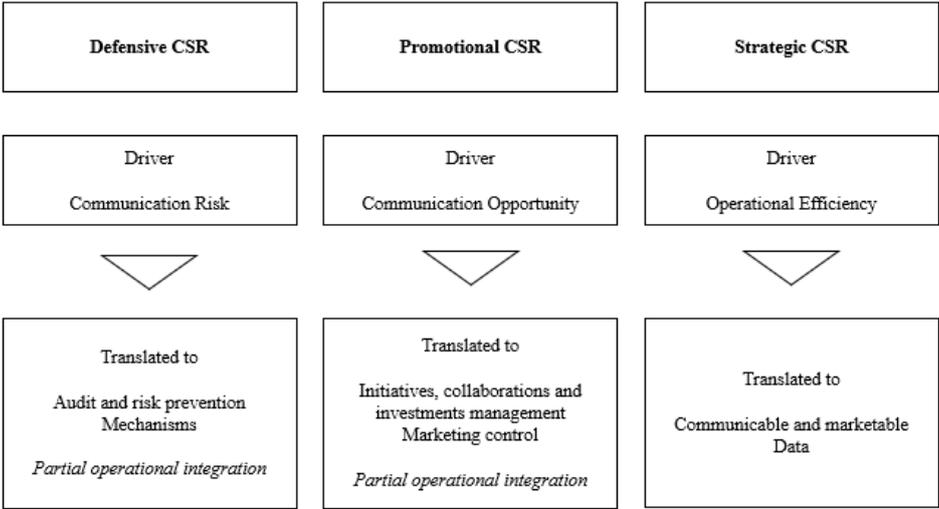


Figure 25: drivers and translation for CSR defensive, promotional and strategic approaches

Vishwanathan et al, (2020) described the non-strategic side of CSR as a blind spot in CSR-related research. However, we argue that the four identified areas of strategic CSR which Vishwanathan mentions as a research focus for strategic CSR: (1) reputation enhancement, (2) stakeholder reciprocation, (3) risk mitigation, and (4) innovation capacity are individually related to each non-strategic CSR approaches, making each responsive CSR approach at least partly strategic. Promotion CSR focuses on reputation enhancement and stakeholder

reciprocation, Defensive CSR on risk mitigation, and Charitable CSR on stakeholder reciprocation and innovation capacity. However, none of these approaches mobilize all four of these criteria. We will thus focus on the attempt to define what strategic CSR is, and the associated criteria.

Strategic CSR can be defined as a “continuous process which takes into account its effects, helps the company to pursue its business goals while considering the stakeholders' engagement” (Athanasopoulou and Selsky, 2016). Accordingly, CSR is strategic “when it yields substantial business-related benefits to the firm, in particular by supporting core business activities and thus contributing to the firm’s effectiveness in accomplishing its mission”. Another term for strategic CSR is embedded CSR: embedded CSR involves an organization's core competencies and integrates CSR within a firm's strategy, routines, and operations, and therefore affects all employees. Embedded CSR is opposed in the literature to Peripheral CSR, which focuses on focuses on activities that are not integrated into an organization's strategy, routines, and operations (e.g., philanthropy, volunteering).

McWilliams and Siegel (2011) have identified the strategic side of CSR as “a promising and relevant field for further research”. However, as emphasized by Yousfi and Loukil (2021), Tang (2012) and Halme and Laurila (2009) underlined the scarcity of research regarding the identification of the determinants of strategic CSR beyond this definition of strategic integration, calling for researchers to further work on the drivers and rationale which condition the level of CSR integration within corporations.

Visser (2016) however states that strategic CSR is related to the corporate core business, auditing, setting of social targets, reporting, and implementation of social management systems, providing a set of criteria for CSR strategic integration. Based on Visser’s proposition of criteria for CSR strategic integration, we can hypothesize that the strategic integration of CSR is related to its integration within core operation and processes (1), which pragmatically means setting

social and environmental KPI (2), which can and should be audited (3), which are then computed and processed within data management systems and can be reporting on (4) (see, schematization, figure 26, below).

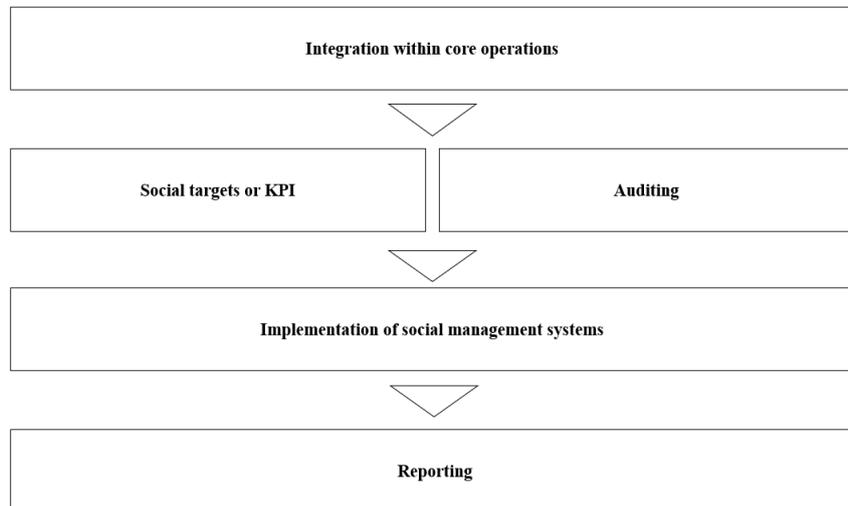


Figure 26: schematization of Visser's (2016) criteria for CSR strategic integration

3.2 Role of managerial accounting and system interoperability in strategically integrating CSR

Beusch (2022) in *Management control for sustainability: towards integrated systems*, examines the issue of the limitations companies face to integrate sustainability into their corporate strategy, as well as to implement it within their business activities.

Building on Simon's (1994) levers of control, Beusch provides three insights into control system integration for sustainability:

- (1) intensive dialogues among managers at different organizational levels and in different organizational functions mitigate challenges to the technical and organizational integration of sustainability along a firm's value chain,

- (2) the degree to which the firm's strategic-level managers focus on external sustainability drivers influences how well the firm develops and markets sustainability-related products and services,
- (3) CEO-level commitment can avoid "marginalizing sustainability" through communication and dialogue across management levels.

Beusch thus puts a particular emphasis on the role of management control practices. In this subchapter, we will discuss the role which can be played by managerial accounting and the necessary system interoperability for the strategic integration of CSR within corporations.

For Sun and Zeng (2022), the aim of a management accounting framework is to improve the operation control ability. They state that the application of management accounting tools in corporations is to "solve the management problems that restrict the ability of enterprise value creation". Overall, Sun and Zeng (2022) in their literature research find three characteristics for management accounting integration:

- (1) the integration of management accounting tools is to create sustainable value for corporations,
- (2) the integration framework should focus on either a core tool or objective,
- (3) each single tool is flawed and lacks of complementary features.

Quoting Beusch (2022), Sun and Zeng further define management accounting as a "method of contingency forecast and business decision-making embedded in the organization, to improve the efficiency and benefit of enterprise operations through information support and management decision-making". Masztalerz (2014) states that focus of management accounting is on "high-quality decision-making and drives the process of enterprise value creation and appreciation through information integration and analysis".

In the previous subchapter, through a schematization of Visser's (2016) criteria for CSR strategic integration (*see*, above, figure 25) we underlined that not only is the implementation of a social and environmental management system, capable of processing social and environmental information, crucial to CSR strategic integration, as defined by researchers, but also that the integration of such a management system within existing operational management system would prove crucial. In that way, in order to strategically integrate CSR, not only would a specific management accounting framework be necessary, but it would also have to be integrated within a general operation control framework.

This suggests a double problematization for CSR strategic integration: first (1) the creation of a managerial accounting framework for social and environmental outcomes and secondly (2) a system interoperability to insure its integration within a comprehensive operational management control framework.

Ahlemann and Legner (2021) show that the operational and organizational performance cannot be achieved if contingency characteristics are not integrated within a comprehensive management accounting system. Further, Tripathy and Eppinger (2013) state that the practice of management accounting should adapt to the internal and external environment and operational characteristics of the corporation, as well as adapt to a new environment through ability iteration, and control activities. In other words, we can consider that there are three challenges to implementing a comprehensive managerial accounting system to enable strategic CSR: (1) the necessity to create an interoperable, comprehensive accounting system, (2) adapting to operational characteristics, and integrating all performance data (including social and environmental data) related to activities, and (3) enabling iterations, adaptable to operational evolutions.

After defining the core criteria for strategic or embedded CSR (1.3.1), and specifying the role of managerial accounting and accounting system interoperability (1.3.2), we will in the next

two subchapters attempt to further the criteria proposed by previous researchers for strategic CSR, from two main perspectives: mobilizing a stakeholder approach and a value redistribution approach (1.3.3), and making the case for a full control approach (1.3.4).

3.3 Mobilizing a stakeholder approach to expand and precise the criteria for strategic CSR

From developing CSR activities directly related to the scope of their main activities in order to meet reporting standards, brand have started to develop CSR projects related to interactions with multiple stakeholders' groups, opening the door for an "inclusive CSR thinking" (Bocquet et al., 2017 and Zerbini, 2017). The integration of new stakeholder categories within strategic thinking and value monitoring may thus further the definition for strategic CSR, by including new criteria.

In this subchapter, we will explore how the mobilizing of a stakeholder approach may provide an expensive understanding of strategic CSR criteria. We hypothesize that an intrinsic and perhaps missing element to think and conceptualize strategic CSR are the integration of stakeholder dependency (A), agency (B) and value (re)distribution leverages (C). In this way, we will attempt to further the work of Yousfi & Loukil. We will focus on three elements: first, relating the level of direct or indirect influence over stakeholders (A), then provide CSR game-theory related insights to gain better insights into value sharing (B), and focus lastly on value redistribution (C).

A) Hypothesis 1: core dependency, and level of direct influence over stakeholders through core business activities

The notion of dependency in commercial relations is often associated with notions ranging from risk (diversifying production to limit risks), to responsibility and accountability (preventing a supplier and their employees for being out of business should an activity or a given production stop). Suppliers' levels of dependency are often measured and considered as part of a resource allocation or commercial sourcing decision-making process.

Here, we attempt applying this notion of dependency both to stakeholders, and to activity. In other words, we aim to explore the level of influence and dependency over suppliers, through a corporation's activities.

In order to further our hypothesis, we mobilize the six stakeholders' subcategories (*see*, figure 27, below) suggested by UNEP and the Social Life Cycle Alliance (2021): workers, local communities, consumers, value chain partners, society and children. We will also mobilize, and build on, our previous analysis for stakeholders throughout our product lifecycle (*see*, figure 28, below).

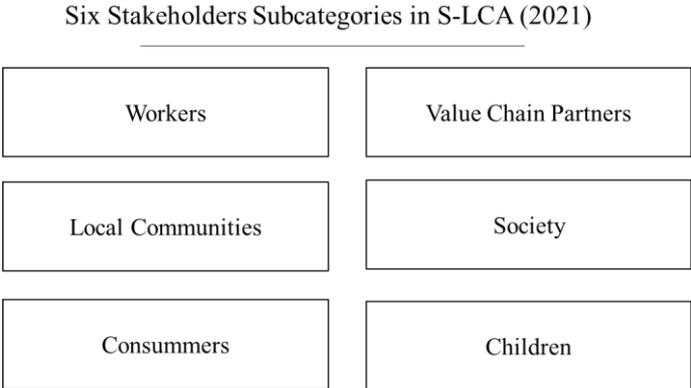


Figure 27: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative's identification of stakeholders for SLCA (2021)

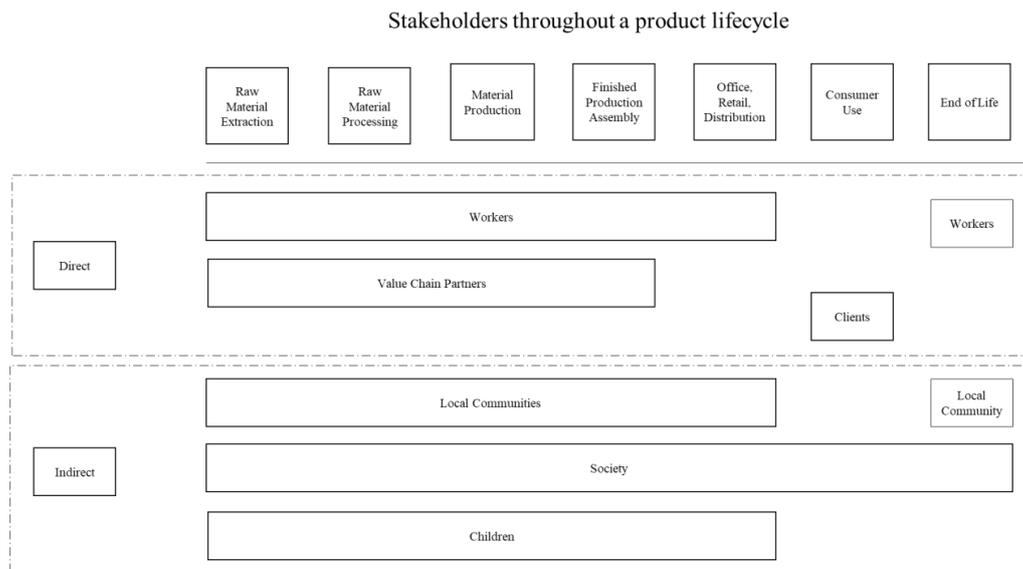


Figure 28: United Nations Environment Programme, Social life cycle alliance, and lifecycle initiative's identification of stakeholders for SLCA (2021), placed throughout a product lifecycle

Our first hypothesis is the following (see, figure 29, and figure 30 below): direct, indirect or influence levels depends on whether the social outcome comes from activity (production, resource allocation), or from project, initiatives or targeted investments. For instance, we hypothesize that (1) direct social outcomes concern stakeholders directly mobilized throughout a product lifecycle: workers, value chain partners, and clients, (2) indirect social outcomes concern stakeholders, who, such as local communities, are impacted through activity but not having a direct link to said product or activities: local businesses, worker's families, including children (3) impact on society are factors of influence, through projects, initiatives and targeted investments. In other words, the level of direct impact could be correlated to a dependency to activity and production. Building on our analysis relating stakeholders to product lifecycles, we thus propose that direct stakeholder's relation to core activity be integrated within strategic CSR definition and related criteria.

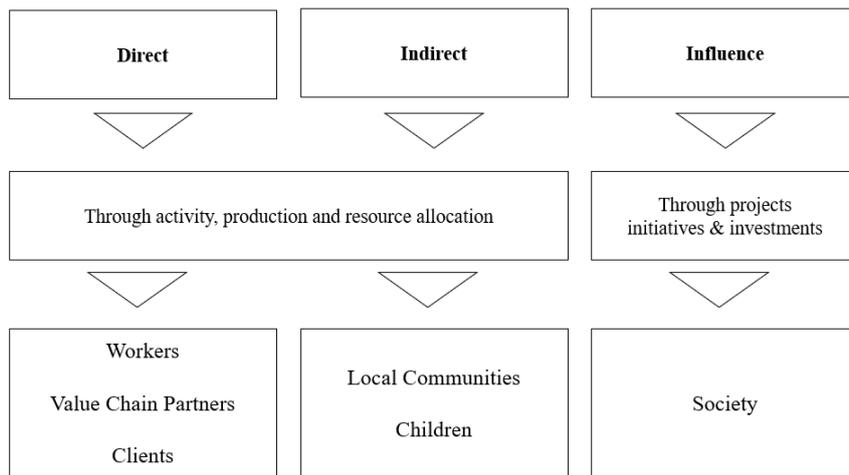


Figure 29: direct, indirect or influence level hypothesis depending on type of resource allocation

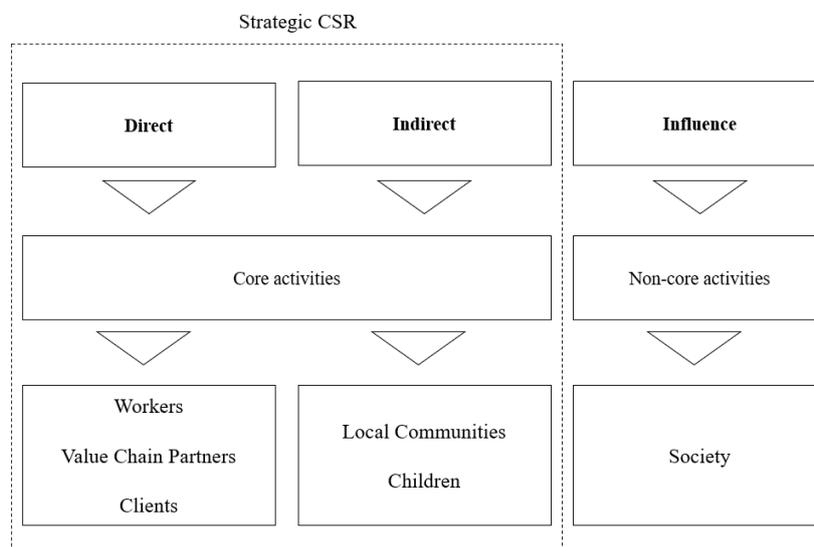


Figure 30: stakeholder's relation to core activities

In that way, building on Athanasopoulou and Selsky (2016) definition of strategic CSR as “continuous process which takes into account its effects, helps the company to pursue its business goals while considering the stakeholders' engagement” and Aguinis and Glavas (2015) defining strategic CSR as a business integrating CSR as a hardcore of the business global strategy, we propose the following updated definition of strategic CSR as a “*continuous process intrinsic to core business activities, which takes into account its direct and indirect effects on stakeholders*”.

Rather than, as Athanasopoulou and Selsky suggest, mentioning “stakeholder engagement” within the CSR strategic definition, we suggest including both the full or wider effects on stakeholders (including stakeholder’s engagement) (1) and the level of direct effect through core activities (2), a notion which is crucial to the definition of strategic CSR.

Our second hypothesis concerns the level of dependency (*see*, figure 31, below) for stakeholders to core business activities. We suggest for corporations to prioritize stakeholders which have not only a direct link to core business activities, but who are also dependent of it. We hypothesize that this creates a second typology of stakeholders for decision-makers to consider: dependant, directly affected, indirectly affected (*see*, figure 31, below)

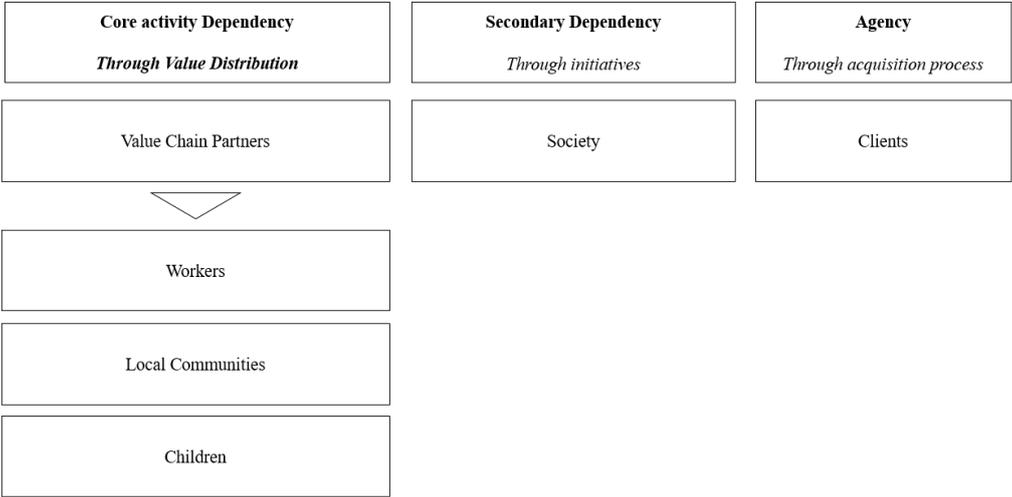


Figure 31: stakeholder’s dependency on core activities

Building on those two hypotheses, we drafted (*see*, figure 32, below) a schematization aimed for decision-makers to approach their stakeholder impact scope, through two prisms: first, the level of direct impact through core activities (1), and secondly the level of dependency to core activities (2). The integration of direct or indirect impacted stakeholders may depend on the level of visibility and access corporations have over their value chains, and become gradual in practice.

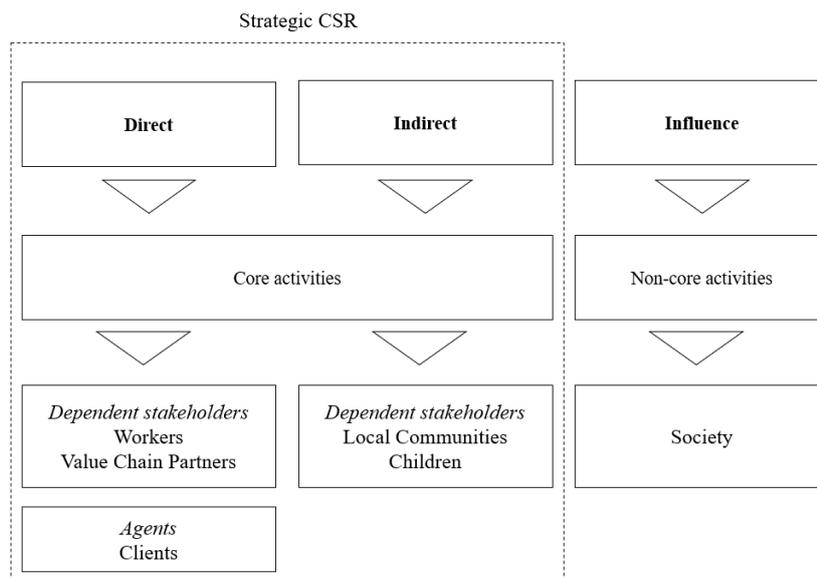


Figure 32: stakeholder level of dependency and core relation to business activities

B) Hypothesis 2: agency, cost and value – learnings from CSR and stakeholder-adjusted game theory

In exploring stakeholder's relation to the core activities of businesses, we first focused on the notion of decency to activity, as a potential primary focus for decision-makers seeking to control and improve their social impact. However, as Athanasopoulou and Selsky (2016) suggested when associating "stakeholder engagement" to strategic CSR, to the notion of stakeholder dependency should be associated the notion of stakeholder agency. Here, we associate the notions of stakeholders' agency and/or dependency to value distribution. We hypothesize that including stakeholders within strategic CSR and by extent, within strategic CSR decision-making formats is key to manage social impact within overall business activities. We further hypothesize that through the inclusion of stakeholders within strategic CSR and decision-making, the possibility of managing value distribution and redistribution in both an inclusive and an efficient way emerges.

In order to explore the way stakeholder agency could be included within strategic CSR definition, criteria and decision-making formats, we first explore the way game theory (mobilizing agent's decision-making, or agency) has been explored with CSR-oriented lenses. Game theory is a theoretical framework conceiving social situations among competing players. Game theory can be considered as one of the sciences of strategy, or at least a perspective on processes to achieve a form of optimal decision-making for independent and competing actors in a strategic setting. The pioneers of game theory were mathematician John von Neumann and economist Oskar Morgenstern in the 1940s.

Since 2008, a few researchers (Sacconi, Lozano, Zhu and Li) applied at the least partially the game theory to CSR settings, relating game theory to stakeholder theory, with CSR being defined as “a multi-stakeholder model of corporate governance and fiduciary duties naturally emerging from a critical assessment of the incomplete contracts view of the firm based on concepts like as authority and residual rights of control.” (Sacconi, 2008).

With this hypothesis, we would like to go further, on one hand, by linking Game Theory to both stakeholder Theory and value attribution and distribution processes (or value allocation choices). At the core of this thought-process is the notion of agency. In this hypothesis, value attribution can be either the attribution of cost (cost bearing), the payment of a price, direct and indirect value distribution through allocation and targeted investments.

The first scenario in our hypothesis is to map the suppliers affected by CSR approaches, meaning stakeholders who can be positively or negatively affected by a CSR strategy or approach. In this scenario, we consider all CSR-related approaches: defensive (risk mitigation and risk monitoring), promotional (key partnerships and targeted investments), charitable (non-core activity related investments) and strategic. As there are no direct declination of levers of action suggested for strategic CSR, we suggest five: (1) full impact monitoring as related to core activities, (2) reflecting social externalities on prices, (3) integrating externalities within

operational costs, (4) optimized or reformed value allocation or distribution, and (5) reformed production processes. We further add the notion of dynamism through the mobilization of “background (or monitoring)” or “active (or initiative)” to qualify the type of decision-making. From the results (*see*, figure 33, below) of this approach, we can draw a set of theoretical conclusions: first, that “background or monitoring” approaches, which tend to be responsive and imposed on all stakeholders, cover a larger spectrum of stakeholders. Secondly, that strategic CSR-related actions (as hypothesized, non-exhaustive) tend to focus on stakeholders directly mobilized or impacted by the core activity, as opposed to responsive (promotional, charitable) CSR approaches.

	Stakeholders	Dynamism	Workers	Value Chain Partners	Clients	Local Communities	Society	Children
Approach	CSR control scenario							
Defensive	Risk mitigation and monitoring	Background						
Promotional	Key partnerships	Active						
Promotional	Targeted investments	Active						
Charitable	Indirect Targeted investments	Active						
Strategic	Full impact monitoring	Background						
Strategic	Reflecting externalities on prices	Active						
Strategic	Integrating externalities	Active						
Strategic	Optimized or reformed value allocat	Active						
Strategic	Reforming production processes	Active						

Figure 33: stakeholder affected by CSR-related decision-making

If we extend this analysis and framework to include value creation hypothesis, or the possible positive value generated through the integration of social impact within decision-making through CSR-related approaches, we ask three questions: (1) who bears the cost (*see*, below, figure 34), (2) who may benefit from this decision (*see*, below, figure 35), and (3) which stakeholder has agency, or is an active stakeholder within the decision-making process (*see*, below, figure 36)?

Looking first at the cost-bearing scope (*see*, figure 34, below), we observe that theoretically in almost all individual scenarios, the corporation (here as an agent) bears a part of the CSR decision-making cost, except in the case where all externalities are transferred to the final price, in which case, the client or consumer bears the cost. Monitoring costs are often shared with

value chain partners, especially when it comes to risk monitoring, and may affect value chain partners, positively or negatively when value is reallocated taking into account stakeholder distribution.

	Stakeholders	Dynamism	Corporation	Value Chain Partners	Workers	Clients	Local Communities	Society	Children
Approach	CSR control scenario								
Defensive	Risk mitigation and monitoring	Background							
Promotional	Key partnerships	Active							
Promotional	Targeted investments	Active							
Charitable	Indirect Targeted investments	Active							
Strategic	Full impact monitoring	Background							
Strategic	Reflecting externalities on prices	Active							
Strategic	Integrating externalities	Active							
Strategic	Optimized or reformed value allocat	Active							
Strategic	Reforming production processes	Active							

Figure 34: CSR initiative cost-bearing per stakeholder category

Looking, secondly, at the potential benefit scope per stakeholder (see, figure 35, below), we hypothesize a difference in benefits depending on, on one hand risk efficiency control (in grey), and on the other hand value creation through (1) charitable investment, (2) process or value optimization.

Based on those projections, we theoretically project that control measures, such as risk mitigation, optimized value allocation and reformed or optimized production processes may produce positive value to corporations (as agents) through rationalization and optimization, and may create more transparency and trust for clients, and may also create positive effects for workers and local communities. The integration of externalities within operations can produce financial relief for value chain partners and clients. Lastly, key partnerships and investments can produce value for local communities, society and children.

	Stakeholders	Dynamism	Corporation	Value Chain Partners	Workers	Clients	Local Communities	Society	Children
Approach	CSR control scenario								
Defensive	Risk mitigation and monitoring	Background							
Promotional	Key partnerships	Active							
Promotional	Targeted investments	Active							
Charitable	Indirect Targeted investments	Active							
Strategic	Full impact monitoring	Background							
Strategic	Reflecting externalities on prices	Active							
Strategic	Integrating externalities	Active							
Strategic	Optimized or reformed value allocat	Active							
Strategic	Reforming production processes	Active							

Figure 35: CSR initiative projected benefit level per stakeholder category

Thirdly, looking at the notion of agency, (*see*, figure 36, below), we can hypothesize that most if not all agency is often concentrated in the hands of corporations’ decision-makers, with the exception of the partnerships or of value allocation, if the decision-making process does not only initiates from corporations but actively seek to involve stakeholders within the discussion and reform.

	Stakeholders	Dynamism	Corporation	Value Chain Partners	Workers	Clients	Local Communities	Society	Children
Approach	CSR control scenario								
Defensive	Risk mitigation and monitoring	Background							
Promotional	Key partnerships	Active							
Promotional	Targeted investments	Active							
Charitable	Indirect Targeted investments	Active							
Strategic	Full impact monitoring	Background							
Strategic	Reflecting externalities on prices	Active							
Strategic	Integrating externalities	Active							
Strategic	Optimized or reformed value allocation	Active							
Strategic	Reforming production processes	Active							

Figure 36: Projected agency level per stakeholder per CSR-related decision-making type

Looking only at decision-making processes which could be associated with strategic CSR, and taking into account all three criteria (agency, cost-bearing, benefiting from value creation) explored within this sub-chapter (*see*, figure 37, below), we hypothesize that most of the agency is still centered in the hands of the corporation, or of the client (choice of whether or not to buy depending on offer, price, and information level) limiting the notion of core stakeholder engagement within strategic CSR decision-making, and that most strategic CSR decision-making may create value through rationalization, efficiency and control for corporations, value chain partners, and workers.

	Stakeholders	Dynamism	Corporation	Value Chain Partners	Workers	Clients	Local Communities	Society	Children
Approach	CSR control scenario								
Strategic	Strategic (controlled) investments	Active	Agency, Cost, Value	Value (if targeted)	Value (if targeted)	Agency	Value (if targeted)	Value (if targeted)	Value (if targeted)
Strategic	Reflecting externalities on prices	Active	Agency, Value	Value	Value	Agency, Cost			
Strategic	Integrating externalities	Active	Agency, Cost	Value	Value	Agency, Value			
Strategic	Optimized or reformed value allocation	Active	Agency, Cost, Value	Value	Value	Agency, Value			
Strategic	Reforming production processes	Active	Agency, Cost, Value	Value		Agency, Value			

Figure 37: Agency, Cost and Value factors per strategic CSR-related decision-making process

Building on our theoretical frameworks inspired by game theory, and systematically including stakeholder categories within decision-making formats, we further hypothesize the importance of including (1) a typology of decision-making propositions associated with strategic CSR, in order to (2) systematically consider the agency level, cost and benefit per stakeholder while taking any core-business related decision.

C) Hypothesis 3: four value redistribution leverages

For this last hypothesis, we will solely focus on the integration of the notions of value allocation, distribution and redistribution within strategic CSR's definition and criteria. The notions of regeneration applied to leadership, decision-making, business and economic models¹³, are more and more associated with CSR-driven business models and organizational reform to integrate social and environmental impact. Centered around the effects on ecosystems, regenerative models rely on the capacity to think in systems, create to regenerate and design to distribute. Being regenerative is defined by DEAL (Doughnut Economics Action Lab) as the capacity to “work in the spirit of open design and share the value created with all who co-create it” and to “be aware of power and seek to redistribute it to improve equity amongst stakeholders”.

This implies first and foremost cost and effect control as a pre-requisite, and creates a focus around value allocation, with value distribution or redistribution as a lever. Strategically integrating stakeholders might in that way mean having control over cost and effects, and having the tools to evaluate and reform value distribution for each production stream.

In this sub-chapter, we explore four possible value redistribution streams for corporations, through four redistribution leverages scenarios, with the hypothesis that the main agency for strategic CSR decision-making processes may still be concentrated within the hands of corporations. Here, we focus on value distribution levers for corporations towards value chain

¹³ <https://doughnuteconomics.org/about-doughnut-economics>

partners, through commercial relation and value relation, to anticipate the potential cost, value and value distributed.

We mobilize a product analysis case study. Analysing a (*here anonymized*) fashion product, and attempting to identify redistribution leverages towards value chain partners involved in its production, we analysed the evolutions in terms of product margin, retail price, and projected redistribution value while increasing either manufacturing cost and/or retail price in order to achieve a level of redistribution towards a, or several value chain partners.

Doing so, we found four main levers to generate value and redistribute value from a corporation towards a value chain partner, through production and pricing: (1) increasing manufacturing without increasing retail prices, (2) increasing both manufacturing price and retail price, proportionally, (3) increasing the final retail price of the product while bearing the operational cost, and (4) reinvesting a percentage of product reference annual revenue (*see, figure 38, below*).

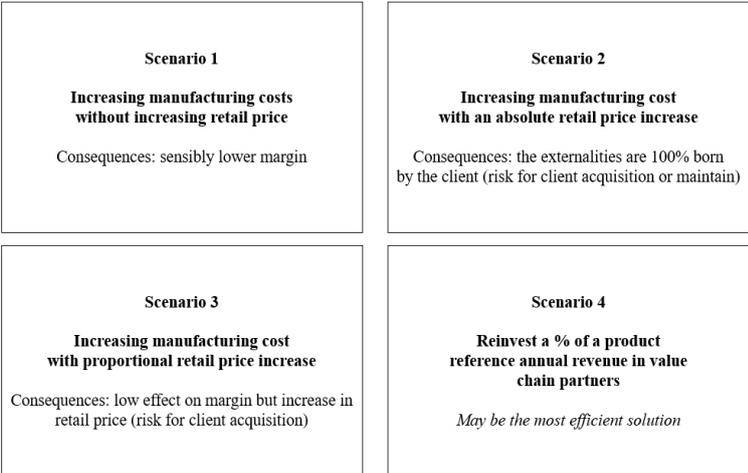


Figure 38: four redistribution levers for corporation towards value chain partners

The first scenario (increasing manufacturing costs without increasing retail price) impacted sensibly the margin, making it unsustainable because undesirable for corporations if systematized. The second scenario (increasing manufacturing cost with an absolute retail price

increase), made clients bear the redistributive cost, and could prove to negatively impact corporations as prices inhibit clients for buying, making it an unsustainable option in the long term. The third redistribution scenario (increasing manufacturing cost with proportional retail price increase), did not affect the margin but created a significant increase in retail price, an unsustainable redistribution solution again for maintaining clients. The fourth and last imagined scenario (reinvesting a percentage of a product reference annual revenue) appeared to be the most effective, as it did not affect the price or the margin but achieved a redistribution stream towards value chain partners.

In this specific instance, four questions could guide the strategic integration of CSR when it comes to value positioning with the intent of achieving redistribution, or regeneration: (1) externalities and redistribution value positioning (who bears the cost, and who should bear the redistributive cost), (2) what the fair price when it comes to deciding on a product's profit margin (how to position a fair price in terms of value distribution), (3) fees and duties (locality and proximity) and (4) client positioning (which scenario is optimal for a specific client).

In this way, this specific small case study regarding leverages to distribute and potentially redistribute value helped us gain better insights into the intersections between stakeholder interaction and value distribution as a practical tool to strategically integrate CSR within decision-making. We hypothesize that value control and value (re)distribution or (re)allocation could help decision-makers not think about CSR in terms of externalities or within a “trade-off” format, but as an intrinsic part of activities, operations and value to manage efficiently. In the next subchapter, based on our previous strategic CSR research, we will explore the potential for a “full control” perspective as an alternative strategic prism.

3.4 The case for a full control model, and for cost control perspective shift

Historically, CSR has been externalized and developed as a support or external segment for organizations from operations, supply chain and management control processes. CSR related value has been considered “alien” or apart from financial cost-benefit analysis, because of the difficulties faced while attempting to translate social and environmental outcomes into value terms. The environmental and social value produced through corporations’ activities, whether positive or negative, are thus often being accounted for through external and complementary forms of accounting and reporting - for instance, extra financial reports, triple bottom line or trade-off schematizations. We suggest that this has weighted in the perception of Sustainability being from a “nice to have” to a potential “competitive edge” differentiation factor, instead of being considered and treated as intrinsic to activities, operations and processes efficiency. However, through regulatory pressure or through voluntary positioning, brands increasingly aim to strategically integrate CSR, or achieve a form of embedded CSR, either as a defensive (risk-focused) or forward-looking integrative value strategy (full activity picture and/or integrative definition of value). This provides the dual question of how to integrate and embed sustainability within processes, and as core factors within decision-making. In this subchapter, we argue that Sustainability should be considered as a control mechanism intrinsic to operations and value creation, rather than as a set of externalities, a support factor, or any form of “other”. In that way, we argue that the challenge may lie not in translating CSR-related outcomes and effects within existing formats and processes, but rather could lie in 1) access and control mechanisms to 2) efficiently managing the full activity picture, including resource allocation utility. We argue that through considering sustainability as control, and investing in a “full control model”, or “full cost control”, CSR could be intrinsically integrated within operations through a resource allocation process centered around overall activity cost allocation efficiency.

We further hypothesize that shifting the focus towards access, cost efficiency and utility maximization throughout value chain operability and decision-making processes could inherently facilitate, or highlight, CSR strategic integration within corporations.

We further argue that in order to consider the degree of integration for CSR in organizations, there are four key factors to consider: one (1), the integration of CSR within operational and management control processes, two (2), social and environmental data access and computation, three (3), social and environmental data accounting and resource allocation formats, and four (4), the integration of social and environmental data within decision-making processes and facilitation formats throughout the organization.

We therefore argue that efforts should be focused on achieving “full value chain control”, maximizing decision-making utility (systematically including social and environmental performance factors), focusing on resource allocation utility maximization, and integrating social and environmental data through reforming and optimizing IT systems and management control processes. We further suggest that in order to ensure CSR strategic integration, the analysis prism should shift from a outcome translation and valuation focus, towards a full activity cost-efficiency and control focus.

Defining and deploying a *full control model*

We suggest defining a *full control business model* as a business model functioning efficiently from full activity visibility and from efficient and inclusive resource allocation. We further suggest that a full control model can operate from (1) a systematic access to, and visibility of, activity cost and outcome information across the value chain, including social and environmental-related activity cost and outcome data, including direct and indirect activity performance data, (2) which are systematically computed within a full activity management control system and translated into performance data available for each decision-maker. The two

pre-requisites for a full control business model could be considered to be (1) traceability throughout the value chain, and (2) a full activity data management system providing the necessary insights to optimize decision-making.

Shifting from outcome translation towards inclusive cost allocation efficiency

We suggest that this model would further require a shift from outcome translation towards cost control and cost allocation efficiency. The focus since the 1970s on outcome translation (qualitative or absolute through the triple bottom line visualization, monetization through externalities and/or use of valuation coefficient, for instance in the case of the EP&L proved valuable in including social and environmental outcomes within trade-offs for decision-making, but did not successfully “integrate” social and environmental factors within value analysis but rather further made social and environmental factors “other” or “alien” within the value conversation. We hypothesize that by shifting the conversation towards a *cost control* analysis (investment, resource allocation, losses), by associating a cost, or resource allocation, to a social and environmental efficiency level, or quantified performance level, rather than making social and environmental factors others, the cursor could shift towards making social and environmental performance an intrinsic part of activity and operational performance. Therefore, by focusing on making cost analysis inclusive, and on quantifying the utility or efficiency of resource allocation in an inclusive way, we hypothesize that decision-makers could maximize the utility of their resource allocation while making social and environmental factors inherent to operational efficiency and profitability. We therefore hypothesize that this shift from outcome translation towards full cost visibility, and full cost management could enable the strategic integration of CSR within corporations through the creation of an inclusive definition for operational optimization, rather than a constant trade-off mechanism reiteration for decision-makers.

Interoperable data management and computation systems

Based on insights from Beusch (2022) and Sun and Zeng (2022) (*see* 1.3.2), we hypothesize that managerial accounting and data management system interoperability play a crucial role in the strategic integration of CSR within corporation. We can define those four roles as data systematic process or computing (1), data translation (2), overall access to decision-makers throughout the organization (3), and integration (4) within a multitude of value-centered formats. We can therefore hypothesize that a full control model would rely heavily on (1) the establishment of a data management system, and (2) ensuring its interoperability through managing data governance for Finance, IT, and Operation teams throughout an organization.

Central use of resource allocation formats

This shift towards focusing on cost control as a primary focus rather than on outcome translation and monetization, would create a need for monitoring both cost utility and cost efficiency in an inclusive format. This would mean either (A) focusing on resource allocation efficiency format as a necessary addition to traditional P&L or (B) integrating resource allocation efficiency within P&L formats, as well as creating new input lines for stakeholder resource allocation, and product line resource allocation. This focus on inclusive operational resource allocation could enable a full activity visibility. Should a full control model but put into place, we hypothesize that three decision-making formats would prove essential (1) an independent and inclusive resource allocation format, (2) a P&L format including efficiency levels for each stakeholder category and (3) an integrated performance visualization format for each decision-maker, from product owners to top management throughout the organization, in order to ensure that each taken decision is efficient in an inclusive – or optimal and comprehensive - way.

We can schematize the theoretical essential features for a *full control* model in the following way (see, figure 39, below), including a focus on decision-making features (see, figure 40, below), and on communication features (see, figure 41, below) and IT system integration proposition for social and environmental data (see, figure 42, below).

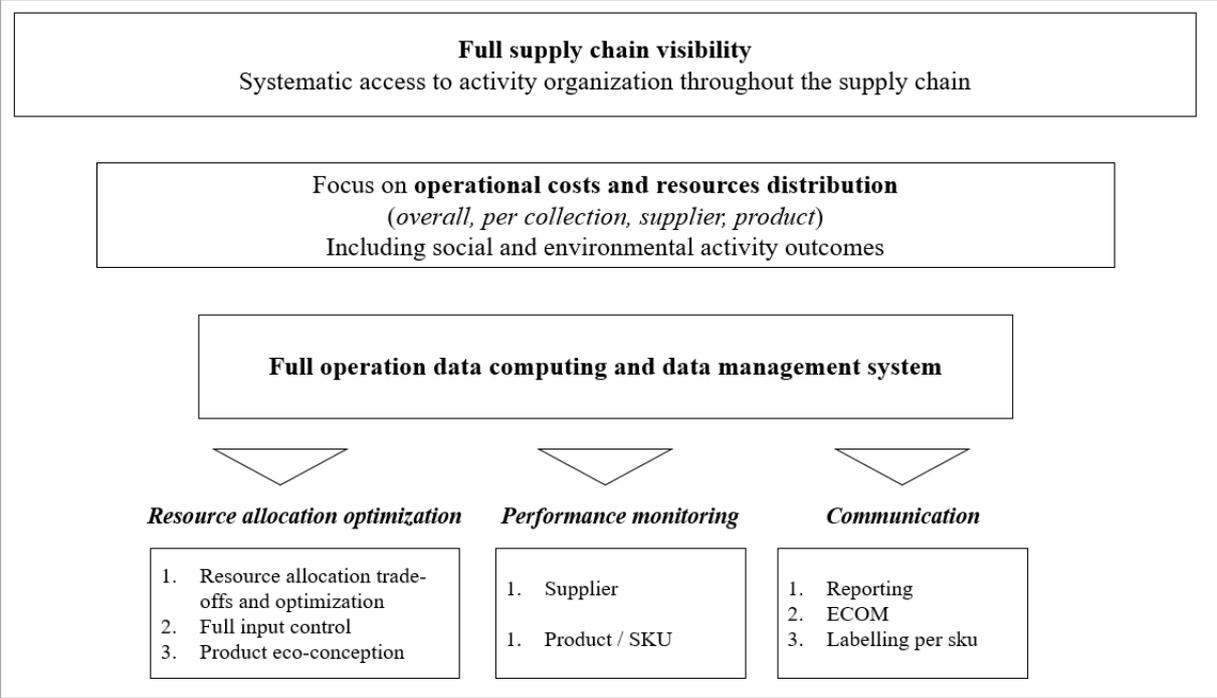


Figure 39: Full data control model schematization proposition

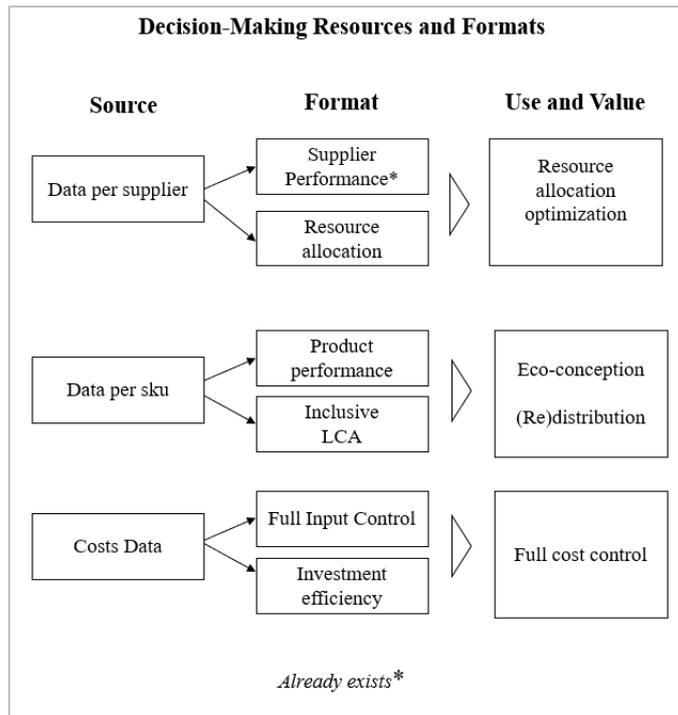


Figure 40: Decision-making Full Data Control Framework

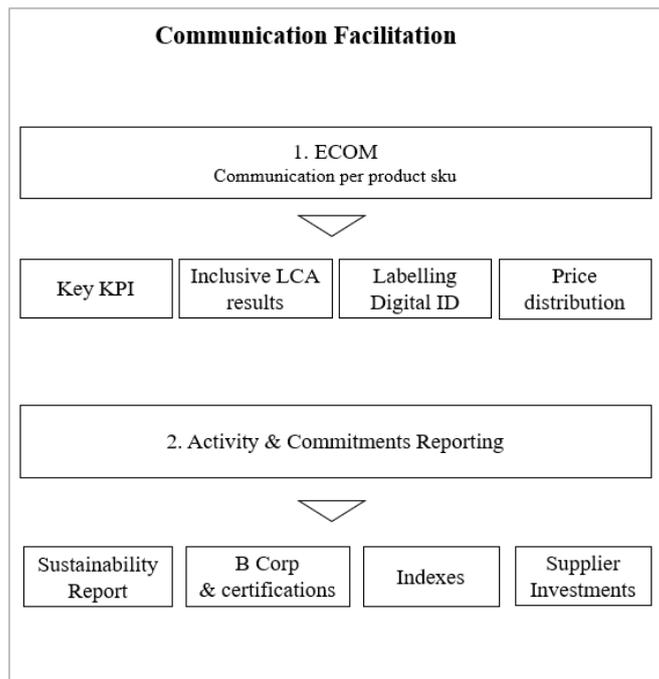


Figure 41: Communication Full Data Control Framework

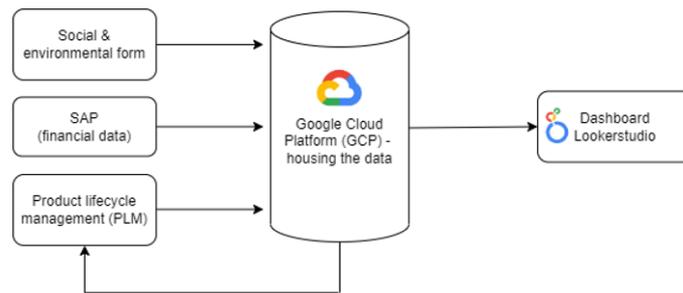


Figure 42: IT System Integration proposition for social and environmental output data

As a response to organizational and strategic management of social and environmental data which contribute to CSR practices visibility being considered as a “nice to have” and not being accounted for systematically, we thus hypothesize that a full control model, including a full inclusive data control, would enable control over risks, optimization and visibility an extended number of value creation and performance factors. In turn, we hypothesize that this full control and cost control model would create the sufficient incentives to truly integrate sustainability-associated factors within business and operational models.

A tryptic framework to facilitate resource allocation based on full visibility: a risk-to-value spectrum, an operational integration coverage, and a stakeholder spectrum

Based on full performance visibility (including social and environmental performance data), and in order to facilitate decision-making processes in link with value factors, we further propose a triple framework to estimate decision-making inclusive utility: a *risk-to-value spectrum* (risk management, optimization and value creation), and *operational integration and coverage*, in order to ensure that decision-making covers both the operational integration of CSR and its full spectrum, and a *stakeholder spectrum* to estimate the inclusivity in resource allocation distribution.

In order for decision-makers to better manage resource allocation, we propose that three dimensions of “value” should systematically be taken into account:

- (1) risk management and risk prevention
- (2) optimization and
- (3) intrinsic value creation.

In that way, we propose that each resource allocation should be estimated on their use or intent: defensive (to cover risks), or strategic (to create inclusive value through inclusive optimization and/or through inclusive value creation).

We further propose that each of these value dimensions be evaluated throughout several operational coverage axis:

- (1) Resource allocation per supplier
- (2) Resource allocation per production
- (3) Resource allocation per product reference
- (4) Resource allocation per external investment

We lastly propose that each resource allocation should associate direct and indirect stakeholder influence and impact, for instance:

- (1) Resource allocation’s performance or efficiency for workers (direct)
- (2) Resource allocation’s performance or efficiency value chain partners (direct)
- (3) Resource allocation ’s performance or efficiency for clients (direct)
- (4) Resource allocation’s performance or efficiency for local communities (indirect)
- (5) Resource allocation’s performance or efficiency for society (influence)
- (6) Resource allocation’s performance or efficiency for children (influence)

We therefore hypothesize and propose that the use of a tryptic framework, taking into account and correlating the degrees of value management (spectrum from risk management, operational optimization towards value creation), including social and environmental data, to the degree of impact on stakeholders and to their integration within operational channels (resource allocation per supplier, production, product reference, specific or targeted investment) could offer a clearer picture of inclusive value management within an extensive activity perimeter.

Part of an initial tryptic on utility (1.1), accounting (1.2), and CSR strategic integration (1.3), this chapter aimed to provide a critical overview of existing research propositions when it comes CSR strategic integration, with an analysis of associated requirements and criteria. We analysed the key role of managerial accounting and data system interoperability in deploying some levels or aspects of CSR strategic integration within organisations. As an extension to the existing research, we first provided propositions to further the definition for CSR strategic integration, and associated criteria by focusing on stakeholder theory, agency, dependency, and value (re)distribution and (re)allocation. We further provided the case for focusing on CSR as full operational control rather than as triple bottom line and continuous trade-off, and the case for focusing on cost-control rather than on outcome translation as a possibly efficient way not to strategically integrate CSR but to showcase CSR as an already intrinsic performance factor for operations. We lastly showcased how *full activity control* and resource allocation utility could interact.

After focusing on conceptual factors which influenced the creation of the SP&L, in the next chapters, we will focus on contextualization factors. We will focus (Chapter 4) on the two-

speed evolution between social and environmental research and methodologies, before focusing (Chapter 5) on fashion industry realities and priorities which shaped the SP&L approach.

4. Analyzing the Gap between Social and Environment Impact Focus

In this chapter we will first analyse the correlations and factors of differentiation between social and environmental impact measurement approaches, before analysing the definition process for social and environmental impacts as a process marked by both its scope and politization, then focus on the emergence of social impact measurement-focused research, on the development of practical and experimental social impact measurement-related methodologies, impact monetization or trade-offs methodologies, and lastly provide typologies of social and environmental impact-focused methodologies, from a target-audience perspective, and from a data access perspective.

As consumers' expectations and preferences keep shifting towards more transparency, more sustainability processes, and less negative social impacts when choosing a product within an extremely competitive field, there is a true opportunity and necessity for businesses to create products with demonstrated social and ecological benefits, and equal pressure to back up their narratives with coherent and holistic facts, metrics and numbers. Further, measuring social and sustainable impact means gaining access to precise and extensive data about the entirety of the value chain which proves to be a crucial tool directed towards strategic leadership in order to better inform business decisions and optimize investments and logistics. In the *Playbook for designing social impact measurement* (Reynolds and *al.*, 2018), the use of data is deemed central to better decide where to put resources towards solving social and ecological issues,

emphasizing that making social progress means using the right data to evaluate outcomes in order to separate correlation from causation. In this chapter, the goal is to investigate and analyze the existing research and findings on sustainability impact-related measurement and social impact-related measurement focusing on the fashion industry and using a comparative method associated with relevant case studies. We aim to provide an analytical framework highlighting the potential use of the existing methodologies at each decision-making level.

We will compare existing measurement tools and methodologies for environmental and social impact measurement, with an analysis of the gap in research, in methodologies and in experimental implementations, a focus on the politization of social and environmental definition processes, an analysis of the emergence of social impact measurement-focused research, the development of experimental methodologies, the focus on monetization for environmental impact methodologies, before proposing two typologies for social and environmental impact measurement methodologies: one focusing on targeted audience, and one focusing on existing data and one mobilizing an adoption framework.

4.1 Intrinsic links and differentiation factors between social impact measurement and environmental impact measurement

At first glance, the differentiation and gap created between environmental and social impact measurement can seem surprising and even artificial given the way social and environmental impacts are intrinsically linked in many ways. Social and environmental impacts are linked when considering externalities in the economic research field, and when it comes to international level contributions. The two terms are bound within sustainable development's definition and goals: The United Nations' Sustainable Development Goals name both climate and communities-related categories within their seventeen goals. Two rationales may be linked to this phenomenon.

Historically, the awareness regarding the potential of social impact measurement and assessment (SIA) appeared in the 1970s as a reaction to the research on environmental impact measurement or assessment (EIA) which started in the 1960s: according to Freudenburg (1986), the field of Social Impact Assessment emerged during the 1970s as a response to new environmental legislation and this logic of action-reaction may help explain the gap in definition, research, framework, strategies and applications when it comes to social and environmental measurement.

Pragmatically, there appears to be a difficulty in social impact measurement regarding the choice of appropriate instruments and indicators, the availability of the right kind of data, and the associated level of objectivity. Meanwhile, measuring environmental impact has been considered as science-based process with a high potential for standardized indicators and data, easier to implement in practice.

4.2 A definition process marked by its scope and its politicization

The process of defining social and environmental impact measurement emerged from practical economical reasoning: the measurement and evaluation of observed externalities or, in other words, the need to evaluate the consequences of an industrial or business activity which affects other parties without being reflected in market prices or without any compensation. Globalization, the process by which businesses and other organizations develop international influence or start operating on an international scale, has caused a segmentation in businesses value chains at an international scale. The impact measurement process is hence being made more difficult by the international scope (including different levels of legislative or normative integration) and involvement of decision-makers from both the public and the private sector with different interests and chosen languages when it comes to social and environmental impact.

Definition as a very first step particularly constitutes an issue in the scope of social impact measurement: a consensus around the mere definition of social impact measurement is far from being agreed upon, leading to the development of a plurality of pragmatic approaches. Starting at the very beginning, the scope of social impact measuring was closely linked to decision-making processes and mechanisms, creating an additional challenge to the difficult task of standardized definition. Freudenburg (1986) explained the creation of a research field surrounding social impact assessment as a reaction to emerging environmental legislation, making social impact assessment an “hybrid, a field of social science and a component of the policy-making process” with its main issue being “how best to incorporate scientific input in what will remain largely political decisions.”

As defined by the OECD (Noya, 2015), measuring social impact means measuring the social value produced by organizations, including social value creation and social return. However, there is a lack of agreement surrounding the exact definition, and about the perspective, market and scale intended for the social impact programs, creating variations in a very hybrid space that induces many challenges ahead.

In terms of applicability scope, the European Commission’s GECES (2014)¹⁴ directly counters the “one size fits all approach” to social impact measurement, deeming that “no single set of indicators can be divided top-down to measure social impact on all cases”. This non-existent cohesion surrounding social impact’s definition creates a crucial dissention in pragmatic approaches and strategies in measuring social externalities: either global approaches covering the spectrum of social impacts, or tailor-made approaches.

The definition of environmental impact measurement and the establishment of its indicators was a more straightforward process. The context of the first pictures of Earth taken from space

¹⁴ European Commission 2014, Proposed approaches to social impact measurement in European Commission legislation and in practice relating to EuSEFs and the EaSI, GECES sub-group on impact measurement

and the rise of international awareness around air and water pollution issues created a dynamic for global cooperation as early as the 1960s. The creation of categories and indicators facilitated the establishment of a common language and the organization of international conferences around environmental impact starting in 1972 with the Stockholm Conference all the way to the 2015 Paris Agreement.

4.3 The emergence of social impact measurement-focused research

There is an increasing interest from researchers in focusing on the combination of economic and social impacts on market-based organizations. This emphasis is particularly evident in social enterprises and hybrid organizations which combine social missions with market approaches to solve global social problems (Battilana & Dorado, 2010). The market-based approaches that characterize a social entrepreneurial approach inherently involve measuring societal impact and social performance (Grimes, 2010; Miller & Wesley II, 2010). Despite this increased interest in the creation and measurement of social impact, measurement standards appear partial and approaches appear heterogeneous, with a focus on social entrepreneurship. The three streams of management research focus on corporate social responsibility (CSR), social entrepreneurship, and the search for BoP (Base / Bottom of the Pyramid) strategies, born from the proposition that companies can exploit new market opportunities by selling products to low-income market segments in emerging economies to generate profits while reducing poverty. The focus is particularly on instrumental returns, individual, organizational, institutional backgrounds and on the political activity of companies. Business management-related research focuses on new market opportunities, new inclusive markets as well as the development of new business models. Some research work has been done to catalog social impact measurement initiatives, including a catalog of approaches of impact measurement by

The Rockefeller Foundation (Olsen et al, 2008), and a classification of thirty contemporary social impact measurement methods by Maas and Liket (2011).

In that way, one can observe that the vast majority of academic research on social impact measurement has been carried out to clarify and strengthen the action of philanthropic actors, social enterprises and public actors' initiatives in relation to positive social impact. Such studies tend focus on both for-profit and non-profit organizations, but often exclude businesses willing to create social impact programs and to monitor their social impact.

From a corporate perspective, the main managerial challenge with CSR is how to treat it as an investment (Husted and Allen, 2007). The strategic link between CSR and value creation has been explored in relation with expenses regarding environmental impact by M. Porter (Porter and Kramer, 2011). Porter forms a distinction between responsive CSR (philanthropy, donation), and strategic CSR, which creates an opportunity for shared value instead of charity. Instead of simply redirecting profits to society, with strategic CSR, corporations identify which social issues they can contribute to solve while creating value for their shareholders and improving their competitive environment.

4.4 The development of practical tools and experimental methodologies

Despite the challenges, a plurality of investigative methodologies has been developed including impact measurement tools. The OECD Policy Brief on Social Impact Measurement (Noya, 2015) has listed three main approaches to social impact measurement: positivist, critical and interpretive, or in practice cost-benefit analysis, rating methods and auditing. Stanford's Spectrum of Impact Measurement Tool (Reynolds and *al.*, 2018) includes a business analysis process and an assessment by control groups, while Deloitte's Social Impact Measurement

Model (SIMM) (Ellis and *al.*, 2019), measures the impact of corporate investment and aims to manage the translation of financial investment into social outcomes.

In the case of environmental impact measurement, a plurality of methodologies has been developed to support business decisions, with the fashion industry being a prime example of this tendency. Within the fashion business scope, multiple measurement tools aimed to estimate the environmental impact of fashion, including indexes, measurement tools and referencing tools, have been developed over the past fifteen years. These tools have been developed as working tools for the fashion industry practitioners and designers, with a focus on the product level rather than on the system level, as Kozłowski & al (2009) remarked in their classification of environmental-impact tools for fashion businesses¹⁵. Kozłowski & al (2009) classified the tool into three categories (or “archetypes”): assessment tools, participatory tools (engagement of the consumer in the design process), and universal tools. The vast majority of these tools is made to accompany designers throughout the design and product development process.

4.5 Monetization, trade-offs and total assessments methodologies

The monetization of social and environmental impacts presents an opportunity to create a common language around non-voluntary impact produced by organizations, language which can be understood widely from investors to clients and communities. This methodology finds its origins in externalities as theorized by Coase (1960) and Kapp (1969), and aims at reflecting every impact into monetary terms in order to guide immediate and future strategic decisions. The EP&L, or Environmental Profit & Loss Account was first developed by PUMA within the scope of the Kering group¹⁶. The methodology aims at monetarily assessing the company

¹⁵ This classification includes the following tools : Considerate Design (CDT), Considered Take and Return (CT&R), Cradle to Cradle Apparel Design (C2CAD), Cradle to Cradle Certified Product Standard (C2C), Higg Index, MADE-BY (MB), Nike Making App (NMA), Sustainable Design Cards DSKD (SDC), Sustainable Fashion Bridges Ideation Toolkit (SFB), Sustainable Fashion Design Model (SFD) and TED's TEN.

¹⁶ Kering Group: Environmental Profil & Loss: a measuring tool for sustainable luxury.

impacts on environment by analyzing the organization value chain and correlating every activity and transformation to their direct impact. This visual accounting tool with impact translation into monetary value has been designed to promote environmental information related to the activity of the Kering group's brands to the wider audience possible, and to guide decision-making at a strategic level. This tool includes health as an indicator but refrains from including social impacts.

However, the line drawn at social impact is beginning to fade. PricewaterhouseCoopers, who worked on the methodology for the EP&L, parallelly developed a new model including both social and environmental notions. The Total Impact Measurement and Management (TIMM) methodology was developed to be a decision-making tool for private companies' board members and high-level executives (Preston, 2013). The model considers four axes to create its complete impact picture: social impact, environmental impact, economic impact and taxes impact. The TIMM functions on a trade-off's basis, suggesting the variable impacts following decisions. The attempt to assess both environmental and social impacts from a company's perspective is also claimed by the B Corp Certification, the first certification which measures a company's entire social and environmental performance. Those business-oriented initiatives, which include both social and environmental impact into their methodology, create a path for innovations.

4.6 Typologies of social and environment tool: per audience and per maturity level

The following section includes a comparison of existing measurement tools and methodologies for environmental and social impact measurement within the scope of adoption frameworks, in order to get a better insight of their level of maturity and use within organizations, with a focus on fashion organizations.

A) Gaining visibility: the scope for social and environmental measurement tools

The two-step approach between the development of environmental impact measurements and the later development of social impact measurement has generated structural differences in audiences and adoption frameworks.

As a consequence of this long and heterogeneous development, targeted audiences for social and environmental impact decision-making tools differ greatly. As seen on figure 1, social impact measurement tools derive from policy briefs and recommendations crafted for corporations’ strategic members in a context of a lack of clear and agreed standards. On the opposite, environmental impact measurement benefits from a sixty-years old multi-lateral work, allowing the genesis and application of international agreements, including the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. If a plurality of tools has been developed for corporations to clarify and eventually communicate around their social impact, no practitioner-focused tool or communication tool have been yet integrated within corporations. The creation and first applications of the EP&L shows potential to reach board members, practitioners and clients alike.

	Policy Makers Governments	Companies Strategic Level	Internal practitioners & Designers	General public & Clients
Social Impact	OECD Policy Brief on Social Impact Measurement EU Commission GECES’ Proposed approaches to social impact measurement United Nations’ Sustainable Development Goals	TIMM B-CORP Social Capital’s SIMM Spectrum of Impact Measurement Tool Centre for social impact’s decision-making tool for social impact measurement		Future Social Labelling (encouraged by the French government and currently in first stages discussion)

Environmental Impact	Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement United Nations' Sustainable Development Goals	EP&L TIMM	EP&L Higg Index (FDS) TED'S TEN, (SDC) and (CT&R) (NMA) (HIMSI) (MB), (CDT), (C2DC), (C2CAD)	EP&L Future Environmental Labelling (PEF)
-----------------------------	--	--------------	--	--

Figure 43: scope of targeted audiences for social and environmental measuring tools

B) Adoption frameworks for social and environmental impact measurement tools

Adoption frameworks illustrate how organizations develop and execute their plans for the introduction of theories of change with a comprehensive approach, from initial assessment to implementation. One can hypothesize that analyzing the place of social and environmental measurement tools across an adoption framework might help us to better understand their level of maturity and to show their potential overlap or complementarity. An adoption framework differentiates four types of tools depending on their level of integration and maturity within an organization's decision making and implementation process, ranging from assessment tools to steering tools. Assessment tools evaluate the maturity of strategy, program or product at the adoption level, defining what existed prior and establishes the areas of progressions. Measurement tools are data collection tools across the value chain in relation to the company's objectives. Decision tools are decision-supporting tools in order to manage the implementation. Steering tools are tools supporting the implementation of the theory of change. Crossing the adoption framework with the segmentation of a life-cycle analysis, a standardized assessment method making it possible to carry out a multi-criteria and multi-stage environmental assessment of a system over its entire life cycle, may give more insight regarding the exact use range for each social and environmental tool.

In the perspective of fashion corporations, there is visible opposition between tools restricted to one function, and tools presenting the potential to accomplish multiple functions. The EP&L, the B-CORP certification, and the HIGG Index overlap between the four main features, whereas the main designers-focused environmental tools are mostly steering tools for the sourcing, design and manufacturing processes, and the TIMM solely purely on providing decision-making features for board members.

No solely social impact-focused tool can be associated with a fashion company’s adoption framework, and no steering tool for fashion businesses seems to be available regarding social impact measurement. This reflects the state and level of maturity for social impact measurement tools and the related research overall: in progress, experimental and in constant dialog with the work done for environmental impact measurement.

	Assess	Measure	Decide	Steer
Sourcing	EP&L B CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	(FDS) TED’S TEN, (SDC) (CT&R) (NMA) (HIMSI) (MB) (CDT) (C2DC) (C2CAD) HIGG Index
Design	EP&L B CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	(FDS) TED’S TEN, (SDC) (CT&R) (NMA) (HIMSI) (MB) (CDT) (C2DC) (C2CAD) HIGG Index
Manufacturing	EP&L B CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	(FDS) TED’S TEN, (SDC) (CT&R) (NMA) (HIMSI) (MB) (CDT) (C2DC) (C2CAD) HIGG Index
Storage	EP&L B CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	HIGG Index
Retail	EP&L B CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	HIGG Index

Use and coproducts				
Recycling	B-CORP Higg Index	B-CORP Higg Index	TIMM	

Figure 44: Adoption framework for social and environmental tools, using life cycle analysis stages

Social and environmental impact measurements theories and methodologies have been developed within a decade from each other, a gap which partially explains the two-step approach we know when it comes to evaluating social and environmental impact. To increase this gap, the access and exploitation of environmental-impact data for measurement methodologies has been deemed easier. As a consequence, the level of maturity regarding environmental impact measurement is higher than the of social impact measurement. This translates directly within the fashion industry scope, where the maturity of life cycle analysis is extensive and commonly done, and environmental key performance indexes are easily set, as opposed to social key performance indexes.

It is also significant that the fashion business scope was an incubator for environmental measurement innovation, with the development of monetary translation for environmental impact, namely the environmental profit and loss account. The tendency for impact measurement seems to be both leading towards the development of global or total impact assessment tool, and towards the development of tools which facilitate decision-making at a corporative or strategic board-level. This creates opportunities for new fields of research regarding the monetary valuation of impact: either a more inclusive tool including not only environmental and health impacts but also includes social impacts, or respecting the approach taken so far, a social profit and loss account which would complete a global vision of sustainability measurement.

This chapter focused on the two-speed emergence and mobilization of social and environmental impact measurement and assessment methodologies and tools. Within the next chapter, we will explore the specificities of the fashion industry, as the fertile soil for impact-focused methodologies such as the EP&L and the SP&L.

5. Fashion industry realities which justify the creation and development of an SP&L approach

In this chapter we will focus on key CSR-related criteria which constitute focal points within the fashion industry, in order to gain better insights into the rationales for creating and developing social performance measurement approaches within this specific industry. We will focus first and foremost on (9.1) the reform and redefinition processes for corporations, (9.2) analysing the context an increasing number of fashion brand becoming benefit corporations or B Corp certified, before (9.3) before focusing on fashion value chain fragmentation and loss of control which increasingly leads to traceability efforts and data control initiatives. We will lastly (9.4) analyse all current published CSR-related goals and strategies published by fashion brands to analyse common strategic and managerial focuses.

5.1 Reform and redefinition: rationales and features for new benefit corporations

In this sub-chapter we will provide an analytical review of Segrestin, Levillain and Hatchuel's contributions on benefit corporations between 2012 and 2022, in order to provide an analytical framework for the increasing number of fashion companies choosing to reform or redefine their business models (9.1.1). We will first address the notion of responsibility as an extension of a normative approach (9.1.2), with at its center an "extended social object" (9.1.3), before addressing the specificity of the French *société à mission* (9.1.4).

5.1.1 A normative approach from corporations: responsibility, attention zone and inclusive value creation management

At the core of benefit corporations, we can hypothesize that there are three pre-requisites: first, a normative approach to responsibility, secondly, stakeholder's theory (Freeman, 1984), and thirdly, the will to assess and manage positive social outcomes as standardized value creation. Segrestin, Levillain and Hatchuel (2012) stated that while States support social and environmental initiatives from large companies, they are not driving forces behind it: in that way, Segrestin et al (2012) stipulate that the efforts which pushed our societies towards forms of "generative" regimes are mostly the results of corporate managerial practices (Le Masson and Weil, 2010).

To analyze the concept of, and the applications for, benefit corporations, we can first address the concept of responsibility, using normative lenses. In that way, Segrestin et al (2012) find that the notion of responsibility encompasses both voluntary actions and positive practices (or practices beyond regulatory norms or standards). Both McGuire (1963) "The idea of social responsibilities supposes that the corporation has not only economic and legal obligations but also certain responsibilities to society which extend beyond these obligations" and Davis (1973) "(...) social responsibility begins where the law ends. A firm is not being socially responsible if it merely complies with the minimum requirements of the law" place the notion of a voluntary action beyond obligations as the epicenter of the concept of responsibility. From 1975, the term "responsibility" is translated into an active "responsiveness", or "response capacity" (Segrestin et al, 2012) suggesting the preeminence of action and anticipation towards one's own activities and their effects. Segrestin et al (2012) thus find that responsibility can be understood as an extension for normative frameworks (in French "*extension du champ normatif*"), as part of a normative approach.

Further; Segrestin et al (2014), in analyzing the frameworks which would enable a voluntary and coherent approach which would combine and both enable a corporation's interest with societal interest, found that researchers who focus on the integration of social and environmental objectives in business models have approached the topic from two perspectives: first (1) analyzing businesses' responsibility towards their stakeholders and environment, and secondly (2) analyzing the development of conceptual frameworks which could enable for companies to create positive social impact while remaining economically sustainable. They found that such conceptual frameworks possess three common criteria: first, (1) assessing social and environmental outcomes, parallelly to economic rentability, and beyond legal constraints, secondly (2) mobilizing a standard legal and economic framework, and thirdly, (3) identifying what Segrestin et al (2014) name "an attention zone" (what a corporation needs to take into consideration beyond contractual or economic relations and dynamics). The "attention zone" in this case is directly linked to Freeman's (1984) stakeholder's theory.

A direct consequence for businesses seeking to strategically integrate social and environmental factors is the importance of assessing *any* effect produced by a corporation, on *any* stakeholder. Segrestin et al (2014) find that the identification of an "*attention zone*" is instrumental to the normative approach of strategically integrating social and environmental factors within a business model as they stipulate that "CSR has built itself over an *attention model*". In other words, CSR was built from the pre-requisite of corporations being able to actively identify and manage their effects over their own ecosystems. From our previous analysis (1.3), we can align the attention model with the system we mentioned as a full control model over operational inputs and outputs. Secondly, by addressing and assessing social effects produced by corporations beyond regulatory frameworks, and through the use of standard economic frameworks, corporations systematically seek to relate positive effects to value creation – or benefit. Acquier (2007), Margolis and Walsh (2003) and Carroll (1999) studied and showcased

the link between corporate social performance and financial performance through an extension of classic strategic reasoning and frameworks (Segrestin et al, 2012).

In that way, corporations have paved the way for benefit corporation frameworks through empirical innovation (Segrestin et al, 2021). Though corporations, prior to the creation of benefit corporations, have provided what Segrestin et al (2012, 2014) have call “pioneering approaches” when it comes to social and environmental strategic integration, the legal perspective remained an “unidentified link”. While corporations have the capacity to initiate regulatory changes, without a new legal perspective, CSR still “fundamentally referred to an uncodified space of interaction between the company and the society in which it is inserted.”

5.1.2 The necessity to create and focus on an “extended social object”

We hypothesize, aligned with Segrestin et al (2014) that two of the main limitations that kept benefit or purpose-oriented corporations into an “uncodified state” are first and foremost, the limited integration of stakeholder’s interests within corporations’ social objects, and secondly the understanding of a corporation solely as a “nexus of contracts” (Donaldson and Preston, 1995).

Segrestin et al (2014) found that if there were a consensus to affirm that corporations could be leverages for value creation *and* provide positive societal effects, corporations were first and foremost meant to create value for shareholders Research remained focused on whether or not social or environmental performance could be positively correlated with financial value creation (Margolis and Walsh, 2003), creating a lasting impression of “dueling expectations”, today often still referred as decision-making tradeoffs.

A limitation to fully formed benefit corporation was thus for Segrestin et al (2014) the reduction of corporation in a legal for as “nexus of contracts”, binding shareholders to managers. Segrestin et al (2014) find that corporations are constituted of multiple investments and

agreements which go beyond what is negotiated with shareholders with the consideration that “by default directors owe fiduciary obligations of care, loyalty, and good faith the corporation and its stockholders” (Yosifon, 2014), and create a possible convergence factor for stakeholder’s interests.

In this perspective, a corporation is more than a pure economic and transactional organization (Deakin et al, 2017) and can be considered as a broad collective effort invested in by multiple stakeholders, with joint welfare as a perspective, incentive and as a goal. This could be achieved through providing an adequation between legal frameworks and stakeholder management, and explicitly addressing several finalities taking into account stakeholder’s interests. In that way, Segrestin et al (2014) found it was necessary to revise corporation’s legal formats to in order to make “the additional possible” and create flexible purpose corporations, providing incentives for the creation of an “extended social object” for corporations (Segrestin et al, 2014) enabling a conciliation between law and stakeholders theory.

5.1.3 Raison d’être: the specificity of the benefit corporation French Model

In the early 2000s, two streams emerged in the US and in the UK: one that extended management duties in respect to various stakeholders, and one which created new corporate forms with extended purposes. The first benefit corporations were thus created in the US, in Maryland in 2010. They followed the creation of Community Interest Companies in the United Kingdom in 2004. California introduced in 2012 both benefit corporations and flexible purposed corporations, soon renamed social purpose corporations (SPC). In 2014, Società Benefit were created and introduced in Italy. In 2021, thirty-one States in the United-States enabled the creation of benefit corporations.

In France, in May 2019, the French parliament passed the PACTE Law revising the definition for corporations in order to systematically consider environmental and social business

outcomes. The law introduced three elements: first and foremost an obligation to consider business activities' social and environmental effects, secondly, the possibility for companies to define their *raison d'être*, and thirdly, *société à mission* as a new corporate form. The main differentiation factor for the French Model is the focus on the *justification* (Segrestin et al, 2021). The introduction of the *société à mission* in France was motivated by an “original” argument which took form in the *raison d'être* (purpose or as we can translate it, intrinsic rationale), “affording the possibility for any corporation to assign social or environmental purposes to itself, defined in its by-laws” (Segrestin et al, 2021). In this way, the French Law both demands of companies to assess and address the social and environmental outcomes of their activities, and provides an option for corporations to define their perspective and make lasting commitments. The *raison d'être* provides a renewed positive view of corporations (Segrestin et al, 2021) placing businesses a solution-makers. Segrestin et al find that this law is based on a new “positive definition of the enterprise as not only a (...) productive entity, but more fundamentally a space for innovative collective action” : “a creative organization”.

5.1.4 The redefinition and reform of an increasing number of fashion companies

In this sub-chapter we will provide a typology of fashion business that either chose to become benefit corporations or to become B Corp certified, based on the corporations' characteristics and on information publicly communicated around the associated processes.

In France, three years after the creation of the PACTE law, more than 1000 corporations chose to become *entreprises à mission*. Amongst them, 80% are corporations which employ less than fifty people. A limited number of fashion companies, such as Aigle, Faguo and Le Slip Français took the constraining steps, creating a limited representation for a very visible industry.

However, since 2019, an increasing number of European and US-based fashion brands made voluntary steps to become B Corp certified. B Lab is a Pennsylvania-based non-profit organization that labels B Corporation businesses: the label is summarized by the letter "B", as the initial representing "benefits" that a company can bring to workers, to society and to the environment. To become B Corp certified, a company must meet explicit social and environmental values and a legally binding fiduciary duty to consider the interests of workers, local communities and the environment and those of its shareholders. The company must also modify its statutes to adopt B-Lab's commitment to sustainable development and the decent treatment of workers. In addition, a B Corporation must pay an annual contribution based on its income, reach a level of social and environmental performance defined by B Corp, subscribe to a complete bi-annual report on the evaluation of its impacts (an exhaustive questionnaire that assesses the impacts of social and environmental measures) and make a public commitment to meet the social and environmental performance standards required by B Lab. The Certification demands continuous improvement, with an adapted evaluation process which varies depending on companies' characteristics, such as their size.

In April 2023, amongst B Lab's databased, 217 corporations were identified as fashion corporations, and amongst those, more than 10% were based in France. We created a comparative analysis for fifteen brands, including fourteen certified B Corp, analyzing their size, date of creation, location, date of certification and score, set purpose or mission and organizational specificities (if relevant) (*see*, figure 45, below).

Brand Name	Number of Employees	Date of Creation	Headquarters' location	B Corp certification date and latest score	Purpose, Mission Statement or Raison d'Etre	Organization Specificities
Patagonia	Estimated 3000 employees	1957	United States	Certified in December 2011, currently with a score of 151.4/200	We're in business to save our home planet. Its core values are to build the best product, cause no unnecessary harm, use business to protect nature,	Creation of the Patagonia Purpose Trust and Holdfast Collective

					and not be bound by convention	
Chloé	Estimated 1000 employees	1952	France	Certified in October 2021, currently with a score of 85.2/200	Women Forward. For a Fairer Future.	Not yet an Entreprise à Mission
Birdsong	N/A	2014	United Kingdom	Certified in March 2022, with a score of 117.2/200	N/A	N/A
Faithfull the Brand	Estimated 100 employees	2012	Australia	Certified in 2021 with a score of 96.3/200	N/A	N/A
Sézane	Between 200 and 500 employees	2013	France	Certified in September 2021, with a current score of 82.6/200	N/A	N/A
66° North	Between 200 and 500 employees	1926	Iceland	Certified in January 2022, with a score of 93.5/200	N/A	N/A
With Nothing Underneath	Fewer than 50 employees	2017	United Kingdom	Certified in June 2022, with a score of 91.7/200	N/A	N/A
Ganni	Between 200 and 500 employees	2000	Denmark	Certified in September 2022, with a score of 90.6/200	N/A	N/A
Dai	Fewer than 50 employees	2017	United Kingdom	Certified in October 2020, with a score of 97.4/200	N/A	N/A
Finisterre	125 employees	2003	United Kingdom	Certified in with a score of 93.2/200	N/A	N/A
Vestiaire Collective	851 employees	2009	France	Certified in September 2021, current score of 89.4/200	N/A	N/A
Wolf and Badger	130 employees	2010	United Kingdom	Certified in February 2021, current score of 81/200	N/A	N/A
Faguo	Around 100 employees	2009	France	Certified in February 2021, with a score of 83.8/200	<i>Raison d'être</i> Faguo exists to engage our generation against climate change	Société à Mission
Le Slip Français	Around 250 employees	2012	France	Certified in March 2022, with a score of 82.4/200	<i>Raison d'être</i> Reinvent the textile industry by fabricating every product	Société à Mission

					less than 250km from your home	
Aigle	Around 600 employees	1853	France	Not a B Corp	<i>Raison d'être</i> Enabling everyone to fully live their own experiences without leaving any other footprint than their own	Société à mission

Figure 45: Overview of B Corp certified or Société à Mission in the fashion industry

Out of the fifteen fashion corporations, eleven obtained their first B Corp certification in 2021 or after 2021, five are located in the United Kingdom, and six are located in France. Seven were created after 2010 and employ less than 500 employees. The majority do not disclose a purpose yet, and only two of the French corporations are both B Corp certified and *Société à Mission*. We can hypothesize that the increasing interest in become B Corp certified for fashion brands, and especially European fashion brands, depends on their size factor and date of creation: on one hand, newer brands might look for a way to both strengthen and scale a business model which at least partially integrated social and/or environmental factors since its inception. Parallely, other brands funded from the 19th century to mid-twentieth century might look for a certification which will both communicate and assist their search in reforming a business model which often did not integrate social and environmental factors from the start. The certification process may also represent a stepping stone for brands looking to become benefit corporations or *entreprises à mission* in the mid or long run, as well as to become part closed and close circle run and coordinated by like-minded managers.

However, the certification process demands an access to information regarding the social and environmental outcomes of activities throughout the value chain. In parallel to this redefinition process, an increasing number of fashion brands are investing in traceability process in order to systematically access, authenticate and manage environmental and social information.

5.1.5 Globalization consequences: the central and evolutive issue of gaining back control over value chains

In chapter 1.4, we highlighted the gradual interest in, and focus on, environmental outcomes from the 1960s, and on social outcomes from the 1970s (Freudenburg, 1986), with a two-speed dynamic. Within the fashion industry, the 1970s were thus both marked by a gradual delocalization, a fragmentation due to the globalization process, and a renewed focus on discussing and solving social and environmental issues. We thus hypothesize that those two polarizing phenomenon – on one hand, loss of control due to supply chain fragmentation and globalization, and on the other hand, a need for data to better allocate resources towards solving social and environmental issues (Reynolds and al, 2018) created a fertile ground for the issues the fashion industry and its decision-makers face today.

The fashion industry is an international and highly globalized industry, with often a gap from country of production, manufacturing and retail, and a globalization (Čiarnienė, 2014), which makes it difficult to access and manage trustworthy information within supply chains and creates the “potential for inefficient transactions (...) or simply a deterioration in supply chain performance” (Hastig and Sodhi, 2020).

The fashion industry can be considered in terms of velocity, volatility, variety, complexity, and dynamism (Čiarnienė and Vienažindienė, 2014), uncertainty and unpredictability (Mustafid et al, 2018). Supply chains today are considered extremely complex, with multiple echelons and a geographical dispersion (Moretto, Macchion, 2022). With the rise of globalization, the fashion industry has become a significant worldwide business based upon lengthy and geographically fragmented value chains generating tremendous environmental and social impacts which are now difficult to monitor due to extreme opacity. From the ending of World War II, globalization rhymed with fragmentation as firms extended production and manufacturing to developing markets in order to produce better cost efficiencies, for instance through foreign direct

investment and outsourcing (Di Gregorio, 2009). As a labour-intensive industry, the fashion industry is mostly comprised of companies aiming to keep the production cost low by sourcing from manufacturers in countries offering a lower salary range (Colucci, 2020).

This lasting fragmentation has led fashion companies to be subject to risks such as late deliveries, long lead times between returns and resending to customers, stock-out or over-stock (Martino, 2015), as well as country-specific risks (Ivanov, 2018). Further, the costs currently involved in verifying supply chains' reliability and transparency further complicates supply chain management (Choi, 2020) and created a gap which is to be filled by traceability solutions providers.

From globalized and fragmented supply chains thus ensued a loss of control, and parallelly a loss of efficiency, which leads practitioners within the industry towards the creation or integration of traceability systems and solutions, for both product and processes. This loss of control further creates a strategic and competitive reputational risk (Xiong et al, 2021) which led to technological solutions within a more digital era in order to ensure supply chain visibility and transparency. The necessity for traceability had already been documented in several industries, including the agriculture sector (Sun and Wang, 2019), luxury (Choi, 2019) and pharmaceutical products (Chen et al, 2019). It is worth mentioning that a great confusion exists when it comes to "traceability" and "transparency" definitions and further clarification is necessary to support common understanding and leverage their deployment in the specific realm of fashion value chain sustainability (Riemens, 2023, Garcia-Torres, 2019). The United Nations Economic Commission for Europe (UNECE) distinguishes traceability as the process "by which enterprises track materials and products and the conditions in which they were produced through the supply chain" and transparency as "the relevant information being made available for all elements of the value chain in a harmonized way, which allows for common understanding, accessibility, clarity and comparison".

Riemens et al (2023) presents three drivers towards traceability and transparency within the fashion industry: (1) first and foremost, preventing reputational risks (recent risks included the mobilizing of Uyghur forced labour, deforestation, or the obtention of high risk ratings), (2) secondly increasing soft law and legal requirements, from guidance, due diligence frameworks¹⁷, towards harmonization at the EU level, (3) and thirdly, beyond preventing adverse impact, the possibility to drive positive changes in fashion businesses, from enhanced communication with business partners to supply chain resilience and optimization. Riemens et al (2023) identified the three main limitations towards implementation traceability systems as (1) inherent value chain complexities, for instance in terms of the multiplicity of suppliers and the presence of intermediaries. This complexity is described in the professional and scientific literatures (for instance UNECE, 2020) (2) Secondly, sustainability systems require substantial investments in tools to authenticate information along globalized and complex value chains, and (3) communication across organizations: given the lack of mobilized frameworks, the passage from a communication at the organization level through a communication of businesses actions and engagements evolved with the progressive focus on product analysis into a dual communication at the organization level and at the product level, multiplying challenges for organizations. Companies selectively choose what they disclose raising the issue of comparability and greenwashing. In view of these challenges, several initiatives have been developed to assist traceability within value chains, three of them identified by Riemens et al (2023): (1) first an effort on criteria standardization and alignment through initiatives from various companies (Kering's EP&L, Chloé's SP&L, FHCM group initiatives), (2) secondly through multi-stakeholder collaborative initiatives: several experimentations have been launched regarding the combination of platforms and physical markers, as well as initiatives

¹⁷ European Parliament (2021). Corporate due diligence and corporate accountability. European Parliament resolution of 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate accountability, 2020/2129 (INL), 1-40.

from the Comité Stratégique de Filière (CSF) Mode et Luxe, in France initiating an unprecedented number of pilots in order to test, define and select from traceability solutions the ones which would fit the industry.

Traceability Drivers	Traceability Challenges	Industry initiatives
Preventing reputation risks	Inherent supply chains complexity	Effort for criteria harmonization
Increasing legal requirements	Need for substantial investments	Multiplication of solutions and initiatives
Possibility for optimizations	Communication across organizations	

Figure 46, fashion industry drivers, challenges and initiatives, derived from Riemens, Asseman and Lemieux (2023)

This multiplication of drivers and initiatives mark a clear need to improve traceability and control in an harmonized way within the industry (Riemens, 2023).

In this way current focus and efforts from a selection of fashion brands are turned towards redefining their business model to better integrate social and environmental practices (5.2), while better accessing and managing their operational data (5.3). In the next and last subchapter (5.4) we will analyse fashion brands’ published CSR goals in terms of scope, data and practices control, and in terms of benefit or value creation orientation.

5.1.6 Analyzing CSR related objectives in terms of scope, management, and link to benefit

In this last subchapter, from published resources regarding CSR goals from three main luxury groups, we will provide a triple analysis: an analysis in terms of scope, data access and management and link to benefit. We hypothesize that this analysis will provide a necessary background for us to better understand the need emanating from fashion brands for impact

measurement, assessment, visualization and management tools to accompany their redefinition, CSR-related efforts and overall performance management efforts.

In this perspective, and in order to identify CSR-related priorities from fashion luxury groups, we consulted their latest Sustainability Report and/or Materiality Matrix when available. From there we listed the identified key objectives and focus areas (*see, below, figure 47*).

Fashion Luxury Group 1 <i>Identified CSR objectives</i>	Fashion Luxury Group 2 <i>Identified CSR objectives</i>	Fashion Luxury Group 3 <i>Identified CSR objectives</i>
Human rights and labour standards Transparency & traceability of raw materials Conflicts materials Biodiversity & deforestation Protetcted species and animal welfare Hazardous chemicals Water Biodiversity & deforestation Customer expectations & sustainable choice Positive social & community impact Governance & ethics Talent & Skills Health, safety and well-being Diversity, equity & inclusion Stakeholder engagement Product innovation, creativity & quality Circularity Waste and resource efficiency Sustainable finance Data privacy & cybersecurity	Circular Strategy Sustainable Finance Sustainability Tech & Innovation Partnerships Material Innovation Training / training Initiatives & Climate Fund for Nature Reducing environmental impact Reducing the group absolute emissions in scopes 1 & 2 Use of renewable energy Regeneration Traceability Biodiversity	Respecting each one’s dignity and individuality Supporting employment of people with disabilities Transmitting our world heritage’s savoir-faire Contributing to the fight against climate change Committing to a better society Making the circular economy desirable Refining traceability and engaging everyone Protecting biodiversity

Figure 47: key objectives and focus areas from three European luxury fashion groups

We organized those objectives in terms of action scope, or utility scope: either as a strategy, investment and innovation leverage (1), supply chain management action scope (2) or operations action scope (3) (*see*, figure 48, below).

From this new organization in terms of action scope, we found (1) that strategic CSR priorities identified by each group are traceability, circularity, resource efficiency, and sustainable finance, which we hypothesize are highly dependent on data management. We further found (2) that identified CSR priorities at the supply chain management level are either risk-mitigation oriented (conflict materials, labour standards), protective or regenerative-oriented when it comes to natural resources. Lastly, we found (3) that at the operational level (headquarters management), identified CSR priorities are either related to the control of emissions or to contributions to skills, well-being and diversity and inclusion.

In this way, we can hypothesize that priorities are highly dependent of their strategic *or* operational orientation, scope, are in majority control-oriented (circularity, traceability, sustainable finance, investment) when it comes to strategic goals, and either risk-mitigation-oriented (reducing environmental footprints and social risks) or, at the opposite end of the spectrum, value-creation oriented (training and skill development, regeneration) within supply chain and operations.

	Fashion Luxury Group 1	Fashion Luxury Group 2	Fashion Luxury Group 3
Strategy, Investments and Innovation	Product innovation, creativity & quality Circularity Traceability Waste and resource efficiency Sustainable finance Data privacy & cybersecurity	Circular Strategy Sustainable Finance Sustainability Tech & Innovation Partnerships Traceability Initiatives & Climate Fund	Refining traceability and engaging everyone Making circular economy desirable
Supply chain (Tier 1 to 4) management	Human rights and labour standards Transparency & traceability of raw materials Conflict Materials	Material Innovation Reducing the Environmental Impact Reducing the group absolute emissions in scopes 1 & 2	Protecting Biodiversity

	Biodiversity & Deforestation Protected species and animal welfare Hazardous chemicals Water	Biodiversity Regeneration	
Operations and Headquarters (Tier 0) Management	Governance & ethics Talent & Skills Health, safety and well-being Diversity, equity & inclusion Stakeholder engagement	Training Reducing the Environmental Impact Reducing the group absolute emissions in scopes 1 & 2	Committing to a better society Respecting each one's dignity and individuality Supporting employment of people with disabilities Transmitting our world heritage's savoir-faire Contributing to the fight against climate change

Figure 48: key objectives and focus areas from three European luxury fashion groups per action scope

In order to gain an insight into a possible alignment within the fashion industry when it comes to CSR-related goals and objectives, we crossed all three lists in order to identify correlations for each action scope (strategy, supply chain management, main operations and headquarters) (see, figure 49, below). We identified three common CSR-related strategic focuses: on circularity, sustainable finance and traceability, which all require extensive data access, control and management. We further identified a focus on managing the impacts on biodiversity, and at the headquarter level, a will to invest further in talent, training and skill development, as well as ensuring a diverse and inclusive working environment for all direct employees.

	Fashion Luxury Group 1	Fashion Luxury Group 2	Fashion Luxury Group 3
Strategy, Investments and Innovation	Circularity Sustainable finance Traceability	Circular Strategy Sustainable Finance Traceability	Refining traceability and engaging everyone Making circular economy desirable
Supply chain (Tier 1 to 4) management	Biodiversity & Deforestation	Biodiversity	Protecting Biodiversity
Operations and Headquarters (Tier 0) Management	Talent & Skills Health, safety and well-being Diversity, equity & inclusion	Training	Committing to a better society Respecting each one's dignity and individuality Supporting employment of people with disabilities Transmitting our world heritage's savoir-faire

Figure 49: key CSR goals alignments between three of the main Luxury fashion groups, per action scope

Lastly, we classified the six identified common CSR-related objectives published by European fashion groups (circularity, sustainable finance, traceability, biodiversity, training and skill development, and diversity and inclusion) in terms of direct action or control scope (throughout the value chain), type of data access and management, and link to benefit (*see*, figure 50, below). We found that out of the six common objectives, the three strategic and innovation identified (circularity, sustainable finance and traceability) shared a control and action scope which covers the value chain, implies data access and control over both social and environmental data and through implementation can provide a framework and a pre-requisite for value or benefit analysis. We further found that all three operational goals (biodiversity protection, training and diversity and inclusion) cover and require access to supply chain and operational data, either environmental data (biodiversity) or human resources-related data (training, diversity and inclusion). A correlation to benefit for all of those three objectives would depend on the levels of access and visibility throughout supply chain, headquarters and retail.

Objective	Action or Control Scope	Type of data access and management	Link to benefit
Circularity	Value Chain	Social and Environmental data	Pre-requisite Framework
Sustainable Finance	Value Chain	Social and Environmental inputs and outputs	Pre-requisite Framework
Traceability	Value Chain	Social and Environmental data	Pre-requisite Framework
Biodiversity	Operations and Supply Chain	Environmental data	Access and Visibility

Training, talent & skill development	Operations (and Supply Chain)	HR data access and management	Access and Visibility
Diversity & Inclusion	Operations (and Supply Chain)	HR data access and management	Access and Visibility

Figure 50: common luxury key CSR goals, analyzed in terms of action scope, data access and link to benefit

Throughout this analysis we aimed to better understand the luxury and fashion industry common set priorities when it comes to CSR-related strategies and practices. We found that both strategic and operational goals are highly dependent on data access and management. We further found that all three common strategic goals (traceability, circularity, sustainable finance) aim to provide efficient framework for social and environmental data computing, in order to clarify perceived tradeoffs and clarify the efficiency and utility of decision-making.

In chapter 4 and 5, we strived to present an industrial context for the development of new social and environmental performance assessment tools. In our eight chapter we highlighted the gap in research and data management tools while assessing social as opposed to environmental impact. In our ninth chapter we analyzed industry realities which shaped the development of a SP&L by and for the fashion industry.

We found that the current redefinition of businesses as benefit corporations, fragmentation and loss of data control as a heritage of globalization, and current common strategies such as traceability, circularity and sustainable finance by the main luxury groups highlight the dual demand for (1) social and environmental data access and (2) social and environmental data control tools and systems.

All of these elements - heritage from utilitarianism, redefinition of businesses towards benefit-based models, value distribution and decision-making utility amongst stakeholders, focus on integrative accountability and strategies based on control – shaped the demand for tools enabling CSR-related data access, control, translation and integration within existing systems.

In this first part (I), we have focused on the key contextual and conceptual factors which shaped the creation and development of the SP&L. In the second part (II) of our research, we will focus on analyzing the SP&L as business and data management tool, from sociological, genealogical, and big data lenses.

Part II

The SP&L as a business, performance and data management tool

In this second part, we will contextualize the development of the SP&L as a data management tool, which assesses both performance factors and capacities, and aims to provide knowledge to orient decision-making. In order to do so, we will first focus on characterizing business management tools (chapter 6) using management paradoxes, genealogical and sociological approaches, showcasing that the diffused performance data which informs strategic decision-makers is situated, translated and tends to both provoke and increase power imbalance in-between stakeholders. After providing analytical framework for management tools, we will then analyze the data journey (integration, translation, use and diffusion) through management tools (chapter 7), before focusing on the role of visualization tools in decision-making and in valuation (chapter 8).

6. Analyzing management tools from paradoxical, sociological and genealogical perspectives

6.1 Defining a business management tool from a sociological perspective, in a context of paradoxes management

Presenting a dossier on managerial paradoxes, with a focus on the perceived paradox between competence management and performance management, Brulhart (2018) states that management sciences now hold a withstanding and extensive tradition of research focused on management tools (Berry, 1983, Hatchuel and Weil, 1992, Aggeri and Labatut, 2010, Chiapello and Gilbert, 2013). Brulhart (2018) emphasizes the central role the research on management tools has played in highlighting emergent, complex and non-linear dynamics which are often now investigated through the concept of paradox.

Brulhart (2018) states that all management tools enable organizations to maintain an analytical perspective on their own performance (Chiapello and Gilbert, 2013), through the conception and continuous use of strategic, management or prospective dashboards (Kaplan and Norton, 1996) for example. These performance evaluation tools, often created to compute and showcase financial indicators (margin, cash flow, profit, turnover) are now adapted and updated as frameworks to integrate new dimensions linked to customer satisfaction, processes optimization, and CSR (Brulhart, 2010). A first focus point is thus the adaptation of existing performance frameworks to integrate new performance criteria due to the evolution of organizations (for instance their redefinition as benefit corporations). Further, Brulhart (2018) finds that the relation to skill (or competence) management through business management tools is particularly complex due to the difficulty to directly link skill or competence to traditionally assessed performance. Skill or competence frameworks (Jarnias and Oiry, 2013), skill

development tools, tutoring and validation of acquired experience (VAE) all have an intrinsic relationship with performance (of a team, of an organization etc). This connection however is either considered indirect or explicit, limiting its use for strategic decision-making.

Analyzing managerial practices, Smith and Lewis (2011) made a significant contribution by distinguishing four forms, or types, of paradoxes in organizations: learning paradoxes, identity of belonging paradoxes, organizing paradoxes and performing paradoxes. A special issue by Erez (2013) in *Organization Studies* on “Paradox, tensions and dualities of innovation and change” underlines the topicality and the recurrence of this theme in management science research. Beyond identifying managerial types however, Decision-making or collective action must deal or strategically integrate bipolarities and tensions, however only few research works have focused on management paradoxes in practice (in situ), or on the use of managerial paradoxes concepts within managerial decision-making (Brulhart, 2018).

Based on our research work which included conceptualizing and mobilizing a social impact business management tool (the SP&L) within a B Corp certified organization, we can provide an interpretation of Smith and Lewis’ (2011) managerial paradoxes categories in order to showcase first (see, figure 51, below) a dependency between the identified managerial paradoxes, and secondly (*see*, figure 52, below), showcase the place and use of management tools in this context.

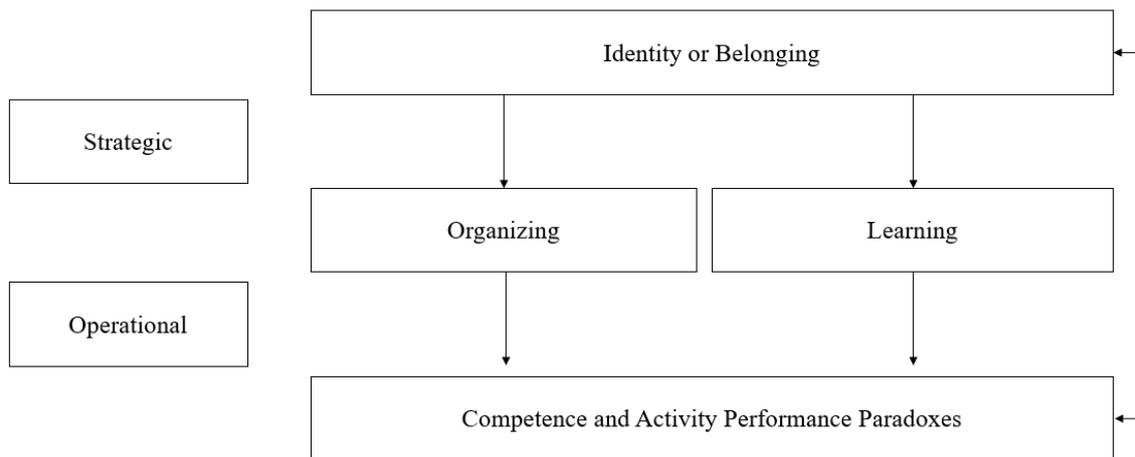


Figure 51: Interpretation in situ of Smith and Lewis' (2011) organizational paradoxes

According to our results presented in Part I of this document, in order to clarify, and perhaps partially resolve, perceived managerial paradoxes, the very first paradox that needs to be clarified is the “Identity or Belonging” paradox, through a strategic definition of what the organization is (for instance, clarifying a purpose through the process of becoming a benefit organization). The clarification or redefinition then might inform and clarify both organizing and learning paradoxes, for both operations management and human resources management. The clarification of paradoxes through new or updated operational or competence-based objectives can in turn affect and influence the activity, individual and collective performance which will be evaluated using performance tools to inform strategic decision-making, whether in the form of trade-offs, pluri-criteria performance, or integrated performance.

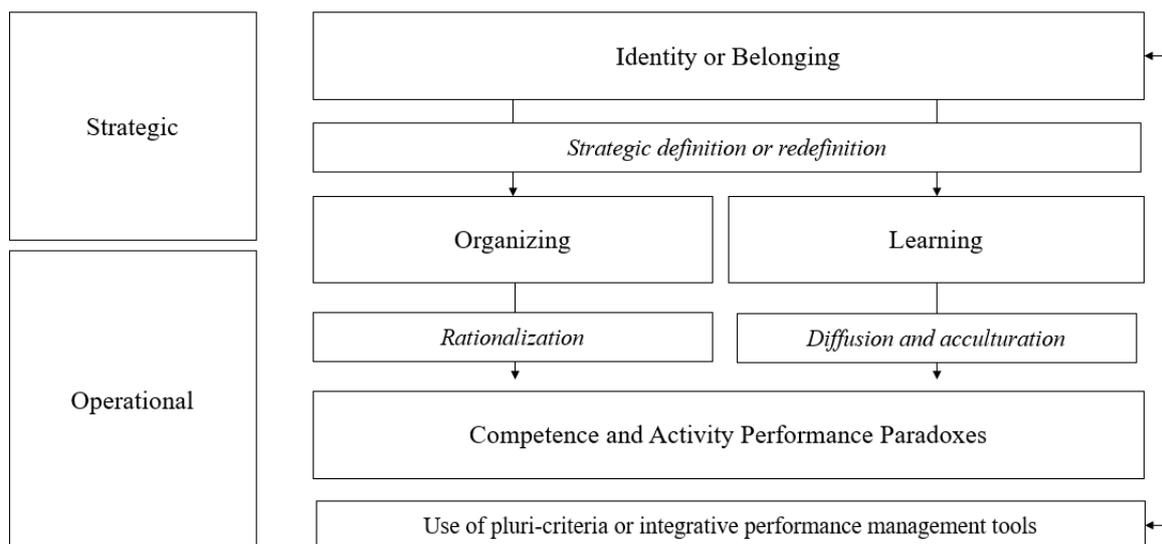


Figure 52: Interpretation in situ of Smith and Lewis' (2011) organizational paradoxes, highlighting the place performance management tools in the process

From this first interpretation, we propose three main processes in order to help clarify the managerial paradoxes at each decision-making stage: first (1) a process of strategic definition and redefinition to inform (2) activities through new activity rationalizations, and (3) diffusion and acculturation processes, in link with strategic definitions. We then place performance management tools at pivotal stages at every stage of decision-making: as training devices for diffusion and acculturation processes within the organization, as rationalization tools for activities, and as performance management tools, placed both at the end of the process, analyzing the result of decision-making and organizational practices, and as the source of new decision-making and organizational practices. We thus propose that organizational paradoxes should be pragmatically considered through the analysis of two interconnected processes: a strategic definition process, and decision-making processes in alignment with the former. We further propose to clarify the pivotal place systematically taken by business management tools in practice in this context and at every stage of decision-making and implementation processes: translating organizational definition and culture through training, facilitating operational

decision-making and processes, both informing decision-making and clarifying its results, in an integrative way.

As analyzing the evolution of management tools appears increasingly fundamental to account for the evolution in organizational dynamics (Brulhart, 2018), and to help clarify and defining organizations' (re)definition and decision-making process, we will analyze business management tools both from genealogical lenses (2.2) and from sociological frameworks (2.3).

6.2 Analyzing the genealogy of business management tools

We will first focus on analyzing business management tools from a genealogical point of view, aligned on Ghaffari (2013). Ghaffari proposes two main contributions for a genealogical approach when it comes to analyzing management tools: first, as an opportunity to analyze the dialogue between intellectual traditions, and secondly, as the opportunity to analyze management tools from a continuous process, in situ. In this way, the contributions of a genealogical approach to management tools (Ghaffari, 2013) are first to provide an opportunity to engage in a dialogue between the intellectual traditions which make it possible to understand them (analyzing the intrinsic dialogue at the genesis of a business management tool), and further, to consider the invention of management tools and their implementation "in continuity" (analyzing the business management tool as a potential, activated or non-activated).

From this perspective, business management tools, resulting from social conventions, are carried and modeled by socially situated practitioners or actors, and integrated into organizational logics, meaning they are used, mobilized and involved in dynamics, alliances, competitions, and that they intrinsically carry strategies and beliefs. A management tool can be co-constructed and modelled by groups with antagonistic roles and goals (Ghaffari, 2013) and can be analyzed as an actionable potential within the organization in which it is developed and

placed (Boussard, 2001). As an actionable potential (Boussard, 2001), it can be invested, or not, be challenged or not (Rot, 2005).

Ghaffari (2013) outlines that management tools are subject to at least three postures: (1) theoreticians-practicioners, ultimately seeking to optimize work rationalizing and associated practices, (2) social science researchers creating counter-discourses and highlighting managerial derives, and (3) the auditing of working conditions (social auditing throughout operations and supply chains).

These postures provide a specific analytical framework to approach business management tools as objects. Ghaffari (2013) highlights three main analytical frameworks. The first one (1), often mobilized by practitioners, aims to question the uses and appropriation by various stakeholders of the management tools deployed within organizations, the second one (2) analyses the socio-technical process of creating new standards, and the third one (3) focuses on industrial rationalization. We propose to re-arrange these analytical frameworks in alignment with organizational processes (focus on standard creation, industrial rationalization, and uses) (*see, figure 53, below*).

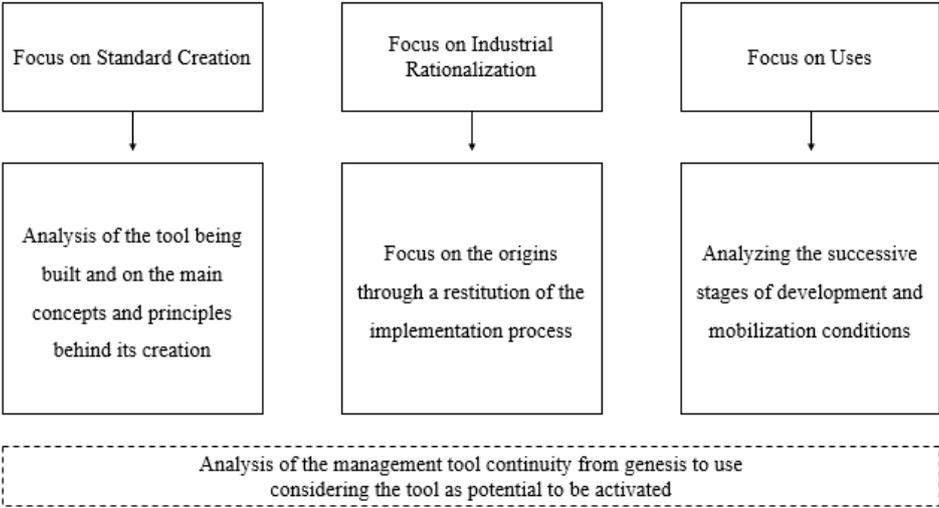


Figure 53: three main analytical frameworks, derived from Ghaffari (2013)

The genealogical approach can provide a basis to analyze three stages in coherence with each other: the intrinsic rationale, the industrial implementation and the use. Focusing on the intrinsic rationale can provide a critical perspective on a management tool as a possible coercive force, implementing and normalizing (unregulated) standards. Focusing on the industrial rationalization and on the implementation process can provide a visibility on both stakeholder coverage and implementation efficiency. Lastly focusing on uses can provide visibility on mobilization efficiency. Viewing the tool as an (un)activated potential (Boussard, 2001), a genealogical approach to management tools could provide an overall efficiency analysis for the tool, considering its rationale, implementation process, use by stakeholders and for decision-making. This would mean thinking of both uses and appropriation for management tools being deployed within organizations.

In the context of a genealogical approach, what would it mean for researchers focusing on management tool to evacuate or omit contextualization or genealogy? We will now analyze the standard creation stage (analysis of the tool being built) and its inner sequence (Ghaffari, 2013) to get a better grasp of the consequences of omitting the genesis factor. Quantitative management tools are meant to make heterogeneous situations comparable, based on the perceived stability of their indicators. Sociologists invite us to consider management tools as a topic of discussion, in order to “open the black box of their elaboration” (Ghaffari, 2013). By doing so, researchers and sociologist develop an interest and focus in the instrument or tool being made, and in its integration within socio-technical systems, associating actors, techniques and interactions around the quantification of value (Ghaffari, 2013), whether it is in order to report the value of a company or an activity (Vatin, 2009). In that way, concepts of translation and socio-technical networks (Akrich, 2006) prove instrumental in the analysis of management tool and of their genesis. Ghaffari (2013) thus states that analyzing the genesis of a tool, means analyzing, first 1) the selection of a social reality which enabled the creation of tool and

informed its development, secondly 2) the tool(s) used to translate a social reality into a language shared by entities enrolled in the process, and 3) thirdly, networks to generalize this new measurement convention and integrate the results in procedures. From this analysis, the importance of a social reality to be translated, and of the management tool as a form of translator appear instrumental to analyze the increasing use of performance indicators within organizations. Desrosière (1993) showed that the construction of a political space necessitates a “conventional space of equivalence” providing not only a measurement methodology but also highlighting the selection of social realities which could and should be measured. This form of “relevant language” and manufactured language can then be generalized and disseminated (Boltanski, Thévenaut, 1991).

This three stages deconstruction suggested by Ghaffari (2013) enables in theory to gain insights into the way a social reality can be “problematized” according to a series of points of views from stakeholders, and enables to see how this reality is “framed” through the choice of indicators as translation of social realities. Ghaffari (2013) hypothesizes that this framework enable better insights into both the stakeholders and into the roles they play, and in this way to sequence activities, results and stakeholders to form a coherent analysis of the management tool. We derived three essential stages to analyze standard creation from management tools: (1) contextual overview and problematization, (2) translation into performance language and (3) language diffusion (*see*, figure 54, below)

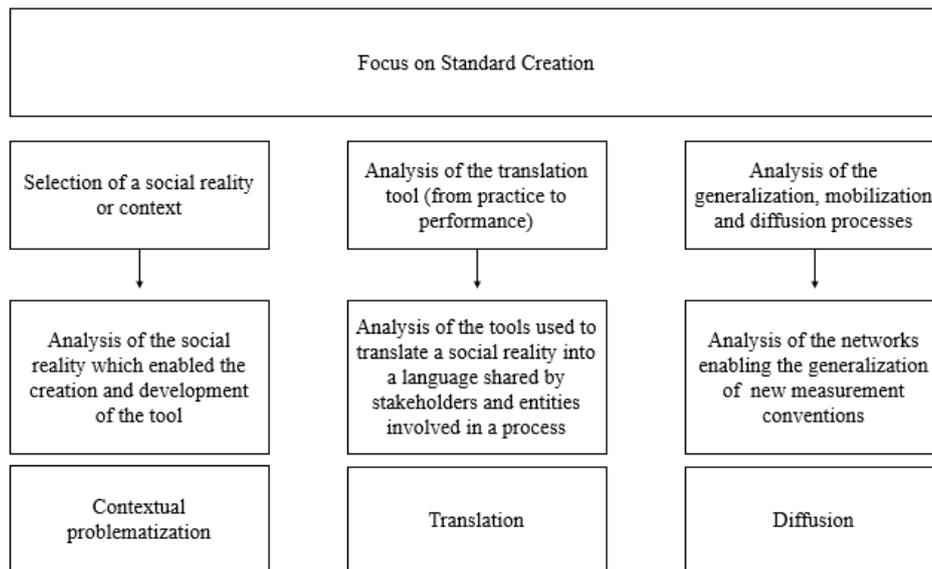


Figure 54: standard creation in three focuses, derived from Ghaffari (2013)

However, Ghaffari (2013) notes that progressively, genesis conditions, or in our chosen terms contextual analysis and problematization, tend to be omitted when considering quantification instruments and the performance results they provide for organizations. Ghaffari hypothesizes that this “amnesia” increases circulation and diffusion of performance results which tend to reinforce the version of reality that they translate and to diffuse the results and language without providing the necessary contextual problematization. A same management tool and performance language can be thus used for very different projects and goals, and this possible displacement shows, for Ghaffari, the importance of contextual analysis.

Besides analyzing its intrinsic potential *as* a tool, Ghaffari (2013) thus states that a genealogy of business management tools could prove to become instrumental in analyzing the coercive potential *of* management tools (Chiapello, Gilbert, 2012, Metzger and Cleach, 2004).

6.3 A social analysis of business management tools

Analyzing the literature on sociology of management tools, Ghaffari (2013) underlines the lack of focus on the historical dimension for the tools, and identifies a series of initial stages for research dedicated to the sociology of management tools, detailing three main approaches. First, from 1980 to 1990 a focus on identifying the tools in connection with the development of computer techniques, forms of globalization (Maugeri, 2003, Terssac, Bazet, 2007) and standardization tools (Gadrey, 1996, Segrestin, 1997) while the tradition and sociology of financial and accounting tools are still neglected (Chiapello, Ramirez, 2004). Secondly, a set of research work was inspired by anthropology, with a reflexive analysis on the appropriation and diffusion of the instruments of rationalization (Flamand, 2002, Both, 2006, Muller, 2008), including a focus on effects of attraction or repulsion towards management tools, or inequalities as an effect of the implementation or diffusion of management tools (Villette, 1976, Pinto, 1987, Dassa, Maillard, 1996, Monchatre, 2011). Thirdly, a set of research works focus on rationalization professionals and practitioners, whether engineers (Thine 2007), graphologists (Marchel, 2005), coaches, but also employees (Stewart, 2006) focusing on the role of scientific and technical legitimacy, and on the mechanisms of appropriation of management tools. Parvis (2003) examines the continuum of positions ranging from practitioners to academics, with intermediate positions of expertise and action research (*see*, figure 55, below)

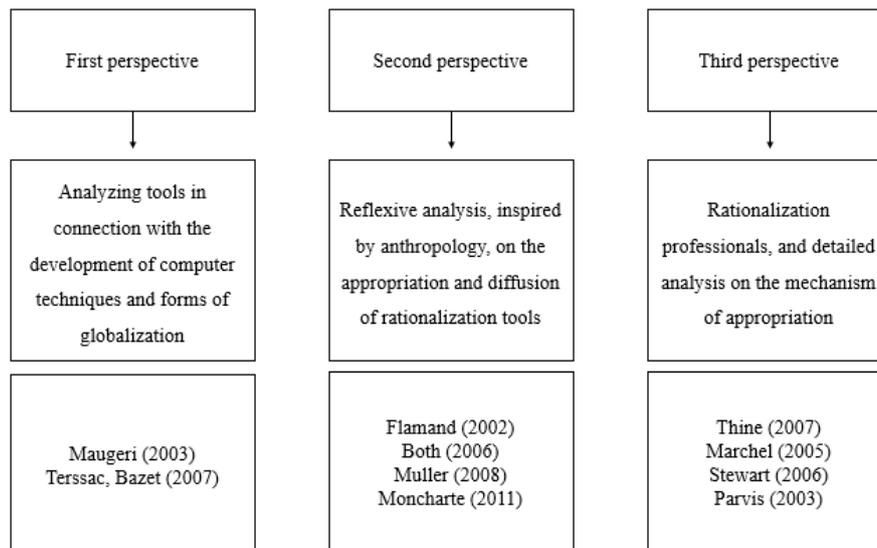


Figure 55: Main sociology perspectives on management tools before 2013, from Ghaffari (2013)

In 2013, Chiapello and Gilbert presented a synthesis of the research work on management tools with a sociology perspective. They provided an analysis mobilizing multiple fields of research (sociology, political science, social psychology and management science). In this perspective, the notion of what a management tool is, is questioned, examined regarding its own materiality. Management tools' materialities are distinguishable according to their functional area of intervention, according to their expected results, or according to the use made of the them (Chiapello, Gilbert, 2013). Chiapello and Gilbert's work aimed not to list the existing management tools but to question why companies mobilize management tool, and what their impacts are on employees.

Describing management tools as non-neutral technical instruments, impacted by their own development and use contexts, Chiapello and Gilbert (2013) outline their historic affiliation with bureaucratic action through the setting of formal rules and the expectation of predictability, and establish a correlation of their development take off with the arrival of new information and communication technologies. Chiapello and Gilbert (2013) highlight the capacity of the tools to harmonize and homogenize practices, as well as to make the border between public and

private porous. Chiapello and Gilbert (2013) further associate the use of management through performance and using performance assessment tools with the use of tools which may contribute to better transparency and visibility in order to facilitate action, including State action.

After detailing progressive management instrumentalization (going back to Winslow Taylor and Henri Fayol's defining work on organizational theory and traditional approaches to management tools), and describing the spectrum of reaction provoked by the increasing use of management tools, with on one hand an associated "technophile euphoria", and on the other hand a feeling of oppression, Chiapello and Gilbert (2013) provide a social analysis of management tools, from a literature review, and focused on three theoretical and critical frameworks. First (1) critical studies in which researchers consider that management tools are domination levers in order to exploit or dominate workers. Those criticism involve a critique of technicism, the evacuation of subjectivity, and a cult of transparency which can lead in the long run to harmful effects (Clot, Dejours). Secondly, (2) critical work which assimilate management tools to vectors of dehumanization and alienation, including work which assimilate management techniques to manipulation (Aubert, De Gaulejac). Thirdly (3), institutionalist studies focusing on the role played by institutions in the development of management tools. Neo-institutionalist approaches are based on studies relying on the interactions between management tools and actors which led to three theories: (1) the actor-network theory (Callon, Latour, Akrich) in which researchers are interested in the role management tools play in organizations and in the way they operate, (2) the tool as a language, with a focus on organizations' communicational dimension, and on the simultaneity of management tool and language efficiency (Borzeix, Fraenkel), and (3) the theory of the strategic actor (Crozier, Friedberg) in which behaviors result from the strategic intentions of

social actors, and in which both individual strategies and action regulation hold a specific significance.

Chiapello and Gilbert (2013) further present contributions by researchers, for instance Corinne Eyraud’s work on public action’s measurement through sets of indicators, in which Eyraud examines the measurement of public actions set up within the framework of organic law in relation to finance laws. In this, Eyraud describes quantification processes as the product of a balance of power between ministerial administrations, and underlines how much of the construction of quantified information can contribute to inform and orient public action, for instance through subordinating means allocation to the institution’s performance. Throughout their work, Chiapello and Gilbert provide a comprehensive, systematic and critical overview of mechanisms of power created by and through the creation and implementation of management tools, with a focus on a plurality of stakeholders (*see*, figure, 56).

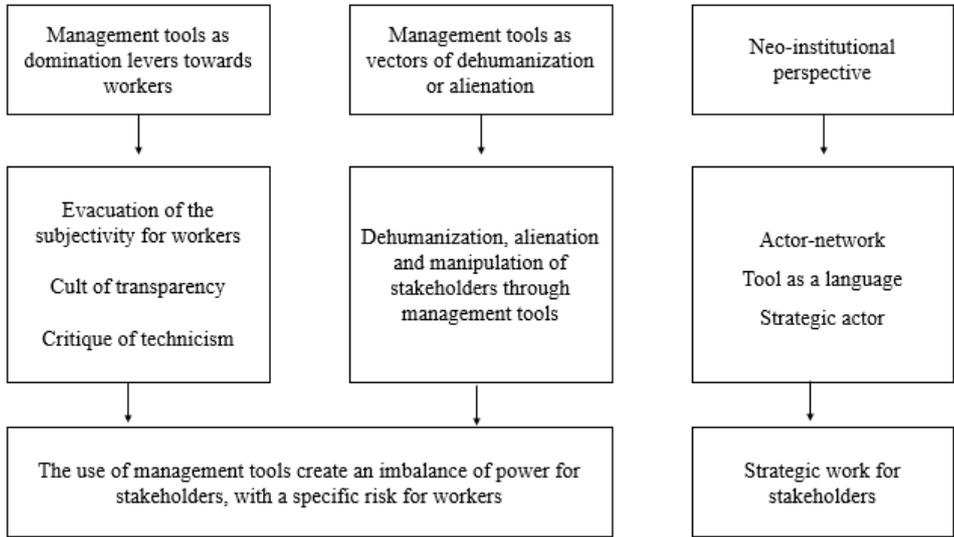


Figure 56: Social analysis of management tools, adapted from Chiapello and Gilbert (2013)

The literatures reviews from Ghaffari (2013) and Chiapello and Gilbert (2013) focused on complementary sociological perspectives on business management tools. On one hand, through

their perspective on the existing literature review on the sociology of management tools, Ghaffari et al (2013) highlighted both the importance of the appropriation (mobilization) of the management tools and on the diffusion of their performance language (diffusion). On the other hand, the literature review from Chiapello and Gilbert showcased the importance of understanding both the stakeholder influence and power imbalance provoked and enhanced by the creation, integration, mobilization of business management tools, and by the diffusion of their languages.

In this chapter we analyzed management tools through their central role in interpreting and managing apparent paradoxes (4.1), the importance of establishing and analyzing their genealogy (4.2) and of analyzing them mobilizing a social perspective (4.3).

In both Ghaffari's and Chiapello and Gilbert's analysis, we could observe that there are two common criteria to take into account while analyzing management tools: one (1) that every data and result emitted and computed is not neutral but entirely situated, and two (2) translated in a performance language which is then largely diffused. In the next chapter, we thus will analyze the genealogy and the continuous computing process of information (or data) as it is assessed through a management tool and diffused between stakeholders.

7. Analyzing data journeys and data processing systems

In this chapter we will focus on the way data is assessed and processed through management tools. In that way, we will first focus on characterizing data and will focus on the concept of data journey (7.1) developed by Leonelli (2020) to question data mobility and interoperability across data management systems, before focusing on the creation, development and increasing use of data analytics and processing systems (7.2) in order to have insights on both the system and data approaches in modern performance management tools.

7.1 Characterizing data mobility, plasticity and journey

“The naïve fantasy that data have an immediate relation to the phenomena of the world, that they are objective in some strong, ontological, sense of that term, that they are the facts of the world directly speaking to us, should be finally laid to rest”: writing about data journeys in sciences, and aligned on findings from sociological perspective on management tools, Leonelli (2020) finds that even where data is assumed to be “relatively homogeneous”, there can be a

variation in data practices, and cases of depending on methodologies and tools mobilized to generate data.

Leonelli (2020)'s *data journey* metaphor helps questioning practices of management and data processing, and data variation across "stages of travel". She defines data journeys as "designating the movement of data from their production site to many other sites in which they are processed, mobilized and re-purposed." Through her volume on data journeys, Leonelli particularly evokes the challenges in obtaining information from data: if one can count and measure any number of things, the difficulty is knowing what the right element to analyze is that will serve both cognitive and practical purpose for organizations and stakeholders. Through her analysis, Leonelli (2020) thus questions (1) which types of data processing exist and (2) how they evolve depending on different inquiries.

This analysis from Leonelli is particularly marked the increasing emphasis placed by both the public and the private sector on the production, management and communication of "open" or "big" data. Leonelli finds that there are two premises to big data: first, (1) mobility, secondly (2) interoperability. Mobility, as the value of data as prospective evidence increases the more it travels across sites, facilitating its use by diverse stakeholders and industries. Interoperable, as through linkage techniques and tools data becomes part of a data aggregate functioning as empirical platforms to power machine learning and explore new correlations.

However, those premises heavily depend on the conditions for data movement, as well as on the ways data mobility and interoperability can be achieved. Leonelli finds that data movement is intrinsically linked to its latin eptymology ("datum" or "that which is given") and defines data as "mobile entities" by definition: for any object to be defined as data, it requires to be portable. Latour (1999) in a seminal discussion regarding data production and circulation found that, while data are intrinsically portable and defined by their portability, their epistemic power is derived from a form of immutability. In other words, for Latour (1999), the power of data is

derived from their capacity to appear stable and taken as stable over time, or as Leonelli describes it “data are static products of one-off interactions between investigations and the parts of the world under investigation”: while phenomena change over time, what is documented remains fixed, stable. Leonelli argues that an evolution from this analysis might reside in the fact that another source of “soft power” when it comes to data today is the evidence of their mutability potential (“the multiple ways in which they are transformed and modified to fit different uses as they travel across space, time and social situations (...) in order to serve their evidential function.”). There thus appears to be a paradox working in the favor of quantifiable data: while defined by its mobility, it projects the illusion or immutability, yet still appears to be transformable and portable at will depending on the intended use.

Further, data quality is also heavily linked to its origin, or “lineage”, especially as industries increasingly seek to implement traceability solutions to ensure the quality of their data as well as to mitigate any external communication risk. Morgan (2010) named data “mutable mobiles”, as the more data “travels” the more it shapeshifts in order to better suit circumstances and new goals while providing its own track record. Data lineage in that way depends on (1) the capacity to retain integrity while being adapted, processed and transferred and (2) remaining identifiable from processing to processing.

Overall, Leonelli identified four stages for a data journey, as well as six associated challenges. The four identified data journey stages are (1) origins (data collection, preparation and reporting), (2) clustering (data ordering and visualization), (3) sharing (data access, dissemination and quality assessment) and (4) data interpretation (data transformation, analysis and re-use). Leonelli identifies locations, narrative multiplication, use in detailed and specific case studies and attention to reflexivity as three of the main challenges associated with data journeys. While as Latour (1999) discussed a perceived value for data was attached, and is still partly attached to its perceived communicable stability and capacity to constitute an absolute

value, the increasing value (interoperability, mobility) associated technically to data flexibility and adaptability in a wide range of context and through a wide range of management system also weakens its perceived and communicable “absolute value”. In other words, we can hypothesize that data’s intrinsic technical abilities and more valued today compared to communication potential (or perceived stability as an intrinsic quality) – however, the question of trust in data lineage is dealt with by organization through system innovation (traceability), making system interoperability not only more complex, costly but also entirely necessary (*see, figure 57, below*)

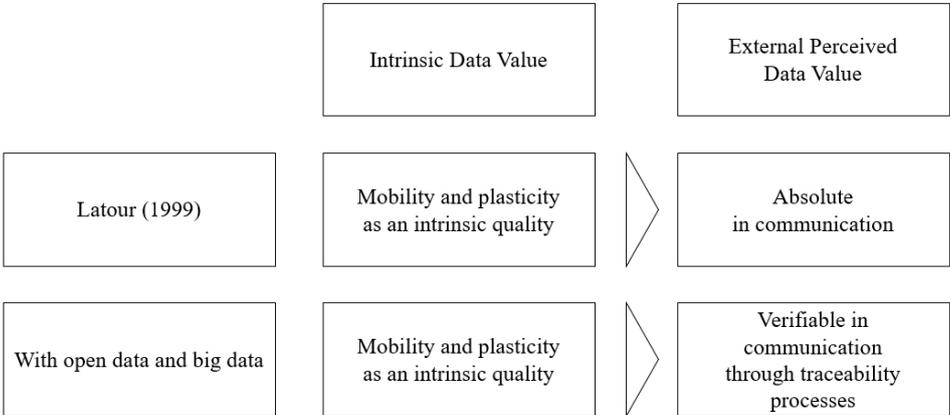


Figure 57: Intrinsic and external data value evolution

7.2 Characterizing data processes and evolutions in information processing

This shift from value placed in data being an absolute value, towards value placed in data as an entity with plasticity (5.1) which can be used and re-used (Leonelli, 2020) has created the necessity for the implementation of big data systems and for risk mitigation processes, in order to ensure data credibility. In this second subchapter we focus on data risk mitigation processes which are meant to increase data credibility at the interpretation and communication stages, and on big data analytics processes put into place to convey data and performance information towards stakeholders.

Access and data processing are deemed key to assess performance and efficiency during production processes. Manufacturers traditionally use a range of software and automation systems in order to increase both productivity and efficiency. However, those systems do not allow manufacturers to perceive and react to the real-time changes in data and associated practices (Cui, 2020). In order to enable real-time access and visibility within the supply or value chain, IoT (data-accessing and data-processing technologies on the cyberspace which enable the perception of real-time changes in physical space with sensory tools) and CPS (cyber physical systems, physical and engineered systems which are monitored, controlled and integrated) have been increasingly used as foundations to develop a series of solutions, such as digital threads (which integrate disparate systems over the product lifecycle, thus product lifecycle-focused), and value chain digital twins (building up a real-time relationship between the physical space and the cyberspace in manufacturing, thus value chain-focused) (*see, below, figure 58*)

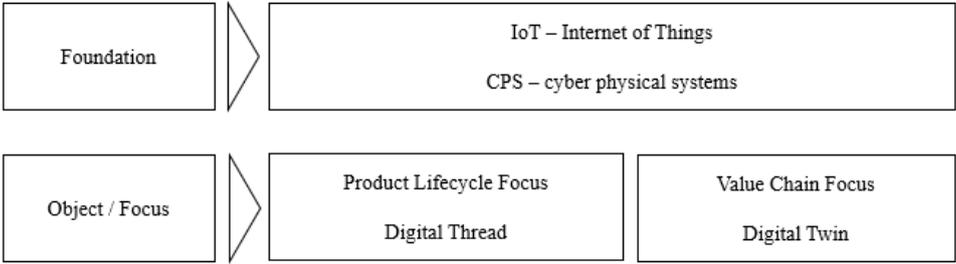


Figure 58: Big data system pre-requisites and perimeter focus

The main fertile ground for research when it comes to real time visibility and digital supply or value chain twins was linked, from 2019 to 2021, to risks related to the pandemic, health supply systems and vulnerabilities in sourcing. Ivanov (2021) theorized that the notion of and applications for digital supply chain twins (which they define as a computerized model that represents network states in real time) are a combination of model-based and data-driven

approaches which aim to uncover the interrelations of risk, disruption modeling and performance assessment. The use of digital supply chain twins increased amid the COVID-19 pandemic and post-pandemic recoveries to ensure visibility over mapping supply networks. Lechler (2019) researched real-time visibility over supply chain management in particularly volatile, uncertain, complex and ambiguous (VUCA) business conditions. Real time data processes were in that case put into place with the premise that data processing could be “perfectly mastered” in order to reduce uncertainty, a premise that Lechler found to be flawed. Beyond pandemic and post-pandemic risk mitigation, there is an extended recent literature regarding the use data sets and data processing tools in order to encourage informed decision-making tackling health issues. Galetsi (2019) for instance reviewed 804 publications related to big data analytics, defined by Chen (2012) as techniques, technologies, systems, practices, methodologies and applications which analyze a vast amount of data to help an organization better understand its business, market and make timely decisions, in the health sector. This research work was conducted in order to identify the organizational and social value related to the creation and integration of big data systems, in a data intensive industry. They found that the main value derived from the implementation of big data systems is the capacity to provide personalized health services to user and to support decision-making using algorithms, specifically through the use of machine learning (Gruebner, 2017) and visualization (Chen and Zhang, 2014) propositions and means. They further found that the use of big data analytics methods and techniques, which could lead to optimization, forecasting, simulations, were of “paramount importance” to formulate recommendations and insights to policy-makers (Doumpos and Zopounidis, 2016). Galetsi (2019) finds that big data analysis could prove beneficial to a diversity of stakeholders (patients, providers, researchers, companies, government). However, they also find that all of these stakeholders might gave different expectations for the evolution of healthcare data analytics. Sousa (2019) further addressed the

utility of big data analytics for people management within healthcare organizations, in efficiency terms and finds that the use of predictive model and real-time analytics can assist in the collection, management, and integration of data in healthcare organizations and create a basis for efficient decision-making. Lastly, Chen (2020) addressed the organizational barriers preventing medical institutions from implementing big data systems, and mobilizing Sheth & Ram (1987) innovation resistance theory.

Beyond risk mitigation overall, hence, they are a series of key drivers of big data ecosystems in manufacturing: for instance, system integration, data, prediction, sustainability, resource sharing and hardware (Cui, 2020). The creation and implementation of big data ecosystem could thus not only participate to risk mitigation, but also help control activity and practices, facilitate communication and enable predictions. Those data systems, duplicating, adapting and interpreting existing manufacturing structures are meant to create an easier and more reliable access to activity data.

Those processes naturally create overlap in functions and in processes. In that way, Cui (2020) finds that the same requirements from manufacturing were adapted in big data ecosystems, namely are data ingestion, storage, computing, analytics, visualization, management, workflow, infrastructure and security. On the other and, Cui (2020) also finds that challenges associated with the 5Vs of big data (Volume, Velocity, Variety, Veracity and Value) are found in manufacturing processes. The initial Vs were coined by Gartner to design volume (vast amounts of data), velocity (fast data streams) and variety (content heterogeneity), to which Schroek added the “V” related to the uncertainty of data, or veracity, and Demchenko identified a fifth V so crucial for organizations, value, in order to design the added-value that the collected data can bring to an intended process, activity or predictive analysis. Cui (2020) thus finds that issues of velocity, variety and veracity can come from the fact that a same type of data can come from

different devices, with various sample frequencies, precisions, formats, leading to inconsistencies in data and difficulties in gaining credible insights.

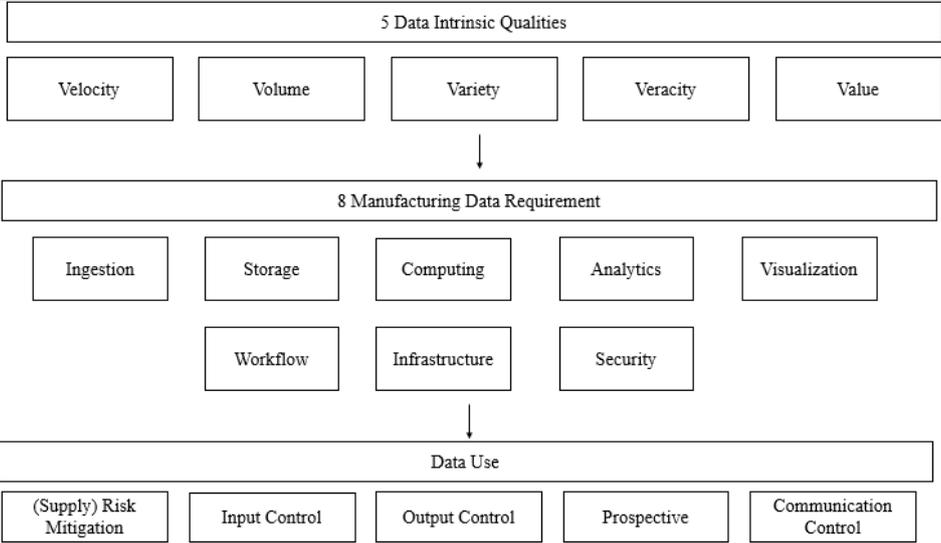


Figure 59: Data qualities, process requirements and related uses

Paik (2019), while focusing on blockchain solutions, however finds to increase data credibility there needs to be a control over what data is stored and manipulated, and how data is stored and manipulated, in order to ultimately determine the degree of utility, performance and cost of implementing data-driven and efficiency-driven solutions. In that way, Paik finds that while blockchains for instance can help enhance the quality of data by providing a “transparent, immutable and consistent data score”, the implementation of the technology can create further data management challenges. In order to verify data credibility, Paik proposes a series of criteria, including assessing data consistency, traceability, availability, compliance, confidentiality and credibility. In turn, they propose that technologies such as blockchain should provide transparency, immutability, consistency, equal rights and availability (see, figure 60, below)

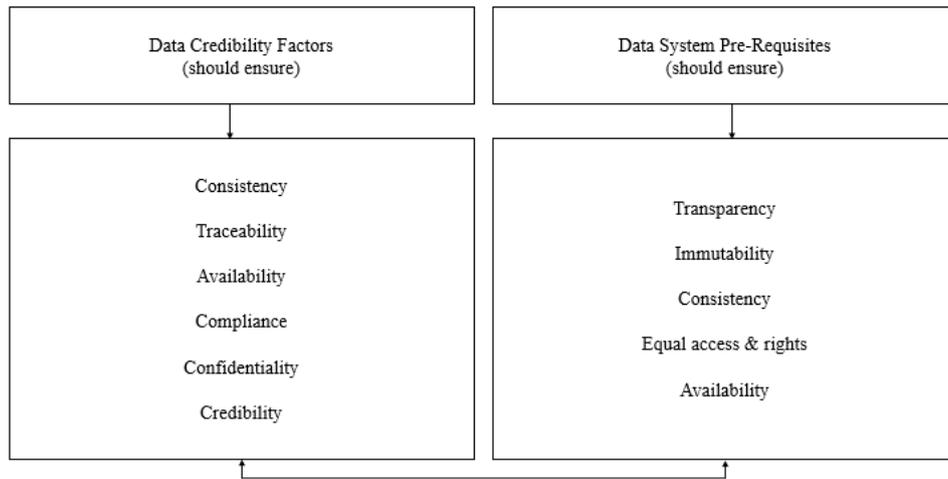


Figure 60: Data credibility requirements, for both data assessment and data processing system, aligned on Paik's proposition (2019)

In that way, we can hypothesize data processing systems, ever increasing in complexity, sophistication and applications, when complying with a series of pre-requisites (transparency, immutability, consistency, equal access & rights, availability) offer the possibility for data to be used at full or growing capacity (volume, velocity, variety) but does not resolve the issue of lineage, which provides both veracity and, eventually, value to its end use. As data is not neutral but heavily situated, the capacity to use and re-use (Leonelli, 2020) data through complementary data processing systems does not mitigate but on the contrary ever increases the risk of using and sharing a biased information to facilitate decision-making or communication, ending in the possible counter-productive use of a sophisticated data system. In this way, the vast use and re-use of common datasets, through facilitating processes, could parallelly create more analytical risks, creating increasing risks for stakeholders.

8. Visualization, Decision-Making and Value Creation

In this chapter we will focus on the mobilization of visualization as a feature to guide decision-making (8.1), and on the factors associated with big data system and management tools' value creation (8.2).

8.1 Analysis of data visualization features to facilitate and support decision-making

In the previous chapter, we highlighted the challenge of data systems to provide a form of consistency, or results immutability, upon which decision-making could be based. In that way, visualization could be playing an instrumental part in aiding decision-making as it holds the “power to stabilize data patterns” (Leonelli, 2020) to enable interpretations. Jin (2022), aligned on a definition by Spence (2001), defines visualization as a visual art technique used to create graphical representations of information to support communication and exploration. In their commentary on “Visualization in Operations Management Research” by Basole (2021), Jin et al (2022) describe the way users interact with visualization systems when it comes to data exploration, analytics interpretation, information integration leading to new hypothesis generation and testing, as well as to knowledge automation. Visualization can be used to define problem scopes and reduce workload in perception, cognition, and insight generation (Van Der Aalst, 2016). It is also meant to improve effectiveness and efficiency through interface design and the showcasing of modalities and selected information (Bowman, 2012) catering specific contexts and user individual characteristics (Chen, 2021).

With the IoT developments, visualization can be deemed as critical and instrumental to big data systems, as it creates both an outcome and a validation process for complex and interconnected networks (Jin, 2022). Further, current visualization (for instance, dashboarding) might

constitute a first step towards the creation of cognitive-based visualization system with predictability features. Generated insights which are modeled, interpreted, and which could be augmented using artificial intelligence models, could become a norm in aiding decision-making (Jin, 2022).

Jin (2022) however states that the main challenges are embedded in the risk of misusing visualization. For instance, misrepresentation by omission, or misrepresentation by inclusion constitute significant risk or misinterpretation which could lead to flawed decision-making and counter-productive direct and indirect impacts on stakeholders. Czigler (2007) calls this phenomenon “visual mismatch negativity”, which could be defined (Jin, 2022) as a mismatch of the information and the visual representation. The usual structure (Scheniderman, 1996) used for visualization tools in order to guide decision-making “overview first, zoom and filter, then details-on-demand” can also be intrinsically flawed and create a bias or a selective process which could lead to flawed interpretation and decision-making.

Further, Corell (2019), working on the ethical dimensions of visualization research, while stating that visualization have a significant influence on how data are used to make decisions, shows that there is not set or systematic connection between visualization production and ethical criteria. Corell and al thus ask what obligations do scientists and engineers have when producing visualizations and visual analytics? They provide a first answer, in the form of a schematization, which associates systematically human-centered computing to security and privacy features. This first proposal by Correll (2019) could possibly benefit from specifying stakeholders, as the notion of data-privacy is for now heavily user-centric: however, in operations management, at least five stakeholders’ categories (workers, value chain partners, consumers, local communities, society) are possibly involved in the activity process, or production process. It would thus be interested to explore and develop further an impact-

framework which would present risks for an extended selection of stakeholders rather than focusing end-users only (*see*, figure 61, below).

	Data analysis	Data internal use	Data diffusion
Data Privacy Risk	Operations Value Chain Partners Workers	Operations Value Chain Partners Workers	Operations Value Chain Partners Workers
Risk mitigation potential	Operations Value Chain Partners Workers	Operations Value Chain Partners Workers	Operations Value Chain Partners Workers
Possible counterproductive effect(s)	Operations Value Chain Partners Workers	Operations Value Chain Partners Consumers Local Communities Society	Operations Value Chain Partners Consumers Local Communities Society

Figure 61: Ethical risks associated with performance visualization, per stakeholder category

In the figure 61 above, we extended the ethical analysis for the use of visualization to six stakeholders (following recommendations from UNEP/LCA Alliance when it comes to stakeholders considered in social lifecycle analysis): value chain partners, local communities, workers, society, consumers, to which we associated operations or headquarters. We analyzed a series of ethical issues, including data privacy risks, potential for risk mitigation through decision-making aid, and potential adverse and counter-productive effects on stakeholders through decision-making aid mobilizing a visualization tool. For each of these three categories of potential effects, we associated categories of stakeholders. We found that, beyond users, operations, value chain partners, and workers are most of the time at risk when it comes to either data privacy risks, or adverse or counter-productive effects due to information mismatch using visualization tools. This effort was preliminary and would benefit from a detailed analysis, either through a specific case study or mobilizing specific visualization or dashboard expertise.

Despite those limitations and risks, the value and increasing use of visualization as an interface to guide decision-making can be witnessed (yet again) first and foremost in health management, and in a derivative way, in the solutions developed to better manage the pandemic and post-pandemic stages. Crisan (2022) documented the unprecedented volume and variety of data which have been produced to both analyze and monitor the evolutions during the pandemic, referring to a form of “data deluge”. This helped explain the increasing use of data visualization, specifically of dashboarding tools as a core component of policy-makers and health specialists to distill and communicate information, and thus prevent community spread. In the health industry, Crisan (2022) underlines the use of dashboarding tools for therapeutic decision aids, policy-making and infectious management, with efforts focusing primarily on communicating individual risk metrics for the general public. Dashboarding tools create not only the possibility to display data in a glanceable and efficient way, but also provide channels for further engagement and deeper exposition to a specific topic or indicators. Further, Li (2022) explored the link between visualization and resilience management in the context of the pandemic and post pandemic, first by showcasing the vast interest in managing supply chain resilience in the post-COVID-19 era with a number of articles on the topic totaling 2,278 on the Web of Science over the study period. Li (2022) explored the intrinsic and instrumental role played by visualization tools in managing efficiently a supply chain post-pandemic, namely in a capacity to help return activities to business as usual, and supply chain to their “starting conditions”. Jin (2022)’s research on visualization in operations management research, and commentary on the initial article by Basole (2021) on the topic, is based on the exploration of large hospital dataset management through the use of interactive visualization to enable better data interpretation and risk mitigation.

Visualization tools, such as dashboarding tools, are deemed instrumental in providing insights for decision-making, but also in value creation processes associated with big data knowledge.

In that way they constitute a crucial articulation through their visual translation and presentation features, between raw data collection and strategic knowledge creation. In the next sub-chapter (6.2) we will focus on the correlation between data insights, knowledge, control and value - creation through the use of data management tools.

8.2 Value creation from big data analysis frameworks and data management tools

Kaufmann (2019) states that data projects, if technologically driven, are often considered expensive and inefficient from a managerial perspective: existing big data reference models are mostly managed as either technological or business-oriented in nature, as it can appear unclear from a business perspective how to mobilize existing data resources, systems, analytics results and visualizations. As opposed to the “technological perspective”, Kaufmann (2019) finds that the “management perspective” of big data essentially focuses on questions related to value creation. In that way, often in managerial perspectives, value creation from big data analysis and visualization are linked to their capacity to aid decision-making by providing or highlighting forms of knowledge, thus on indirectly creating financial value to organizations investing in data management systems.

In that way, Davenport (2013) states that “Data analysis are most used to add value by enabling managers to make better internal decisions. The new strategic focus on delivering value to customers has profound implications for where analytics functions sit in organizations and what they must do to succeed”. Decision support is the most visible part of data-driven value creation processes; however, Kaufmann (2019) hypothesizes that it is far from the only relevant one.

Another direct value creation potential from managing big data, in the words of Kaufmann, and derived from Davenport and Dyché, the capacity to feedforwards analytics results as the primary value from big data does not come from data in its raw form but from processed and

analyzed data, as well as insights, products and services emerging from its processing and analysis. Kaufman names this feedforward and marketable process “data effectuation”. In a same perspective, Demchenko (2013) emphasizes that the efficient management of big data should not be an end in itself but should strive to create value for business ecosystems and stakeholders.

Kaufman (2019) provides two main frameworks which seek clarify the ways in which big data management can provide value. First example quoted by Kaufman, the OECD published a model consisting of a cycle of five connected steps, each connecting input and output iteratively: (1) datafication, (2) big data, (3) data analytics, (4) knowledge base and (5) decision-making. The OECD model describes value added for both growth and well-being as the result of enhanced decision-making supposed by big data frameworks. In this perspective, value creation is directly linked to a capacity to provide knowledge and support decision-making. The second example provided by Kaufmann is the NSIT Big Data Public Working Group, that has defined a form of data life cycle model. This specific process is composed of four steps: (1) collection, (2) preparation, (3) analysis and (4) action (which involves processes which mobilize synthesized knowledge in order to generate value). In the NIST big data reference architecture, access to consumer data present the most value.

Kaufman (2019) presents three main drawbacks to those value creation models for big data management frameworks. First (1) a limitation in that decision support is in this model the sole way of creation value from data processing (the possibility to feedforward and market data is named “data effectuation” by Kaufmann). Secondly (2) knowledge bases go beyond being the result of data analytics and guiding decision-making, and should be considered as a “data intelligence” cross-section function. Thirdly (3), the correlation (or “data interaction”) between knowledge base and efficient decision-making has not been effectively proven.

Kaufman (2019) hence aims to provide a model for big data management value creation based on the possibility to market analytics, or generated knowledge, (data effectuation) rather than sharing and valuing raw data. They propose to manage big data as an auto-maintained and evolutive cognitive system, or in their own words “a frame of reference for creating value from big data which is closely linked to knowledge emergence from data analysis, according to the theory of emergent knowledge”.

Doing so, Kaufmann (2019) mobilizes the work of sociologist Niklas Luhmann on cognitive systems, by articulating business intelligence and data selection as a catalyst for organizational knowledge. From this perspective business intelligence, in Kaufmann’s words, “can be seen as a socio-technical cognitive system” (*see*, figure 62, below). The value question is then how to encourage the emergence of knowledge, and consequently the emergence of value for organizations through the data management systems and efforts.



Figure 62: Interpretation of Kaufmann’s proposition of business intelligence as a socio-technical cognitive system with a simplified articulation between data stages

In this analysis, managing extensive amounts of data to optimize all aspects value chains by creating a strategic interaction between operations (business) and data systems (technology), means effectively producing value through the translation of raw data into data intelligence – and mobilization of it. It also means creating a data intelligence system, capable to maintain

itself through evolving data expertise and investment in data systems, and capable of generating new insights and new solutions to regulate, control and predict activities in order to, in theory, provide useful insights to manage value chains and operations efficiently, immediately and over time.

Accordingly, knowledge and consequently value emerges through the interaction between operations processes and data management systems in place, through four steps (1) data preparation and collection, (2) data analysis, (3) data interaction and (4) data effectuation.

The interaction between operations and data management systems should enable in theory not only a generation of knowledge and control which would create value, but also the generation of a data expertise which would enable organizations to maintain and better the data management system in place (*see, below, figure 63*).

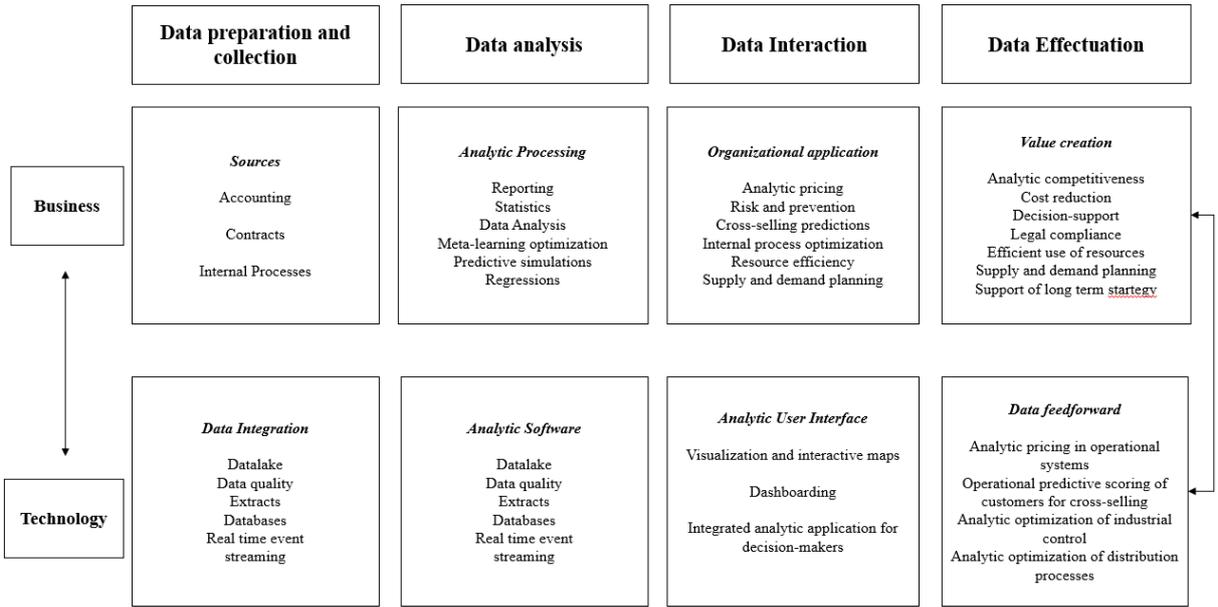


Figure 63: Interpretation of Kaufmann’s proposition of business intelligence as a socio-technical cognitive system – per data stage

In Kaufmann’s (2019) own words, “[their] proposed reference model operationalizes value creation by linking business targets with technical implementation through a value-oriented

framework”. In this way, based on a model which conceptualizes big data management as a form of cognitive system, Kaufmann showcases a perspective where, first (1) creating value from big data relies on supporting decisions with new knowledge generated from data analysis, and (2) providing data feedforward in order to create value is only possible if an internal set of data science skills is developed directly within organizations.

Here, Kaufmann mobilizes Wheeler’s definition of knowledge as “an answered question, a problem resolved” and as “a mean of control rather than a state of mind”. For Kaufmann this capacity to generate advanced knowledge and provide means of control are key to understand how value chain management systems and specifically big data management systems might create value for organizations.

We can however hypothesize that one key perspective missing for this analysis, similarly to Correll’s research work on the ethical risks associated with data visualization (8.2), is the distribution of cost and the distribution of value creation. In Kaufmann’s proposal, only businesses as an entity are considered, rather than businesses as ecosystems. However as the definition of businesses’ responsibility towards their stakeholders and environment evolves, sometimes through a voluntarily effort by corporations, it would seem relevant to question how value creation through data management and big data systems may affect, positively or negatively, businesses’ stakeholders (*see*, figure 64, below).

	Data preparation and collection	Data analysis	Data Interaction	Data Effectuation
Initial technological investment	Operations	Operations	Operations	Operations
Cost (and time) intensive	Operations Value Chain Partners	Operations	Operations	Operations
Data Privacy Risk	Operations Value Chain Partners	Operations Value Chain Partners	Operations Value Chain Partners	Operations Value Chain Partners
Risk mitigation potential	Operations Value Chain Partners	Operations Value Chain Partners	Operations Value Chain Partners	Operations Value Chain Partners
Positive Impact through control	Operations Value Chain Partners Local Communities	Operations Value Chain Partners Consumers Local Communities Society	Operations	Operations Value Chain Partners Consumers Local Communities Society
Possible counterproductive effect(s)	Operations Value Chain Partners Local communities	Operations Value Chain Partners Local Communities	Operations Value Chain Partners Consumers Local Communities Society	Operations Value Chain Partners Consumers Local Communities Society

Figure 64: projected costs and added value for the implementation and use of data management systems, per stakeholder category

Applying a multi stakeholder perspective to value creation analysis per data management stage, we find similarly to our analysis (in Part I) on the cost-benefit analysis per stakeholder of implementing strategic CSR, that most stakeholders could benefit from extended data collection and analysis processes (if the cost is born in majority by operations) and by control processes over activities. However, the possibility of counterproductive or adverse effects through the misinterpretation or mismanagement of data throughout data management processes (creation of biased or unverifiable knowledge) could negatively also affect a majority of stakeholders. The power imbalance in terms of cost, but also in terms of who gets to manage the translation and the interpretation of data is also centralized around businesses, which could amount to a form of narrative control. We could therefore adapt our previous analytical framework to focus solely on those two perspectives (see, figure 65, below):

- correlation between cost control and narrative control
- range of positive or negative output per stakeholder category)

	Data preparation and collection	Data analysis	Data Interaction	Data Effectuation
Initial technological investment	Operations	Operations	Operations	Operations
Cost (and time) intensive	Operations Value Chain Partners	Operations	Operations	Operations
<i>Cost, language and technology control realm</i>				
Positive Impact through control	Operations Value Chain Partners Local Communities	Operations Value Chain Partners Consumers Local Communities Society	Operations	Operations Value Chain Partners Consumers Local Communities Society
Possible counterproductive effect(s)	Operations Value Chain Partners Local communities	Operations Value Chain Partners Local Communities	Operations Value Chain Partners Consumers Local Communities Society	Operations Value Chain Partners Consumers Local Communities Society
<i>Positive or negative data management output realm</i>				

Figure 65: Cost control and output range, per stakeholder category

Based on this theoretical framework, we could hence recommend systematically situate the value creation analysis, and to take into consideration (1) power imbalance in cost allocation and technology management, as well as correlation between cost and narrative control, and (2) stakeholder within cost-analysis benefit, while assessing the value potential of data management tools.

9. Adapting data management tools to increase social and environmental utility

Part I of our research presented the initial tryptic of utility-oriented thinking (1.1), utility accounting (1.2) and CSR strategic integration (1.3) as the conceptual framework for the creation, development and deployment of social and environmental performance tools. In chapters 4 to 6 of Part II of our research, we aimed to question the rationales for creating and implementing data management systems and data management tools. We therefore analyzed their instrumental role in guiding decision-making, increasing efficiency and performance within supply chains, generating forms of knowledge – and form those augmented forms of knowledge and systemic control, intrinsic value (Kaufmann, 2019). We however highlighted the lack of consideration and integration of stakeholders within data processes and systems, creating a possibly inefficient form a value analysis, creation and distribution within corporation strategies and operations. We further highlighted the lack of focus on power imbalance within cost control and narrative control mechanisms, intrinsic to operational and data processes.

In this chapter we will first explore the current alignment and misalignments of current data management approaches with utility-focused decision-making, and benefit corporation formats (9.1), with a selection of existing social and environmental management tools and approaches (9.2) and analyze the SP&L approach using the same perspective (9.3).

We here aim to analyze the degree of current alignment between CSR strategic integration and data management systems. We hypothesize (1) that a key missing element in current data management systems is the integration of stakeholder analysis and (2) that the lack of integration of stakeholders within data management system marginalizes their consideration in decision-making and associated strategic frameworks. We hypothesize that this lack of

integration leads to inefficient decision-making, directly and over time, as performance and efficiency are solely associated with value creation for shareholders and, partially, clients.

9.1 Analyzing the integration of stakeholders within data management systems

In the first chapter of this document, we analyzed the fundamental influence the utilitarian perspective had over current benefit corporations. Doing so, we linked back utilitarian felicific calculus to modern integrated accounting, and hypothesized that one of the main evolution from utilitarianism is the translation of utility-based thinking from government towards corporations. In this way, the extensive development of management tools to access, control and translate social and environmental impacts (such as the Environmental Profit & Loss from Kering, Environmental lifecycle analysis, Sustainable Reporting frameworks and guidelines) crystallises this evolution in two ways. First, (1) in its relevance as a strategic topic for organisations, whether through systematic risk mitigation processes or through exploring value creation related to social and environmental control and investments, and secondly (2) in the use and adaptation of accounting frameworks as utility accounting frameworks. The evolution and redefinition processes of businesses (in analysed in 2.2) towards becoming “benefit corporations” would make corporations both “calculable selves” (Miller 1992) and entities that “calculate about power” (Rose, 1991), with the aim of their “purposive action” (Bryer, 2014) to maximize both utility and value of their decision-making and resource allocation processes within their own ecosystem (stakeholders and environment). The traditional proposed basis for the evaluation of outcomes utility, or purposive action, in that perspective, would be through the use quantitative performance and value distribution efficiency analysis, which require accounting tools developing “a double entry-perspective of value creation, i.e to count not only its profits (as been abundantly done by its promoters), but also its losses (a question which has

rarely been addresses)” (Bourguignon, 2005). This constituted the very rationale for the creation of social, or environmental profit & loss accounts, as updated formats for utility and performance efficiency accounting.

We therefore evoked both in Part I and within the former chapter the necessity for this rationale to work to include stakeholders and their environment both in managerial resource allocation frameworks, but also parallelly in data management systems. In this way, we hypothesize and propose that the systematic inclusion of stakeholders within data management framework could prove crucial in strategically integrating CSR.

We however previously evoked the instrumental place taken by data management systems and big data management tools in accessing, translating, and making available data for decision-making. Little thought has been given however to the strategic integration of CSR-related data within data management frameworks and processes. We hypothesize that this could be linked to a two-speed evolution between technology and CSR strategic frameworks.

We found that none of the authors working on current solutions to digitalize value chains and data modelling (for instance Ivanov, 2016, Galetsi, 2019, Gruebner, 2017, Paik, 2019, Kaufmann, 2019, Cui, 2020) no mention to CSR-related data was made by the authors, making CSR-related data a form of “non-factor”, revitalizing the understanding of CSR as an afterthought or a nice-to-have factor in a strategic corporative cognitive system (Kaufmann, 2019). Further, when it comes to stakeholders, only users (either to mention end-user, such as decision-makers, or consumers alternatively) were mentioned, beyond the implied shareholders, and perhaps value chain partners (however in a performance perspective that does not include ethical or CSR-related considerations or factors). This perspective creates a form a dialogue or a bipolar system between operations and market, or between shareholders and consumers, with a control mechanism almost exclusively in the hands of shareholders and operations (*see*, figure 66, below).

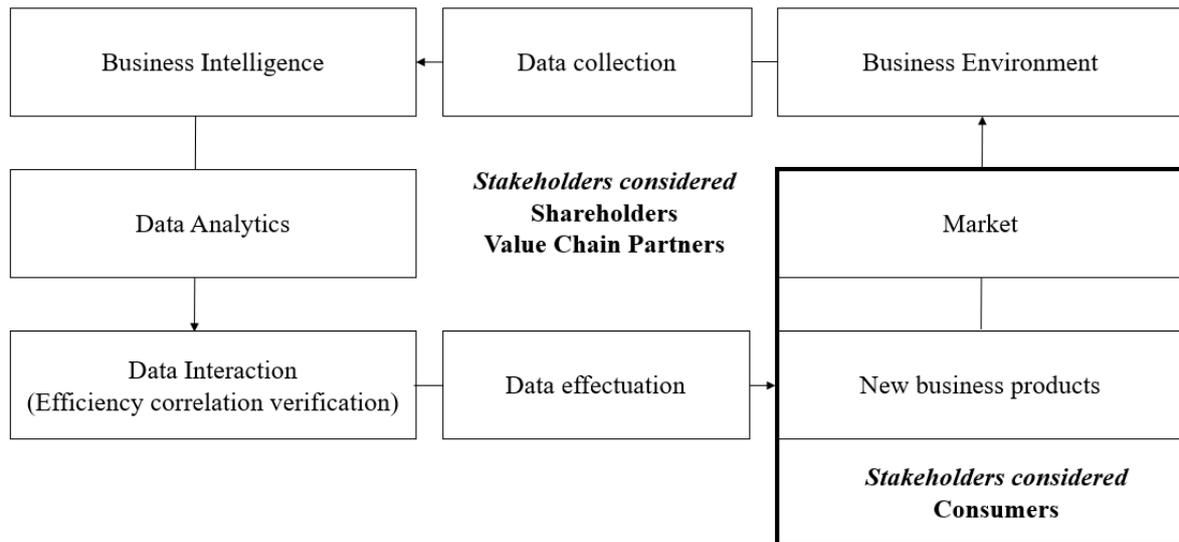


Figure 66: adaptation of Kaufmann's data intelligence cognitive system, integrating relevant stakeholders to this perspective

As big data management frameworks are currently being implemented in companies at great initial cost for companies to tailor and set up their own systems, we highlight the risk linked to the delay of CSR-related data integration within these processes. This very delay could reinforce the consider of CSR not as factors to systematically take into consideration but as constant afterthoughts. We therefore hypothesize that a way to increase the utility of decision-making from big data insights would be to include a diverse range of stakeholders within existing and developing data management frameworks and systems (*see*, figure 67, below).

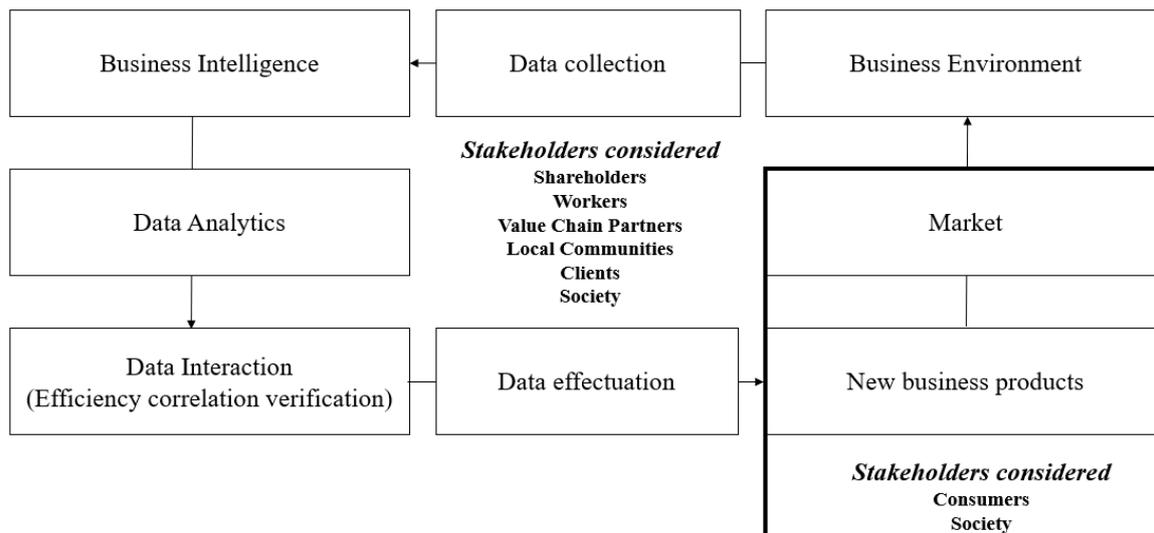


Figure 67: adaptation of Kaufmann's data intelligence cognitive system, with a fuller stakeholder integration

In this way, in order to strategically integrate CSR, we suggest integrating (1) a stakeholder approach to activity data collection (a data collection tailored per stakeholder), and (2) anticipating social and environmental data collection related to activity. A more advanced integration of stakeholders within data management frameworks and processes does not however resolve the dual question of control: (1) first of who holds the data control, and (2) of who, or which stakeholder, possibly benefits from control management.

9.2 The integration of stakeholders within control and value creation mechanisms

In the second chapter of this document analyzing critical perspectives on integrated accounting, we hypothesized that if monetary value creation represents the main leverage for corporations, there are two ways to integrate for a company to “act utilitarian” and integrate utility-based thinking. The first one (1) being through the control of the positive outcomes of their activity to maximize their positive outcomes and minimize their negative outcomes towards stakeholders and their environment, and the second one (2) being through resource allocation

and targeted investments to create value for shareholders, stakeholders and their environment.

The common vocabulary was related to control mechanisms.

As in the case of felicific accounting, we previously hypothesized that control over outcomes in order to maximize the benefits from decision-making could be achieved through the use of accounting frameworks, or in other words, accountability would be achieved through the use of accounting tools. Further in (3.3), we suggested in order to strategically integrate CSR defining a full control business model as a business model functioning efficiently from full activity visibility and from efficient and inclusive resource allocation, operating from (1) a systematic access to, and visibility of, activity cost and outcome information across the value chain, including social and environmental-related activity cost and outcome data, including direct and indirect activity performance data, (2) which are systematically computed within a full activity management control system and translated into performance data available for each decision-maker.

We hypothesized that the two pre-requisites for a full control business model could be considered to be (1) traceability throughout the value chain, and (2) a full activity data management system providing the necessary insights to optimize decision-making.

We further suggested that this model would further require a shift from outcome translation towards cost control and cost allocation efficiency, and that by shifting the conversation towards a cost control analysis (investment, resource allocation, losses), by associating a cost, or resource allocation, to a social and environmental efficiency level, or quantified performance level, rather than making social and environmental factors others, the cursor could shift towards making social and environmental performance an intrinsic part of activity and operational performance.

In Chapter 8, we interpreted Kaufmann's proposition of business intelligence as a socio-technical cognitive system. In their work, Kaufmann's provided a breakdown of data stages,

and value creation anticipated per data stage, when relevant (see, figures 62-63, chapter 6). Kaufmann (2019) associated value creation with a series of capacities or in their words “data effectuations”: analytic competitiveness, cost reduction, decision-making support, legal compliance, efficient use of resources, supply and demand planning and support of long term strategy. In other words, a form of full data control could lead to better resource allocation, oversight, and predictability. This forms of “data intelligence”, through the capacity to provide full control and visibility, enhance operational capabilities and intrinsically could create value, other than the initial access to knowledge linked to raw data collection (see, figure 68, below).

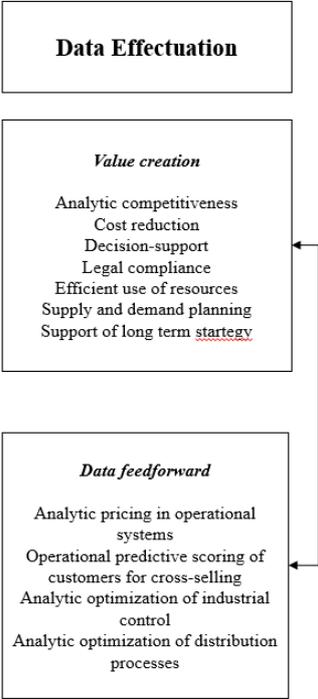


Figure 68: Interpretation of Kaufmann’s proposition of business intelligence as a socio-technical cognitive system – data effectuation stage

However, through our suggestion for a full control model and specifically through a full cost control process, we suggested focusing on making cost analysis inclusive, by integrating new performance criteria including a comprehensive range of stakeholders, in order to quantify the utility and efficiency of resource allocation in an inclusive way.

We believe that this aspect is often neglected from data management system strategies, which leads to a sub-efficient way of collecting, analysing and mobilizing social and environmental data in decision-making processes. We therefore highlight the importance of linking a control model to an inclusive cost focus in order to maximize decision-making efficiency in an inclusive way, and provide a “full cost visibility”, in order to find a necessary alternative to externalities, triple bottom lines and trade-offs (*see*, figure 69, below).

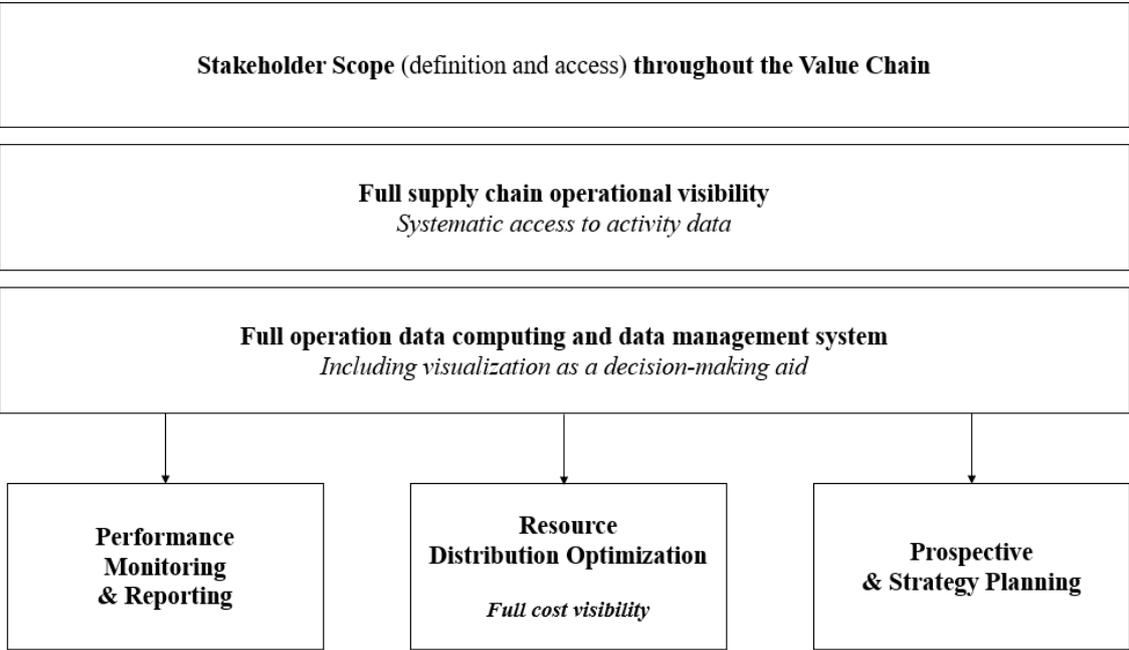


Figure 69: Systemic control model proposal, including stakeholder scope and full cost visibility

Part III

The SP&L: approach, methodology and first implementation process

In this third part, we will present the open-sourced methodology of the SP&L as the main result of the industrial and research collaboration with the fashion brand Chloé. We will present the rationale for the SP&L (Chapter 10), its scope and stakeholders (Chapter 11), and main implementation steps (Chapter 12). Further, we will address the limitations of the tool through a sociological, genealogical and data control analysis (Chapter 13), based on learnings from Part II.

10. SP&L approach rationale & overall presentation

10.1 The SP&L approach rationale & overall presentation

The SP&L approach was created in order to access, evaluate and visualize positive social performance all throughout our value chain, and product lifecycles. The rationale behind this SP&L tool was also to visualize together the social and environmental impact of our activities, partners and products, and to consider our financial, environmental and social performances in an inclusive format. With the SP&L Chloé and the research team aimed to systematically integrate social impact within an inclusive resource allocation analysis, in order to facilitate a decision-making process which should always include social and environmental performance factors.

The SP&L is by definition a business management tool, and an internal decision-making tool, which aims to integrate positive social impacts into performance reporting and accounting, alongside environmental and financial performance criteria. The tool accounts for a company's positive social impacts all throughout its value chain and product lifecycles. The SP&L Approach was tailor-made to better inform and facilitate decision-making by providing a more comprehensive social impact and performance picture of a company's activities and products, in a vocabulary common to other types of performance criteria.

The methodology has five main steps:

- social auditing and decent practices monitoring as a pre-requisite (1)

- potentially positive social performance measurement (2)
- evaluation (3)
- visualization (4)
- and a data verification process to consolidate the final results (5).

In terms of scope, the SP&L approach covers operations (headquarters) and the supply chain, and covers both direct and indirect employment, in order to take responsibility, account for progress, and improve social impact for all stakeholders involved in production, activities and processes.

The results of the SP&L approach can be visualized at three levels:

- company's activities (1),
- suppliers (2)
- and products (3).

In terms of use, the SP&L was created for fashion brands, suppliers, social enterprises and social organizations who are already advanced on decent working conditions monitoring in their own supply chains. The tool was created for organizations that aim to access the full social picture, including positive impact, of their activities, and better manage their social outcomes, directly and over time.

The results are aimed to be integrated: within a company's integrated reporting and accounting formats, and within resource allocation efficiency analysis. Data collected through the SP&L process can further be useful: for a certification process such as B Corp, as the basis for monitoring supplier social practices, capacity-building and creating improvement plans for suppliers, as a basis for social investment efficiency analysis (monitoring changes in social

performance over time whenever resources are allocated), and within product optimization analysis (relevant when data is provided from Tier 0, operations, to Tier 4, raw material extraction).

10.2 Getting the full activity picture

The tool was created to enrich the picture of traditional “cost, charges and expenses” P&L social criteria by providing social positive performance and job quality quantified insights. Integrated into reporting and accounting, those new insights are meant to better inform and facilitate decision-making when it comes to resource allocation, targeted investment for operations, and capacity-building within the supply chain. Through the SP&L approach, Chloé chose not to monetize social impacts through the use of financial proxies or valuation coefficients (quantify positive performance rather than monetize) in order to avoid any black box effect when indirectly valuating social impact. Rather, by facilitating the systematic access to quantified positive social performance data which can be compared and monitored over time, the SP&L aims to provide useful insights for decision-making, valuable and valued when included in an investment and resource allocation analysis. In that way, the SP&L approach provides a different take on Social Return on Investment (SROI) by creating the necessary and direct basis for a social investment efficiency analysis, resource allocation optimization evaluation and forecasts.

The approach directly enables: the integration of new performance criteria into fully quantified performance reviews of activities, collections and products (1), and a systematized resource allocation optimization and maximization analysis, assessing and anticipating the efficiency of resources. The SP&L approach facilitates the assessment of the efficiency of resources allocation through monitoring performance results, directly and over time, and systematically relinking social value creation to investment efficiency (2).

The business management tool can also provide the necessary data for: return on (targeted) social investment over time for capacity-building efforts, if resource allocation and associated capacity-building are monitored over time, and in correlation with operation efficiency performance criteria such as quality and productivity (1), evaluating, job creations (direct, indirect, induced), training and capacity-building efficiency, directly and over time (2), creating the basis for social lifecycle costing (SLCC) value distribution, and value redistribution analysis (3).

10.3 Complementing existing frameworks and approaches

The development of Chloé's SP&L approach is a first exploratory methodology inspired by the EP&L (Environmental Profit & Loss) approach, a pioneering tool developed by Kering, enabling the assessment and valuation of the environmental impact throughout the supply chain, supply and operations of a Fashion House. The EP&L as a business management tool was the first example of a company's measuring, and valuing the environmental impacts of its operations and entire supply chain in order to facilitate decision-making. The EP&L enables the visualization of environmental impacts for brand's activities and products.

The SP&L Approach was inspired by the approach, scope and capacities of the EP&L: to measure, quantify, evaluate, visualize social impact data throughout operations and supply chain in order to better inform decision-making and integrate outcomes and impact-related data within performance reviews.

The SP&L aims to address several gaps in terms of social impact measurement and evaluation. Social impact and environmental impact measurement advanced with a two-speed dynamic, with a profusion of methodologies when it comes to assessing and visualizing environmental impacts (example: EP&L at the activity level and LCA and carbon environmental footprint at

product level), and a delay when it comes to analyzing and visualizing social impact, and quantifying social practices.

Regarding social-specific performance methodologies, the SP&L approach addresses three observable gaps:

- (1) The gap in addressing social impact with the same criteria for both direct and indirect employment. Social impact is addressed differently in fashion companies' supply chain than in fashion companies' direct operations. In the supply chain, social impact is addressed through social auditing which assesses compliance and decent working conditions. At the headquarter level, social performance criteria such as job tenure, employee turnover, and training are preferred.
- (2) The availability of comparable social data all throughout the value chain, preventing companies from assessing and visualizing the social impact of their activities, commercial partnerships and products in a cohesive way.
- (3) A systematic focus on positive impact social, starting with measuring the same performance criteria for direct and indirect employees.

The differentiation factors for the methodology are:

- (1) The scope and multi-level visualization possibility enabled by a uniform data collection throughout the value chain
- (2) The focus on potentially positive social impacts
- (3) The possibility to integrate positive social impact within a performance and resource allocation framework

Those differentiation factors enable performance visualization and reporting for activities, suppliers and products. Further, the SP&L Approach complements and contrasts with the work developed on Social Return on Investment, by pragmatically assessing performance efficiency associated to resource allocation, rather than mobilizing valuation coefficients, in order to facilitate decision-making.

The review of existing methodologies, databases, literatures and experimentations internationally has been essential to avoid redundancy and strive for complementarity. Five types of documentation were reviewed: social reporting, social databases, job quality frameworks, social impact measurement experimentations, guidelines and frameworks (including life cycle costing, social life cycle assessment, social life cycle inventory and life cycle sustainability assessment) and international surveys.

(1) Social Reporting & Return on Investment

- GRI (Global Reporting Initiative)
- CDSB (Climate Disclosure Standards Board)
- IIRC (Integrated Reporting Initiative)
- SASB (Sustainability Accounting Standards Board)
- World Economic Forum - Toward Common Metrics and Consistent Reporting of Sustainable Value Creation (White Paper, 2020)
- The Embankment Project for Inclusive Capitalism (EPIC)
- Social Return on Investment (SROI, 2012 Guide)
- UN & LCA Initiative Guideline for Social Life Cycle Assessment – PSIA working group (product life cycle analysis)

(2) Social Data(bases) & Indicators

- United Nations – SDGs guidelines
- UNECE – Statistics on Population
- UNESCO – Statistics on Education, Literacy, Gender in Education
- ILO – ILO Stats, Decent Work framework
- OECD – Social Welfare & Expenditure, Employment, Job Quality
- World Bank – World Bank open data

(3) Job Quality frameworks & research

- EU Laeken indicators of job quality, 2001
- Business Europe indicators of job quality, 2001
- European Trade Union Institute ETUI Job quality index, 2008
- EU Employment Committee (EMCO), 2010
- The International Labour Organisation (ILO) Decent Work Indicators, 2012
- Eurofund, 2012
- UNECE Job Quality Framework, 2014
- OECD Job Quality Framework, 2015
- Aghion, Blundell, ongoing work on the nature of good jobs, 2020-present

(4) International Survey (Focus on Workers)

- European Working Conditions Survey
- European Quality of Life Survey
- The European Union Labour Force Survey ad hoc modules
- International Social Survey Programme
- Gallup World Poll

- EWCS/O*Net

(5) Guidelines & Frameworks

- ISO Norms - Guidance ISO 26000-2010, ISO 45001: Occupational Health & Safety, ISO14001: management of environmental management , ISO9001 quality management, ISO 14040-2006 Environmental management – LCA
- United Nations – SDGs and guidelines on metrics
- OECD Policy Brief on social impact measurement
- UN & LCA Initiative Guideline for Social Life Cycle Assessment
- UNECE Human Capital Guide
- BSR Gender Data and Impact Tool
- Handbook for Product Social Impact Assessment, Roundtable for product social metrics, Pré Sustainability in partnership with UNDP, SAI, ILO

Out of those five types of documentation, two were mobilized throughout the metrics and reporting process (1), and two were mobilized throughout the evaluation process (2) (*see*, figure 70, below). In order to strengthen complementarity, Chloé turned to methodologies with harmonization potential, which could constitute and provide social reporting norms within the fashion industry, and beyond.

For the metrics and reporting step, Chloé chose to integrate the proposition for harmonized reporting provided by:

- The World Economic Forum’s 2020 white paper “Toward Common Metrics and Consistent Reporting of Sustainable Value Creation”, based on a harmonization of the GRI, CDP, CDSB, IIRC and SASB reporting

- Job Quality frameworks (OECD, as well as analysis by Philippe Aghion and Richard Blundell on what constitutes a “good job” and the associated criteria.)

For the evaluation process, Chloé aligned on both the evaluation processes provided by:

- Social auditing referential (SMETA, SEDEX)
- The evaluation process provided by the UN & LCA Initiative Guideline for Social Life Cycle Assessment (2020)

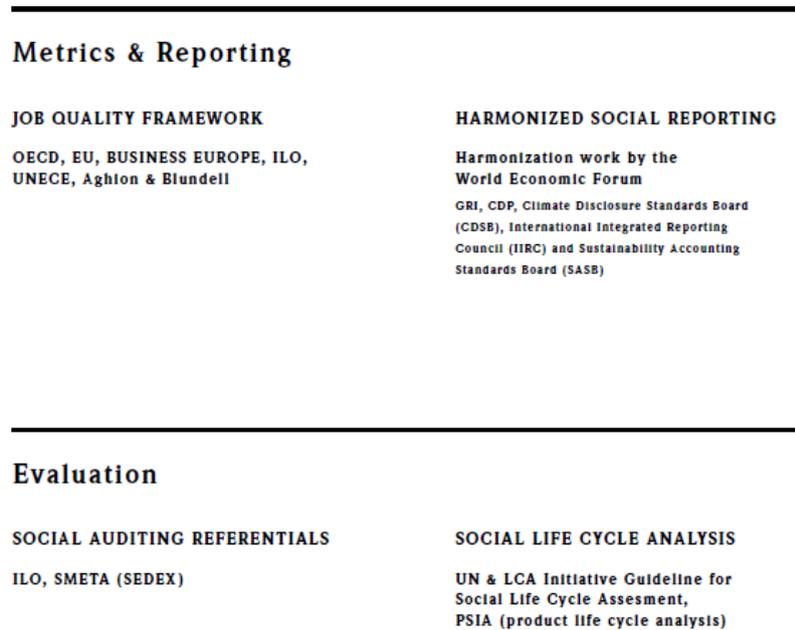


Figure 70: documentation mobilized within the SP&L conceptualization

11. Stakeholders & Impact Scope

11.1 Stakeholders

The UNEP (UN Environment Programme) defines social impacts as “consequences of positive and negative pressures on social endpoints and area of protection (i.e well-being of stakeholders)” (UNEP, 2020). Measuring impact on all applicable stakeholders is central to measuring, evaluating and integrating social impact into decision-making and improvement processes. Aligning on the UNEP S-LCA proposition, six stakeholders groups were identified: workers, local communities, value chain, actors, consumers, society and children.

The SP&L Approach accounts for four of those stakeholders:

- (1) Workers
- (2) Local communities
- (3) Society
- (4) Clients

The first focus of the methodology is on workers, both directly employed at the headquarters and operations, and employed by the company’s suppliers. In that way, the methodology focuses on workers directly involved in the conception, manufacturing, and distribution process of our products. Beyond workers, Chloé chose whenever possible and relevant to align their choice of stakeholders, impact categories and metrics on the existing social life cycle assessment (Life Cycle Initiative, UNEP, and Social Value Initiative, leading to the future ISO 14075 Social Life Cycle Assessment norm in 2024). When it comes to local communities, society, and clients, we directly aligned the data collected on UNEP 2021 Methodological sheets for subcategories in Social Life Cycle Assessment. When it comes to impact on society,

we further aligned our criteria on upcoming B Lab criteria (2022 draft for their new upcoming standards).



Figure 71: Main impact categories selected per stakeholder category

With the SP&L Approach, Chloé estimates primarily their outcomes on workers and employees mobilized on our products from sourcing to retail (see, figure 72, below)

Impacts measured for	Stakeholder Focus	Impact Categories
HQ & Suppliers	Workers	<ul style="list-style-type: none"> Diversity & Inclusion Gender Equality Living Wage Well-Being Training Job Quality

Figure 72: Impact categories selected for the “Worker” stakeholder category

When it comes to local communities, Chloé aligned the data they collect on the UNEP proposition (2021). We uniformly estimate our operations impact on local communities, as well as our suppliers’ impact on their own local communities (see, figure 73, below)

Impacts measured for	Stakeholder Focus	Impact Categories
HQ & Suppliers	Local Communities	Local Engagement Policies to protect local communities

Figure 73: Impact categories selected for the “Local Communities” stakeholder category

When it comes to impact on society, Chloé aligned the data collection on the UNEP proposition (2021) and the draft for upcoming B Lab performance criteria and new standards (2022) aimed to be published in 2024. Impact on Society is only measured in Tier 0 (direct activities and operations) (*see, figure 74, below*)

Impacts measured for	Stakeholder Focus	Impact Categories
HQ only	Society	Public Commitments Contribution to Development

Figure 74: Impact categories selected for the “Society” stakeholder category

When it comes to impact on clients, Chloé aligned the data collection on UNEP (2021). Impact on Clients is only measured in Tier 0 (direct activities and operations) (*see, figure 75, below*)

Impacts measured for	Stakeholder Focus	Impact Categories
HQ only	Clients	Client protection Transparency & Dialog

Figure 75: Impact categories selected for the “Clients” stakeholder category

11.2 Impact Scope

When it comes to impact on workers, the SP&L metrics are aligned with a selection of the WEF 2020 referential proposal, with the exception of the Job Quality, Know-How, Living Wage associated metrics, and the complementary metrics for the Gender Equality impact category. Metrics for impact on local communities, society, and clients are aligned on the S-LCA UNEP proposition (2020). The SP&L approach includes twelve impact categories total with seventy-two associated metrics, including new metrics derived and adapted from UNEP S-LCA propositions (UNEP, 2021).

In total, 45 metrics are allocated to assessing the potentially positive impact on workers (see below) (*see*, figure 76, below)

IMPACT CATEGORY	SP&L APPROACH ASSOCIATED METRICS	WEF REFENTIAL (2020)	S-LCA UNEP (2020)	B CORP DRAFT STANDARDS (FOR 2024)
Diversity & Inclusion	<ul style="list-style-type: none"> Employee categories and representation (nationality, age, disability, gender) Access to permanent contracts Diversity policies in place Disability policies in place 	Percentage of employees per employee category, by age group, gender and other indicators of diversity	Equal opportunity	<ul style="list-style-type: none"> Justice Equity Diversity & Inclusion Company gathers and rates D&I statistics and manages D&I opportunities (operations focus solely)
Gender Equality	<ul style="list-style-type: none"> Representation and share in management Access to permanent contract Representation at the board Representation in workers committees Pay gap 	Pay gap	Not represented in worker's criteria	Integrated within D&I criteria
Living Wage	<ul style="list-style-type: none"> Living wage (computation based on the cost of living for a predefined food basket derived from FAO databases, WageIndicator methodology) Share of employees paid the living wage Current workers' wages against the living wage 	Not in the WEF proposition (as such)	Wages	Fair Wages paid in own operations, and actions taken to enable fair wages in the supply chain. Company takes meaningful actions to prevent wage disparities.
Health and well-being	<ul style="list-style-type: none"> Access to well-being offer and services Mobilization and participation to well-being best practices Absenteeism 	Employee well-being measured through employees' participation in best practice health and well-being programme, absenteeism rate	Benefits and social security	
Training	<ul style="list-style-type: none"> Hours of training Number of employees trained Measured effectiveness of training (estimate) Share of unskilled position Intergenerational training (optional) 	Training provided (average hours of training per person and by employee category, average training expenditure), number of unfilled skilled positions, and monetized impacts of training (increase earning capacity as a result of training intervention using investment un training as a percentage of payroll, effectiveness in training and development through increased revenue, productivity, employees engagement and internal hire rates.	Not represented in worker's criteria	
Job Quality	<ul style="list-style-type: none"> Job Tenure Promotion rate Pay progression Use of soft skills 	Not in the WEF proposition	Not represented in worker's criteria	
Know-How	<ul style="list-style-type: none"> Complex Technical skills Traditional skills Know-how transmission Seniority 	Not in the WEF proposition	Not represented in worker's criteria	

Figure 76: Overall SP&L approach impact scope for workers

In total, 27 metrics are allocated to assessing the potentially positive impact on local communities (9 metrics), society (9 metrics), and clients (9 metrics), (see, figure 78, below)

STAKEHOLDERS	SP&L APPROACH IMPACT CATEGORIES	SP&L APPROACH IMPACT METRICS	UNEP, S-LCA (2020)	B CORP DRAFT STANDARDS (FOR 2024)
Local Communities	Local Engagement	<ul style="list-style-type: none"> • Sharing of Local Hires • Policies on local hiring • Share of locally-based suppliers 	Local employment	
	Initiatives & Policies in place to protect local communities	<ul style="list-style-type: none"> • Intellectual Property (if applicable) • Education Initiatives • Material Resource conflict prevention • Environmental management system • Policies in place to protect cultural heritage (if applicable) • Migrants integration (if applicable) • Delocalization prevention (if applicable) 	<ul style="list-style-type: none"> • Access to material resources • Access to immaterial resources • Delocalization and migration prevention • Cultural heritage protection • Healthy and safe living conditions • Respect for Indigenous Rights 	
Society	Public commitment to Sustainability	<ul style="list-style-type: none"> • Public Commitment to Sustainability • Principles and Codes of Conduct • Commitment & actions to prevent corruption • Internal and external controls to prevent corruption • Lobbying is aligned on mission and values 	<ul style="list-style-type: none"> • Public Engagement on Sustainable development topics • Prevention and Mediation of Armed Conflicts • Corruption Prevention • Ethical Treatment of Animals 	<ul style="list-style-type: none"> • Collective Action • Multi stakeholder-collaborations • Active promotion of the advancement of social and/or environmental impacts • Public Policy promotion to advance social and/or environmental impacts • Practicing through leadership to drive change
	Contribution to Development	<ul style="list-style-type: none"> • Contribution to Economic Progress • Partnership in research and development • Investments in technology development / transfer 	<ul style="list-style-type: none"> • Contribution to Economic Development • Technology Development • Poverty Mitigation 	<ul style="list-style-type: none"> • Collective Action • Mentoring • Funding Research
Clients	Protection	<ul style="list-style-type: none"> • Client health and safety assessment • Internal management systems to protect client's privacy 	<ul style="list-style-type: none"> • Health & Safety • Privacy Protection 	
	Dialog	<ul style="list-style-type: none"> • Feedback mechanism • Improvement • Customer satisfaction surveys • Publication of a Sustainability Report • LCA Results Communication • Clear communication of end-of-life options to clients 	<ul style="list-style-type: none"> • Feedback Mechanism • Transparency • End-of-life Transparency 	

Figure 77: Overall SP&L approach impact scope for local communities, society and clients

12. SP&L Steps

12.1 Steps Overview

There are five steps composing the SP&L.

- (1) The first step is a pre-requisite: an overall mapping process based on documentation, auditing results, and certifications.
- (2) The second step is communication of a self-assessment document to suppliers in order to measure their potentially positive social impacts. The time of completion is estimated between two weeks and one month from reception. The same self-assessment should be filled by the corporation.
- (3) The third step is a data verification process, an estimation by external auditing partners of the reliability level of information communicated in the self-assessment.
- (4) The fourth step is the evolution and impact quantification based on five levels of practice, with a grading reflecting the level of social practices, from worst to best practices.
- (5) The fifth step is a visualization of the impacts evaluated at four levels: product, collection, supplier, and entity (Chloé).

Steps 4 and 5 are currently being systematized through a BI tool, with Google Cloud Platform (GCP), linked to a dashboarding tool (Looker studio) allowing us to visualize the results of the SP&L's: overall score, score per impact category, improvement areas and best practices using individual metrics (top five and bottom five practices per stakeholder evaluated) and number of mobilized workers per product and collection.

The sixth and last step is to take action, including reporting social impact data, monitoring social performance, directly and over time, accompanying suppliers to encourage improvement in social practices.

12.2 Open Source and Documentation

The forms of documentation mobilized through the SP&L process and made available on chloe.com are the following:

- Self-assessment: digital self-reporting process sent to suppliers via email, and/ or completed at the operations level (headquarters)
- Data verification format
- Excel base for evaluation
- Visualization scoreboard

The supplier visualization scoreboard contains information regarding social certifications and/or audit results in order to co-visualize the level of social risks together with the level of positive social practices. The dashboarding is accessible to every IT team by the interfacing of product data management tool and the dashboarding tool, allowing more informed decision-making. Chloé made available the methodology for brands IT teams to adapt the code by providing a github link within the formats provided on chloe.com, alongside measurement and evaluation formats. Please find the resources, measurement, evaluation, visualization and code formats on chloe.com.

12.3 Step 1: Social Auditing

The SP&L has been conceived as a logical continuation to social auditing, and although the two assessments are meant to be read as distinct results, they are complementary in many ways, including:

- The selection of topics covered enables a complete picture of social performance of the supplier (decent working conditions, potential positive impact)
- The same external partner and internal staff are involved, ensuring good knowledge on suppliers and enabling synergies in the process (collecting the data at the same time).

The SP&L is meant to be communicated in a conjoined way with the audit score: internally, both at the supplier level and at the product level, the SP&L Approach dashboard presents both the audit and the SP&L score.

In that way, each brand performing an SP&L should:

- Align the SP&L with at least a supplier mapping or a traceability process
- Make sure that the SP&L is not launched independently from social auditing

Chloé further recommends to align the SP&L within the same timeframe and with the same stakeholders as the social auditing process.

12.4 Step 2: data collection and measurement

Data is collected yearly from all active suppliers and at the operations (headquarter) level through a digital self-assessment (available on chloe.com). The process is introduced via an introduction letter or call to suppliers introducing and clarifying the purpose of the data collection. The data is self-reported, with a clear mention of the possibility of a data verification

process with an auditing partner. The current process is to send out a digital document enabling direct evaluation and visualization of results upon completion.

The survey has four parts: one covering diversity & inclusion, fair wages and gender equality, the second covering well-being, the third one covering training and job quality, and the fourth and last one covering the impact on local communities. The last page (additional information) gathers essential elements such as: remarks regarding the partnership with the brand, workers mobilized by collection and by product reference (with an example of two to several product references), whether or not jobs were created or destroyed within the year and partnership with Chloé, certifications and documentation to attest of the level of social practices (SA8000, B Corp...), and additional information the supplier wishes to highlight when it comes positive social practices. The extent of the data collection depends on the number of employees per organization: if there are thirty or less employees, the organization fills a lighter version of the survey (20% less data collected, including data regarding policies and initiatives).

The metrics are presented with tables formats in order to make the data competition as straightforward as possible. The documentation is shared in several languages to facilitate communication and understanding throughout our value chain, and specifically at the supply chain level. Definitions, as well as a global glossary is made available and translated into each language to facilitate data completion. Key documentation is demanded of suppliers during the data collection process in order to facilitate the data verification process when it comes to policies and initiatives specifically.

12.5 Step 3: data verification process

The data verification process is a mandatory step in order to insure that any data collected, processed and potentially communicated is valid and not a false allegation. In order not to create any bias, we created with our social auditing partner a remote and adaptable process.

The information is verified in two ways:

- (1) Non-personal data is uploaded on the auditor's platform
- (2) Personal information is checked directly during the remote call in order to preserve confidentiality

The auditor fills in, per information category, the following elements: type of documentation provided by supplier (1), methodology or thought process applied (if relevant) (2), validating the data (3), detail, and observations (4).

Chloé recommends that the organization launching an SP&L within a given perimeter launch, for the first year, a data verification process for 100% of the scope, then a data verification process for 30% (minimum) of the suppliers filling out the self-assessment, based on a verification sample including geographical representation of the company's supply chain within the sample, and representation of common supplier size.

Variation identifications with previous years and trends between sites or specific social topics should be monitored, with a rule of variance starting at 20%. Any variance identified beyond 20% should lead systematically to a demand for supporting documentation.

12.6 Step 4: performance evaluation

A) Grading Process

The choice of a 1-5 performance rating scale enables a three-dimensional view on the performance level on each topic, and provides some degree of granularity regarding the positive social impacts.

The evaluation is realized with an ascending scale from 1 (below average practice) to 5 (best possible practice). We consider that grades 1 to 3 to highlight a low level of positive practices.

We consider that a result from 3 to 3.5 is neither negative nor positive, representing a level of

average practices. We consider that results from 3.5, and up to 5 represent good practices, or beyond average social practices. We consider, lastly, that results equaling 5 represent practices close or equivalent to best practices in the fashion industry.

The evaluation process is realized at the:

- (1) Metric level
- (2) Impact category level
- (3) Overall or activity level

The evaluation is realized systematically and automatically, based on an evaluation grid, and using Google Cloud Platform (GCP) and Looker Studio. The code mobilized to adapt and implement the evaluation and visualization process are available on chloe.com.

The fully digitalized process was created in order to avoid any form of potential error or bias during the evaluation of the quantified data, and to facilitate the analytic process (see, figure 78 and 79 below, and full downloadable evaluation documentation)

Stakeholders	Category	Metric name	Unit	Metric description
Workers	Diversity & Inclusion	Gender	%	Percentage of women in total workforce
Workers	Diversity & Inclusion	Age	%	Percentage of employees who are 50 years-old and older
Workers	Diversity & Inclusion	Age	%	Percentage of employees who are between 19 and 26 years-old (youth)
Workers	Diversity & Inclusion	Nationality	%	Percentage of Non-National in total workforce
Workers	Diversity & Inclusion	Disadvantaged workers	%	Share of employees who are part of one of the "disadvantaged workers" category
Workers	Diversity & Inclusion	Disability	%	Percentage of employees who have a disabled status
Workers	Diversity & Inclusion	Permanent contract 18-26	%	Workers who are between [19 - 26] and have a permanent contract
Workers	Diversity & Inclusion	Permanent contract 50+	%	Workers above 50 years-old with a permanent contract
Workers	Diversity & Inclusion	Permanent contracts formerly marginalized & priority workers	%	Disadvantaged workers who have a permanent contract
Workers	Diversity & Inclusion	Permanent contracts disability	%	Disabled workers who have a permanent contract
Workers	Diversity & Inclusion	Permanent contracts non-nationals	%	Non-national workers who have a permanent contract
Workers	Diversity & Inclusion	Non-national shareholders	%	Percentage of non-National shareholders
Workers	Diversity & Inclusion	Non-national in the top management	%	Non-National in the top management
Workers	Diversity & Inclusion	Non-national share of management	%	Non-National share of management
Workers	Diversity & Inclusion	Formerly marginalized / priority workers share of management	%	Share of management who were initially part of the "disadvantaged workers" category
Workers	Diversity & Inclusion	Disabled workers share of management	%	Workers with a disability; share of management
Workers	Diversity & Inclusion	Representation in workers committees / nationality	%	Non-National representation in worker's committees
Workers	Diversity & Inclusion	Representation in workers committees / formerly marginalized	%	Representation of "disadvantaged workers" within workers' committees
Workers	Diversity & Inclusion	Representation in workers committees / youth (18-26)	%	Youth representation in worker's committees
Workers	Diversity & Inclusion	Representation in workers committees / 50+ years-old	%	50+ years old employees' representation in worker's committees
Workers	Diversity & Inclusion	Representation in workers committees / disabled	%	Workers with a disability; representation in worker's committees
Workers	Diversity & Inclusion	Equal Opportunity policy (Non-discrimination policy)	Maturity Level	Equal opportunity policy or practices in place
Workers	Diversity & Inclusion	Disability and Inclusion policy	Maturity Level	Disability and inclusive policy or practices in place
Workers	Gender Equality	Permanent contract / gender	%	Share of women workers with a permanent contract
Workers	Gender Equality	Women shareholders	%	Women who are part of the shareholders
Workers	Gender Equality	Top management / gender	%	Women in the top management
Workers	Gender Equality	Management / Gender	%	Share of women in management
Workers	Gender Equality	Representation in workers committees / gender	%	Women representation in workers committees and representation
Workers	Gender Equality	Parental leaves	Maturity Level	Policies for parental leaves; processes & benefits in place
Workers	Gender Equality	Management pay gap / Gender	%	Gap from pay equality based on gender in % in management
Workers	Gender Equality	Workers pay gap / Gender	%	Gap from pay equality based on gender in % for non-management workers
Workers	Living Wage	Share of employees paid the living wage	%	Share of employees paid the living wage
Workers	Living Wage	Current workers wages against living wage	%	Living wage against current wage
Workers	Well-Being	Access to additional medical and care services provided by employer	%	Access to employer-provided medical and healthcare services beyond regulatory demands
Workers	Well-Being	Participation in well-being programmes and services	%	Percentage of employees participating in "best practice" health and well-being programmes (e.g. sport, meditation, etc)
Workers	Well-Being	Absenteeism	%	Absenteeism Rate
Workers	Training	Training scope	%	Percentage of trained employees (beyond Health & Safety)
Workers	Training	Effectiveness of training	Maturity Level	Effectiveness of the training and development through increased revenue, productivity gains, employee engagement and/or internal hire rates.
Workers	Training	Intergenerational training - Mecenat training	%	Share of youth (19-26) trained by senior workers
Workers	Job Quality	Permanent contract 26-50	%	Workers who are between [27 - 50] and have a permanent contract
Workers	Job Quality	Job Tenure	Nb	Average job tenure
Workers	Job Quality	Promotion Rate	%	Average of employees promoted yearly
Workers	Job Quality	Pay progression	%	Percentage of employees benefiting from a pay progression yearly
Workers	Job Quality	Turnover	%	Average employee turnover (yearly)
Workers	Training	Transmission	%	(Of which) Number of employees committed to, and passing on their know-how
Workers	Training	Seniority	Years	Average seniority of employees mobilizing know-how (in years)
Local Communities	Policies to protect local communities	Delocalization prevention	Maturity Level	Has the organization developed policies to prevent delocalization
Local Communities	Policies to protect local communities	Migrants integration	Maturity Level	Has the organization developed procedures for integrating migrants
Local Communities	Policies to protect local communities	Policies in place to protect Cultural Heritage	Maturity Level	Has the organization developed policies in Place to Protect Cultural Heritage years-old
Local Communities	Local Engagement	Local hire	%	Percentage of workforce hired locally
Local Communities	Local Engagement	Policies on local hire	Maturity Level	Has the organization developed policies on local hiring?
Local Communities	Local Engagement	Spending on locally-based suppliers	%	Percentage of spending on locally-based suppliers
Local Communities	Policies to protect local communities	Intellectual property	Maturity Level	Has the organization developed policies related to intellectual property respect moral at
Local Communities	Policies to protect local communities	Education initiatives	Maturity Level	Has the organization developed community education initiatives?
Society	Public commitments	Implementation of a code of conduct	Y/N	Has your company designed, signed and implemented a code of conduct, integrating the
Society	Public commitments	Sustainable Development Goals	Maturity Level	Has your company signed, and at least partially implemented measures in alignment with
Society	Public commitments	Initiatives and partnerships related to SDGs	Maturity Level	Has your company set up one or more partnerships and/or initiatives related to the SDG?
Society	Public commitments	Environmental and social performances integrated into decision-ma	Y/N	How does your company integrate social and environmental performance into decision m
Society	Public commitments	Anti-corruption practices	Y/N	Which of the following anti-corruption reporting and prevention systems do you have? ..
Society	Public commitments	Anti-corruption prevention systems	Y/N	Does your company have any of the following in place with respect to monitoring and res
Society	Contribution to Development	Contributions to economic development	Y/N	Does your company implement any of the following ways of contributing to progress and
Society	Contribution to Development	Technical and technology development	Maturity Level	Has your organization invested in technical and technological solutions aimed at rationaliz
Society	Contribution to Development	Research partnerships	Maturity Level	Has your organization initiated and/or developed long-term partnerships to promote rese
Consumers / Clients	Safety, privacy & dialog	Warranty coverage	%	What percentage of your products is covered by a warranty?
Consumers / Clients	Safety, privacy & dialog	Quality insurance methodologies	Y/N	Do you use an established third-party methodology to manage the quality assurance of y
Consumers / Clients	Safety, privacy & dialog	Quality audit coverage	%	What percentage of suppliers undergo regular quality assurance reviews or audits? ..
Consumers / Clients	Safety, privacy & dialog	Client claims, feedback and suggestions	Y/N	Do any of the following statements relate to mechanisms for customers to provide feedba
Consumers / Clients	Safety, privacy & dialog	Client satisfaction	Y/N	Which of the following applies to your business with respect to customer satisfaction and
Consumers / Clients	Safety, privacy & dialog	Privacy	Y/N	Does your company have any of the following to address data usage and privacy issues?
Consumers / Clients	Communication surrounding sustainability	Environmental and social performance communication	Y/N	Does your company publicly share information about your social or environmental perfor
Consumers / Clients	Communication surrounding sustainability	LCA results communication	Y/N	If you produce life cycle analyses of your products, do you communicate the results to y
Consumers / Clients	Communication surrounding sustainability	Products end-of-life options communication	Y/N	Does your company systematically communicate about recycling and end-of-life options

Figure 78: Detail of SP&L impact categories and metrics

Metric description	1	2	3	4	5	Evaluation rationale	Calculation method
Percentage of women in total workforce	20 OR 96	30 OR 90	40 OR 75	45 OR 60	50 and 60	Industry-specific	Nb of women / Total employees
Percentage of employees who are 50 years-old and older	Depends on country					Representation	Nb of employees over 50 / Total employees
Percentage of employees who are between 19 and 26 years-old (youth)	Depends on country					Representation	Nb of employees 19-26 / Total employees
Percentage of [non-National] in total workforce	Depends on country					Representation	1 - (Nb of employees that are nationals) / Total employees
Share of employees who are part of one of the "disadvantaged workers" category	0%	0% to 3%	3% to 8%	8% to 10%	Above 10%	Representation	Nb of disadvantaged workers / Total employees
Percentage of employees who have a disabled status	Depends on country					Representation	Nb of disabled workers / Total employees
Workers who are between [19 - 26] and have a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Coverage	Nb of employees 19-26 who have a permanent contract / nb of employees 19-26
Workers above 50 years-old with a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Coverage	Nb of employees over 50 who have a permanent contract / nb of employees over 50
Disadvantaged workers who have a permanent contract	0%	0% to 3%	3% to 8%	8% to 10%	10%	Coverage	Nb of disadvantaged workers who have a permanent contract / nb of disadvantaged workers
Disabled workers who have a permanent contract	Depends on country					Coverage	Nb of disabled workers who have a permanent contract / nb of disabled workers
Non-national workers who have a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Coverage	(Total employees with a national contract - National employees who have a permanent contract) / (Total employees - national employees)
Percentage of non-National shareholders	Depends on country					Representation	1 - (Nb of nationals that are shareholders / Total shareholders)
Non-National in the top management	Depends on country					Representation	1 - (Nb of nationals that are part of top management / Total top management)
Non-National share of management	Depends on country					Representation	1 - (Nb of nationals that are part of management / Total management)
Share of management who were initially part of the "disadvantaged workers" category	0%	0% to 3%	3% to 8%	8% to 10%	10%	Representation	Disadvantaged workers that are managers / Total management
Workers with a disability: share of management	Depends on country					Representation	Managers with a disability / Total management
Non-National representation in worker's committees	Depends on country					Representation	1 - (Nationals who are part of a workers committee / total workers committee)
Representation of "disadvantaged workers" within workers' committees	0%	0% to 3%	3% to 8%	8% to 10%	10%	Representation	Disadvantaged workers who are part of a workers committee / Total workers committee
Youth representation in worker's committees	Depends on country					Representation	Workers 18-26 who are part of a workers committee / Total workers committee
50+ years old employees' representation in worker's committees	Depends on country					Representation	Workers 50+ who are part of a workers committee / Total workers committee
Workers with a disability: representation in worker's committees	Depends on country					Representation	Workers with a disability who are part of a workers committee / Total workers committee
Equal opportunity policy or practices in place	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Equal opportunity policy or practices in place
Disability and inclusive policy or practices in place	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Disability and inclusive policy or practices in place
Share of women workers with a permanent contract	50	60	75	90	90 to 100	Coverage	Women who have a permanent contract / all women
Women who are part of the shareholders	Less than 10	10 to 25	25 to 35	35 to 50	50 and 60	Industry-specific	Women who are shareholders / Total shareholders
Women in the top management	Less than 10	10 to 25	25 to 35	35 to 50	50 and 60	Industry-specific	Women who are in the top management / Total top management
Share of women in management	Less than 10	10 to 25	25 to 35	35 to 50	50 and 60	Industry-specific	Women who are in management / Total management
Women representation in workers committees and representation	an 30 or 80 and	an 35 OR 75 and	an 40 OR 70 and	an 45 OR 65 and	an 50 OR 60 and	Industry-specific	Women who are in workers committees / Total workers committee
Policies for parental leaves: processes & benefits in place	Non existent		Maternity leave	Maternity & paternity leave	Extendable parental leave	Maturity Level	Policies for parental leaves: processes & benefits in place
Gap from pay equality based on gender in % in management	15 & higher	10 to 15	1 to 10	Below 1	0	Gradation towards equality	(Average men managers salary - average women managers salary) / Average men managers salary
Gap from pay equality based on gender in % for non-management workers	15 & higher	10 to 15	1 to 10	Below 1	0	Gradation towards equality	(Average men non-management workers salary - average women non-management workers salary) / Average men non-management workers salary
Share of employees paid the living wage	Less than 40	40 to 60	60 to 80	80 to 100	100	Coverage	Workers paid the living wage / Total employees
Living wage against current wage	Depends on country					Representation and Gradation toward	Average worker salary
Access to employer-provided medical and healthcare services beyond regulatory demand	0 to 20	20 to 40	40 to 60	60 to 80	Above 80	Coverage	Workers with access to medical and healthcare services provided by employer / Total employees
Percentage of employees participating in "best practice" health and well-being programmes (e.g. sport, meditation, etc)	0 to 20	20 to 40	40 to 60	60 to 80	Above 80	Coverage	Employees participating in "best practice" health and well-being programmes / Total employees
Absenteeism Rate	Depends on country					Industry-specific	Absenteeism rate
Percentage of trained employees (beyond Health & Safety)	0 to 10	10 to 20	20 to 30	30 to 50	Above 50	Coverage	Trained employees / Total employees
Effectiveness of the training and development through increased revenue, productivity gains, employee engagement and/or internal hire rates.	No positive effect observed (0 boxes checked)	Little positive effect observed (1 box checked)	Some positive effect observed (2 boxes checked)	Plural positive effects observed (3 boxes checked)	A lot of positive effect observed (4 boxes checked)	Scope of observed positive effect	Positive effects of training observed
Share of youth (19-26) trained by senior workers	Depends on country					Coverage	Workers 19-26 who are trained by senior workers / Nb of employees 18-26
Workers who are between [27 - 50] and have a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Coverage	Workers who are between [26 - 50] and have a permanent contract / Nb of employees 26-50
Average job tenure	1 to 2	2 to 4	4 to 5	5 to 7	7 years +	Industry-specific	Average job tenure
Average of employees promoted yearly	Less than 5	5 to 8	8 to 10	10 to 15	15+	Industry-specific	Nb of employees promoted / Total employees
Percentage of employees benefiting from a pay progression yearly	Less than 5	5 to 8	8 to 10	10 to 15	15+	Industry-specific	Nb of employees who received a raise / Total employees
Average employee turnover (yearly)	Depends on country					Industry-specific	Average employee turnover
(Of which) Number of employees committed to, and passing on their know-how	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Coverage	Nb of employees passing on their know-how / Nb of employees mobilizing advanced technical skills
Average seniority of employees mobilizing know-how (in years)	1 to 2	2 to 4	4 to 5	5 to 7	7 years +	Industry-specific	Average seniority of employees mobilizing know-how
Has the organization developed policies to prevent delocalization	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Policies to prevent delocalization
Has the organization developed procedures for integrating migrants	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Procedures for integrating migrants
Has the organization developed policies in place to Protect Cultural Heritage years-old	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Policies in place to protect cultural heritage
Percentage of workforce hired locally	25	50	75	90	100	Coverage	Percentage of workforce hired locally
Has the organization developed policies on local hiring?	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Policies on local hiring
Percentage of spending on locally-based suppliers	Less than 5	5 to 10	10 to 20	20 to 50	More than 50	Industry-specific	Percentage of spending on locally-based suppliers
Has the organization developed policies related to intellectual property respect moral	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Policies related to intellectual property
Has the organization developed community education initiatives?	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	Community education initiatives
Has your company designed, signed and implemented a code of conduct, integrating the	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Has your company set up one or more partnerships and/or initiatives related to the SDGs	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	No calculation: filled by headquarters, not via survey
How does your company integrate social and environmental performance into decision	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Which of the following anti-corruption reporting and prevention systems do you have?	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Does your company have any of the following in place with respect to monitoring and rep	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Does your company implement any of the following ways of contributing to progress and	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Has your organization invested in technical and technological solutions aimed at rationaliz	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	No calculation: filled by headquarters, not via survey
Has your organization initiated and/or developed long-term partnerships to promote rese	Non existent	Formalized	In place	movement iterat	Reporting	Maturity Level	No calculation: filled by headquarters, not via survey
What percentage of your products is covered by a warranty?	25 or less	25 to 49	50 to 74	75 to 99	100	Coverage	No calculation: filled by headquarters, not via survey
Do you use an established third-party methodology to manage the quality assurance of y	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
What percentage of suppliers undergo regular quality assurance reviews or audits?	Less than 10	10 to 49	50 to 62	63 to 75	75 to 100	Coverage	No calculation: filled by headquarters, not via survey
Do any of the following statements relate to mechanisms for customers to provide feedb	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Which of the following applies to your business with respect to customer satisfaction and	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Does your company have any of the following to address data usage and privacy issues?	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Does your company publicly share information about your social or environmental perfor	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
If you produce life cycle analyzes of your products, do you communicate the results to y	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey
Does your company systematically communicate about recycling and end-of-life options?	No	N/A	N/A	N/A	Yes	Binary (Y/N)	No calculation: filled by headquarters, not via survey

Figure 79: Grading process per impact metric with associated calculation method

B) Evaluation Rationales

The SP&L totals seventy-two metrics, divided into six impact categories for workers, two impact categories for the impact on communities, two impact categories for impact on society, and two impact categories related to the impact on clients. Metrics are evaluated in terms of social performance (1-5) following five evaluation rationales (see, figure 80, below)

Maturity level metrics:	<p>Non-existent Policy does not exist</p> <p>Formalized Policy has been defined / outlined but is not yet fully in place</p> <p>In place Policy is fully in place</p> <p>Improvement iterations Actions are regularly taken to improve the impact of the policy</p> <p>Reporting Impact of the policy is measured and reported on</p>
Representation metrics:	<p>Some metrics cannot be measured the same from country to country. They have been adapted based on local demographics and customs.</p>
Country dependent metrics:	<p>For instance, the population in Madagascar is much younger than in Europe, so the “% of employees 50 or older” should represent this gap.</p>
Coverage metrics:	<p>Metrics rated from low worker coverage, or 0% (rated 1) to full worker coverage, or 100% (rated 5).</p> <p>This form of evaluation is relevant when it comes to contracts, living wage payment, access to services, and training.</p>
Industry-specific metrics:	<p>Some metrics require a benchmark from the fashion industry. For the time being we used averages from national data, however this evaluation should be updated after the industry consultation.</p> <p>This is particularly relevant for “Job Quality” and “Know-How” metrics, and gender balance metrics which are specific to the fashion industry.</p>
Binary metrics:	<p>Some metrics should either be answered by “yes” (rated 5) or “no” (rated 1) as a gradual evaluation would not be relevant.</p> <p>For instance annual meetings or whether publications are in place.</p>
Gradation towards equality metrics:	<p>Metrics that should reflect the gap (or lack thereof) in practices depending on worker’s profile and characteristic (ie gender, age, etc).</p> <p>For instance, the gap between men’s and women’s salary for a similar job position with similar competences and experiences.</p>
Gender balance metrics	<p>For gender representation metrics, we aligned ourselves on both the principle of gender balance (women should represent 50 to 60% of the workforce) and on the specificities of the fashion industry, which has a workforce composed of women in majority.</p>
<i>Specificity and hypothesis</i>	<p>The metric related to % of the workforce is within the diversity category and is therefore stricter regarding parity, whereas metrics regarding representation in leadership are less strict as the presence of women in leadership (while not extreme, up until 90%) is deemed a positive impact.</p>

Figure 80: Evaluation Rationales Overview

1) National Representation

Some metrics cannot be measured the same from country to country. They have been adapted based on local demographics and customs. For instance, the population in Madagascar is much younger than in Europe, so the “% of employees 50 or older” should represent this gap. Those metrics are country-dependent and we have developed independent tables per country in order to reflect this. Evaluation intervals are thus adapted country to country.

1. No correlation between country representation data and organization representation data
2. Low correlation between country representation data and organization representation data
3. Close representation between country representation data and organization representation data
4. Exact correlation between country representation data and organization representation data
5. Balanced over-representation between organization representation data and organization data (within 10%)

Ensuring living wage payments throughout value chains is deemed as a high priority for the luxury industry. Chloé chose the Fair Wage Network referential to measure and evaluate the payment of living wages for their suppliers. Fair Wage Network provides two levels of evaluation for living wages: non-adjusted living wage (in this case, the individual worker's salary must fully cover the needs of his or her family), and adjusted-living wage (in this case, the salary of the worker is added to other income earners in the family to cover his/her family needs). In both cases, Fair Wage Network advises to take into account the needs of a typical family composed of two adults with a number of children along the national fertility rate. Fair Wage Network provides living wage levels at national, regional and city level in a majority of cases.

However, for the SP&L, since we are aware that multiple standards are currently used within (and outside of) the fashion industry, we created an evaluation process which enables brands to provide their own data while evaluating living wages, see the proposed scale below:

1. Wages more than 10% below the adjusted living wage
2. Wages below the adjusted living wage (but no more than 10%)
3. Wages at adjusted living wage
4. Wages above the adjusted living wage but below the non-adjusted living wage
5. Wages at or above the non-adjusted living wage

2) Coverage

This set of metrics evaluate the level of access: to permanent contracts, to best practice well-being programs and to training. The metrics are scored from 1 to 5 in a perimeter extending from 0 (no access) to 100 (the entire workforce benefits from access).

Three types of metrics are evaluated this way:

1. The metrics related to the access to permanent contracts by population type (women, non-nationals, age factor, handicap status) in complement to the metrics evaluated in social auditing (share of workers who have access to permanent contracts)
2. The metrics related to the access to “best practice” health and well-being programs (metric aligned on the proposition from the Embankment Project), complementarily to the social auditing metric of access to basic medical care, and training
3. The metrics related to training: for instance, the share of trained employees metrics which are complementary to social auditing’s metrics regarding the risk-based training offer.

Evaluation example: this is how we evaluate permanent contracts for women.

3) Gradation towards equality

Are measured with the “gradation towards equality” rationale metrics that reflect the gap (or lack thereof) in practices depending on worker’s profile and characteristic (ie gender, age, etc). For instance, the gap between men’s and women’s salary for a similar job position with similar competences and experiences. *Evaluation example:* this is how we evaluate the lack of pay gaps

Pay level evaluation: Metrics related to wages are evaluated mobilizing a range from 0 (unequal, or partial pay level) corresponding to grade 1 out of 5, to 1 (equal, or fully corresponding pay level) corresponding to a grade of 5 out of 5. 1 corresponds to a total inequality and non-match, while 5 corresponds to a total parity and a best practice.

4) Maturity Level

This evaluation rationale is relevant for the evaluation of the implementation and level of advancement for policies, programs and initiatives. We consider a positive practice the deployment of initiatives and policies with improvement iterations, and best practices when there is an associated reporting for transparency enabling comparison over time in order to further improve practices. Size rule: the maturity metrics are only evaluated when the organization has more than 30 workers.

Case	Associated Grade
<ul style="list-style-type: none"> • Policy, program or initiative does not exist • No actions are taken 	1
<ul style="list-style-type: none"> • Policy, program or initiative has been defined or outlined but is not yet fully in place • No action is taken, or an action is taken without reporting or monitoring 	2
<ul style="list-style-type: none"> • Policy, program or initiative is fully in place and communicated to stakeholders • No action is taken, or an action is taken without reporting or monitoring 	3
<ul style="list-style-type: none"> • Policy, program or initiative is fully in place and communicated to stakeholders • Actions are regularly taken to improve the impact of the policy, program, initiative, but no regular reporting is in place 	4
<ul style="list-style-type: none"> • Policy, program or initiative is fully in place and communicated to stakeholders • Actions are regularly taken to improve the impact of the policy, program, initiative, but no regular reporting is in place 	5

Figure 81: Means Maturity Grading Proposition

Beyond means, we also created a rationale to evaluate ends when it comes to training initiatives: when one or several positive and correlated effects can be observed, a multicriteria choice creates the possibility for organizations to select one or several option (for instance when it comes to effectiveness of training: increased revenue, productivity gains, employee engagement and/or internal hire rates, which are then verified through data verification

processes). The scope of observed positive effects is rated from 0 (no positive effect observed) to 5 (plural positive effects observed and registered).

5) Binary

In some cases, a binary evaluation method can be used for metrics related to the existence and implementation of inclusive policies (gender, disability, diversity and inclusivity), especially for impact categories such as local communities, society, and clients. The grading process is the following: the application of a binary analysis (yes/ no, existent/non-existent implemented/ not implemented) with a grade being either a 1 (no) or a 5 (yes). This is only relevant whenever a gradual evaluation is either non relevant or not feasible.

Example: Has your company designed, signed and implemented a code of conduct, integrating the social and environmental dimensions?

C) Mandatory data

Through the data collection process, a majority of the data is mandatory and must be completed by production sites (*see*, figure 82, below)

Mandatory	Yes	Workers	Diversity & Inclusion	Gender
Mandatory	Yes	Workers	Diversity & Inclusion	Age
Optional	Yes	Workers	Diversity & Inclusion	Age
Optional	Yes	Workers	Diversity & Inclusion	Nationality
Optional	Yes	Workers	Diversity & Inclusion	Disadvantaged workers
Mandatory	Yes	Workers	Diversity & Inclusion	Disability
Optional	Yes	Workers	Diversity & Inclusion	Permanent contract 18-26
Mandatory	Yes	Workers	Diversity & Inclusion	Permanent contract 50+
Optional	Yes	Workers	Diversity & Inclusion	Permanent contracts formerly marginalized & priority workers
Optional	Yes	Workers	Diversity & Inclusion	Permanent contracts disability
Optional	Yes	Workers	Diversity & Inclusion	Permanent contracts non-nationals
Optional	Yes	Workers	Diversity & Inclusion	Non-national shareholders
Mandatory	Yes	Workers	Diversity & Inclusion	Non-national in the top management
Mandatory	Yes	Workers	Diversity & Inclusion	Non-national share of management
Optional	Yes	Workers	Diversity & Inclusion	Formerly marginalized / priority workers share of management
Optional	Yes	Workers	Diversity & Inclusion	Disabled workers share of management
Optional	Yes	Workers	Diversity & Inclusion	Representation in workers committees / nationality
Optional	Yes	Workers	Diversity & Inclusion	Representation in workers committees / formerly marginalized
Optional	Yes	Workers	Diversity & Inclusion	Representation in workers committees / youth (18-26)
Optional	Yes	Workers	Diversity & Inclusion	Representation in workers committees / 50+ years-old
Optional	Yes	Workers	Diversity & Inclusion	Representation in workers committees / disabled
Optional	No	Workers	Diversity & Inclusion	Equal Opportunity policy (Non-discrimination policy)
Optional	No	Workers	Diversity & Inclusion	Disability and Inclusion policy
Mandatory	Yes	Workers	Gender Equality	Permanent contract / gender
Mandatory	Yes	Workers	Gender Equality	Women shareholders
Mandatory	Yes	Workers	Gender Equality	Top management / gender
Mandatory	Yes	Workers	Gender Equality	Management / Gender
Mandatory	Yes	Workers	Gender Equality	Representation in workers committees / gender
Optional	No	Workers	Gender Equality	Parental leaves
Mandatory	Yes	Workers	Gender Equality	Management pay gap / Gender
Mandatory	Yes	Workers	Gender Equality	Workers pay gap / Gender
Mandatory	Yes	Workers	Living Wage	Share of employees paid the living wage
Mandatory	Yes	Workers	Living Wage	Current workers wages against living wage
Mandatory	Yes	Workers	Well-Being	Access to additional medical and care services provided by employer
Mandatory	Yes	Workers	Well-Being	Participation in well-being programmes and services
Mandatory	Yes	Workers	Well-Being	Absenteeism
Mandatory	Yes	Workers	Training	Training scope
Optional	Yes	Workers	Training	Effectiveness of training
Optional	Yes	Workers	Training	Intergenerational training - Mentoring training
Optional	Yes	Workers	Job Quality	Permanent contract 26-50
Mandatory	Yes	Workers	Job Quality	Job Tenure
Mandatory	Yes	Workers	Job Quality	Promotion Rate
Mandatory	Yes	Workers	Job Quality	Pay progression
Optional	Yes	Workers	Job Quality	Turnover
Optional	Yes	Workers	Training	Transmission
Optional	Yes	Workers	Training	Seniority
Optional	No	Local Communities	Policies to protect local communities	Delocalization prevention
Optional	No	Local Communities	Policies to protect local communities	Migrants integration
Optional	No	Local Communities	Policies to protect local communities	Policies in place to protect Cultural Heritage
Optional	Yes	Local Communities	Local Engagement	Local Hire
Optional	No	Local Communities	Local Engagement	Policies on local hire
Optional	Yes	Local Communities	Local Engagement	Spending on locally-based suppliers
Optional	No	Local Communities	Policies to protect local communities	Intellectual property
Optional	No	Local Communities	Policies to protect local communities	Education Initiatives
HQ only		Society	Public commitments	Implementation of a code of conduct
HQ only		Society	Public commitments	Sustainable Development Goals
HQ only		Society	Public commitments	Initiatives and partnerships related to SDGs
HQ only		Society	Public commitments	Environmental and social performances integrated into decision-making
HQ only		Society	Public commitments	Anti-corruption practices
HQ only		Society	Public commitments	Anti-corruption prevention systems
HQ only		Society	Contribution to Development	Contributions to economic development
HQ only		Society	Contribution to Development	Technical and technology development
HQ only		Society	Contribution to Development	Research partnerships
HQ only		Consumers / Clients	Safety, privacy & dialog	Warranty coverage
HQ only		Consumers / Clients	Safety, privacy & dialog	Quality insurance methodologies
HQ only		Consumers / Clients	Safety, privacy & dialog	Quality audit coverage
HQ only		Consumers / Clients	Safety, privacy & dialog	Client claims, feedback and suggestions
HQ only		Consumers / Clients	Safety, privacy & dialog	Client satisfaction
HQ only		Consumers / Clients	Safety, privacy & dialog	Privacy
HQ only		Consumers / Clients	Communication surrounding sustainability	Environmental and social performance communication
HQ only		Consumers / Clients	Communication surrounding sustainability	LCA results communication
HQ only		Consumers / Clients	Communication surrounding sustainability	Products end-of-life options communication

Figure 82: mandatory and optional metrics for data completion

- **Mandatory metrics rules:** if mandatory metrics are not completed by the organization, they are given a grade of 1. All gender equality and living wage metrics are automatically mandatory as they constitute a high priority for the fashion industry.
- **Optional data rules:** if optional metrics are not completed by the organization, they are left blank and not taken into account when calculating the organization's grade.

- *Scenario 1 – Small organizations (less than 30 workers):* organization-specific metrics such as «board representation» and «worker committee/union», as well as metrics evaluated in terms of maturity (policies, initiatives) are considered optional.
- *Scenario 2 – HQ-only metrics* which are not mandatory for suppliers

D) Evaluation Weighting rule

Aggregate score. Inside each SP&L aggregated score, the grade is calculated as the average of the grades of each category.

Impact category score. Each impact category is evaluated independently, and will have one individual grade. This means that every category has initially the same weight, no matter how many metrics are in that category. To reflect the priorities within the fashion industry, after a consultation, the choice of ponderation at the impact category level is to create a weighting differentiation in favor of gender equality and living wage (2v1) compared to the other impact categories, to reflect the industry priorities.

Metric score. At the metric level, the ponderation is of 1 between each metric and following the same grading system.

The multi-tiers evaluation enables a visibility of nuances between impact categories, and between individual types of practices (for example: gender equality, and within the gender equality category: “representation on the board” has a score that might be different from the performance score given to “share of women present on the board”) which guides the choices in terms of decision-making’s timeline and set priorities.

At the product level, where T0 (operations), T1(assembly), T2 (manufacturing), T3 (raw materials transformation) & T4 (raw material extraction) are represented and where every

organization mobilized on a product is taken into account in the final aggregated score, the ponderation is creating using the number of workers directly mobilized on the product reference. The total aggregated score, taking into account all three sites of production, will be divided by the total number of employees mobilized.

Applicable to companies with less than 30 employees	Stakeholders	Category	Metric name
Yes	Workers	Diversity & Inclusion	Gender
Yes	Workers	Diversity & Inclusion	Age
Yes	Workers	Diversity & Inclusion	Nationality
Yes	Workers	Diversity & Inclusion	Disadvantaged workers
Yes	Workers	Diversity & Inclusion	Disability
Yes	Workers	Diversity & Inclusion	Permanent contract 18-26
Yes	Workers	Diversity & Inclusion	Permanent contract 50+
Yes	Workers	Diversity & Inclusion	Permanent contracts formerly marginalized & priority workers
Yes	Workers	Diversity & Inclusion	Permanent contracts disability
Yes	Workers	Diversity & Inclusion	Permanent contracts non-nationals
Yes	Workers	Diversity & Inclusion	Non-national shareholders
Yes	Workers	Diversity & Inclusion	Non-national in the top management
Yes	Workers	Diversity & Inclusion	Non-national share of management
Yes	Workers	Diversity & Inclusion	Formerly marginalized / priority workers share of management
Yes	Workers	Diversity & Inclusion	Disabled workers share of management
Yes	Workers	Diversity & Inclusion	Representation in workers committees / nationality
Yes	Workers	Diversity & Inclusion	Representation in workers committees / formerly marginalized
Yes	Workers	Diversity & Inclusion	Representation in workers committees / youth (18-26)
Yes	Workers	Diversity & Inclusion	Representation in workers committees / 50+ years-old
Yes	Workers	Diversity & Inclusion	Representation in workers committees / disabled
No	Workers	Diversity & Inclusion	Equal Opportunity policy (Non-discrimination policy)
No	Workers	Diversity & Inclusion	Disability and Inclusion policy
Yes	Workers	Gender Equality	Permanent contract / gender
Yes	Workers	Gender Equality	Women shareholders
Yes	Workers	Gender Equality	Top management / gender
Yes	Workers	Gender Equality	Management / Gender
Yes	Workers	Gender Equality	Representation in workers committees / gender
No	Workers	Gender Equality	Parental leaves
Yes	Workers	Gender Equality	Management pay gap / Gender
Yes	Workers	Gender Equality	Workers pay gap / Gender
Yes	Workers	Living Wage	Share of employees paid the living wage
Yes	Workers	Living Wage	Current workers wages against living wage
Yes	Workers	Well-Being	Access to additional medical and care services provided by employ
Yes	Workers	Well-Being	Participation in well-being programmes and services
Yes	Workers	Well-Being	Absenteeism
Yes	Workers	Training	Training scope
Yes	Workers	Training	Effectiveness of training
Yes	Workers	Training	Intergenerational training / Mecenal training
Yes	Workers	Job Quality	Permanent contract 26-50
Yes	Workers	Job Quality	Job Tenure
Yes	Workers	Job Quality	Promotion Rate
Yes	Workers	Job Quality	Pay progression
Yes	Workers	Job Quality	Turnover
Yes	Workers	Training	Transmission
Yes	Workers	Training	Seniority
No	Local Communities	Policies to protect local communities	Delocalization prevention
No	Local Communities	Policies to protect local communities	Migrants integration
No	Local Communities	Policies to protect local communities	Policies in place to protect Cultural Heritage
Yes	Local Communities	Local Engagement	Local Hire
No	Local Communities	Local Engagement	Policies on local hire
Yes	Local Communities	Local Engagement	Spending on locally-based suppliers
No	Local Communities	Policies to protect local communities	Intellectual property
No	Local Communities	Policies to protect local communities	Education Initiatives
	Society	Public commitments	Implementation of a code of conduct
	Society	Public commitments	Sustainable Development Goals
	Society	Public commitments	Initiatives and partnerships related to SDGs
	Society	Public commitments	Environmental and social performances integrated into decision-ma
	Society	Public commitments	Anti-corruption practices
	Society	Public commitments	Anti-corruption prevention systems
	Society	Contribution to Development	Contributions to economic development
	Society	Contribution to Development	Technical and technology development
	Society	Contribution to Development	Research partnerships
	Consumers / Clients	Safety, privacy & dialog	Warranty coverage
	Consumers / Clients	Safety, privacy & dialog	Quality insurance methodologies
	Consumers / Clients	Safety, privacy & dialog	Quality audit coverage
	Consumers / Clients	Safety, privacy & dialog	Client claims, feedback and suggestions
	Consumers / Clients	Safety, privacy & dialog	Client satisfaction
	Consumers / Clients	Safety, privacy & dialog	Privacy
	Consumers / Clients	Communication surrounding sustainability	Environmental and social performance communication
	Consumers / Clients	Communication surrounding sustainability	LCA results communication
	Consumers / Clients	Communication surrounding sustainability	Products end-of-life options' communication

Figure 83: size criteria for data completion

12.7 Step 5: performance visualization

The purpose of the visualization process is to guide decision-making towards optimization at both lifecycle and value chain levels. Once the data is completed on the digital survey form, the social data is directly evaluated and automatically translated visually on a dashboard:

- At the headquarters or operations level
- At the supplier level
- At the product level

The initial SP&L version mobilizes Google Cloud Platform (GCP), a BI & analytics serving dashboards for in-depth, consistent analysis in order to avoid mistakes and provide a consistent analysis. GCP allows a real-time data processing, and constitutes an essential step in the visualization process. An Excel file for input/output file in an effort to harmonize and centralize all feedback and SP&L results from operations and suppliers.

While the SP&L does not cover decent working conditions itself through the process, but focuses on positive impacts, the visualization includes audit score at every level: organization and product through the completion on GCP or any social risk information or auditing information.

The visualization offers a granularity:

- Audit score covering decent working conditions
- Overall performance score (aggregated)
- Score per impact category
- Score per metrics, with best practices and necessary improvement showcased.

Other direct available information are: the number of workers mobilized by collection, the number of workers mobilized by product reference (in average), and a List of references the supplier has worked on – and *link* to access the visualization per product reference.

Through the first version of the SP&L approach was created a visualization tool which synthesizes essential elements for decision-making and optimization, by creating the basis for a multicriteria performance scoreboard, including certifications et audit scores, to facilitate access, reporting and accounting.

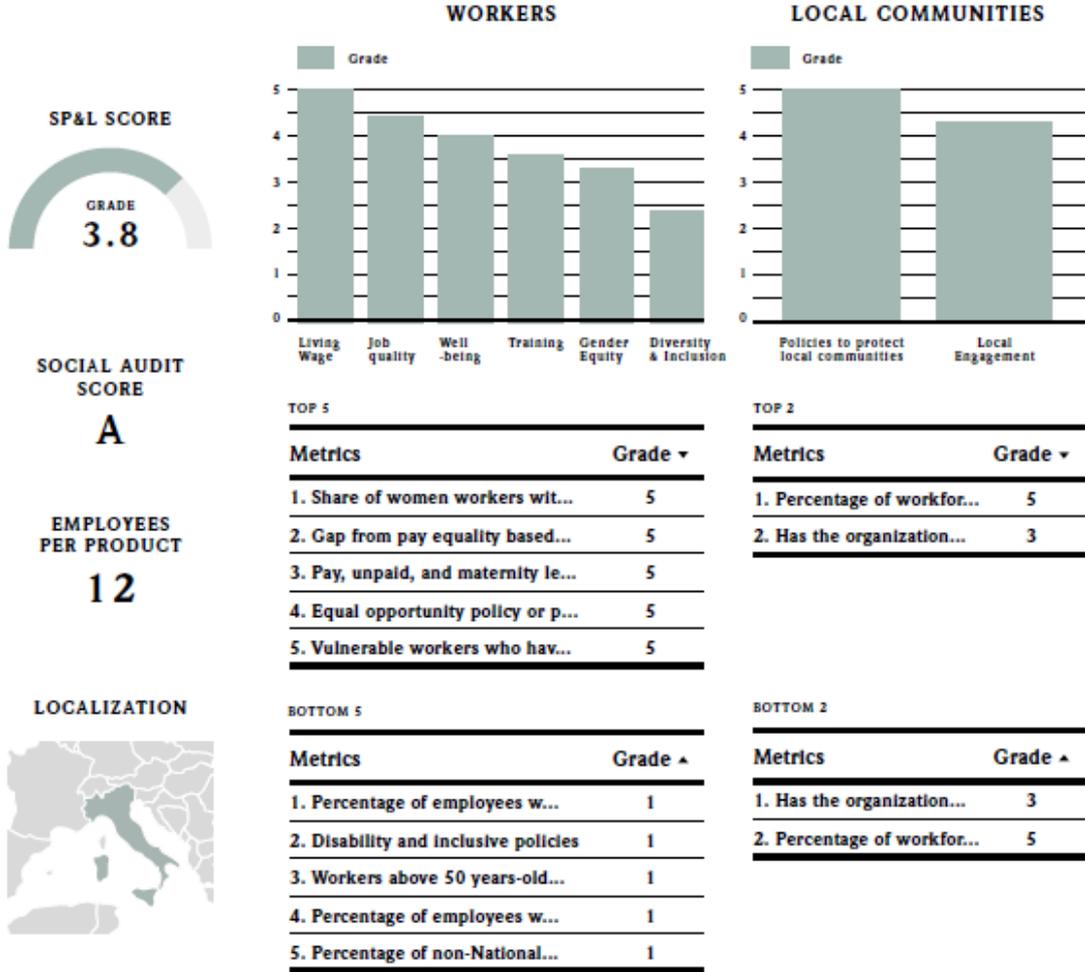


Figure 84: example for an organization SP&L dashboard

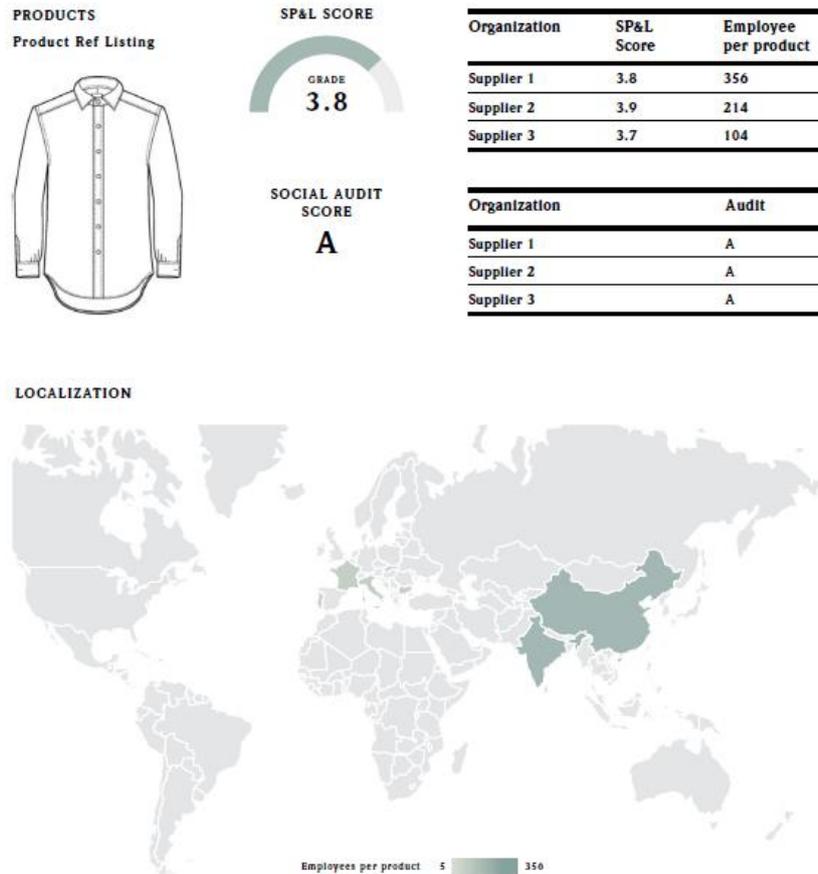


Figure 85: example for an organization SP&L dashboard

12.8 Taking Action

The aim with the SP&L was to provide additional insight for decision-making and to better accompany change within our supply chain.

In that way, the steps to take after visualization are the following:

1. Communicate key information and results to suppliers
2. Define a capacity-building plan based on SP&L KPI with suppliers
3. Monitor change and organize yearly evolution monitoring
4. Train internal teams to anticipate data collection, monitoring, and discussion with suppliers.

The SP&L approach is by nature exploratory and evolutive. It is intrinsically meant to evolve over time as socio-economic situation by country, regulations, but also industry standards such as social labelling regarding social impact evolve. Living wage, which is one of the key item measured in this methodology, has not yet a single international recognized standard.

The methodology will be regularly updated. Other key topics which we aim to include in a future iteration of the methodology are value sharing, value distribution and value redistribution which we aim to include in a “value chain partners” new stakeholder category. Further, current progress in traceability will more than likely further the possibilities to get additional insight and better manage positive social impact within supply chains.

13. Limitations

There are many inner-limitations as well as opportunities for future research which we observed throughout our work, and will non-exhaustively list here: the SP&L approach provides a framework for potential analysis of social value creation over time, which due to the timeline we did not have time to test. This could prove to be an interesting way to rethink social return on investment methodologies.

Further, additional time and insights could help understanding both how the SP&L helps organizations systematically collect data regarding their own social practices, and how those results evolve over time, with or without additional resource allocation or investment.

The possibility to monitor the results of tools such as the SP&L over time could create many possibilities to assess capacity-building efforts’ efficiency.

Further, an interesting outcome of this research could be to provide insights into value distribution and redistribution between stakeholders, specifically at the product level. Many organizations, for instance DEAL, place value distribution or redistribution not only as a factor of value creation, but also as necessary intrinsic feature of business models seeking to control and increase their social impact.

Lastly, the use of tools such as the SP&L within circular models (at the business model level) and their deployment to aid product eco-conception while monitoring, and forecasting product and collections' impact could be useful to the fashion industry, and perhaps beyond the fashion industry.

The articulation between and use for, tools such as the SP&L to further strategic evolution and integration of CSR, control and efficiency modalities within their business models can take plural forms, and perhaps should systematically be analysed from a stakeholder interaction perspective, as, as Cecilie Thornsmark, CEO of the Copenhagen Fashion Week stated about circular models within the fashion industry, "this kind of systemic change will require a collective and coordinated push from suppliers, designers, brands and retailers across fashion's value chains.

14. Critical perspective on the SP&L, from organizational paradoxes, genealogical, social and data control perspectives

Based on genealogy models (highlighted in chapter 6), and mobilizing a social and stakeholder-centered perspective, in this sub-chapter we will further test the former hypothesis developed in Part II for the creation, development and development of a Social Profit & Loss (SP&L) management tool within the fashion industry.

We will first analyze the integration of the SP&L within the managerial paradoxes representation, derived from Smith and Lewis' (2011) work in organizational paradoxes, before analyzing the SP&L from a genealogical' s perspective, derived from the research work presented by Ghaffari (2013), question power imbalance and analyze the integration of the tool within a stakeholder ecosystem, and lastly analyze the management tool mobilizing Kaufmann's (2019) data intelligence as a cognitive system proposition, as well as our own proposal for a full cost and control system.

We hypothesize through the mobilization of those four perspective on management tools we will be able to showcase and better analyze the main features of the SP&L, as well as its implementation within a specific ecosystem.

14.1 The SP&L, from an organizational paradoxes' perspective

First, we mobilize our visual interpretation of Smith and Lewis' (2011) organizational paradoxes (see, figure 86, below) to create a foundation to analyze Chloé's SP&L integration within a specific ecosystem (see, figure 87, below).

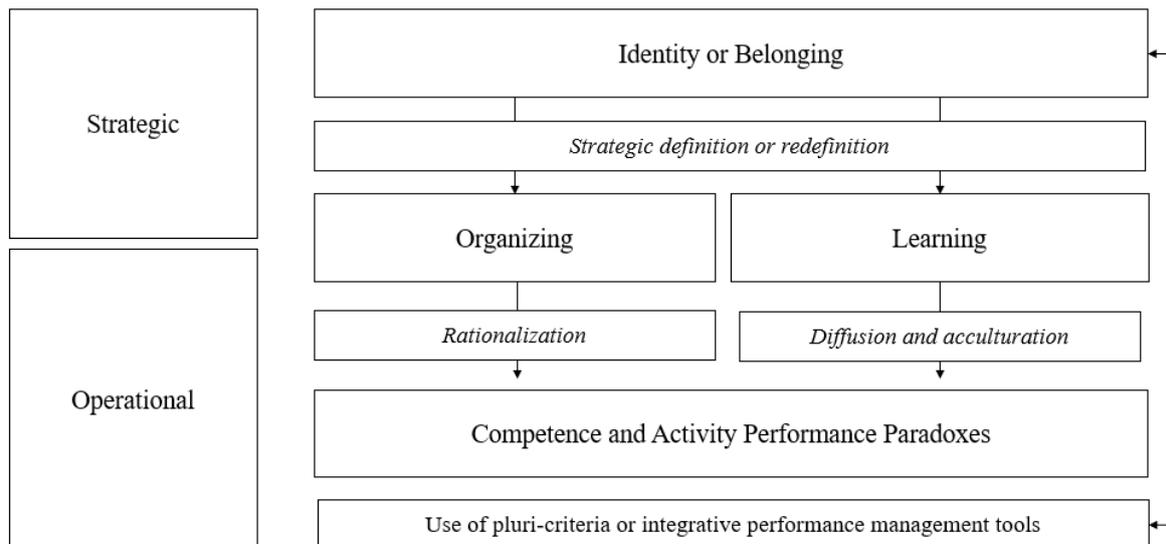


Figure 86: Interpretation in situ of Smith and Lewis' (2011) organizational paradoxes

Doing so, we find that from a strategic perspective, the identity, or belonging paradoxes and questions mainly surround the capacity for a corporation, in this case Chloé, to redefine itself and its business to model towards become a benefit corporation, or *société à mission*. This strategic transition is made in a public way, with the communication of a *raison d'être*, or long-lasting strategic purpose “Women Forward. For a Fairer Future”. The communication of a *raison d'être* creates operational accountability, as every decision made must align with the purpose that was communicated upon. The definition and redefinition of a business model and the communication of a business purpose both creates and emphasize an apparent identity paradox for organization as to best align “purpose and profit”, and a belonging paradox as how to define stakeholders, and how to distribute value amongst stakeholders.

Those initial paradoxes (identity, belonging) thus creates for Chloé apparent operational paradoxes: first how to strategically and systematically integrate social and environmental activity parameters within existing perimeters, in order to at least align, or in the best scenario fully integrate social and environmental factors within activity and value creation processes?

Secondly, for a human resource and corporate culture, how to translate a strategic redefinition and purpose into work practices and narrative, through policies, resource management and training for instance?

In Part I (Chapter 1 to 3) we linked utility-centered benefit corporation models to utility accounting as a facilitation process for decision-making. We hypothesize that a utility-oriented management vision was most of the time operated through utility accounting formats, and that those formats were often adapted by corporations from existing financial accounting formats. In Part II (Chapter 5 and 6) we further hypothesized that data management played an essential role in managing operational information and supporting (or influencing) decision-making, in alignment with operational processes. The dual and integrated use of data management systems and accounting systems is often key to supporting decision-making – however, inheriting identity, belonging, organizing and learning strategic paradoxes, the activity visibility and performance assessment processes equally inherit the paradox of “purpose and profit”, meaning maintaining and increasing operational efficiency while integrating new social and environmental parameters as potential performance factors. This series of organizational paradoxes in a context of strategic and operational redefinition and rework created the ground to create a Social Profit & Loss approach, and find a way to access, translate and manage social data throughout strategic and operational stages. In that way, and mobilizing this perspective, we hypothesize that the SP&L approach is the result of a series of organizational paradoxes, and is aimed to clarify a series of perceived trade-offs. Inheriting those strategic and operational paradoxes, the SP&L essentially constitutes an access, translation and control tool for corporate redefinition.

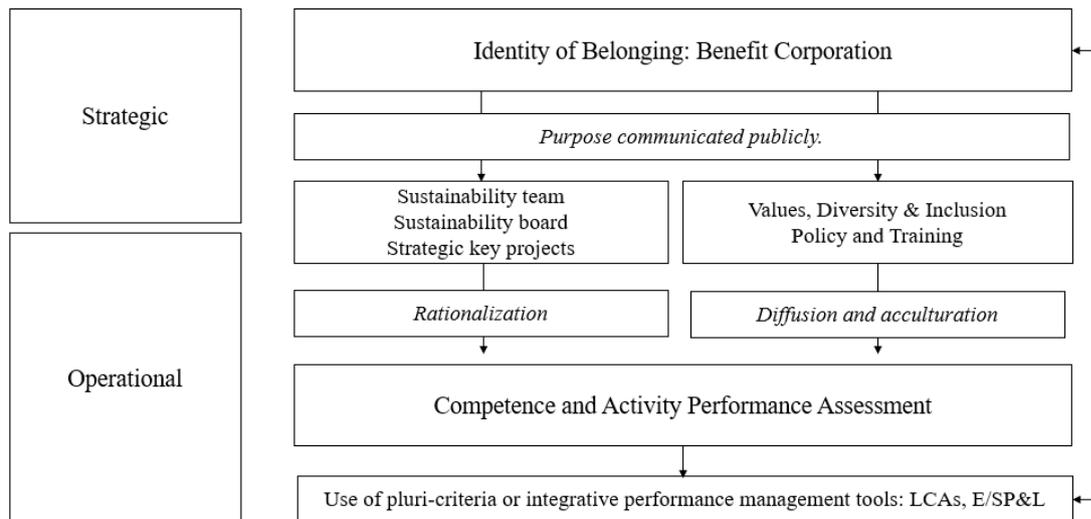


Figure 87: Interpretation in situ of Smith and Lewis' (2011) organizational paradoxes, highlighting the place performance management tools hold in the process

14.2 The ideation, development and implementation of the SP&L, from a genealogical perspective

We previously hypothesized that in order to clarify, and perhaps partially resolve, perceived managerial paradoxes, the very first paradox that needs to be clarified is the “Identity or Belonging” paradox, through a strategic definition of what the organization is (for instance, clarifying a purpose through the process of becoming a benefit organization). The clarification or redefinition then might inform and clarify both organizing and learning paradoxes, for both operations management and human resources management.

Mobilizing Ghaffari's (2013) work on a genealogical approach to management tools, we will therefore first focus on the standard creation stage for the SP&L (*see*, figure 88, below), before focusing on a three-stages genealogical approach (*see*, figure 89, below).

Focusing on standard creation for management tools, means for Ghaffari (2013) to analyze “the tool being built, and the main concepts and principles behind its creation”. Ghaffari (2013) associates three stages to standard creation: first (1) a selection of a social reality or context problematization, or in other words the social reality which enabled the creation and development of the tool, secondly (2) the analysis of the translation mechanisms enabling practices to be translated into performance, and thirdly (3) the analysis of the mobilization and diffusion processes, or in other words the clarification of the networks enabling the generalization of new measurement conventions.

In the case of the SP&L, we hypothesize that the contextual problematization has been the formulation of three main questions within an organization in redefinition to become a benefit corporation. First, a question that we can call “the access question”: how to collect and measure social practices throughout value chains? Secondly, a set of questions that we can call “the translation questions”: how to value social impact, and how to effectively invest our resources in positive social impact? Thirdly, a question that we can call “the management and control question”: how to consider and manage strategically and operationally social and environmental impacts together? The SP&L, as management tool is the result of this tryptic of problematizations in a strategic redefinition context for a fashion corporation. As a pragmatic answer, the SP&L seeks to help collect (access), evaluate (translate) and visualize social data on positive practices all throughout value chains, while insuring that social data is integrated within (a) existing data frameworks and (b) performance and resource allocation strategic frameworks.

The next step is to analyze how the SP&L came to formulate and propose a solution for translating social practices into performance factors to be computed and analyzed operationally and strategically. The SP&L complements existing performance assessment, including social auditing which evaluates social compliance and practices associated with risk, and the EP&L

which provides an overview of environmental performance per activity, choice of supplier, and of material. The SP&L as a management tool has three main technical features, first it accesses practices information through the use of a self-assessment, verified by a third party, entirely quantified in order to then facilitate data computation. The second technical feature is an evaluation process which enables the translation of quantified social data regarding potentially positive impact in performance data, using a scale ranging to 0 (no positive impact) to 5 (best practice), mobilizing and adapting existing international standards. Each practice and impact category is being attributed a performance score, in order to enable and facilitate both macro (performance overall, performance categories) and micro-analysis (performance linked to singular social practices). The last feature is a translation in visual insights through the use of a dashboarding tool to guide operational and strategic decision-making.

The third step is the analysis of the networks enabling the generalization of new measurement conventions, of the networks and mechanisms of standard diffusion. In terms of initial network, the SP&L was first and foremost a collaboration between the Conservatoire des Arts et Métiers (LIRSA), the Institut Français de la Mode (Chaire Sustainability IFM-Kering) and the fashion brand Chloé. The tool was reviewed at two different stages (initial, and experimental) by an external consulting firm, and two industry consultations were coordinated: one by the French Fédération Haute Couture et de la Mode (FHCM) and another one was facilitated through Textile Exchange for non-French and mostly US-based brands. The tool was communicated upon in three ways: first, in 2021 and 2022, the brand issues specific and targeted press releases, following which about twenty press articles were published in fashion-oriented press sources (WWD, Business of Fashion and Vogue Business for instance). Secondly it was the object of a publication on March 2023 on the e-commerce site of the brand, and on the LinkedIn page of the brand, with both the methodology and the deployment formats made available for consultation and for download. Thirdly the advancement of the methodology was documented

upon through the brand’s sustainability-related reporting published on their e-commerce site. In that way, we find that the diffusion effort for the SP&L was oriented towards both the fashion industry, or networks of expertise regarding social impact (academics, B Lab, World Fair Trade Organization, Doughnut Economic Action Lab, other brands actively working on social impact), with a public mostly in Europe or in the United States.

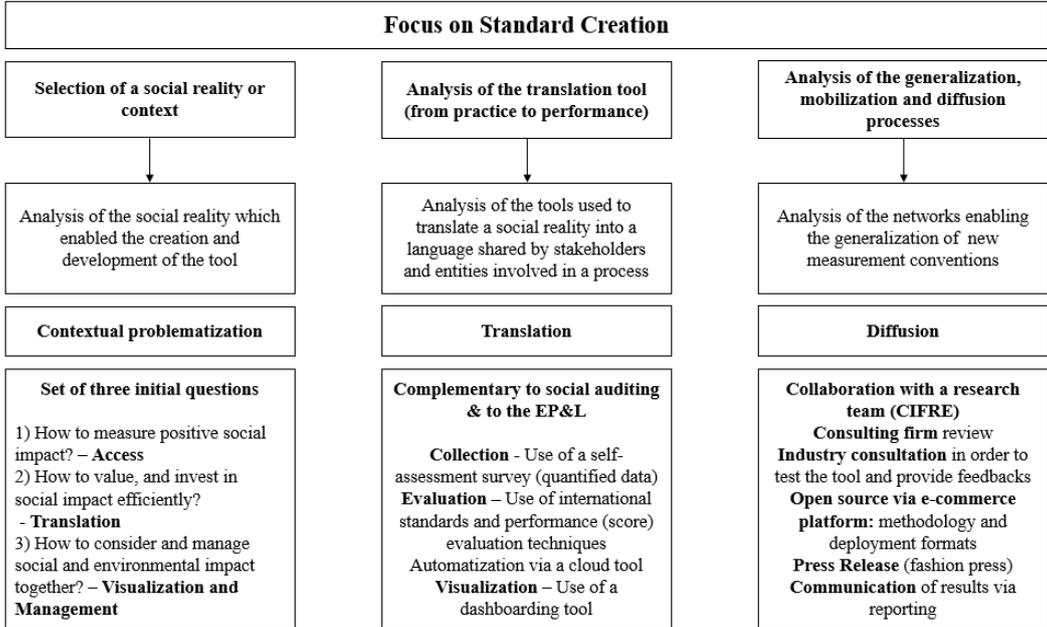


Figure 88: standard creation in three focuses, derived from Ghaffari (2013)

Beyond standard creation and this initial analysis, we focus on three stages to map out the genealogy of the tool, using the three steps identified by Ghaffari (2013). We propose to analyze (1) implementation scope and (2) eco-systems (stakeholders) involved at each stage. When it comes to the first stage (standard creation), we previously identified four main rationales guiding the creation of new measurable performance factors (a): the definition of a corporation as a benefit corporation, the aim to measure and strategically integrate positive social impact, the aim to be able to compare and report on positive social impact, and the capacity to strategically allocate resources. The stakeholders (b) or strategic ecosystem behind

those rationales was a direct dynamic coming from the brand CEO, the creation over two years of a Sustainability team and of a Sustainability Advisory Board, as well as an active participation within the French B Lab Ecosystem.

The industrial rationalization stage for the SP&L can be assessed first in terms of progressive implementation scope: the tool was tested within two activity segments (ready-to-wear and shoes) for final assembly suppliers, and for a full product line (data collection from raw material extraction suppliers to final assembly suppliers) of products in the context of a traceability system implementation. In terms of ecosystem, the tool was deployed in coordination with the production, industrialization, and social compliance teams when it came to contacting suppliers and managing data collection processes. Further, the SP&L tool was implemented with the IT team when it came to adapting and integrating the SP&L processes within existing data processes (*see*, figure, 90).

When it comes to use, we can separate the full use potential (coming back to the management tool as an actualized or unactualized potential), and the current implementation of the SP&L within Chloé ecosystem. We find the full use scope of the SP&L would include four types of capacities: resource allocation optimization, supplier monitoring and selection, product eco-conception and advanced performance analysis. In the current ecosystem and following the first implementation tests, the current use of the SP&L is centered around supplier performance monitoring and supplier selection for specific projects.

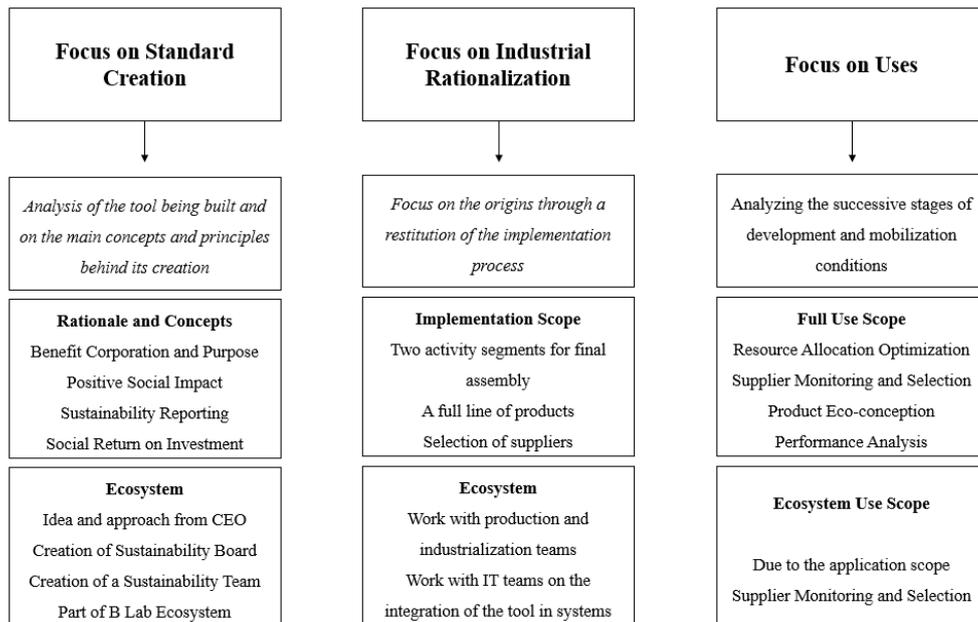


Figure 89: three main analytical frameworks, derived from Ghaffari (2013)

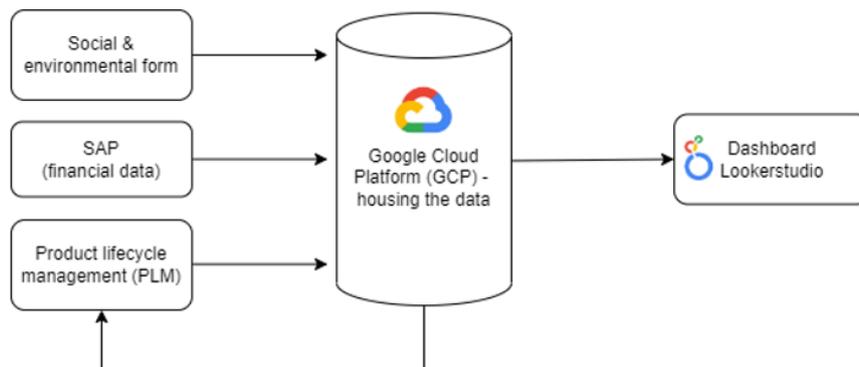


Figure 90: Process and implementation of the SP&L within data management systems

14.3 The SP&L within its Ecosystem: stakeholder and power balance analysis

After addressing the strategic and operational genealogy of the tool in (A) and (B), we focus on addressing the SP&L within a brand's eco-system, maximizing the benefit for all stakeholders through the production and marketing of fashion goods. In order to do so, we mobilize our previous adaption of Kaufmann's (2019) data intelligence cognitive system, to which we previously proposed to attach a stakeholder analysis and visualization in order to reflect benefit corporation's goals and strategic definition (*see*, figure 91, below).

In the case of the implementation and deployment of the SP&L, we find that aside from operations, controlling the process from the initial business environment and data collection to the informed marketing of products through the use of the SP&L insights, there only a partial coverage of stakeholders involved in the process. Due to the nature of the tool, value chain partners and workers are directly involved at two stages of the process: data collection, and data effectuation in the case where insights from the SP&L are shared with value chain partners, and in the case where practices are monitored over time directly with value chain partners. Further, depending on the diffusion and communication strategy, through the offer new business products (eco-conception or features of the products informed through the use of the SP&L as a management tool), the marketing of new products can involve and affect stakeholders such as Society and Consumers if SP&L-related data is systematically and comprehensively communicated upon.

Analyzing the SP&L as a management tool from a stakeholder's effect perspective, we find that stakeholders are only partially engaged in each stage, as the control mechanisms are effectively centralized through operations, via operational processes, and aligned data management processes. The use and implementation of the SP&L, by (1) collecting data regarding a series of stakeholders, in connection with a series of stakeholders and (2) being part of an open-source

and communication-driven effort enables to systematic consideration of a wider range of stakeholders throughout the strategic and operational process, however, the SP&L as management tool by itself does not resolve the question of power imbalance, or does not addresses directly the question of value distribution amongst stakeholders.

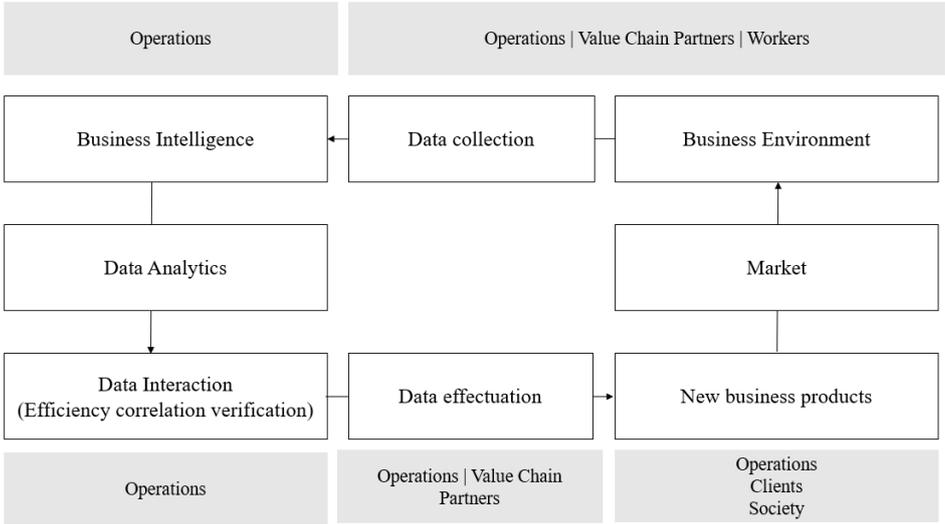


Figure 91: adaptation of Kaufmann’s data intelligence cognitive system, with a stakeholder focus

14.4 The dual nature of the SP&L: as a performance approach and as a data and activity control management tool

In the first part of this sub chapter, we found that the SP&L as a management tool and as an approach is derivative from a series of organizational paradoxes, and was created with the expectation of clarifying a series of perceived tradeoffs.

However, the SP&L was also created to be integrated within data computing management systems, which role is to enable and facilitate activity control and value creation from activity and resource allocation control (Kaufmann, 2019). In other words, as a methodology, the SP&L is meant to resolve the access and performance translation questions associated with the strategic integration of social impact within decision-making, focusing on the translation feature (Ghaffari, 2013). As a management tool, however, the SP&L is essentially an integrated

control tool and data management tool, within a data management system meant to control and optimize decision-making from an operational point of view (which can be translated to: rationalizing activity).

The SP&L, as an approach and as a management tool, is therefore dual in its nature. However, a risk in compartmentalizing the SP&L as an “either/or” (either an approach, or as a management tool solely) would be to denature the tool and to provoke a significant loss of efficiency in its application and use.

For instance, only considering the SP&L as a data management while not making the approach evolve with regulations, strategic goals and throughout a corporation’s redefinition process would be running the risk of making the evaluation performance standard obsolete, meaningless and to ineffectively inform decision-making. However, only considering the SP&L as an approach without using it as a data control and management mechanism within an existing operational data infrastructure would hypothetically cause the risk of compartmenting social data management from operational data management, making social data management a perpetual external performance factor, sometimes associated with operational performance but mostly considered as “other”.

We therefore hypothesize that in order to provide value, and to avoid any counter-productive effects on decision-making, the SP&L must also be considered both as an ever-evolving approach in order for the standards it may set to maintain relevancy for all stakeholders involved in an communication, and be systematically integrated as a control mechanism within data management frameworks in order to enable the strategic integration of social impacts within operations and strategic planning. We further suggest that, if the SP&L was created out of a series of organizational paradoxes and in the context of a strategic corporation redefinition process, the SP&L should be mobilized in alignment and as an intrinsic part of operational processes and data management processes in order to be able to provide value, as a

rationalization process, as a resource management process and as decision-making facilitation process.

Conclusion

Throughout our research work, and while conceptualizing, testing, and deploying Chloé's Social Profit & Loss approach and management tool, we aimed to address how a business management and data visualization tool could be developed and implemented to provide additional means of access, translation and resources management, facilitate decision-making, and overall help integrating social impact within strategic and operational frameworks.

We therefore explored how business management tools represent essential mechanisms for the accountability and control processes that are essential to CSR management, and can help integrating CSR within businesses.

We specifically studied the extent to which business management tools and data visualization tools could enable companies to link back impact and value creation. Further, by analyzing the SP&L intrinsic features, we explored the roles played by access (or measurement), translation (or evaluation), and management leverage (or visualization), in fostering efficiency, optimization and value creation when allocating resources.

Our research initial research questions were (1) centered the possibility to assess positive social effects (2) throughout value chains, product lifecycles and per supplier choice, and around the possibility to use a management tool such as the SP&L for (3) visualization in order to aid decision-making, (4) optimization and rationalization and (5) rethinking value, and value distribution. Our research work confirmed the initial hypothesis and led us further. In order to answer those initial questions, we mobilized insights from utilitarian philosophy, management tools sociology, critical perspectives on accounting, CSR strategic integration-centered

research, and data intelligence research – with a constant focus on the place given to stakeholders and stakeholder theory in each of these perspectives.

Becoming a benefit corporation creates a range of possibilities, from considering corporations as liable moral agents towards redefining efficiency and performance in an inclusive way. We found, that, as McIntyre (1992) stated, the practical world of business is haunted by unrecognized ghost, reiterative strategic questions explored within new ecosystems, through new management means. In that way, we explored the way benefit corporations seek to adapt, with a new vocabulary, a utility-based system in order to become utility-centered as well as efficiency-centered ecosystem within a same strategic breath.

We explored benefit corporations with an organizational paradoxes perspective from Smith and Lewis (2011) and modeled the intersection between identity, belonging, organizing, learning and performance paradoxes throughout strategic and operational processes – highlighting the role played by management tools and specifically by business management tools. We further highlighted the intrinsic link between utility thinking (strategic) and utility accounting systems (operational) in managing decision-making processes. We found that the main two evolutions from Bentham and Mill’s utilitarianism is first the translation of the strategic thought process from public to private environment, requisitioning the definition of value and value efficiency, and the possible use of data management tools and system to effectively compute information and guide decision-making through visualization propositions. We further found that this rationale places management tools not only as “indispensable mediators” (Chiapello, 2013) but also as value creation generators (Kaufmann, 2019) through their capacity to control, optimize, predict, and rationalize operational processes and associated decision-making.

Enhancing the crucial role of data management tools, we emphasized that the fashion industry is specifically marked by fragmented value chains and by a common focus on data control, through priorities given to traceability systems, circularity approaches and eco-conception, all

dependent on access and translation of social and environmental performances throughout value chains. We found this to be a crucial rationale in the recent development and adaptation of existing financial frameworks, such as P&L, by fashion brands, to integrate social and environmental performance factors and translate them into value indicators. While the adaptation and reinterpretation of frameworks is necessary, as neither data nor data management are neutral, but heavily situated, we found that focusing on rethinking accounting through translating social and environmental outcomes into value in an effort to solve the externality issue presents many dead ends.

We suggest that a more efficient approach could be (1) to shift the focus from outcome translate to full and inclusive cost control, and (2) to create a full control model for operations and activity, which we presented in the form of a schematization. We believe that the use of a cost-control and full control model, integrated and aligned on current big data management efforts, could help strategically integrating CSR in order to outgrow the “trade-off” or “triple bottom line” line of thinking.

We further suggest that a tryptic (1) inclusive and systematic data collection and computing, (2) performance translation and visualization and (3) clarification within inclusive resource allocation formats could greatly help integrating social and environmental factors within every stage of strategic and environmental decision-making.

However, we also found throughout our research process a lack of focus and integration of a stakeholder approach, either in strategic formats, or in data management systems. The absence of strategic representation of stakeholders in both performance frameworks and data management systems is a true limit to CSR strategic integration, as it makes the stakeholder approach both invisible and unmanageable. We therefore suggest, and created for explanatory models for, integrating stakeholders in data collection and computation processes in order to systematically and strategically discuss (1) performance and (2) value distribution and

redistribution for each stakeholder, and with each stakeholder in order to prevent further power and control imbalance. In that way, we recommend to continue discussing the importance of value distribution and inclusivity within strategic and data frameworks in order to further integrate CSR within processes, business models and decision-making formats.

Lastly, by developing, integrating and open sourcing a Social Profit and Loss methodology and management tool for the fashion industry, we were able to test our hypothesis and findings throughout our research process, as well as to highlight the importance of evolving from a defensive CSR (risk mitigation) towards a full control model, including the assessment of positive social performance.

In full use, the SP&L approach, in alignment with strategic redefinition and fully integrated within data processes and operational processes, with insights highlighted within resource allocation models for each stakeholder, could represent a new step towards inclusive value creation and distribution amongst stakeholder –showcasing CSR as it is: an intrinsic part of activity and operations.

However, the present research represents only a perspective, a first proposition and a small fragment of the research methodologies, technologies and industrial conversations needed to create value chains with full visibility and traceability, to implement circular strategies, optimize product conceptions from both social and environmental perspectives - and fully being able to account for and thus being responsible for social practices throughout value chains.

Further work is needed to not only account for direct and long-term changes due to the implementation of new integrated management and accounting solutions, but also to observe the effect of their implementation within operations, and use within decision-making processes.

We suggest that future should specifically focus on the way stakeholder approaches are integrated, or are to be integrated, within integrated data management, operational processes and decision-making processes.

Bibliography

Aguinis, H, and Glavas, A, 2012, What We Know and Don't Know About Corporate Social Responsibility: A Review and Research Agenda, *Journal of Management*, Volume 38, Issue 4, <https://doi.org/10.1177/014920631143607>

Aguinis, H, and Glavas, A, 2015, *Embedded Versus Peripheral Corporate Social Responsibility: Psychological Foundations*, *Industrial and Organizational Psychology*, published online by Cambridge University Press

Ahlemann, F, Legner, C and Lux, J, 2021, "A resource-based perspective of value generation through enterprise architecture management," *Information & Management*, vol. 58, no. 1, pp. 1–17.

Akrich M., Callon M., Latour B, 2006, *Sociologie de la traduction : textes fondateurs*, Paris, Presses des Mines. DOI : 10.4000/books.pressesmines.1181

André, R, 2012, Assessing the Accountability of the Benefit Corporation: Will This New Gray Sector Organization Enhance Corporate Social Responsibility?. *J Bus Ethics* 110, 133–150 (2012). <https://doi.org/10.1007/s10551-012-1254-1>

Ardoino, J, 1980, *Education et relations : introduction à une analyse plurielle des situations éducatives*. Paris : Gauthier-Villars : Unesco.

Athanasopoulou and Selsky, 2016, Chapter 4: the social context in CSR research: a contextualist approach with critical applications, *Research Handbook on Corporate Social Responsibility in Context*, Business 2016, <https://doi.org/10.4337/9781783474806.00012->

Avenier, M J, 2018, La stratégie "chemin faisant » revisitée 20 ans après, in N. Fabbe-Costes et L. Gialdini (coord), *Stratégie organisationnelle par la dialogue*, *Economica*, p43-52.

Battilana, J. & Dorado, S. 2010, Building sustainable hybrid organizations: the case of commercial microfinance organizations, *Academy of Management Journal*

Bedin, V, 2013, La recherche-intervention en éducation et formation : une nouvelle forme de conduite et d'accompagnement du changement. In V. Bedin (Dir.) *Conduite et accompagnement du changement*. Contribution des sciences de l'éducation. Paris : L'Harmattan.

Benabou R, Tirole J, 2010, Individual and Corporate Social Responsibility, *Economica*, Vol. 77, No. 305, 2010, pp. 1-19

Bentham, J, 1789, *An Introduction to the Principles of Morals and Legislation.*, Oxford: Clarendon Press, 1907.

Bentham, J, 1832, *Introduction to the Principles of Morals and Legislation*, Chapter 4 (Felicific calculus)

Berthelot, M, 1996, *Les vertus de l'incertitude*. Paris : PUF. DOI : 10.3917/puf.berth.2004.01

Chiapello, E, Gilbert P, 2013, *Sociologie des outils de gestion*, Introduction à l'analyse sociale de l'instrumentalisation de gestion, Repères, ed. La Découverte

Bereskin and Hsu, 2014, Corporate Philanthropy, Research Networks, and Collaborative Innovation, *Financial Management*, Volume 45, Issue 1, 175-206, <https://doi.org/10.1111/fima.12078>

- Bereskin and Hsu, 2016, Corporate Philanthropy and Innovation: The Case of the Pharmaceutical Industry, *Journal of Applied Corporate Finance*, Volume 28, Issue 2, 80-86, <https://doi.org/10.1111/jacf.12179>
- Beusch, P et al, 2022, Management control for sustainability : towards integrated systems, *Management Accounting Research*
- Bigoni, M, Mohammed, S, 2023, Critique is unsustainable: a polemic, *Critical Perspectives on Accounting*, January 2023, 102555
- Bocquet, R., Le Bas, C., Mothe, C., & Poussing, N, 2017, CSR, innovation, and firm performance in sluggish growth contexts: A firm-level empirical analysis. *Journal of Business Ethics*, 146(1), 241–254.
- Boltanski L., Thévenot L, 1991, *De la justification : les économies de la grandeur*, Paris, Gallimard.
- Bosch-Badia M.T, Montllor-Serrats J, Tarrazon-Rondon M., 2013, Corporate Social Responsibility from Friedman to Porter and Kramer, *Theoretical Economics Letters*, Vol.3 No.3A
- Both A, 2006, « Le journal interne d’entreprise. Ethnographie d’une mission impossible ? », *Ethnologie française*, vol. 36, n° 1, pp. 45-54.
- Bourguignon, A, 2005, Management Accounting and Value Creation: the profit and loss of reification, *Critical Perspectives on Accounting*, Volume 16, Issue 4, May 2005, pages 353-389
- Boussard V, 2001, « Quand les règles s’incarnent. L’exemple des indicateurs prégnants », *Sociologie du travail*, vol. 43, n° 4, pp. 533-551. DOI : 10.1016/S0038-0296(01)01179-7
- Brulhart, F et al, 2018, Management des paradoxes, Compétences, performances et outils de gestion in *Revue Française de Gestion*, 2018/1 (N°270), pages 65-69
- Bryer, A.R, 2014, Conscious practices and purposive action: a qualitative study of accounting and social change, *Critical Perspectives on Accounting*, Volume 25, Issue 2, Pages 93-103
- Buck, P, 1982, *People Who Counted: Political Arithmetic in the Eighteenth Century*, Isis
- Cameron, Kim S, 1986, “Effectiveness as Paradox: Consensus and Conflict in Conceptions of Organizational Effectiveness.”
- Carnegie, A, 1906, *The Gospel of Wealth*, *The North American Review*, Vol.183, N°599, 526-537 (12 pages)
- Charlier, E., Dejean, K. & Donnay, J, 2004, Nouvelles postures de travail du chercheur en éducation : analyse d’une intervention. In G. Pelletier (Ed.), *Accompagner les réformes et les innovations en éducation. Consultance, recherches et formation*. (125-143). Paris : L’Harmattan.
- Chatterji, A, Durand, R, Levine, D, Touboul, S, 2015, Do ratings of firms converge? Implications for managers, investors and strategy researchers, *Strategic Management Journal*, Volume 37, Issue 8, p.1597-1614
- Chen et al, 2012, *Business intelligence and analytics: from big data to big impact MIS Q.* (2012)
- Chen, P, 2020, Big data management in healthcare: adoption challenges and implications, *International Journal of Information Management*, Volume 53, August 2020, 102078
- Chiapello E., Gilbert C, 2012, « Les outils de gestion : producteurs ou régulateurs de la violence psychique au travail », *Le travail humain*, vol. 75, n° 1, pp. 1-18. DOI : 10.3917/th.751.0001

Chiapello, E, Gilbert, P, 2013, Sociologie des outils de gestion, Introduction à l'analyse sociale de l'instrumentation de gestion, La Découverte, collection Grands Repères, 294 pages

Choi TM , 2020, Supply chain financing using blockchain: impacts on supply chains selling fashionable products. *Ann Oper Res* 1–23

Chwastiak, M, 2001, Taming the untamable: planning, programming and budgeting and the normalization of war”, *Acc Organ Soc*.

Chwastiak, M, 2006, Rationality, performance measures and representation of reality: planning, programming and budgeting and the Vietnam War, *Critical Perspectives on Accounting*, Volume 17, Issue 1, Pages 29-55.

Čiarnienė, R, Vienažindienė, M, 2014. Agility and responsiveness managing fashion supply chain. *Procedia-Social and Behavioral Sciences* 150: 1012–19.

Cline Cohen, P, 1982, Calculating People: the Spread of Numeracy in Early America

Clot, Y, 2009, *Soigner le travail*. Toulouse : ERES.

Coase, R. 1960, The Problem of Social Cost, 3 *Journal of Law and Economics*, pp1-44.

Colucci, M, et al, 2020, An empirical investigation of the drivers of CSR talk and walk in the fashion industry, *J. Clean. Prod*.

Comité Stratégique de Filière Mode & Luxe, 2019, Avenant au contrat stratégique de Filière Mode & Luxe 2021-2022, Paris, 1-31.

Corell, M, 2019, Ethical Dimensions of Visualization Research, Conference on Human Factors in Computing Systems, paper number 188, pages 1-13, <https://doi.org/10.1145/3290605.3300418>

Cousins, J, Sikka, P, 1993, Accounting for Change: Facilitating Power and Accountability, *Critical Perspectives on Accounting*, Volume 4, Issue 1, March 1993, Pages 53-72

Crozier, M, Friedberg, E, 1977, *L'acteur et le système* (éditions du seuil)

Crisan, A, 2022, The Importance of Data Visualization in Combating a Pandemic, *American Journal of Public Health* 112, no. 6 (June 1, 2022): pp. 893-895, <https://doi.org/10.2105/AJPH.2022.306857>

Cui, Y, 2020, Manufacturing big data ecosystem: a systematic literature review, *Robotics and Computer-Integrated Manufacturing*, Volume 62, April 2020, 101861, <https://doi.org/10.1016/j.rcim.2019.101861>

Ellis, S. et al. 2019, Social capital: Measuring the community impact of corporate spending, *Deloitte Review*, no. 24.

Davenport, T.H. Analytics 3.0. *Harvard Business Review*, 2013, 91, 65–72

Deegan, C, 2013, The accountant will have a central role in saving the planet...really? A reflection on “green accounting” and green eyeshades twenty years later, *Critical Perspectives on Accounting*, Volume 24, Issue 6, Pages 448-458

- Deakin, S, 2017, Tony Lawson's theory of the corporation: Towards a social ontology of law. *Cambridge Journal of Economics*, 41(5), 1505–1523. <https://doi.org/10.1093/cje/bex044>.
- De Ketele, J.-M. & Roegiers, X, 1991, *Méthodologie du recueil d'informations*. Bruxelles : De Boeck Université.
- Deleuze, G, 1981, « Cours sur le Cinéma, Cours Vincennes-St Denis, 10-11-1981 »
- Demchenko, Y.; Grosso, P.; de Laat, C.; Membrey, P, 2013, Addressing big data issues in Scientific Data Infrastructure. In *Proceedings of the 2013 International Conference on Collaboration Technologies and Systems (CTS)*, San Diego, CA, USA, 20–24 May 2013; pp. 48–55.
- DesJardine, M, Marti, E, Durand, R, 2021, Why Activists Hedge Funds Target Socially Responsible Firms: The Reaction Costs of Signaling Corporate Social Responsibility, *Academy of Management Journal*, Vol.64, N°3, <https://doi.org/10.5465/amj.2019.0238>
- Desrosières A, 1993, *La politique des grands nombres. Histoire de la raison statistique*, Paris, La Découverte, [2000]. DOI : 10.3917/dec.desro.2010.01
- Di Gregorio, D, Musteen, M, 2009, Offshore outsourcing as a source of international competitiveness for SMEs. *Journal of International Business Studies* 40: 969–88
- Durand, R, 2006, Créativité organisationnelle, *Revue Française de Gestion*, 2006/2 (n°161), p91-94
- Durand, R, Paugam, L, Stolowy, H, 2019, Do investors actually value sustainability indices? Replication, development, and new evidence on CSR visibility, *Strategic Management Journal*, Volume 40, Issue 9, p. 1471-1490
- European Parliament, 2021, Corporate due diligence and corporate accountability. European Parliament resolution of 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate accountability, 2020/2129 (INL), 1-40.
- European Commission, 2021, Sustainable Product Initiative
- Fashion for Good, 2019, Tracing organic cotton from farm to consumer: key findings from a pioneering pilot using on-product markers and blockchain solutions, Amsterdam, 1-18; United Nations Economic Commission for Europe (UNECE) (2022). Recommendation n°46: Enhancing traceability and transparency of sustainable value chains in the garment and footwear sector, ECE/TRADE/463, United Nations Geneva, 1-67.
- Flamand N, 2002, *Une anthropologie des managers*, Paris, Presses universitaires de France.
- Foucault, 1979, M, *On Governmentality*, I&C
- Freeman, R.E, 1984, *Strategic Management: A Stakeholder Approach*
- Freeman R.E, Harrison J.S, Wicks A.C, Parmar B.L and de Colle S, 2010, *Stakeholder Theory*, Cambridge University Press, Cambridge
- Freudenburg, W. 1986, Social Impact Assessment, *Annual Review of Sociology* vol. 12, pp 451-478
- Friedman, M, 1970 "The Social Responsibility of Business Is to Increase Its Profits," *The New York Times Magazine*, 13 September 1970
- Gadrey J, 1996, *Services, la productivité en question*, Paris, Desclée de Brouwer.

- Galetsi, P, 2019, Values, challenges and future directions of big data analytics in healthcare: A systematic review, *Social Science & Medecine*, Volume 241, November 2019, 112533, <https://doi.org/10.1016/j.socscimed.2019.112533>
- Garcia-Torres, S., Albareda, L., Rey-Garcia, M., & Seuring, S, 2019, Traceability for sustainability – literature review and conceptual framework. *Supply Chain Management: An International Journal*, 24(1), 85-106.
- Garcia-Torres, S., Rey-Garcia, M., Sáenz, J., & Seuring, Sn, 2021, Traceability and transparency for sustainable fashion-apparel supply chains. *Journal of Fashion Marketing and Management: An International Journal*, 1361-2026.
- Ghaffari, S, Misset, S, Pavis, F, Ponnet, M, 2013, Généalogies des outils de gestion. Introduction, *Travail et Emploi*, DOI : <https://doi.org/10.4000/travailemploi.5889>
- Girin, J, 1990, Analyse empirique des situations de gestion : éléments de théorie et de méthode. in A.C. Martinet (Dir) *Epistémologies et Sciences de gestion*. Paris: Economica.
- Glaserfeld E. von (Eds.) *Epistemology and education* (pp. 1–24), Athens, GA, Follow Through Publications
- Gray, R, Milne, M.J, 2015, It's not what you do, it's the way that you do it? Of method and madness, *Critical Perspectives on Accounting*, Volume 32, Pages 51-66
- Grimes, M. 2010, Strategic sensemaking within funding relationships: The effects of performance measurement on organizational identity in the social sector. *Entrepreneurship Theory and Practice* vol. 34, no. 4, pp. 763–783.
- Gruebner et al, 2017, Big data opportunities for social behavioral and mental health research *Soc. Sci. Med.*
- Halme, M, Laurila, J, 2009, Philanthropy, Integration or Innovation? Exploring the Financial and Societal Outcomes of Different Types of Corporate Responsibility, *Journal of Business Ethics*, 84, 325-339 (2009)
- Hatchuel, A & Molet, H, 1986, Rational Modelling in Understanding Human Decision Making: about two case studies. *European Journal of Operations Research*, 24, 178-186.
- Hatchuel, A, 2000, Research, Intervention and the production of knowledge. In Learn Group (Eds), *Cow Up a Tree: Knowing and Learning for change in Agriculture* (55-68). Paris : Inra Edition, coll. Science Update.
- Hume, D. 2000. (First published in 1740.) *A treatise of human nature*. (Edited by D. F. Norton & M. J. Norton.) New York: Oxford University Press
- Husted, B. W. and J. de Jesus Salazar: 2006, 'Taking Friedman Seriously: Maximizing Profits and Social Performance', *Journal of Management Studies* 43, 75–91.
- Husted, B. and Allen, D. B, 2007, Strategic Corporate Social Responsibility and Value Creation among Large Firms, Lessons from the Spanish Experience, *Long Range Planning*, Vol. 40, No. 6, pp. 594-610
- Hutchins, G, Storm, L, 2019, *Regenerative Leadership, the DNA of life-affirming 21st century organizations*, Wordzworth Publishing

- Ivanov, D, 2018. Revealing interfaces of supply chain resilience and sustainability: A simulation study. *International Journal of Production Research* 56: 3507–23.
- Ivanov, D, 2021, A digital supply chain twin for managing the disruption risks and resilience in the era of Industry 4.0, *Production Planning & Control*, Volume 32, 2021, Issue 9
- Jin, R, 2022, Commentary on “Visualization in Operations Management Research”. *INFORMS Journal on Data Science*, 1(2):194-195. <https://doi.org/10.1287/ijds.2022.0014>
- Jones, T. M.: 1995, ‘Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics’, *Academy of Management Review* 20, 404–437.
- Jones, T.M, Felps, W, Bigley G.A, 2007, Ethical Theory and Stakeholder-related decisions: the role of stakeholder culture, *Academy of Management Review*, 2007, Vol. 32, No. 1, 137–155.
- Kaufmann, M, 2019, Big Data Management Canvas: A Reference Model for Value Creation from Data, *Big Data Cogn. Comput.* 2019, 3(1), 19; <https://doi.org/10.3390/bdcc3010019>
- Kapp, W. 1969, Environmental Disruption and Social Costs: A Challenge to Economics, *Kyklos*, 23: pp 833-848.
- Keynes, John Maynard, 1883-1946. *The General Theory of Employment, Interest and Money*. London :Macmillan, 1936
- Kozlowski A et al. 2019, Tools for Sustainable Fashion Design: An Analysis of Their Fitness for Purpose
- Lechler, S, 2019, Real-time data processing in supply chain management: revealing the uncertainty dilemma, *International Journal of Physical Distribution & Logistics Management*, ISSN:0960-0035
- Lefevre, V, 2012, Integrating Corporate Social Responsibility at the Start-up Level: Constraint or Catalyst for Opportunity Identification?. *International Business Research*, 2012, 5 (7), pp.17-27.
- Leonelli, S, *Data Journeys in the Sciences*, 2020, Open Access, Springer Nature
- Levillain K, Segrestin B, Hatchuel A, 2014, Repenser les finalités de l’entreprise, La contribution des sciences de gestion dans un monde post-hégélien, in *Revue Française de Gestion*, 2014/8 (N° 245)
- Lewis, M. W “Exploring Paradox: Toward a More Comprehensive Guide.” *Academy of Management Review* 25.4 (2000): 760–776.
- Li, L, Chi, R, Liu, Y, 2022, The Data Visualization Analysis in Global Supply Chain Resilience Research During 2012–2022, *International Conference on Services Computing*, Part of the Lecture Notes in Computer Science book series (LNCS, volume 13738)
- Lozano, R, 2011, Addressing Stakeholders and Better Contributing to Sustainability through Game Theory, *The Journal of Corporate Citizenship*, pp. 45-62 (18 pages)
- Man, M, Gadau, L, 2010 *The Profit and Loss Account in different approaches, advantages and disadvantages*, *Universitatis Apulensis Series Oeconomica*, 12(1)
- Maas, K. & Liket, K. 2011, Social Impact Measurement: classification of methods, *Environmental Management Accounting and Supply Chain Management* pp.171-202

- Martino, G, 2015, Risk identification map for a fashion retail supply chain. Paper presented at Summer School "Francesco Turco", Senigallia, Italy, September 11–13; pp. 208–16
- Maształerz, M, 2014 "Global Management Accounting Principles – emperor's new clothes?" *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, vol. 345, no. 5
- Maugeri S. (2003), « Une lecture pessimiste du processus de rationalisation. L'exemple des dispositifs de gestion logistique », in Boussard V., Maugeri S., *Du politique dans les organisations. Sociologies des dispositifs de gestion*, Paris, L'Harmattan, pp. 105-132.
- McIntyre, A, 1992, Utilitarianism and Cost-Benefit Analysis: an Essay on the Relevance of Moral Philosophy to Bureaucratic Theory, in *The Moral Dimensions of Public Policy Choice: Beyond the Market Paradigm*, published by John Martin Gillroy and Maurice L. Wade
- McKernan, J, McPhail, K, 2012, Accountability and Accounterability, Editorial, *Critical Perspectives on Accounting*, Volume 23, Issue 3, April 2012, Pages 177-182
- McWilliams and Siegel, 2011, Creating and Capturing Value: Strategic Corporate Social Responsibility, Resource-Based Theory, and Sustainable Competitive Advantage, Volume 37, Issue 5, <https://doi.org/10.1177/0149206310385696>
- Metzger J.-L., Cléach O, 2004, « Le télétravail des cadres : entre suractivité et apprentissage de nouvelles temporalités », *Sociologie du travail*, vol. 46, n° 4, pp. 433-450.
- Mill, John Stuart, 1843. *A System of Logic*, London: John W. Parker. —, 1859. *On Liberty*, London: Longman, Roberts & Green. —, 1861 [U]. *Utilitarianism*, Roger Crisp (ed.), Oxford: Oxford University Press, 1998.
- Morales, J, Sponem, S, 2017, You can too have a critical perspective! 25 years of critical perspectives on accounting, *Critical Perspectives on Accounting*, Volume 43, pages 149-166.
- Moretto, A, Macchion, L, 2022, Drivers, barriers and supply chain variables influencing the adoption of the blockchain to support traceability along fashion supply chains. *Oper Manag Res* 15, 1470–1489 (2022). <https://doi.org/10.1007/s12063-022-00262-y>
- Muller S, 2008, *À l'abattoir. Travail et relations professionnelles face au risque sanitaire*, Paris, éd. MSH.
- Mustafid, S, 2018, Supply chain agility information systems with key factors for fashion industry competitiveness. *International Journal of Agile Systems and Management* 11: 1–22.
- Norwood, NJ: Ablex, 1986, and Quinn, Robert E., and Kim S. Cameron, eds. *Paradox and Transformation: Toward a Theory of Change in Organization and Management*. Cambridge MA: Ballinger, 1988.
- Noya, A. 2015, OECD, Policy Brief on Social Impact Measurement for Social Enterprises
- OCDE, 2018, *OECD Due Diligence Guidance for Responsible Supply Chains in the Garment & Footwear Sector*, Editions OCDE, Paris, 1-192; United Nations Global Compact & BSR (2014). *A guide to traceability: A Practical Approach to Advance Sustainability in Global Supply Chains*, New-York, 1-45; United Nations Economic Commission for Europe (UNECE) (2021). *Sustainability Pledge*.
- Olsen, S. et al 2008, *Catalog of Approaches to Impact Measurement, Assessing social impact in private ventures*, version 1, pp 8-78

- Paik, H-Y, 2019, Analysis of Data Management in Blockchain-Based Systems: from architecture to governance, IEEE, Volume 7, 10.1109/ACCESS.2019.2961404
- Paton, E., Gallois, L., Breeden A, 2021, Fashion retailers face inquiry over suspected ties to forced labor in China. New York Times Edition.
- Philippe, D, Durand, D, 2009, Communication environnementale et réputation de l'organisation, dans Revue Française de Gestion, 2009/4 (n°193), p 45-63
- Phillips, R. A. 1997. Stakeholder theory and a principle of fairness. *Business Ethics Quarterly*, 7: 51–66.
- Phillips, R. A. 2003. Stakeholder legitimacy. *Business Ethics Quarterly*, 13: 24 – 41
- Pinto L, 1987, « Graphique et science d'entreprise », Actes de la recherche en sciences sociales, n° 69, pp. 93-97. DOI : 10.3406/arss.1987.2384
- Poole, M. S., & van de Ven, A. H, 1989 ,Using paradox to build management and organization theories. *Academy of Management Review*, 14(4), 562–578
- Porter, M. E., & Kramer, M. R, 2006, Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12),
- Porter, M.E, and Kramer, M. R, 2011, Creating Shared Value, *Harvard Business Review*, Vol.89, N°1, 2011, pp 2-17
- Preston, M. 2013, Measuring and managing total impact: a new language for business decisions, PwC Report
- Putnam, Linda L. “Contradictions and Paradoxes in Organizations.” In *Organization-Communication: Emerging Perspectives*. Edited by Lee Thayer, 151–167.
- Renouard C., 2010, Corporate Social Responsibility, Utilitarianism, and the Capabilities Approach, *Journal of Business Ethics*, DOI 10.1007/s10551-010-0536-8
- Richero, R., Ferrigno, S, 2019, A Background Analysis on Transparency and Traceability in the Garment Value Chain, final report Project No. 2016/378769, DAI Europe and Office for Economic Policy and Regional Development (EPRD), Apsley, Kielce, 1-53.
- Rose, N, 1991, Governing by numbers: Figuring out democracy, *Accounting, Organization and Society*, Volume 16, Issue 7, Pages 673-692
- Reynolds, G. et al. 2018, A Playbook for Designing Social Impact Measurement, *Stanford Social Innovation Review*
- Richero, R., Ferrigno, S, 2019, A Background Analysis on Transparency and Traceability in the Garment Value Chain, final report Project No. 2016/378769, DAI Europe and Office for Economic Policy and Regional Development (EPRD), Apsley, Kielce, 1-53.
- Sacconi, L, 2008, CSR as Contractarian Model of Multi-Stakeholder Corporate Governance and the Game-Theory of its Implementation, 75p, Department of public and supra-national law, University of Milan ; University of Trento - Department of Economics and Management, Sacconi, L, 2008, A Rawlsian View of CSR and the Game Theory of its Implementation (Part II): Fairness and Equilibrium

- Schlossberger, E, Dual-Investor Theory and the Case for Benefit Corporations, *Business & Professional Ethics Journal*, Vol. 35, No. 1, SPECIAL ISSUE ON BENEFIT CORPORATIONS (Spring 2016), pp. 51-72 (22 pages), published by Philosophy Documentation Center, JSTOR
- Segrestin D, 1997, « L'entreprise à l'épreuve des normes de marché – Les paradoxes des nouveaux standards de gestion dans l'industrie », *Revue française de sociologie*, vol. 38, n° 3, pp. 553-585.
- Segrestin, B, Levillain, K, Hatchuel, A, 2012, La révision du cadre légal de l'entreprise, in *Revue française de gestion* 2012/9-10 (N° 228-229), pages 185 à 200
- Sen, A.: 1990, 'Individual Freedom as a Social Commitment', *New York Review of Books* 37(10), 49–54
- Sen, A.: 1999, *Development as Freedom* (Knopf, New York)
- Sen, A.: 2004, 'Elements of a Theory of Human Rights', *Philosophy & Public Affairs* 32, 315–356.
- Singh and Dhir, 2019, Structured review using TCCM and bibliometric analysis of international cause-related marketing, social marketing, and innovation of the firm, *International Review on Public and Nonprofit Marketing*, 16, 335-347
- Sousa, M-J, 2019, Decision-Making based on Big Data Analytics for People Management in Healthcare Organizations, *Health Information Systems & Technologies*, in *Journal of Medical Systems*, 43, Article Number: 290 (2019)
- Stewart P., Durand J.-P., Lewchuk W., Yates C., Danford A. (2006), « Les ouvriers de Vauxhall face à la lean production », *Le mouvement social*, n° 217, pp. 33-52. DOI : 10.3917/lms.217.0033
- Stroehle, J, Murthy, S, 2018, Integrating Frameworks for Multi-Capital Accounting, Reporting and Valuation, White Paper, Said Business School, University of Oxford
- Sun S, Wang X, 2019, Promoting traceability for food supply chain with certification. *J Clean Prod* 217:658–665
- Sun, Y, Yu, G, Zeng, C, 2022, Research on Management Accounting Framework and Quantitative Correlation Based on Hall Three-Dimensional Structure, *Mathematicas, I Problems in Engineering*, vol. 2022, Article ID 8373596, 16 pages.
- Tang, Z, 2012, How Corporate Social Responsibility Engagement Strategy moderates the CSR-Financial Performance Relationship, *Journal of Management Studies*, Volume 49, Issue 7, p 1274-1303, <https://doi.org/10.1111/j.1467-6486.2012.01068.x>
- Terressac G. de, Bazet I, 2007, « Les TIC-TAC de la rationalisation : un travail d'organisation ? », in Terressac G. de, Bazet I., Rapp. L. (dir.), *La rationalisation dans les entreprises par les technologies coopératives*, Toulouse, Octarès, pp. 15-27.
- Thine S, 2007, « Redistribution des rôles dans l'urgence du déploiement de l'ERP. Un projet entre tutelle des consultants et prescription du marché », in Terressac G. de, Bazet I., Rapp. L. (dir.), *La rationalisation dans les entreprises par les technologies coopératives*, Toulouse, Octarès, pp. 95-105.
- Thornton, D, 2013, *Green Accounting and Green Eyeshades Twenty Years Later*
- Tinker, A, M, et al, 1982, *The normative origins of positive theories: ideology and accounting thought*, Acc. Org. Soc
- Tripathy, A, Eppinger, S,D, 2013, "Structuring work distribution for global product development organizations," *Production and Operations Management*, vol. 22, no. 6, pp. 1557–1575

- Vatin F. (dir.), 2009, *Évaluer et valoriser. Une sociologie économique de la mesure*, Toulouse, Presses universitaires du Mirail. DOI : 10.4000/books.pumi.7017
- Vilanova M, Lozano J, Arenas D, 2009, “Exploring the Nature of the Relationship between CSR and Competitiveness,” *Journal of Business Ethics*, Vol. 87, No. 1, 2009, pp. 57-69
- Villette M, 1976, « Psychosociologie d’entreprise et rééducation morale », *Actes de la recherche en sciences sociales*, vol. 2, n° 4, pp. 47-65. DOI : 10.3406/arss.1976.3465
- Visser, W, 2010, The age of responsibility CSR 2.0 and the new DNA of business. *Journal of Business Systems, Governance and Ethics*, 5(3), 7-22.
- Visser, W, 2016, Chapter 19: The future of CSR: towards transformative CSR, or CSR 2.0, *Research Handbook on Corporate Social Responsibility in Context*, Business 2016, 339-367, <https://doi.org/10.4337/9781783474806.00033>
- Vishwanathan et al, 2020, Strategic CSR: a concept building meta-analysis, *Journal of Management Studies*, Volume 57, Issue 2, p 314-350, <https://doi.org/10.1111/joms.12514>
- Willer, D., Lovaglia, M. J., & Markovsky, B. 1997. Power and influence: A theoretical bridge. *Social Forces*, 76: 571–603.
- Xiong Y, Lam HK, Kumar A, Ngai EW, Xiu C, Wang X , 2021, The mitigating role of blockchain-enabled supply chains during the COVID-19 pandemic.
- Yousfi & Loukil, 2021, Why should firms achieve strategic CSR?. Fatih Ayhan. *Local Governance and Regional Development: Current Perspectives*, Peter&Lang, 2021, ISBN 978-3-631-84201-0.
- Zerbini, F, 2017, CSR Initiatives as Market Signals: a Review and Research Agenda, *Journal of Business Ethics*, 146, 1-23 (2017)
- Zhu, W, Li, H, 2013, *CSR Based on Game Theory*, College of Management, Shanghai University of Engineering Science, Shanghai, China
- Zuca, M, Tinta, A, 2012, The Profit and Loss Account – Major Tool for the Analysis of the Company’s Performance, *Procedia, Social and Behavioral Sciences*, Volume 62, Pages 382-387

Annexes

Annex 1. Conference paper, The Centre for Sustainable Design at UCA, Epsom, 23rd International Conference: Accelerating Sustainability in Fashion, Clothing, Sportswear & Accessories, 2021, March 15th-21st

Title: The Impact Demonstration Challenge: a comparative literature review of social and sustainable impact measurement methods and tools for fashion businesses

Mathilde Asseman – PhD candidate Institut Français de la Mode, Conservatoire National des Arts et Métiers - LIRSA, CSR Project Manager at Chloé

Andrée-Anne Lemieux – Sustainability IFM-Kering Chaire Director

Philippe Durance – Conservatoire National des Arts et Métiers – LIRSA

Abstract

This research aims to analyze the existing research on sustainability and social impact-related measurement focusing on the fashion scope and using a comparative method. It aims to provide an analytical framework highlighting the potential use of the existing methodologies at each decision-making level. The environmental and social impact measurements were developed in a two-step approach. Social impact measurement tool development seems to be slowed down by the absence of universal standards, and by the lack of agreement around its definition and applications. More recently, tools that link back social and environmental impact have been developed to orient decision-making. Within the fashion industry, a search for more inclusive tools with a potential for better data communication led to the creation of the environmental profit & loss (EP&L), relying on monetary translation. This creates a dynamic for the development of future tools aiming at pricing social and environmental impacts.

Keywords: Social Impact, Environmental Impact, Sustainability, Fashion, Impact Measurement

Introduction

As consumers' expectations and preferences keep shifting towards more transparency, more sustainability and less negative social impacts when choosing a product within an extremely competitive field, there is a true opportunity and necessity for businesses to create products with demonstrated social and ecological benefits, and equal pressure to back up their narratives with coherent and holistic facts, metrics and numbers. Further, measuring social and sustainable impact means gaining access to precise and extensive data about the entirety of the value chain which proves to be a powerful tool directed towards strategic leadership in order to better inform business decisions and optimize investments and logistics. In the Playbook for designing social impact measurement (Reynolds and al., 2018), the use of data is deemed central to better decide where to put resources towards solving social and ecological issues, emphasizing that making social progress means using the right data to evaluate outcomes in order to separate correlation from causation. With this research, the goal is to investigate and analyze the existing research and findings on sustainability impact-related measurement and social impact-related measurement focusing on the fashion industry and using a comparative method associated with relevant case studies. The article aims to provide an analytical framework highlighting the potential use of the existing methodologies at each decision-making level.

1. Exploring the gaps

This research will start with a comparison of currently existing measurement tools and methodologies for environmental and social impact measurement, with an analysis of the gap in research, in methodologies and in experimental implementations.

1.1 Intrinsic links and differentiation between social impact measurement and environmental impact measurement

At first glance, the differentiation and gap created between environmental and social impact measurement can seem surprising and even artificial given the way social and environmental impacts are intrinsically linked in many ways. Social and environmental impacts are linked when considering externalities in the economic research field, and when it comes to international level contributions. The two terms are bound within sustainable development's

definition and goals: The United Nations' Sustainable Development Goals name both climate and communities-related categories within their seventeen goals. Two rationales may be linked to this phenomenon. Historically, the awareness regarding the potential of social impact measurement and assessment (SIA) appeared in the 1970s as a reaction to the research on environmental impact measurement or assessment (EIA) which started in the 1960s : according to Freudenburg(1986), the field of Social Impact Assessment emerged during the 1970s as a response to new environmental legislation and this logic of action-reaction may help explain the gap in definition, research, framework, strategies and applications when it comes to social and environmental measurement. Pragmatically, there is a huge difficulty in social impact measurement regarding the choice of appropriate instruments and indicators, the availability of the right kind of data, and the associated level of objectivity. Meanwhile, measuring environmental impact has been considered as science-based process with a high potential for standardized indicators and data, easier to implement in practice.

1.2 A definition process marked by its scope and its politicization

The process of defining social and environmental impact measurement emerged from practical economical reasoning: the measurement and evaluation of observed externalities or, in other words, the need to evaluate the consequences of an industrial or business activity which affects other parties without being reflected in market prices or without any compensation. Globalization, the process by which businesses and other organizations develop international influence or start operating on an international scale, has caused a segmentation in businesses value chains at an international scale.

The impact measurement process is hence being made more difficult by the international scope (including different levels of legislative or normative integration) and involvement of decision-makers from both the public and the private sector with different interests and chosen languages when it comes to social and environmental impact.

Definition as a very first step particularly constitutes an issue in the scope of social impact measurement: a consensus around the mere definition of social impact measurement is far from being agreed upon, leading to the development of a plurality of pragmatic approaches. Starting at the very beginning, the scope of social impact measuring was closely linked to decision-making processes and mechanisms, creating an additional challenge to the difficult task of standardized definition. Freudenburg(1986) explained the creation of a research field

surrounding social impact assessment as a reaction to emerging environmental legislation, making social impact assessment an “hybrid, a field of social science and a component of the policy-making process” with its main issue being “how best to incorporate scientific input in what will remain largely political decisions.” As defined by the OECD (Noya, 2015), measuring social impact means measuring the social value produced by organizations, including social value creation and social return. However, there is a lack of agreement surrounding the exact definition, and about the perspective, market and scale intended for the social impact programs, creating variations in a very hybrid space that induces many challenges ahead. The European Commission’s GECES (2014) directly counters the “one size fits all approach” to social impact measurement, deeming that “no single set of indicators can be divided top-down to measure social impact on all cases”. This non-existent cohesion surrounding social impact’s definition creates a crucial dissention in pragmatic approaches and strategies in measuring social externalities: either global approaches covering the spectrum of social impacts, or tailor-made approaches.

The definition of environmental impact measurement and the establishment of its indicators was a more straightforward process. The context of the first pictures of Earth taken from space and the rise of international awareness around air and water pollution issues created a dynamic for global cooperation as early as the 1960s. The creation of categories and indicators facilitated the establishment of a common language and the organization of international conferences around environmental impact starting in 1972 with the Stockholm Conference all the way to the 2015 Paris Agreement.

1.3 The emergence of social impact measurement-focused research

There is an increasing interest from researchers in focusing on the combination of economic and social impacts on market-based organizations. This emphasis is particularly evident in social enterprises and hybrid organizations which combine social missions with market approaches to solve global social problems (Battilana & Dorado, 2010). The market-based approaches that characterize a social entrepreneurial approach inherently involve measuring societal impact and social performance (Grimes, 2010; Miller & Wesley II, 2010). Despite this increased interest in the creation and measurement of social impact, measurement standards appear partial and approaches appear heterogeneous, with a focus on social entrepreneurship. The three streams of management research focus on corporate social responsibility (CSR), social entrepreneurship, and the search for BoP (Base / Bottom of the Pyramid) strategies, born

from the proposition that companies can exploit new market opportunities by selling products to low-income market segments in emerging economies to generate profits while reducing poverty. The focus is particularly on instrumental returns, individual, organizational, institutional backgrounds and on the political activity of companies. Business management-related research focuses on new market opportunities, new inclusive markets as well as the development of new business models. Some research work has been done to catalog social impact measurement initiatives, including a catalog of approaches of impact measurement by The Rockefeller Foundation (Olsen et al, 2008), and a classification of thirty contemporary social impact measurement methods by Maas and Liket (2011).

In that way, one can observe that the vast majority of academic research on social impact measurement has been carried out to clarify and strengthen the action of philanthropic actors, social enterprises and public actors' initiatives in relation to positive social impact. Such studies tend focus on both for-profit and non-profit organizations, but often exclude businesses willing to create social impact programs and to monitor their social impact.

From a corporate perspective, the main managerial challenge with CSR is how to treat it as an investment (Husted and Allen, 2007). The strategic link between CSR and value creation has been explored in relation with expenses regarding environmental impact by M. Porter (Porter and Kramer, 2011). Porter forms a distinction between responsive CSR (philanthropy, donation), and strategic CSR, which creates an opportunity for shared value instead of charity. Instead of simply redirecting profits to society, with strategic CSR, corporations identify which social issues they can contribute to solve while creating value for their shareholders and improving their competitive environment.

1.4 The development of practical tools and experimental methodologies

Despite the challenges, a plurality of investigative methodologies has been developed including impact measurement tools. The OECD Policy Brief on Social Impact Measurement (Noya, 2015) has listed three main approaches to social impact measurement: positivist, critical and interpretive, or in practice cost-benefit analysis, rating methods and auditing. Stanford's Spectrum of Impact Measurement Tool (Reynolds and al., 2018) includes a business analysis process and an assessment by control groups, while Deloitte's Social Impact Measurement Model (SIMM) (Ellis and al., 2019), measures the impact of corporate investment and aims to manage the translation of financial investment into social outcomes.

In the case of environmental impact measurement, a plurality of methodologies has been developed to support business decisions, with the fashion industry being a prime example of this tendency. Within the fashion business scope, multiple measurement tools aimed to estimate the environmental impact of fashion, including indexes, measurement tools and referencing tools, have been developed over the past fifteen years. These tools have been developed as working tools for the fashion industry practitioners and designers, with a focus on the product level rather than on the system level, as Anika Kozłowski & al (2009) remarked in their classification of environmental-impact tools for fashion businesses 1 . Anika Kozłowski & al (2009) classified the tool into three categories (or “archetypes”): assessment tools, participatory tools (engagement of the consumer in the design process), and universal tools. The vast majority of these tools is made to accompany designers throughout the design and product development process.

1.5 Monetization, trade-offs and total assessments methodologies

The monetization of social and environmental impacts presents an opportunity to create a common language around non-voluntary impact produced by organizations, language which can be understood widely from investors to clients and communities. This methodology finds its origins in externalities as theorized by Coase (1960) and Kapp (1969), and aims at reflecting every impact into monetary terms in order to guide immediate and future strategic decisions. The EP& L, or Environmental Profit & Loss Account was first developed by PUMA within the scope of the Kering group. The methodology aims at monetarily assessing the company impacts on environment by analyzing the organization value chain and correlating every activity and transformation to their direct impact. This visual accounting tool with impact translation into monetary value has been designed to promote environmental information related to the activity of the Kering group and brands to the wider audience possible, and to guide decision-making at a strategic level. This tool includes health as an indicator but refrains from including social impacts.

However, the line drawn at social impact is beginning to fade. PricewaterhouseCoopers, who worked on the methodology for the EP&L, parallelly developed a new model including both social and environmental notions. The Total Impact Measurement and Management (TIMM) methodology was developed to be a decision-making tool for private companies’ board members and high-level executives (Preston, 2013). The model considers four axes to create its

complete impact picture: social impact, environmental impact, economic impact and taxes impact. The TIMM functions on a trade-off's basis, suggesting the variable impacts following decisions. The attempt to assess both environmental and social impacts from a company's perspective is also claimed by the B-Corp Certification, the first certification which measures a company's entire social and environmental performance. Those business-oriented initiatives, which include both social and environmental impact into their methodology, create a path for innovations.

2. A comparison of existing tools and methodologies

The following section will include a comparison of existing measurement tools and methodologies for environmental and social impact measurement within the scope of adoption frameworks, in order to get a better insight of their level of maturity and use within organizations, with a focus on fashion organizations.

2.1 Gaining visibility: the scope for social and environmental measurement tools

The two-step approach between the development of environmental impact measurements and the later development of social impact measurement has generated structural differences in audiences and adoption frameworks.

As a consequence of this long and heterogeneous development, targeted audiences for social and environmental impact decision-making tools differ greatly. As seen on figure 1, social impact measurement tools derive from policy briefs and recommendations crafted for corporations' strategic members in a context of a lack of clear and agreed standards. On the opposite, environmental impact measurement benefits from a sixty-years old multi-lateral work, allowing the genesis and application of international agreements, including the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. If a plurality of tools has been developed for corporations to clarify and eventually communicate around their social impact, no practitioner-focused tool or communication tool have been yet integrated within corporations. The creation and first applications of the EP&L shows potential to reach board members, practitioners and clients alike.

	Policy Makers Governments	Companies Strategic Level	Internal practitioners & Designers	General public & Clients
Social Impact	OECD Policy Brief on Social Impact Measurement EU Commission GECES' Proposed approaches to social impact measurement United Nations' Sustainable Development Goals	TIMM B-CORP Social Capital's SIMM Spectrum of Impact Measurement Tool Centre for social impact's decision-making tool for social impact measurement		
Environmental Impact	Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement United Nations' Sustainable Development Goals	EP&L TIMM	EP&L Higg Index (FDS) TED'S TEN, (SDC) and (CT&R) (NMA) (HIMSI) (MB), (CDT), (C2DC), (C2CAD)	EP&L

Figure 1: scope of targeted audiences for social and environmental measuring tools

2.2 Adoption frameworks for social and environmental impact measurement tools

Adoption frameworks illustrate how organizations develop and execute their plans for the introduction of theories of change with a comprehensive approach, from initial assessment to implementation. One can hypothesize that analyzing the place of social and environmental measurement tools across an adoption framework might help us to better understand their level of maturity and to show their potential overlap or complementarity. An adoption framework differentiates four types of tools depending on their level of integration and maturity within an organization's decision making and implementation process, ranging from assessment tools to steering tools. Assessment tools evaluate the maturity of strategy, program or product at the adoption level, defining what existed prior and establishes the areas of progressions. Measurement tools are data collection tools across the value chain in relation to the company's objectives. Decision tools are decision-supporting tools in order to manage the implementation. Steering tools are tools supporting the implementation of the theory of change. Crossing the adoption framework with the segmentation of a life-cycle analysis, a standardized assessment method making it possible to carry out a multi-criteria and multi-stage environmental assessment of a system over its entire life cycle, may give more insight regarding the

exact use range for each social and environmental tool.

In the perspective of fashion corporations, there is visible opposition between tools restricted to one function, and tools presenting the potential to accomplish multiple functions. The EP&L, the B-CORP certification, and the HIGG Index overlap between the four main features, whereas the main designers-focused environmental tools are mostly steering tools for the sourcing, design and manufacturing processes, and the TIMM solely purely on providing decision-making features for board members.

No solely social impact-focused tool can be associated with a fashion company’s adoption framework, and no steering tool for fashion businesses seems to be available regarding social impact measurement.

This reflects the state and level of maturity for social impact measurement tools and the related research overall: in progress, experimental and in constant dialog with the work done for environmental impact measurement.

	Assess	Measure	Decide	Steer
Sourcing	EP&L B-CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	(FDS) TED’S TEN, (SDC) (CT&R) (NMA) (HIMSI) (MB) (CDT) (C2DC) (C2CAD) HIGG Index
Design	EP&L B-CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	(FDS) TED’S TEN, (SDC) (CT&R) (NMA) (HIMSI) (MB) (CDT) (C2DC) (C2CAD) HIGG Index

Manufacturing	EP&L B-CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	(FDS) TED'S TEN, (SDC) (CT&R) (NMA) (HIMSI) (MB) (CDT) (C2DC) (C2CAD) HIGG Index
Storage	EP&L B-CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	HIGG Index
Retail	EP&L B-CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	HIGG Index
Use and coproducts				
Recycling	EP&L B-CORP Higg Index	EP&L B-CORP Higg Index	EP&L TIMM	

Figure 2: Adoption framework for social and environmental tools following a fashion corporation life-cycle analysis

Perspectives

Social and environmental impact measurements theories and methodologies have been developed within a decade from each other, a gap which partially explains the two-step approach we know when it comes to evaluating social and environmental impact. To increase this gap, the access and exploitation of environmental-impact data for measurement methodologies has been deemed easier.

As a consequence, the level of maturity regarding environmental impact measurement is higher than the of social impact measurement. This translates directly within the fashion industry scope, where the maturity of life cycle analysis is extensive and commonly done, and environmental key performance indexes are easily set, as opposed to social key performance indexes. It is also significant that the fashion business scope was an incubator for environmental measurement innovation, with the development of monetary translation for environmental impact, namely the environmental profit and loss account. The tendency for impact measurement seems to be both leading towards the development of global or total impact assessment tool, and towards the development of tools which facilitate decision-making at a corporative or strategic board-level. This creates opportunities for new fields of research regarding the monetary valuation of impact: either a more inclusive tool including not only

environmental and health impacts but also includes social impacts, or respecting the approach taken so far, a social profit and loss account which would complete a global vision of sustainability measurement.

References

Battilana, J. & Dorado, S. 2010, Building sustainable hybrid organizations: the case of commercial microfinance organizations, *Academy of Management Journal*

Coase, R. 1960, The Problem of Social Cost, *3 Journal of Law and Economics*, pp1-44.

Ellis, S. et al. 2019, Social capital: Measuring the community impact of corporate spending, *Deloitte Review*, no. 24.

European Commission 2014, Proposed approaches to social impact measurement in European Commission legislation and in practice relating to EuSEFs and the EaSI, GECES sub-group on impact measurement

Freudenburg, W. 1986, Social Impact Assessment, *Annual Review of Sociology* vol. 12, pp 451-478

Grimes, M. 2010, Strategic sensemaking within funding relationships: The effects of performance measurement on organizational identity in the social sector. *Entrepreneurship Theory and Practice* vol. 34, no. 4, pp. 763–783.

Husted, B. and Allen, D. B, 2007, Strategic Corporate Social Responsibility and Value Creation among Large Firms, Lessons from the Spanish Experience, *Long Range Planning*, Vol. 40, No. 6, pp. 594-610

Olsen, S. et al 2008, Catalog of Approaches to Impact Measurement, Assessing social impact in private ventures, version 1, pp 8-78

Kapp, W. 1969, Environmental Disruption and Social Costs: A Challenge to Economics, *Kyklos*, 23: pp 833-848.

Kering Group: Environmental Profil & Loss: a measuring tool for sustainable luxury.

Kozlowski A et al. 2019, Tools for Sustainable Fashion Design: An Analysis of Their Fitness for Purpose.

Maas, K. & Liket, K. 2011, Social Impact Measurement: classification of methods, *Environmental Management Accounting and Supply Chain Management* pp.171-202

Noya, A. 2015, OECD, Policy Brief on Social Impact Measurement for Social Enterprises

Porter, M. et al 2011, Creating Shared Value, *Harvard Business Review*, Vol. 89, No. 1, 2011, pp. 2-17

Preston, M. 2013, Measuring and managing total impact: a new language for business decisions, PwC Report

Reynolds, G. et al. 2018, A Playbook for Designing Social Impact Measurement, Stanford Social Innovation Review

Annex 2. Accelerating Sustainability: in Fashion, Clothing and Textiles, M. Charter, B.Pan, S.Black, 2023, Routledge

Chapter 5: Traceability, Transparency & Greenwashing: highlighting growing drivers for traceability & transparency in the sector, & emerging challenges surrounding greenwashing of garments

Introduction

The fashion industry has become a significant worldwide business based on lengthy and geographically fragmented value chains (Richero et Ferrigno, 2016) The tremendous environmental and social impact generated has progressively come into the spotlight (Niinimäki et al., 2020) and in this context, traceability has been identified as an essential backbone to advance sustainability in order to identify and mitigate these negative externalities (Garcia-Torres et al., 2021; UNECE-UN/CEFACT, 2017). While intrinsically related, traceability and transparency must be differentiated but addressed concurrently (Garcia-Torres et al., 2021). Indeed, traceability is defined as the process “by which enterprises track materials and products and the conditions in which they were produced through the supply chain to ensure the reliability of sustainable claims” whereas transparency refers to “the relevant information being made available for all elements of the value chain in a harmonized way allowing common understanding, accessibility, clarity and comparison”, either between supply chains actors or publicly. Therefore, transparency must rely on traceability evidence to back up sustainability credentials (Kumar et al., 2017) and traceability must be supported by transparency frameworks to enable harmonization and common understanding around sustainability communications. With the current lack of regulations and the variety of disclosure initiatives (Mejías et al., 2019), the sector has been particularly targeted for greenwashing in recent years. Defined as the misleading advertising of sustainability credentials, greenwashing is contributing to false

impressions of sustainability impacts and benefits, thus preventing advancement towards a truly sustainable industry. Therefore, this chapter aims to consider the existing challenges (I) and progressive drivers (II) regarding traceability and transparency in order to accelerate sustainability in the fashion industry.

I. Existing traceability, transparency, and greenwashing challenges in the fashion industry

1. Traceability: Supply chain opacity and complexity

Due to globalization over the last few decades, supply chains in the fashion industry have become distinctively fragmented and increasingly complex (Richero et Ferrigno, 2016) including numbers of suppliers, indirect subcontractors, or traders from raw materials up to the finished product at a global scale (Brun et al., 2020; UN Environment Programme, 2020). This evolution has resulted in a loss of control, due to the extreme opacity for brands beyond their direct suppliers. A recent global survey of 100 companies, including major fashion brands, found that only 34% had traceability system in place, of which only half had visibility up to “Tier 2” (covering stages of manufacturing and finishing of products materials) (UNECE-UN/CEFACT, 2017).

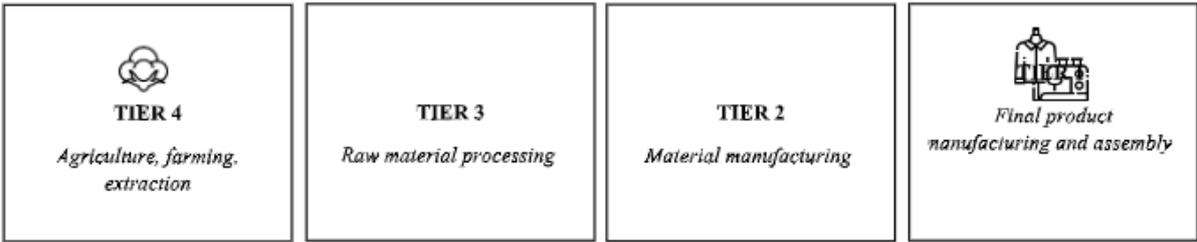


Fig. 1 “Tiers” usually refer to the four main processing stages of the value chain (from raw materials to the final product)

This complexity raises a major issue of data accessibility which is critical to mitigate negative environmental and social impact. Indeed, recent evaluations showed that on average, life cycle stages of raw materials acquisition and pre-processing as well as manufacturing stages such as spinning, weaving, dyeing, and finishing account for major drivers of negative environmental impacts (Quantis, 2021). In the same vein, a recent report identified highest risks on the social

indicators at the fibre production stage (UN Environment Programme, 2020). Besides, labels are usually restricted to certain aspects of sustainability credentials (Kumar et al., 2017; Henninger, 2015) and social monitoring implemented within the first tiers (Fashion Revolution, 2021). More data is needed to provide a holistic understanding of the variety of sustainability attributes and their respective impact reductions (Kumar et al., 2017). Accounting for emissions and resources consumption toward all activities in the life cycle of a product, Life Cycle Analysis (LCA) is a standardized methodology that translates such activities into environmental indicators with the combination of primary data (such as the country where the manufacturing) and secondary data from third-party databases or other sources (such as the country's energy supply). Therefore, access to specific data will likely influence the representative accuracy of the results. A recent study investigating blockchain traceability for LCA calculation, showed that environmental impact varies up to 36% on the processing step for a fixed wool composition with specific data compared to generic data provision (Carrières et al., 2022). This high variability rate supports the key role of traceability to enable meaningful impact measurement and improvement actions.

However, the large amount of data collection and authentication required for such an effective traceability requires the use of advanced technologies for assistance in these efforts (UNECE-UN/CEFACT, 2017). Various technologies exist in support of traceability, such as cloud-based platform including the use of blockchain, Internet of Things (IoT) or physical tracer technologies (Ahmed et MacCarthy, 2021) which is adding another level of complexity as companies must carefully identify and select the relevant ones for their business needs (UNECE-UN/CEFACT, 2022). For instance, cloud-based Software as Service (SaaS) digital platforms are developed to facilitate data collection and sharing, whereas embedded tracers are used for in-product materials identification to ensure authentication of origin (Ahmed et MacCarthy, 2021). On the other hand, blockchain distributed ledger technology has been gaining particular attention for data immutability and security (Agrawal et al., 2021). Besides, such technologies are still in their early stages and further experimentations are needed to explore how it can be deployed extensively to enable and support traceability and sustainability at a large scale (Ahmed et MacCarthy, 2021). Several challenges remain to be addressed. In the currently unregulated fashion environment, data confidentiality and privacy protection in fact present impediments to information exchange and tracing (Garcia-Torres et al., 2021; Egels-Zandén et al., 2015). Besides, digital traceability requires interoperability of existing systems

to enhance information sharing (UNECE-UN/CEFACT, 2022) whereas numerous supply chains actors are not yet digitalized and/or have different systems. Coordination between existing initiatives, such as the Initiative for Compliance and Sustainability (ICS), a shared platforms for social audits, or SEDEX Advance, another collaborative platform for ethical data, is also essential in enhancing mutualization and avoiding duplication of information requests with suppliers (Doorey, 2011).

2. Transparency: Information asymmetry and greenwashing risks

While companies are struggling to implement traceability measures, the industry is also seeing the development of different levels of information in terms of reporting initiatives (Jestratišević et al., 2020). This form of communication, essentially positioned at the corporate level, aims to translate and promote a brands sustainable efforts and best practices. A recent study corroborating previous results (Jestratišević et al., 2020) highlighted that if 98% of the 54 brands reviewed were communicating their social and environmental commitments, little traceability information would be displayed at the product level (Ospital et al., 2022). Information communicated through promotional Corporate and Social Responsibility (CSR) strategies based on marketing insights (Singh et Dhir, 2021) tends to reduce reputational risk while enhancing the stakeholders' perception of the business. This approach stimulates the risk of creating a biased perception of a company's social and environmental impact, with partial or unaudited communication creating greenwashing risks, due to information asymmetry (Akerlof, 1970) between the company and consumers. The Fashion Transparency Index is a prime example: if 47% of major fashion brands published in 2021 a list of their first-tier manufacturers, this figure dropped to 29% for brands publishing at least 95% of their manufacturers. An in-depth case study on Nudie's Jeans' transparency policy illustrates the risks of partial disclosure (Egels-Zandén et al., 2015). While in most cases suppliers' names and the audit's main findings were published on the website, major non-compliances were sometimes omitted as well as non-audited suppliers from the published information. While it is understandable why managers were hesitant to disclose highly sensitive information, the case study highlights that this exclusion can actually be perceived as greenwashing attempts. The issue of transparency and greenwashing is also intrinsically linked to the veracity of sustainability claims made by brands and defined as a "high-level statement about a characteristic of a product, or about a process or an organization associated with that product"

(UNECE-UN/CEFACT, 2022). The Changing Markets Foundation recently reviewed over 4,000 products from 12 fashion brands and highlighted that of the 39% of products marketed with sustainability claims attached to them, 59% of their green claims could be qualified as unsubstantiated or misleading (Changing Market Foundation, 2021). Furthermore, another study found that even when brands promote third-party labels or certifications, consumers lacked knowledge of these schemes or did not find them instructive with regards to their purchasing decisions (Henninger, 2015). Therefore, numerous methodologies to evaluate environmental impacts (such as the EP& L, or the Higgs Index) and social impacts (such as a recent SP&L tool) at company, value chain or product levels are currently being developed with the initial aim of creating an additional support for informed decision-making. However, this lack of standardization is critically preventing effective comparability and the development of a normalized framework to evaluate both environmental and social impacts holistically. It is also raising important greenwashing risks as suggested by the recently publicized case of the Allbirds lawsuit (The Fashion Law, 2021). The plaintiff alleged that Allbirds shoes' carbon footprint assessment did not assess the environmental impact of wool production beyond and prior to the manufacturing stages and thus excludes almost half of wool's environmental impact. Besides, use and end-of-life stages in product impact assessments essentially rely on secondary data with limited representation, as suggested by the European standardization work (Quantis, 2021). Such evaluation must address linear business models through meaningful indicators towards consumers, otherwise it will fail to tackle the crucial over-consumption issue in the industry.

II. Increasing drivers of traceability and transparency in the fashion industry

1. Accountability: From pressure to the potential of stringent requirements

In the meantime, with the multiplication of social and environmental scandals since the late 1990s and subsequent name and shame campaigns from NGOs and media, the pressure for greater responsibility has been progressively increasing (UNECE-UN/CEFACT, 2022). This dynamic has strengthened lately with public authorities and increasing policies towards more accountability in business conduct. Over the last few years, several countries and regional states, including the United Kingdom, France, California, the Netherlands, and more recently Germany, have progressively adopted due diligence legislations, with the ambition to mandate

companies of a certain turnover to implement processes that identify, prevent, mitigate, and account for their impact (UNECE-UN/CEFACT, 2022). In line with this, the European Commission has also recently adopted a proposal for a directive on corporate sustainability due diligence regime to enable a level-playing field and to foster a large-scale improvement. In the United States, the banning of cotton from Xinjiang due to the Uyghur scandal (Le Monde, 2021) has been another precursor example and a further step has been taken with release of the New York Fashion Sustainability and Social Accountability Act. The Bill promotes greater commitment to sustainability in the fashion industry, through targeting big apparel and footwear companies with more than \$100 million in revenue and business in New-York. For instance, it requires these companies to map at least 50% of their supply chain from raw materials to market, based on prioritized risks. With legislative action such as this, the regulatory framework does appear to be changing rapidly, as substantiated by the survey findings of existing policies, regulations, and guidelines, conducted in UNECE's recent report (UNECE-UN/CEFACT, 2021). In this uncertain context, companies are also calling for clear requirements and the last multi-stakeholder Cercle de Giverny forum in 2021 is an example of collaborative initiative of multinational groups such as L'Oréal, KERING and Rocher, aiming to promote policy proposals in favour of the operational deployment of systemic CSR.

2. Transparency: From expectations to the prospects of communication standardization

In addition, the recent multiplication of lawsuits in the fashion and cosmetic industries attests to the strengthening of allegation control, to ensure the veracity of the information being communicated to consumers (The Fashion Law, 2021). Canada Goose, for instance, has been recently pursued for false advertising regarding the trapping methods used to source the fur, as claiming to adhere to “ethical, responsible, and sustainable sourcing and the use of real fur” (The Fashion Law, 2021) In the same vein, a group of plaintiffs filed a class action lawsuit last year against Shiseido in New York, alleging that its Bare Minerals brand of cosmetics falsely advertised its products as “clean and conscious”, “pure” and “free of harsh chemicals”, due to the presence of Perfluoroalkyl chemicals (PFAS) (The National Law Review, 2022). Indeed, sustainability claims fall under the provisions of general consumer protection regulations, except in case of specific legal requirements, and thus guidance has been progressively released by institutions such as the International Consumer Protection and Enforcement Network

(ICPEN), a global network of consumer protection authorities from over 65 countries, or the Netherlands Authority for Consumers and Markets (ACM) (Webb, 2021). The latest created and published five “rules of thumb” regarding environmental claims and has started investigating businesses against these rules: nearly 70 fashion brands are known to be currently under investigation (Webb, 2021). To be faced with greenwashing risks and potential legal pursuits, some brands, including Asket or Reformation, have been proactive in demanding tighter guidance and calling on the Federal Trade Commission to review its Green Guides, outlining rules against greenwashing (Policy Collective Politically in Fashion, 2021)

Stringent requirements appear to be forthcoming. In France, following the adoption of the Anti-Waste and Circular Economy law, a draft decree has introduced mandatory labelling of environmental characteristics, such as the country where the products’ assembly, fabric’s finishing and weaving took place. The draft decree also prohibits the use of terminologies such as “biodegradable”, “environmentally friendly” or “any other equivalent”. The Climate and Resilience law further announced the priority and enforcement of products’ environmental labelling as mandatory for the textile-apparel sector, with several methodologies currently being experimented (ADEME, 2022). A consultation on social labelling has also explored the communication to consumers on the potential of social risks associated with the product’s production and other positive social indicators such as know-how (Chanteau et al., 2022). At the same time, since 2019, the European Commission has initiated the development of sectoral category rules (PEFCRs) for the calculation of apparel and footwear environmental impacts (Quantis, 2021), based on the wider Product Environmental Footprint (PEF) LCA methodological framework (Quantis, 2019) which will have a direct impact on brands’ communication if becoming mandatory to communicate around environmental impact.

Conclusion and recommendations to accelerate sustainability

Traceability creates both organizational and technological challenges for corporations within the fashion industry. These challenges are amplified by the ripple effect of the difficulties of data collection within the value chain, creating issues in ensuring direct transparency and moderating brands’ communication regarding the true quality of their actions and products. Data collection challenges can also create asymmetry when fashion brands communicate partial and unaudited information to consumers, which contributes to the greenwashing phenomenon

currently rife in the marketplace. This situation also emphasizes the need for harmonization when it comes to brands' communication of sustainability attributes. With the growing number of proactive fashion stakeholders demanding a clear regulatory framework for both data measurement and communication, harmonization of accurate data and overall standardization of technical information represent potential solutions. Brands must reduce their risks when it comes to greenwashing in the short term by strengthening their data collection process and using traceability tools as well as verification systems throughout their supply chains. However, to accelerate sustainability, it is essential to actively consider the downstream part with the use stages up to the product end-of-life, which tend to be an afterthought with secondary datasets of limited representations. Business models should be properly evaluated through meaningful indicators aimed and should tackle the over-production and consumption issues as a direct environmental factor in itself. Traceability and transparency are still conceived and applied in a linear manner, whereas they should be driven by a sustainability and circular strategy to address the fashion industry's negative impact on environmental and social wellbeing.

Bibliography

ADEME (2021), Environmental labelling. Available at: <https://expertises.ademe.fr> (Accessed: 10 April 2022).

Agrawal, T. K., Kumar, V., Pal, R., Wang, L., & Chen, Y. (2021). Blockchain-Based Framework for Supply Chain Traceability: A Case Example of Textile and Clothing Industry. *Computers & Industrial Engineering*, Vo.154, No.6, p.107130.

Ahmed, W. A. H., & MacCarthy, B. L. (2021). Blockchain-Enabled Supply Chain Traceability in the Textile and Apparel Supply Chain: A Case Study of the Fiber Producer, Lenzing. *Sustainability*, Vo.13, No.19, p.10496.

Akerlof, G. (1970), The Market for "Lemons": Quality Uncertainty and the Market. *The Quarterly Journal of Economics*, Vo.84, No.3, p. 488-500.

Décret n° 2022-748 du 29 avril 2022 relatif à l'information du consommateur sur les qualités et caractéristiques environnementales des produits générateurs de déchets (2022). Available at: <https://www.legifrance.gouv.fr> (Accessed: 1st June 2022).

Doorey, D.J. (2011), The Transparent Supply Chain: from Resistance to Implementation at Nike and Levi-Strauss. *Journal of Business Ethics*, Vo. 103, p. 587–603.

Egels-Zandén, N., Hulthén, K., & Wulff, G. (2015), Trade-Offs in Supply Chain Transparency: The Case of Nudie Jeans Co, *Journal of Cleaner Production*, Vo.107, p.95-104.

European Commission (EC) (2022), EU Strategy for Sustainable and Circular Textiles. Available at: <https://ec.europa.eu> (Accessed: 10 April 2022).

European Commission (2022), Corporate Sustainability Due Diligence. Available at: <https://ec.europa.eu> (Accessed: 10 April 2022).

Garcia-Torres, S., Rey-Garcia, M., Sáenz, J., & Seuring, S. (2021), Traceability and Transparency for Sustainable Fashion-Apparel Supply Chains, *Journal of Fashion Marketing and Management: An International Journal*, Vo.26, No. 2, p. 344-364.

Henninger, C. (2015), Traceability the New Eco-Label in the Slow-Fashion Industry? — Consumer Perceptions and Micro-Organisations Responses, *Sustainability*, Vo.7, No.5, p.6011-6032.

Jestratijevic, I., Rudd, N., Uanhoro, J. (2020), Transparency of sustainability disclosures among luxury and mass-market fashion brands, *Journal of Global Fashion Marketing*, Vo.11., No.2, p.1-18.

Kumar, V., Agrawal, T. K., Wang, L., & Chen, Y. (2017), Contribution of Traceability Towards Attaining Sustainability in the Textile Sector, *Textiles and Clothing Sustainability*, Vo. 3, No.1, p.1-10.

Le Monde (2021), Les Etats-Unis Interdisent l'Importation de Produits du Xinjiang Issus du Travail Force. Available at: <https://www.lemonde.fr> (Accessed: 10 April 2022).

Mejías, A. M., Bellas, R., Pardo, J. E., & Paz, E. (2019), Traceability Management Systems and Capacity Building as New Approaches for Improving Sustainability in the Fashion Multi-tier Supply Chain, *International Journal of Production Economics*, Vo. 217, p.143-158.

New York's Fashion Sustainability and Social Accountability Act, senate Bill S7428 (2022). Available at: <https://www.nysenate.gov> (Accessed: 10 April 2022).

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020), The Environmental Price of Fast Fashion,

Nature Reviews Earth & Environment, Vo.1, No.4, p.189-200.

Ospital, P. Masson D., Beler, C. Legardeur, J. (2022) Traceability Information to Communicate to Consumer in Total Transparency, *Global Fashion Conference 2021*, Warsaw, Poland, p. 1-7.

Quantis (2021), Draft Product Environmental Footprint-Representative Product (PEF-RP) Study Report: Apparel and

Footwear, Version 1.1. Available at: <https://webgate.ec.europa.eu> (Accessed: 10 April 2022).

Quantis (2021), Draft Product Environmental Footprint-Category Rules (PEFCRs) Apparel and Footwear, Version 1.1.

Available at: <https://webgate.ec.europa.eu> (Accessed: 10 April 2022).

Quantis (2019), Designing Credibility in Fashion with the Product Environmental Footprint.

Available at: <https://quantis-intl.com> (Accessed: 10 April 2022).

Richero, R.; Ferrigno, S. (2016) A Background Analysis on Transparency and Traceability in the Garment Value Chain, DAI

Europe, Office for Economic Policy, and Regional Development (EPRD), Apsley, Kielce.

Singh, S., Dhir S. (2021), Structured Review Using TCCM and Bibliometric Analysis of International Cause-Related

Marketing, Social Marketing, and Innovation of the Firm, International Review on Public and Non-profit Marketing, Vo.16, No.2-4, p. 335-34

The Fashion Law (2021), Fashion Law in 2021: 12 of the Year's Noteworthy Lawsuits.

Available at: <https://www.thefashionlaw.com> (Accessed: 10 April 2022).

The National Law Review (2022), Cosmetics and PFAS: Industry Lawsuits a Lesson For ESG.

Available at: <https://www.natlawreview.com> (Accessed: 10 April 2022).

United Nations Economic Commission for Europe (UNECE) & United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) (2022), Enhancing Traceability and Transparency of Sustainable Value Chains in the Garment and Footwear Sector. Recommendation n°46, Geneva.

United Nations Economic Commission for Europe (UNECE) & United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) (2021), Enhancing Sustainability and Circularity of Value Chains in the Garment and Footwear Sector: Policy Developments on Traceability and Transparency. A Mapping of Policies, Regulations, and Guidelines, Geneva.

United Nations Economic Commission for Europe (UNECE) & United Nations Centre for Trade Facilitation and Electronic Business (2017), Accelerating Action for a Sustainable and Circular Garment and Footwear Industry: Which Role for Transparency and Traceability of Value Chains, Geneva.

United Nations Environment Programme (2020), Sustainability and Circularity in the Textile Value Chain – Global Stocktaking, Nairobi.

Webb. B. (2021), The Big Global Greenwashing Crackdown, Vogue Business. Available at: <https://www.voguebusiness.com> (Accessed: 10 April 2022).

Annex 3. SP&L Approach presentation and open-source page on Chloé's website



Votre avis

Chez Chloé, nous pensons que l'élaboration de stratégies et de plans d'action commence par la mesure d'impact. Mesurer l'impact social signifie mieux comprendre les potentiels effets que les organisations peuvent avoir sur leurs parties prenantes tout au long de leurs chaînes de valeur – de l'extraction des matières premières à la fin de vie d'un produit. Nous sommes persuadé.e.s que mieux mesurer notre impact nous permettra d'améliorer nos pratiques sur la durée.

C'est dans cette logique que nous avons créé l'approche Social Profit & Loss (SP&L), une méthodologie développée en partenariat avec l'Institut Français de la Mode (IFM) et le Conservatoire National des Arts et Métiers (CNAM), et revue en externe par le cabinet de conseil PricewaterhouseCoopers (PwC). Le SP&L est un outil de gestion qui vise à intégrer l'impact social positif dans les rapports de performance et les cadres comptables, aux côtés des critères de performance environnementale et financière.

L'approche SP&L permet aux organisations de mesurer, d'évaluer et de visualiser l'impact positif d'une organisation sur ses parties prenantes, et de rédiger des plans d'action sur mesure pour apporter des améliorations, immédiates et à long terme, à leurs propres pratiques ainsi qu'à celles de leurs fournisseurs. Mobiliser l'approche SP&L permet de mesurer l'impact des organisations sur leurs équipes, leurs principaux fournisseurs, leurs salarié.e.s ainsi que les communautés locales.

27/06/2023 05:14

Approche SP&L | Chloé FR



ET RESSOURCES D'ÉVALUATION D'IMPACT EXISTANTS

EP&L : Le développement de notre approche SP&L est une première itération inspirée de l'approche EP&L (Environmental Profit & Loss), une méthodologie pionnière créée par Kering, qui permet à la fois l'évaluation et la valorisation de l'impact environnemental tout au long des chaînes d'approvisionnement et des opérations au sein de l'industrie de la mode.

Audit social : L'outil SP&L est conçu pour compléter l'audit social, un outil standardisé d'évaluation de la conformité réglementaire des pratiques sociales, environnementales et éthiques d'une entreprise.

B Corp : L'outil SP&L s'inspire des travaux du B Lab, qui certifie les B Corporations, et a été créé dans le cadre de l'obtention du statut B Corp par Chloé. Afin de faciliter l'accès aux données sur l'impact social positif, le processus SP&L implique une collecte systématique de données sociales auprès des opérations et de la chaîne d'approvisionnement.

PRINCIPAUX USAGES DE L'APPROCHE SP&L

1. Renseigner et faciliter la prise de décision en fournissant systématiquement des informations sociales parallèlement à d'autres critères de performance, dans les cadres et formats de reporting et de comptabilité.
2. Surveiller et soutenir les améliorations des pratiques sociales au fil du temps avec les fournisseurs.
3. Optimiser les conditions de création des produits pour garantir aux clients une offre traçable et responsable.





OPEN SOURCE

Chez Chloé, nous sommes persuadé.e.s que la transparence et la collaboration sont essentielles pour faire progresser les pratiques de l'industrie. Nous avons créé le SP&L avec l'objectif de faire avancer la discussion collective autour de l'impact social positif. La méthodologie SP&L et ses formats de mise en œuvre sont donc en open source.

Nous avons décrit ci-dessous les principales étapes pour aborder la méthodologie SP&L. Ces informations sont particulièrement pertinentes pour les organisations qui souhaitent mieux comprendre et/ou mettre en œuvre le SP&L.

https://www.chloe.com/fr/chloe/femme/subhome/spl_section

27/06/2023 05:14

Approche SP&L | Chloé FR

ETAPES CLES

0. Organiser des audits sociaux

1. Collecte et vérification de données sur l'impact social positif pour les opérations et les fournisseurs
2. Mesure et évaluation des pratiques sociales positives*
3. Visualisation des impacts sociaux positifs, ainsi que l'impact des fournisseurs et des produits
4. Intégration des résultats dans les rapports de performance et formats de comptabilité
5. Discussion autour de la démarche et de ses résultats avec les parties prenantes, et élaboration de plans d'action sur mesure pour améliorer leurs pratiques sociales positives

*Pour les employé.e.s et les fournisseurs : égalité des genres, diversité et inclusion, salaire vital, formation, bien-être et qualité de l'emploi. Pour les collectivités locales : la création d'opportunités locales, et la mise en place de politiques de protection des collectivités locales (liste non exhaustive).





AUDIT SOCIAL

Un prérequis à toute relation commerciale avec Chloé est le respect du Code de Conduite de Richemont. Cet accord s'applique également à la sous-traitance, au textile, au cuir et à la production de produits semi-finis. Chloé se réserve le droit de demander des audits sociaux par un prestataire externe indépendant, mobilisant le référentiel SMETA. La mesure de l'impact social positif complète ces mesures au niveau de la chaîne d'approvisionnement.

PROCESSUS DE COLLECTE ET DE VERIFICATION DES DONNEES

Nous recueillons des données d'impact social à l'aide d'un formulaire digital à remplir par les équipes ainsi que par les fournisseurs. Ce formulaire porte sur l'impact social positif sur deux catégories de parties prenantes (employé.e.s direct.e.s et

indirectes, et communautés locales); huit catégories d'impact (égalité des genres, salaire vital, diversité et inclusion, formation, bien-être, qualité de l'emploi, création d'opportunités locales et politiques protégeant les communautés locales), à travers 72 métriques.

Un processus de vérification par un cabinet de conseil spécialisé en audit social sera mené annuellement pour garantir l'intégrité des données.

Approche SF&L | UNIOE FR



MESURE ET EVALUATION DES IMPACTS POSITIFS

L'évaluation des performances d'impact social positif mobilise une note allant de 1 à 5, (1) étant le niveau le plus bas estimé de pratiques positives et (5) représentant les meilleures pratiques. Trois scores sont systématiquement attribués: un score global, un score de catégorie d'impact (sur l'égalité des genres par exemple) et un score de pratique individuelle (sur la représentation des femmes dans le management par exemple). Ces scores de performance d'impact positif fournissent des informations et des nuances supplémentaires lorsqu'il s'agit de visualiser l'impact d'une organisation sur ses parties prenantes. Les données collectées sont automatiquement évaluées via une plateforme de Cloud Computing. Vous trouverez ici toutes les informations nécessaires concernant le processus d'implémentation de vos systèmes informatiques.

Ressources : modèle d'évaluation, GitHub

VISUALISATION DES IMPACTS

Un outil de pilotage et de visualisation, lié à l'outil d'évaluation, fournit une visualisation à plusieurs niveaux de l'impact social positif, y compris l'impact agrégé, l'impact du fournisseur et l'impact du produit. La visualisation de l'impact est essentielle pour faciliter la prise de décision, et pour soutenir les fournisseurs lorsqu'il s'agit d'améliorer leurs pratiques sociales immédiates, et à long terme.

Ressources : Schématisation de la visualisation



[n/fr/chloe/femme/subhome/spl_section](#)

Approche SP&L | Chloé FR



INTEGRATION DES RESULTATS

Le SP&L vise à fournir les ressources nécessaires pour créer une analyse de performance multicritère (sociale, environnementale, financière) et établir des formats comptables intégrant l'impact social.

Le SP&L nous permet d'intégrer des scores de performance d'impact social positifs aux cadres de reporting de performance existants afin d'obtenir des informations supplémentaires sur l'impact que les organisations ont à travers leurs activités, et de mieux guider nos processus de prise de décision.

Le SP&L fournit également aux organisations les moyens de mesurer l'allocation efficace immédiate et à long terme des ressources – des données qui peuvent être valorisées et monétisées.

NOTE METHODOLOGIQUE

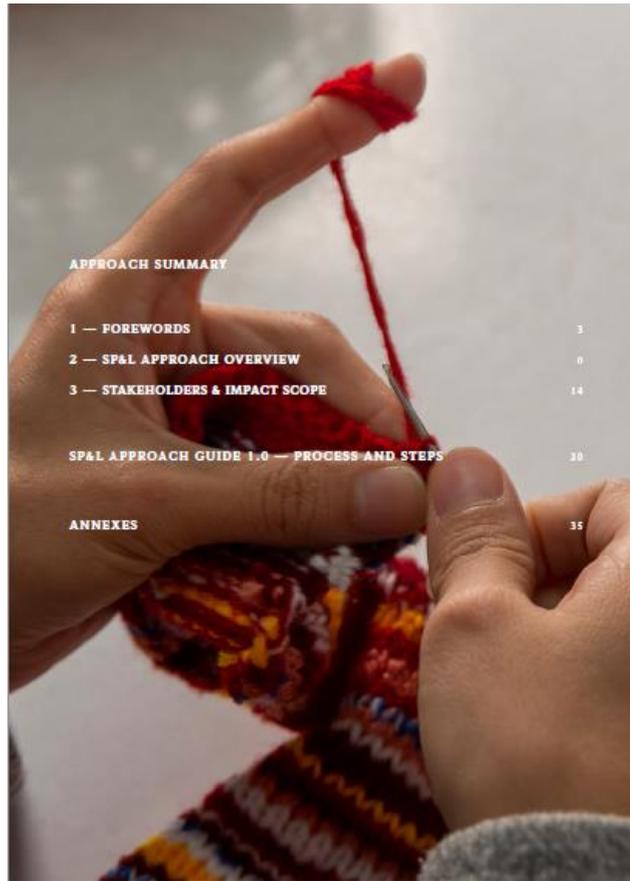
La première méthodologie d'approche SP&I de Chloé peut être trouvée ici. La note méthodologique a été créée après une revue par des experts, et a fait l'objet d'une revue complémentaire par PwC. Une concertation industrielle a été organisée en 2022, coordonnée par PwC et la Fédération de la Haute Couture et de la Mode (FHCM).

Pour toute question concernant notre approche SP&I, son contenu ou la mise en œuvre de la méthodologie, vous pouvez contacter notre équipe Développement Durable : sustainability@chloe.com.



Annex 4. SP&L Methodology





APPROACH SUMMARY

1 — FOREWORDS	3
2 — SP&L APPROACH OVERVIEW	6
3 — STAKEHOLDERS & IMPACT SCOPE	14

SP&L APPROACH GUIDE 1.0 — PROCESS AND STEPS	20
---	----

ANNEXES	35
---------	----



APPROACH SUMMARY

1 — FOREWORDS

FOREWORDS

We believe that companies today need to take full accountability for the impact they have on all stakeholders. We made a commitment to shift our Maison towards a purpose-driven business model: Women Forward. For a Fairer Future. This means embracing social and environmental sustainability in everything we do, by integrating social and environmental performances at the core of our business model and greater transparency and accountability. We believe that having effective measuring systems is essential to guide our ambition for continuous improvement. For this purpose, we launch our new Social Profit & Loss Approach (SP&L Approach). Developed over the last two years, The S&PL is a social performance measurement, evaluation and visualisation methodology, and a decision-making tool focusing on driving positive social performance. By providing new insights to improve the social impacts of both our activities and our products, the SP&L approach provides us with additional tools to further integrate social impact into our business model— and advance forward so that Chloé continues to be a purposeful force for positive change.

— Riccardo Bellini, CEO & President, Chloé

This first iteration of the SP&L was created in a spirit of collaboration, and results from two years of intensive work and partnership between Chloé, the Institut Français de la Mode and the Conservatoire National des Arts et Métiers. Taking responsibility and accountability for the impact our business has on people and communities is central to becoming a source of positive change. As women represent the majority of workers in our industry's supply chains, it is especially crucial for us to better understand and visualize how we can further participate in removing any frontier which prevents women from reaching their full potential. The SP&L approach constitutes a useful foundation to better monitor our impacts on our stakeholders, and to better accompany our production partners towards improving their own social practices. By publishing the SP&L Approach Methodology, we hope to further contribute to the conversation on social impact, and to participate to a scalable and lasting change on topics such as gender equality and living wage, which are so vital to our industry.

— Aude Vergne, Chief Sustainability Officer, Chloé

The SP&L was the result of a dynamic academic and industry conversation, which provided us with the opportunity to further the scientific conversation regarding the integration of social impact within benefit based business models in the fashion industry. Throughout the conception of the SP&L approach, the role that managerial accounting and new business management tools serve in impact related decision making was explored. We are proud to contribute to the discussion around the necessity to place social impact as a systemic factor for decision making, by relinking impact, performance and value.

— Mathilde Asseman, Andrée-Anne Lemieux (IFM, IFM-Kering Sustainability Chair),
and Philippe Durance (CNAM, LIRSA)

ABOUT THE SP&L APPROACH VERSION 1

PHILIPPE AGHION,
ECONOMIST, COLLÈGE DE FRANCE

"I am delighted to see Chloé further its core ambition to positively influence society through the systematic inclusion of social impact within its decision-making process. By providing a systemic measurement and evaluation process for social outcomes, the development of the SP&L helps clarifying trade-offs, and participates to the systematic inclusion of social impact within necessary frameworks for decision-making.

MATHILDE FERMAUT,
CERTIFICATION LEAD, B LAB FRANCE

"Chloé's work on social impact measurement through the SP&L embodies the company's commitment to continuous improvement, which they had already demonstrated with their B Corp Certification. At B Lab, we are convinced that collaboration between businesses is a real driver of systemic change, and therefore support the spirit in which the SP&L methodology was developed"

MADINA RIVAL,
LIRSA LABORATORY, CONSERVATOIRE NATIONAL
DES ARTS ET MÉTIERS (CNAM)

"The LIRSA is proud to collaborate on and contribute to the SP&L approach, a new action oriented business management tool focusing on positive social impact, providing performance evaluation and supporting purposeful action."

DANIEL VAUGHAN WHITEHEAD,
FOUNDER, FAIR WAGE NETWORK

"We are glad at the Fair Wage Network that Chloé has started a living wage journey, by commencing in 2022 a certification process with the Fair Wage Network in pilot markets and for suppliers"

FASCAL MORAND,
EXECUTIVE PRESIDENT, FÉDÉRATION DE LA
HAUTE COUTURE ET DE LA MODE (FHCM)

"If the principle of sustainable development and its implementation are now a categorical imperative, it is still necessary to put in place appropriate and objective tools and metrics. Both by its conceptualization and by the extent of its potential, the SP&L developed with Chloé within the framework of Mathilde Asséman's thesis represents in this respect an important and stimulating advancement."

CATERINA OCCHIO,
SUSTAINABILITY ADVISOR AND SEEEME FOUNDER

"The SP&L is an essential step for measuring the impact of fashion on people and communities and I'm honoured to have been involved in its development. The current climate emergency has forced the industry to create instruments to measure its environmental impact while its social impact has not received the same attention, yet. Chloé's pioneer work on SP&L is a key attempt to fulfill this gap shedding a light on the need for systemic social as well as environmental innovation. We cannot change what we cannot measure"

XAVIER KOMATET,
GENERAL DIRECTOR, INSTITUT FRANÇAIS DE LA
MODE (IFM)

"Measuring social impact is key to the sustainable transformation of our industry. We are very proud of this collaboration"



APPROACH SUMMARY

2 —

**SP&L APPROACH
OVERVIEW**

THE JOURNEY TOWARDS CREATING THE SP&L APPROACH

Two years ago, Chloé began the conception of the SP&L (Social Profit and Loss) Approach. The tool was aimed at systematically improving Chloé's social impact, by better monitoring the effects on stakeholders that happen as the results of actions, activities and initiatives. As you cannot improve what you cannot measure, the SP&L approach was created in order to access, evaluate and visualize positive social performance all throughout our value chain, and product lifecycles.

The rationale behind this SP&L tool was also to visualize together the social and environmental impact of our activities, partners and products, and to consider our financial, environmental and social performances in an inclusive format.

With the SP&L we aimed to systematically integrate social impact within an inclusive resource allocation analysis, in order to facilitate a decision-making process which should always include social and environmental performance factors.

Chloé's SP&L reflects its manifesto and long term commitment to uplift women, eradicate

gender based inequalities and promote inclusivity through the creation of products that have a positive impact on people.

The SP&L is an industry and academic collaboration between Chloé, the Institut Français de la Mode (IFM Kering Sustainability Chair) and the Conservatoire National des Arts et Métiers (Interdisciplinary research laboratory in action-oriented science). The tool was reviewed in 2022 by PricewaterhouseCoopers (PwC) to ensure its methodological robustness and adaptability.

An industry consultation coordinated by the Fédération de la Haute Couture et de la Mode (FHCM) provided the necessary industry insights to present the current open sourced methodology.



DEFINITION, PROCESS & APPLICATIONS

The SP&L is by definition a business management tool, and an internal decision-making tool, which aims to integrate positive social impacts into performance reporting and accounting, alongside environmental and financial performance criteria. The tool accounts for a company's positive social impacts all throughout its value chain and product lifecycles. The SP&L Approach was tailor-made to better inform and facilitate decision-making by providing a more comprehensive social impact and performance picture of a company's activities and products, in a vocabulary common to other types of performance criteria.

The methodology has five main steps: social auditing and decent practices monitoring as a pre-requisite, potentially positive social performance measurement, evaluation, visualization, and a data verification process to consolidate the final results.

In terms of scope, the SP&L approach covers operations (headquarters) and the supply chain, and covers both direct and indirect employment, in order to take responsibility, account for progress, and improve social impact for all stakeholders involved in production, activities and processes.

The results of the SP&L approach can be visualized at three levels:

1. Company's activities
2. Suppliers
3. Products

In terms of use, the SP&L was created for fashion brands, suppliers, social enterprises and social organisations who are already advanced on decent working conditions monitoring in their own supply chains.

The tool was created for organizations that aim to access the full social picture, including positive impact, of their activities, and better manage their social outcomes, directly and over time.

The results are aimed to be integrated:

- Within company's integrated reporting, accounting formats
- Within resources allocation efficiency analysis

Data collected can be useful:

- As the basis for monitoring supplier social practices, capacity-building and creating improvement plans for suppliers
- As a basis for social investment efficiency analysis (monitoring changes in social performance over time whenever resources are allocated)
- Within product optimization analysis (relevant when data is provided from Tier 0, operations, to Tier 4, raw material extraction)
- For certification process such as B Corp

THE FULL ACTIVITY PICTURE, AND A PERSPECTIVE ON VALUATION

The tool was created to enrich the picture of traditional “cost, charges and expenses” P&L social criteria by providing social positive performance and job quality quantified insights. Integrated into reporting and accounting, those new insights are meant to better inform and facilitate decision-making when it comes to resource allocation, targeted investment for operations, and capacity-building within the supply chain.

We chose not to monetize social impacts through the use of financial proxies or valuation coefficients (quantify positive performance rather than monetize). Rather, by facilitating the systematic access to quantified positive social performance data which can be compared and monitored over time, the SP&L provides useful insights for decision-making, valuable and valued when included in an investment and resource allocation analysis.

In that way, the SP&L approach provides a different take on Social Return on Investment (SROI) by creating the necessary and direct basis for a social investment efficiency analysis, resource allocation optimization evaluation and forecasts.

The approach directly enables:

1. The integration of new performance criteria into fully quantified performance reviews of activities, collections and products.
2. A systematized resource allocation optimization and maximization analysis, assessing and anticipating the efficiency of resources. The SP&L approach facilitates the assessment of the efficiency of resources allocation through monitoring performance results, directly and over time, and systematically relinking social value creation to investment efficiency.

The business management tool can also provide the necessary data for:

1. Return on (targeted) social investment over time for capacity-building efforts, if resource allocation and associated capacity-building are monitored over time, and in correlation with operation efficiency performance criteria such as quality and productivity.
2. Evaluating, job creations (direct, indirect, induced), training and capacity-building efficiency, directly and over time.
3. Creating the basis for social lifecycle costing (SLCC) value distribution, and value redistribution analysis

A COMPLEMENTARY TOOL TO THE EP&L & SOCIAL AUDIT

The development of our SP&L approach is a first exploratory methodology inspired by the EP&L (Environmental Profit & Loss) approach, a pioneering tool developed by Kering, enabling the assessment and valuation of the environmental impact throughout the supply chain, supply and operations of a Fashion House. The EP&L as a business management tool was the first example of a company's measuring, and valuing the environmental impacts of its operations and entire supply chain in order to facilitate decision-making. The EP&L enables the visualization of environmental impacts for brand's activities and products.

The SP&L Approach was inspired by the approach, scope and capacities of the EP&L: to measure, quantify, evaluate, visualize social impact data throughout operations and supply chain in order to better inform decision-making and integrate outcomes and impact-related data within performance reviews.

The SP&L approach as a new business management tool is an answer to the lack of tool enabling data collection for positive social impact data all throughout the value chain, beyond the supply chain. The lack of tool uniformly collecting social data throughout supply chain and operations prevented the visualization and the integration of social impact within overall performance reporting and accounting formats. The SP&L Approach entirely focuses on primary data and excludes the use of estimations.

The SP&L tool was also designed as a logical continuation to social auditing, a standardized process for evaluating the regulatory compliance of a business' social, environmental and ethical practices, focused on the supply chain. A prerequisite for starting any commercial relationship with Chloé is to comply with Richemont's Code of Conduct. This agreement also applies to subcontracting, and to textile, leather and the production of semi-finished goods. Chloé reserves the right to request social audits by an independent external service provider, mobilizing the ETI referential (SMETA). Measuring positive social impact complements these measures at a supply chain level.

The SP&L approach provides insights into potentially positive social practices at both the supply chain and headquarters (operations, retail) levels, by measuring and evaluating a set of additional impact categories attesting of not only decent but good working conditions: for workers additional impacts categories include diversity and inclusivity, gender equality, living wage, well-being, training and job quality.

COMPLEMENTING EXISTING DATA AND FRAMEWORKS

The SP&L aims to address several gaps in terms of social impact measurement and evaluation. Social impact and environmental impact measurement advanced with a two-speed dynamic, with a profusion of methodologies when it comes to assessing and visualizing environmental impacts (example: EP&L at the activity level and LCA and carbon environmental footprint at product level), and a delay when it comes to analyzing and visualizing social impact, and quantifying social practices.

Regarding social-specific performance methodologies, the SP&L approach addresses three observable gaps:

1. The gap in addressing social impact with the same criteria for both direct and indirect employment. Social impact is addressed differently in fashion companies' supply chain than in fashion companies' direct operations. In the supply chain, social impact is addressed through social auditing which assesses compliance and decent working conditions. At the headquarter level, social performance criteria such as job tenure, employee turnover, and training are preferred.
2. The availability of comparable social data all throughout the value chain, preventing companies from assessing and visualizing the social impact of their activities, commercial partnerships and products in a cohesive way.
3. A systematic focus on positive impact social, starting with measuring the same performance criteria for direct and indirect employees.

The differentiation factors for the methodology are:

- The scope and multi-level visualization possibility enabled by a uniform data collection throughout the value chain
- The focus on potentially positive social impacts
- The possibility to integrate positive social impact within a performance and resource allocation framework

Those differentiation factors enable performance visualization and reporting for activities, suppliers and products. Further, the SP&L Approach complements and contrasts with the work developed on Social Return on Investment, by pragmatically assessing performance efficiency associated to resource allocation, rather than mobilizing valuation coefficients, in order to facilitate decision-making.

COMPLEMENTING EXISTING DATA AND FRAMEWORKS

The review of existing methodologies, databases, literatures and experimentations internationally has been essential to avoid redundancy and strive for complementarity (see in Annexes).

We reviewed six types of documentation: social reporting, social databases, job quality frameworks, social impact measurement experimentations, guidelines and frameworks (including life cycle costing, social life cycle assessment, social life cycle inventory and life cycle sustainability assessment) and international surveys.

To strengthen complementarity, we turned to methodologies with harmonization potential, which could constitute and provide social reporting norms within the fashion industry, and beyond (see in Annexes)

We selected four types of frameworks to integrate within the SP&L.



For the metrics and reporting step, we chose to integrate the proposition for harmonized reporting provided by:

- The World Economic Forum's 2020 white paper "Toward Common Metrics and Consistent Reporting of Sustainable Value Creation", based on a harmonization of the GRI, CDP, CDSB, IIRC and SASB reporting
- Job Quality frameworks (OECD, as well as analysis by Philippe Aghion and Richard Blundell on what constitutes a "good job" and the associated criteria.)

For the evaluation process, we aligned ourselves on both the evaluation processes provided by:

- Social auditing referential (SMETA, SEDEX)
- The evaluation process provided by the UN & LCA Initiative Guideline for Social Life Cycle Assessment (2020)

PEER REVIEW AND CRITICAL REVIEW

Throughout the tool conception and implementation, two academic advisors and their research teams provided a continuous insight regarding the SP&L (Philippe Durance, Economist, Prospective and Sustainable Development Chair, Conservatoire National des Arts et Métiers), and Andrée-Anne Lemieux (Head of Sustainability, IFM-KERING Sustainability Research Chair). Additionally, a bi-annual insight was provided by Collège de France Economist Philippe Aghion.

A total of twenty-five interviews were conducted before the first pilot and proof of concept.

Sets of peer review interviews were organized:

- One once the initial concept was approved internally in order to gain a first set of feedbacks which included interviews with professionals from our industry, experts on environmental and social impact assessment.
- The second set of interviews included conversations with international organizations (WFTO, BSR, Reporters Sans Frontières, BLAB, OECD, DEMOS, Planète Urgence, SEDEX), auditing partners and experts (ELEVATE, SGS), industry-related organizations (Fédération de la Haute Couture et de la Mode), Richemont, social enterprises (SeeMe) and corporations advanced when it comes to social impact initiatives (Michelin).
- A follow-up peer review one year after the first one to confirm alignment and further feedback from a selection of experts.

The Sustainability team at PricewaterhouseCoopers (PWC) Paris produced an initial and a follow-up critical review for the SP&L. They deemed the methodology robust, transposable, transparent and efficient. An industry test of the tool was organized and coordinated in 2022 by the FHCM (Fédération de la Haute Couture et de la Mode) in order to provide further feedback. PWC also had an active role in coordinating the Industry Consultation.



APPROACH SUMMARY

3 —
STAKEHOLDERS
& IMPACT SCOPE

STAKEHOLDERS

The UNEP (UN Environment Programme) defines social impacts as "consequences of positive and negative pressures on social endpoints and area of protection (i.e. well-being of stakeholders)" (UNEP, 2020). Measuring impact on all applicable stakeholders is central to measuring, evaluating and integrating social impact into decision-making and improvement processes.

Aligning on the UNEP S-LCA proposition, six stakeholder groups were identified: workers, local communities, value chain actors, consumers, society and children.

The SP&L Approach accounts for four of those stakeholders:

- Workers
- Local communities
- Society
- Clients

The first focus of the methodology is on workers, both directly employed at the headquarters and operations, and employed by the company's suppliers. In that way, the methodology focuses on workers directly involved in the conception, manufacturing, and distribution process of our products.

Beyond workers, we chose whenever possible and relevant to align our choice of stakeholders, impact categories and metrics on the existing social life cycle assessment (Life Cycle Initiative, UNEP, and Social Value Initiative, leading to the future ISO 14075 Social Life Cycle Assessment norm in 2024). When it comes to local communities, society, and clients, we directly aligned the data collected on UNEP 2021 Methodological sheets for subcategories in Social Life Cycle Assessment. When it comes to impact on society, we further aligned our criteria on upcoming B Lab criteria (2022 draft for their new upcoming standards).



STAKEHOLDERS

WORKERS

With the SP&L Approach, we estimate primarily our impacts on workers and employees mobilized on our products from sourcing to retail.



Impacts measured for	Stakeholder Focus	Impact Categories
HQ & Suppliers	Workers	Diversity & Inclusion
		Gender Equality
		Living Wage
		Well-Being
		Training
		Job Quality

LOCAL COMMUNITIES

When it comes to local communities, we aligned the data we collect on the UNEP proposition (2021). We uniformly estimate our operations impact on local communities, as well as our suppliers' impact on their own local communities.



Impacts measured for	Stakeholder Focus	Impact Categories
HQ & Suppliers	Local Communities	Local Engagement
		Policies to protect local communities

STAKEHOLDERS

SOCIETY

When it comes to impact on society, we aligned the data we collect on the UNEP proposition (2021) and the draft for upcoming B Lab performance criteria and new standards (2022) aimed to be published in 2024. Impact on Society is only measured in Tier 0 (direct activities and operations)



Impacts measured for	Stakeholder Focus	Impact Categories
HQ only	Society	Public Commitments Contribution to Development

CLIENTS

When it comes to impact on clients, we aligned the data we collect on UNEP (2021). Impact on Clients is only measured in Tier 0 (direct activities and operations).



Impacts measured for	Stakeholder Focus	Impact Categories
HQ only	Clients	Client protection Transparency & Dialog

IMPACT SCOPE

When it comes to impact on workers, the SP&L metrics are aligned with a selection of the WEF 2020 referential proposal, with the exception of the Job Quality, Know-How, Living Wage associated metrics, and the complementary metrics for the Gender Equality Impact category. Metrics for impact on local communities, society, and clients are aligned on the S-LCA UNEP proposition (2020).

The SP&L approach includes twelve impact categories total with seventy-two associated metrics, including new metrics derived and adapted from UNEP S-LCA propositions (UNEP, 2021). In total, 45 metrics are allocated to assessing the potentially positive impact on workers (see below).

IMPACT CATEGORY	SP&L APPROACH ASSOCIATED METRICS	WEF REFENTIAL (2020)	S-LCA UNEP (2020)	B CORP DRAFT STANDARDS (FOR 2024)
Diversity & Inclusion	<ul style="list-style-type: none"> Employee categories and representation (nationality, age, disability, gender) Access to permanent contracts Diversity policies in place Disability policies in place 	Percentage of employees per employee category, by age group, gender and other indicators of diversity	Equal opportunity	<ul style="list-style-type: none"> Justice Equity Diversity & Inclusion Company gathers and rates D&I statistics and manages D&I opportunities (operations focus solely)
Gender Equality	<ul style="list-style-type: none"> Representation and share in management Access to permanent contract Representation at the board Representation in workers committees Pay gap 	Pay gap	Not represented in worker's criteria	Integrated within D&I criteria
Living Wage	<ul style="list-style-type: none"> Living Wage (based on Fair Wage Network's database, adjusted and non-adjusted living wages estimates) Share of employees paid the living wage Current workers' wages against the living wage 	Not in the WEF proposition (as such)	Wages	Fair Wages paid in own operations, and actions taken to enable fair wages in the supply chain. Company takes meaningful actions to prevent wage disparities.
Health and well-being	<ul style="list-style-type: none"> Access to well-being offer and services Mobilization and participation to well-being best practices Absenteeism 	Employee well-being measured through employees' participation in best practice health and well-being programme, absenteeism rate	Benefits and social security	
Training	<ul style="list-style-type: none"> Hours of training Number of employees trained Measured effectiveness of training (estimate) Share of unskilled position Intergenerational training (optional) 	Training provided (average hours of training per person and by employee category, average training expenditure), number of unfilled skilled positions, and monetized impacts of training (increase earning capacity as a result of training intervention using investment in training as a percentage of payroll, effectiveness in training and development through increased revenue, productivity, employees engagement and internal hire rates.	Not represented in worker's criteria	
Job Quality	<ul style="list-style-type: none"> Job Tenure Promotion rate Pay progression Use of soft skills 	Not in the WEF proposition	Not represented in worker's criteria	
Know-How	<ul style="list-style-type: none"> Complex Technical skills Traditional skills Know-how transmission Seniority 	Not in the WEF proposition	Not represented in worker's criteria	

SP&L, WEF, UNEP & B Corp impact categories and associated metrics (Impact on workers)

18

IMPACT SCOPE

In total, 27 metrics are allocated to assessing the potentially positive impact on local communities (9 metrics), society (9 metrics), and clients (9 metrics).

STAKEHOLDERS	SP&L APPROACH IMPACT CATEGORIES	SP&L APPROACH IMPACT METRICS	UNEP, S-LCA (2020)	B CORP DRAFT STANDARDS (FOR 2024)
Local Communities	Local Engagement	<ul style="list-style-type: none"> • Sharing of Local Hires • Policies on local hiring • Share of locally-based suppliers 	Local employment	
	Initiatives & Policies in place to protect local communities	<ul style="list-style-type: none"> • Intellectual Property (if applicable) • Education Initiatives • Material Resource conflict prevention • Environmental management system • Policies in place to protect cultural heritage (if applicable) • Migrants integration (if applicable) • Delocalization prevention (if applicable) 	<ul style="list-style-type: none"> • Access to material resources • Access to immaterial resources • Delocalization and migration prevention • Cultural heritage protection • Healthy and safe living conditions • Respect for Indigenous Rights 	
Society	Public commitment to Sustainability	<ul style="list-style-type: none"> • Public Commitment to Sustainability • Principles and Codes of Conduct • Commitment & actions to prevent corruption • Internal and external controls to prevent corruption • Lobbying is aligned on mission and values 	<ul style="list-style-type: none"> • Public Engagement on Sustainable development topics • Prevention and Mediation of Armed Conflicts • Corruption Prevention • Ethical Treatment of Animals 	<ul style="list-style-type: none"> • Collective Action • Multi stakeholder-collaborations • Active promotion of the advancement of social and/or environmental impacts • Public Policy promotion to advance social and/or environmental impacts • Practicing through leadership to drive change
	Contribution to Development	<ul style="list-style-type: none"> • Contribution to Economic Progress • Partnership in research and development • Investments in technology development / transfer 	<ul style="list-style-type: none"> • Contribution to Economic Development • Technology Development • Poverty Mitigation 	<ul style="list-style-type: none"> • Collective Action • Mentoring • Funding Research
Clients	Protection	<ul style="list-style-type: none"> • Client health and safety assessment • Internal management systems to protect client's privacy 	<ul style="list-style-type: none"> • Health & Safety • Privacy Protection 	
	Dialog	<ul style="list-style-type: none"> • Feedback mechanism • Improvement • Customer satisfaction surveys • Publication of a Sustainability Report • LCA Results Communication • Clear communication of end-of-life options to clients 	<ul style="list-style-type: none"> • Feedback Mechanism • Transparency • End-of-life Transparency 	

SP&L, WEF, UNEP & B Corp Impact categories and associated metrics (Impact on local communities, society and clients)



STEPS OVERVIEW

There are five steps composing the SP&L.

1. The first step is a pre-requisite: an overall mapping process based on documentation, auditing results, and certifications.
2. The second step is communication of a self-assessment document to suppliers in order to measure their potentially positive social impacts. The time of completion is estimated between two weeks and one month from reception. The same self-assessment should be filled by the corporation.
3. The third step is a data verification process, an estimation by external auditing partners of the reliability level of information communicated in the self-assessment.
4. The fourth step is the evolution and impact quantification based on five levels of practice, with a grading reflecting the level of social practices, from worst to best practices.
5. The fifth step is a visualization of the impacts evaluated at four levels: product, collection, supplier, and entity (Chloé).

Steps 4 and 5 are currently being systematized through a BI tool, with Google Cloud Platform (GCP), linked to a dashboarding tool (Looker studio) allowing us to visualize the results of the SP&L's: overall score, score per impact category, improvement areas and best practices using individual metrics (top five and bottom five practices per stakeholder evaluated) and number of mobilized workers per product and collection.

The sixth and last step is to take action, including reporting social impact data, monitoring social performance, directly and over time, accompanying suppliers to encourage improvement in social practices.

OPEN-SOURCE AND DOCUMENTATION

The forms of documentation mobilized through the SP&L process and made available on chloe.com are the following:

- Letter of Introduction to introduce and clarify the process to suppliers
- Self-assessment: digital self-reporting process sent to suppliers via email, and/or completed at the operations level (headquarters)
- Data verification format
- Excel base for evaluation
- Visualization scoreboard

The supplier visualization scoreboard contains information regarding social certifications and/or audit results in order to co-visualize the level of social risks together

with the level of positive social practices. The dashboarding is accessible to every IT team by the interfacing of product data management tool and the dashboarding tool, allowing more informed decision-making.

We made available the methodology for brands IT teams to adapt the code by providing a [github link](#) within the formats provided on chloe.com, alongside measurement and evaluation formats.

Please find the resources, measurement, evaluation, visualization and code formats on chloe.com. For any question please contact sustainability@chloe.com.



STEP 1: SOCIAL AUDITING

The SP&L has been conceived as a logical continuation to social auditing, and although the two assessments are meant to be read as distinct results, they are complementary in many ways, including:

1. The selection of topics covered enables a complete picture of social performance of the supplier (decent working conditions, potential positive impact)
2. The same external partner and internal staff are involved, ensuring good knowledge on suppliers and enabling synergies in the process (collecting the data at the same time).

The SP&L is meant to be communicated in a conjoined way with the audit score: Internally, both at the supplier level and at the product level, the SP&L Approach dashboard presents both the audit and the SP&L score.

In that way, each brand performing an SP&L should:

1. Align the SP&L with at least a supplier mapping or a traceability process,
2. Make sure that the SP&L is not launched independently from social auditing

We further recommend to align the SP&L within the same timeframe and with the same stakeholders as the social auditing process.



STEP 2: DATA COLLECTION & MEASUREMENT

Data is collected yearly from all active suppliers and at the operations (headquarter) level through a digital self-assessment (available on chloe.com). The process is introduced via an introduction letter or call to suppliers introducing and clarifying the purpose of the data collection. The data is self-reported, with a clear mention of the possibility of a data verification process with an auditing partner. The current process is to send out a digital document enabling direct evaluation and visualization of results upon completion.

The survey has four parts: one covering diversity & inclusion, fair wages and gender equality, the second covering well-being, the third one covering training and job quality, and the fourth and last one covering the impact on local communities. The last page (additional information) gathers essential elements such as: remarks regarding the partnership with the brand, workers mobilized by collection and by product reference (with an example of two to several product references), whether or not jobs were created or destroyed within the year and partnership with Chloé, certifications and documentation to attest of the level of social practices (SA8000, B Corp...), and additional information the supplier wishes to highlight when it comes positive social practices. The extent of the data collection depends on the number of employees per organization: if there are thirty or less employees, the organization fills a lighter version of the survey (20% less data collected, including data regarding policies and initiatives).



The metrics are presented with tables formats in order to make the data competition as straightforward as possible. The documentation is shared in several languages to facilitate communication and understanding throughout our value chain, and specifically at the supply chain level. Definitions, as well as a global glossary is made available and translated into each language to facilitate data completion. Key documentation is demanded of suppliers during the data collection process in order to facilitate the data verification process when it comes to policies and initiatives specifically.

STEP 3: DATA VERIFICATION PROCESS

The data verification process is a mandatory step in order to insure that any data collected, processed and potentially communicated is valid and not a false allegation. In order not to create any bias, we created with our social auditing partner a remote and adaptable process.

The information is verified in two ways:

- Non-personal data is uploaded on the auditor's platform
- Personal information is checked directly during the remote call in order to preserve confidentiality

The auditor fills in, per information category, the following elements: type of documentation provided by supplier, methodology or thought process applied (if relevant), validating the data, detail, and observations.

We recommend that the organization launching an SP&L within a given perimeter launch, for the first year, a data verification process for 100% of the scope, then a data



verification process for 30% (minimum) of the suppliers filling out the self-assessment, based on a verification sample including geographical representation of the company's supply chain within the sample, and representation of common supplier size.

Variation identifications with previous years and trends between sites or specific social topics should be monitored, with a rule of variance starting at 20%. Any variance identified beyond 20% should lead systematically to a demand for supporting documentation.

STEP 4: PERFORMANCE EVALUATION

GRADING PROCESS

The choice of a 1-5 performance rating scale enables a three-dimensional view on the performance level on each topic, and provides some degree of granularity regarding the positive social impacts.

The evaluation is realized with an ascending scale from 1 (below average practice) to 5 (best possible practice). We consider that grades 1 to 3 to highlight a low level of positive practices. We consider that a result from 3 to 3.5 is neither negative nor positive, representing a level of average practices. We consider that results from 3.5, and up to 5 represent good practices, or beyond average social practices. We consider, lastly, that results equaling 5 represent practices close or equivalent to best practices in the fashion industry.

The evaluation process is realized at the:

- Metric level
- Impact category level
- Overall or activity level

You will find on chloe.com the detail of the grading system for each metric.

The evaluation is realized systematically and automatically, based on [an evaluation grid](#), and using Google Cloud Platform (GCP) and Looker Studio. The code mobilized to adapt and implement the evaluation and visualization process are available on [chloe.com \(githublink\)](#). The fully digitalized process was created in order to avoid any form of potential error or bias during the evaluation of the quantified data, and to facilitate the analytic process.



STEP 4: PERFORMANCE EVALUATION

EVALUATION RATIONALES

The SP&L totals seventy-two metrics, divided into six impact categories for workers, two impact categories for the impact on communities, two impact categories for impact on society, and two impact categories related to the impact on clients. Metrics are evaluated in terms of social performance (1-5) following five evaluation rationales:

1. National Representation

Some metrics cannot be measured the same from country to country. They have been adapted based on local demographics and customs. For instance, the population in Madagascar is much younger than in Europe, so the "% of employees 50 or older" should represent this gap. Those metrics are country-dependent and we have developed independent tables per country in order to reflect this. Evaluation intervals are thus adapted country to country.

1. No correlation between country representation data and organization representation data
2. Low correlation between country representation data and organization representation data
3. Close representation between country representation data and organization representation data
4. Exact correlation between country representation data and organization representation data
5. Balanced over-representation between organization representation data and organization data (within 10%)

Focus: Living Wage Evaluation.

Chloé chose the Fair Wage Network referential to measure and evaluate the payment of living wages for their suppliers. Fair Wage Network provides two levels of evaluation for living wages: non-adjusted living wage (in this case, the individual worker's salary must fully cover the needs of his or her family), and adjusted-living wage (in this case, the salary of the worker is added to other income earners in the family to cover his/her family needs). In both cases, Fair Wage Network advises to take into account the needs of a typical family composed of two adults with a number of children along the national fertility rate. Fair Wage Network provides living wage levels at national, regional and city level in a majority of cases. However, for the SP&L, since we are aware that multiple standards are currently used within (and outside of) the fashion industry, we created an evaluation process which enables brands to provide their own data while evaluating living wages, see the proposed scale below:

1. Wages more than 10% below the adjusted living wage
2. Wages below the adjusted living wage (but no more than 10%)
3. Wages at adjusted living wage
4. Wages above the adjusted living wage but below the non-adjusted living wage
5. Wages at or above the non-adjusted living wage

STEP 4: PERFORMANCE EVALUATION

EVALUATION RATIONALES

2. Coverage

This set of metrics evaluate the level of access: to permanent contracts, to best practice well-being programs and to training. The metrics are scored from 1 to 5 in a perimeter extending from 0 (no access) to 100 (the entire workforce benefits from access). Three types of metrics are evaluated this way:

- The metrics related to the access to permanent contracts by population type (women, non-nationals, age factor, handicap status) in complement to the metrics evaluated in social auditing (share of workers who have access to permanent contracts)
- The metrics related to the access to “best practice” health and well-being programs (metric aligned on the proposition from the Embankment Project), complementarily to the social auditing metric of access to basic medical care, and training
- The metrics related to training: for instance the share of trained employees metrics which are complementary to social auditing’s metrics regarding the risk-based training offer.

Evaluation example: this is how we evaluate permanent contracts for women.

3. Gradation towards equality

Are measured with the “gradation towards equality” rationale metrics that reflect the gap (or lack thereof) in practices depending on worker’s profile and characteristic (ie gender, age, etc). For instance, the gap between men’s and women’s salary for a similar job position with similar competences and experiences.

Evaluation example: this is how we evaluate the lack of pay gaps.

Pay level evaluation:

Metrics related to wages are evaluated mobilizing a range from 0 (unequal, or partial pay level) corresponding to grade 1 out of 5, to 1 (equal, or fully corresponding pay level) corresponding to a grade of 5 out of 5. 1 corresponds to a total inequality and non-match, while 5 corresponds to a total parity and a best practice.

STEP 4: PERFORMANCE EVALUATION

EVALUATION RATIONALES

4. Maturity Level

This evaluation rationale is relevant for the evaluation of the implementation and level of advancement for policies, programs and initiatives. We consider a positive practice the deployment of initiatives and policies with improvement iterations, and best practices when there is an associated reporting for transparency enabling comparison over time in order to further improve practices. Size rule: the maturity metrics are only evaluated when the organization has more than 30 workers.

Example: this is how we evaluate disability policies.

Case	Associated Grade
<ul style="list-style-type: none"> • Policy, program or initiative does not exist • No actions are taken 	1
<ul style="list-style-type: none"> • Policy, program or initiative has been defined or outlined but is not yet fully in place • No action is taken, or an action is taken without reporting or monitoring 	2
<ul style="list-style-type: none"> • Policy, program or initiative is fully in place and communicated to stakeholders • No action is taken, or an action is taken without reporting or monitoring 	3
<ul style="list-style-type: none"> • Policy, program or initiative is fully in place and communicated to stakeholders • Actions are regularly taken to improve the impact of the policy, program, initiative, but no regular reporting is in place 	4
<ul style="list-style-type: none"> • Policy, program or initiative is fully in place and communicated to stakeholders • Actions are regularly taken to improve the impact of the policy, program, initiative, but no regular reporting is in place 	5

Beyond means, we also created an rationale to evaluate ends when it comes to training initiatives: when one or several positive and correlated effects can be observed, a multicriteria choice creates the possibility for organizations to select one or several option (for instance when it comes to effectiveness of training: increased revenue, productivity gains, employee engagement and/or internal hire rates, which are then verified through data verification processes). The scope of observed positive effects is rated from 0 (no positive effect observed) to 5 (plural positive effects observed and registered).

5. Binary

In some cases, a binary evaluation method can be used for metrics related to the existence and implementation of inclusive policies (gender, disability, diversity and inclusivity), especially for impact categories such as local communities, society, and clients. The grading process is the following: the application of a binary analysis (yes/no, existent/non-existent, implemented/not implemented) with a grade being either a 1 (no) or a 5 (yes). This is only relevant whenever a gradual evaluation is either non relevant or not feasible.

Example: Has your company designed, signed and implemented a code of conduct, integrating the social and environmental dimensions?

STEP 4: PERFORMANCE EVALUATION

MANDATORY DATA

A majority of the data is mandatory and must be completed by production sites.

Mandatory metrics rules: If mandatory metrics are not completed by the organization, they are given a grade of 1. All gender equality and living wage metrics are automatically mandatory as they constitute a high priority for the fashion industry.

Optional data rules: If optional metrics are not completed by the organization, they are left blank and not taken into account when calculating the organization's grade.

Scenario 1 – Small organizations (less than 30 workers): organization-specific metrics such as «board representation» and «worker committee/union», as well as metrics evaluated in terms of maturity (policies, initiatives) are considered optional.

Scenario 2 – HQ-only metrics which are not mandatory for suppliers

EVALUATION WEIGHTING RULE

Aggregate score. Inside each SP&L aggregated score, the grade is calculated as the average of the grades of each category.

Impact category score. Each impact category is evaluated independently, and will have one individual grade. This means that every category has initially the same weight, no matter how many metrics are in that category. To reflect the priorities within the fashion industry, after a consultation, the choice of

ponderation at the impact category level is to create a weighting differentiation in favor of gender equality and living wage (2v1) compared to the other impact categories, to reflect the industry priorities.

Metric score. At the metric level, the ponderation is of 1 between each metric and following the same grading system.

The multi-tiers evaluation enables a visibility of nuances between impact categories, and between individual types of practices (for example: gender equality, and within the gender equality category: "representation on the board" has a score that might be different from the performance score given to "share of women present on the board") which guides the choices in terms of decision-making's timeline and set priorities.

At the product level, where T0 (operations), T1 (assembly), T2 (semi-finished and embellishments), T3 (raw material transformation) & T4 (raw material extraction) are represented and where every organization mobilized on a product is taken into account in the final aggregated score, the ponderation is created using the number of workers directly mobilized on the product reference. The total aggregated score, taking into account all three sites of production, will be divided by the total number of employees mobilized.

STEP 5: PERFORMANCE VISUALIZATION

The purpose of the visualization process is to guide decision-making towards optimization at both lifecycle and value chain levels. Once the data is completed on the digital survey form, the social data is directly evaluated and automatically translated visually on a dashboard:

- At the headquarters or operations level
- At the supplier level
- At the product level

The initial SP&L version mobilizes Google Cloud Platform (GCP), a BI & analytics serving dashboards for in-depth, consistent analysis in order to avoid mistakes and provide a consistent analysis. GCP allows a real-time data processing, and constitutes an essential step in the visualization process. An Excel file for input/output file in an effort to harmonize and centralize all feedback and SP&L results from operations and suppliers.

While the SP&L does not cover decent working conditions itself through the process, but focuses on positive impacts, the visualization includes audit score at every level: organization and product through the completion on GCP or any social risk information or auditing information.

The visualization offers a granularity:

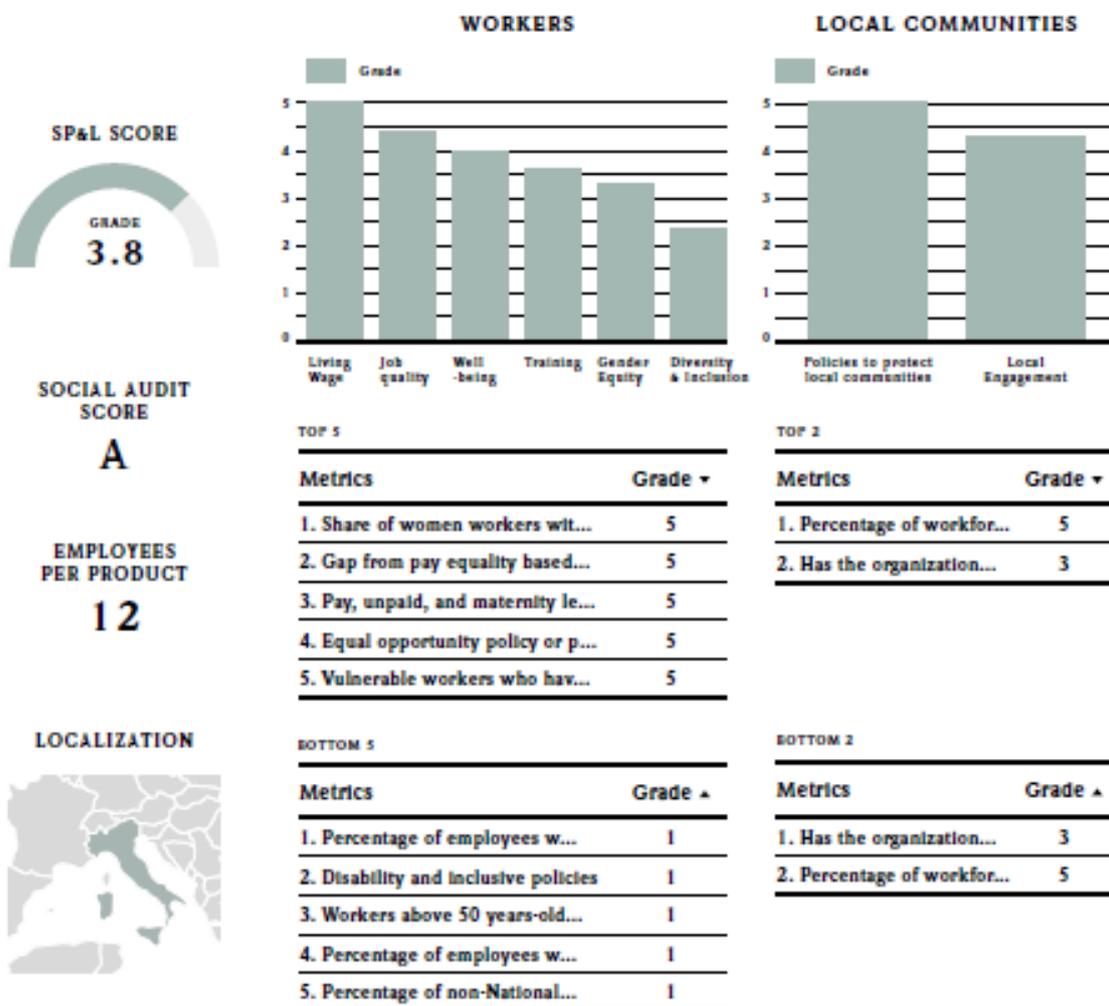
- Audit score covering decent working conditions
- Overall performance score (aggregated)
- Score per impact category
- Score per metrics, with best practices and necessary improvement showcased.

Other direct available information are: the number of workers mobilized by collection, the number of workers mobilized by product reference (in average), and a List of references the supplier has worked on – and *link* to access the visualization per product reference.

STEP 5: PERFORMANCE VISUALIZATION

Through the first version of the SP&L approach was created a visualization tool which synthesizes essential elements for decision-making and optimization, by creating the basis for a multicriteria performance scoreboard, including certifications et audit scores, to facilitate access, reporting and accounting.

Please find below an example of the representation of the organizations and product scorecards.



**STEP 5:
PERFORMANCE VISUALIZATION**

PRODUCTS
Product Ref Listing



SP&L SCORE



SOCIAL AUDIT SCORE

A

Organization	SP&L Score	Employee per product
Supplier 1	3.8	356
Supplier 2	3.9	214
Supplier 3	3.7	104

Organization	Audit
Supplier 1	A
Supplier 2	A
Supplier 3	A

LOCALIZATION



Product Dashboard — example

TAKING ACTION

The aim with the SP&L was to provide additional insight for decision-making and to better accompany change within our supply chain.

In that way, the steps to take after visualization are the following:

1. Communicate key information and results to suppliers
2. Define a capacity-building plan based on SP&L KPI with suppliers
3. Monitor change and organize yearly evolution monitoring
4. Train internal teams to anticipate data collection, monitoring, and discussion with suppliers.

The SP&L approach is by nature exploratory and evolutive. It is intrinsically meant to evolve over time as socio-economic situation by country, regulations, but also industry standards such as social labelling regarding social impact evolve. Living wage, which is one of the key item measured in this methodology, has not yet a single international recognized standard.

The methodology will be regularly updated. Other key topics which we aim to include in a future iteration of the methodology are value sharing, value distribution and value redistribution which we aim to include in a "value chain partners" new stakeholder category. Further, current progress in traceability will more than likely further the possibilities to get additional insight and better manage positive social impact within supply chains. We hope this leads to a systemization of performance measurement



and monitoring in the longer run.

The creation of the SP&L approach created an opportunity to discuss best practices at the industry level related to social impact. As these discussions continue, we hope and anticipate that they will also contribute to ambitiously progress forward. We hope that our approach can be further integrated into social auditing processes, in discussion with supply chain partners in order to avoid too much extra work.

With the SP&L we strived to systematically fill the gap between social and environmental impact measurement and management, and to consider together social and environmental performances. We welcome change, progress and conversation to continue this journey together. Please do not hesitate to contact sustainability@chloe.com



ANNEXES

35

LITERATURE REVIEWED

SOCIAL REPORTING & RETURN ON INVESTMENT

- GRI (Global Reporting Initiative)
- CDSB (Climate Disclosure Standards Board)
- IIRC (Integrated Reporting Initiative)
- SASB (Sustainability Accounting Standards Board)
- World Economic Forum - Toward Common Metrics and Consistent Reporting of Sustainable Value Creation (White Paper, 2020)
- The Embankment Project for Inclusive Capitalism (EPIC)
- Social Return on Investment (SROI, 2012 Guide)
- UN & LCA Initiative Guideline for Social Life Cycle Assessment – PSIA working group (product life cycle analysis)

SOCIAL DATA(BASES) & INDICATORS

- United Nations – SDGs guidelines
- UNECE – Statistics on Population
- UNESCO – Statistics on Education, Literacy, Gender in Education
- ILO – ILO Stats, Decent Work framework
- OECD – Social Welfare & Expenditure, Employment, Job Quality
- World Bank – World Bank open data

JOB QUALITY FRAMEWORKS & RESEARCH

- EU Laeken Indicators of Job quality, 2001
- Business Europe Indicators of Job quality, 2001
- European Trade Union Institute ETUI Job quality Index, 2008
- EU Employment Committee (EMCO), 2010
- The International Labour Organisation (ILO) Decent Work Indicators, 2012
- Eurofund, 2012
- UNECE Job Quality Framework, 2014
- OECD Job Quality Framework, 2015
- Aghlon, Blundell, ongoing work on the nature of good jobs, 2020-present

INTERNATIONAL SURVEYS (FOCUS ON WORKERS)

- European Working Conditions Survey
- European Quality of Life Survey
- The European Union Labour Force Survey ad hoc modules
- International Social Survey Programme
- Gallup World Poll
- EWCS/O*Net

GUIDELINES & FRAMEWORKS

- ISO Norms - Guidance ISO 20000-2010, ISO 45001: Occupational Health & Safety, ISO14001: management of environmental management, ISO9001 quality management, ISO 14040-2006 Environmental management – LCA
- United Nations – SDGs and guidelines on metrics
- OECD Policy Brief on social impact measurement
- UN & LCA Initiative Guideline for Social Life Cycle Assessment
- UNECE Human Capital Guide
- BSR Gender Data and Impact Tool
- Handbook for Product Social Impact Assessment, Roundtable for product social metrics, Pré Sustainability in partnership with UNDP, SAI, ILO

CHLOÉ: EXISTING DATA FOR THE SP&L

- Social Auditing Cycles
- HR Data
- B Corp
- Traceability data

LITERATURE MOBILIZED

Metrics & Reporting

JOB QUALITY FRAMEWORK

OECD, EU, BUSINESS EUROPE, ILO, UNECE, Aghion & Blundell

HARMONIZED SOCIAL REPORTING

Harmonization work by the World Economic Forum

GRI, CDP, Climate Disclosure Standards Board (CDSB), International Integrated Reporting Council (IIRC) and Sustainability Accounting Standards Board (SASB)

Evaluation

SOCIAL AUDITING REFERENTIALS

ILO, SMETA (SEDEX)

SOCIAL LIFE CYCLE ANALYSIS

UN & LCA Initiative Guideline for Social Life Cycle Assessment, PSIA (product life cycle analysis)

Metric description	1	2	3	4	5	Calculation method
Percentage of women in total workforce	In 20 OR 96	30 OR 40	40 OR 50	50 OR 60	60 OR 70	No. of women / Total employees
Percentage of employees who are 50 years old and older	0%	0% to 3%	3% to 8%	8% to 10%	Above 10%	No. of employees over 50 / Total employees
Percentage of employees who are part of one of the "disadvantaged workers" categories	0%	0% to 3%	3% to 8%	8% to 10%	Above 10%	1 - (No. of employees that are national) / Total employees
Percentage of employees who have a disabled status	0%	0% to 3%	3% to 8%	8% to 10%	Above 10%	No. of disabled workers / Total employees
Workers who are between 19 - 26 and have a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	No. of employees 19-26 who have a permanent contract / no of employees over 50
Workers above 50 years old with a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	More than 90	No. of employees over 50 who have a permanent contract / no of employees over 50
Disadvantaged workers who have a permanent contract	0%	0% to 3%	3% to 8%	8% to 10%	10%	No. of disadvantaged workers who have a permanent contract / no of disadvantaged workers
Disabled workers who have a permanent contract	0%	0% to 3%	3% to 8%	8% to 10%	10%	No. of disabled workers who have a permanent contract / no of disabled workers
Non-national workers who have a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	(Total employees with a national contract - National employees who have a permanent contract) / (Total employees - national employees)
Percentage of non-National stakeholders	0%	0% to 3%	3% to 8%	8% to 10%	10%	1 - (No. of nationals that are stakeholders) / (Total stakeholders)
Non-National in the top management	0%	0% to 3%	3% to 8%	8% to 10%	10%	1 - (No. of nationals that are part of management) / Total top management
Share of management who were solely part of the "disadvantaged workers" category	0%	0% to 3%	3% to 8%	8% to 10%	More than 10%	Disadvantaged workers that are managers / Total management
Workers with a disability: share of management	0%	0% to 3%	3% to 8%	8% to 10%	10%	Managers with a disability / Total management
Non-National representation in worker's committees	0%	0% to 3%	3% to 8%	8% to 10%	More than 10%	1 - (Nationals who are part of a workers committee) / Total workers committee
Representation of "disadvantaged workers" within workers' committees	0%	0% to 3%	3% to 8%	8% to 10%	More than 10%	Disadvantaged workers who are part of a workers committee / Total workers committee
Youth representation in worker's committees	0%	0% to 3%	3% to 8%	8% to 10%	More than 10%	Workers 18-26 who are part of a workers committee / Total workers committee
50+ years old employees' representation in worker's committees	0%	0% to 3%	3% to 8%	8% to 10%	More than 10%	Workers 50+ who are part of a workers committee / Total workers committee
Workers with a disability: representation in worker's committees	0%	0% to 3%	3% to 8%	8% to 10%	More than 10%	Workers with a disability who are part of a workers committee / Total workers committee
Equal opportunity policy or practices in place	Non-existent	Formalised	In place	Advanced	Reporting	Equal opportunity policy or practices in place
Disability and inclusive policy or practices in place	Non-existent	Formalised	In place	Advanced	Reporting	Disability and inclusive policy or practices in place
Share of women workers with a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Women who have a permanent contract / all women
Women who are part of the "disadvantaged workers" category	Less than 10	10 to 25	25 to 35	35 to 45	45 to 50	Women who are in management / Total top management
Women who are in management	Less than 10	10 to 25	25 to 35	35 to 45	45 to 50	Women who are in management / Total top management
Share of women in management	Less than 10	10 to 25	25 to 35	35 to 45	45 to 50	Women who are in management / Total top management
Women representation in workers' committees and representation	Less than 10	10 to 25	25 to 35	35 to 45	45 to 50	Women who are in workers' committees / Total workers committee
Women representation in workers' committees and representation	Less than 10	10 to 25	25 to 35	35 to 45	45 to 50	Women who are in workers' committees / Total workers committee
Policies for parental leaves, processes & benefits in place	Non-existent	Maternity leave	Maternity leave + paternity leave	Advanced	Reporting	Policies for parental leaves: processes & benefits in place
Gap from pay equality based on gender in % in management	15 & higher	10 to 15	1 to 10	Below 1	0	Average men managers salary - average women managers salary / (Average men non-management workers salary - average women non-management workers salary)
Gap from pay equality based on gender in % for non-management workers	15 & higher	10 to 15	1 to 10	Below 1	0	Average men non-management workers salary - average women non-management workers salary
Women's paid the living wage / Total employees	Less than 50	50 to 60	60 to 75	75 to 90	90 to 100	Workers paid the living wage / Total employees
Access to employee-provided medical and healthcare services beyond regulatory demands	0 to 20	20 to 40	40 to 60	60 to 80	Above 80	Workers with access to medical and healthcare services provided by employer / Total employees
Percentage of employees participating in "best practice" health and well-being assessment (6/5)	0 to 20	20 to 40	40 to 60	60 to 80	Above 80	Employees participating in "best practice" health and well-being assessment / Total employees
Percentage of trained employees (beyond Health & Safety)	0 to 10	10 to 20	20 to 30	30 to 50	Above 50	Trained employees / Total employees
Effectiveness of the training and development through increased revenue, productivity gains, employee engagement and/or internal hire rates.	No positive effect observed (0 boxes checked)	Little positive effect observed (1 box checked)	Some positive effect observed (2 boxes checked)	Plural positive effect observed (3 boxes checked)	A lot of positive effect observed (4 boxes checked)	Positive effects of training observed
Share of youth (19-26) trained by senior workers	0 to 10	10 to 20	20 to 30	30 to 50	Above 50	Workers 19-26 who are trained by senior workers / No. of employees 19-26
Workers who are between (27 - 50) and have a permanent contract	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Workers who are between 19-26 and have a permanent contract / No. of employees 28-50
Average job tenure	1 to 2	2 to 4	4 to 5	5 to 7	7 years +	Average job tenure
Percentage of employees promoted yearly	Less than 5	5 to 8	8 to 10	10 to 15	15+	No. of employees promoted / Total employees
Percentage of employees benefiting from a pay progression yearly	Less than 5	5 to 8	8 to 10	10 to 15	15+	No. of employees who received a raise / Total employees
Average employee turnover (yearly)	Less than 25	25 to 35	35 to 45	45 to 55	55+	Average employee turnover: No. of employees who left / Total employees
(O) which Number of employees committed to, and passing on their know-how	50 or less	50 to 60	60 to 75	75 to 90	90 to 100	Average seniority of employees mobilized know-how (in years)
Average seniority of employees mobilized know-how (in years)	1 to 2	2 to 4	4 to 5	5 to 7	7 years +	Average seniority of employees mobilized know-how (in years)
Has the organization developed policies to prevent devaluation	Non-existent	Formalised	In place	Advanced	Reporting	Has the organization developed policies to prevent devaluation
Has the organization developed procedures for integrating migrants	Non-existent	Formalised	In place	Advanced	Reporting	Has the organization developed procedures for integrating migrants
Has the organization developed policies in place to protect cultural heritage year-round	Non-existent	Formalised	In place	Advanced	Reporting	Has the organization developed policies in place to protect cultural heritage year-round
Percentage of workforce need local?	Non-existent	Formalised	In place	Advanced	Reporting	Percentage of workforce need local?
Has the organization developed policies on local hiring?	Non-existent	Formalised	In place	Advanced	Reporting	Has the organization developed policies on local hiring?
Percentage of spending on locally-based suppliers	Less than 5	5 to 10	10 to 20	20 to 50	More than 50	Percentage of spending on locally-based suppliers
Has the organization developed policies related to intellectual property: respect moral of artists	Non-existent	Formalised	In place	Advanced	Reporting	Has the organization developed policies related to intellectual property: respect moral of artists
Has your company designed, shared and implemented in code of conduct, integrating the	Non-existent	Formalised	In place	Advanced	Reporting	Has your company designed, shared and implemented in code of conduct, integrating the
Has your company signed, and at least partially implemented measures in alignment with	Non-existent	Formalised	In place	Advanced	Reporting	Has your company signed, and at least partially implemented measures in alignment with
Has your company set up one or more partnerships and/or initiatives related to the SDGs	Non-existent	Formalised	In place	Advanced	Reporting	Has your company set up one or more partnerships and/or initiatives related to the SDGs
How does your company integrate social and environmental performance into decision making	Non-existent	Formalised	In place	Advanced	Reporting	How does your company integrate social and environmental performance into decision making
Does your company have any of the following statements with respect to customer satisfaction	Non-existent	Formalised	In place	Advanced	Reporting	Does your company have any of the following statements with respect to customer satisfaction
Does your company implement any of the following ways of contributing to progress and	Non-existent	Formalised	In place	Advanced	Reporting	Does your company implement any of the following ways of contributing to progress and
Has your organization invested in technical and technological solutions aimed at national	Non-existent	Formalised	In place	Advanced	Reporting	Has your organization invested in technical and technological solutions aimed at national
Has your organization initiated and/or developed long-term partnerships to promote rise	Non-existent	Formalised	In place	Advanced	Reporting	Has your organization initiated and/or developed long-term partnerships to promote rise
What percentage of suppliers undergo regular quality assurance reviews or audits?	Less than 10	10 to 49	50 to 74	75 to 99	100	What percentage of suppliers undergo regular quality assurance reviews or audits?
Do any of the following statements relate to mechanisms for customer satisfaction and	Non-existent	Formalised	In place	Advanced	Reporting	Do any of the following statements relate to mechanisms for customer satisfaction and
Does your company have any of the following statements with respect to customer satisfaction	Non-existent	Formalised	In place	Advanced	Reporting	Does your company have any of the following statements with respect to customer satisfaction
Does your company have any of the following statements with respect to customer satisfaction	Non-existent	Formalised	In place	Advanced	Reporting	Does your company have any of the following statements with respect to customer satisfaction
If you produce life cycle analyses of your products, do you communicate the results to	Non-existent	Formalised	In place	Advanced	Reporting	If you produce life cycle analyses of your products, do you communicate the results to
Does your company systematically communicate about recycling and end-of-life options	Non-existent	Formalised	In place	Advanced	Reporting	Does your company systematically communicate about recycling and end-of-life options

Stakeholders	Category	Metric name	Unit
Workers	Diversity & inclusion	Gender	%
Workers	Diversity & inclusion	Age	%
Workers	Diversity & inclusion	Nationality	%
Workers	Diversity & inclusion	Disadvantaged workers	%
Workers	Diversity & inclusion	Disability	%
Workers	Diversity & inclusion	Permanent contract, 18-28	%
Workers	Diversity & inclusion	Permanent contract, 50+	%
Workers	Diversity & inclusion	Permanent contracts formerly marginalized & priority workers	%
Workers	Diversity & inclusion	Permanent contracts disability	%
Workers	Diversity & inclusion	Permanent contracts non-nationals	%
Workers	Diversity & inclusion	Non-national shareholders	%
Workers	Diversity & inclusion	Non-national in the top management	%
Workers	Diversity & inclusion	Non-national share of management	%
Workers	Diversity & inclusion	Formerly marginalized / priority workers share of management	%
Workers	Diversity & inclusion	Disabled workers share of management	%
Workers	Diversity & inclusion	Representation in workers committees / nationally	%
Workers	Diversity & inclusion	Representation in workers committees / formerly marginalized	%
Workers	Diversity & inclusion	Representation in workers committees / youth (18-28)	%
Workers	Diversity & inclusion	Representation in workers committees / 50+ years-old	%
Workers	Diversity & inclusion	Representation in workers committees / disabled	%
Workers	Diversity & inclusion	Equal Opportunity policy (Non-discrimination policy)	Maturity Level
Workers	Diversity & inclusion	Disability and inclusion policy	Maturity Level
Workers	Gender Equality	Permanent contract / gender	%
Workers	Gender Equality	Women shareholders	%
Workers	Gender Equality	Management / Gender	%
Workers	Gender Equality	Representation in workers committees / gender	%
Workers	Gender Equality	Parental leaves	Maturity Level
Workers	Gender Equality	Management pay gap / Gender	%
Workers	Gender Equality	Workers pay gap / Gender	%
Workers	Living Wage	Share of employees paid the living wage	%
Workers	Living Wage	Current workers wage against living wage	%
Workers	Well-Being	Access to additional medical and care services provided by employer	%
Workers	Well-Being	Participation in well-being programmes and services	%
Workers	Well-Being	Absenteeism	%
Workers	Training	Training scope	%
Workers	Training	Effectiveness of training	Maturity Level
Workers	Training	Intergenerational training / Vocational training	%
Workers	Job Quality	Permanent contract, 26-50	%
Workers	Job Quality	Job Tenure	NB
Workers	Job Quality	Promotion Rate	%
Workers	Job Quality	Pay progression	%
Workers	Job Quality	Turnover	%
Workers	Training	Transission	%
Workers	Training	Stability	Years
Local Communities	Policies to protect local communities	Decentralization	Maturity Level
Local Communities	Policies to protect local communities	Migrants integration	Maturity Level
Local Communities	Policies to protect local communities	Policies in place to protect Cultural Heritage	Maturity Level
Local Communities	Local Engagement	Policies on local hire	Maturity Level
Local Communities	Local Engagement	Spending on locally-based suppliers	Maturity Level
Local Communities	Policies to protect local communities	Intellectual property	Maturity Level
Local Communities	Policies to protect local communities	Education Initiatives	Maturity Level
Society	Public commitments	Implementation of a code of conduct	Y/N
Society	Public commitments	Responsible Design/ Green Design	Maturity Level
Society	Public commitments	Responsible Procurement linked to SDGs	Maturity Level
Society	Public commitments	Environmental and social performances integrated into decision-making	Y/N
Society	Public commitments	Anti-corruption practices	Y/N
Society	Public commitments	Anti-corruption prevention systems	Y/N
Society	Contribution to Development	Contributions to economic development	Y/N
Society	Contribution to Development	Technical and technology development	Maturity Level
Society	Contribution to Development	Research and development	Maturity Level
Consumers / Clients	Safety, privacy & dialog	Warranty coverage	%
Consumers / Clients	Safety, privacy & dialog	Quality insurance methodologies	Y/N
Consumers / Clients	Safety, privacy & dialog	Quality audit coverage	%
Consumers / Clients	Safety, privacy & dialog	Client claims, feedback and suggestions	Y/N
Consumers / Clients	Safety, privacy & dialog	Client satisfaction	Y/N
Consumers / Clients	Communication surrounding sustainability	Environmental and social performance communication	Y/N
Consumers / Clients	Communication surrounding sustainability	LCA results communication	Y/N
Consumers / Clients	Communication surrounding sustainability	Predicts end-of-life options communication	Y/N

Annex 6. SP&L Approach Github and Data Framework

chloe-social-profit-and-loss-approach / SP_L-Approach Public

<> Code Issues Pull requests Actions Projects Security Insights

main

SP_L-Approach / README.md

chloe-social-profit-and-loss-approach Update README.md

1 contributor

816 lines (601 sloc) | 48.3 KB

CONTRIBUTORS	1	FORKS	1	STARS	2	ISSUES	0 OPEN	LICENSE	AGPL-3.0
--------------	---	-------	---	-------	---	--------	--------	---------	----------

LINKEDIN

Chloé

Social Profit & Loss Approach

Women Forward. For a Fairer Future.
[Explore the docs »](#)

[View Demo](#) · [Report Bug](#) · [Request Feature](#)

▼ Table of Contents

1. About The Project
 - Built With
2. Getting Started
 - Prerequisites
 - Build and provide the gcloud environment
 - Compute KPIs
 - Weighing rule
3. How to implement Data Visualization
4. Usage
5. Roadmap
6. Contributing
7. License
8. Contact
9. Acknowledgments

About The Project



The Social Profit & Loss Approach

At Chloé, we believe that informing strategies and action plans all start with impact measurement. Measuring social impact means gaining a better insight into the potentially positive impacts that organisations can have on their stakeholders throughout their value chains – from raw material extraction to a product's end of life. This was our rationale for creating the Social Profit & Loss approach (SP&L). The SP&L approach enables organisations to measure, evaluate, and visualise an organisation's positive impact on their stakeholders, and to draft tailor-made action plans for making immediate and long-term improvements to their own practices as well as their suppliers.

Open Source

Chloé believes transparency is central to advancing industry practices. We have created the SP&L to further the collective discussion around positive social impact. The SP&L methodology and its implementation formats therefore are open sourced.

Steps

The methodology has five main steps: (1) social auditing and decent practices monitoring as a pre-requisite, (2) potentially positive social performance measurement through a data collection using jotform, (3) data evaluation, (4) data visualization, and (5) a data verification process to consolidate the final results. The data collection format ([url](#)) and evaluation format detailing metrics and calculations rules ([url](#)) are available [here/on chloe.com\(url\)](#), as well as the general [Methodology Note and Guidelines](#).

Once you have sent the surveys (using jotform) and that the data collection is completed, this github will describe how to clean and automatize data evaluation and visualisation. Impact visualisation is instrumental to informing decision-making, and in supporting suppliers when it comes to improving their immediate and long-term social practices. In the methodology, a dashboarding tool, linked to the evaluation tool, provides a multi-level visualisation of positive social impact including the aggregated impact, supplier's impact and product's impact.

We have thus created this github to provide insight and an example as to how to :

1. Automate the data evaluation using Jotform and GCP
2. Go from data collection and evaluation to data visualization

We encourage highly collaboration and contribution to improve this project according to the needs of the community.

Built With

This section list the major frameworks/libraries used to bootstrap the project.

-  GOOGLECLOUD
-  LOOKER
-  MICROSOFT EXCEL
-  Jotform

In a first version, the project uses Google Cloud for data storage in BigQuery, calculation of scoring rules with a Google Cloud workflow, visualization of results with Google Cloud Looker. Microsoft Excel for the processing of form data (Deprecated) and exportation of Submission Form (from JotForm). Python as a framework to build the cloud function in GCP to export the excel file from a Bucket to a BigQuery table.

The final output of this project is a Dashboard built with Looker Studio where you can explore the result of the social performance measurements process.

About Looker Studio:

Looker Studio is a web-based data modeling and analysis tool that allows users to create, manage, and share interactive data insights and dashboards. It offers a drag-and-drop interface for data modeling, data exploration, and visualization. Looker Studio integrates with various data sources, including databases, data warehouses, and cloud services, to provide a unified view of data. It also allows users to create custom calculations and metrics, and to build complex data models that can be easily understood by both technical and non-technical users.

[\(back to top\)](#)

Getting Started

In order to implement this project in your own Google Cloud infrastructure, this section should cover few examples of how we decided to implement the SP&L project in our infrastructure.

However, with the form available and the calculation rules defined, everyone is free to adapt this implementation to their own environment according to their needs and resources.

Prerequisites

To implement the project the way it was designed to be, you first need to install Google Cloud SDK on your local machine. Follow this link for further information <https://cloud.google.com/sdk/docs/install?hl=fr#windows>

Secondly, you need to setup your JotForm account or any other form provider and implements the questions to your survey.

The survey questions that you need to implement can be found directly in the [Survey Question](#) document.

Build and provide the gcloud environment

Below is an example of how you can deploy the Google Cloud instances to implement the project in your infrastructure.

1. Export the submission form in XSLX format or CSV from your form provider

2. Create a dedicated project inside your GCP environment *Follow this link for further information*
<https://cloud.google.com/sdk/gcloud/reference/projects/create>

```
gcloud projects create <project-id> --name="Happy project" --labels=type=happy
```

3. Create a bucket in your GCP environment and upload the submission form *Follow this link for further information*
<https://cloud.google.com/storage/docs/creating-buckets?hl=en>

```
gcloud storage buckets create gs://<bucket-name>  
gcloud storage cp path/to/submission_form.csv gs://<bucket-name>/
```

4. Create a dataset in your BigQuery environment *Follow this link for further information*
<https://cloud.google.com/bigquery/docs/datasets?hl=en>

```
bq --location=<location-name> mk -d <dataset-name>
```

5. Create the table in your dataset to load the submission form with the proper table json schema of your submission

⚠ *In order for the fields (questions from your survey) to be accepted as a field name, it is recommended to reformat to follow the syntax rules for field names in BigQuery. Field names in lower case, no number as a first character, cannot contain spaces or special characters such as "?", "/", "", "é", "à", "%" etc.*

Example: The question 6. Have you formalized and/or implemented an inclusion and/or non-discrimination policy? in your survey should be reformatted to comply with Google Cloud Platform (GCP) naming conventions when you export your submission form as follows
have_formalized_and_or_implemented_inclusion_non_discrimination_policy

Follow this link for further information https://cloud.google.com/bigquery/docs/schemas#column_names

```
bq mk --table <project-id>:<dataset-name>.<table-name> <path_to_schema_json>
```

6. Create a cloud function in Google Cloud Functions to process the submission form and load the data into your BigQuery table automatically *Follow this link for further information*
<https://cloud.google.com/sdk/gcloud/reference/functions>

- Configure the cloud function to trigger execution as soon as a file is dropped in the bucket

```
gcloud functions deploy <function-name> --runtime python37 --trigger-bucket <bucket-name> --entry-j
```



► Cloud function example code

Compute KPIs

This section covers some example of how you can compute the final KPIs based on the scoring grid definitions in BigQuery SQL.

⚠ *Please refer to the [Evaluation and Sources Detail](#) to implement the scoring notation grid associated to the scoring metrics based on your own implementation.*

► Scoring metrics

In this section we will provide examples to implement the scoring rules using different types of metrics in BigQuery SQL.

1. Maturity level metric

Maturity level grid

Calculation method

Non existent	Policy does not exist
Formalized	Policy has been defined / outlined but is not yet fully in place
In place	Policy is fully in place
Improvement iterations	Actions are regularly taken to improve the impact of the policy
Reporting	Impact of the policy is measured and reported on

- Question 6: Have you formalized and/or implemented an inclusion and/or non-discrimination policy?
- BigQuery Field: `have_formalized_implemented_inclusion_non_discrimination_policy`

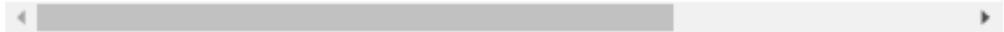
▼ Deploy to see the code

```

----- Maturity level metric example -----
SELECT
CASE
  WHEN have_formalized_implemented_inclusion_non_discrimination_policy = 'Policy does not exist' THEN
  WHEN have_formalized_implemented_inclusion_non_discrimination_policy = 'Policy has been defined /
  WHEN have_formalized_implemented_inclusion_non_discrimination_policy = 'Policy is fully in place'
  WHEN have_formalized_implemented_inclusion_non_discrimination_policy = 'Actions are regularly take
  WHEN have_formalized_implemented_inclusion_non_discrimination_policy = 'Impact of the policy is me
END AS equal_opportunity_policy_or_practices_in_place

FROM <project-id>.<dataset-name>.<table-name>

```



2. Representation metric & depends on country

Some metrics cannot be measured the same from country to country. They have been adapted based on local demographics and customs.

Calculation method

$$\frac{\text{Number of employees } [> 50]}{\text{Number of employees}} * 100$$

- Question 1: Répartition des employés >> Ayant plus de 50 ans >> Nombre total d'employés
- BigQuery Field: `employee_distribution_over_50_total_count`, `total_employee_count`
- The grade depends on: Country

► Deploy to see the code

3. Coverage metric

Metrics rated from low worker coverage, or 0% (rated 1) to full worker coverage, or 100% (rated 5).

Calculation method

$$\frac{\text{Workers who are between [19-26] and have a permanent contract}}{\text{Number of employees [19-26]}} * 100$$

- Question 2: Permanent contracts >> Between 19 and 26 years old >> Number of employees with permanent contracts
- Question 1: Distribution of employees >> Between 19 and 26 years old >> Total number of employees
- *BigQuery Field:* `permanent_contracts_19_to_26_years_old_count` , `employee_distribution_19_to_26_years_old_total_count`

► [Deploy to see the code](#)

4. Industry-specific metric

Some metrics require a benchmark from the fashion industry. For the time being we used averages from national data, however this evaluation should be updated after the industry consultation.

Calculation method

$$\frac{\text{Number of women}}{\text{Number of employees}} * 100$$

- Question 2: Distribution of employees >> Who are women >> Total number of employees
- *BigQuery Field:* `employee_distribution_female_total_count` , `total_employee_count`

► [Deploy to see the code](#)

5. Gradation towards equality metric

Metrics that should reflect the gap (or lack thereof) in practices depending on worker's profile and characteristic (ie gender, age, etc).

For instance, the gap between men's and women's salary for a similar job position with similar competences and experiences.

Calculation method

$$\frac{\text{Average men managers salary} - \text{Average women managers salary}}{\text{Average men managers salary}}$$

- Question 5B: Equal Pay - Middle and Senior Management >> Average for men >> Gross salary per management employee
- Question 5C: Equal Pay - Middle and Senior Management >> Average for women >> Gross salary per management employee
- *BigQuery Field:* `salary_equality_male_mid_level_managers_average_gross_salary` , `salary_equality_female_mid_level_managers_average_gross_salary`

► [Deploy to see the code](#)

 All the calculation methods, scoring grids, scoring metrics and descriptions are well documented in the [Evaluation and Sources Detail](#)

Weighing rule

Each KPIs are part of a *category*. Inside each *category*, the grade is calculated as the average of the grades of this *category*.

The overall grade is calculated as the average of all twelve categories, with the two categories "living wage" and "gender equality" weighing twice as much in the final aggregated score.

$$\frac{\text{AVG}(\text{all categories except living wage and gender equality}) * 10 + (2 * \text{living wage grade}) + (2 * \text{gender equality grade})}{14}$$

[\(back to top\)](#)

How to implement Data Visualization

The purpose of the visualization process is to guide decision-making towards optimization at both lifecycle and value chain levels. Once the data is completed on the digital survey form, the social data is directly evaluated and automatically translated visually on a dashboard:

- At the headquarters or operations level
- At the supplier level
- At the product level

The initial SP&L version mobilizes Google Cloud Platform (GCP), a BI & analytics serving dashboards for in-depth, consistent analysis in order to avoid mistakes and provide a consistent analysis. GCP allows a real-time data processing, and constitutes an essential step in the visualization process. An Excel file for input/output file in an effort to harmonize and centralize all feedback and SP&L results from operations and suppliers.

While the SP&L does not cover decent working conditions itself through the process, but focuses on positive impacts, the visualization includes audit score at every level: organization and product through the completion on GCP or any social risk information or auditing information.

The visualization offers a granularity :

- Audit score covering decent working conditions
- Overall performance score (aggregated)
- Score per impact category
- Score per metrics, with best practices and necessary improvement showcased.

Other direct available information are: the number of workers mobilized by collection, the number of workers mobilized by product reference (in average), and a List of references the supplier has worked on – and *link* to access the visualization per product reference.

Through the first version of the SP&L approach was created a visualization tool which synthesizes essential elements for decision-making and optimization, by creating the basis for a multicriteria performance scoreboard, including certifications et audit scores, to facilitate access, reporting and accounting. Please find below an example of the representation of the organizations and product scorecards.

 dashboard-screenshot

Organization or product site dashboard – *anonymized example*

 dashboard-screenshot

Product dashboard – *anonymized example*

 You can develop your own scoring dashboard based on the template [Dashboard Looker](#). You can simply create a copy of the dashboard and connect it to your aggregated result table.

 Don't forget to refer to the official documentation of Looker if you want more technical information on how to connect the dashboard to your BigQuery Table [Quick start with Looker Studio](#).

Usage

In terms of use, integrated into reporting and accounting, the SP&L approach insights are meant to better inform and facilitate decision-making when it comes to resource allocation, targeted investment for operations, and capacity-building within the supply chain. By facilitating the systematic access to quantified positive social performance data which can be compared and monitored over time, the SP&L provides useful insights for decision-making, valuable and valued when included in an investment and resource allocation analysis. In that way, the SP&L approach provides a different take on Social Return on Investment (SROI) by creating the necessary and direct basis for a social investment efficiency analysis, resource allocation optimization evaluation and forecasts.

The approach directly enables:

- The integration of new performance criteria into fully quantified performance reviews of activities, collections and products
- A systematized resource allocation optimization and maximization analysis, assessing and anticipating the efficiency of resources. The SP&L approach facilitates the assessment of the efficiency of resources allocation through monitoring performance results, directly and over time, and systematically relinking social value creation to investment efficiency.

Data collected can be useful:

- For certification process such as B Corp
- As the basis for monitoring supplier social practices, capacity-building and creating improvement plans for suppliers
- As a basis for social investment efficiency analysis (monitoring changes in social performance over time whenever resources are allocated)
- Within product optimization analysis

Taking action:

The aim with the SP&L was to provide additional insight for decision-making and to better accompany change within our supply chain. In that way, the steps to take after visualization are the following: (1) Communicate key information and results to suppliers (2) Define a capacity-building plan based on SP&L KPI with suppliers (3) Monitor change and organize yearly evolution monitoring (4) Train internal teams to anticipate data collection, monitoring, and discussion with suppliers.

For more examples, please refer to the [Methodology Note and Guidelines](#)

[\(back to top\)](#)

Roadmap

The SP&L approach is by nature exploratory and evolutive. It is intrinsically meant to evolve over time as socio-economic situation by country, regulations, but also industry standards regarding social impact evolve. Living wage, which is one of the key item measured in this methodology, has not yet a single international recognized standard.

The methodology will be regularly updated. Other key topics which we aim to include in a future iteration of the methodology are value sharing, value distribution and value redistribution which we aim to include in a "value chain partners" new stakeholder category. Further, current progress in traceability will more than likely further the possibilities to get additional insight and better manage positive social impact within supply chains. We hope this leads to a systemization of performance measurement and monitoring in the longer run.

The creation of the SP&L approach created an opportunity to discuss best practices at the industry level related to social impact. As these discussions continue, we hope and anticipate that they will also contribute to ambitiously move the needle. We welcome change, progress and conversation to continue this journey together. Please do not hesitate to contact us at sustainability@chloe.com

See the [open issues](#) for a full list of proposed features (and known issues).

[\(back to top\)](#)

Contributing

Contributions are what make the open source community such an amazing place to learn, inspire, and create. We are always open to contributions to improve the SP&L project. Any contributions you make are greatly appreciated.

If you have a suggestion that would make this better, please fork the repo and create a pull request. You can also simply open an issue with the tag "enhancement". Don't forget to give the project a star! Thanks again!

1. Fork the Project
2. Create your Feature Branch (`git checkout -b feature/AmazingFeature`)
3. Commit your Changes (`git commit -m 'Add some AmazingFeature'`)
4. Push to the Branch (`git push origin feature/AmazingFeature`)
5. Open a Pull Request

Chloé is a company that has always acted in favor of equality. We aim to foster a community where people of all genders, ethnicities, social backgrounds, sexual orientations, ages and disabilities - visible and invisible - to make participation in our project and our community.

Therefore, you are requested to follow the code of conduct at [CODE_OF_CONDUCT.md](#) while contributing to the project 🤝

[\(back to top\)](#)

License

Distributed under the GNU AGPLv3 License. See [LICENSE](#) for more information.

[\(back to top\)](#)

Acknowledgments

The SP&L approach is a collaborative effort as well as a discussion, and Chloé would like to thank all the experts and organizations which reviewed and/or participated to the essential industry consultation for the tool. In that way, we would like to acknowledge the essential work done by Kering on the pioneering EP&L methodology, without which there would be no SP&L approach.

We would like to thank the Sustainable team at PwC France for reviewing the methodology, and the Fédération de la Mode et de la Haute Couture for coordinating the Industry Consultation that took place in 2022, and Textile Exchange for facilitating the conversation with other industry collaborators and experts.

A warm thank you also to our academic partners, the Institut Français de la Mode (IFM) and the Conservatoire National des Arts et Métiers (CNAM) for providing crucial insights throughout the development process for the SP&L approach methodology.

Thank you to Elevate for providing essential insights when it comes to the data verification process and its deployment.

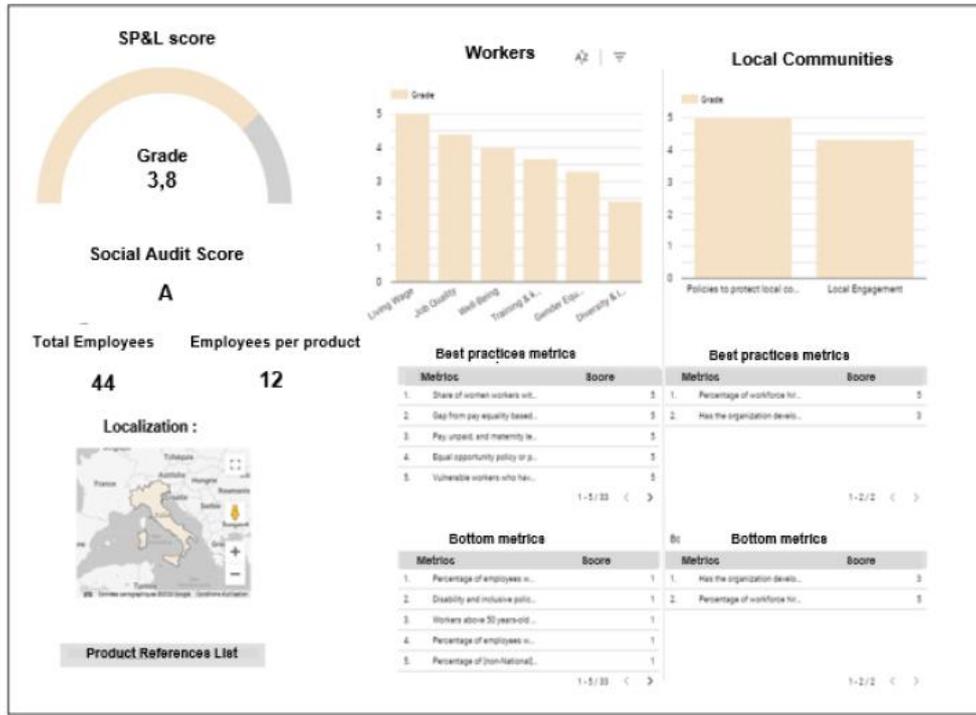
Thank you to the numerous experts who shared essential insights, and a specific thank you to Philippe Aghion (Collège de France), Caterina Occhio (SeeMe), and Erinch Sahan (Doughnut economics action lab) for their continuous feedbacks.

Internally, the conception and deployment of the tool united our Sustainability, IT and Operations Departments who made crucial efforts into making the SP&L come to life.

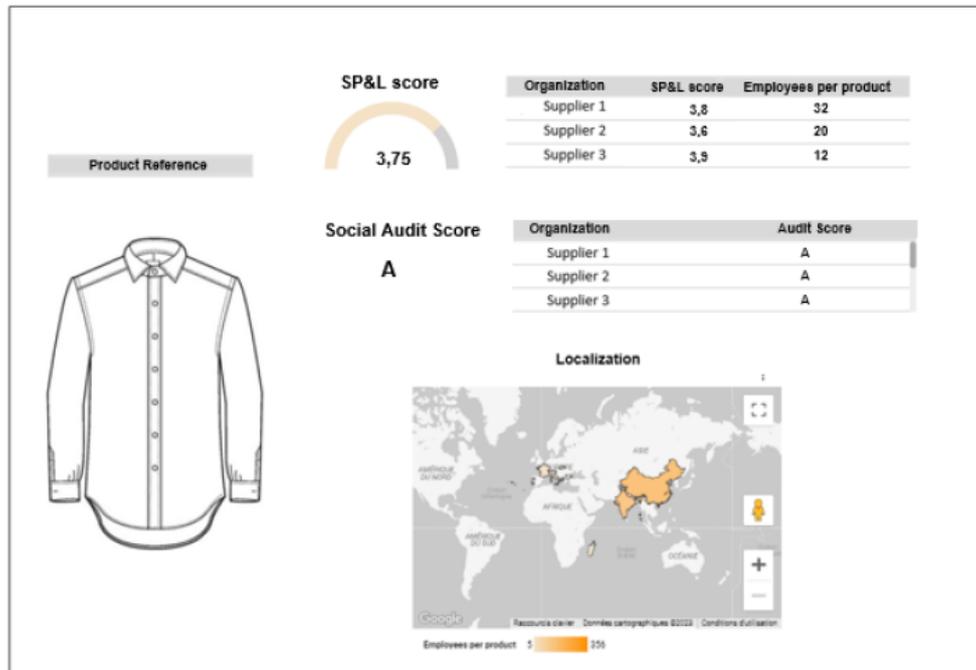
This list is non-exhaustive and we hope to keep the conversation regarding the measurement, evaluation and visualization of social impact going

[\(back to top\)](#)

Annex 7. SP&L Approach Data Visualization and Dashboard example



Visualisation Template for organisations (brands and suppliers) – anonymized example



Visualisation Template for products - anonymized example

Annex 8. SP&L Approach Survey Questions (English)

English (UK) -

Social Profit & Loss Approach - Self-Assessment

Dear partner,

As a committed company, we want to offer our customers traceable, responsibly produced products.

That is why you receive this new social questionnaire. This questionnaire is complementary to the social audit. Social compliance, compensated through social audits, is a guarantee that any worker involved in the manufacture of our products enjoys decent working conditions, while this complementary survey aims to assess all potentially positive social practices, including, but not limited to, diversity, gender equality, pay, training, and wellness practices.

This questionnaire includes six pages of information to be completed as well as a page of additional remarks, and a glossary.

Please note that the questionnaire focuses almost exclusively on HR data, and the process does not include active employee participation or individual interviews.

Once you have received this e-mail, we have given you a deadline for completing the questionnaire of three weeks, during which time we remain at your disposal to answer any questions.

After the completion process, a documentation verification process can be organized remotely by Elevate, a process that should not take more than three hours and will not require any additional time for workers. Chloé bears the costs of the documentation verification process if it takes place.

This approach is an opportunity for us to become aware of the positive social practices of our partners, practices that we do not yet measure.

We count on your commitment and thank you in advance for your collaboration. We are of course at your disposal if you have any questions about the approach and the process.

Initial information

All fields marked with * are required and must be filled.

Name of the company and/or production site *

In which country is your company or production site located? *

Pays

Total number of employees *

Category 1: Diversity & Inclusion

All fields marked with * are required and must be filled.

[Glossary - Living Wage Table](#)

1. Employees description *

	Total Number of Employees
Between 15 and 18 years old	
Between 19 and 26 years old	
Between 27 and 50 years old	
Over 50 years old	
Who are women	
Who are men	
In a situation of handicap or invalidity (glossary, 1)	
Having your country's nationality	
Number of employees recognized as disadvantaged workers (glossary, 2)	

2. Long-term contracts *

	Total Number of Employees with a permanent contract
Total number of employees with a long-term contract	
Between 15 and 18 years old	
Between 19 and 26 years old	
Between 27 and 50 years old	
Over 50 years old	
Who are women	
Who are men	
In a situation of handicap or invalidity (glossary, 1)	
Having your country's nationality	
Number of employees recognized as disadvantaged workers (glossary, 2)	

3.A Governance - Shareholders *

	Total Number of Shareholders
Total Number of Shareholders	
Between 15 and 18 years old	
Between 19 and 26 years old	
Between 27 and 50 years old	
Over 50 years old	
Who are women	

Who are men	
In a situation of handicap or invalidity (glossary, 1)	
Having your country's nationality	
Number of shareholders recognized as disadvantaged workers (glossary, 2)	

3.B. Governance - Management *

	Total number of employees in management (CEO, Board, Directors)
Between 15 and 18 years old	
Between 19 and 26 years old	
Between 27 and 50 years old	
Over 50 years old	
Who are women	
Who are men	
In a situation of handicap or invalidity (glossary, 1)	
Having your country's nationality	
Number of employees recognized as disadvantaged workers (*glossary, 2)	

3.C. Governance - Managers (Middle managers and managers) *

	Number of employees with a managerial grade (middle managers and managers)
Total number of employees with a managerial grade (middle managers and managers)	
Between 15 and 18 years old	
Between 19 and 26 years old	
Between 27 and 50 years old	
Over 50 years old	
Who are women	
Who are men	
In a situation of handicap or invalidity (glossary, 1)	
Having your country's nationality	
Number of employees recognized as disadvantaged workers (*glossary, 2)	

4. Representation of employees in a works council and/or a trade union *

	Number of employees who are representing other employees through a work council and/or a trade union (if applicable)
Total number of employees belonging to a works council and/or union	
Between 15 and 18 years old	
Between 19 and 26 years old	

Between 27 and 50 years old	
Over 50 years old	
Who are women	
Who are men	
In a situation of handicap or invalidity (glossary, 1)	
Having your country's nationality	
Number of employees recognized as disadvantaged workers (*glossary, 2)	

5.A. Equal pay - Manual workers and non-executive and non-managerial employees *

	Salary per employee (worker, non-executive, non-manager)
Average	
Median (glossary, 8)	
Average for women	
Average for men	
Average for employees with a nationality from your country	
Average for employees with a nationality other than the one from your country	
Average for employees with disabilities (glossary, 1)	
Average for employees recognized as disadvantaged workers (*glossary, 2)	
Average: for employees between 15 and 18 years-old	
Average: for employees between 19 and 26 years-old	
Average: for employees between 27 and 50 years-old	
Average : for employees who are over 50 years-old	

5.B. Equal pay - Middle managers and managers *

Average	
Median (glossary, 8)	
Average for women	
Average for men	
Average for employees with a nationality from your country	
Average for employees with a nationality other than the one from your country	
Average for employees with disabilities (glossary, 1)	
Average for employees recognized as disadvantaged workers (*glossary, 2)	
Average: for employees between 15 and 18 years-old	
Average: for employees between 19 and 26 years-old	

Average: for employees between 27 and 50 years-old	
Average : for employees who are over 50 years-old	

5.C. Equal pay - Management *

	Salary per employee (middle management)
Average	
Median (glossary, 8)	
Average for women	
Average for men	
Average for employees with a nationality from your country	
Average for employees with a nationality other than the one from your country	
Average for employees with disabilities (glossary, 1)	
Average for employees recognized as disadvantaged workers (*glossary, 2)	
Average: for employees between 15 and 18 years-old	
Average: for employees between 19 and 26 years-old	
Average: for employees between 27 and 50 years-old	
Average : for employees who are over 50 years-old	

5.D. Equal pay - Minimum wage paid in the company *

Please indicate below the minimum wage paid in the company

5.E. Equal Pay - Living Wage *

	Number of employees paid the adjusted living wage	Number of employees paid more than the adjusted living wage	Number of employees paid the non-adjusted living wage	Number of employees paid more than the non-adjusted living wage
Total				
Women				
Men				
Employees with the nationality from your country				
Employees with another nationality from the one in your country				
Employees with a recognized disability (glossary, 1)				
Disadvantaged employees (*glossary, 2)				
Employees who are between 15 & 18 years old				

Employees who are between 19 & 26 years old				
Employees who are between 27 & 50 years old				
Employees who are over 50 years old				

Category 1: Diversity & Inclusion

All fields marked with * are required and must be filled.

6. Have you formalized and/or implemented an inclusion and/or non-discrimination policy? *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

Additional information - if relevant

If you have implemented an internal policy aimed at preventing discrimination (glossary, 4) and for the inclusion of all, based for example on the inclusion of employees of all ages, origins, gender, identity, and developing a strategy to promote more professional diversity, please list the main elements in the box below. Please send us back a copy of the document and proof of diffusion.

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

7. Have you formalized and/or implemented a specific policy for employees with recognized disabilities? *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

Additional information - if relevant

If you have implemented an internal policy aimed at preventing discrimination (glossary, 4) and to facilitate the inclusion of your employees with a recognized disability, enter the main elements in the box below. Please send us back a copy of the document and proof of diffusion.

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

Category 2: Employee well-being

Definition of well-being in glossary, 10.

All fields marked with * are required and must be filled.

Glossary

1. Offer promoting employee health and well-being *

	Number of employees benefiting
Number of employees benefiting from access to occupational health services in addition to legal requirements	
Number of employees mobilized yearly in wellness services and offer	

2. Absenteeism (detailed definition in *glossary, 12) *

	Level of employee absenteeism (annually, taking into account the year 2021-2022)
Number of employees who have been absent once during the past year	
Number of employees who were absent more than once during the year	
Estimated absenteeism rate (annual)	
Average number of days of absence per employee	
Number of employees whose absence is related to an injury	
Number of employees whose absence is related to another medical reason	

Category 2: Employee well-being

Definition of well-being in glossary, 10.

All fields marked with * are required and must be filled.

3.A. Maternity and paternity leave (detailed definition in *glossary, 11) *

- No parental leave policy
- Maternity leave policy in place
- Maternity and paternity leave policy in place
- Policy in place to extend maternity and paternity leave

Additional information - if relevant

Indicate below if the maternity/paternity policy your employees benefit from

3.B. Company or inter-company kindergarten system

-

- No company kindergarten system
- Company kindergarten system in place

Additional information - if relevant

Indicate below whether your company sets up a company or inter-company kindergarten system, as well as the means made available to new parents when they reintegrate into the company at the end of maternity/paternity leave.

Category 3: Training & Job Specificities

All fields marked with * are required and must be filled.

Glossary

1. Training *

Total number of employees having received at least one training during the past year	
Total number of employees having benefited from training once (one type of training) during the year 2021-2022	
Total number of employees having benefited from several training courses during the year 2021-2022	
Share of training expenditure on the total budget for the year 2021-2022	
Number of employees having benefited from soft skills training (skills related to listening, interactions, etc.)	

Number of employees having benefited from technical training	
Number of employees having benefited from leadership or management training	
Number of intergenerational training (junior or unskilled employee trained by a senior or skilled employee)	
Number of employees committed to passing on their know-how (*glossary, 13)	
Number of employees mobilizing advanced technical skills	
Average seniority of employees using know-how (*glossary, 13) (in years)	

2.A Observed and/or measured positive effects related to training

- Salary increases following training
- Internal promotions following training
- Estimated monetary gains following the training
- Productivity gains following training

2.B Positive effects observed and/or measured linked to the training - description, if relevant

3. Unfilled qualified positions (definition in glossary, 14) *

Number of unfilled qualified positions	
Number of initially unqualified employees who received training	
Number of associated internal promotions or transfers	

4. Job quality & specificities *

Average employees job tenure (in years)	
Average employee turnover (in %)	
Number of employees who received a promotion	
Number of employees who received a salary raise	

Category 4: Impact on local communities'

Glossary

1. Participation in local employment

Percentage of workforce who originally come from the local community (village, city, region) in which your business is located	
Have you formalized a local recruitment policy (promoting recruitment from the local community(ies))?	
If applicable, what percentage of your suppliers are suppliers from your region and/or your country?	

Category 4: Impact on local communities'

All fields marked with * are required and must be filled.

2.A Have you formalized and/or implemented a policy to avoid the displacement of local populations as a result of your activity? *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

2.B Have you formalized and/or implemented a policy to integrate migrant workers into your company? *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

2.C Have you formalized and/or implemented a policy to protect cultural heritage? (*glossary, 16) *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

2.D Have you formalized and/or implemented a policy to better respect the integrity, intellectual property and economic rights of local communities? *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

2.E Have you formalized and/or implemented a policy to promote education? *

- No policy in place
- Policy defined but not yet implemented in practice
- Policy formalized and implemented
- Policy formalized, put in place, and actions are taken to ensure continuous improvement
- Policy formalized, put in place, actions are taken to ensure continuous improvement, and reporting exists to monitor the effectiveness of the actions carried out

File upload - if relevant

BROWSE FILES
DRAG AND DROP FILES HERE

Additional Information

[Glossary](#)

1. Were there any creations or destructions of jobs related to your commercial collaboration with Name of the company for this year? Any remark or feedback on your commercial relationship with us?

If yes, please specify.

2. Number of employees directly involved in our collections and productions references

Please specify (with description) the number of employees directly involved in the latest collection.

3. Number of employees directly involved in our collections and productions references

Please specify (with description) the number of employees directly involved in the product reference which was specified.

4. Are there other positive social practices that you would like to bring to our attention and which have not yet been covered by this survey?

If yes, please specify.

5.A. Do you have a certification attesting to your social impact? (Example: BCORP, FairTrade, WFTO, SA8000)

If yes, please specify below.

5.B. File upload

BROWSE FILES
DRAG AND DROP FILES HERE

Glossary

- 1. Disability.** Disability is understood as a phenomenon comprising the physical and/or mental impairments of the person, the resulting functional limitations and the interaction with society and the environment, as reflected in the International Classification of the Organization's Functioning World Health Organization (WHO) and classified through the International Classification of Functioning (ICF). Constitutes a disability any limitation of activity or restriction of participation in life in society suffered in his environment by a person due to a substantial, lasting or definitive alteration of one or more physical functions, sensory, mental, cognitive or psychic, a multiple disability or a disabling health problem. The Law on the employment of disabled people (Law no. 68 of 12 March 1999: "Regulations on the right to employment for persons with disabilities") is the main legislation concerning disability employment in Italy. Based on the size of their workforce, both private and public sector employers are required to hire a certain percentage of disabled workers: employers with more than 50 employees must meet a 7% disability employment quota, at least 2 disabled workers must be hired in workplaces of 36 to 50 employees, workplaces of 15 to 35 employees must hire at least 1 disabled worker if they operate new intake, and disabled workers hired on temporary contracts for a period of less than 9 months cannot be included in the percentage. In other words employers must hire disabled workers for longer periods to meet the legal requirement.
- 2. Disadvantaged workers.** A disadvantaged worker refers to any person who belongs to a category which has difficulty entering the labour market without assistance, namely a person meeting at least one of the following eleven criteria:
 - (i) any person who is under 25 or is within two years after completing full-time education and who has not previously obtained his or her first regular paid employment;
 - (ii) any migrant worker who moves or has moved within the Community or becomes resident in the Community to take up work;
 - (iii) any person who is a member of an ethnic minority within a Member State and who requires development of his or her linguistic, vocational training or work experience profile to enhance prospects of gaining access to stable employment;
 - (iv) any person who wishes to enter or to re-enter working life and who has been absent both from work and from education for at least two years, and particularly any person who gave up work on account of the difficulty of reconciling his or her working life and family life;
 - (v) any person living as a single adult looking after a child or children;
 - (vi) any person who has not attained an upper secondary educational qualification or its equivalent, who does not have a job or who is losing his or her job;
 - (vii) any person older than 50, who does not have a job or who is losing his or her job;
 - (viii) any long-term unemployed person, i.e. any person who has been unemployed for 12 of the previous 16 months, or six of the previous eight months in the case of persons under 25;
 - (ix) any person recognised to be or to have been an addict in accordance with national law;
 - (x) any person who has not obtained his or her first regular paid employment since beginning a period of imprisonment or other penal measure;
 - (xi) any woman in a NUTS II geographical area where average unemployment has exceeded 100 % of the Community average for at least two calendar years and where female unemployment has exceeded 150 % of the male unemployment rate in the area concerned for at least two of the past three calendar years.
- 3. Marginalization.** According to the definition of the World Fair Trade Organization (WFTO), based on a review of existing definitions by USAID, the World Bank and the OECD, among other relevant organizations, marginalization is "the systematic denial of the freedoms enjoys society at large. This multifaceted and persistent disadvantage leads to exclusion from the development process. This is mostly associated with elements of identity (i.e. race, gender, ethnicity, caste, religion, etc.) or location (i.e. i.e. disaster or conflict-affected, remote and stigmatized areas, among others).
- 4. Discrimination.** Discrimination may concern "any distinction made between natural persons on the basis of their origin, their sex, their family situation, their pregnancy, their physical appearance, their surname, their place of residence, their state of health, their handicap, their genetic characteristics, their mores, their

sexual orientation or identity, their age, their political opinions, their trade union activities, their membership or their non-belonging, real or supposed, to a given ethnic group, nation, race or religion”.

5. **Job Tenure.** Job tenure is measured by how long workers have been in their current or main job or with their current employer and is expressed in number of years. They can be converted into months by multiplying them by a factor of 12 (months).
6. **Turnover.** Turnover, at the level of an establishment or firm, is the net change in employment between two points in time – the total number of jobs created minus the number of jobs that have disappeared. It does not include vacancies that remain unfilled and jobs that begin and end during the observation interval, which is most often one year.
7. **Work Council.** Body in charge of economic, cultural and social functions within a company and having the material and financial means to do so.
8. **Median.** The median is the middle value in a list ordered from smallest to largest.
9. **The living wage.** The living wage is defined as the minimum income necessary for a worker to meet their basic needs, which include food, shelter, education, clothing, and transportation. The purpose of a living wage is to enable a worker to afford a basic but decent standard of living through employment without government subsidies. The term “living wage” differs from the terms minimum wage and subsistence wage. A minimum wage is mandatory, determined by legislation. It must meet an individual’s basic needs, but may still involve a worker relying on government grants for additional income. A living wage is a minimum income that provides roughly the bare necessities of life. A living wage is paid voluntarily and helps avoid excessive overtime, multiple jobs, and ensures access to and respect for basic human rights such as access to food, clothing, housing, not suffer from social deprivation and be able to withstand crises for the employee and for his family.

Living wage estimation per country, based on [Fair Wage Network’s database \(January 2023\)](#)

The SP&L is based on the Fair Wage Network referential to measure and evaluate the payment of living wages for their suppliers. Fair Wage Network provides two levels of evaluation for living wages: **non-adjusted living wage** (in this case, the individual worker’s salary must fully cover the needs of his or her family), and **adjusted-living wage** (in this case, the salary of the worker is added to other income earners in the family to cover his/her family needs). In both cases the Fair Wage Network advises to take into account the needs of a typical family composed of two adults with a number of children along the national fertility rate.

Country	Adjusted Living Wage (estimation in €)	Non-adjusted Living Wage (estimation in €)
China	327	611
France	1361	2246
India	143	207
Italy	829	1343
Madagascar	54	101
Portugal	511	889
Romania	450	819
Slovakia	591	1045
Spain	715	1251
United Kingdom	2423	4192
United States	2651	4846
Vietnam	183	321

10. **Well-Being.** The OECD (Organization for Cooperation and Development) associates eleven dimensions with well-being, including material conditions (income, wealth, housing, quality of employment), the guarantee and preservation of health, access to knowledge, the development of skills, the quality of their environment and their sense of security. According to the OECD, quality of life also encompasses how people are connected and engaged, and how and with whom they spend their time (work-life balance, social connections, civic engagement). We include in well-being initiatives and offers by the employer which go beyond regulatory demands; for instance any medical offer (for instance: doctor visits on site, practitioner visits, mental health-related offer by employer, upgrades of seating options for comfort) that

go beyond what is required by the law, and any activity (for instance: sport offer, meditation, yoga, cultural workshops and/or visits) which is offered by the employer to workers.

11. **Parental leave.** Parental leave is an individual right that allows workers to take a certain number of months’ leave on the birth or adoption of a child, to be taken before the child reaches a specified age. In accordance with national legislation, collective agreements and/or practice, employers should allow workers to take time off from work for unforeseeable reasons due to a family emergency in the event of sickness or accident, if they necessitate the immediate presence of the worker (termed “force majeure” leave). This includes the maternity leave and/or the paternity leave, a period of absence from work granted to a mother before and after the birth of her child.

For member states of the European Union: On 24 January 2019, within the framework of the European Pillar of Social Rights, the European Commission, the European Council and the European Parliament agreed to adopt a proposal for a directive on work-life balance for parents and carers. According to the new directive, while parental leave still stands at a minimum of four months, two of these months may now be transferred to the other parent and will be paid, in order to encourage uptake from men. This individual right to parental leave of four months must still be taken before the child reaches a specified age (a maximum of eight years), to be set by each Member State or by collective agreement. Each Member State is able to make the right to parental leave subject to a period of work qualification or to a length of service qualification, which shall not exceed one year. Employees will also be able to request flexible uptake, which is also left to Member States to define.

12. **Absenteeism.** Absenteeism is the fact of being habitually or systematically absent from the workplace. Absenteeism is assessed by studying the cause, frequency and duration of absences over a given period. We include in absenteeism sick leaves, or leaves related to injury, and exclude from absenteeism rate any parental leave, or justified leaves for familial reasons. In order to calculate the absenteeism rate, take the number of unexcused absences in a given period of time, divide it by the total period, and multiply the result by 100 to get the percentage of absenteeism over a year.
13. **Know-How.** Know-how has no established definition, but represents practical knowledge or skill, acquired and transmitted, which is specific to the industry, rare, advanced and/or complex on a technical level. This skill can come from a longstanding tradition (local or national). In the SP&L context, in order to assess know-how, employers should assess the number of their employees that are (1) skilled with an advanced and/or rare technical and/or traditional technique, and that are (2) actively transmitting their rare, complex and advanced technical skill to other employees, including younger workers, through a specific and dedicated training.
14. **Qualified job positions.** A qualified job position mobilizes a worker who has from the start of their employment a specific experience in the industry, documented skill or attribute the job position require. Proof of qualification can include diploma with a specialty or relevant past experience. Qualified positions include both management positions and non-management positions.
15. **Local Communities and Hires.** A local community is a group of interacting people sharing an environment. In human communities, intention, belief, resources, preferences, needs, risks and a number of other conditions can be present and common, affecting the identity of the participants and their degree of cohesion. The local community is directly linked to the location of your business or production site, and is made up of the local population, the families of your employees, and local employees and business owners at a minimum. A local hire means that the employer offers a contract to an individual who is “domiciled” in the same village, city or region as the company or production site at least seven days prior to commencing work. Hiring locally means that at the time of hire, the residence of an employee is in the same direct community, town or region as the position for which they are recruited for.
16. **Cultural Heritage.** The UNESCO defines cultural heritage as including artefacts, monuments, a group of buildings and sites, museums that have a diversity of values including symbolic, historic, artistic, aesthetic, ethnological or anthropological, scientific and social significance. It includes tangible heritage (movable, immobile and underwater), intangible cultural heritage (ICH) embedded into cultural, and natural heritage artefacts, sites or monuments. The definition excludes ICH related to other cultural domains such as festivals, celebration etc. It covers industrial heritage and cave paintings.

Mathilde ASSEMAN

Accounting for social utility.

The creation of an SP&L (social profit and loss) approach for the fashion industry.

Résumé

Via ce travail de recherche, nous discutons des logiques historiques et des facteurs contextuels pour la création d'une approche SP&L (social profit and loss) pour l'industrie de la mode, et pour son déploiement en tant qu'outil de gestion opérationnelle, et de gestion inclusive des données. Nous explorons et contextualisons la manière dont les outils de gestion commerciale, et de données, peuvent représenter un mécanisme essentiel pour les processus de responsabilité et de contrôle qui sont essentiels à la RSE. Nous explorons également la manière dont ces outils peuvent aider à intégrer la RSE stratégiquement au sein des entreprises. À travers l'analyse des caractéristiques intrinsèques du SP&L, nous analysons spécifiquement les rôles joués par les caractéristiques d'accès (ou de mesure), de traduction (ou d'évaluation) et de levier de gestion (ou de visualisation), afin de favoriser l'efficacité, l'optimisation et la création de valeur lors de l'allocation des ressources. Nous mettons en valeur l'héritage de l'utilitarisme qui conduit à des réinterprétations des formats de comptabilité (P&L) et des formats d'allocation des ressources afin d'intégrer les facteurs de performance sociale et environnementale. Nous proposons en outre de nouveaux modèles et critères opérationnels pour l'intégration stratégique de la RSE, y compris un modèle de contrôle complet des données et un modèle centré sur des coûts situés et inclusifs, plutôt que sur la monétarisation des effets fondée sur des estimations. Enfin, nous fournissons la méthodologie complète et les formats de mise en œuvre du SP&L, développé en collaboration avec notre partenaire industriel, la marque de mode Chloé.

Mots clés : Valeur, performance, impact social, P&L, outil de gestion, données, mode

English Summary

With this research work, we discuss the historic rationales and contextual factors for the creation of an SP&L (social profit and loss) approach for the fashion industry, and for its deployment as a business and data management tool. We explore and contextualize how business and data management tools can represent an essential mechanism for the accountability and control processes which are essential to CSR, and can help integrating CSR within businesses. Through the analysis of the SP&L intrinsic features, we specifically analyze the roles played by access (or measurement), translation (or evaluation), and management leverage (or visualization) features, in fostering efficiency, optimization and value creation when allocating resources. We showcase the heritage from utilitarianism which leads to reinterpretations of P&L and resource allocation format to integrate social and environmental performance factors. We further propose new operational models and criteria for CSR strategic integration, including a full data control model and a situated and inclusive cost focus

model. Lastly, we provide the full methodology and implementation formats for the SP&L developed in collaboration with the fashion brand Chloé.

Key words: Value, performance, social impact, profit & loss, business management tool, data, fashion