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# Rationales, Pressures and Tensions Operating in the Adoption of Business Model Innovation: A Multi-Level Perspective

Anastasia Markoff-Legend

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## THÈSE

Pour obtenir le grade de

**DOCTEUR DE L'UNIVERSITÉ SAVOIE MONT BLANC**

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Présentée par

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Thèse dirigée par **Rachel BOCQUET** et **Romain GANDIA**

préparée au sein du **Laboratoire IREGE**

dans l'**École Doctorale CST**

# **Logiques, pressions et tensions à l'œuvre dans l'adoption des innovations de business model : une perspective multiniveau**

Thèse soutenue publiquement le **14 décembre 2023**

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*L'Université Savoie Mont Blanc n'entend donner aucune approbation ni improbation aux opinions émises dans cette thèse : ces opinions doivent être considérées comme propres à leur auteur.*



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# INTRODUCTION GENERALE

## 1. Genèse, contexte et enjeux de la recherche

### 1.1. *Genèse de la recherche dans le cadre de mon parcours personnel*

Le choix d'étudier les innovations de *business model* (BMI), selon une approche renouvelée de la stratégie mise en perspective avec la philosophie morale, s'inscrit dans la continuité de mon parcours académique. Après m'être spécialisée en philosophie au cours de mes trois ans de classe préparatoire littéraire puis avoir obtenu mon master de philosophie éthique en 2018, j'ai décidé de poursuivre mes études en sciences de gestion et de suivre un second master en droit et management en 2019. Dans le cadre de cette formation, j'ai eu l'opportunité d'effectuer un stage de recherche en gestion à l'IREGE (laboratoire de recherche de l'IAE d'Annecy, Université Savoie Mont Blanc), au cours duquel j'ai pu contribuer à la réalisation d'un projet Interreg franco-suisse sur l'innovation ouverte dans les PME de l'économie sociale et solidaire et du numérique. Enrichie de cette expérience qui m'a permis de côtoyer une diversité de dirigeants d'entreprises, j'ai commencé à entrevoir la complémentarité de la philosophie morale et de la stratégie pour éclairer les choix stratégiques d'innovation.

A l'issue de mon master en droit et management, j'ai donc souhaité creuser cette perspective de recherche et ai entrepris de réaliser une thèse sur l'adoption des BMI, ce sujet mettant justement en exergue les dilemmes moraux et stratégiques contemporains auxquels font face les entreprises en matière d'innovation et de création de valeur. En effet, suite à l'apparition de nouveaux défis tels que l'intégration rapide de nouvelles technologies numériques (par exemple, le big data, l'intelligence artificielle, le cloud et les objets connectés) ou encore l'élaboration de nouvelles réglementations environnementales (telles que la Réglementation Environnementale 2020), les organisations sont poussées à reconfigurer leur business model (BM), c'est-à-dire leur manière de créer, livrer et capturer de la valeur, pour délivrer une performance durable (Foss et Saebi, 2017). Le choix d'opérer cette reconfiguration du BM, qui initie l'adoption de la BMI, implique toutefois de la part des entreprises de revoir la finalité de leurs choix et activités, tant au plan de la nature de la valeur créée (économique, sociale et/ou environnementale), que du périmètre au sein duquel elle est générée (dans la limite des frontières organisationnelles ou au-delà). C'est à l'aune de ce constat, renforcé par la lecture du cadre conceptuel de la « stratégie comme philosophie morale » d'Alan E. Singer (1994), que la genèse de cette recherche a alors véritablement débuté : **la philosophie morale, qui traite**

**précisément de la finalité qui guide nos décisions et actions et de leurs conséquences, pourrait permettre de distinguer différentes *logiques* d'adoption de la BMI (orientées sur la maximisation du profit ou sur la réalisation d'une mission à impact sociétal par exemple) et ainsi de mieux saisir les enjeux de la création de valeur aux différents niveaux (au sein et en dehors des frontières organisationnelles).**

## 1.2. *Insertion de la recherche dans le contexte de la chaire IOPEN*

Cette thèse a pour originalité de s'inscrire dans la première chaire de recherche de la Fondation Université Savoie Mont Blanc (USMB). Créée en juillet 2019 avec un budget de 500 000€ pour une période de 4 ans, la chaire IOPEN (« Innovation Ouverte, management 4.0 et Prospective à l'Ere du Numérique ») fédère des chercheurs et des membres associés de l'IREGE (Université Savoie Mont Blanc) ainsi que des partenaires socio-économiques variés (PME, ETI, grandes entreprises et collectivités territoriales). Positionnée dans le champ du management de l'innovation, elle s'est donné pour objectif d'aider les entreprises à réaliser durablement leur transformation (notamment numérique) grâce à la mise en œuvre de l'innovation ouverte (échange de connaissances, idées et pratiques avec des salariés et des partenaires pour innover et créer de la valeur)<sup>1</sup>.

Forte de sa visibilité et de son impact sur le territoire grâce à l'organisation de divers événements ouverts aux entreprises et au grand public (*masterclasses*, séances de restitution de résultats de recherche, universités d'été, ...), elle intègre à ce jour un vaste panel d'entreprises françaises innovantes et leaders de leur secteur d'activité, que ce soit des PME comme Alphi (spécialiste du coffrage et de l'étalement de béton), des ETI comme Nicomatic, (acteur clé de la micro-connectique), des filiales de groupes internationaux comme Pfeiffer Vacuum (premier opérateur sur les marchés du vide) et Salomon (acteur de référence sur le marché de l'*outdoor*) ou encore de grandes entreprises comme Somfy (spécialiste des solutions de motorisation pour la maison connectée) ou Enedis (opérateur historique de la distribution d'électricité en France). Bien que diverses, ces entreprises ont pour objectif commun d'être engagées dans un projet de transformation qui implique des défis (numériques, environnementaux, sociaux) et avec eux, une formidable opportunité pour la chaire de développer de nouvelles réponses (e.g, modèles, outils, pratiques). **Notre thèse s'inscrit dans cet objectif commun d'aider les entreprises à s'approprier ces défis pour mieux se**

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<sup>1</sup> <https://www.fondation-usmb.fr/chaire-iopen/>

## **transformer, tout en proposant un angle spécifique d'étude : celui de l'adoption des innovations de *business model* (BMI).**

L'intégration de la thèse à ce projet de recherche collectif a donc non seulement pour intérêt majeur de nous avoir permis de traiter une question d'actualité, à forts enjeux (cf. 1.3 ci-après), mais aussi d'accéder à un très vaste terrain d'enquête<sup>2</sup> tout en renforçant notre démarche méthodologique grâce à l'étroite collaboration avec les autres membres de la chaire sur des projets de recherche complémentaires à la thèse. Ces projets abordaient un autre objet que l'adoption de la BMI (l'innovation ouverte) mais étaient centrés sur le même terrain d'enquête que celui du présent travail doctoral (les mécènes de la chaire). En ce sens, la participation à ces projets en parallèle de la réalisation de la thèse a permis un enrichissement mutuel, grâce au croisement de nos interprétations suivant différentes perspectives théoriques. Plus précisément, dans le cadre de ces projets, nous avons eu l'occasion inédite de travailler avec une dizaine d'enseignants-chercheurs pour élaborer des revues de littérature, réaliser de nombreux entretiens (142) et focus groups (7), mais également coder et analyser des données lors d'ateliers collectifs, accélérant ainsi notre apprentissage. Par ailleurs, en raison de notre rôle spécifique de coordination avec les mécènes, la participation au projet IOPEN nous a permis d'étayer nos analyses par des observations de terrain réalisées *in vivo*, dans le cadre d'échanges réguliers avec nos partenaires externes tout au long de nos trois années de doctorat. Enfin, nous avons eu l'opportunité de renforcer la validité de notre recherche en discutant en profondeur de nos résultats avec les entreprises de la chaire lors de fréquentes restitutions intra-mécènes et inter-mécènes (17).

### *1.3. Enjeux managériaux et théoriques de la recherche*

Selon une étude du Boston Consulting Group menée en 2014 auprès de 1 500 cadres supérieurs à l'échelle internationale, 94% d'entre eux affirment que leur entreprise a tenté d'innover au niveau de son modèle d'affaires (BM) (Lindgart et Ayers, 2014), c'est-à-dire de reconfigurer l'une ou plusieurs de ses composantes, assimilées par une majorité d'auteurs aux mécanismes de création, livraison et capture de valeur et/ou l'architecture les reliant (Foss et Saebi, 2017 ; Teece, 2010). L'innovation de *business model* (BMI) est aujourd'hui une tendance majeure, en voie d'accélération considérable depuis la pandémie du COVID-19, qui a poussé les entreprises à renouveler urgemment leur manière de générer de la valeur tant

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<sup>2</sup> Dans le cadre de cette thèse, nous avons eu l'opportunité d'étudier toutes ces entreprises, à l'exception de Pfeiffer Vacuum qui a rejoint la chaire en 2023. Elles ont été sélectionnées en vue de comparer différents contextes d'adoption de la BMI, de par leurs différences de taille et de secteur industriel.

économique, sociale, qu'environnementale. L'intégration de nouvelles technologies numériques (e.g. outils d'analyse de données, cloud, intelligence artificielle ou encore plateformes) a été un support clé de cette accélération (Scuratti *et al.*, 2020).

Toutefois, selon une enquête conduite en 2016 par la *Harvard Business School*, le taux d'échec associé à la BMI est particulièrement élevé, en raison de la difficulté pour les entreprises à comprendre la manière dont les BM sont adoptés et se développent, phase par phase (Christensen *et al.*, 2016). Cette difficulté à faire aboutir une BMI touche particulièrement les grandes entreprises établies, comme en témoigne le célèbre exemple de Google qui a échoué à développer son BM en créant en 2011 le réseau social « Google + », en raison de son manque d'attractivité pour les utilisateurs qui n'ont pas perçu la valeur ajoutée de ce media (Christensen *et al.*, 2016).

Dans le prolongement de ce constat, de récentes études montrent la difficulté pour les managers d'identifier et d'agir sur les différents facteurs pouvant mettre en péril la BMI dès la phase précoce de son adoption (Bocken et Geradts, 2020 ; Heidenreich *et al.*, 2022 ; Hiteva et Foxon, 2021 ; Stubbs, 2019 ; Van Bommel, 2018), c'est-à-dire entre l'initiation de l'innovation et le début de son implémentation (Damanpour et Schneider, 2006). **Or, ces mêmes études soulignent qu'en dépit de son importance, l'étude de cette « face sombre » (Heidenreich *et al.*, 2022) de l'adoption de la BMI reste à ce jour un manque à combler de la littérature (Bocken et Geradts, 2020 ; Heidenreich *et al.*, 2022 ; Hiteva et Foxon, 2021 ; Stubbs, 2019 ; Van Bommel, 2018).**

En réponse à cette lacune de la littérature, un nombre croissant d'études se sont attachées à identifier les différentes **tensions** et leurs modalités de traitement pouvant affecter l'adoption de la BMI (Best *et al.*, 2021 ; Stubbs, 2019 ; Suh *et al.*, 2020 ; Van Bommel, 2018). Ces recherches, qui définissent principalement les tensions comme le résultat de la coexistence de forces, logiques et valeurs contradictoires (Das et Teng, 2000 ; Fernandez et Leroy, 2013 ; Guedri *et al.*, 2014 ; Van de Ven, 1992), mettent notamment en évidence la complexité pour les managers à repérer et, ensuite, à gérer les tensions de par leur nature variée et leur manifestation à différents niveaux d'analyse (Best *et al.*, 2021, 2022). En effet, des tensions d'ordre stratégique (Rachinger *et al.*, 2019 ; Dellermann *et al.*, 2017 ; Köhtamaki *et al.*, 2019), organisationnel (Fitzgerald *et al.*, 2014, Venkatraman, 1994), managérial (Paiola et Gebauer, 2017 ; Latilla *et al.*, 2020 ; Rachinger *et al.*, 2019 ; Urbinati *et al.*, 2019) ou encore structurel (Latilla *et al.*, 2020 ; Skylar *et al.*, 2019 ; Stubbs, 2019) peuvent émerger au niveau de l'organisation adoptante. Celles-ci font alors apparaître des frictions voire des conflits internes

entre les actionnaires, dirigeants, managers, employés de l'organisation focale qui adopte la BMI (Berglund et Sandström, 2013). La BMI peut également être adoptée collaborativement par plusieurs organisations partenaires qui souhaitent cocréer davantage de valeur selon des mécanismes communs (Best *et al.*, 2021, 2022). Dans ce cadre, des tensions d'alignement, tenant à des divergences d'objectifs stratégiques et d'intérêts entre les acteurs internes et externes impliqués, peuvent quant à elles générer des frictions ou conflits au-delà des frontières de l'organisation focale, et plus particulièrement au niveau du réseau de valeur (Best *et al.*, 2021, 2022). **En cohérence avec cette littérature encore émergente de la BMI fondée sur une approche multiniveau, nous étudions l'adoption de la BMI selon deux principales modalités : celle de l'adoption individuelle de la BMI, où une organisation focale reconfigure son propre BM, et celle de l'adoption collaborative de la BMI, où un réseau d'organisations partenaires décident de reconfigurer ensemble leur BM.** Cependant, que l'adoption de la BMI soit individuelle ou collaborative, **nous nous attachons à considérer les enjeux qu'elle implique selon une perspective multiniveau, les tensions rencontrées lors de l'adoption se situant dans les deux cas aux différents niveaux de l'organisation, du réseau de valeur et de l'environnement institutionnel** (Berglund et Sandström, 2013 ; Best *et al.*, 2021, 2022).

D'autres études récentes adoptant une approche multiniveau de la BMI (Bocken *et al.*, 2022 ; Burström *et al.*, 2021 ; Endres *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Landoni *et al.*, 2020 ; Li, 2020 ; Rachinger *et al.*, 2019 ; Rey-Garcia *et al.*, 2020 ; Skylar *et al.*, 2019 ; Spieth *et al.*, 2019) démontrent que ces tensions de différentes natures peuvent résulter de l'existence de **pressions externes** provenant du réseau de valeur voire, plus largement, du niveau institutionnel. En effet, d'une part, le renforcement de la concurrence et l'interdépendance entre l'organisation focale et ses partenaires sont assimilés par les chercheurs à des pressions du réseau de valeur contraignant l'adoption de la BMI (Burström *et al.*, 2021 ; Endres *et al.*, 2019 ; Köhtamaki *et al.*, 2019 ; Landoni *et al.*, 2020 ; Li, 2020 ; Paiola et Gebauer, 2017 ; Rachinger *et al.*, 2019 ; Skylar *et al.*, 2019). D'autre part, et à plus large échelle, la revendication d'exigences sociétales par des citoyens, syndicats et associations, ainsi que la mise en œuvre de nouvelles lois et normes par les autorités publiques, sont assimilées à des pressions d'ordre institutionnel pouvant également conduire à une adoption contrainte de la BMI (Berglund et Sandström, 2013 ; Bocken *et al.*, 2022 ; Marti, 2018 ; Rey-Garcia *et al.*, 2020 ; Spieth *et al.*, 2019). Or, ces mêmes études montrent que des réponses organisationnelles inadaptées ou insuffisantes envers ces deux types de pressions (celles situées au niveau de réseau de valeur et



celles provenant du niveau institutionnel) peuvent créer ou renforcer les tensions internes, augmentant donc les chances d'échec de l'adoption de la BMI (Berglund et Sandström, 2013).

Ainsi, dans les cas (fréquents) où les managers ne parviennent pas à gérer ces pressions et tensions aux différents niveaux (Best *et al.*, 2022), l'adoption de la BMI peut engendrer de la destruction plutôt que de la génération de valeur (Bocken *et al.*, 2013 ; Snihur et Bocken, 2022). Les chercheurs prennent notamment l'exemple de la plateforme numérique Airbnb, dont la BMI, fondée sur le principe innovant de partage des résidences entre particuliers, a engendré de la destruction de valeur sociale par l'apparition de nuisances sonores affectant le voisinage, la montée de la criminalité et l'augmentation des coûts des loyers (Snihur et Bocken, 2022).

**Afin d'identifier par quels moyens spécifiques les managers pourraient gérer les pressions et tensions pour générer de la valeur par le biais de la BMI, un nombre croissant de recherches récentes suggèrent qu'il est nécessaire de remonter aux logiques expliquant son adoption, sans préciser toutefois clairement cette notion** (Brenk *et al.*, 2019 ; Broekhuizen *et al.*, 2018 ; Gasparin *et al.*, 2022 ; Grieco, 2021 ; Kim, 2017 ; Spiess-Knafl, 2015 ; Von den Eichen *et al.*, 2015). La « logique » (ou « logique de valeur ») d'un BM renvoie généralement dans la littérature à la synthèse de la proposition de valeur, l'architecture de valeur commerciale et l'équation de profit permettant de capturer de la valeur (Brenk *et al.*, 2019 ; Laasch *et al.*, 2018 ; Müller *et al.*, 2018 ; Spieth *et al.*, 2019 ; Spieth et Schneider, 2016). Suivant cette perspective, d'autres études montrent que la BMI ne résulte pas d'une compilation hasardeuse de nouveaux mécanismes de création, livraison et capture de valeur, mais d'un choix stratégique conscient lui conférant une certaine cohérence interne, son « architecture » (Foss et Saebi, 2018 ; Teece, 2010). En ce sens, l'architecture du BM peut être comprise comme la ou les logique(s) qui articule(nt) de manière cohérente les mécanismes de création, livraison et capture de valeur (Brenk *et al.*, 2019).

Par extension, lors de la reconfiguration des mécanismes et de l'architecture globale du BM via la BMI, différentes logiques peuvent entrer en conflit (entre acteurs internes et externes, d'une part, mais aussi entre l'ancien et le nouveau BM d'autre part), faisant ainsi émerger des pressions et tensions spécifiques (Brenk *et al.*, 2019). Or, **la littérature BMI reste à ce jour trop évasive quant à la manière de qualifier ces logiques, dont la compréhension fine est pourtant essentielle à la résolution des tensions et conflits qui peuvent menacer l'adoption** (Brenk *et al.*, 2019). Pour pallier cette lacune, nous soutenons qu'il est possible de faire dialoguer la littérature BMI sur les logiques de valeur avec, d'autres recherches plus anciennes en stratégie qui se sont attachées à définir le terme analogue de « rationalités » stratégiques

(Rumelt *et al.*, 1991 ; Singer, 1994). Ces recherches, ancrées dans une approche rationnelle renouvelée de la stratégie, permettent en effet de distinguer avec précision entre différentes formes de rationalité qui orientent les choix stratégiques tout en tenant compte de leur nécessaire inscription dans un environnement complexe qui limite le pouvoir et la capacité décisionnels des agents (Rumelt *et al.*, 1991). A notre connaissance, Alan E. Singer (1994) propose le cadre conceptuel holistique le plus précis pouvant être adapté à la qualification des logiques de la BMI, entendues comme différentes formes de rationalité. En effet, ce cadre de la « **stratégie comme philosophie morale** » (Singer, 1994) intègre, sous une forme synthétique, l'ensemble des formes de rationalité définies par les principales théories en économie et en stratégie (théorie des coûts de transaction, théorie des jeux, théorie évolutionnaire, théorie de l'inefficience X, théorie des parties prenantes ou encore théorie behavioriste), ainsi que celles issues des grands courants de la philosophie morale (déontologie, utilitarisme et contractualisme), couvrant ainsi un large panel de finalités et modalités qui orientent les décisions stratégiques. Transposé à l'objet spécifique de l'adoption de la BMI, ce cadre pourrait donc avoir pour avantage de permettre de couvrir les logiques d'adoption tant volontaires que contraintes, orientées vers la création de valeur économique au niveau organisationnel dans le cas des BMI traditionnels (i.e., centrés sur le profit) et/ou la génération de valeur sociale et/ou environnementale au-delà des frontières de l'organisation dans le cas des BMI « durables » (Bocken *et al.*, 2013). **Cette approche novatrice, non encore appliquée aux recherches en management stratégique, pourrait ainsi permettre de révéler les logiques cachées de l'adoption de la BMI et, par suite, d'identifier les origines des pressions, tensions et réponses qui affectent l'adoption.**

## **2. Cadre théorique, problématique et questions de recherche**

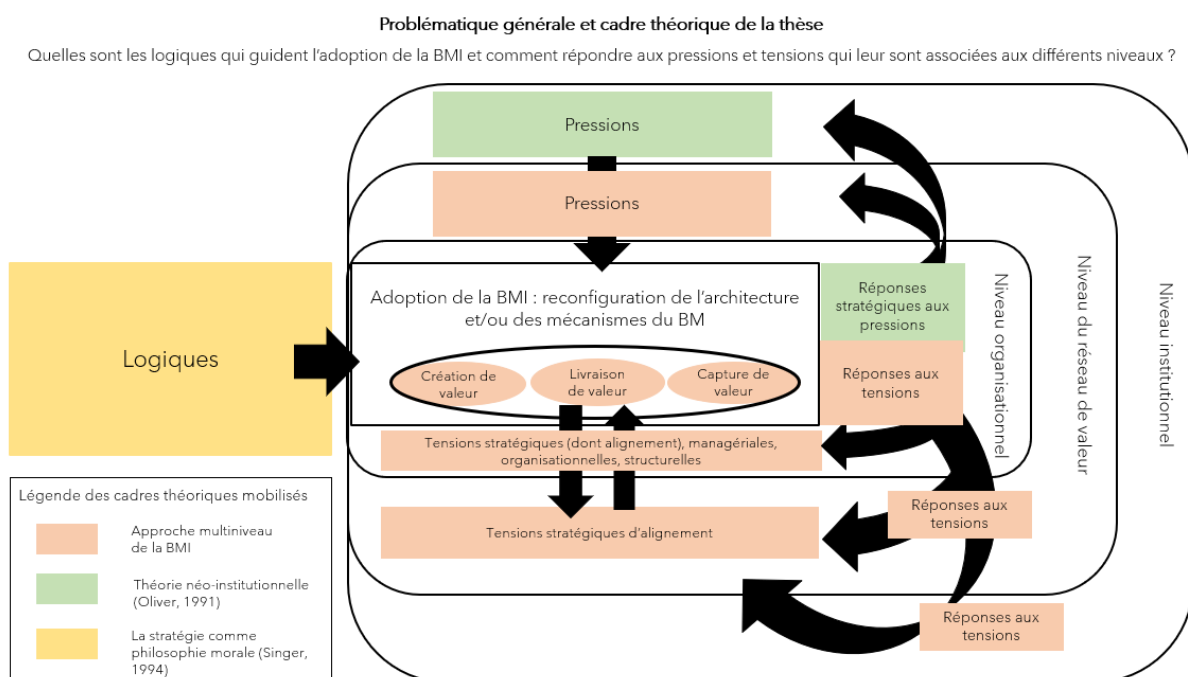
Dans la continuité des recherches qui adoptent une **perspective multiniveau** sur ce phénomène, **nous envisageons l'adoption de la BMI comme un objet englobant trois principaux niveaux d'analyse : le niveau organisationnel (celui de l'organisation focale qui adopte la BMI), le niveau du réseau de valeur (l'ensemble des partenaires qui interfèrent dans les activités de l'organisation focale), ainsi que le niveau institutionnel (l'ensemble des acteurs qui véhiculent de nouvelles exigences sociétales, normes et lois susceptibles de réorienter la stratégie de l'organisation focale).** Notre choix d'étudier l'adoption de la BMI sous le prisme de cette perspective multiniveau est conforme à notre

objectif de fournir des explications à la fois précises et systémiques sur la manière dont les logiques, pressions et tensions affectent l'adoption de la BMI, tant au sein des frontières organisationnelles qu'au-delà de celles-ci (Guedri *et al.*, 2014 ; John, 2005). Ce choix théorique suppose de considérer les BM dans leur complexité et de les concevoir selon deux modalités. Tout d'abord, dans la mesure où nous nous intéressons aux logiques qui motivent les managers à adopter une BMI, nous considérons le BM comme un schéma cognitif (Martins *et al.*, 2015), c'est-à-dire la manifestation informelle de la logique (individuelle) des managers qui cherchent à reconfigurer les mécanismes de création, livraison et capture de valeur selon une certaine architecture (Massa *et al.*, 2017). Cependant, dans la mesure où ces schémas cognitifs provenant des représentations individuelles du BM peuvent présenter des similitudes et donner lieu à des logiques et architectures génériques (pouvant donc faire l'objet d'une théorisation), nous considérons également les BM comme des « représentations conceptuelles formelles », c'est-à-dire des descriptions conceptuellement précises et systémiques à même d'expliquer le fonctionnement des activités que l'organisation met en œuvre afin d'atteindre ses objectifs (Massa *et al.*, 2017, p.84). **Dans la continuité de cette conceptualisation à la fois cognitive et formelle des BM, notre thèse intègre à cette perspective multiniveau des BMI les éclairages fournis par la théorie néo-institutionnelle (Oliver, 1991 ; Pedersen et Gwozdz, 2018) et l'approche de la stratégie comme philosophie morale (Singer, 1994). Ces théories permettent en effet de repenser l'adoption d'une BMI en la reliant à la fois à des enjeux internes (logiques et tensions qui émergent au niveau de l'organisation focale) et des enjeux externes (logiques, pressions et tensions qui émergent au niveau du réseau de valeur et/ou au niveau institutionnel).**

En remontant d'abord aux logiques (*e.g.* création de valeur économique vs. création de valeur sociale) qui expliquent l'adoption de la BMI (Brenk *et al.*, 2019), **nous visons à retracer la genèse des pressions et tensions qui émergent aux différents niveaux de l'organisation, du réseau de valeur et des institutions et complexifient l'adoption. En effet, si les différentes logiques portées par des acteurs internes et externes peuvent être vecteurs de pressions, tensions voire « conflits » de nature variée susceptibles de menacer l'adoption, il importe de les identifier en vue de proposer des réponses adaptées, permettant de générer de la valeur (Best *et al.*, 2021 ; 2022 ; Brenk *et al.*, 2019).** Aussi, notre problématique se formule de la manière suivante :

**« Quelles sont les logiques qui guident l'adoption de la BMI et comment répondre aux pressions et tensions qui leur sont associées aux différents niveaux ? »**

## Schéma 1. Problématique générale et cadre théorique de la thèse

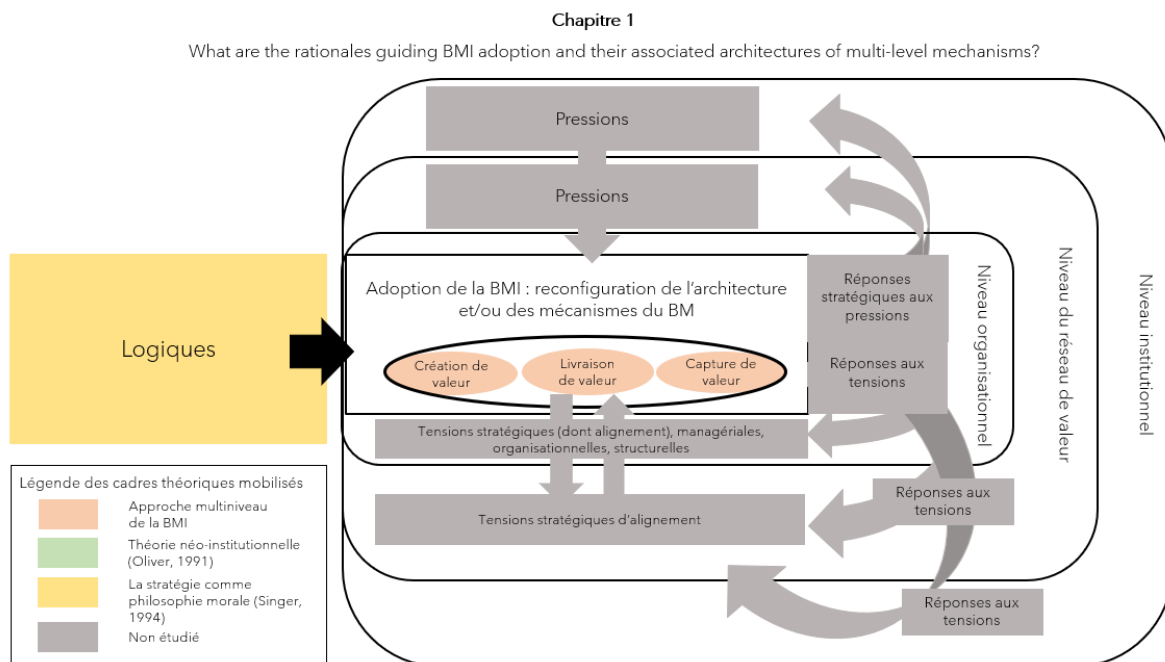


A l'aide de cette approche multiniveau renouvelée, nous déclinons notre problématique générale en trois questions de recherche spécifiques qui structurent nos chapitres de thèse. Celles-ci nous permettent d'apporter des éclairages différents et complémentaires sur l'adoption de la BMI.

Dans un **premier chapitre**, nous cherchons à identifier les logiques sous-jacentes à l'adoption de la BMI susceptibles d'expliquer les différentes architectures de mécanismes de création, livraison et capture de valeur (Foss et Saebi, 2017, 2018), en considérant la question suivante : « *Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multi-niveaux associées ?* » Pour y répondre, nous élaborons une **revue de littérature systématique** (Denyer et Tranfield, 2009) intégrant 79 articles et couvrant 21 ans de recherche sur les BMI. Fondée sur une approche multiniveau intégrant les éclairages de la stratégie comme philosophie morale (Singer, 1994), cette revue de littérature nous permet d'identifier les principales logiques qui orientent l'adoption de la BMI (Singer, 1994). En fonction de ces logiques qui permettent de préciser la finalité de la BMI, nous identifions et définissons trois architectures de mécanismes de création, livraison et capture de valeur dominantes au sein de la littérature : l'architecture fondée sur la sympathie rationnelle, l'architecture fondée sur l'égoïsme rationnel et l'architecture fondée sur l'engagement rationnel. Nous précisons pour chacune les niveaux d'analyse auxquels sont implémentés ces

mécanismes de création, livraison et capture de valeur : au niveau de l'organisation, du réseau de valeur et/ou de la société (Bocken *et al.*, 2013 ; Lepak *et al.*, 2007). Au plan théorique, nous débouchons sur deux types de contributions. Premièrement, cette recherche contribue à caractériser précisément les logiques cachées (Grieco, 2021 ; Kim, 2017 ; Spiess-Knafl *et al.*, 2015 ; Schneckenberg *et al.*, 2019) qui sous-tendent son adoption et qui permettent de révéler une architecture cohérente basée sur des mécanismes complémentaires de création, livraison et capture de valeur (Foss et Saebi, 2017, 2018). Deuxièmement, cette revue de littérature nous permet d'identifier différentes lacunes de la recherche sur l'adoption de la BMI et de formuler en fonction de celles-ci des perspectives de recherche future. Chacune des perspectives de recherche proposée mobilise le cadre que nous élaborons à partir du croisement de l'approche multiniveau de la BMI et de la stratégie comme philosophie morale (Singer, 1994).

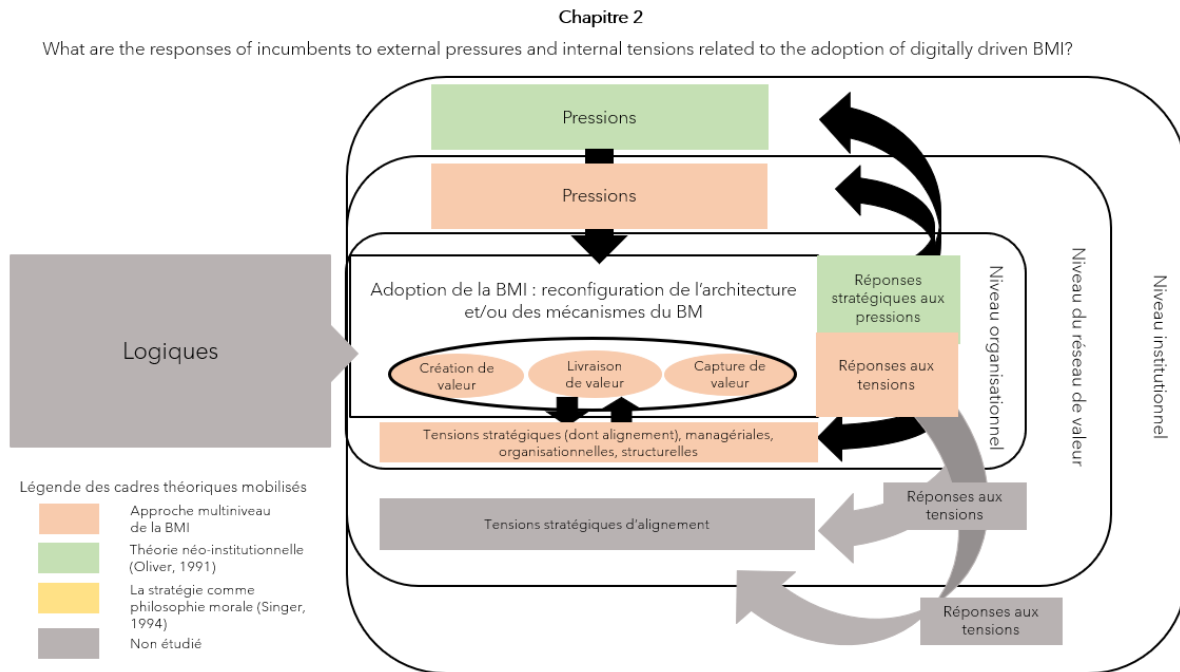
### Schéma 2. Question de recherche et cadre théorique du premier chapitre



**Le deuxième chapitre** s'inscrit dans la lignée des nombreuses recherches qui montrent les difficultés posées par l'adoption de la BMI, en particulier dans les entreprises établies (Klos *et al.*, 2021 ; Latilla *et al.*, 2020 ; Mao *et al.*, 2020 ; Remane *et al.*, 2017 ; Sund *et al.*, 2021 ; Svahn *et al.*, 2017). Plus précisément, ces études insistent sur le fait que les entreprises établies sont aujourd'hui en proie à la fois à des pressions externes (interdépendance et concurrence accrues avec les partenaires du réseau de valeur, nouvelles exigences sociétales et normes institutionnelles) et des tensions internes (stratégiques, managériales, culturelles, structurelles) de forte intensité. Cela les contraint à reconfigurer leur BM (i.e. adopter la BMI) afin d'apporter

des réponses plus ou moins adaptées à ces pressions et tensions (Dellermann *et al.*, 2017 ; Jocevski, 2020 ; Kamalaldin *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Paiola et Gebauer, 2020 ; Rachinger *et al.*, 2019). Or, de récentes recherches montrent que ces pressions et tensions qui affectent l'adoption de la BMI par les entreprises établies sont particulièrement difficiles à identifier et à gérer dans le cas des « *digitally driven BMI* », c'est-à-dire lorsque la décision de reconfigurer le BM fait suite à l'intégration d'une technologie numérique particulièrement disruptive (Burström *et al.*, 2021 ; Karimi et Walter, 2016 ; Solberg *et al.*, 2020 ; Weking *et al.*, 2020). Dans la continuité de ces études, qui appellent à davantage d'éclairages sur les réponses apportées par les entreprises établies aux difficultés multiniveaux posées par l'adoption d'une *digitally driven BMI*, ce deuxième chapitre de thèse vise à répondre à la question suivante : « ***Quelles sont les réponses des entreprises établies envers les pressions externes et tensions internes liées à l'adoption d'une digitally driven BMI ?*** » Afin de traiter cette question, nous nous appuyons sur un cadre multiniveau de la *digitally driven BMI* que nous enrichissons à l'aune des contributions de la théorie néo-institutionnelle (Oliver, 1991 ; Pedersen et Gwozdz, 2018). Cette théorie a pour intérêt majeur de préciser la nature des pressions institutionnelles associées à l'adoption d'une BMI qui n'ont jamais été considérées dans un cadre multiniveau, ainsi que les différents types de réponses organisationnelles apportées à celles-ci. Au plan méthodologique, cette recherche met en œuvre une **étude de cas unique aux unités emboîtées** (Siggelkow, 2007 ; Yin, 2003) au sein d'une grande entreprise française de distribution d'électricité ayant décidé d'adopter une BMI suite à l'intégration d'un compteur intelligent. Notre étude révèle que face à des pressions institutionnelles de forte intensité, la principale réponse apportée par les entreprises établies est de se conformer rapidement à de nouvelles exigences sociétales (i.e., normes européennes imposant l'intégration de technologies numériques pour opérer la transition énergétique), au détriment de la prise en compte des nombreuses tensions internes rencontrées au plan stratégique, managérial et culturel pourtant susceptibles de menacer l'adoption pérenne de la BMI et à terme, la capacité des entreprises à générer de la valeur.

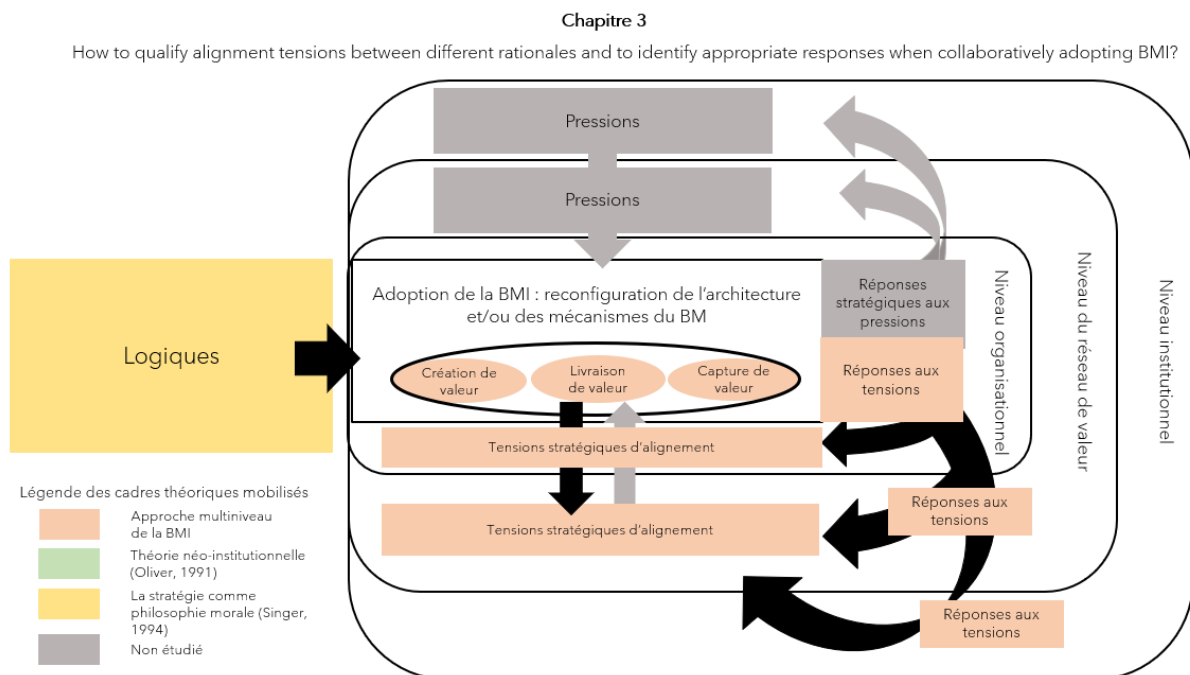
### Schéma 3. Question de recherche et cadre théorique du deuxième chapitre



Dans le troisième chapitre, nous nous inscrivons dans la lignée des travaux qui considèrent que la BMI peut être adoptée **collaborativement** par une organisation focale et les partenaires de son réseau de valeur qui interfèrent directement dans la conduite de ses activités. Dans ce cadre, un certain nombre de tensions peuvent émerger lorsque les acteurs internes (de l'organisation focale) et externes (du réseau de valeur) soutiennent des logiques aux finalités économiques, sociales et environnementales désalignées (Berglund et Sandström, 2013 ; Bocken et Geradts, 2020 ; Best *et al.*, 2021 ; Hiteva et Foxon, 2021 ; Moroz et Gamble, 2021 ; Pache et Santos, 2010 ; Stubbs, 2019). Si non considérées, ces tensions, que nous qualifions de « **tensions d'alignement** », peuvent conduire à détruire de la valeur au lieu d'en générer par le biais de la BMI (Best *et al.*, 2022 ; Bocken *et al.*, 2013 ; Snihur et Bocken, 2022). Or, à ce jour, **la manière de qualifier ces tensions d'alignement** ainsi que les **réponses** apportées à celles-ci aux niveaux de l'organisation, du réseau de valeur et de l'environnement institutionnel restent largement méconnues (Best *et al.*, 2022 ; Oskam *et al.*, 2020 ; Rey-Garcia *et al.*, 2020). Aussi, dans ce troisième et dernier chapitre de thèse, nous visons à combler cette lacune de la littérature en traitant la question de recherche suivante : « **Comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative d'une BMI ?** ». Afin de répondre à cette question, nous mobilisons une approche multiniveau intégrant les apports de la stratégie comme philosophie morale (Singer, 1994), celle-ci

permettant de qualifier l’alignement en fonction d’un large spectre de logiques plus ou moins complémentaires, soutenues par les acteurs internes et externes qui adoptent la BMI. Notre approche méthodologique fait appel à une **étude de cas multiple** (Yin, 2003) conduite au sein de quatre organisations focales de taille et de secteurs industriels distincts qui ont pour point commun d’avoir adopté une BMI en collaboration avec différents partenaires. Cette étude nous permet de contribuer doublement à éclairer l’adoption collaborative de la BMI. Tout d’abord, en identifiant les logiques qui coexistent dans l’adoption collaborative de la BMI et en évaluant leur proximité selon la finalité visée, nous développons un outil conceptuel permettant de qualifier l’alignement des acteurs. Cette qualification de l’alignement et des tensions associées nous permet de distinguer différents types et niveaux de réponses. Nos résultats révèlent ainsi que les réponses proposées aux tensions d’alignement sont principalement positionnées aux niveaux de l’organisation et du réseau de valeur, au détriment du niveau institutionnel qui reste quant à lui un « impensé » malgré son importance théorique et pratique (Berglund et Sandström, 2013 ; Rey-Garcia *et al.*, 2020).

#### Schéma 4. Question de recherche et cadre théorique du troisième chapitre





### 3. Design de recherche

#### 3.1. Positionnement épistémologique

Au plan épistémologique, cette thèse se positionne dans la veine du **constructivisme philosophique** ou « constructionnisme », hérité de la *Critique de la raison pure* de Kant (2012), et tel que développé par l'épistémologue Ian Hacking (Hacking, 2008 ; Nguyễn-Duy et Luckerhoff, 2007). Ce courant considère que, si la réalité a bien une configuration unique et intrinsèque (i.e., il existe bien une seule réalité en dehors de notre esprit), la science ne peut prétendre être en mesure de vérifier le niveau d'adéquation entre les connaissances que nous construisons et celle-ci<sup>3</sup>. Cette limite de la science, dont part le constructivisme philosophique pour définir les objets et le rôle des sciences, tient au fait que nous n'accédons jamais directement à la réalité dans son essence même. En effet, nous accédons à la réalité uniquement par le biais des phénomènes, c'est-à-dire par l'intermédiaire de manifestations sensibles qui sont mises en forme par notre conscience au moment même de l'opération de cognition (Kant, 2012). Par conséquent, il est soutenu par les constructivistes (ou constructionnistes) que les connaissances produites par les sciences peuvent tout au plus expliquer les phénomènes tels qu'ils se manifestent à la conscience humaine (notamment en fonction de leur nécessaire inscription dans les catégories du temps et de l'espace), c'est-à-dire l'expérience (sensible) que nous avons du monde, et non la réalité elle-même, telle qu'elle existe en dehors de toute manifestation sensible (Hacking, 2008 ; Kant, 2012 ; Rockmore, 2007).

Ce positionnement épistémologique par rapport au statut des objets des sciences distingue le constructivisme du courant réaliste. En effet, par opposition au constructivisme, le réalisme considère que les objets des sciences sont bien l'essence de la réalité, c'est-à-dire sa configuration unique et intrinsèque telle qu'elle existe indépendamment du sujet qui l'observe, et non ses manifestations sensibles (les phénomènes en tant qu'ils sont perçus par nos sens et sont reconstruits dans les catégories de notre conscience). Par suite, le réalisme soutient, dans sa version « scientifique », que les sciences peuvent et doivent produire des connaissances exactes, en adéquation avec l'essence même de la réalité (Putnam, 1984) ou, du moins, dans sa version « critique », que nous devons produire des connaissances qui tendent infiniment vers (mais n'atteignent jamais absolument) sa configuration intrinsèque, notamment par le biais de

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<sup>3</sup> Le fait que le constructivisme philosophique considère que la réalité n'est pas construite par notre esprit mais possède une ontologie propre, à la différence des connaissances scientifiques qui sont une production humaine renadant compte des phénomènes, distingue nettement cette épistémologie du constructivisme radical (qui, lui, considère la réalité comme une construction de l'esprit).

la réfutation successive des théories scientifiques invalides et la corroboration de celles qui résistent encore à l'expérimentation (Popper, 2009).

Le constructivisme se distingue également du courant positiviste, non pas cette fois par rapport au statut des objets des sciences (i.e., pas de distinction ontologique), mais par rapport à leur rôle dans la production de connaissances (i.e., distinction axiologique). En effet, constructivistes comme positivistes s'opposent aux réalistes dans la mesure où ils considèrent communément que les objets des sciences ne sont *que* les phénomènes (les manifestations sensibles de la réalité, reconstruites par notre conscience au moment de la cognition), appelant ainsi les scientifiques à abandonner l'objectif (estimé vain) de rendre compte de l'essence des objets réels (Comte, 2009). Cependant, à la différence du constructivisme, le courant positiviste soutient que le rôle des sciences est de se concentrer sur la production de connaissances à même d'expliquer et prédire les relations (causales) entre les phénomènes de manière certaine, sous la forme de lois que nous pourrions vérifier par le biais de l'expérimentation (Carnap, 1936 ; Comte, 2009 ; Pickering, 2011). Par distinction, le constructivisme soutient une position plus sceptique quant au statut de nos connaissances des phénomènes : dans le courant constructiviste (constructionniste), « la réflexion est centrée sur la fonction extra-théorique de construits théoriques et méthodologiques » (Nguyễn-Duy et Luckerhoff, 2007, p.6). En effet, « en analysant les entités théoriques en termes de constructions logiques » (Hacking, 2001, p. 72), mais aussi comme constructions politiques et sociales (Kuhn, 2018), un constructiviste espère accroître la rigueur et la validité de la démarche scientifique (Nguyễn-Duy et Luckerhoff, 2007, p.6). Ainsi, à la différence du positivisme, le constructivisme ne considère pas les connaissances scientifiques comme des lois certaines universellement vérifiables, mais plutôt comme « différents projets sociologiques, historiques et philosophiques ayant pour but de montrer ou d'analyser des interactions sociales ou des chaînes de causalité réelles, historiquement situées, ayant conduit à, ou ayant été impliquées dans la mise en évidence ou l'établissement de quelque entité ou fait présent » (Nguyễn-Duy et Luckerhoff, 2007, p.6). Aussi, pour les constructivistes, les connaissances produites en sciences ne doivent pas tant viser la vérité entendue comme certitude (position des positivistes) que la cohérence logique (interne à la théorie), et la réflexivité sur le rapport (logique, politique et social) que le scientifique entretient avec les phénomènes qu'il observe (Hacking, 2008 ; Kant, 2012 ; Kuhn, 2018 ; Pickering, 2011).

**Cette thèse s'inscrit dans le courant constructiviste pour trois principales raisons.** Premièrement, du point de vue de **l'objet étudié** (dimension ontologique), nous considérons au plan théorique le BM et, par extension, la BMI, comme des **représentations conceptuelles**

**formelles** (Massa *et al.*, 2017). Or, les représentations conceptuelles formelles du BM ne visent pas tant à décrire avec exactitude la conduite des activités des entreprises, qu'à en abstraire les mécanismes de création, livraison et capture de valeur ainsi que l'architecture les reliant (Foss et Saebi, 2017 ; Teece, 2010). Dans une conception formelle des BM et BMI, ces mécanismes ne sont considérés non pas comme des entités réelles mais **des concepts théoriques construits par le chercheur qui souhaite rendre compte avec cohérence (et non exactitude) du fonctionnement des activités des entreprises** (Massa *et al.*, 2017). Deuxièmement, ce positionnement constructiviste est cohérent avec l'importance que nous accordons aux **représentations individuelles** des managers dans la mise au jour des logiques qui guident l'adoption de la BMI et donnent lieu à des schémas cognitifs (Martins *et al.*, 2015 ; Massa *et al.*, 2017) distincts. Enfin, du point de vue du statut que nous accordons aux **connaissances** produites (dimension épistémique), nous considérons que les concepts théoriques (notamment « mécanismes », « logiques », « pressions » et « tensions ») qui sont au cœur de l'étude des BM et de la BMI mettent en évidence des **relations causales et interactions sociales qui ne peuvent être détachées de leur contexte d'étude spécifique** (Hacking, 2001, 2008 ; Nguyễn-Duy et Luckerhoff, 2007 ; Kuhn, 2018). En l'occurrence, les connaissances que nous produisons dans le cadre de ce travail doctoral s'inscrivent spécifiquement dans le contexte d'organisations françaises ayant initié récemment leur BMI, dans une période d'instabilité politique et sociale générale liée à la pandémie de COVID-19.

Nous synthétisons dans le Tableau 1 ci-dessous le positionnement du constructivisme (ou constructionnisme) que nous soutenons par rapport aux autres principaux courants épistémologiques selon trois principales dimensions : le statut des objets des sciences (dimension ontologique), le rôle des sciences dans la production de connaissances (dimension axiologique) et le statut des connaissances scientifiques qui dérive de la définition retenue de la vérité (dimension épistémique).

**Tableau 1.** Positionnement du constructivisme par rapport aux autres principaux courants épistémologiques

*D'après Hacking, 2008 ; Nguyễn-Duy et Luckerhoff, 2007 ; Kuhn, 2018 ; Pickering, 2011*

	<b>Réalisme</b>	<b>Positivisme</b>	<b>Constructivisme</b>
<b>Statut des objets des sciences (dimension ontologique)</b>	Les objets des sciences sont les objets réels, tels qu'ils existent en dehors de toute manifestation sensible, dans leur configuration intrinsèque.	Les objets des sciences sont les phénomènes, c'est-à-dire les manifestations sensibles des objets réels, reconstruits par l'opération de cognition.	
<b>Rôle des sciences dans la production de connaissances (dimension axiologique)</b>	Le rôle des sciences est de rendre compte, avec la plus grande exactitude possible, de la configuration intrinsèque de la réalité.	Le rôle des sciences est de produire des lois universellement vérifiables, capables d'expliquer et prédire les phénomènes.	Le rôle des sciences est de montrer et d'analyser les interactions sociales et/ou chaînes de causalité en tenant compte de leur reconstruction logique et sociale au sein des concepts mobilisés dans les différentes théories scientifiques.
<b>Définition de la vérité et statut des connaissances scientifiques (dimension épistémique)</b>	La vérité est entendue comme <i>exactitude</i> ou <i>vérité-correspondance</i> : les connaissances scientifiques considérées vraies ou tendant vers la vérité sont celles qui <i>correspondent</i> le mieux à la réalité dans sa configuration intrinsèque.	La vérité est entendue comme <i>certitude</i> : les connaissances scientifiques vraies sont celles capables d'expliquer et prédire les relations entre les phénomènes de manière <i>certaine</i> .	La vérité est entendue comme <i>vérité-cohérence</i> : les connaissances scientifiques vraies sont celles qui articulent de manière <i>cohérente</i> les concepts théoriques pour expliquer les phénomènes, tout en rendant compte du positionnement (logique, politique, social) du scientifique par rapport à ces derniers.

### 3.2. Choix méthodologiques

L'objectif de répondre à la problématique « *quelles sont les logiques qui guident l'adoption de la BMI et comment répondre aux pressions et tensions qui leur sont associées aux différents niveaux ?* » nous a incités à nous appuyer sur **différentes méthodologies qualitatives** complémentaires pour étudier notre terrain d'enquête. D'une part, le déploiement de méthodes qualitatives est particulièrement indiqué dans les recherches en sciences sociales adoptant une

approche constructiviste (Mucchielli, 2005 ; Nguyễn-Duy et Luckerhoff, 2007). En effet, celles-ci impliquent de contextualiser davantage le phénomène étudié (ici, l'adoption de la BMI) et de faire preuve de réflexivité sur la posture du chercheur qui interprète ce phénomène à l'aune de concepts théoriques logiquement et socialement construits (Mucchielli, 2005 ; Nguyễn-Duy et Luckerhoff, 2007). D'autre part, les méthodologies qualitatives se sont avérées particulièrement adaptées aux recherches visant à répondre à des questions encore peu étudiées dans la littérature (Yin, 2003 ; Siggelkow, 2007), ce qui coïncide avec notre problématique et l'actuelle rareté des recherches multiniveau sur l'adoption de la BMI (Best *et al.*, 2021 ; 2022). Enfin, une approche qualitative permet d'analyser en profondeur les différentes dimensions d'un phénomène complexe (Yin, 2003), ce qui répond également à notre objectif d'analyser les modalités d'adoption de la BMI aux différents niveaux (organisationnel, réseau de valeur et institutionnel) en tenant compte de leurs interactions complexes (John, 2005).

Dans l'optique d'adapter notre démarche méthodologique aux spécificités des trois questions de recherche formulées et aux lacunes identifiées dans la littérature sur l'adoption des BMI, nous déployons des méthodologies qualitatives distinctes (mais complémentaires) pour chaque chapitre de la thèse. Le **premier chapitre** (qui vise à répondre à la question : « *Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multi-niveaux associées ?* ») a pour objectif de révéler les « logiques » d'adoption de la BMI et de dresser une typologie des architectures de mécanismes multi-niveaux de création, livraison et capture de valeur associées. La réalisation d'une **revue systématique** est particulièrement adaptée à cet objectif, dans la mesure où cette méthodologie permet d'accéder à un nombre conséquent d'articles issus du champ de la BMI tout en s'assurant de leur pertinence pour répondre à la question de recherche, à l'aide de critères de sélection clairement définis (Higgins *et al.*, 2011). Par ailleurs, les processus de sélection d'articles et d'analyse d'une revue de littérature systématique sont clairement détaillés par le chercheur et suivent des étapes séquencées, reproductibles par le reste de la communauté scientifique (Denyer et Tranfield, 2009 ; Higgins *et al.*, 2011). Par conséquent, les résultats résultant de cette méthodologie ont une portée théorique plus robuste que celles issues de revues exploratoires ou narratives (Higgins *et al.*, 2019). En l'occurrence, notre revue de littérature systématique a suivi les cinq étapes définies par Denyer et Tranfield (2009) : (1) formulation de la question de recherche, (2) définition du périmètre de la recherche (selon les mots-clés et bases de données interrogées), (3) sélection et évaluation de la recherche (application de critères d'exclusion puis de critères d'inclusion clairement définis), (4) analyse et synthèse (codage et analyse des données sur

Atlas.TI 9) et (5) rapportage des résultats. Le respect de ces cinq étapes nous a permis d'intégrer à notre analyse 79 articles couvrant 21 ans de recherche sur les BMI (de 2000 à 2021), mettant chacun en évidence les logiques (comprises au sens de finalités) de l'adoption de la BMI et les mécanismes de création, livraison et capture de valeur qui leur sont associés aux différents niveaux. Le travail d'analyse et de synthèse que nous avons opéré sur ces résultats nous a permis de dégager et de définir **trois architectures distinctes de mécanismes multiniveaux, en fonction des trois principales logiques d'adoption de la BMI identifiées** dans les 79 articles. Enfin, le choix méthodologique de la revue systématique de littérature systématique nous a conduit à identifier avec précision les lacunes actuelles de la recherche multiniveau sur les BMI, en vue de proposer des perspectives de recherche adaptées.

En lien avec les lacunes et perspectives identifiées par le biais de la revue de littérature systématique présentée de notre premier chapitre, le **second chapitre** de la thèse interroge : « *Quelles sont les réponses des entreprises établies envers les pressions externes et tensions internes liées à l'adoption d'une digitally driven BMI ?* » Ce chapitre a pour objectif de comprendre plus précisément les modalités d'adoption de la BMI en contexte « extrême » (Barlatier, 2018; Eisenhardt et Graebner, 2007 ; Ridder, 2017), c'est-à-dire dans un secteur particulièrement soumis aux contraintes institutionnelles (le secteur de l'énergie), dans un type d'organisations rencontrant des difficultés intenses lors de l'adoption (les entreprises établies) et pour une forme complexe de BMI (la BMI engendrée par l'intégration d'une technologie numérique disruptive). Du fait de la complexité de notre objet de recherche et de sa rare considération dans la littérature sur les BMI, nous avons fait le choix méthodologique de nous appuyer sur une **étude exploratoire de cas unique aux unités emboîtées** (Siggelkow, 2007 ; Yin, 2003). En effet, ce type d'étude permet d'identifier des enjeux pertinents exposés par les interviewés, qui partagent de riches expériences sur le phénomène observé tout en mettant en éclairant l'adoption de la *digitally-driven* BMI dans des contextes d'exercice différents (Fraser and Ansari, 2021, Pache and Santos, 2010). En nous appuyant sur cette approche méthodologique, nous avons sélectionné une grande entreprise française (plus de 36 000 employés) de distribution d'électricité à mission de service public. Désignée sous le nom d'ENERGIA dans notre étude cette entreprise a décidé d'adopter une BMI en 2019 suite aux difficultés posées par l'intégration d'un compteur intelligent. La période de collecte des données a coïncidé à la fois avec la pandémie de COVID-19 et le début de l'implémentation de

la BMI, en janvier 2021. Au sein d'ENERGIA, nous avons conduit 20 entretiens semi-dirigés<sup>4</sup> avec des employés, managers et dirigeants de deux unités : l'une en charge du déploiement national de la BMI, et l'autre de sa déclinaison régionale. Ces deux unités ont en commun d'endosser la mission de service public de l'entreprise, qui consiste à assurer la distribution équitable de l'électricité aux citoyens français tout en répondant à de nombreuses exigences et normes institutionnelles. Cependant, l'unité en charge de la déclinaison régionale de la BMI est *a priori* plus exposée aux pressions externes, dans la mesure où elle assure directement la distribution d'électricité et services associés auprès des municipalités et des citoyens. Par distinction, l'unité nationale est supposée rencontrer davantage de tensions internes, son objectif principal étant de fournir différents services logistiques aux autres unités de l'entreprise qui assurent la distribution d'électricité. Afin de donner davantage de cohérence à l'analyse, nous avons opéré par ailleurs une triangulation des données qui consiste à croiser les résultats issus des entretiens semi-directifs avec 10 documents secondaires (155 pages) traitant du projet global de BMI d'ENERGIA, et de ses déclinaisons au sein de l'unité nationale et de l'unité régionale. Cette méthodologie nous a permis de développer **une conceptualisation multiniveau tenant compte des interdépendances entre pressions externes et tensions internes, et d'obtenir une potentielle variété de réponses envers ces pressions et tensions susceptibles d'affecter l'adoption de la BMI.**

Dans l'optique d'étendre ces résultats à la lumière d'autres contextes, notre **troisième chapitre** a pour objectif de confronter notre cadre multiniveau à d'autres situations empiriques, en vue de l'enrichir par d'autres dimensions. Plus précisément, dans ce chapitre, notre objectif était de comprendre « *Comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative d'une BMI* » dans différents contextes industriels et organisationnels. En cohérence avec cet objectif et dans le prolongement d'autres (rares) études ayant analysé les tensions d'alignement et leur gestion selon une approche multiniveau de la BMI (Best *et al.*, 2021 ; 2022), nous avons fait appel à une **étude de cas multiple** (Siggelkow, 2007 ; Yin, 2003) menée au sein de quatre organisations focales et leurs partenaires externes qui ont choisi d'adopter une BMI en collaboration. Les quatre cas sélectionnés ont en commun d'être engagés dans un projet d'adoption de BMI qui consiste à élaborer ensemble une nouvelle proposition de valeur nécessitant l'implémentation de nouveaux mécanismes de création, livraison et capture de valeur. Cependant, les quatre

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<sup>4</sup> En respect des normes sanitaires liées à la pandémie de COVID-19, ces entretiens ont été réalisés en visioconférence par les chercheurs de la chaire IOPEN.

organisations focales de ces cas diffèrent en taille, âge et contexte industriel. Parmi les entreprises choisies figurent une PME et une ETI : une ETI spécialisée dans la confection de connecteurs et d'interfaces homme-machine (CONNECT-HUB), et une PME spécialisée dans la conception et la location de solutions de coffrage et d'étaie pour le secteur du bâtiment (ECO<sup>2</sup>-BUILD). Les deux autres organisations sont de grandes entreprises établies : l'une opérant dans le secteur de la motorisation tubulaire et de la domotique (SMART&GREEN), et l'autre dans la distribution d'articles de sports d'extérieur pour athlètes amateurs et professionnels (NEWTEX)<sup>5</sup>. Afin d'accroître « la validité, la force et le potentiel d'interprétation » (Thurmond, 2001, p. 253) de notre étude de cas multiple, nous nous sommes appuyés sur des méthodes de conduite d'entretiens mixtes qui ont l'avantage de faciliter la triangulation des données (Denzin, 1978). Cette **approche mixte** a consisté en l'occurrence à conduire 9 *focus groups* ainsi que 38 entretiens semi-dirigés avec des employés, managers et dirigeants au sein des organisations focales et de leurs entreprises partenaires. Dans la mesure où les organisations focales sont également celles à l'initiative de chaque projet de BMI étudié, nous avons choisi d'interviewer les acteurs internes dans des focus groups séparés, pour éviter tout biais d'influence et de conformité de ces derniers sur les partenaires externes qui ont rejoint le projet plus tardivement. Les interviewés réfléchissant d'abord individuellement puis débattant collectivement de la finalité du projet de BMI lors des focus groups (conduits de février à avril 2022), cette méthode nous a permis d'identifier les tensions d'alignement et leurs modalités de gestion *in vivo*, au moment même de leur émergence sous l'effet du groupe (Best *et al.*, 2021). La conduite d'entretiens semi-directifs qui s'en est suivie (d'avril à septembre 2022) a permis quant à elle de collecter *ex vivo* les perceptions individuelles (de manière indépendante de tout effet de groupe) sur la finalité de la BMI, les tensions d'alignement rencontrées en interne et en externe, et les réponses fournies ou à fournir envers celles-ci. Au global, cette approche méthodologique présente l'avantage d'aider à **(1) identifier les logiques de la BMI à l'origine de tensions d'alignement entre les acteurs (internes comme externes) et (2) mettre en perspective les principales réponses proposées à ces tensions aux différents niveaux, à l'aune de contextes organisationnels et industriels variés.**

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<sup>5</sup> Compte tenu du caractère hautement stratégique des projets étudiés, nous ne révélerons pas dans cette thèse les entreprises focales impliquées.



**Tableau 2.** Synthèse des choix méthodologiques

	Chapitre 1	Chapitre 2	Chapitre 3
Question de recherche	« <i>Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multiniveaux associées ?</i> »	« <i>Quelles sont les réponses des entreprises établies envers les pressions externes et tensions internes liées à l'adoption d'une digitally driven BMI ?</i> »	« <i>Comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative d'une BMI ?</i> »
Design méthodologique	Revue de littérature systématique (Denyer et Tranfield, 2009) couvrant 21 ans de recherche sur les BMI	Etude qualitative de cas unique aux unités emboîtées (Siggelkow, 2007 ; Yin, 2003) au sein de deux unités (nationale et régionale) du distributeur français d'énergie ENERGIA	Etude qualitative de cas multiple (Siggelkow, 2007 ; Yin, 2003) au sein de quatre organisations focales et leurs partenaires (CONNECT-HUB, ECO <sup>2</sup> -BUILD, SMART&GREEN, NEWTEX)
Volumétrie des données	79 articles de recherche publiés dans des revues à comité de lecture	20 entretiens semi-dirigés avec des employés opérationnels, managers et dirigeants (564 pages) et 10 documents secondaires sur le projet de BMI (155 pages)	9 focus groups (170 pages) et 38 entretiens semi-dirigés (avec des employés opérationnels, managers et dirigeants) (849 pages)

## 4. Contributions de la recherche

### 4.1. Contributions théoriques

Le présent travail doctoral a pour objectif principal d'éclairer comment les logiques, pressions et tensions situées à différents niveaux (organisationnel, réseau de valeur et institutionnel) affectent l'adoption d'une BMI et la manière dont les entreprises les intègrent. Pour satisfaire cet objectif, nous avons développé un modèle multiniveau de l'adoption de la BMI qui permet de dévoiler les logiques (Singer, 1994) guidant l'adoption de la BMI (i.e. choix de reconfigurer les mécanismes de création, livraison et capture de valeur à des niveaux distincts), ainsi que les pressions, tensions et réponses associées. Ce faisant, **les principales contributions théoriques de ce travail doctoral sont de trois ordres.**

Premièrement, notre recherche met en perspective **l'adoption de la BMI à l'aune de la stratégie comme philosophie morale** (Singer, 1994), un cadre conceptuel qui précise les **logiques** à l'origine des choix stratégiques visant différentes finalités (de la capture de valeur économique au niveau organisationnel à la création de valeur sociale et/ou environnementale au niveau de la société). En ce sens, notre cadre permet de **fournir un nouvel éclairage à la question des antécédents de la BMI** (Foss et Saebi, 2017) et de ses « logiques » sous-jacentes (Grieco, 2021; Kim, 2017; Spiess-Knafl *et al.*, 2015; Schneckenberg *et al.*, 2019) selon une approche renouvelée de la stratégie permettant d'articuler les modèles traditionnels de BMI, qui priorisent la génération de valeur économique au niveau organisationnel, et les modèles de BMI « durables » (Bocken *et al.*, 2013) qui visent à générer de la valeur globale aux niveaux du réseau de valeur et de la société. **Cette typologie des logiques d'adoption aide également à mettre au jour le « pluralisme de valeur » inhérent à la BMI adoptée de manière collaborative** (Best *et al.*, 2021). En effet, en clarifiant les différentes finalités (complémentaires ou conflictuelles) visées par les acteurs internes et/ou externes engagés dans l'adoption d'une BMI, notre recherche est l'une des rares, à ce jour, à proposer **un cadre pour qualifier de manière précise l'alignement stratégique autour d'un projet d'innovation commun** (Adner, 2017).

Deuxièmement, notre modèle multiniveau apporte une voie de réponse originale aux récentes études sur l'adoption de la BMI qui appellent à **développer une vision plus holistique de ce phénomène** en rendant compte des facteurs susceptibles de l'affecter au-delà des frontières organisationnelles (Berglund et Sandström, 2013 ; Best *et al.*, 2021 ; 2022 ; Rey-Garcia *et al.*, 2020). En intégrant à notre modèle les niveaux extra-organisationnels du **réseau de valeur** et des **institutions**, dont les rôles dans l'adoption de la BMI sont encore sous-estimés d'une majorité de recherches (Best *et al.*, 2022 ; Rey-Garcia *et al.*, 2020), **nous révélons l'existence de pressions (parfois cachées) qui contraignent les entreprises à adopter une BMI, générant ou renforçant ainsi certaines tensions internes** (Berglund et Sandström, 2013 ; Oliver, 1991 ; Pedersen et Gwozdz, 2018). Cette mise en évidence d'interdépendances entre pressions et tensions multiniveaux qui complexifient voire menacent la pérennité de l'adoption, tous secteurs industriels confondus, peut contribuer à **alimenter la recherche sur la « face sombre » de la BMI** (Heidenreich *et al.*, 2022).

En troisième lieu, notre modèle multiniveau vise à éclairer la question (encore largement méconnue) de la **gestion de ces pressions et tensions**, en dressant une **typologie élargie des réponses** qui peuvent être adressées à ces dernières aux différents niveaux de l'organisation,

du réseau de valeur et des institutions (Best *et al.*, 2021 ; 2022 ; Oliver., 1991 ; Oskam *et al.*, 2020 ; Rey-Garcia *et al.*, 2020). Tout d'abord, en raffinant les types de réponses envers les pressions externes impliqués par l'adoption d'une BMI, **notre travail s'inscrit dans la continuité des recherches en stratégie fondées sur la théorie néo-institutionnelle**, celles-ci mettant en exergue les marges de manœuvre dont disposent les organisations pour s'auto-déterminer au plan stratégique malgré l'existence de pressions externes et tensions internes qui influencent leur évolution (Oliver, 1991, Pedersen et Gwozdz, 2018). Aussi, en caractérisant différentes réponses aux tensions d'alignement à l'œuvre dans les BMI adoptées par un collectif d'acteurs internes et externes, **notre travail vise à combler le manque de recherches sur les modalités précises de la cocréation de valeur au niveau d'un réseau** (Best *et al.*, 2021).

#### 4.2. *Contributions méthodologiques*

Dans la mesure où nous avons mobilisé dans l'ensemble de la thèse des **méthodologies qualitatives mixtes** (revue de littérature systématique, étude de cas unique aux unités emboîtées et étude de cas multiple) qui nous permettent d'accroître le potentiel d'interprétation et de croisement de nos résultats (Denzin, 1978 ; Siggelkow, 2007 ; Thurmond, 2001 ; Yin, 2003), **les contributions visées sont également d'ordre méthodologique**. Plus particulièrement, dans notre troisième chapitre où nous nous attachons à comprendre les tensions d'alignement entre différentes logiques impliquées dans l'adoption collaborative d'une BMI, nous mobilisons à la fois des focus groups et entretiens semi-dirigés. Cette méthode mixte originale, encore très peu déployée dans le champ de la littérature BMI et, plus largement, du management stratégique de l'innovation, nous permet d'identifier les tensions d'alignement à la fois *in vivo* - lors des focus groups où les acteurs débattent de la finalité de la BMI - et *ex vivo* - lors des entretiens individuels où les interviewés ont l'occasion de revenir sur les tensions et réponses qui ont fait suite à ces débats - (Best *et al.*, 2021).

#### 4.3. *Contributions managériales*

Les contributions visées par cette thèse impliquent enfin des enjeux **managériaux** qui revêtent un intérêt majeur pour les entreprises souhaitant générer davantage de valeur en capitalisant sur l'adoption d'une BMI. En rendant compte des logiques sous-jacentes à l'adoption de la BMI, nous espérons **aider les managers à identifier de manière plus précise les différentes finalités qui guident le choix de reconfigurer le BM**. En effet, l'identification et la définition de ces logiques devrait permettre aux acteurs de choisir une architecture de mécanismes de création, livraison et capture de valeur en adéquation avec leurs objectifs stratégiques. La mise au jour de ces logiques peut également aider les dirigeants à **anticiper les**

**pressions et tensions** susceptibles d'affecter négativement la BMI, en tenant compte dès la phase précoce d'initiation des potentielles divergences d'objectifs et d'intérêts des différents acteurs impliqués (employés, partenaires et acteurs institutionnels notamment). Par ailleurs, notre travail permet de **proposer des voies de réponses, à mettre en œuvre aux différents niveaux**, pour gérer ces pressions et tensions et générer durablement de la valeur économique, sociale et environnementale via la BMI. De par l'inscription de cette thèse dans le cadre de la chaire IOPEN, ces contributions managériales ont eu des répercussions importantes auprès des entreprises mécènes, qui ont non seulement été sensibilisées aux enjeux multiniveaux de l'adoption de la BMI, mais ont également su se réapproprier nos résultats pour les transformer en **outils de pilotage** concrets. Par exemple, la reprise de notre cadre sur les logiques d'adoption de la BMI, inspiré du modèle conceptuel de Singer (1994), a permis à NEWTEX d'élaborer un outil pour évaluer l'alignement avec des partenaires autour d'un projet de BMI et plus largement d'innovation commun.

## **5. Architecture de la thèse**

L'architecture de cette recherche a été conçue selon le format d'une **thèse sur articles** (ou « thèse sur travaux », suivant les recommandations de la Société Française de Management (Société Française de Management, 2015). Suivant ces dernières, nous nous sommes attachés à subdiviser de manière cohérente notre problématique générale en trois questions de recherche donnant chacune lieu à un article par chapitre et permettant d'éclairer la problématique générale sous des angles à la fois distincts et complémentaires. Le choix de ce modèle de thèse sur travaux est principalement fondé sur notre volonté de confronter notre travail à la critique par des pairs. En effet, chaque article/chapitre ayant été présenté au cours de séminaires internes, conférences internationales et/ou soumis à des revues à comité de lecture, nous avons eu l'opportunité d'enrichir et de faire évoluer notre recherche tout au long de nos trois années de doctorat grâce aux précieux retours émis par d'autres membres de la communauté scientifique. Un autre motif ayant justifié ce format est que l'écriture d'une thèse sur articles permet de renforcer l'impact académique et sociétal de notre recherche, la quête de ce double impact étant la raison d'être de la chaire IOPEN dans laquelle s'inscrit notre travail.

Suivant les recommandations de la Société Française de Management (2015), une thèse sur travaux doit s'ouvrir sur une **introduction générale étendue**, celle-ci devant rassembler à la fois les enjeux théoriques et managériaux associés à l'objet de recherche, la problématique et les sous-questions de recherche, la revue de littérature (cadre théorique), le positionnement épistémologique, les choix méthodologiques et les contributions impliquée(s) par la recherche.

L'articulation cohérente des travaux de recherche étant le principal défi posé par ce format (CNU section 6, 2020 ; SFM, 2015), nous avons veillé à respecter l'unité de la thèse en adaptant la question de recherche de chaque article à notre problématique générale. Par ailleurs, bien que des théories différentes puissent être mobilisées dans certains chapitres (la théorie néo-institutionnelle dans le cadre du chapitre 2 et la stratégie comme philosophie morale dans le cadre des chapitres 1 et 3) pour éclairer sous un angle nouveau les enjeux de l'adoption de la BMI, nous avons veillé à l'unité de notre cadre théorique général qui reste, pour chaque chapitre, l'approche multiniveau de la BMI. Notre thèse comprend trois chapitres et s'articule comme suit. Notre **premier chapitre** consiste en une revue de littérature systématique visant à affiner le concept générateur de notre problématique, à savoir les « logiques » qui guident l'adoption de la BMI. Plus précisément, en croisant le cadre conceptuel de Singer (1994) avec l'approche multiniveau des BMI (Bocken *et al.*, 2013), cette revue de littérature permet de développer un cadre conceptuel holistique à même de définir les principales logiques qui guident le choix d'adopter la BMI et les architectures de mécanismes multiniveaux de création, livraison et capture de valeur qui leur sont associées. La conduite de cette revue de littérature nous permet plus encore d'identifier d'importantes lacunes de la littérature sur les BMI et d'élaborer des perspectives de recherche multiniveau que les chapitres suivants visent à développer.

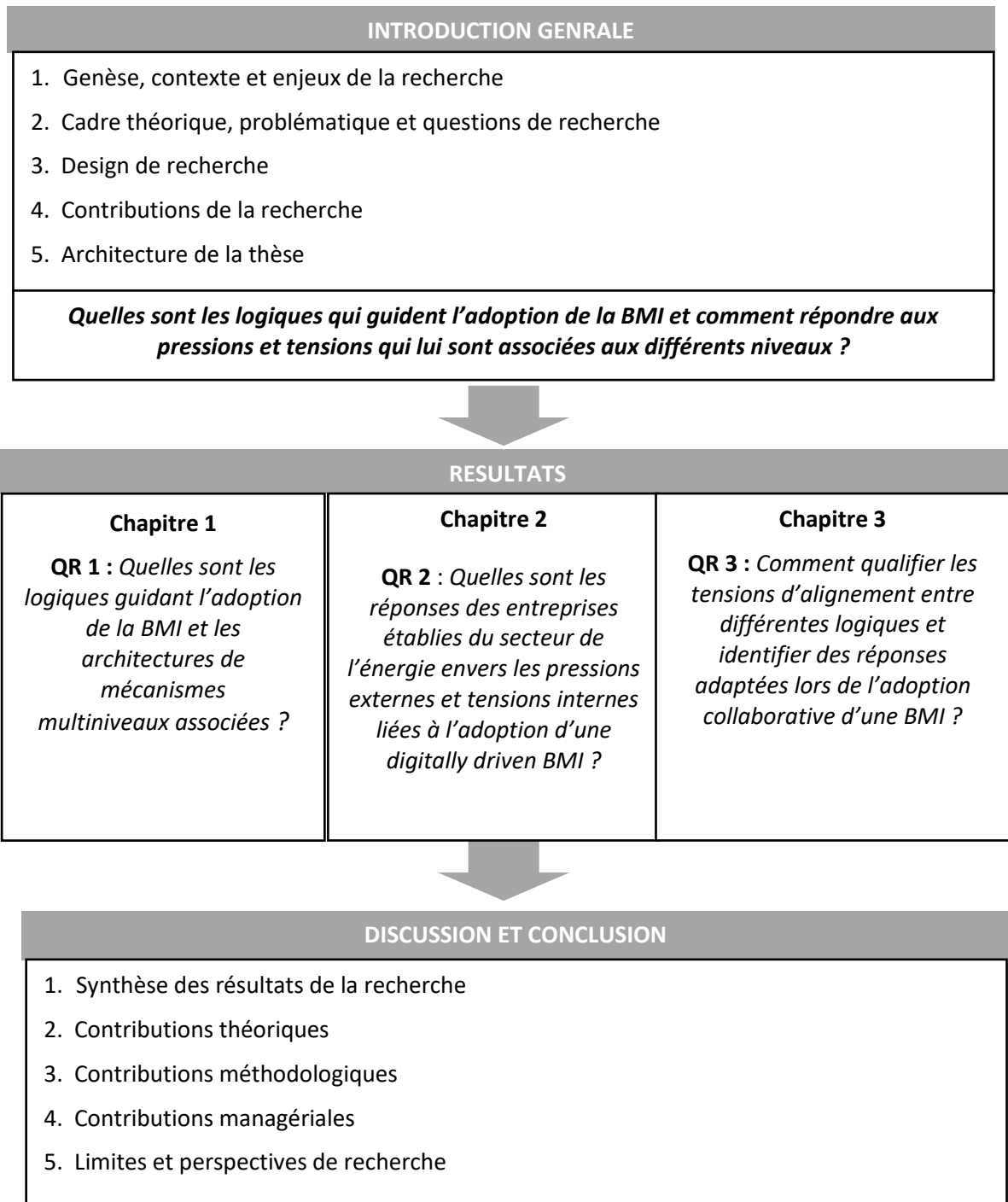
Dans la continuité des perspectives de recherche dressées dans le premier chapitre, le **deuxième chapitre** de la thèse consiste en une étude de cas unique visant à analyser les pressions et tensions susceptibles d'affecter l'adoption de la BMI et les réponses qui leur sont adressées. Dans ce chapitre, l'adoption de la BMI est étudiée dans le contexte spécifique des entreprises établies qui adoptent une BMI suite à l'intégration d'une technologie numérique (*digitally-driven* BMI), celles-ci étant en proie à des difficultés de forte intensité qui permettent davantage de mettre en lumière les types de pressions et tensions qui résultent de conflits de logique entre les acteurs internes (de l'organisation focale qui adopte la BMI) et externes (du réseau de valeur et des institutions),.

Si l'étude de cas unique du deuxième chapitre de la thèse permet d'identifier précisément les pressions et tensions multiniveaux susceptibles d'affecter l'adoption de la BMI, le manque de réponses qui leur est adressé dans les entreprises établies nous conduit à centrer notre **troisième chapitre** sur la qualification des tensions d'alignement et des réponses associées, dans d'autres contextes organisationnels et industriels. Dans la mesure où notre problématique générale prend pour objet l'adoption de la BMI sous une double modalité (adoption individuelle

par une organisation focale et adoption collaborative par une organisation focale aidée de ses partenaires), nous nous sommes attachés dans ce chapitre à mettre au jour au jour les tensions et réponses qui résultent de la coexistence de différentes logiques portées par les acteurs internes et externes engagés dans l'adoption collaborative d'une BMI. Suivant cet objectif, ce chapitre se fonde sur une étude de cas multiple qui permet de qualifier l'alignement entre les différentes logiques qui guident l'adoption collaborative de la BMI, et d'identifier des voies de résolution concrètes, à mettre en place aux différents niveaux, dans les cas où des tensions d'alignement sont susceptibles de mettre en péril cette adoption.

Dans une dernière partie de **conclusion et discussion**, nous synthétisons nos résultats et les mettons en perspective avec la littérature selon trois angles qui correspondent à nos principales contributions théoriques : la relecture des antécédents de la BMI selon les logiques d'adoption, l'intégration du niveau institutionnel à l'approche multiniveau de la BMI et l'élaboration d'une typologie élargie des réponses aux pressions et tensions affectant l'adoption. Nous détaillons également à cette occasion les contributions méthodologiques impliquées par le choix de méthodes qualitatives mixtes (notamment dans le troisième chapitre de thèse). En raison de l'inscription de cette recherche dans le cadre de la chaire IOPEN, notre partie conclusive opère également un retour réflexif sur nos contributions managériales. A ce titre, nous rendons compte des premières mobilisations de nos résultats qui ont été faites par les entreprises mécènes (notamment l'entreprise focale du cas NEWTEX). Nous proposons par ailleurs des perspectives d'application de notre cadre multiniveau au monde des organisations, en élaborant notamment un outil de réflexion en quatre étapes permettant d'améliorer l'analyse et la gestion des tensions associées à l'adoption de la BMI. Cette partie conclusive nous permet enfin de revenir sur quatre principales limites de notre recherche, à savoir la portée des résultats liée au contexte spécifique d'étude, le choix de méthodologies uniquement qualitatives, la prise en compte sous-jacente du niveau individuel dans notre cadre multiniveau, ainsi que l'absence d'étude processuelle de la BMI au-delà de la seule phase d'adoption (notamment, dans la phase de développement qui suit le début d'implémentation) (Damanpour et Schneider, 2006). En fonction de chacune de ces limites, nous élaborons des perspectives de recherche future qui permettraient d'étendre les contributions de la présente recherche en offrant une meilleure compréhension globale des enjeux de l'adoption de la BMI.

## Schéma 5. Architecture de la thèse



# CHAPITRE 1

## RATIONALES BEHIND BUSINESS MODEL INNOVATION: A MULTI-LEVEL FRAMEWORK BASED ON A SYSTEMATIC REVIEW

INTRODUCTION GENERALE
<ol style="list-style-type: none"><li>1. Genèse, contexte et enjeux de la recherche</li><li>2. Cadre théorique, problématique et questions de recherche</li><li>3. Design de recherche</li><li>4. Contributions de la recherche</li><li>5. Architecture de la thèse</li></ol>
<p><i>Quelles sont les logiques qui guident l'adoption de la BMI et comment répondre aux pressions et tensions qui lui sont associées aux différents niveaux ?</i></p>



RESULTATS		
<p><b>Chapitre 1</b></p> <p><i>QR 1 : Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multiniveaux associées ?</i></p>	<p><b>Chapitre 2</b></p> <p><i>QR 2 : Quelles sont les réponses des entreprises établies du secteur de l'énergie envers les pressions externes et tensions internes liées à l'adoption d'une digitally driven BMI ?</i></p>	<p><b>Chapitre 3</b></p> <p><i>QR 3 : Comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative de la BMI ?</i></p>



DISCUSSION ET CONCLUSION
<ol style="list-style-type: none"><li>1. Synthèse des résultats de la recherche</li><li>2. Contributions théoriques</li><li>3. Contributions méthodologiques</li><li>4. Contributions managériales</li><li>5. Limites et perspectives de recherche</li></ol>



## Résumé étendu

*Cette recherche a fait l'objet d'un article co-écrit avec deux jeunes chercheuses, Angélique Breuillot (Professeure assistante, ESSCA Aix en Provence) et Gaëlle Cotterlaz-Rannard (Lecturer, Université de Sussex), dont je suis premier auteur. Il a été présenté à la XXXIe conférence de l'AIMS (Annecy, France) le 1<sup>er</sup> juin 2022, en tant que papier finaliste du prix Roland Calori. Cet article est actuellement en phase de révision et resoumission dans la revue *European Management Review* (FNEGE 2, HCERES B, ABS 2) depuis le 24 juillet 2023.*

Ce premier chapitre vise à répondre à l'appel d'harmoniser la conceptualisation de la BMI en clarifiant la notion-clé « d'architecture », considérée comme la structure reliant de manière cohérente les mécanismes BM de création, livraison et capture de valeur (Foss et Saebi, 2017, 2018 ; Teece, 2010) dans le contexte de leur reconfiguration aux différents niveaux de l'organisation, du réseau et de la société (Bocken et al., 2013). Certaines récentes recherches adoptant une vision cognitive de la BMI révèlent que le choix de reconfigurer les mécanismes BM à différents niveaux peut être expliqué par un antécédent cognitif spécifique, à savoir la logique qui sous-tend le choix d'adopter la BMI (Grieco, 2021 ; Kim, 2017 ; Spiess-Knafl et al., 2015 ; Schneckenberg et al., 2019). Cependant, l'identification précise de ces différentes logiques qui expliquent le choix de l'adoption et, donc, la nature de l'architecture du nouveau BM constitue toujours une lacune de la littérature. En effet, les approches cognitives de la BMI dégagent davantage des « schémas » résultant de la reconfiguration du BM (Martins et al., 2015) que les motivations qui en sont à l'initiation. Cette genèse partielle, qui ne considère pas les antécédents des schémas eux-mêmes (les logiques), rend ainsi délicate l'identification précise des antécédents cognitifs de l'adoption de la BMI et de ses architectures de mécanismes associées. Pour combler cette lacune, ce chapitre se donne pour objectif de révéler les logiques qui guident le choix d'adopter la BMI et de reconfigurer les mécanismes du BM (création, livraison et capture de valeur) à différents niveaux (organisationnel, réseau et institutionnel) en les connectant par le biais d'une architecture spécifique (Foss et Saebi, 2017, 2018 ; Teece, 2010). Cet objectif nous conduit à nous concentrer sur la question : « ***Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multiniveaux associés ?*** »

Pour éclairer cette question, nous nous appuyons sur l'approche de la stratégie comme philosophie morale (Singer, 1994), celle-ci permettant d'identifier et définir un vaste ensemble de

logiques d'adoption de la BMI, allant de la seule capture de valeur économique au niveau organisationnel à la création de valeur sociale et environnementale au niveau du réseau de valeur et/ou de la société. Nous combinons ce cadre conceptuel à une approche multiniveau de la BMI (Bocken et al., 2013), afin de comprendre en quoi la logique d'adoption de la BMI influence le choix de reconfigurer les mécanismes de création, livraison et capture de valeur aux différents niveaux de l'organisation, du réseau et de la société. Au plan méthodologique, cette recherche s'appuie sur une revue de littérature systématique (Denyer et Tranfield, 2009) couvrant 21 ans de recherche sur les BMI et aboutissant à l'étude de 79 articles.

Nos contributions théoriques sont de deux ordres. Premièrement, nous contribuons à donner davantage de clarté conceptuelle aux concepts fondamentaux de la littérature BMI en élaborant un cadre multi-niveau à même de révéler selon des logiques bien identifiées, trois principales architectures qui relient de manière cohérente les mécanismes BM aux différents niveaux : (1) l'architecture fondée sur la sympathie rationnelle, l'architecture fondée sur l'égoïsme rationnel et l'architecture fondée sur l'engagement rationnel. Deuxièmement, en nous fondant sur ce cadre, nous proposons des perspectives de recherche futures qui permettraient de combler trois principales lacunes identifiées dans notre revue de littérature, à savoir la qualification de l'alignement des mécanismes de création, livraison et capture de valeur dans la BMI, l'identification des tensions associées à l'adoption collaborative de la BMI et la mise au jour des changements dynamiques de logiques au cours du processus de BMI. Enfin, au plan managérial, le cadre multiniveau que nous proposons peut permettre aux entreprises de mieux identifier les finalités et moyens adéquats à leur stratégie de BMI grâce à l'identification des différentes logiques pouvant guider son adoption, et de reconfigurer de manière cohérente leurs mécanismes de création, livraison et capture de valeur

## 1. Introduction

The increased use of digital technologies and the consideration of social and environmental concerns have driven organizations to reconfigure their Business Models (BM), meaning the way they create deliver and capture value (Ahlgren Ode & Louche, 2022; Berends et al., 2016; Desyllas et al., 2020; Verhoef et al., 2021; Weerawardena et al., 2021; Zhang et al., 2021). This phenomenon of BM reconfiguration, generally called business model innovation (BMI), has become increasingly interesting to both scholars and managers and is now a specific research field (Täuscher, 2018; Wirtz et al., 2016). While the BM is commonly defined as the architecture unifying value creation, delivery and capture mechanisms in a cohesive system of functional relations (Teece, 2010), BMI involves a change of one or more BM components (which correspond to value creation, delivery and capture mechanisms) and/or the architecture connecting them (Foss & Saebi, 2017).

Despite of a growing consensus around this general definition of BMI based on Teece's (2010) definition of BM, the BMI literature is still fragmented as it does not clarify the crucial notion of architecture (Foss & Saebi, 2018), which connects the mechanisms through which firms create, deliver and capture value. This issue is even more concerning in the current "openness paradigm" which drives BMI by opening value creation, delivery and capture mechanisms over organizational frontiers (Chesbrough, 2003; Torres de Oliveira et al., 2021). Indeed, value creation, delivery and capture can be expanded at different levels, such as the value network level, with the growing collaboration of companies for implementing new, interactive business models (Matarazzo et al., 2021; Sanchez & Ricart, 2010; Solaimani et al., 2018), or at the broader societal level due to the involvement of external stakeholders in the conduct of sustainable business activities (Fobbe & Hilletofth, 2021; He & Ortiz, 2021; Narayan & Tidström, 2020; Velter et al., 2020). In light of this phenomenon, scholars have called for a multi-level approach of value creation, delivery and capture mechanisms at the individual, organizational, value network and societal levels (Lepak et al., 2007; Bocken et al., 2013).

A key element to develop a more unified conceptualization of BMI architectures would be to identify the main sets of reasons why value creation, delivery and capture are reconfigured by organizations at different levels of analysis. Accordingly, a small but growing number of scholars have found that the architecture connecting BM mechanisms could be affected by cognitive

antecedents such as the rationales underlying the strategic decision to adopt BMI (Grieco, 2021; Kim, 2017; Spiess-Knafl et al., 2015; Schneckenberg et al., 2019). These rationales can be defined as a “meta logic” (Spiess-Knafl et al., 2015, p. 114) composed of a set of principles and reasons guiding managers in the strategic decision to adopt BMI and, thus, to cohesively implement new types and levels of value creation, delivery and capture mechanisms. This cognitive view of BMI is promising in the sense that, at the aggregate level, the identification of similarities and differences between managers’ rationales supports the theorization of BMI as formal conceptual representations (Massa et al., 2017; Shepherd et al., 2023). However, such rationales have still not been fully revealed (Grieco, 2021). This leaves an important gap on the study of the cognitive antecedents of BMI (Bhatti et al., 2021; Frankenberger & Sauer, 2018; Martins et al., 2015) which aims to explain “the cognitive logic and processes through which schemas can be changed to ideate and design new business models” (Martins et al., 2015, p.2).

In line with both these multi-level and cognitive views of BMI, we find a case for adopting the “Strategy as moral philosophy” conceptual framework (Singer, 1994) for revealing BMI rationales, which constitute a still understudied type of cognitive antecedents. Indeed, “Strategy as moral philosophy” holistically integrates a wide range of strategic rationalities, from calculative rationalities targeting organizational interests to ethical ones integrating social, political and environmental concerns into strategic decision-making. If combined with the multi-level view on BMI, this framework can allow to capture BMI rationales and associated architectures of multi-level mechanisms in very different contexts, such as constrained or voluntary BMI adoption, as well as profit-driven or sustainable BMI (Bocken et al., 2013). To address the current gaps regarding BMI architecture and their underlying rationales, this paper aims to address the following question: “*What are the rationales guiding BMI adoption and their associated architectures of multi-level mechanisms?*” To do so, we combine the strategy as moral philosophy approach and multi-level perspective on BMI in order to develop an original framework unravelling the most prevalent rationales guiding BMI adoption and their associated architectures of value creation, delivery and capture mechanisms, which can be variably implemented at the organizational, network and societal levels.

Drawing on a systematic literature review based on 79 papers on BMI covering a period of 21 years, we aim to capture in-depth insights on the different conceptualizations of value creation, delivery and capture mechanisms in order to unravel their underlying rationales and develop a

clearer view of BMI architecture and the specific multi-level mechanisms it connects. Our research thus provides two main theoretical contributions. First, we help to provide further conceptual consistency for both past and future BMI studies by identifying and defining three cohesive architectures of multi-level mechanisms of value creation, delivery and capture according to the most prevalent rationales underlying BMI adoption. Second, by adopting the complementary approaches of strategy and moral philosophy (Singer, 1994), we provide scholars with original research avenues to address current gaps regarding BMI adoption.

## **2. Theoretical framework**

### *2.1. Conceptualizing distinct BMI mechanisms: A multi-level perspective*

According to Teece's (2010) widely used definition of BM (Foss & Saebi, 2017), their components include value creation, delivery and capture mechanisms. The BMI literature demonstrates that these mechanisms are growingly implemented at broader levels of analysis than merely the focal organization (Frankenberger et al., 2014; Torres de Oliveira et al., 2021). This is reflected in the development of new BM, which create, deliver and capture value in relation with close partners from the organization's value network (clients, suppliers, competitors, end users) or even with a variety of social stakeholders (citizens, associations, public institutions). Drawing on this observation, a growing number of BMI studies have called for the development of a multi-level approach to better analyze why and how value is created, delivered, captured and sometimes destroyed at several levels of analysis (Bocken et al., 2013; Lepak et al., 2007).

So far, the literature has identified four main levels of analysis for new BM mechanisms: (1) organizational, (2) value network and (3) societal. Lepak and colleagues (2007) show that value can be variably created and captured (i.e. appropriated) at the organizational (individual) and societal levels. In addition, in their value mapping tool for sustainable business modelling, Bocken and colleagues (2013) identify that besides being created, delivered or captured in new ways through BMI at the organizational level (employees, investors and shareholders), value could be missed, wasted or even destroyed, especially at the intermediary level of the firm's value network (suppliers, partners and customers) or at the wider level of society and environment (academia, media, external agencies, government, community, the environment).

In line with these theoretical insights that have proven their value in most recent BMI studies using a multi-level perspective (Best et al., 2022), we propose to identify and define through our literature review distinct architectures of value creation, delivery and capture mechanisms according to their related levels of analysis (organizational, value network and societal levels) in order to develop a more integrative conceptual framework for future BMI studies.

## 2.2. *Identifying BMI architectures of multi-level mechanisms by unravelling their rationales: the perspective of “strategy as moral philosophy”*

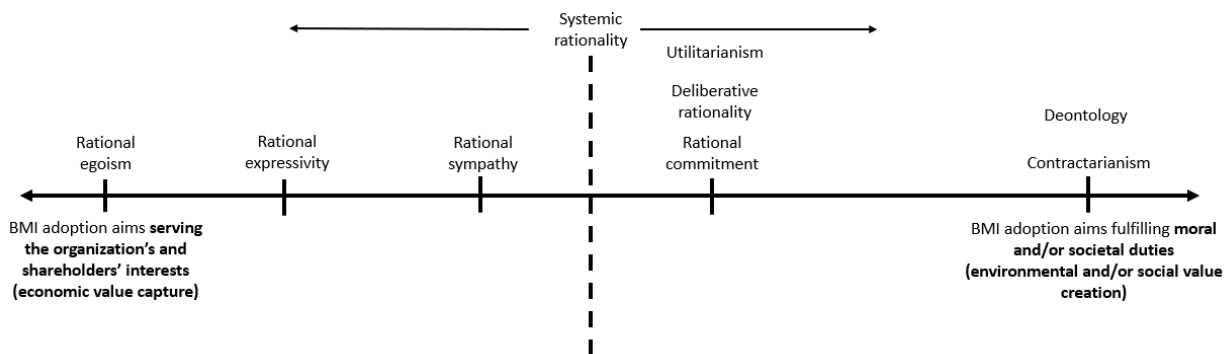
Though a multi-level approach is promising insofar as it makes it possible to capture precise insights on how value can be created, delivered, captured at the organizational, value network and societal levels, it remains rather silent about the reasons why such mechanisms are each reconfigured at distinct levels through BMI, though keeping a certain cohesion. Thus, multi-level studies are still missing the core component of each BMI, which is the architecture unifying new BM mechanisms in a cohesive system of functional relationships (Foss & Saebi, 2018; Teece, 2010).

A key element to develop further conceptualization of BMI architectures would be to explain *why* value is created, delivered, captured or destroyed at several levels. Most recent studies have called for the identification of the rationales (the sets of principles and reasons forming distinct meta-logics) underlying the strategic choice to adopt BMI (Grieco, 2021; Kim, 2017; Spiess-Knafl et al., 2015). In line with this objective, we base our analysis on Singer’s “Strategy as moral philosophy” framework (1994) as this specific framework is, to the best of our knowledge, the only one to identify rationales leading to both distinct and cohesive strategies involving the creation, delivery and capture of value at various levels of analysis. In particular, it offers a precise and holistic conceptual framework to be adapted to the qualification of BMI rationales, which have not yet been precisely defined in the emerging cognitive view on BMI antecedents (Bhatti et al., 2021; Frankenberger and Sauer, 2018; Martins et al., 2015). Indeed, this approach integrates, in a synthetic form, all of the types of rationalities guiding strategic decisions as defined by the main theories deriving from economics and strategy (namely transaction costs, game theory, evolutionary theory, stakeholder theory, behavioral theory), as well as their equivalent in the main streams of moral philosophy (deontology, utilitarianism and contractarianism). Thus, « strategy as moral philosophy » embeds the widest range of ends and aims guiding strategic decisions. When

applied to the specific object of BMI adoption, this framework allows to cover both constrained and voluntary rationales guiding BMI adoption, as well as those driven by the goal to capture more economic value at the organizational level (in the case of traditional, profit-driven BMI) and those aiming social and/or environmental value creation beyond organizational frontiers in the case of more sustainable BMI (Bocken *et al.*, 2013).

The nine identified rationales range from traditional economic rationale (calculating only individual and/or organizational interests) to more ethical rationale (expanding to the voluntary integration of societal concerns). They are defined as follows: (1) “Rational egoism” corresponds to serving the organization’s and its shareholders’ interests only, for ensuring profits in the short term. (2) “Expressive rationality” pursues an organizational sense of autonomy. (3) “Rational sympathy” means serving stakeholders’ interests to achieve organizational interests in the long term. With (4) “utilitarianism”, strategy is based on a social cost-benefit analysis aimed at achieving the greatest good for the greatest number. In (5) “deliberative rationality”, a political dialogue on organizational goals is undertaken with external stakeholders. (6) “Rational commitment” is associated with deliberately serving a non-financial cause (through pursuing social and/or environmental impact). Through (7) “deontology”, strategy is driven by the respect of moral duties. (8) “Contractarianism” integrates justice and social fairness concerns with strategy. Eventually, with (9) “systemic rationality”, strategy emerges over time as a function of the historical organization’s experience and capabilities. We summarize in Figure 6 below the nine types of BMI rationales ranging from calculative rationalities aimed at serving egoistic interests to those targeting the fulfillment of moral and or/societal duties.

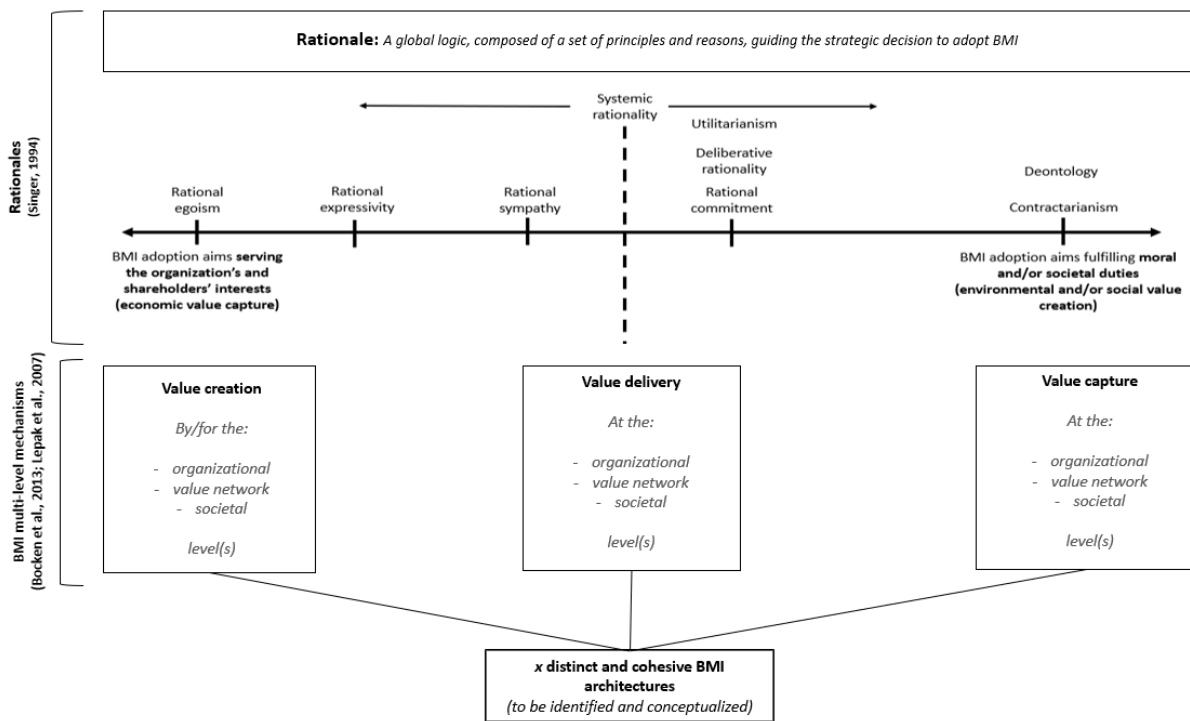
**Figure 6.** The nine rationales guiding BMI adoption (based on Singer, 1994)



### 2.3. A new framework for identifying BMI architectures

Using both the multi-level approach and the strategy as moral philosophy framework, our systematic literature review should determine (1) what rationale(s) underlie the choice of a specific BMI strategy and (2) how BMI mechanisms, which are reconfigured at distinct levels of analysis, work cohesively in a same architecture depending on each rationale. In line with our research question, the combination of these two frameworks should ultimately enable us to model and define distinct yet cohesive multi-level BMI architectures (see Figure 7 below for a synthesis of our theoretical framework).

**Figure 7.** Synthesis of our theoretical framework to study BMI architectures



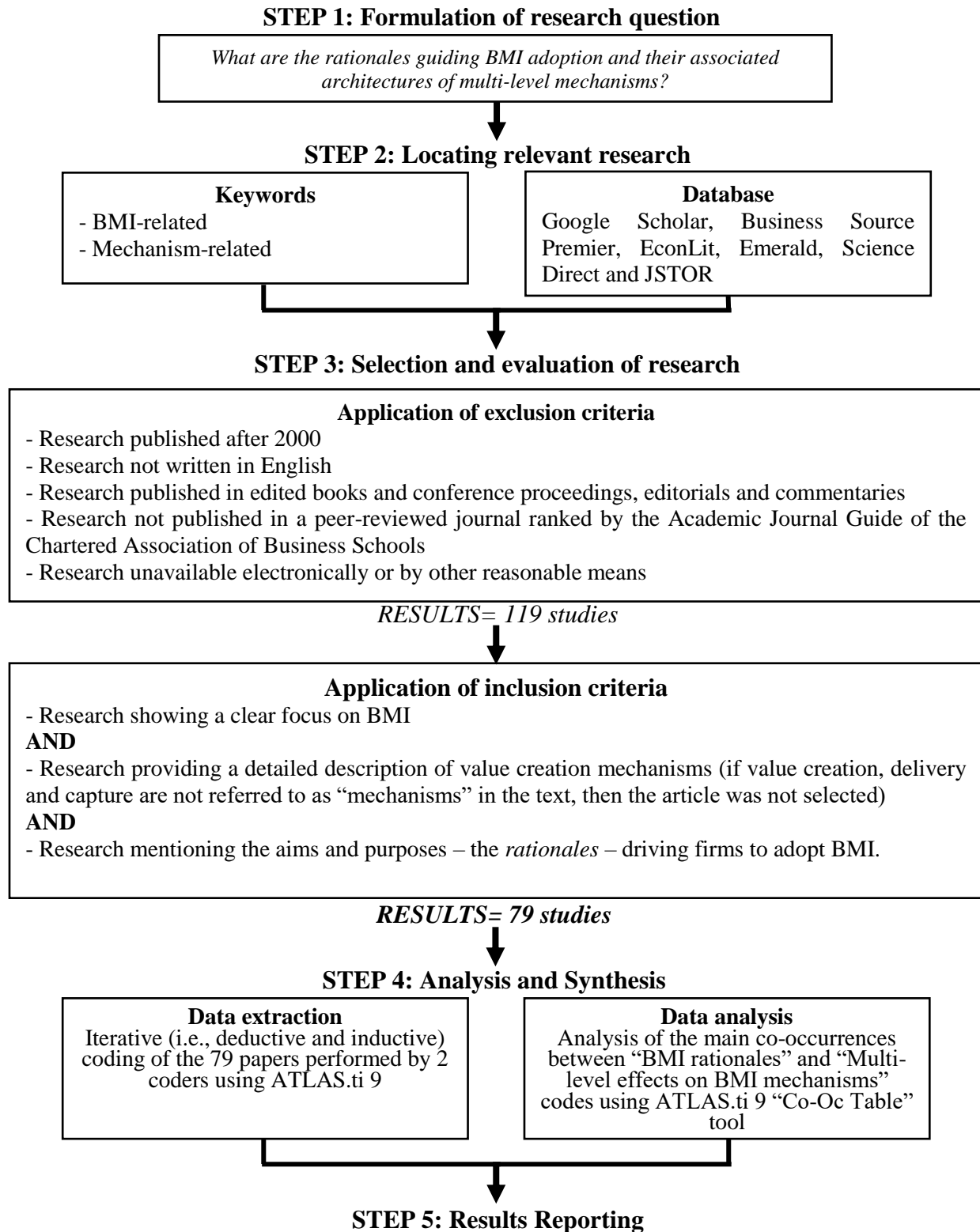
### 3. Methodology of the review

This research seeks to synthesize relevant research on BMI in order to identify distinct rationales and their associated multi-level BMI architectures. The choice of a systematic review methodology is in line with this objective as it allows to ensure the finding of relevant articles for addressing our specific research question, by relying on clearly defined selection criteria (Higgins & Green 2011). To ensure a clear description of the steps taken and to help ensure the rigor and transparency of the process, we have adopted the five-step methodology developed by Denyer and



Tranfield (2009). This detailed process makes it possible to specify the parameters of our review (keywords, databases, time spans, languages) and the procedure used to select the studies, using consecutive exclusion and inclusion criteria. Figure 8 below summarizes our protocol.

**Figure 8.** Summary of our systematic review protocol



### 3.1. *Locating relevant research*

A preliminary literature review (Foss & Saebi 2017, 2018; Lepak et al., 2007; Singer, 1994) enabled us to identify the key concepts and keywords for our database search. We used keyword combinations related to (1) BMI and (2) its associated value creation, delivery and capture mechanisms, which generated a total of 48 search strings (see Table 3)<sup>6</sup>. A review panel of academic experts in the field of BMI was created to avoid any omissions. In line with previous research, a list of keywords with broad coverage was generated (Kauppi et al., 2018; Müller-Seitz, 2012).

**Table 3.** Keywords used in the systematic literature review

<b>BMI-related keywords</b>	<b>Mechanism-related keywords</b>
“business model innovation”	“value creation”
“business model change”	“value generation”
“business model reconfiguration”	“value delivery”
“business model transformation”	“value distribution”
“business model adaptation”	“value capture”
“business model evolution”	“value appropriation”
“business model dynamics”	
“business model reinvention”	

The search was conducted in late 2021 on Google Scholar, Business Source Premier, EconLit, Emerald, Science Direct and JSTOR. Different settings were chosen depending on the capacities of each database. In each case, we followed Wirtz, Göttel and Daiser (2016) in only considering articles published since 2000, as this year corresponds to the emergence of BMI literature as a field. This screening process enabled us to identify a total of 195 studies, dropping to 153 after a check for duplicates.

### 3.2. *Selection and evaluation of research*

The third step of our review consisted of applying exclusion and inclusion criteria to the 153 identified studies. First, we excluded research that was not written in English (Deng, 2012; Ellwood et al. 2017). Second, we excluded studies published in edited books, conference proceedings, editorials, commentaries, and case studies (e.g., for teaching purposes), to include

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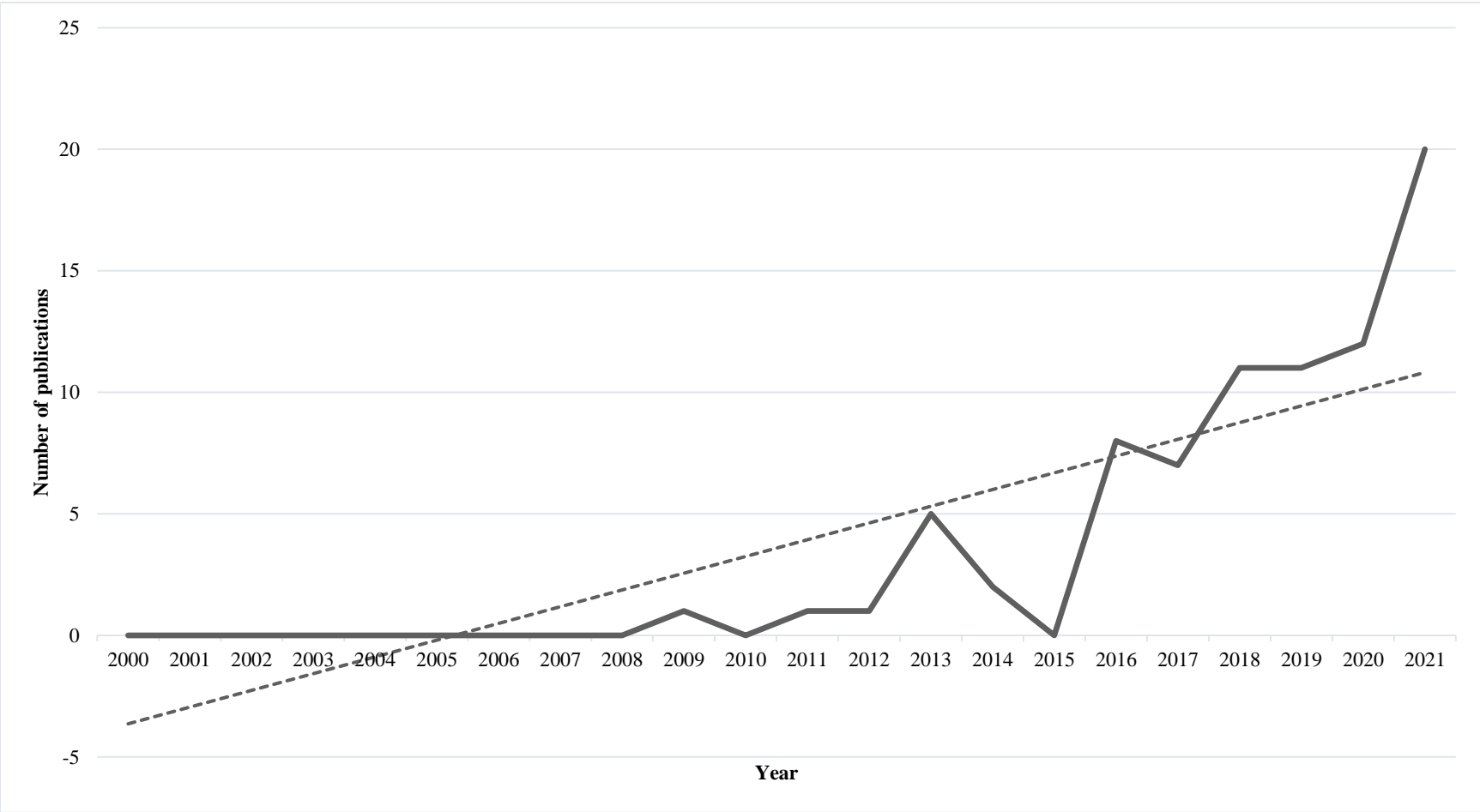
<sup>6</sup> Although central in our research question, the terms “architectures” and “rationales” were not included to keywords for launching databases and selecting BMI articles, as they are too scarcely used in the current literature, while mechanisms keywords are widely mobilized (Foss and Saebi, 2017, 2018).

only peer-reviewed papers published in journals ranked by the Chartered Association of Business Schools. This criterion was based on Podsakoff and colleagues' (2005) assertion that only publications in peer-reviewed journals can be considered validated knowledge and likely to have the largest impact on scholarly discourse. In addition, we excluded references unavailable electronically or by other reasonable means, reducing the number of papers to 119.

At this point, the 119 papers were read for a first time and evaluated according to three inclusion criteria. All selected papers should (1) have a clear focus on BMI, (2) provide a detailed description of value creation mechanisms (if value creation, delivery and capture were not mentioned in the text, then the article was not selected) and finally, (3) explicitly mention the aims and purposes – the *rationale(s)* – driving firms to adopt a BMI. The number of articles first dropped to 86. A second reading of each article during the coding process reduced the number of our final corpus to 79 papers, as 7 papers appeared not to sufficiently develop the aims and purposes (*rationales*) driving firms to adopt BMI and thus were excluded basing on the third inclusion criterion.

A descriptive analysis of the corpus was carried out before the coding process to highlight the corpus's main features. First, we analyzed the chronological evolution of the 79 articles (see Figure 9 below). Only 10 of them were published before 2016, which marks the beginning of a significant growth in publications demonstrating the increasing academic interest in BMI. Second, the articles of the corpus are published in 36 different journals, but two journals contributed the most entries: *Journal of Cleaner Production* and *Journal of Business Research*, with 17 and 14 entries respectively. Finally, the vast majority of the selected articles use a qualitative methodology (56); only eight chose a quantitative methodology and six employ mixed methods. The corpus also includes nine conceptual papers.

**Figure 9.** Evolution of publications per year



### 3.3. *Analysis and synthesis*

The 79 papers were then coded using ATLAS.ti 9 software and relying on an iterative theorizing approach (Corbin & Strauss, 2008; Saldaña, 2013). This methodology consists of moving back and forth between an initial theoretical codebook (composed of the main categories of (1) BMI rationales and (2) multi-level mechanisms) and data to continually enrich the codebook with frequently emerging constructs and develop new knowledge through the detection of patterns across the investigated thematic areas (Miles et al., 2020). All throughout the coding process, this initial theoretical codebook was enriched with new, frequently appearing concepts, which were discussed by the research team before being added to a “Free codes” group. Moreover, following Saldaña’s (2013) qualitative coding guidelines, a final recoding cycle was undertaken to achieve further consistency, avoid over-interpretation and identify potential missed text passages in the coding of data. Drawing on this iterative approach ultimately enabled us to find a continuum in the various conceptualizations of BMI rationales and associated mechanisms, while also maintaining crucial distinctions between differentiated architectures of those mechanisms (see Appendix A for the final codebook).

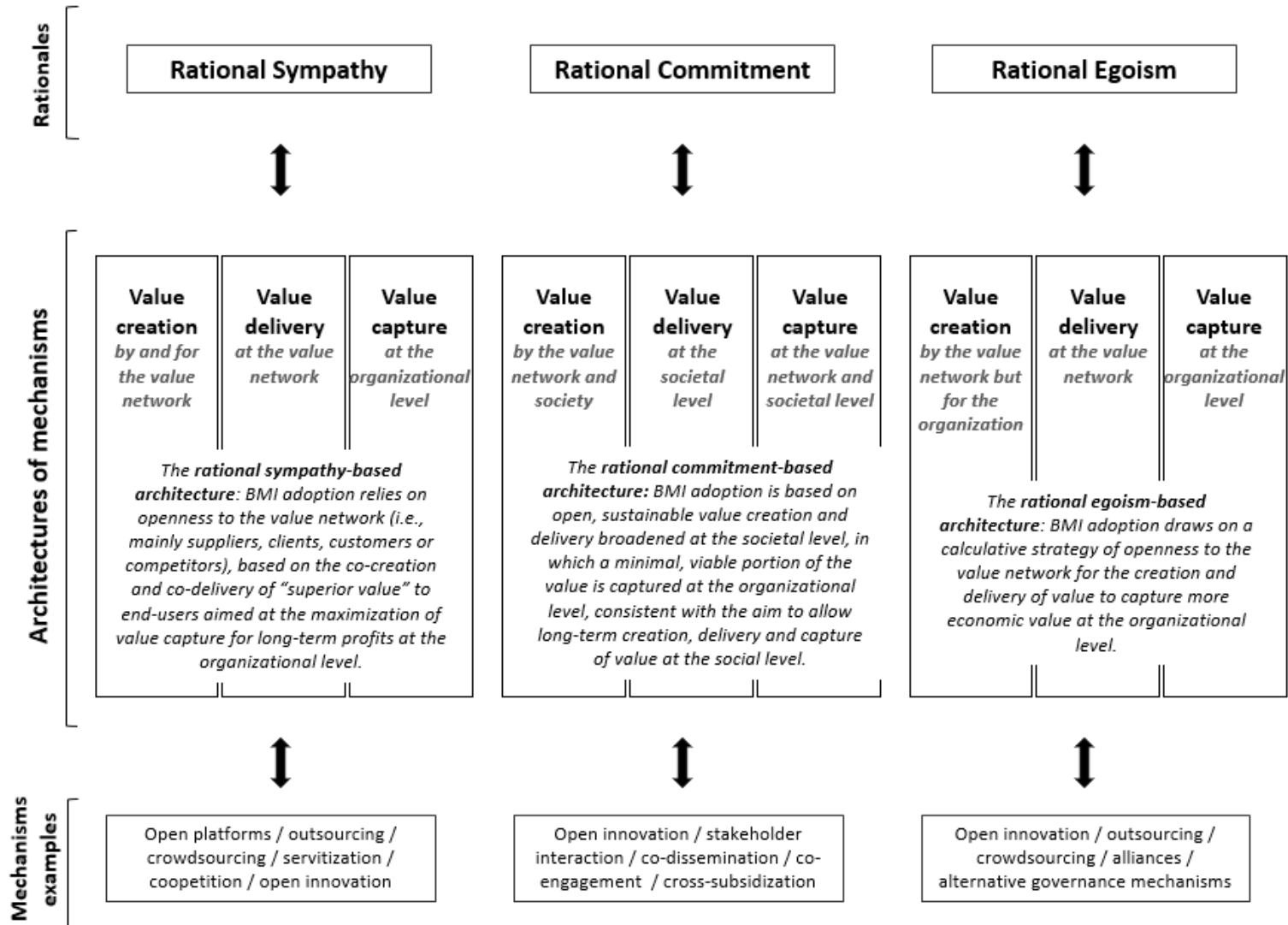
The coded data were eventually analyzed in a two-stage co-occurrence exploration process, using the ATLAS.ti 9 “Co-Oc Table” tool. First, the main levels of BMI mechanisms (value creation, delivery and capture) that were associated with BMI rationales were identified. Second, the main rationales guiding BMI adoption and their associated architectures of mechanisms emerged.

## **4. Discussed findings**

In the following section, we compare the main architectures of BMI multi-level mechanisms we find through our review by focusing on the means and ends implied by their underlying rationales (Singer, 1994). This is in line with this paper’s aim to develop a more unified framework to contribute to the conceptualization of BMI architectures of multi-level mechanisms. Using the nine rationales explaining strategic choices defined by Singer (1994), we identified three prevalent architectures of multi-level mechanisms: the rational sympathy-based, rational commitment-based and rational egoism-based architectures. The remaining six rationales are underrepresented: expressive rationality, deliberative rationality, systemic rationality, contractarianism, deontology

and utilitarianism. The mechanisms of value creation, delivery and capture were all identified but to varying degrees at the different levels. For instance, we rarely found the mechanism of value creation or value delivery at the organizational levels. Figure 10 illustrates the main rationales and associated architectures of mechanisms we have identified, the most occurrent ones being on the left and the less occurrent on the right. We then focus in more detail on the three prevalent rationales and associated architectures of mechanisms.

**Figure 10.** The three main BMI rationales and associated architectures of multi-level mechanisms





#### 4.1. *The rational sympathy-based architecture*

The most prevalent architecture is based on rational sympathy, which is characterized by the aim to serve stakeholders' interests for achieving organizational interests through BMI adoption. When driven by this rationale, firms create and deliver value through their network of external partners (Burström et al., 2021). The rational sympathy-based architecture can be defined as a calculative BMI strategy of openness to the value network (mainly suppliers, clients, customers or competitors), based on the co-creation and co-delivery of "superior value" to end-users (Best et al., 2021). It is aimed at the maximization of value capture for long-term profits at the organizational level (in line with Agarwal et al., 2021; Singer, 1994). In this architecture, the network's engagement in value co-creation and co-delivery thus represents what moral philosophy considers a means, whereas the end is to maximize long-term profits through value capture (Singer, 1994).

When relying on rational sympathy, firms co-create value by building up strong networks mainly with suppliers, customers, clients and even competitors from different industries (Best et al., 2022; Brock et al., 2019). However, the value created by and for the network is largely captured at the organizational level. To achieve their interests through BMI, firms create and deliver value through their network but capture value at the organizational level. Among the main value creation, delivery and capture mechanisms embedded in this architecture, we find the use of open platforms (Brock et al., 2019; Fehrer et al., 2018; Gebauer et al., 2020; Kukkamala et al., 2021; Rask & Günzel-Jensen, 2019), outsourcing (Abrahamsson et al., 2019; Ritter & Schanz, 2019; Sjödin et al., 2020), crowdsourcing (Bagheri et al., 2020; Rayna & Striukova, 2016), servitization (Kamalaldin et al., 2020; Muller et al., 2018), coopetition (Best et al., 2022; Carraresi & Bröring, 2021) and open innovation (Yderfält & Roxenhall, 2017).

Paradoxically, though the main end of such mechanisms embedded in rational sympathy-based BMI is to capture more value at the organizational level in the long term, most organizations opening their BM to co-create and co-deliver value with their value network also face significant risks that they will not appropriate the expected part of value. In particular, Weissbrod and Bocken (2017) suggest tensions between consumers, suppliers and the firm's profit motive. This is especially the case when firms rely on servitization and coopetition (Best et al., 2022), in which the value network partners are also likely to pursue their own economic interests of profit maximization in the short term through value co-creation and co-delivery mechanisms (Baber et al., 2019). This can result in potential inter-organizational tensions for sharing captured value. Hence, these authors recommend that firms innovating their BM on the

basis of such mechanisms should also implement a contractual governance for ensuring a fairer distribution of the captured value between the parties involved, and thus the capture of value at the organizational level in the long term (Bouncken et al., 2016b; Kamalaldin et al., 2020).

#### 4.2. *The rational commitment-based architecture*

The second most prevalent architecture of mechanisms relies on rational commitment. The architecture of rational commitment-based mechanisms can be conceptualized as a BMI based on open, sustainable value creation and delivery expanded to the societal level (engagement of various external stakeholders such as citizens, communities and NGOs, besides the value network traditional partners), in which a minimal, viable portion of value has to be captured at the organizational level, consistent with the aim of enabling long-term creation, delivery and capture of value at the social level. In contrast to the previous architecture based on rational sympathy, the means here represent the capture of a viable portion of value at the organizational level (to cover costs associated with the conduct of sustainable activities), whereas the end is the engagement of external stakeholders at the societal level in the sustainable conduct of business activities for long-term value creation, delivery and capture at the societal level (McDonald et al., 2021; Singer, 1994; De Silva et al., 2021; Kuckhertz et al., 2019; Ritter & Schanz, 2019; Siebold, 2021).

Most of the mechanisms used in this architecture are value discovery through open innovation (Angeli & Jaiswal, 2016; De Silva et al., 2021) or stakeholder interaction (Fobb et al., 2021; Hofmann, 2019; Klein et al., 2021) consisting of identifying societal needs with stakeholders for co-formulating a sustainable value proposition. Other mechanisms that are frequently associated with rational commitment are the co-dissemination (or contamination) and co-engagement of social objectives with the value network (Best et al., 2022; Fobb et al., 2021), as well as cross-subsidization consisting in increasing service and product prices for the wealthiest consumers to lower them for the poorest (Angeli & Jaiswal, 2016). For instance, Björklund and colleagues (2020) suggest that the value created by the value network, such as donors, volunteers, and public or private partners, can help local communities (i.e., value creation for society). Besides generating goods or services with the help of donors and volunteers, organizations may collaborate with public and private partners, based on shared social goals, to generate collaborative solutions to social problems (Siebold, 2021; Weerawardena et al., 2010). Consistent with the creation of value for society, these firms mainly deliver value at the societal level. For instance, Siebold (2021) argues that organizations can integrate beneficiaries as a part of their workforce in the value delivery process. In this case,

the value delivery mechanism at the societal level considers the recipients not only as beneficiaries but as active partners. In addition, organizations may also use competitors for BMI in the value delivery mechanism by learning how to enhance service quality in providing goods and services for end users (Weerawardena et al., 2010).

However, within rational commitment, firms tend to capture the value created mainly at the organizational level and, to a lesser extent, at the societal level. In this sense, BMI should prioritize the economic *viability* (rather than economic profitability) of the organization (Geissdoerfer et al., 2018), while acting ethically (Best et al., 2021). This emphasizes that firms primarily capture value for viability, as a mean to ensure they maintain or expand their social impact, and that the value they create can ultimately be captured at the societal level. One major issue that has been reported regarding this specific architecture is the risk of mission drift (Best et al., 2021), which corresponds to the inversion between BM means and ends (switching from a social purpose model based on financial viability to a profitability-oriented model based on social activities). In the view of moral philosophy, such a mission drift would, in sum, indicate the adoption of a rational sympathy-based BMI architecture, characterized by a traditional calculative rationale focusing on individual or organizational interests (Singer, 1994).

#### 4.3. *The rational egoism-based architecture*

The last prominent architecture of mechanisms is based on rational egoism. This architecture is very closely related to the rational sympathy-based one, as it is also based on a calculative and opportunistic strategy of openness to the value network for the creation and delivery of value (i.e., the same mean). It also aims to maximize profits at the organizational level (i.e., the same end) (in line with Singer, 1994). However, one main difference involves the absence of enhanced value for end-users in the rational egoism-based architecture. Indeed, this architecture mainly maximizes profits at the organizational level in the short term through cost and risk reduction, by relying on transactional relationships with its value network in the development of products and services (in line with Abrahamsson et al., 2019; Agarwal et al., 2021; Baber et al., 2019). Thus, in the rational egoism-based architecture, the value network is opportunistically used by firms as a *mean* to enhance the creation and delivery of value, but the *end*, which is economic value capture, is almost exclusively restrained to the organizational level, to respond to shareholders' economic interests of profitability.

The analysis of the corpus indicates that none of the dominant mechanisms identified operates exclusively within this egoistic rationale. In contrast, we find that BMI adoption following rational egoism results in the reconfiguration of several mechanisms that coexist at

different levels of analysis. Thus, the mechanisms of value creation are used by the value network, but for either the network or the organization (i.e., shareholder value creation). Accordingly, most types of mechanisms in this architecture do not differ from those we identify in the rational sympathy-based one, as value is mainly created, delivered and captured through outsourcing (Abrahamsson et al., 2019), open innovation (Bagheri et al., 2020; Brock et al., 2019) and crowdsourcing (Bagheri et al., 2020; Brock et al., 2019).

The main distinction with the architecture based on rational sympathy regards the modes of governance that are used in the egoism-based architecture to create and deliver value at the value network level and to capture more organizational value. Indeed, some authors propose that firms transform the value created at the value network level to obtain economic advantages only in their economic interests (e.g., Baber et al., 2019). More specifically, some studies identify alternative governance mechanisms that aim to derive a competitive advantage from external transaction efficiency and cost reduction (Abrahamsson et al., 2019). For example, firms may use supplier integration or outsource activities to the network to create value for the purpose of reducing costs and increasing profits. In this way, they gradually become involved in the value network and new types of partnerships to accumulate new know-how and convert innovations into new profitable business models. Companies basing on rational egoism are also prompt to rely on governance arrangements, which consist of establishing short-term alliances to maximize organizational value capture through bargaining with alliance members (Bouncken et al., 2016). In this governance mechanism, which is mainly used by incumbent firms aiming to secure a monopolistic position on their market (Sabatier et al., 2012), the main issue is that partners rapidly find themselves in conflict because of strong misalignment regarding the appropriation of value, which results in a quick rupture of the alliance (Bouncken et al., 2016).

## **5. Research avenues**

The main architectures of multi-level mechanisms we identify and discuss above encourage us to propose three promising research avenues for addressing current literature gaps on BMI adoption, which could be studied in light of our multi-level framework by crossing the complementary approaches of strategy and moral philosophy.

### *5.1. The qualification of value creation, delivery and capture mechanisms' alignment in BMI*

Many of the papers analyzed through our systematic literature review emphasize a lack of “holistic” perspective on BMI (e.g., Reinhardt et al., 2019). More specifically, scholars call for a joint consideration of both value creation and value capture mechanisms, as well as the process enabling their alignment (Foss & Saebi, 2018; Sjödin et al., 2020). This gap is particularly emphasized in the social and sustainable BMI (SBMI) literature, in which value creation and capture mechanisms must be cohesively designed to ensure both the pursuit of a social and/or environmental mission and the organization’s financial viability for undertaking such a mission over the long run (Best et al., 2021; De Silva et al., 2021; Fobbe & Hilletoft., 2021; Velter et al., 2020). Though most recent research has contributed by identifying organizational tensions between potentially misaligned value creation and capture mechanisms in social and hybrid BMI (Best et al., 2021; Iheanachor et al., 2021; Klein et al., 2021), how this alignment could be qualified and achieved remains to be understood (Sjödin et al., 2020).

To address this gap, we propose that future research could build on our framework so as to identify if the value creation, delivery and capture mechanisms that are implemented with BMI are consistent with one of the three main architectures we identify (rational egoism-based, rational sympathy-based or rational commitment-based). If the mechanisms employed in a same BMI belong to different architectures (for instance, if value creation mechanisms belong to the rational commitment-based architecture and value capture mechanisms rather belong to the rational egoism-based one), this could thus help researchers identifying the nature of misalignment between mechanisms.

### *5.2. The management of tensions in BMI collaborative adoption*

Though a growing number of organizations collaboratively use BMI for co-creating and co-delivering value with their value network (mainly composed of clients, suppliers, competitors and customers) in the aim to capture more organizational value (Visnjic et al., 2018) and/or to enhance added value for their end-users (Sorescu et al., 2011; Wirtz et al., 2018), many scholars identify several inter-organizational tensions hampering the pursuit of such objectives (Best et al., 2021, 2022; Bouncken et al., 2016b; Brock et al., 2019; Solaimani et al., 2018; Visnjic et al., 2018). Hence, some have called for research to refine the specific types of responses that could help organizations avoid such barriers and implement more durable external partnerships through BMI collaborative adoption (Best et al., 2021; Bouncken et al., 2016b; Fehrer et al., 2018; Solaimani et al., 2018; To et al., 2020; Velter et al., 2020).

We propose that researches focusing on the case of BMI collaborative adoption by an organization and its network partners (Best et al., 2021; 2022) could use our conceptual framework based on Singer's (1994) rationales for qualifying actor's alignment and checking for potential tensions between them by verifying the consistency between the different BMI rationales they support. This would allow to better frame the core of alignment tensions such as those between profit-driven (based on rational egoism or rational sympathy) and mission-driven (based on rational commitment) BMI (Best et al., 2021). Scholars could then study whether the types and levels of responses to tensions vary depending on the rationales supported by actors engaged in a same BMI.

### 5.3. *The dynamics of rationale change in BMI and their effects on value creation, delivery and capture mechanisms*

A significant number of the selected papers consider changes in BM "logic", understood as "a re-conceptualizing of the purpose of the firm and the value creating logic" (Bocken et al., 2014: 43), to be a crucial characteristic of BMI (e.g., Bjorklund et al., 2020; Bosbach et al., 2020; Hanafizadeh et al., 2021; Rask & Günzel-Jensen, 2019; Sabatier et al., 2012; Schneider et al., 2013; Yang et al., 2017). Based on this observation, several scholars have called for a more dynamic view of BMI, which should contribute to further insights on the external and internal elements entailing BM logic change and their associated effects on value creation, delivery and capture mechanisms at different stages of the BMI process (Best et al., 2021; Fehrer et al., 2018; Gebauer et al., 2020; Hoßbach et al., 2016; Kastalli & Van Looy, 2013; Schneckenberg et al., 2019).

As a rationale corresponds to a "meta-logic" (Spiess-Knafl et al., 2015, p. 114) entailing the ends and aims of BMI, future research adopting a dynamic, processual perspective on BMI could leverage our framework for identifying the main rationale that dominate each phase of BMI (adoption, development and leveraging), in order to qualify the extent in which the global BM logic have changed during the whole process. Depending on the extent of BM logic change, different effects on value creation, delivery and capture mechanisms could then be observed along the adoption, development and leveraging phases.

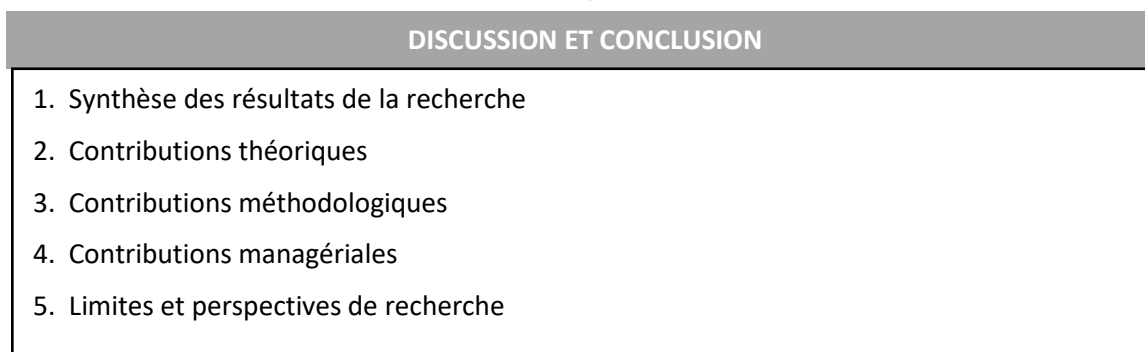
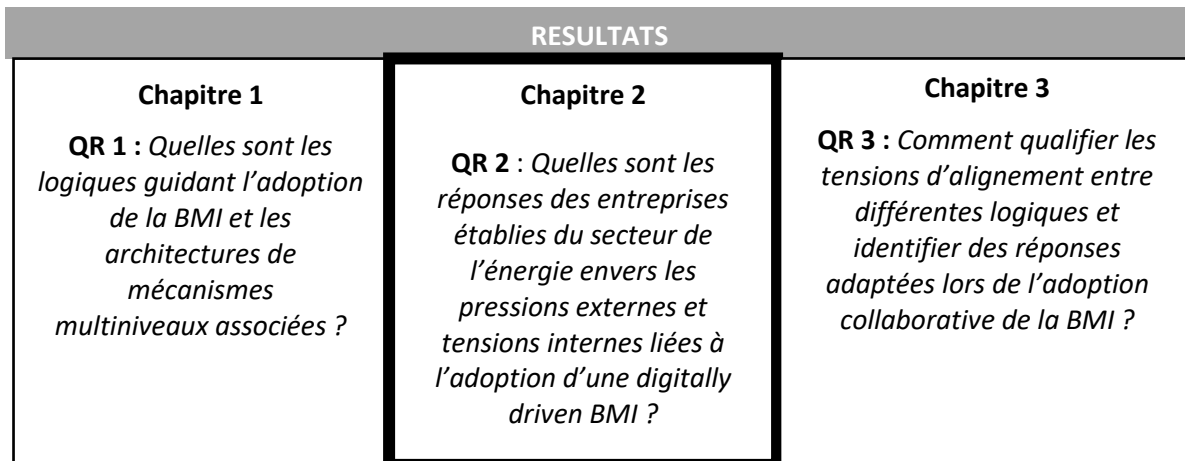
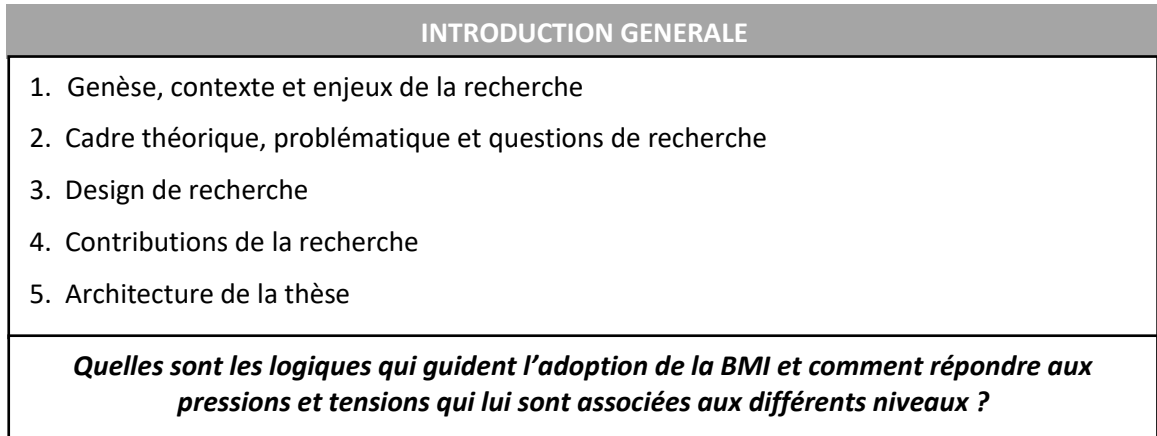
## **6. Conclusion**

Through our systematic review based on 79 papers covering a period of 21 years, this paper makes theoretical contributions to the BMI literature in two main ways. First, we provide BM scholars with a more precise framework for conceptualizing BMI by identifying and

defining three architectures of multi-level mechanisms based on the most prevalent rationales underlying BMI adoption: (1) the rational sympathy-based architecture (co-creating and co-delivering “superior” value to end-users with help of the value network to capture long-term profits at the organizational level through the mechanisms of open platforms, outsourcing, crowdsourcing, servitization, coopetition and open innovation), (2) the rational commitment-based architecture (creating and delivering sustainable value with the network and society to enable long-term creation, delivery and capture of value at the societal level through the mechanisms of open innovation, stakeholder interaction, co-dissemination, co-engagement and cross-subsidization) and (3) the rational egoism-based architecture (calculative openness to the value network for the creation and delivery of value in order to capture more organizational value through the mechanisms of open innovation, outsourcing, crowdsourcing, alliances and alternative governance). This conceptual framework could be used in future studies to bring further consistency to the BMI core construct of “architecture” and thus reduce the fragmentation in the literature that still mainly lists new mechanisms associated to BMI without considering the global rationale connecting them (in line with Foss & Saebi, 2018; Massa et al., 2017; Wirtz et al., 2016). This contribution could also help filling the gap on BMI antecedents (Foss & Saebi, 2017), as the rationales we identify are at the core of the cognitive schemas leading to reconfigure value creation, delivery and capture mechanisms (Martins et al., 2015). Second, by suggesting original research avenues based on our multi-level framework that combines the complementary approaches of strategy and moral philosophy, we should help future studies to bridge three main gaps on BMI: (1) the qualification of value creation, delivery and capture mechanisms’ alignment in BMI, (2) the management of tensions in BMI collaborative adoption and (3) the dynamics of BM rationale change in BMI and their effects on value creation, delivery and capture mechanisms. At the managerial level, this research could help organizations responding to the great challenge of generating sustainable value at the organizational, value network and societal levels by modeling their new BM mechanisms into a more cohesive architecture. Finally, this research has some limitations, as the final framework was not tested with empirical data. Therefore, we encourage future research that analyzes the relationships between BMI rationales and their architecture of multi-level mechanisms in varied institutional and organizational settings, through both qualitative and quantitative studies based on multiple cases. This could also help capture further insights on currently underrepresented BMI rationales (expressive rationality, deliberative rationality, systemic rationality, contractarianism, utilitarianism and deontology).

## CHAPITRE 2

### ENERGY INCUMBENTS' ADOPTION OF DIGITALLY DRIVEN BUSINESS MODEL INNOVATION: A MULTI-LEVEL NEO-INSTITUTIONAL FRAMEWORK





## Résumé étendu

*Cet article, dont je suis premier auteur, a été co-écrit avec mes directeurs de thèse, Rachel Bocquet et Romain Gandia. Il a été présenté à la Business Model Conference le 5 octobre 2021 et est actuellement en cours de révision (2<sup>ème</sup> tour) dans la revue Technological Forecasting and Social Change (FNEGE rang 2, HCERES rang A, ABS rang 3), depuis le 22 février 2022.*

Ce chapitre a pour objectif de répondre à l'appel de récentes recherches qui invitent à se pencher sur les difficultés spécifiques posées par l'adoption d'une *digitally driven* BMI (i.e., une reconfiguration d'une ou plusieurs composantes du BM faisant suite à l'intégration d'une technologie numérique) dans les entreprises établies, celles-ci étant en proie à des pressions externes et tensions internes susceptibles de menacer la pérennité de l'adoption si non considérées (Burström *et al.*, 2021 ; Dellermann *et al.*, 2017 ; Karimi et Walter, 2016 ; Latilla *et al.*, 2020 ; Mao *et al.*, 2020 ; Paiola et Gebauer, 2020 ; Rachinger *et al.*, 2019 ; Remane *et al.*, 2017 ; Sund *et al.*, 2021 ; Svahn *et al.*, 2017). Pour répondre à cet appel, nous visons à éclairer **les réponses des entreprises établies envers les pressions externes et tensions internes liées à l'adoption d'une *digitally driven* BMI.**

Pour ce faire, nous nous appuyons sur un cadre multiniveau de la *digitally driven* BMI, qui permet de préciser les types et niveaux de pressions et tensions affectant l'adoption, que nous enrichissons à l'aune des contributions de la théorie néo-institutionnelle (Oliver, 1991 ; Pedersen et Gwozdz, 2018). Cette théorie a en effet pour intérêt majeur de préciser la nature des pressions institutionnelles associées à l'adoption d'une BMI, celles-ci n'ayant jamais été considérées dans un cadre multiniveau, ainsi que les différents types de réponses organisationnelles apportées à celles-ci.

Au plan méthodologique, nous nous focalisons sur l'étude d'un cas unique aux unités emboîtées (Siggelkow, 2007 ; Yin, 2003). Il s'agit d'une grande entreprise française de distribution d'électricité (ENERGIA) ayant décidé d'adopter une BMI suite à l'intégration d'un compteur intelligent. Les deux unités interrogées lors d'entretiens semi-directifs étant chacune en charge de l'implémentation de la BMI à différents niveaux (régional et national), cette méthodologie nous permet d'identifier des pressions externes communes, mais aussi des tensions internes et réponses organisationnelles propres à chaque niveau.

Notre étude contribue à la littérature sur l'adoption de la BMI en révélant que face à des pressions institutionnelles de forte intensité, la principale réponse apportée par les entreprises

établies est de se conformer rapidement à de nouvelles exigences sociétales (i.e., normes européennes imposant l'intégration de technologies numériques pour opérer la transition énergétique), au détriment de la prise en compte des nombreuses tensions internes rencontrées au plan stratégique, managérial et culturel pourtant susceptibles de menacer l'adoption pérenne de la BMI et à terme, la capacité des entreprises à générer de la valeur.

## 1. Introduction

The energy sector is subject to digital transformation imperatives and the urgent need to innovate and reinvent strategies to respond to the grand challenge of energy transition (Chasin et al., 2020). In Europe, political pressures have contributed to the development of energy plans (e.g., Green Pact) to expand sustainable energy and reduce greenhouse gas emissions. This political demand, as a vector of innovation, draws largely on digital technologies that encourage the creation of new systems and business models (BMs)<sup>7</sup> that favor decarbonization and decentralization of energy, especially renewable energy (Pereira et al., 2022). In this context of profound transformation, energy incumbents must reinvent their strategies by adopting digitally driven business model innovation (BMI).

The disruptive role of digitalization in company activities—that is, “the increased use of digital technologies and their integration and cross-fertilization in the firm’s products and inbound and outbound activities” (Björkdahl, 2020, p. 18)—can be a source of external and internal tensions (Burström et al., 2021; Karimi and Walter, 2016; Solberg et al., 2020; Weking et al., 2020). From an external perspective, stakeholders within value networks or ecosystems can push to impose certain digital and value creation requirements (Hiteva and Foxon, 2021; Sengupta et al., 2021). From an internal perspective, organizational tensions are particularly challenging for large, incumbent firms; they arise when previously established tasks, working conditions, core competencies, and relationships are deeply destabilized or come into conflict with new organizational assets imposed by the integration of new digital technologies (Klos et al., 2021; Latilla et al., 2020; Mao et al., 2020; Remane et al., 2017; Sund et al., 2021; Svahn et al., 2017). Generally, the organization as a whole (e.g., culture, processes, structure) is disrupted by digitalization, resulting in deep transformations (Fitzgerald et al. 2014). Therefore, adoption of digitally driven BMI may involve interconnected external pressures and internal tensions that require adapted responses (e.g., Dellermann et al., 2017; Jocevski, 2020; Kamalaldin et al., 2020; Köhtamaki et al., 2019; Paiola and Gebauer, 2020; Rachinger et al., 2019).

However, current BMI literature limits understanding of which responses incumbents should provide in the face of external pressures and internal tensions, because it does not integrate institutional and multi-level perspectives. When BMI literature considers external challenges, it tends to approach them at a value network level; it neglects the role of institutional

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<sup>7</sup> A business model is defined by “the design or architecture of the value creation, delivery and capture mechanisms” that are employed by firms in the conduct of their business activities (Teecce, 2010, p.191).

pressures at the highest level and fails to compare constrained BMI adoption with opportunistic strategies, even though the institutional view seems crucial to the study of innovation and digitalization (Hinings et al., 2018). Especially in the energy sector, European and national public policies are exerting pressure on incumbents to develop new technological innovations, as well as new BMs for sustainable energy, decarbonation, smart/decentralized networks, and energy efficiency (Pereira et al., 2022). In this context, both the institutional setting and the control exerted by associated stakeholders likely influence firms' BMI strategies (Berglund and Sandström, 2013). However, the range of responses in the face of internal tensions and external pressures remains unexplored, especially with regard to energy incumbents, in which BMIs are subject to multi-level, interconnected barriers (Bocken and Geradts, 2020).

We aim to fill this gap by combining a multi-level perspective of BMI with neo-institutional theory to address the following question: “*What are the responses of energy incumbents to external pressures and internal tensions related to the adoption of digitally driven BMI?*” We seek to provide a more complete model of digitally driven BMI adoption by integrating the institutional level that existing BMI literature has neglected to include. By relying on Oliver's (1991) typology of strategic responses to institutional pressures, we add new links to organizational responses and identify the ways in which they interact with external pressures and internal tensions during energy incumbents' adoption of digitally driven BMI.

Empirically, we select and study two units in a very large incumbent company in the energy sector. We study these units during the company's BMI adoption phase (2019–2021), in which, following the 2015 integration of a disruptive digital technology (smart meters), changes occurred in both BM components and value architecture (in line with the previously mentioned definition of BMI). To better capture a broad, non-binary range of intra-organizational strategic responses implied by digitally driven BMI adoption, we follow Fraser and Ansari (2021) and triangulate rich secondary data documents with 20 semi-structured interviews of operational employees, middle, and top managers who work in two different business units (managing national or local/regional BMI implementation). Our methodological design of a single case study of embedded units allows us to capture both similarities and differences between the studied business units regarding the internal tensions and external pressures they face, as well as identify their strategic and organizational responses to tensions and pressures related to adopting digitally driven BMI.

Our contributions are threefold: First, by clarifying interactions across the institutional, value network, and organizational levels as firms adopt digitally driven BMI, we establish the

relevance of a multi-level neo-institutional perspective on BMI. Second, we contribute to neo-institutional theory by showing that, due to energy incumbents' characteristics, acquiescence can be a valid strategic response; however, its effectiveness may be hampered by a lack of organizational responses adapted to types of internal tensions. Third, by providing further insights on the ambivalent role of digitalization as an essential mechanism at work across the three levels, we contribute to help reconcile the three main conceptions of digitalization, that is, context, antecedent, or tool.

## **2. Theoretical framework**

### *2.1. Multi-level perspective of digitally driven BMI*

A small but growing number of scholars are calling for a multi-level perspective of digitally driven BMI adoption, to reinterpret the internal challenges to firms in light of the pressures imposed by digitalization at the external level (e.g., Björkdahl, 2020; Dellermann et al., 2017; Fraser and Ansari, 2021; Ghezzi and Cavallo, 2020). These scholars often note issues related to firms' interactions with their direct networks, as well as the profound changes they experience as a result of digitalization. Generally, studies rely on ecosystem frameworks (e.g., Björkdahl, 2020; Burström et al., 2021; Dellermann et al., 2017; Hiteva and Foxon, 2021; Jocevski, 2020; Köhtamaki et al., 2019; Landoni et al., 2020; Latilla et al., 2020; Remane et al., 2017) or value network frameworks (e.g., Endres et al., 2019; Ghezzi and Cavallo, 2020; Rachinger et al., 2019; Skylar et al., 2019; Urbinati et al., 2019); they focus on the challenges associated with transformations of firms' customer and/or supplier relationships. The two main external pressures exerted by firms' digitalized value networks or ecosystems relate to heightened *competitiveness* (Burström et al., 2021; Endres et al., 2020; Köhtamaki et al., 2019; Landoni et al., 2020; Li, 2020; Paiola and Gebauer, 2017; Rachinger et al., 2019; Skylar et al., 2019) and the associated, strategically risky increase in *interdependence* between actors seeking to efficiently and sustainably co-create and capture value in complex environments (Björkdahl, 2020; Dellermann, 2017; Kamalaldin et al., 2020; Köhtamaki et al., 2019; Urbinati et al., 2019).

These same studies identify various internal tensions related to the pressures exerted by firms' digitalized networks (i.e., strategic, managerial, cultural, structural). With regard to *strategic tensions*, several authors highlight (1) the difficulty of selecting the right digital technologies at the right times to maintain competitive advantage (Rachinger et al., 2019), (2) the challenges of identifying value co-creation partners and their roles in managing the risk of increased relational interdependence in complex ecosystems (Dellermann et al., 2017), and (3)

the struggle to create specific processes and capabilities that are consistent with firms' new BMs and the evolving configurations of their ecosystems (Köhtamaki et al., 2019).

The multi-level approach to digitally driven BMI also describes *managerial tensions*, including the struggle to attract the right human resources to master the use of digital technologies (Latilla et al., 2020; Paiola and Gebauer, 2017) and build the know-how, qualifications, and talent required by the integration of digital technologies (Rachinger et al., 2019; Paiola and Gebauer, 2017; Urbinati et al., 2019). Some authors stress the challenge of implementing agile development methods to respond to the accelerating evolution of firms' environments and times-to-market (Björkdahl, 2020; Ghezzi and Cavallo, 2020; Landoni et al., 2020; Latilla et al., 2020).

Recent papers also underline *cultural tensions*, such as the struggle to change firms' identities, values, and cultures drastically enough to implement sustainable digitalization (Köhtamaki et al., 2019). These changes are crucial; several authors agree on the importance of complete cultural transformation and the development of digital mindsets for profiting from digitalization (Fitzgerald et al. 2014; Venkatraman, 1994). Finally, studies relate structural tensions to cultural tensions, with regard to the degree of firms' centralization, which can be a barrier to changing processes and adapting to the level of digitalization required by ecosystem evolution (Latilla et al., 2020; Skylar et al., 2019). They also identify the challenges of coordinating across functions to attain "true digital transformation," in line with their environments' evolution dynamics (Björkdahl, 2020).

However, from this multi-level perspective, only a very few studies consider "macro" external pressures, such as societal issues (i.e., citizen and government expectations of ecology, solidarity, sustainability) that may constrain digitally driven BMI adoption and create or strengthen internal challenges (e.g., Berglund and Sandström, 2013; Spieth et al., 2019). According to other ethical and economic pressures related to grand challenges, it may be necessary to adopt an institutional pressure approach, to understand what drives organizations to adopt BMI (Bocken et al., 2022; Marti, 2018).

Taking a multi-level perspective on BMI also requires transcending firms' close networks to consider a broader level of analysis. We argue that neo-institutional theory is a well-adapted framework for that purpose, in that it helps characterize the types and degrees of external pressures that drive firms to evolve strategically in light of their relationships with their institutional environments—that is, the "shared rules and typifications that identify categories of social actors and their appropriate activities or relationships" (Barley and Tolbert, 1997, p.

98)—as well as the responses organizations undertake to make this strategic evolution effective (Oliver and Holzinger, 2008; Pache and Santos, 2010).

## 2.2. *Contribution of neo-institutional theory to the multi-level perspective of digitally driven BMI*

By drawing on Oliver's (1991) neo-institutional theory, we aim to characterize firms' institutional environments in relation to BMI adoption according to five dimensions of their strategic evolution: cause, constituents, content, control, and context. First, *cause* refers to the reasons that organizations are pressured to conform to institutional rules or expectations (i.e., the purposes of the pressure): to achieve legitimacy (social fitness) or to achieve efficiency (economic fitness). Second, *constituents* are the stakeholders who exert institutional pressures (or demands); the more stakeholders exerting pressure, the lower a firm's degree of dependence on them. Third, *content* relates to the types of norms or requirements to which firms are expected to conform, which might be consistent with, or opposed to, organizational goals. Fourth, *control* reflects the ways institutional pressures are exerted, by legal coercion or voluntary diffusion of norms. Fifth, *context* corresponds to the degree of uncertainty and interconnectedness of institutional environments' evolution (Oliver, 1991, p. 160).

Firms can adopt a variety of strategic responses according to the different combinations of types and degrees of institutional pressures. These responses vary from passive conformity (DiMaggio and Powell, 1983) to active resistance to defend firms' interests (Oliver, 1991), or even to strategic discretionary behaviors such as opportunity-seeking (Pedersen and Gwozdz, 2014). According to the neo-institutional typology developed by Oliver (1991) and complemented by Pedersen and Gwozdz (2014), firms address external pressures by adopting digitally driven BMI, through six types of strategic responses: acquiescence, compromise, avoidance, defiance, manipulation, and opportunity seeking. First, *acquiescence* relates to cases in which firms follow invisible or taken-for-granted norms, mimic (consciously or unconsciously) institutional models,<sup>8</sup> or obey rules and accept institutional norms (Oliver, 1991). Second, *compromise* corresponds to whether companies balance the expectations of multiple constituents (e.g., when several inconsistent demands are formulated by different external stakeholders), placate and accommodate institutional elements, or negotiate with institutional stakeholders (Oliver, 1991, p. 153). Third, *avoidance* is associated with situations in which firms conceal their nonconformity to institutional expectations, loosen institutional

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<sup>8</sup> This subtype of response mechanism also is known as "mimetic isomorphism," as popularized by DiMaggio and Powell (1983).

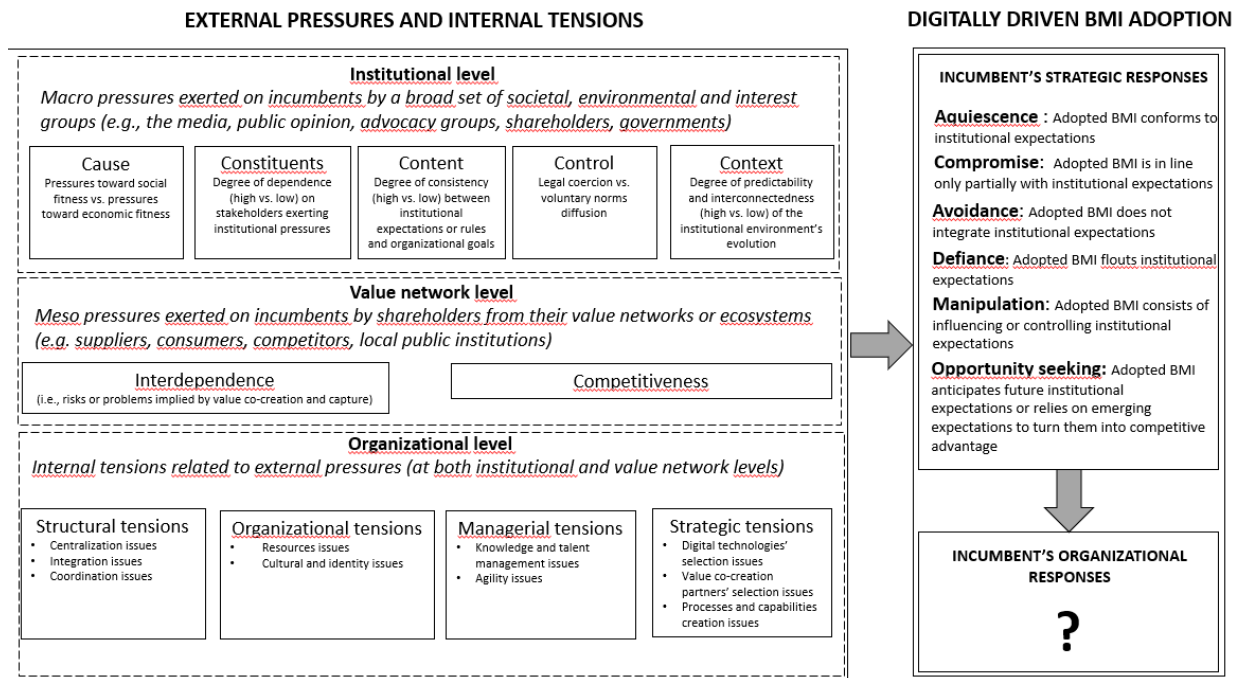
attachments, or change their goals, activities, or domains to avoid institutional pressures (Oliver, 1991). Fourth, *defiance* relates to cases in which firms dismiss explicit norms or values, challenge rules and requirements, or attack the sources of institutional pressures (Oliver, 1991). Fifth, *manipulation*—the most active form of resistance to institutional pressures—occurs when companies import influential constituents, shape values and criteria, or dominate institutional constituents and processes (Oliver, 1991). Sixth, Pedersen and Gwozdz (2014) propose another response mechanism, *opportunity seeking*, as the most strategic response. Because of the predominance of this strategic response in BMI research, we integrate it into our framework. Unlike manipulation, opportunity seeking does not imply resistance to institutional pressures; rather, it consists of anticipating future or identifying emerging societal expectations that imply new business benefits and competitive advantages (Pedersen and Gwozdz, 2014).

This framework—though very useful for identifying firms’ strategic responses to institutional pressures—requires further development to ensure a proper connection to the multi-level perspective of BMI, for three reasons. First, according to this perspective, strategic responses depend on external pressures situated at not only the institutional level but also the value network level. Second, strategic responses address various internal tensions, because internal tensions are not independent from external pressures; as Pache and Santos (2010, 2021) argue, strategic responses are influenced by both external pressures and intra-organizational dynamics that interpret and enact the institutional demands exerted on organizations. Third, we need to identify more precisely the organizational response related to digital BMI adoption. A few neo-institutional works suggest that the successful implementation of strategic responses depends on firm-specific capabilities (internal or external) (Oliver and Holzinger, 2008) or organizational conditions (leadership, structures and processes) (Pache and Santos, 2021) that vary with the type of response.

According to insights from the multi-level approach and the premises of neo-institutional theory, we synthesize the main dimensions of our theoretical framework in Figure 11, modeling (1) incumbent firms’ varied strategic responses to external pressures (exerted at both the value network and institutional-environment levels) and internal tensions resulting from the adoption of digitally driven BMI and (2) firms’ organizational responses related to digitally driven BMI adoption that remain to be established from a multi-level neo-institutional perspective.



**Figure 11.** Theoretical framework



### 3. Methodology

#### 3.1. Case selection: ENERGINA's digitally driven BMI

Empirically, we followed an in-depth exploratory qualitative approach, using a single case study with embedded units. We selected a very large (more than 36,000 employees) incumbent French energy company (ENERGINA) that has a public service mission. This choice is particularly relevant for studying the influence of the institutional environment on the external pressures and internal tensions faced by firms during their strategic evolution. As Lovell and Nightingale (2016) show in their study of BMI adoption in the British railway industry, the expectations of government and citizens deeply affect the evolution of public mission companies' BMs. Some non-trivial changes in socio-economic expectations that require dramatic changes in firms' value-creation and capture models are likely to cause intense intra-organizational tensions—such as major destabilization of organizational processes that previously were static. Such constrained strategic evolution is accentuated in the energy sector, which currently is buffeted by the rapid integration of digital technologies (e.g., smart grids) and the evolution of political and societal expectations about the development of green energy and electric mobility (Chasin et al., 2020; Dellermann et al., 2017; Hiteva and Foxon, 2021; Latilla et al., 2020; Shomali and Pinkse, 2015). Thus, both the focal firm's status (i.e., a very large incumbent company with a public service mission) and its sector (i.e., energy distribution)

make it an extreme case (Barlatier, 2018; Eisenhardt and Graebner, 2007; Ridder, 2017). This extremity allows us to capture new theoretical insights about the relatively unknown responses of incumbent firms that face both external pressures and internal tensions when they adopt digitally driven BMI (in line with Fraser and Ansari, 2021).

We study ENERZIA for three additional reasons: First, the company's BM<sup>9</sup> changed with the adoption of a disruptive digital technology (smart meter), resulting in the addition of a new component (smart grid service) and the development of a new innovative value proposition: "inventing the electricity network of tomorrow, which will be smarter, more digital, more interactive, and more inclusive to serve customers, electricity market players, and regions" (ENERZIA, PDF press release introducing the BMI project and co-construction steps). Second, the new value proposition reorganized the value architecture of the company's BM, implying a new organizational design for both external and internal value co-creation and value co-delivery located in all firm activities. Third, ENERZIA's communication documents described this BM change as an opportunity-seeking strategy developed in response to institutional change (i.e., new European rule imposing smart grids and energy transition) that also changes the value-capture perspective (both environmental and economic). For ENERZIA, the change in BM therefore implies a significant innovation in its value-creation and value-proposition delivery components, as well as a more minimal change in value capture. According to Foss and Saebi's typology (2017) and in light of ENERZIA's corporate communications, ENERZIA's digitally driven BMI can be qualified as "complex BMI" with regard to the changes involved to the existing BM of the incumbent and its novelty to the energy sector.

This BMI was described explicitly in the firm's 2020–2025 strategic plan, which was co-written in 2019 in collaboration with internal and external stakeholders and began to be implemented in all business units in January 2021. Because little research was conducted during the adoption phase of these strategic innovations (Damanpour and Schneider, 2006), we deliberately chose to observe the BMI phenomenon that occurred during the period between the firm's decision to adopt its BMI and the very beginning of its implementation, rather than at the end of the process. The study of this key moment of transition is particularly pertinent for

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<sup>9</sup> Before the implementation of its smart meter, ENERZIA's BM consisted of a traditional industrial model for electricity distributors, with the public mission of ensuring maintenance, operations, and electrical connection services on the electricity grid for citizens. These services did not require digital technologies. But with the adoption of a French energy transition law in 2015, the company was required to integrate new technologies to develop new services consistent with the ecological goals of the European Union, the French government, and local authorities (e.g., green energy sources, electrical mobility, awareness-raising about electricity consumption).

understanding which external pressures and internal tensions the organization faced and which strategic and organizational responses it must produce to achieve adoption in a concrete way.

3.2. Selection of interviewees and units of analysis

We conducted 20 semi-structured interviews of operational employees and middle and top managers working in two different business units of the firm, one in charge of national BMI adoption and the other in charge of its local (regional) adoption and implementation. Although the company operates at multiple locations, it adopted a single digitally driven BMI, but at different levels (national/global and regional/local). We selected interviewees according to their managerial responsibilities and diversity criteria pertaining to employees’ seniority, levels of implication, and roles in the first phase of BMI adoption. Table 4 summarizes the main characteristics of the selected interviewees and their associated business units.

Both business units of our focal company adopt its public utility mission, the main task of which is to ensure the equitable distribution of electricity to citizens. This mission creates a crucial need to respond to multiple societal expectations and regulations. However, the regional business unit in charge of the local implementation of the BMI was *a priori* likely to face more intense external pressures as the result of its mission to provide electricity distribution–related services in collaboration with municipalities and consumers. In contrast, the national business unit was likely to experience more internal tensions, because of its goal of providing logistics services in collaboration with all firms’ regional business units. By reflecting on these distinctive traits of ENERGIA’s embedded units, we aimed to capture the interdependencies between external pressures and internal tensions faced by the incumbent, as well as potential varied responses across the two units and their consequences for BMI adoption.

**Table 4.** Interviewees’ characteristics

<p><b>Business Unit 1 (internal logistic services)</b></p> <ul style="list-style-type: none"> <li>- In charge of national BMI implementation</li> <li>- External pressures experienced at the institutional level</li> <li>- More internal tensions expected at firm level</li> </ul>	<ul style="list-style-type: none"> <li>- 1 top manager</li> <li>- 2 middle managers</li> <li>- 6 operational employees</li> </ul>
<p><b>Business Unit 2 (electricity distribution-related services)</b></p> <ul style="list-style-type: none"> <li>- In charge of local (regional) BMI implementation</li> <li>- External pressures experienced at the institutional level</li> <li>- More external pressures expected at the value network level</li> </ul>	<ul style="list-style-type: none"> <li>- 2 top managers</li> <li>- 7 middle managers</li> <li>- 2 operational employees</li> </ul>

### 3.3. *Data collection*

Our choice to conduct a single-case qualitative study using semi-structured interviews reflects the relevance of the approach for answering research questions regarding the natural environment of rare and/or complex phenomena (Siggelkow, 2007; Yin, 2003). This type of study can identify relevant issues expressed by interviewees who share rich experiences of the observed phenomenon but have different frames (Fraser and Ansari, 2021, Pache and Santos, 2010). Moreover, unlike traditional single-case studies, those that study embedded units enable data triangulation—that is, comparisons of different sub-cases in a single analysis—and offer greater robustness, even though, as qualitative studies, they do not achieve representativeness beyond the analyzed sample (Baxter and Jack, 2008; Prévost and Roy, 2015; Yin, 2003). We also collected secondary data to enrich the primary data. All secondary data documents (10 documents, 155 pages) dealt with the national BMI of the company and its associated transformations (digitalization, organizational, environmental) in each studied business unit (see Appendix 1 for more details). Throughout our analysis, we paid particular attention to data triangulation by comparing primary data (interviews and field notes) with technical and/or archival data. We also discussed the results of this study with respondents, to ensure our analysis was consistent with their perceptions.

We carried out our study during the COVID-19 pandemic, with all 20<sup>10</sup> interviews taking place during January and February 2021, led by one or two researchers. The interviews averaged 1.25 hours in length. They were transcribed in full, resulting in 564 pages (see Appendix 1). Drawing on our theoretical framework, we focused on five main topics, addressed by open-ended questions: (1) interviewee profile (career paths, functions, and managerial responsibilities in the company), (2) BMI characterization (i.e., nature of the firm’s “transformation,” as perceived by the interviewee) and interviewee’s level of involvement in this transformative phenomenon, (3) internal tensions and external pressures related to the practice of value co-creation implied by the BMI at the firm, value network, and institutional levels, (4) organizational features and practices in support of BMI adoption, and (5) digitalization roles (see Appendix 2 for the content and structure of the interview guide).

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<sup>10</sup> One interview from among the original 21 conducted was removed because of the interviewee’s affiliation with a different business unit than the selected units of analysis.

### 3.4. *Qualitative data analysis*

Before starting the coding phase, all three researchers elaborated on a first version of the coding grid, according to the previously presented theoretical framework (see Figure 11). This first grid included the following code categories: (1) external pressures at the institutional and value network levels, (2) BMI adoption, (3) digitalization roles in BMI adoption, (4) internal tensions, (5) types of strategic responses to external pressures, and (6) types of organizational responses to internal tensions (i.e. organizational features and practices in support of BMI adoption). One researcher coded both primary and secondary data documents using ATLAS.ti qualitative analysis software. Drawing on Saldaña's (2013) qualitative coding guidelines, this coder applied an iterative coding methodology that consisted of adopting deductive coding to characterize external pressures, internal tensions, and the firm's strategic responses. We used a first version of the theoretical coding grid, followed by an inductive method to enrich this theoretical framework with unexpected dimensions. This iterative coding resulted in the addition of new inductive codes to the grid (e.g., value network pressures related to internal issues, structural tensions resulting from formalization and specialization degrees, managerial tensions caused by lack of gratitude, other responses to internal tensions). The single coder undertook multiple proofreading and recoding steps over a four-month period to achieve consistency and accuracy. Moreover, on a regular basis, the coder held discussions about the coding grid and applied codes with the other two researchers, to avoid potential interpretative biases and gain a more distant, critical view of the coding methodology.

Once the coded data were stabilized, we analyzed them through three phases of co-occurrence exploration, using the ATLAS.ti "Co-Oc Table" tool. First, we crossed BMI external pressures codes (at the levels of the value network and institutional environment) with BMI codes to compare the types and degrees of influence of both levels of external pressures on the firm's BMI adoption in each of the two studied business units. Second, we crossed BMI external pressures codes with internal tensions codes to identify the main internal tensions associated with the digitally driven BMI adoption in each business unit. Third, we crossed external pressures and internal tensions codes with the firm's response codes to compare the responses adopted by the studied business units as they faced both.

At each step of this co-occurrence exploration process, we identified the most often mentioned relationships and extracted associated interviewee comments to conduct an in-depth, comprehensive, and comparative analysis of interviewees' perceptions; this process allowed us

to distinguish between explicit and coincidental co-occurrences.<sup>11</sup> To limit extrapolation and representativeness biases, we compared the number of co-occurrences with the total number of occurrences per code, as well as the number of co-occurrences with the number and length of associated sources (i.e., interviews or secondary data documents). Appendix 3 summarizes the numbers of main co-occurrences and occurrences we found at each step of the analysis process. Our analysis of both primary and secondary data was confirmed by more than 160 employees of the two selected business units, whom we asked to discuss the study's intermediate results during a report-back session in April 2021.

#### **4. Results**

We identify three main results. First, we find a critical role of external institutional pressures in the adoption of a digitally driven BMI. Second, we reveal complex interactions between external pressures and internal tensions that can complicate the adoption of digitally driven BMI. These first two results confirm the interest of integrating the institutional approach with a multi-level perspective of the BMI adoption. Third, we identify acquiescence as the preferred strategic response of the incumbent to cope with external pressures. We also identify only two internal organizational responses that slow down the adoption of digitally driven BMI as the result of inadequacy. This last result allows us to identify the organizational limitations of an acquiescence strategy for adopting digitally driven BMI.

##### *4.1. Major role of institutional level in external pressures related to digitally driven BMI adoption*

Most external pressures perceived as antecedents of ENERGINA's BMI adoption occur at the institutional level (46 co-occurrences, from a total of 163 occurrences regarding BMI adoption) rather than at the value network level (15 co-occurrences). Interviewees mention these institutional pressures regardless of the business units in which they work. They also associate most BMI external pressures with an institutional expectation of achieving societal fitness (i.e., cause—the reason the institutional pressures exist) regarding the development of sustainable energy and ecological transition policies and rules. As an energy distributor with a public service mission, the company needs to meet the expectations of both French citizens and

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<sup>11</sup> Because two codes may be present in the same responses, without the interviewee explicitly relating them, we differentiated responses that implied explicit relationships between the studied codes from those with coincidental code co-occurrences.

the government related to renewable energy production and smart grid services.<sup>12</sup> Thus, the institutional pressure to achieve social fitness appears to be a strong antecedent of digitally driven BMI adoption, especially when it combines with constituent pressure (i.e., few stakeholders exerting institutional pressures, which increases the firm's dependence on institutional demands). Interviewees from both business units perceive the company as strongly dependent on the state—the main stakeholder that exerts institutional pressure associated with ecological transition:

*We're really in a moment when we feel the company is moving. It's moving because the environment is moving, because there's an external context which is more palpable, and if we want to remain a quality electricity distributor and to address stakeholders' expectation so the unions and all people we work with on the external level—we have to change, to constantly question ourselves. So, we have this big project, namely the [2020-2025 strategic plan].... It consists in a true disruption and a self-questioning about various aspects, for sticking as closely as possible to ecological transition, which has to stick more to customers' expectations. (Middle manager 1, Business Unit 2)*

*It's on a political level. Our boss is the State, and there are very important issues. For ENERGIA, even if we're not yet in a competitive sector, things could change.... With the [2020-2025 strategic plan], there's the will to reduce our pollutant emissions in the very near future. We already have started with electric vehicles. (Top manager 1, Business Unit 1)*

However, interviewees' perceptions also differ, depending on unit of analysis (local or national), with regard to the degree of consistency associated with these institutional pressures. Interviewees from Business Unit 2 (local adoption) mainly consider social expectations (i.e., demands to align the firm's value proposition with ecological transition goals) as consistent with their firm's goals, whereas interviewees from Business Unit 1 (national adoption) perceive inconsistencies between ENERGIA's and institutional shareholders goals with regard to the economic demands (i.e., cost saving objectives) that underlie BMI adoption:

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<sup>12</sup> "Yesterday solely in charge to distribute to consumers the electricity that comes from production facilities, the distribution network now has to integrate renewable energies' local productions.... An accelerating trend which will grow in the next few years in order to address energetic transition goals." (Company press release introducing new smart grid services, 2018, p. 5)

*We're told: 'yes, of course, you're ENERZIA, so you have to move towards electric mobility.' Yes, we moved to electric mobility because the company believes in electricity.... We also believe in everything that relates to renewable energies. (Middle manager 2, Business Unit 2)*

*The problem is that State is a shareholder, and that we have additional shareholders. But, nowadays, unfortunately, the shareholder would say: 'You don't know how to run your business, [name of ENERZIA's CEO], because, did you see how much you spend, your payrolls? It must be halved,' for instance. So, they also have this pressure that they always bring down. (Operational employee 5, Business Unit 1)*

The final institutional pressure that we identify is associated with the digitalization phenomenon, which started in 2015 and progressively drove ENERZIA to adopt BMI in 2019 after a series of strategic experiments (e.g., development of new smart grid services in specific territories). Both our primary and secondary data identify digitalization as a new way to convey institutional norms, such that it embeds them in the institutional pressure of control. Digitalization is part of a European directive (i.e., highly constraining norm diffusion) that requires electricity distributors to contribute to renewable energies and electric mobility development by adopting Internet of Things (IoT) technologies. This pressure urged ENERZIA to implement smart meters and master the use of open data (i.e., databases that include energy consumption information shared with several partners and institutional stakeholders):

*The motives of ENERZIA's smart meter.... Basically, it's a European rule. It's a European decree which stipulates that bills must be paid depending on what's consumed—not on estimations—and to increase people's awareness on how much energy they consume. (Operational employee 6, Business Unit 1)*

*So, about big recent projects, we had the [name of ENERZIA's smart meter], with the ecological transition law.... We have to computerize and modernize customer relationship more than it was before. (Top manager 2, Business Unit 2)*

In the specific case of the local unit, interviewees perceive this pressure to digitalize at the institutional level as intensified by value network pressure related to the firm's interdependence with external partners. The provision of smart grid services by Business Unit 2 requires close collaboration with local authorities, electricity unions, and social landlords who are the co-owners of the rural electricity grid exploited by this unit—and whose needs regarding the provision and analysis of data related to energy production and consumption constantly are increasing in the context of the ecological transition policy. Our triangulation of primary data



with secondary data documents allowed us to expand this observation to reveal that the constraint to collaborate with several external partners from the value network applies to each unit of ENERGIA involved in providing smart grid services. Notably, these co-occurrences of value network pressures related to interdependence and BMI adoption appear in four secondary documents dealing with implementation issues for smart grid services at the firm level:

*There's the operational area, there's us. There are the local authorities. Then, there are people who design the grid, so the engineering area. Then, there are external partners, because we have to work with them. In rural areas, the grids don't only belong to us. So, we also have to help the electricity unions...to develop the grids, because they will belong to them. (Middle manager 2, Business Unit 2)*

*[ENERGIA] understood the high expectation regarding the provision of aggregated data. Presently, this capability is strengthening, while the needs are growing: on the one hand, [ENERGIA] will benefit, especially thanks to [ENERGIA's smart meter], from extraordinarily more numerous and accurate data than before; on the other hand, public stakeholders such as municipal authorities or social landlords, who are at the core of energy transition policies, will increasingly need it. (Company press release introducing the role of big data in the firm's digital and environmental transformation, p.2, 2020)*

Overall, the main external pressures that interviewees from both business units identify as BMI antecedents occur at the institutional level; they relate to social expectations regarding the development of sustainable energies and electric mobility (*cause*). The interviewees consider digitalization a type of institutional antecedent, embedded in the pressure of constraining norms diffusion (*control*) rather than acting as a driver of BMI adoption at the level of the value network. Although interviewees from both business units believe institutional pressures may be strengthened by ENERGIA's high level of dependency on the state (*constituents*), we observe distinct associated degrees of constraint, depending on the studied unit of analysis (*content*). In contrast with the national unit, the local unit perceives institutional pressures related to social demands as less constraining, because of their consistency with organizational goals.

**Table 5.** Perceived role of the institutional level in external pressures related to digitally driven BMI adoption

External pressures		Perception of interviewees related to BMI adoption	
		<i>Business Unit 1 (national)</i>	<i>Business Unit 2 (local)</i>
<i>Institutional level</i>	Cause	Same perception of the strong influence (achieving social expectations about sustainable energy)	
	Constituents	Same perception of the strong influence (high degree of dependence on the State which promotes the energy transition)	
	Content	High influence (low consistency with organizational goals)	Low influence (high consistency with organizational goals)
	Control	Same perception of the strong influence (European directive and rules imposing digitalization to contribute to renewable energies development)	
<i>Value network level</i>	Interdependence towards partners	Unperceived	Increases the intensity of the Control pressure (local value must be co-created with partners by using digitalization)
	Competitiveness	Unperceived	

#### 4.2. Complex relationship between external pressures and internal tensions in digitally driven BMI adoption

With regard to the relationship between internal tensions and levels of external pressures associated with ENERZIA's digitally driven BMI adoption, few interviewees perceive the value network as interconnected to internal issues (14 co-occurrences between value network pressures and internal tensions among all 126 co-occurrences of external pressures and internal tensions). Almost half the internal tensions mentioned by interviewees, from both business units, are organizational in nature (182 occurrences out of 446) and linked mainly to the external pressure of digitalization at the institutional level (45 co-occurrences between digitalization as a control pressure and organizational tensions, among a total of 182 occurrences of organizational tensions). Regardless of their unit, interviewees mention the lack of organizational assets, such as simplified processes, capabilities, technological skills, adapted digital tools, and related training, as critical internal tensions intensified by the external pressuring role of digitalization (*control*). They mainly refer to this issue when discussing value co-creation practices related to the use of digital tools (i.e., in the local unit, smart meters and associated databases, and in the national unit, a new information system for screening logistic

activities) that had been imposed by institutional stakeholders, even before existing organizational assets were prepared for rapid digital changes:

*Before, we used to have our own database, I mean at the time of [name of ENERGIJA's mother company]. Then, this database was made open. Then, there were other energy suppliers, so the databases were also made accessible to them. But, now, we realize that some suppliers, when they're not able to solve a problem, create a file and give up the previous one. Expect we, as a distributor, are bothered, because some customers' delivery points disappear. And there are electricity meters that are shut down, which shouldn't be. So it creates mishaps like that. (Operational employee 2, Business Unit 2)*

*So, right now, what's coming to my mind is the IS [Information System] development which failed, because we don't have the skills in our service and we didn't find someone who could make it evolve internally.... After one year of use, we're still waiting for critical updates, and so, the IS failures we've noticed currently make us search for alternative solutions. (Middle manager 2, Business Unit 1)*

Beyond this relationship between the external pressure of control and internal organizational tensions, other purely internal relationships emerge. We identify organizational issues resulting from the difficulty of developing value co-creation capabilities, which interviewees perceive as strengthened by the existence of joint structural, cultural, and managerial issues related to the firm's high degree of centralization (i.e., decision-making power concentrated at the top of the pyramidal structure of this large incumbent organization) and the associated lack of agile, empowering managerial methods. These tensions seem significant; interviewees indicate that centralization and lack of empowerment and agility hamper the critical engagement of employees and external partners in BMI adoption and result in strategic tensions related to misalignment of a main objective of the adopted BMI (i.e., strategic ambition to revise ENERGIJA's value architecture by implementing value co-creation both between internal units and with external partners) and existing organizational assets:

*So, we're sometimes asked about our opinion on the organization that's aimed to be implemented but knowing that it's still.... When an organization must be implemented, quite frankly, we always have the feeling that it's top-down. We're concerted, but, at some point, there's a line that was decided, we have to apply the line, so the room for maneuver is quite reduced. (Operational employee 5, Business Unit 1)*

*So that's why I think the managers are concerned—well I am, anyway.... That's because the sets<sup>13</sup> come once the decision has already been taken. The IA are transformed, and then we're told: 'But we need to work on the vehicles, we need to work on this point, this point, this ...' knowing that the implementation will end in March. (Middle manager 2, Business Unit 2)*

Furthermore, though interviewees from both units of analysis perceive the same types of internal tensions (structural, managerial, organizational, and strategic), national unit (Business Unit 1) interviewees perceive their interconnection as more constraining. Both organizational transformation and digitalization took place at the very moment of the restructuring of this specific unit (in 2019), following the early adoption of the firm's BMI, which may have reinforced the interconnectedness of internal tensions and thus increased their intensities.

When linking the internal tensions implied by ENERGIJA's digitally driven BMI to the external pressures identified in the previous stage, we determine that the pressure associated with digitalization at the institutional level (control) caused mostly organizational tensions that were strengthened by pre-existing internal issues of structural, cultural, and managerial natures (firm's high degree of centralization, lack of agile and empowering managerial methods)—which together resulted in strategic misalignment of one of the main goals of ENERGIJA's BMI (changing the value architecture by co-creating value with internal and external partners) and ENERGIJA's existing organizational assets (Table 6).

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<sup>13</sup> This mention refers to operational sets, which are about to be transformed through the local transformation of Business Unit 2's intervention agencies (IAs).

**Table 6.** Relationship between external pressures and internal tensions in digitally driven BMI adoption

External pressures	Internal tensions (organizational level)	
<p><i>(Institutional level)</i></p> <p><i>Pressure of Control</i></p> <p>Digitalization imposed by European directive →</p>	<p><i>Organizational tensions</i></p> <p>Lack of organizational assets regarding adapted processes, capabilities and resources and tools), intensified by the external pressure of control</p>	<p><i>Structural tensions</i></p> <p>High degree of centralization and decision-making process</p> <p><i>Managerial tensions</i></p> <p>Lack of agility and empowering methods</p>
	<p><i>Strategic tensions</i></p> <p>Strategic misfit between the BMI ambitions of both internal and external value co-creation and existing organizational assets and capabilities</p>	

4.3. *Strategic and organizational responses with negative consequences for digitally driven BMI adoption*

Although the two units of analysis faced differing intensities of external pressures and internal tensions (different perceptions)—and thus could have adopted different strategic responses when adopting the BMI—the most mentioned strategic response was acquiescence to institutional pressures (i.e., compliance with social demands), regardless of business unit:

*Nowadays, society demands more and more things, so we have to respond. That's why we have some obligations in the [2020–2025 Business Plan] that require to adapt ourselves. (Operational Employee 4, Business Unit 1)*

*So that happens naturally, when we're asked to do something, generally, we answer positively, to the extent possible. (Middle manager 2, Business Unit 2)*

Interviewees perceive compliance with social expectations as a consequence of the firm's strong dependence on public authorities (strength of constituent pressure); top managers from both units emphasized this point when discussing the motives of ENERGIA's BMI adoption:

*So, if we mess up on a daily basis, we, ENERGIJA's employees, at the end of the concession contracts, well let's say that the local authorities could object these concession contracts or not renew them, and we would, at last, lose our client. (Top manager 1, Business Unit 2)*

*And, above all, there's the very important fact that ENERGIJA doesn't own the distribution networks so, if one day or another, our services happened to deteriorate, the distribution and pseudo-monopole model could be jeopardized. (Top manager 1, Business Unit 1)*

This result is surprising for two main reasons. First, it contrasts with the type of response we identified in the secondary documents that mention the reasons for BMI adoption, which mainly cite opportunity-seeking strategies in the context of institutional change. This contrast indicates a misfit between corporate discourse on BMI and ENERGIJA's employees' perceived reality. Second, interviewees from both business units rarely mention responses to the numerous internal tensions that we identified (81 co-occurrences of internal tensions and responses to internal tensions, among 446 occurrences regarding internal tensions). This low number contrasts with the high number of positive responses to external pressures and the scarcity of solutions to internal tensions; it also is evident in explicit comments from operational employees in Business Unit 1, who allege that ENERGIJA favors solving external societal demands over internal demands. A majority of respondents (including managers) acknowledge a lack of assistance and guidance, evoking the top-down nature of the transformation. This finding is consistent with the top-down nature of the 2020–2025 strategic plan, which seeks to impose a new strategic vision on the entire organization in line with institutional expectations.

*We have to 'follow' what's going on outside, observe and adapt, so effectively, in terms of organization, in terms of technology, we have to follow the movement.... It affects the customer part, the operational part, engineering, operations in general, well yes, it affects a lot of units and a lot of businesses. We are obliged to adapt and to ensure that people also adapt. It's not necessarily easy for everyone. So, for that, you have to provide support. Sometimes, there is a lack of support (Middle manager 5, Business Unit 2).*

*We like to do big masses, it's a top-down process, it goes down. You open your mouth, you swallow. And today, it's going to kill people's desire to develop the company (Operational employee 5, Business Unit 2).*

The firm's organizational responses to internal tensions mostly were associated with a few organizational and managerial solutions that aimed to solve organizational tensions. The main organizational responses consisted of adopting new digital resources to simplify processes or share information about projects related to BMI (without training employees to use these digital tools). Managerial solutions consisted of verbal empowerment and increasing employees' involvement in the value co-creation practice implied by the BMI. However, according to interviewees, both of these "ready-made solutions" were inefficient or associated with the creation of new internal tensions:

*Quite often, we created groups, SharePoint, in the idea to create managers exchange, peers exchange, to find new solutions to the issues we faced, for instance. And then, we realized that, actually, well, it didn't work, in fact. (Middle manager 4, Business Unit 2)*

*Well, what's new is the management's evolution we've been experiencing, which maybe explains that the present topic is tackled differently. So, there's obviously the genesis of the topic with where we want to go, and a more significant, more participatory involvement. And that's what bothers people. Well, 'bothers' maybe isn't the right word. However, it disturbs, well, not 'disturbs', but questions some people. (Operational employee 1, Business Unit 2)*

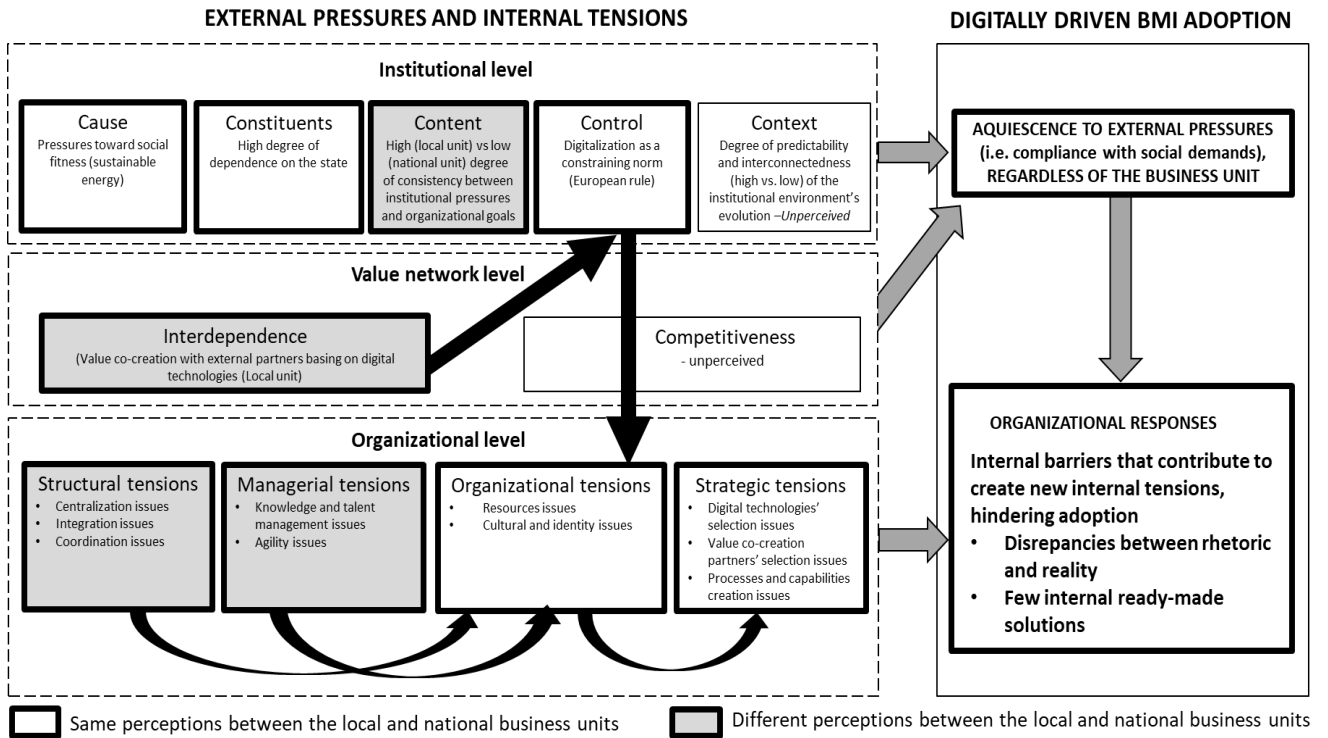
Both the perceived neglect of internal issues and the lack of effectiveness of the organizational responses implemented ultimately had detrimental consequences for BMI adoption. They drove some employees to disengage, citing a lack of social and managerial recognition:

*Socially speaking, I think that, on the internal level, it's hard, because I've the feeling that we're numbers. We don't necessarily have recognition. (Operational employee 6, Business Unit 1)*

*Employees' recognition, one day or another, if not integral, employees won't necessarily invest themselves over and over.... Well, it's clear that the real problem now, that's it, that's recognition. (Operational employee 7, Business Unit 1)*

We summarize in Figure 12 below the types of strategic and organizational responses addressed by ENERGIA to the external pressures and internal tensions that were identified in the context of digitally driven BMI adoption.

**Figure 12.** Summary of results



## 5. Discussion and conclusion

In line with recent research that calls for a multi-level view of BMI that tells more than “half of the story” (Berglund and Sandström, 2013, p. 277), our results provide a more complete model of incumbent firms’ responses and constraints related to multi-level issues of digitally driven BMI adoption. They make three contributions that enrich both neo-institutional theory and literature on BMI adoption: (1) establishment of a multi-level neo-institutional framework of BMI adoption, (2) identification of the organizational side and misfit related to the acquiescence response to BMI adoption, and (3) identification of the ambivalent role of digitalization in BMI adoption. These contributions also are rich in managerial implications, which we detail before noting some limits and perspectives for further research.

### 5.1. Relevance of a multi-level neo-institutional framework for BMI adoption

Our results confirm the importance of the institutional level in the adoption of digitally driven BMI. Although it is crucial to the study of innovation and digitalization (Hinings et al., 2018), literature on BMI adoption largely continues to ignore it (Spieth et al., 2021; Verhoef et al., 2021). By explicitly integrating the institutional level into our framework, we support the



relevance of the multi-level neo-institutional perspective in revealing the importance of the interactions among the institutional, value network, and organizational levels and thereby understanding BMI adoption in digitalization contexts. Despite the specificities of our case study and the largely politicized dimension of the energy sector (Pereira et al., 2022), this multi-level approach might be relevant to other incumbents that face similar combinations of external pressures and internal tensions (see Bhatti et al., 2021; Pedersen and Gwozdz, 2014; Pedersen et al., 2018).

We build on previous works that apply this perspective and that have established only that societal and governmental pressures influence firms' strategic evolution (Oliver, 1991); we explore the interdependencies among external pressures and internal tensions faced by incumbents that adopt digitally driven BMI. Our analysis, which shows that institutional pressures (e.g., social fitness, dependence on the state, digitalization) represent major antecedents of the adoption of a digitally driven BMI, broadens debates on this subject (Bhatti et al., 2021; Foss and Saebi, 2017). This result, in combination with neo-institutional theory (e.g., Pache and Santos, 2010, 2021), goes a step further to reveal that the external pressures of control at the institutional level (in our case, digitalization as a European constraining norm) can be reinforced by external pressures at the value network level (i.e., value co-creation with external partners based on digital technologies). This finding adds to work that shows that the institutional framework and stakeholder control (and interdependency) likely influence the evolution of the strategy of firms engaged in BMI (Berglund and Sandström, 2013). Moreover, we show that external pressures linked to digitalization are the source of internal tensions that incumbents must consider, insofar as these tensions are sources of strategic misalignment that inform the effectiveness of the strategic response (i.e., BMI adoption). We thus confirm the need to consider different levels in a context in which digitalization reinforces their interactions (e.g., Dellermann et al., 2017; Jocevski, 2020; Kamalaldin et al., 2020; Köhtamaki et al., 2019; Paiola and Gebauer, 2020; Rachinger et al., 2019).

For incumbent firms, a multi-level perspective of BMI adoption is crucial, because boundaries across different levels of analysis are permeable; analyses of external pressures and internal tensions should not be conducted solely at the value network or ecosystem levels (Dellermann et al., 2017; Skylar et al., 2019; Spieth et al., 2021) or at the level of the broader dynamics of the environments (Björkdahl, 2020). Because digitally driven BMI relies on digital technologies for strategic reinvention (Chasin et al., 2020; Verhoef et al., 2021), it is subject to

multi-level and interconnected barriers (Bocken and Geradts, 2020) that require analysts to focus on the more complex interplays across all three levels.

### 5.2. *Various misfits related to the acquiescence response for multi-level BMI adoption*

Our results shed new light on the strategies implemented by incumbents in response to institutional pressures and help expand previous research (Olivier, 1991; Pache and Santos, 2010; Pedersen and Gwozdz, 2014). In line with Oliver and Holzinger (2008), we show that the strategy of acquiescence can be assimilated into a “political strategy” that consists of maintaining or creating value from the political environment (cf. accepting the inevitability and potential disadvantages or costs of its influence). In accordance with Oliver and Holzinger’s (2008) prediction, acquiescence is an available strategy when incumbents are large and dependent on the political environment, possess material interest in the public policy in question, or operate in highly regulated industries that impose significant political pressures on them. Therefore, acquiescence is a response implemented in the face of urgent adaptation pressures (Fraser and Ansari, 2021). However, our results also reveal adaptation issues related to the adoption of digitally driven BMI; the effectiveness of acquiescence responses may be hampered by a lack of organizational responses adapted to types of internal tensions. Studies in the neo-institutional field already have established the importance of specific capabilities and organizational conditions (e.g., leadership, structures, processes) to support acquiescence responses and adaptation (Pache and Santos, 2021). However, these studies remain essentially conceptual and do not offer empirical validation. Moreover, they do not integrate interactions across levels. Our results enrich these studies (Oliver and Holzinger, 2008; Pache and Santos, 2010, 2021) by going beyond a conceptual vision to consider the interdependencies of the institutional, value network, and organizational levels. Moreover, rather than identify conditions necessary for an effective acquiescence strategy, we identify types of organizational misfit that can hinder its effectiveness.

Organizational misfits connect work related to BMI to enrich our understanding of the adoption issues that incumbents may face. According to Ansari et al. (2010), adaptation is the process by which an adopter tries to create better “fit” between newly adopted practices and the context of the adopting organization. Adaptation may change the practice, the organization, or both; it usually stems from a lack of political, technical, or cultural “fit” or “misfit” between newly adopted practices and their context (Ansari et al., 2010).

In our case, *political misfit* pertains to the misalignment of one of the main goals of ENERGIA’s BMI (changing the value architecture by co-creating value with internal and

external partners) and ENERGIA's existing organizational assets. Although new management or organizational practices might be "made to fit" the specific context of the adopting firm, they are not sufficient to ensure that the response fosters an adoption process. This result is in line with Oliver and Holzinger's (2008) argument that the effectiveness of reactive political strategies for creating or maintaining value depends on firm-specific dynamic capabilities. If ENERGIA is implementing internal actions, the reconfiguration of internal processes is neither rapid nor low-cost, as proposed by Oliver and Holzinger (2008). Similarly, the investment in training, resource, and skill innovations necessary to accelerate and improve compliance with public policy is akin to ready-made solutions and therefore slows down BMI implementation.

The issue of *technical misfit* also appears significant, because the digitally driven BMI is not compatible with the digital base of the company (e.g., lack of simplified processes, capabilities, technological skills, adapted digital tools, related training). This incompatibility occurs frequently in digital transformations of incumbents (Klos et al., 2021; Svahn et al., 2017), because adopting digitally driven BMI requires adapted organizational responses to support the development of new technical and organizational assets imposed by the integration of new digital technologies (Latilla et al., 2020; Mao et al., 2020; Remane et al., 2017; Sund et al., 2021).

We also observe a *cultural misfit* through the centralization of power (top-down decision-making process) and a lack of empowerment and agility. This historically pyramidal culture does not provide the necessary prerequisites for the development of a digital mindset that can profit from digitalization (Venkatraman, 1994). Moreover, locking an organization into a historical culture can act as a brake on BM innovation and hinder the adoption process (von den Eichen et al., 2015). Thus, incumbents that seek sustainable digitalization must engage in radical cultural transformations (Köhtamaki et al., 2019) and develop new cultural values (Hartl and Hess, 2017)—especially because BMI and digital transitions disrupt all key dimensions of organizations, including management modes, processes, culture, values, and organizational identity (Fitzgerald et al. 2014).

### 5.3. Ambivalent role of digitalization in BMI adoption

Although digitalization is a known antecedent of BMI (Rachinger et al., 2019) and a source of internal tension (Paiola and Gebauer, 2017; Urbinati et al., 2019), our results expand insights into its multi-level nature and its ambivalent role. They emphasize its embeddedness in the institutional pressure of control (i.e., new constraining norm diffusion), which indicates ambivalence in role digitalization, not only as part of institutional pressures but also as a vector

of opportunity for innovation and strategic development (Hiteva and Foxon, 2021). This ambivalence is present particularly in the energy sector, in which digitalization not only is a natural element of national and European policy (fight against global warming) but also an opportunity to develop new BMI for sustainable energy, decarbonation, smart and decentralized networks, and energy efficiency (Pereira et al., 2022). Therefore, it is important for incumbents to be aware of this double role of digitalization as both a driver and a pressure.

Moreover, through the institutional pressure it exerts, digitalization urges companies to transform organizationally and digitally (at the internal level) (Björkdahl, 2020), which results in critical organizational tensions arising from a lack of adapted assets (e.g., value co-creation capabilities, human resources, digital tools, training, simplified processes) (Köhtamaki et al., 2019; Paiola and Gebauer, 2017). This disruptive role of digitalization reflects the nature of digital technologies as technical and software tools that transform the uses and all dimensions of organizations (Fitzgerald et al., 2014). As a result, the integration of new technologies, tools, or information systems naturally destabilizes the organization in place and creates conflicts with existing tools (Klos et al., 2021; Latilla et al., 2020; Remane et al., 2017; Svahn et al., 2017). These disruptions extend to the human and managerial dimensions (Burström et al., 2021; Karimi and Walter, 2016; Solberg et al., 2020; Weking et al., 2020). In ENERGIA's case, the organizational problems were accentuated, because its responses to the internal tensions raised by the institutional pressure of digitalization consist, paradoxically, of adopting new digital tools. These elements reveal a second form of ambivalence in the role of digitalization, that is, between the external context (source of pressure or opportunity) and technical tools that provide sources of internal transformation and disruption.

Our results contribute to reconciling the three main conceptions of digitalization, namely, as a context (Pache and Santos, 2021), an antecedent (Rachinger et al., 2019), or a tool for value creation/maintenance (Hinnings et al. 2018). These findings are important to establish the nature of digitally driven BMI, in which adoption can be disrupted by the often misunderstood, ambivalent role of digitalization. Our findings fill the gaps in existing BMI research on external and internal challenges associated with digitalization (e.g., Amit and Han, 2017; Burström et al., 2021; Köhtamaki et al., 2019; Verhoef et al., 2019).

#### *5.4. Contributions, limitations, and research avenues*

Our study provides several theoretical and managerial contributions. At the theoretical level, it confirms the relevance of a multi-level neo-institutional framework for better understanding BMI adoption in the digital context; it clarifies interactions across institutional,

value network, and organizational levels. We consider the framework generalizable, in that it supports a better understanding of the interdependencies among levels. Moreover, it helps fill a knowledge gap regarding the antecedents and moderators of BMI, as well as regarding digitalization's diverse multi-level and ambivalent roles in BMI. It contributes to neo-institutional theory by identifying an incumbent's response to both external pressures and internal tensions and the instances of organizational misfit in which this response is likely to hamper BMI adoption.

At the managerial level, our study provides a strategic analysis framework that managers of incumbent firms can use to anticipate multi-level issues related to digitally driven BMI adoption that result from the complex interconnections of external pressures and internal tensions. It also reveals the extent to which a lack of organizational prerequisites, as well as misfits, can hinder the effectiveness of an acquiescence response. These elements can provide guidance to managers for anticipating organizational responses in support of their strategic responses and then defusing misfits at the political, technical, and cultural levels, which can foster the adoption of BMI at the local level. Digitalization can serve as a lens for observing clearly the relationship among institutional, value network, and organizational levels with regard to BMI adoption. By focusing their analysis on the multi-level roles of digitalization, managers can better anticipate adoption issues, both externally to act against pressures and internally to act against tensions.

Beyond these contributions, we identify several limitations that lead us to formulate research suggestions. First, we conducted a qualitative study of a single case with embedded units. Even though this case is very specific because of its public service mission and its strong dependence on national and European policies in the energy sector, our results seem likely to generalize to incumbents that face similar problems in largely politicized sectors (e.g., railway industry, textiles, aeronautics). Nevertheless, our results should be supported by further research that investigates digitally driven BMI adoption in other organizational configurations and environmental settings (e.g., industries with different degrees of institutional constraints and/or interdependencies with value networks). For example, studies could consider external stakeholders' points of view as a complement to the analysis of firms' responses to external pressures (Fraser and Ansari, 2021). Second, because the focal firm is still at the beginning of its BMI implementation, our research cannot provide insights on the possible strengthening of internal tensions and associated evolution of responses to external pressures over time. It would be fruitful to adopt a dynamic approach to studying digitally driven BMI multi-level challenges

at each step of the process, beyond the adoption phase (Chasin et al., 2020; Foss and Saebi, 2017; Fraser and Ansari, 2021; Ghezzi and Cavallo, 2020; Kamaladin et al., 2020; Köhtamaki et al., 2020). Researchers then could explore the variety of innovations linked to the adoption of BMI, because our study focuses on the core innovation (connected meter and associated services), without observing possible interconnected managerial or organizational innovations. Third, our results raise the question of sustainable value creation through digitally driven BMI, which is itself the result of external institutional demands. By adopting a sustainable vision of BMI in relation to the challenges of sustainable value creation (Bocken et al., 2014; Pedersen et al. 2018), authors could extend our research. This extension also could examine the role of political management strategies and the production of results according to the type of value created (i.e., economic, social, or environmental).

# CHAPITRE 3

## IDENTIFYING ALIGNMENT TENSIONS AND THEIR RESPONSES IN THE COLLABORATIVE ADOPTION OF BUSINESS MODEL INNOVATION: A MULTILEVEL FRAMEWORK

INTRODUCTION GENERALE
1. Genèse, contexte et enjeux de la recherche
2. Cadre théorique, problématique et questions de recherche
3. Design de recherche
4. Contributions de la recherche
5. Architecture de la thèse
<i>Quelles sont les logiques qui guident l'adoption de la BMI et comment répondre aux pressions et tensions qui lui sont associées aux différents niveaux ?</i>



RESULTATS		
<b>Chapitre 1</b> <b>QR 1 :</b> <i>Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multiniveaux associées ?</i>	<b>Chapitre 2</b> <b>QR 2 :</b> <i>Quelles sont les réponses des entreprises établies du secteur de l'énergie envers les pressions externes et tensions internes liées à l'adoption d'une digitally driven BMI ?</i>	<b>Chapitre 3</b> <b>QR 3 :</b> <i>Comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative de la BMI ?</i>



DISCUSSION ET CONCLUSION
1. Synthèse des résultats de la recherche
2. Contributions théoriques
3. Contributions méthodologiques
4. Contributions managériales

## Résumé étendu

*Cet article, dont je suis l'unique auteur<sup>14</sup>, est actuellement en copy editing. Il sera prochainement soumis à la revue Business and Society (FNEGE rang 2, HCERES rang A, ABS rang 3).*

En réponse à l'appel d'un nombre croissant de chercheurs adoptant une perspective multiniveau de l'adoption collaborative de la BMI et appelant à étudier les modalités de gestion des tensions qui lui sont associées (Best *et al.*, 2021, 2022 ; Oskam *et al.*, 2020 ; Rey-Garcia *et al.*, 2020), l'objectif de ce chapitre est de comprendre **comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative d'une BMI.**

Afin de répondre à cette question, nous mobilisons une approche multiniveau de l'adoption de la BMI. Celle-ci combine le cadre conceptuel de la stratégie comme philosophie morale (Singer, 1994), afin de qualifier l'alignement en fonction des types de logiques soutenues par les partenaires, et les apports de la recherche multiniveau sur l'adoption collaborative de la BMI (Best *et al.*, 2022 ; Oskam *et al.*, 2020 ; Rey-Garcia *et al.*, 2020). En révélant la variété des logiques des acteurs, ce cadre développe une nouvelle lecture de l'alignement et permet de caractériser les types et niveaux de réponses proposées envers les tensions identifiées.

Notre design méthodologique fait appel à une **étude de cas multiple** (Yin, 2003) conduite au sein de quatre organisations focales de taille et de secteurs industriels distincts qui ont pour point commun d'avoir adopté une BMI en collaboration avec différents partenaires. Cette méthodologie a l'originalité d'être mixte, dans la mesure où elle consiste à conduire à la fois des focus groups et des entretiens individuels afin d'étudier les tensions d'alignement *in vivo*, au moment de leur émergence lors des focus groups (Best *et al.*, 2021), mais aussi *ex vivo* grâce au recueil de perceptions ultérieures lors des entretiens individuels.

Ce faisant, notre étude vise une double contribution à la littérature sur l'adoption collaborative de la BMI. Tout d'abord, nous mettons au jour les principales logiques qui se trouvent mises en tensions lors de l'adoption afin de qualifier l'alignement entre acteurs. Ensuite, nous contribuons à l'étude de la relation entre la « qualité » de l'alignement et les réponses proposées aux tensions aux différents niveaux de l'organisation, du réseau de valeur

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<sup>14</sup> Bien que je sois l'auteur de cet article, mes directeurs de thèse, Rachel Bocquet et Romain Gandia, ont hautement contribué à la réalisation de la présente version en participant à l'analyse des résultats et en procédant à des relectures successives.



et des institutions. Au plan managérial, cette recherche nous permet d'établir des recommandations et de concevoir un outil d'aide à la décision permettant d'anticiper les tensions d'alignement spécifiques à l'adoption collaborative de la BMI et d'envisager des voies concrètes de résolution aux différents niveaux.

## 1. Introduction

With the rise of new digital and environmental challenges, organizations reconfigure the way they create, deliver and capture value, a phenomenon which has been theoretically referred to as the adoption of business model innovation (BMI) (Foss and Saebi, 2017). A growing number of studies highlight the importance of considering BMI as an open, multilevel process, in which both internal (CEOs, staff, employees) and external actors (suppliers, clients, end users, citizens, associations, institutions) interfere (Berglund and Sandstrom, 2013; Bocken et al., 2013; Bocken and Geradts, 2020; Demil and Lecocq, 2014; Foss and Saebi, 2018; Rey-Garcia et al., 2020; Snihur and Bocken, 2022).

Though BMI adoption represents an opportunity to generate more value, even at broader levels than the mere organization, its successful implementation depends on strategic alignment, which can be defined as the ability to find a collective and cohesive strategy converging with both internal (employees, managers, professional unions, shareholders) and external (users, associations, public institutions, citizens) actors' interests and incentives (Berglund and Sandstrom, 2013; Bocken and Geradts, 2020; Best et al., 2021; Hiteva and Foxon, 2021; Moroz and Gamble, 2021; Pache and Santos, 2010; Stubbs, 2019). However, companies which collaboratively adopt BMI are likely to face both intra and inter-organizational tensions when trying to achieve alignment, as internal and external actors may pursue conflicting goals and thus mobilize plural rationales (or logics)<sup>15</sup>. For instance, scholars have identified important misfits or even conflicts between profit-driven and social/environmental impact-driven strategies supported by internal and external stakeholders, which can ultimately hamper BMI implementation (Best et al., 2022; Moroz and Gamble, 2021; Oskam et al., 2020; Pedersen et al., 2022; Rey-Garcia et al., 2020; Stal et al., 2022; Stubbs, 2019; Van Bommel, 2018; Velter et al., 2020). Thus, anticipating and managing these tensions which we henceforth refer to as *alignment tensions* is crucial from the early stages of BMI adoption. Indeed, if unsolved, they can ultimately lead to the destruction of economic, social and environmental value at the organizational, value network and societal levels during the next implementation phases (Best et al., 2022; Bocken et al., 2013; Snihur and Bocken, 2022).

As a BM can be conceived as a cognitive schema, which entails a consistent logic driving the way actors conceive adequate value creation, delivery and capture mechanisms (Massa et al., 2017), a key element to qualify alignment and their associated tensions when

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<sup>15</sup> A rationale, or logic, is here considered a cognitive schema focusing on the means and ends of the BM (in other words, why and how value is created, delivered and captured).

collaboratively adopting BMI would be to go further in identifying the rationales (or “logics”) that are individually supported by managers when they conceive a new BM (Martins et al., 2015).

However, most studies that focus on tensions in the collaborative adoption of BMI tend to underestimate the full scope of possible rationales motivating actors to engage in BMI. Indeed, by focusing mostly on the conflicts between the goal to generate economic profits at the organizational level and the aim to fulfill a societal mission at the network and societal levels (Best et al., 2021; Rey-Garcia et al., 2020), current multi-level studies on BMI collaborative adoption fall short in precisely qualifying actors’ alignment and associated tensions. Moreover, scholars have called for more studies that identify the responses used by organizations and their value network’s or institutional partners to manage alignment tensions when engaging together in BMI in distinct institutional and organizational settings (Best et al., 2022; Oskam et al., 2020; Stal et al., 2022). As the refinement of the menu of rationales motivating BMI collaborative adoption could also help identifying adapted responses for addressing alignment tensions, the present paper aims to address these two gaps by analyzing *how to qualify alignment tensions between different rationales and to identify appropriate responses when collaboratively adopting BMI?*

To address this research question, we draw on the “strategy as moral philosophy” framework (Singer, 1994), which enables to identify the full scope of rationales motivating BMI adoption and thus to refine the nature of alignment and associated tensions. Thus, if combined with both a cognitive and multilevel perspective on alignment tensions and their management in BMI, we assume this philosophical approach should enable to elaborate a more complete model for characterizing BMI alignment tensions and the responses proposed to manage them.

The management of alignment tensions in BMI has been scarcely studied in the literature or essentially through single case studies that may lack expandability (Best et al., 2022; Sjödin et al., 2020; Stal et al., 2022). Thus, we draw on an in-depth qualitative study based on four original cases (Yin, 2003) of firms and their associated networks engaging collaboratively in BMI, in distinct organizational and institutional settings. More specifically, our research design consisted of conducting six focus groups and 38 semi-structured interviews with top and middle managers from the focal organizations as well as partnering organizations. This mixed method makes it possible to capture both *in vitro* and discursive in-depth insights

on alignment tensions' management at the organizational, value network and institutional levels.

On a theoretical level, this research contributes to the BMI literature by adopting a multilevel perspective on BMI combined with the framework of “strategy as moral philosophy”. We develop a novel framework for identifying the quality of alignment between focal organizations and their external partners as well as the responses they consider appropriate to manage alignment tensions when adopting BMI. Through this theoretical modelling, we also provide a strategic tool that helps managers to anticipate and overcome the internal and external challenges of BMI for generating long-term, global value beyond organizational boundaries.

## **2. Theoretical framework**

### *2.1. BMI as a multilevel process involving alignment tensions*

Following Teece's (2010) widely used definition (Foss and Saebi, 2017), we assume BM are composed of value creation, delivery and capture mechanisms, interconnected with a cohesive architecture. Accordingly, BMI can be defined as a change of one or more of these mechanism(s) and/or the architecture connecting them (Foss and Saebi, 2017; 2018). Most recent research shows that BMs are growingly innovated at broader levels of analysis than merely the focal organization (Frankenberger et al., 2014; Torres de Oliveira et al., 2021). This is reflected by the development of new BM, which create, deliver and capture value based on collaboration with close partners from the organization's value network (clients, suppliers, competitors, end users) or even with a broad variety of institutional stakeholders (citizens, associations, public institutions). Drawing on this observation, a growing number of scholars have called for the development of a multilevel approach to better analyze how value is created, delivered, captured and sometimes destroyed at several levels of analysis (Bocken et al., 2013; Lepak et al., 2007).

So far, scholars drawing on a multi-level approach have identified three main levels of analysis that are involved in the modelling and adoption of BMI: organizational, value network and societal ones. In their value mapping tool for sustainable business modelling, Bocken and colleagues (2013) identify that value can be created, delivered or captured in new ways through BMI at the organizational level by employees, investors and shareholders. Though value creation is supposed to be at the core of BMI, they underline that value can be missed, wasted or even destroyed at broader levels. More precisely, they identify value creation, delivery,

capture as well as missed or destroyed value at the intermediary level of the firm's value network (suppliers, partners and customers) and at the wider level of society and environment (academia, media, external agencies, government, community, the environment).

As actors from various levels can engage collaboratively in BMI adoption, but may follow distinct goals and value creation logics, multiple tensions due to alignment challenges are likely to appear (Best et al., 2022; Rey-Garcia et al., 2020). For instance, in their study on collaborative cross-sectors business models for sustainable innovation, Rey-Garcia et al. (2020) identify interrelated alignment tensions at both the organizational, inter-organizational and institutional levels, as actors face multiple divergent or opposing demands regarding the generation of economic, social and environmental value. Best et al. (2022) also show that alignment tensions can emerge at the value network level. Following Lusch et al. (2010, p.20), they define such tensions as “a spontaneously sensing and responding spatial and temporal structure of largely loosely coupled value proposing social and economic actors interacting through institutions and technology to: (1) co-produce service offerings, (2) exchange service offerings and (3) co-create value” (Best et al., 2022, p.477). More precisely, their qualitative multiple case study on BMI in Social Purpose Organizations (SPOs) reveals that, when internal and external actors pursue together a dual mission through BMI (i.e., social impact and economic competitiveness), alignment tensions are more complex to manage, as they result from a plurality of logics that interact *across* the micro (organizational), meso (value network) and macro (institutional/societal) levels.

Though it proposes a promising framework for characterizing the levels of analysis facing alignment tensions in the collaborative adoption of BMI, this multi-level approach still lacks expandability for qualifying alignment, as most of the mentioned studies only focus on the tensions between two main rationales supported by actors: the aim to maximize profitability (economic value generation) and the research of societal impact (social/environmental value generation) (Best et al., 2021, 2022; Rey-Garcia et al., 2020). As these two rationales are rather crude and unprecise and thus cannot cover the full range of logics involved in the complex cognitive representation of BMI (Martins et al., 2015), we propose to go further in identifying the rationales motivating BMI adoption and their associated alignment tensions by integrating additional rationales which are embedded in the strategy as moral philosophy conceptual framework (Singer, 1994).

## 2.2. *Qualifying alignment tensions basing on the convergence of BMI rationales*

Most recent studies have called for the identification of the rationales (the sets of principles and reasons forming distinct meta-logics) underlying the strategic choice to adopt BMI (Grieco, 2021; Kim, 2017; Spiess-Knafl et al., 2015). In response to this call, we base our qualification of alignment degree on Singer's "Strategy as moral philosophy" framework (1994), as this specific background is, to the best of our knowledge, the only one that identifies rationales leading to distinct strategies involving the creation, delivery, capture and destruction of value at various levels of analysis (organizational, value network and institutional). The nine identified rationales are defined through the integrative approach of moral philosophy and range from traditional economic logics (calculating only individual and/or organizational interests) to more ethical logics (expanding to the voluntary integration of societal and environmental concerns). (1) "Rational egoism" corresponds to serving the organization's and its shareholders' interests only. (2) "Rational sympathy" means serving stakeholders' interests to achieve organizational interests. (3) "Rational commitment" is associated with deliberately serving a non-financial cause (through pursuing social and/or environmental impact). (4) "Expressive rationality" pursues an organizational sense of autonomy. In (5) "deliberative rationality", a political dialogue on organizational goals is undertaken with external stakeholders. With (6) "systemic rationality", strategy emerges over time as a function of the historical organization's experience and capabilities. (7) "Contractarianism" integrates justice and social fairness concerns with strategy. Through (8) "deontology", strategy is driven by the respect of moral duties. Finally, with (9) "utilitarianism", strategy is based on a social cost-benefit analysis aimed at achieving the greatest good for the greatest number.

## 2.3. *The multi-level perspective on the management of alignment tensions in BMI*

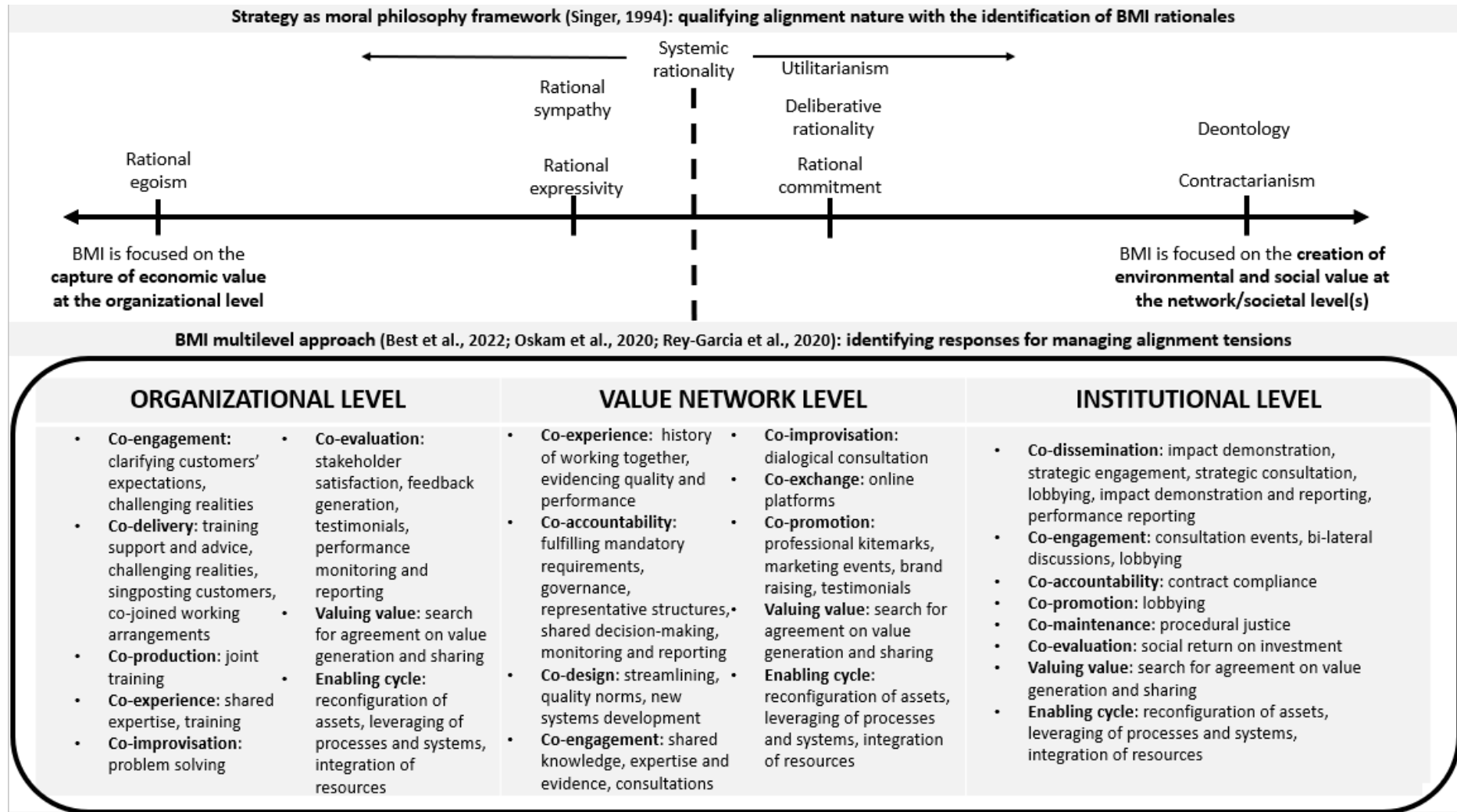
Though alignment tensions between different BMI rationales are complex to manage because of their interdependence at various levels of analysis, recent BMI studies have identified several responses that can help firms to manage them for ultimately generating value. For instance, Oskam et al. (2020) show that organizations that are likely to reach alignment when adopting BMI are those engaged in the process of "valuing value", which they define as "the discovery process through which multiple actors search for agreement about what environmental, social, and economic value to create; how to share this value; and thereby, how to satisfy each actor's interests" (Oskam et al., 2020, p.3). In addition, Best et al. (2022) find that when engaging in BMI with value network partners, and though adopting pluralist logics (focus on either economic or social value, at the micro level of organizations, meso level of

network or macro level of society), organizations could manage tensions through collaborative processes such as co-engagement, co-experience, co-dissemination, co-delivery or co-design and, more importantly, thanks to the mutual trust resulting from the implementation of such processes (Best et al., 2022). Their findings echo Rey-Garcia and colleagues' (2020) study on collaborative cross-sectors BM for sustainability innovation (CCSBMSI), which associates tensions' management to an *enabling cycle*, as the engagement with tensions at the organizational, inter-organizational and institutional levels enables better value generation and diffusion thanks to the reconfiguration of assets, the leveraging of processes and systems, as well as the integration of resources (Rey-Garcia et al. 2020).

While anchoring in the multi-level perspective of BMI for characterizing the types and levels of responses proposed to address alignment tensions, we propose to go further by relating the proposed responses to the rationales supported by actors. Indeed, we assume that the refinement of alignment nature and associated tensions should help identifying distinct responses that could whether fit or friction with the rationales supported by actors.

We synthesize in Figure 13 below our theoretical framework which combines the concepts developed by the approaches of “strategy as moral philosophy” (Singer, 1994) and the multilevel perspective on BMI (Best et al., 2021; 2022; Oskam et al., 2020; Rey-Garcia et al., 2020). By crossing these two approaches, we aim to elaborate a more holistic framework, which is then tested and completed through empirical confrontation, for identifying alignment tensions between different BMI rationales and the responses used to manage them at the organizational, value network and institutional levels.

**Figure 13.** Theoretical framework





### 3. Methodology

#### 3.1. Research design

Since no research has yet refined the qualification of alignment tensions and only scarce studies have studied the way firms manage them in various settings, we chose to conduct an in-depth qualitative study based on multiple cases. Indeed, exploratory qualitative studies are acknowledged to be particularly adapted for answering *how* research questions on relatively unknown phenomenon needing in-depth observation, conceptualization and analysis (Siggelkow, 2007; Yin, 2003). In line with the very few BMI studies focusing on the management of alignment tensions (Best et al., 2021), we rely on a mixed method design which facilitates data triangulation (Denzin, 1978) and “increases validity, strength, and interpretative potential” of our study (Thurmond, 2001: 253). This mixed method design consisted of conducting focus groups as well as semi-structured interviews with focal organizations and their external partners. As the focal organizations were those leading the initiation phase of each BMI project, we decided to interview internal actors in separate focus groups, for avoiding any influence bias on the external partners that were implied later. They could have different points of view on the rationales motivating the decision to adopt BMI and separate them from internal actors allows for better control of conformity bias. This method enabled to identify the tensions and their management *in vivo* (Best et al., 2021), through the direct observation of collective discussions held in the common setting of the focus groups, and *ex vivo*, through the collection of individual perceptions during the semi-structured interviews that were held after the focus groups. We then went further by deriving the qualification of alignment from the observations and descriptions of alignment tensions between actors, which allowed us to compare individual representations with our theoretical positioning of the nine rationales proposed in the strategy as moral philosophy framework (Singer, 1994).

#### 3.2. Cases selection and characteristics

In response to BMI studies calling to identify the different ways to analyze alignment tensions in various settings (Best *et al.*, 2022), we selected four organizations and associated networks operating in distinct industries (outdoor sports, connectors and new buildings), and with varying companies' age and size. Consistent with Foss and Saebi's (2017) definition of BMI, all of the four studied cases share the common point of being engaged together in the initiation phase (Damanpour and Schneider, 2006) of a BMI adoption project, which consists of co-elaborating a new value proposition (VP), implying the implementation of new ways to

create, deliver and capture value. However, consistent with the objective of a multiple cases methodology to distinguish between context dependent and invariable results, the four focal organizations differ in size, age and industrial settings. We chose two SMEs: one specialized in the manufacturing of connectors and man-machine interface switching technology (CONNECT-HUB), and the other operating in the building sector, specialized in the design and renting of casing and shoring products (ECO<sup>2</sup>-BUILD). Additionally, we selected two large companies: one operating in the tubular drive factory and smart home devices (SMART&GREEN), and the other conceiving outdoor sports products for both professional and amateur athletes (NEWTEX). We briefly situate these 4 cases.

The main goal of the BMI project that was adopted in 2019 by the focal company of CONNECT-HUB (an SME specialized in the manufacturing of connectors and man-machine interfaces) and its network of 10 suppliers, two clients and one design office is “to become solution providers” (CONNECT-HUB, focus group with internal actors; focus group with external actors). More precisely, by sharing a diversity of complementary resources (mainly knowledge, technologies, financial assets and dedicated teams), these organizations aim to develop custom-made connectors with and for their clients (regardless of the industry they work for) who express special needs that cannot be satisfied by the focal organization if working on its own.

In ECO<sup>2</sup>-BUILD, the focal company is also an SME but operating in the building sector. It designs and rents casing and shoring products and is engaged in a BMI project which consists of implementing a new value proposition aiming at correctly measuring and reducing its carbon emissions and those of its partners (ECO<sup>2</sup>-BUILD, internal focus group). This project implies a wide network of suppliers, transporters, clients and local institutions, who are either forced to respond to new European rules on carbon emissions, and/or seek to thrive from new strategic opportunities that relate to the construct of more ecological buildings.

Regarding SMART&GREEN, the focal company operates in two core businesses: tubular drive factory (its traditional business) and smart home devices (its new business, which has been developed for a decade). Interested in experimenting in diverse market segments, the company recently formulated the project to develop its BM by searching new strategic opportunities in the new building industry, for which it could distribute home devices that both help reducing carbon emissions and improve inhabitants’ comfort (SMART&GREEN, internal focus group). This BMI project only is at its early steps, as the focal company just started in 2021 to identify potential partners for elaborating a new value proposition. These external

actors, who are mainly architects, B2C distributors, big clients from the building sector and public authorities, were then interviewed by the research team during the conduct of this study.

The focal company of NEWTEX is specialized in the design and distribution of outdoor sports products. In 2019, it started to experiment a new manufacturing process with a local textile manufacturer consisting of gluing fabrics together instead of sewing them. This enabled to produce prototypes of “local to local” robust bags and shoes, well designed for outdoor sports. This focal company, which had exclusively worked with Asian manufacturers before this project, decided to integrate this new process to its whole textile collection of sports bags, shoes and apparel. This decision implies a significant renovation of the way companies used to create, deliver and capture value (new production processes, new marketing methods and a switch from cost-reduction based to margin-based value capture). Together, the two companies now seek to develop a new eco-friendly “local to local” value proposition, with a wider range of partners such as textile suppliers, big industrial machine constructors, innovation consultants and textile recyclers.

### *3.3. Data collection*

The focus groups were conducted from February to April 2022, at the very moment when firms whether decided to engage in a BMI project with their value network or began to implement it. These focus groups were first held with internal actors from the focal companies. This first step of internal focus groups’ realization allowed to establish a first diagnosis of alignment quality among focal companies’ actors that could hamper the BMI process. As a second step, from April to September 2022, we then conducted focus groups with external partners of the focal organizations (CONNECT-HUB, NEWTEX), or, if partners could not be available for a collective meeting, we interviewed them individually (ECO<sup>2</sup>-BUILD, SMART&GREEN). Eventually, as a third step, we held semi-structured interviews with both internal and external actors in order to capture further insights on alignment tensions and the responses that can be proposed to manage them in each case. We detail in Appendix A the content of the focus groups and semi-structured interviews’ guides.

**Table 1. Data characteristics**

Case	Document type	Interviewee(s) details	Transcript details
CONNECT-HUB	Internal focus group	<ul style="list-style-type: none"> <li>• Field application engineer</li> <li>• Plastics processing technician</li> <li>• Sales engineer</li> <li>• Digital marketing manager</li> <li>• Laboratory technician</li> <li>• Market manager</li> <li>• Sales manager</li> <li>• Digital transformation manager</li> </ul>	33 pages
	External focus group	<ul style="list-style-type: none"> <li>• CEO of a consulting company in product design and engineering</li> <li>• Excellence system manager of a client operating in the automobile and aerospace industries</li> <li>• Sales manager of a connectors' and medical devices' supplier</li> <li>• Technician of a connectors' and medical devices' supplier</li> </ul>	26 pages
	Internal interview 1	General manager of industrial production	24 pages
	Internal interview 2	Sales manager* <sup>16</sup>	27 pages
	Internal interview 3	Sales engineer*	29 pages
	Internal interview 4	CEO	48 pages
	External interview 1	Commercial project manager of a supplier specialized in surface processing	17 pages
	External interview 2	Technician of a connectors' and medical devices' supplier*	32 pages
	External interview 3	CEO of a consulting company in product design and engineering*	23 pages
	External interview 4	CEO of a company specialized in industrial cutting and injection	19 pages
	External interview 5	Excellence system manager of a client operating in the automobile and aerospace industries*	24 pages
ECO <sup>2</sup> -BUILD	Internal focus group	5 interviewees: <ul style="list-style-type: none"> <li>• Communication manager</li> <li>• R&amp;D engineer</li> <li>• Logistic manager</li> <li>• Design engineer</li> <li>• R&amp;D manager</li> </ul>	37 pages
	External focus group	None	
	Internal interview 1	QSE (Quality, Safety and Environment) manager	15 pages
	Internal interview 2	R&D engineer*	20 pages
	Internal interview 3	Logistic manager*	24 pages
	Internal interview 4	Sales manager	16 pages
	Internal interview 5	Lean and supply chain development manager	23 pages
	External interview 1	Environmental performance manager of a client operating in the building and civil engineering sectors	19 pages
	External interview 2	Operational strategy and technological transformation manager of a client operating in the building sector	21 pages
	External interview 3	Environment, climate and energetic transition manager (local elected official)	16 pages

<sup>16</sup> “\*” indicates that the interviewee also took part in the focus group phase.

	External interview 4	QSE manager of an aluminum supplier	25 pages
<b>SMART&amp;GREEN</b>	Internal focus group	<ul style="list-style-type: none"> <li>• Electronics and mechanics expert</li> <li>• R&amp;D manager</li> <li>• Hardware electronics engineer</li> <li>• Intellectual property, standard &amp; approvals, and environmental performance director</li> <li>• Influence and standards international director</li> <li>• Cybercommerce project manager</li> </ul>	33 pages
	External focus group	None	
	Internal interview 1	Expert engineer in smart home devices	16 pages
	Internal interview 2	Carbon strategy and CSR performance manager	11 pages
	Internal interview 3	Cybercommerce project manager*	20 pages
	Internal interview 4	R&D manager*	26 pages
	Internal interview 5	Rolling shutter product manager	23 pages
	External interview 1	Project manager of a builder-promoter group	23 pages
	External interview 2	Vice-CEO of a consulting company specialized in environmental transition in the building industry	23 pages
	External interview 3	Chief executive of a group operating in general building and civil engineering for industries and households	17 pages
	External interview 4	Innovation manager of an energetic transition competitiveness hub	16 pages
	External interview 5	Open innovation manager of an energy provider	37 pages
	<b>NEWTEX</b>	Internal focus group	<ul style="list-style-type: none"> <li>• Footwear, bags and shoes department vice-chairman</li> <li>• Group industrial manager</li> <li>• Group director of innovation</li> <li>• Purchasing director</li> </ul>
External focus group		<ul style="list-style-type: none"> <li>• CEO of a design and innovation consulting company</li> <li>• Chief executive of a textile manufacture</li> </ul>	16 pages
Internal interview 1		Product line manager for bags and packs	27 pages
Internal interview 2		R&D and quality manager	24 pages
Internal interview 3		Legal director	23 pages
Internal interview 4		Backpack design and development manager	14 pages
Internal interview 5		Purchasing director*	24 pages
External interview 1		CEO of a textile manufacturing group	15 pages
External interview 2		CEO of a design and innovation consulting company*	31 pages
External interview 3		Operational director of a textile manufacturing group	21 pages
External interview 4		Client manager of a textile manufacturing group	16 pages
External interview 5		Chief executive of a textile manufacture*	20 pages

### 3.4. Data analysis

Before starting the coding phase, we pre-elaborated a first version of the coding grid, according to the previously presented theoretical framework (Figure 13). This first grid included two codes categories: (1) BMI rationales and (2) responses for tensions' management, which were first filled with the deductive codes from our theoretical framework and then completed by inductive codes that emerged throughout our analysis.

Then, both focus groups and interviews' documents were coded using ATLAS.ti 9 qualitative analysis software. Drawing on Saldaña's (2013) qualitative coding guidelines, the coder applied an iterative coding methodology that consisted of adopting deductive coding to characterize BMI rationales as well as the responses proposed to manage tensions, based on a first version of the theoretical coding grid, then using an inductive method to enrich this theoretical framework with unexpected dimensions. This iterative coding resulted in the addition of two inductive codes to the grid, including "influential leadership at the organizational level" and "rules implementation at the institutional level", which were added to the category of responses used for tensions' management (see Appendix B for more detail on the content of our coding grid). The coder undertook multiple proofreading and recoding steps over a year to achieve consistency and accuracy in the coding of the data. Moreover, on a regular basis, the coder held discussions about the coding grid and applied codes with the other researchers who were actively engaged in the collection of data, to avoid interpretative biases and gain a more distant, critical view of the coding methodology. The interpretation of data was also discussed with the companies involved in the research project, during intra and inter-cases results restitutions. This allowed to better assess research consistency and accuracy.

Once stabilized, the coded data were analyzed using ATLAS.ti "Code Document" tool. First, we identified the most occurrent BMI rationales of each case, regardless of their internal or external sources, so as to qualify alignment within each case. Second, we extracted and compared internal actors' quotes including these rationales codes with those from external actors, so as to identify potential alignment tensions. These alignment tensions were then methodologically distinguished as "internal" or "external". "Internal" tensions refer to cases when the BMI rationales exposed by the interviewees from the focal company significantly differ, or enter in conflict when comparing internal interviews from the same focal company, or analyzing the different points of view exposed by employees taking part in an internal focus group. Tensions are qualified as "external" when this significant difference or conflict regarding BMI rationales occurs when comparing the focus group and semi-structured interviews of the

focal company to the external focus group or external semi-structured interviews held with its partners. Eventually, we checked the main occurrences of tensions' management codes and compared the types and levels (organizational, value network and institutional) of responses mentioned for each case, as well as their source (internal and/or external actors' interviews).

At each step, we identified the most mentioned codes and extracted associated quotes to conduct an in-depth, comprehensive, and comparative analysis of interviewees' perceptions. We also checked for the length of sources, and the repartition of occurrences in documents, to limit both extrapolation and representativeness biases. We detail in Appendix C the main occurrences and associated sources that are identified at each step of the analysis process.

## 4. Results

The first step of the analysis process allows us to identify the main BMI rationales that were mentioned by both internal and external actors from each case, and then compare the associated quotes for qualifying the alignment between these rationales. We then identify in each case the types and levels (organizational, value network, institutional) of the responses used to manage the alignment tensions found between BMI rationales.

### 4.1. CONNECT-HUB

The analysis of CONNECT-HUB reveals that interviewees' perceptions on BMI rationales are deeply divided between very contrasting, misaligned value creation logics, which range from prioritizing economic interests at the organizational level (*rational sympathy*, with 68 occurrences) to expanding the generation of social value at the network level (*rational commitment* with 58 occurrences and *deontology* with 42 occurrences). More precisely, we observe that actors from the focal company who had engaged since the very beginning of the project are the ones who mostly perceive BMI as a voluntary and total commitment to always respond to clients' needs by developing custom-made connectors (*rational commitment*), and/or a moral duty to encourage partnership and social bounding between clients and suppliers without necessarily capturing economic value (*deontology*):

“By working via [CONNECT-HUB BMI project], [CONNECT-HUB focal company] positions itself as a solution provider. This is a firm and strong commitment to always provide a solution to clients, through several channels. [...] If we don’t have the solution, we use [CONNECT-HUB BMI project].” (CONNECT-HUB, internal focus group, sales engineer)

“Now, my dream position is [to become an] altruist company [...]: we have a large ecosystem, which can bring something to the client level. Now, I bring to the fore the very notion of altruism. It means that I follow through, saying that the business model is not about pointing directly at the ROI, at margins and so on, it’s just the notion of putting people in contact.” (CONNECT-HUB, internal interview with the CEO)

In a different perspective, internal employees and external partners who have engaged later in BMI are those who consider it a way to outsource to other suppliers the production of connectors that cannot be made by the focal organization, for ultimately capturing more economic value and business opportunities at the organizational level (*rational sympathy*):

“We’re still utility-driven. In our branch, we are not great dreamers, so [CONNECT-HUB BMI project] has to generate business or technological components. [...] We’re more and more aimed at becoming a solution provider, [...] finding solutions to our clients’ problems, without necessarily doing everything on our own. [...] I’m quite opportunistic in business, and opportunism helped us a lot during the COVID pandemics.” (CONNECT-HUB, internal interview 1 with general manager of industrial production)

“In the context of [CONNECT-HUB BMI project], one mustn’t eliminate profitability - which is prominently complex - so as to estimate the return on investment. But, ultimately, we need our companies to be profitable, otherwise everything would stop.” (CONNECT-HUB, external focus group, CEO of a consulting company in product design and engineering)

CONNECT-HUB concentrates most of the responses suggested by interviewees when asking about how to address alignment tensions. For addressing strong alignment tensions between the goal to voluntarily generate social value at the network level (*rational commitment* or *deontology*) and the aim to capture more economic value at the organizational level (*rational sympathy*), interviewees suggest four main responses at the organizational and value network levels. The most mentioned ones are located at the network level and correspond to two distinct processes. The first main response working at the network level consists of *valuing value* (25 occurrences out of 87 occurrences of responses to alignment tensions in CONNECT-HUB documents), which is defined as ensuring mutual comprehension and trust through transparent discussions on partners’ goals and interests, as well as the modalities for sharing risks and profits. It is perceived as more effective by interviewees if implemented *ex-ante* BMI adoption,



as a lack of mutual comprehension at the beginning of the adoption phase is likely to lead to trust issues, or even to the withdrawal of partners in the next stages of BMI:

*“We move forward by opening dialogue, we sort things out, which allows to tackle every subject we discussed, saying: ‘Are you still aligned to this?’ or ‘Wait, we thought we were aligned here, but you’re more talking about this, and your interests are there. Because if your interests are there, and mine are here, this will do for the moment but at some point, we might get stuck’. This is how I see anticipation.”* (CONNECT-HUB, external interview 3 with CEO of a consulting company in product design and engineering)

*“[What enables to address tensions is] the fact we modelled everything [CONNECT-HUB BMI project] could provide, its purpose, and the fact we explained that it creates one plus one, and that we create another brick, to gather people around it, without hiding that it’s still for doing business – I think one should never hide that because, otherwise, these projects would die.”* (CONNECT-HUB, internal interview 1 with general manager of industrial production)

The second main response to alignment tensions proposed by CONNECT-HUB interviewees is *enabling cycle* at the value network level (22 occurrences out of 87), which consists of reconfiguring assets of the value network by integrating (a) human resource(s) who coordinate(s) partners, communicate(s) on strategy, control(s) partners’ number and diversity and establish(es) clear criteria for selecting them so as to ensure their alignment. This specific response can theoretically be used *ex-ante* (at the very moment of the decision to adopt BMI) or *ex-post* (later, during the implementation phase) the first stages of BMI adoption, depending on the moment when alignment tensions due to partners’ coordination or selection issues are perceived as compromising the whole project. As CONNECT-HUB BMI started with an informal coordination led by the focal organization which resulted in alignment tensions, *enabling cycle* would here be implemented *ex-post* BMI adoption. Indeed, both internal and external actors wish to distribute and structure coordination processes for better preparing the project’s development and go to market phases:

*“So now, we began to reorganize so as to use the strengths of the rather active actors of the moment. We decided that [company in product design and engineering] would be positioned as a project manager, because it’s their activity: design, project management and so on. [...] So why wouldn’t we use these strengths to make things easier?”* (CONNECT-HUB, internal interview 2 with sales manager)

*“On a daily basis, operationally speaking, we have to process that [CONNECT-HUB BMI project] with a coordinator who centralizes demands. [...] We need to structure a process, in which each has its role, so that no one feels aggrieved, and with a steering committee where everyone would have their say and could express their ambitions regarding [CONNECT-HUB BMI project] with total transparency and honesty.”* (CONNECT-HUB, external interview 3 with CEO of a consulting

company in product design and engineering)

At the organizational level, two secondary responses are proposed by CONNECT-HUB interviewees so as to address alignment tensions, the first one being *influential leadership* (12 occurrences out of 87). This response, which was not incorporated into our initial theoretical framework, emerged from inductive analysis and is mainly identified by interviewees from the focal organization. Influential leadership can be defined as an organization's ability to elaborate and diffuse a powerful and convincing strategic vision, which drives internal and external actors into the same direction though they may pursue different (but still sufficiently compatible) goals and interests:

*“Communication must be assumed by [CONNECT-HUB's focal organization]. But it can also certainly be assumed by each network partner. However, if we want to push [CONNECT-HUB BMI project] forward, saying: ‘Don't hesitate to consult us, we'll certainly find a solution!’, we must do it too. Because, then, the project is still brought back by [sales staff of CONNECT-HUB's focal organization's], so we mustn't hesitate to communicate about it. So maybe we could share these resources, have a shared communication in the future.”* (CONNECT-HUB, internal interview 3 with sales engineer)

*“There's also [CEO of CONNECT-HUB's focal organization] who used of his influence in the organization... [...] He knows how to challenge people and to subtly affect one's ego, without being visible. So, he has an important part to play in that. Then, there have been all these different decision-makers along the chain. [...]. I think there are also some actors who aren't necessarily active – or whom we don't see - but still influence things such as confidence, motivation or else. [...] These are other ways to interact with an ecosystem on other types of projects, but unconsciously, I think it gives strength.”* (CONNECT-HUB, internal interview 2 with sales manager)

Eventually, the second main organizational response identified in the case of CONNECT-HUB is *co-engagement* (11 occurrences out of 87), which is equally perceived by interviewees from the focal organization and external partners. Co-engagement here corresponds to the process of collectively challenging realities through the viral commitment and sensibilization of employees and partners to a common cause, such as encouraging social bounding with suppliers and clients through exemplarity:

*“I appreciate the fact we're perceived as friendly, because it's the way people perceive us that enables to create social links. [...] But, in the first place, it's up to us [CONNECT-HUB focal company] to be exemplary, saying: ‘come and see, come and see how it works.’ [...] It's almost the*

*notion of seduction.”* (CONNECT-HUB, internal interview 4 with CEO)

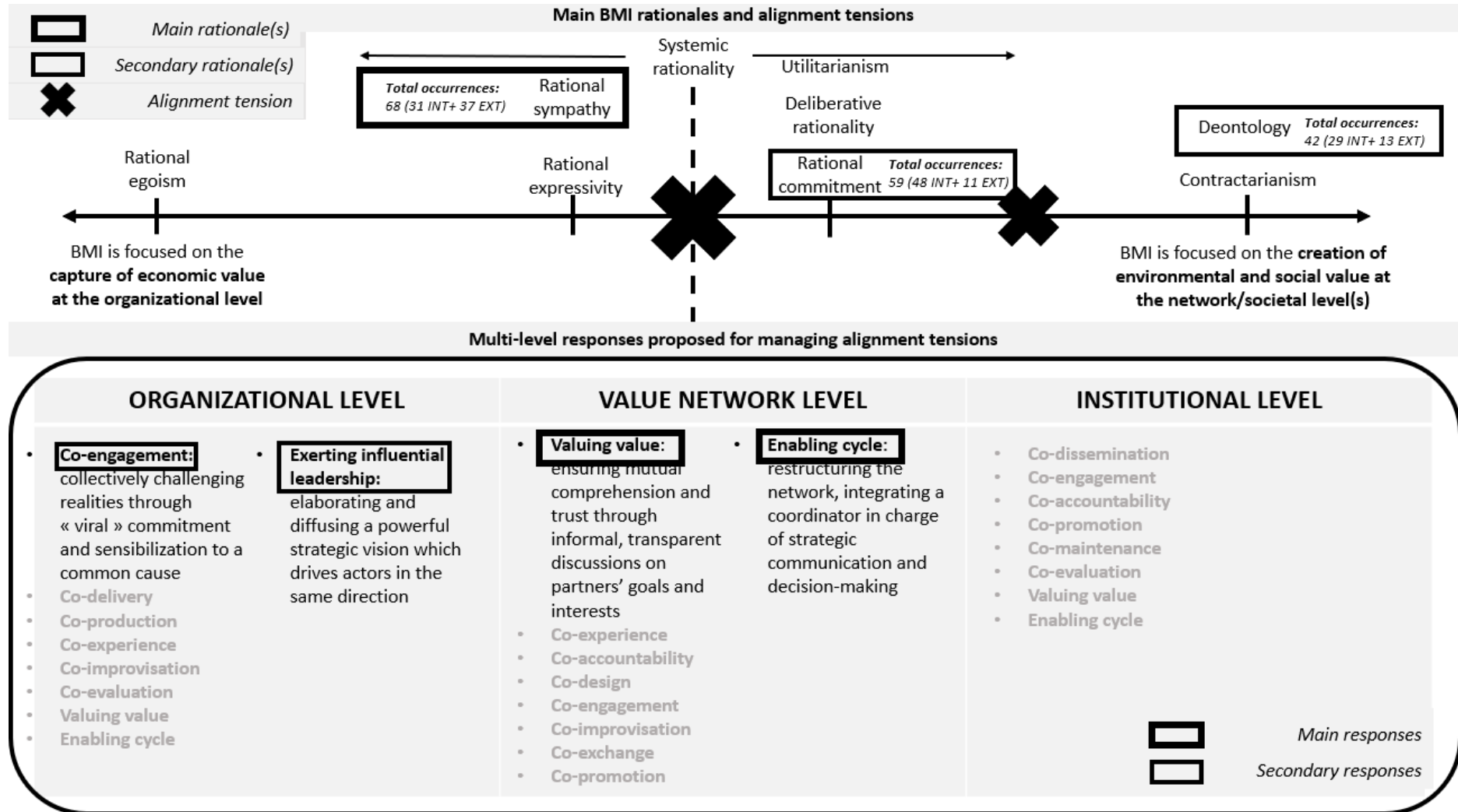
*“[CONNECT-HUB's focal organization] also has the aim to address needs. So, they're very cooperative on new projects. We need to connect two cards, they try to be proactive in searching solutions, even though they're not necessarily in their*

*catalogue.*” (CONNECT-HUB, external  
interview 5 with excellence system

manager of a client operating in the  
automobile and aerospace industries)

We synthesize in Figure 14 below the main BMI rationales, alignment tensions and multi-level responses identified in CONNECT-HUB.

**Figure 14.** CONNECT-HUB's BMI rationales, alignment tensions and multi-level responses



## 4.2. ECO<sup>2</sup>-BUILD

In ECO<sup>2</sup>-BUILD, the main goal of BMI that is identified by internal and external interviewees is to voluntarily create environmental value at the network level (*rational commitment*, with 63 occurrences). More precisely, most interviewees consider their organization as improving its environmental impact and security conditions by monitoring and reducing carbon emissions related to the production and delivery of building products, with the help of materials suppliers, transporters and competitors:

*“I think this is about discussing with our partners. [...] We analyze further what our competitors do to check whether materials are environment friendly, are better for us. We don't look only at the environmental side, we also try to consider the security and, obviously, the economic sides [of innovation]. [...] So, I think that the keys to success are communication and commitment, enacted commitment, which means joining acts to words, showing that we do act in a structured manner, that we do progress and communicate on this progress.”* (ECO<sup>2</sup>-BUILD, internal interview 1 with QSE manager)

*“So yes, we can help in the sense that in the building sector, there is a lot of steel, so we manage to reach some big steel producers. [...] So, we are an indirect actor, by exposing decarbonized solutions to our suppliers, saying: ‘there are solutions, we can help you to establish contact with your producers, your materials suppliers.’ This is how we can do something.”* (ECO<sup>2</sup>-BUILD, external interview 2 with operational strategy and technological transformation manager of a client operating in the building sector)

Although this global convergence towards *rational commitment* indicates that most actors engaging in BMI are aligned in terms of value creation logics, we find a few tensions between this dominant point of view and the perceptions of some external interviewees, who rather interpret BMI as a response to the European institutions that enforce the reduction of carbon emissions. More precisely, they associate ECO<sup>2</sup>-BUILD new value proposition to complying with institutional rules without necessarily creating value and/or only increasing economic growth at the organizational level (*rational sympathy*, with 40 occurrences):

*“I understand [ECO<sup>2</sup>-BUILD focal company]’s approach, but, to me, it’s just giving numbers for making tables, and complying with rules. [...] It’s only for receiving subsidies that we adopt this proactive approach. It’s only reglementary, without any virtue.”* (ECO<sup>2</sup>-BUILD, external interview 4 with QSE manager of an aluminum supplier)

*“So, to me, this environmental transition is an opportunity, especially for general contractors, who have a well-fit model for responding to these issues. [...] We, as a general contractor, have a vast majority of the required assets.”* (ECO<sup>2</sup>-BUILD, external interview 1 with environmental performance manager of a client operating in the building and civil engineering sectors)

Unlike CONNECT-HUB, only a few responses to these alignment tensions are suggested by interviewees from the ECO<sup>2</sup>-BUILD case. Additionally, these are mostly identified by interviewees from the focal organization. This global lack of responses to alignment tensions may be due to the fact that ECO<sup>2</sup>-BUILD BMI is still a very emergent project, as the new value proposition for better quantifying and reducing carbon emissions is still debated by both internal actors and external partners. Thus, alignment tensions might be particularly difficult to identify and address in this context. In ECO<sup>2</sup>-BUILD, the main responses proposed by interviewees to strong alignment tensions between *rational commitment* and *rational sympathy* are identified at all three levels of analysis (organizational, value network and institutional). Though, as for CONNECT-HUB, most occurrences of responses to alignment tensions are concentrated at the organizational and value network levels. The first main response mentioned by ECO<sup>2</sup>-BUILD interviewees is *co-engagement* at the organizational level (9 occurrences out of 30 occurrences of responses to alignment tensions in ECO<sup>2</sup>-BUILD documents). This response, which is mostly perceived by interviewees from the focal organization, here consists of engaging proactively in environmental value creation by collectively reducing carbon emissions reduction and collaboratively innovating in more eco-friendly building products and processes:

*“I think that if we really commit, with concrete decisions - I was telling you earlier about the commitment of the CEO, who’s ready to invest more on [eco-friendly] products - [...]. I think, at some point, we could change, simply if there’s a real commitment.”* (ECO<sup>2</sup>-BUILD, internal interview 1 with QSE manager)

*“Co-developing with clients helps reconciling, and that’s a very good thing, to strengthen links with users, for us who design casing solutions. So, this creates something virtuous, an emulation which seems interesting to me.”* (ECO<sup>2</sup>-BUILD, internal interview 2 with R&D engineer)

The second most mentioned response is *valuing value* at the network level (6 occurrences out of 30), which is also mainly proposed by interviewees from the focal organization. Here, *valuing value* consists of discussing with partners so as to clarify how to concretely reduce carbon emissions (mainly in the production and transport of building products) while maintaining economic balance:

*“We realized that the work « economic » is a driving one in this [ECO<sup>2</sup>-BUILD BMI project]. This is why I talk about transparency, discussion, this is how things will progress.”* (ECO<sup>2</sup>-BUILD, internal interview 3 with logistic manager)

*“We should get around the table so as to discuss it more clearly, but in companies such as [ECO<sup>2</sup>-BUILD’s focal organization] or transporters, we should certainly have someone in charge of that. [...] Now, we have people working on lean management, but we should certainly go*

*further.*” (ECO<sup>2</sup>-BUILD, internal interview 2 with R&D engineer)

In a lesser extent, interviewees from the focal organization propose to implement *enabling cycle* at the value network level (4 occurrences out of 30) so as to address alignment tensions. As for CONNECT-HUB, this response corresponds to the integration of a coordinator and the structuration of a coordination process for communicating on BMI, as well as for selecting and driving proactive partners in a common direction:

*“You only have to get the right person and to coordinate, to create something which adds value and which also adds, in terms of communication, a good image [...] and also behind the image, to make efforts on the way we work.”* (ECO<sup>2</sup>-BUILD, internal interview 4 with sales manager)

*“I think it’s more an organization that makes things work. [...] In my opinion, it’s really an organization, it’s what I told you about earlier, it’s about targeting the right partners who will be able to act.”* (ECO<sup>2</sup>-BUILD, internal interview 2 with R&D engineer)

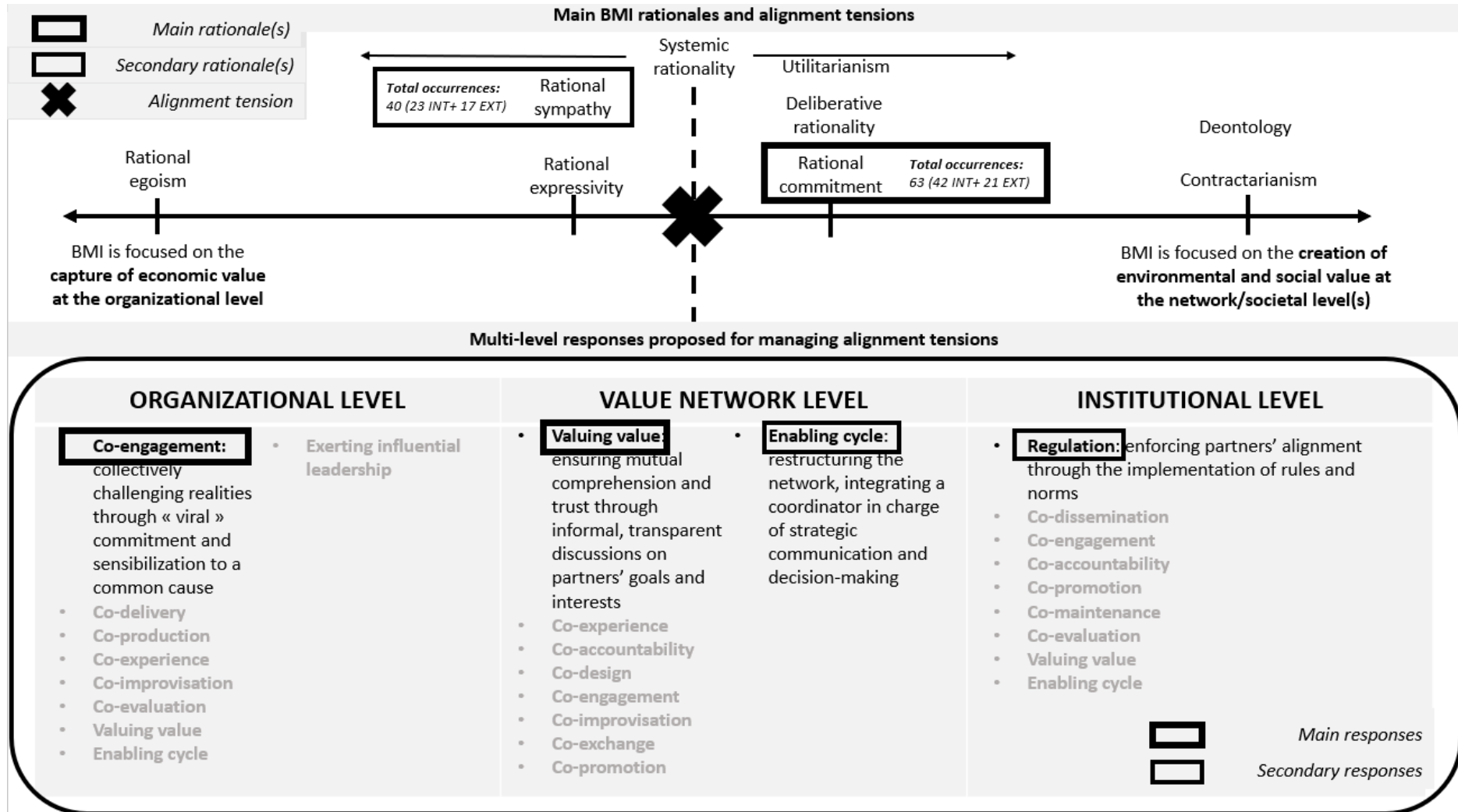
Eventually, the last main response identified in the ECO<sup>2</sup>-BUILD case is proposed by external partners, who suggest to address alignment tensions by relying more on *regulation* at the institutional level (4 occurrences out of 30). *Regulation* is a type of response that emerged from inductive analysis, and which corresponds to the implementation of rules and norms that constrain partners to align to common environmental goals, such as quantifying and reducing carbon emissions by adopting innovative building products and processes, though having possibly conflicting economic interests:

*“We have French objectives, but they’re embedded in European and group’s objectives. But we can reach energy objectives only if we decide to change something, because our machines are what they are, we need a technological breakthrough for improving it.”* (ECO<sup>2</sup>-BUILD, external interview 4 with QSE manager of an aluminum supplier)

*“We must have regulators, regulation. But it’s the same for us, territorial authorities, as long as we have no regulation that imposes us to do something, we’re all the same: we’re just the icing on the cake, giving us a clear conscience, because, financially, it’s very hard. I think it’s the same for promoters.”* (ECO<sup>2</sup>-BUILD, external interview 3 with environment, climate and energetic transition manager - local elected official)

We synthesize in Figure 15 below the main BMI rationales, alignment tensions and multi-level responses identified in ECO<sup>2</sup>-BUILD.

**Figure 15.** ECO<sup>2</sup>-BULD's BMI rationales, alignment tensions and multi-level responses





### 4.3. SMART&GREEN

In SMART&GREEN, we find a global alignment of interviewees towards the BMI goal of capturing more economic value at the organizational level by exploiting new opportunities brought by the reduction of carbon emissions in the building industry (*rational sympathy*, with 50 occurrences). Indeed, BMI is considered by a majority of internal and external interviewees as a vital solution to survive and keep selling products and services in a more digitalized and environmental-friendly building industry, for capturing economic value at the organizational level:

*“It might be the added value: securing our historical market, securing our products. [...] [SMART&GREEN focal company] was given a mantra, which is: ‘go green or get out’, so we have to either make solutions with less impact on the environment, or get out of the market, because clients are expecting it from us.”* (SMART&GREEN, internal interview 1 with expert engineer in smart home devices)

*“In my opinion, everything is about carbon data. It’s about using carbon data, products’ carbon efficiency, or projects’ carbon efficiency in case we situate at the building scale, in order to improve competitiveness and the company’s growth.”* (SMART&GREEN, external interview 2 with vice-CEO of a consulting company specialized in environmental transition in the building industry)

However, similarly to ECO<sup>2</sup>-BUILD, we identify a few alignment tensions between actors supporting this dominant rationale (*rational sympathy*), and those - less numerous, and mainly interviewed in the internal focus group - who interpret BMI as a way to maximize the generation of economic and environmental value through greener, innovative products, such as new smart home devices (*utilitarianism*, with 22 occurrences). Interviewees supporting this second rationale do want to satisfy the interests of their organization, but they also focus on those of the end users, who could benefit from the diminishment of energy consumption cost and the improvement of their living conditions:

*“Our ambition, with these [smart analytics and automation] solutions is to improve one’s building’s energy efficiency, while reducing carbon footprint and energy costs, as well as maximizing occupants’ comfort.”* (SMART&GREEN, internal focus group, Cybercommerce project manager)

*“The first [value proposition] deals with user value, which means finding monitoring algorithms. For the user, these are algorithms aimed at optimizing the monitoring of solar protections and reducing buildings’ energy use. [...] Secondly, it deals with the value for [SMART&GREEN focal company], which is to find how to put solar protections in movement at lower energy cost.”* (SMART&GREEN, internal focus group, Intellectual property, standard & approvals, and environmental performance director)

Towards these slight alignment tensions between *rational sympathy* and *utilitarianism*, both internal and external interviewees identify mainly responses working at the network and institutional levels. The most mentioned one is *enabling cycle* at the network level (11 occurrences out of 57 occurrences of responses to alignment tensions in SMART&GREEN documents). Here, this response corresponds both to the integration of a coordinator, the structuration of a coordination process and the restructuring of the value network, with a potential reduction of partner's number for increasing actors' chances to reach alignment:

*"We'll work on every subject, but they don't go in the same direction, so a coordinator tries being neutral, saying: 'my goal is – talking about [my hub] - economic development, so I have to prioritize projects which drive to that.', but it wouldn't be the same filter if we chose other criteria."* (SMART&GREEN, external interview 4 with innovation manager of an energetic transition competitiveness hub)

*"Wouldn't it be more interesting to start small? To put a first stone and then, it might motivate others. Maybe it would make other people think about it. It would make the reflection go further. [...] Let's count three or four complementary partners who all share the common interest to do it and little reluctance to do it with us. We'll see later how to widen the ecosystem."* (SMART&GREEN, internal interview 4 with R&D manager)

The second main response proposed by internal and external interviewees is *co-accountability* at the value network level (10 occurrences out of 57), which consists of guarantying the satisfaction of each partner's (mainly economic) interests through the formal management of partnerships and intellectual property (mostly contractual agreements and NDAs). In the SMART&GREEN case, interviewees agree that the earliest stage of BMI adoption is the best moment for establishing contracts, as it secures partners (who may be in concurrency) and thus enables more transparent discussion:

*"When there's a potential for having ideas, for developing new solutions, it must be framed with a partnership contract. Our legal department is permanently working on such subjects."* (SMART&GREEN, internal interview 1 with expert engineer in smart home devices)

*"We make sure that partners build consortium agreements. [...] What matters is that questions are asked as early as possible in the project establishment. We tell them to clearly identify what they expect, what their revenue models are, what they want to implement. [...] Our mission is to sensitize them to it, or even to introduce them with lawyers, so as to make them worry about that question as early as possible before starting the project."* (SMART&GREEN, external interview 4 with innovation manager of an energetic transition competitiveness hub)

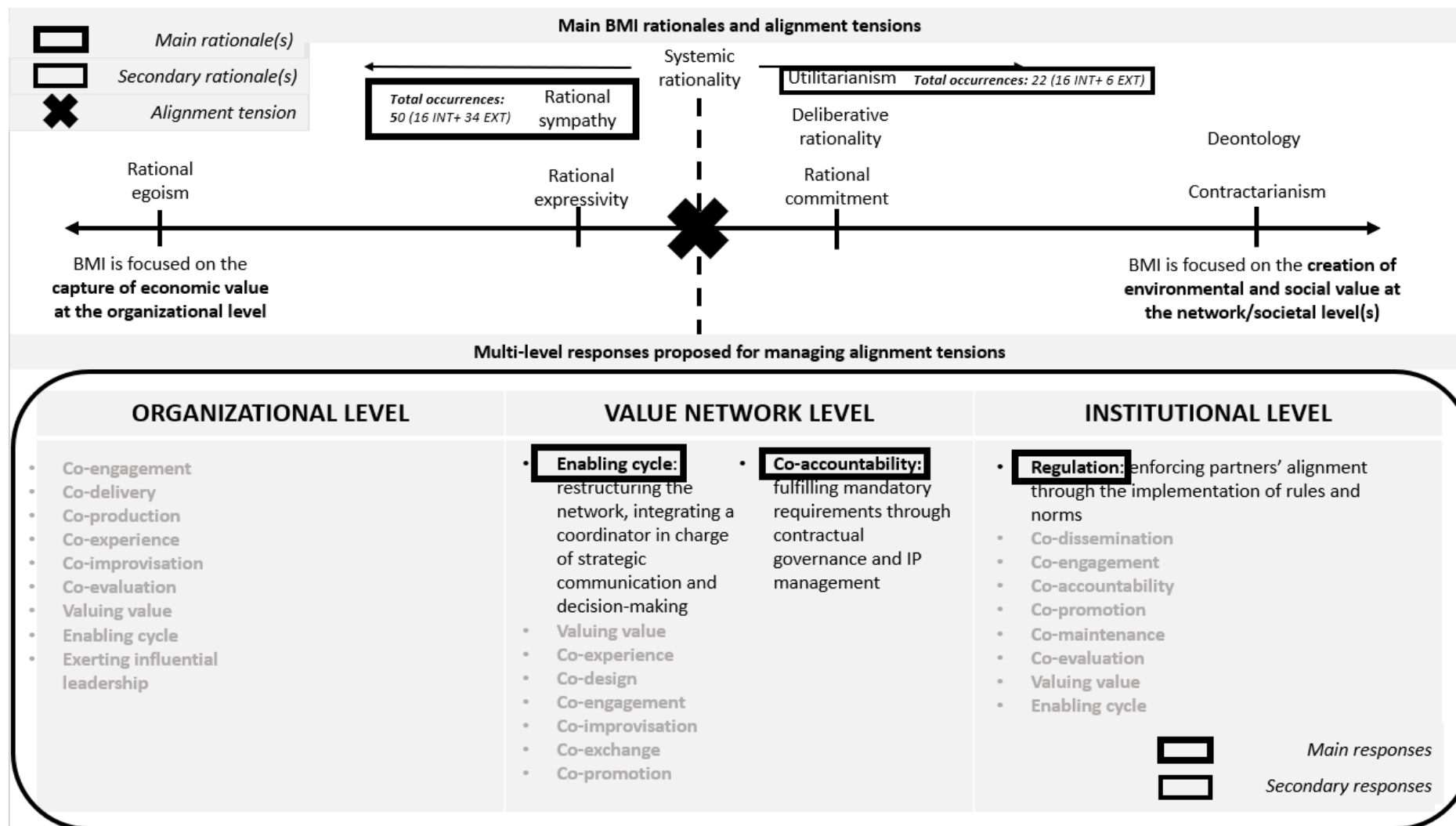
At last, as in the ECO<sup>2</sup>-BUILD case, *regulation* at the institutional level (10 occurrences out of 57) is identified by both the focal organization and its partners as a powerful response to alignment tensions as it forces partners to actively and cohesively reduce their carbon emissions in new buildings though it necessitates to increase building production costs:

*“Obviously, if there is regulation in the background, it naturally constrains every actor from the building sector to enter in the order of battle. So, I think that the rules working at the level of the new building industry - for instance, RE2020 [European Environmental Regulation] and future regulation – may encourage all of the building actors to set things up.”* (SMART&GREEN, internal interview 1 with expert engineer in smart home devices)

*“I think we might need a norm or label. We have buildings with high environmental quality, we have low consumption buildings, but when we look at it, we only focus on a part of the building’s life. We have no label – or, at least, as far as I know – which would be a low carbon building during all its life: from its construction to its end of life.”* (SMART&GREEN, external interview 5 with open innovation manager of an energy provider)

We synthesize in Figure 16 below the main BMI rationales, alignment tensions and multi-level responses identified in SMART&GREEN.

**Figure 16.** SMART&GREEN's BMI rationales, alignment tensions and multi-level responses



#### 4.4. NEWTEX

The vast majority of NEWTEX internal and external interviewees see BMI as a way to capture more economic value at the organizational level through the leveraging of new environmental-friendly and local textile production processes (*rational sympathy*, with 68 occurrences). More precisely, they describe BMI as a new way to produce and deliver sports bags and shoes which enables both to improve their organization's financial margins, time to market as well as responding to consumers' demand to reduce environmental footprint:

*“With a local and integrated ecosystem, [NEWTEX BMI project] enables [NEWTEX focal company] to reduce its time to market and have an impact on its environmental footprint. [...] The environmental footprint is something that can impact the market and consumer, the responsible side of things. And time to market corresponds to the benefits for the company.”* (NEWTEX, internal focus group, group director of innovation)

*“Our business model is based on this: making more sophisticated, so as to increase our margins and sell more.”* (NEWTEX, external interview 2 with CEO of a design and innovation consulting company)

Although there is a global alignment of NEWTEX actors towards this BMI rationale (*rational sympathy*), the data analysis also reveals moderate alignment tensions between interviewees supporting this view, and those who prioritize innovation and strategic differentiation over the sole capture of economic value for their organization (*rational expressivity*, with 36 occurrences):

*“It corresponds to product and process innovations, which means having a more local production chain and, thus, more local, environmental friendly products, and having the possibility to go faster. So, this is also a new business model for us. But what pleases me is this new final outcome, having this product perceived differently by the consumer.”* (NEWTEX, internal interview 1 with product line manager for bags and packs)

*“I would have said: ‘the best, local to local manufacture of technical clothing and equipment’, [...] because, to me, the most important thing is that French people can read ‘made in France’, but that Europe can produce nearby, because the future of these professions is to produce in Asia for Asia, and in Europe for Europe.”* (NEWTEX, external focus group, CEO of a design and innovation consulting company)

This slight misalignment is well identified by some interviewees from NEWTEX focal organization, who worry that the goal to generate more economic value by producing innovative, local to local, recyclable textile products could not fit with their current business model and brand image:

*“Now, we are at the very beginning [of the BMI project], and we ask questions about the feasibility of this option: is it possible? Is it viable? Is it conceivable to have our bags made in France, with all the issues it represents? So, there are obviously economic issues, but also image and communication ones.”* (NEWTEX, internal interview 1 with product line manager for bags and packs)

Towards these slight alignment tensions between *rational sympathy* and *rational expressivity*, the main responses proposed by interviewees are mostly identified by the focal organization and operate at the network level. The first most mentioned response for addressing alignment tensions is *co-accountability* (15 occurrences out of 61 occurrences of responses to alignment tensions in NEWTEX documents), which is mainly identified by the focal organization. As for SMART&GREEN, interviewees agree that formalizing partnerships through contractual agreements and DNAs should have been done at the earliest steps of BMI adoption for securing the satisfaction of partners’ interests and avoiding alignment tensions in the development phase:

*“However, even if we trust each other, I think we need to establish rules from the start. This is why I think there needs to be a real leader, and that there are rules that must be established from the start, on transparency, honesty, and how we’ll proceed.”* (NEWTEX, internal interview 2 with R&D and quality manager)

*“What maybe missed to [NEWTEX BMI project] is that we should have formalized [partnerships] more, been clearer, from the start, on the repartition of activities, or we should have tackled tricky subjects from the beginning. [...] Unfortunately, IP subjects are often tackled rather lately, when the collaboration has already started, and these subjects might anger people or, at least, be confronted to different points of view. So, I think that the earlier we tackle them, the better.”* (NEWTEX, internal interview 3 with legal director)

The second main response identified by both internal and external actors is *enabling cycle* at the network level (14 occurrences out of 61), which here does not imply to integrate a new coordinator, but rather to efficiently structure coordination processes with established actors’ roles, continuous communication and distributed decision-making:

*“There’s a lot of actors, when we look at the [value network map]. So, [we need] a good coordination and, above all, some well-established roles. [...] Maybe project managers in each entity, who would allow to meet each other and to connect members.”* (NEWTEX, internal interview 1 with product line manager for bags and packs)

*“And then, there are staffs who communicate together, I think there’s a real will... This is quite good, sharing development and final decisions, so that we eventually all are satisfied by the price, the product and the quality.”* (NEWTEX, external interview 3 with operational director of a textile manufacturing group)

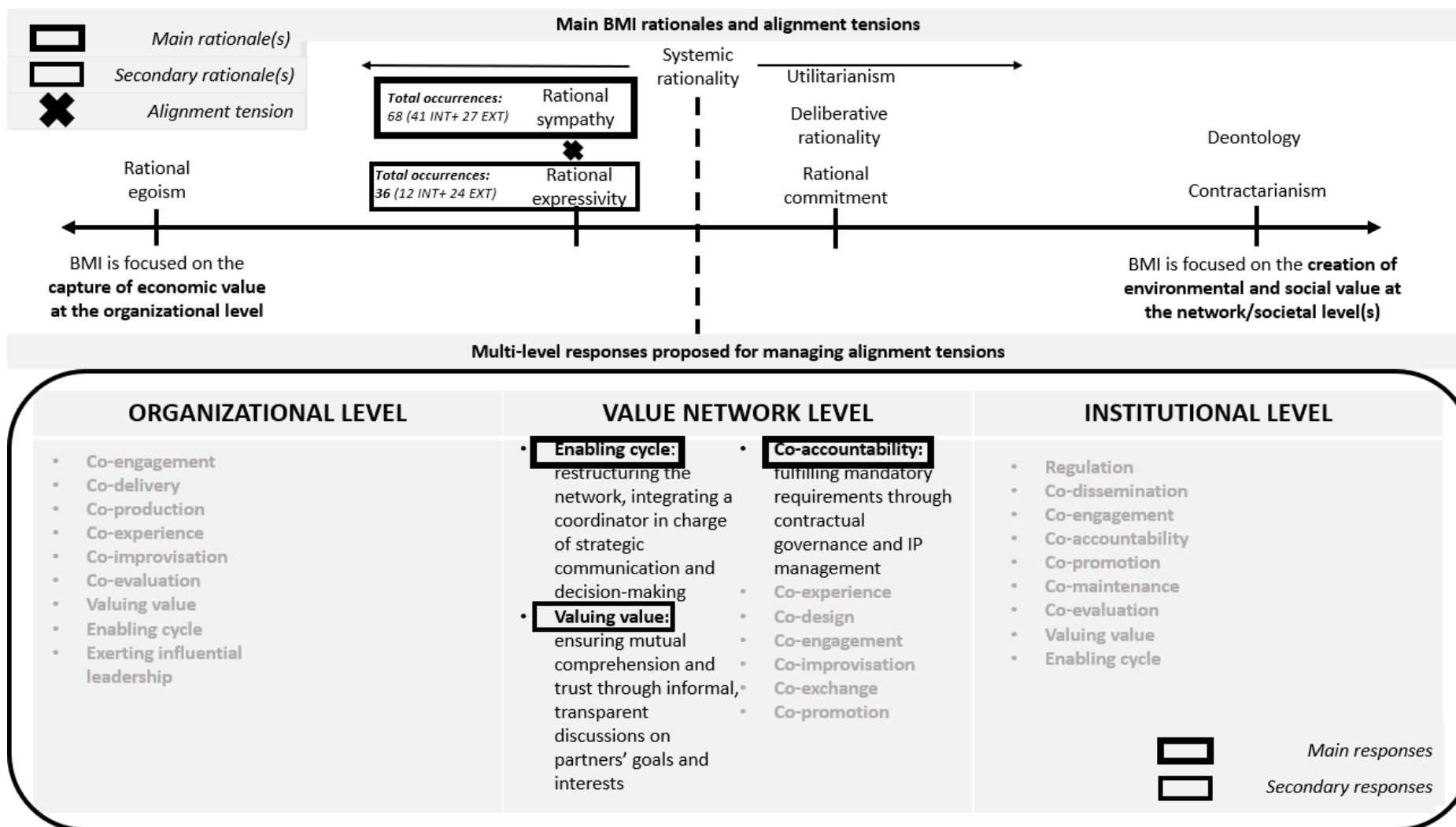
Eventually, *valuing value* at the value network level (9 occurrences out of 61) is a third, secondary response to alignment tensions identified by both the focal organization and its partners. Here, *valuing value* mostly implies to transparently discuss partners' interests and expectations in BMI, especially regarding the creation and capture of economic value, but also to exchange on the difficulties met during its adoption:

*“There’s the financial and budgetary aspects that must be defined too, so who pays what. Is everyone around the table, like it’s open bar, and each requires what he wants and everyone can give what they want? Things should be square.”* (NETWTEX, internal interview 5 with purchasing director)

*“We organized a sort of seminar in which we gathered all our brands. Some were a little skeptical. But actually, we turned it into an event where they could exchange between them, about what value they drew from it, what added value it brings them, what difficulties they’ve met.”* (NEWTEX, external interview 4 with client manager of a textile manufacturing group)

We synthesize in Figure 17 below the main BMI rationales, alignment tensions and multi-level responses identified in NEWTEX.

**Figure 17.** NEWTEX’x BMI rationales, alignment tensions and mutli-level responses





## 5. Discussion and conclusion

In line with the recent BMI studies calling to draw on a multi-level approach for analyzing tensions in BMI collaborative adoption and their management (Best et al., 2021; 2022; Oskam et al., 2020; Rey-Garcia et al., 2020), and the absence of research enabling to qualify actors' alignment in the first place, our results provide two main theoretical contributions to the BMI literature that we discuss in the following section. Our first contribution consists of developing a framework for qualifying actors' alignment through the identification and comparison of plural rationales that may co-exist in a same BMI project and cause potential tensions. Secondly, our study confirms the relevance of the multi-level approach for proposing possible ways to manage alignment tensions in the context of BMI collaborative adoption, by revealing the complementarity of the responses proposed by actors, which position at the organizational, value network and institutional levels. These contributions also entail methodological and managerial implications, which we detail in conclusion before noting the limits of our study and perspectives for future BMI research.

### 5.1. BMI rationales' plurality and the complexity to reach internal and external alignment

In line with other research from the strategy and BMI literatures, our study confirms that, rather than being perfectly consistent, a same strategic project (here, BMI) involving numerous actors is likely to embed a wide set of rationales (Singer, 1994), and thus, lead to possible alignment tensions (Best et al., 2021). Indeed, in all of the four cases, although differing in their intensity, alignment tensions are identified between actors supporting BMI rationales that focus on the generation of economic value at the organizational level (for instance, *rational sympathy* and *rational expressivity*) and those supporting the generation of social and environmental value at the network and societal levels (*rational commitment*, *utilitarianism* and *deontology*). More specifically, across the four cases, "*rational sympathy*", which consists of constraining to generate more economic value at the organizational level by constraining to stakeholders' social and/or environmental demands (Singer, 1994), is present in all of the four cases. Though the prevalence of this specific rationale could be interpreted as an evidence of alignment, within each case, *rational sympathy* rather enters in conflict with other value creation logics focusing on social and/or environmental value creation at the network and/or societal levels (e.g., *rational commitment*, *deontology* and *utilitarianism* in CONNECT-HUB, ECO<sup>2</sup>-BUILD, SMART&GREEN).

Regarding the sources (internal and/or external) of alignment tensions, our results are in line with Rey-Garcia et al.'s study (2020) on multilevel tension management in CCSBMSI (Collaborative cross-sector business models for sustainability innovation). Indeed, we find that BMI rationales' plurality does not solely points at interorganizational tensions between the perceptions of internal (focal organization's) actors and those of external (partners') on BMI goals, as plural rationales may be mentioned by interviewees from the focal companies and thus also point at organizational tensions (CONNECT-HUB, ECO<sup>2</sup>-BUILD, NEWTEX). This result confirms the complexity to reach alignment in the context of BMI adoption, as different rationales may enter in friction or conflict at both the organizational (internal) and interorganizational (external) levels (Rey-Garcia et al., 2020), and thus the necessity to refine the menu of rationales that motivate BMI adoption in the first place

However, following Best et al.'s multiple case study on tensions in SPOs' BMI and their results regarding "value pluralism" (2021), there is a need to distinguish cases where plural, but complementary rationales co-exist and leverage value generation through a common BMI project, and those with conflicting logics that jeopardize it. For instance, in NEWTEX, though slight alignment tensions between *rational sympathy* and *rational expressivity* are identified, the co-existence between these two rationales does not compromise BMI, as both focus on economic value generation at the organizational level and help actors balancing goals of short term profitability through environmental-friendly local production (*rational sympathy*) and long-term differentiation through the development of innovative production processes (*rational expressivity*). On the contrary, other cases such as CONNECT-HUB entail plural rationales (*rational sympathy* versus *rational commitment* and *deontology*) with conflicting perceptions on BMI goals (economic value generation at the organizational level versus social value generation at the network level), which, if not identified, could hamper actors' ability to generate value in the next stages of BMI implementation. Though, actors who are engaged in CONNECT-HUB's BMI project are also the ones who propose the greatest number and variety of responses towards these tensions, which shows their awareness about alignment tensions and their ability to deal with contradictory rationales in collaborative BMI adoption. We thus follow Best et al.'s (2021) in affirming that it is rather the way actors conceptualize and address tensions than solely tensions' strength that determinate the ability of a network to co-create value through BMI though pursuing different logics. By revealing the diversity of rationales or logics that are embedded in BMI, our research also complements a cognitive view of BMI (Martins et al., 2015; Massa et al., 2017) which shows the importance of focusing on managers'

individual representations of the BM for successfully adopting BMI. Our results are also in line with other researches that support a positive view on tensions in the field of strategic management, by showing that tensions between different rationales are essential in the sense they prevent organizations from auto-reinforcing extreme forces (for instance, maximizing economic profits versus searching for societal impact) and thus enable organizational evolution and innovation (Cameron, 1986; Guedri et al., 2014).

### *5.2. The relevance of the multi-level approach for anticipating and managing alignment tensions in BMI*

Across cases, two main responses to alignment tensions are mobilized at the value network level, whatever the BMI rationale(s) supported by actors. The main common response working at the network level which is identified in the four cases is *enabling cycle*, which refers to the integration of a coordinator and the structuration of coordination processes. A second main response found in three out of four cases is *valuing value* at the network level, which consists of transparently discussing on partners' interests and the modalities of value creation and capture through BMI. Thus, our results are in line with other studies dealing with BMI alignment tensions and their management, which highlight the importance of *valuing value* (Oskam et al., 2020) and *enabling cycle* (Rey-Garcia et al., 2020) for managing alignment tensions. We add to these studies by identifying the network level as the main unit of analysis implied in the implementation of these two responses, and evidencing their complementarity.

However, when comparing the other responses mobilized in the four cases, we find that three main types of responses specifically depend on the BMI rationales supported by actors, and their associated alignment tensions. When BMI is associated to *rational commitment* or *deontology*, and conflicts with the goal to capture more value at the organizational level (*rational sympathy*), actors are likely to respond by *co-engagement* at the organizational level (CONNECT-HUB, ECO<sup>2</sup>-BUILD). This response is directly related to moral engagement demonstration and individual convictions of actors who want to support environmental or social value co-creation through BMI. In contrast, when BMI is mostly associated to the constraint of generating more environmental value while needing to secure organizational interests in terms of economic value capture (*rational sympathy*), but sometimes conflicts with the need to achieve strategic differentiation (*rational expressivity*) or to maximize all partners' interests (*utilitarianism*), more formal responses are mobilized and concentrate at the broader levels of the value network and institutions. These formal responses mostly correspond to the formalization of partners' relationships (*co-accountability* at the value network level), which is

mostly leveraged by SMART&GREEN and NEWTEX, as well as the reliance on *regulation* at the institutional level, which is mainly identified in ECO<sup>2</sup>-BUILD and SMART&GREEN.

Thus, our multiple case study complements DiVito et al.'s (2021) research on collaborative value creation and associated tensions' management, which underlines the importance of leveraging multiple governance mechanisms at shifting levels for ultimately co-creating and co-capturing value in the context of sustainability grand challenges (DiVito et al., 2021). Our results are also in line with Best et al.'s research (2022) on the multi-level management of alignment tensions in SPOs adopting BMI, as we also evidence the importance of actors' *co-engagement* at the organizational level (CONNECT-HUB, ECO<sup>2</sup>-BUILD), *co-accountability* at the network level (SMART&GREEN, NEWTEX), as well as *regulation* (new response inductively identified in ECO<sup>2</sup>-BUILD and SMART&GREEN) at the institutional level. An interesting result is that, although the cases we selected were not similar to Best et al. (2022) in the sense they do not belong to Social Purpose Organizations (SPOs), the responses they identify also work for managing alignment tensions in organizations with a profit-driven BMI from various industries (manufacture for harsh environment, sports and building). This finding echoes their call to bring further evidence of the multi-level approach's relevance for anticipating and managing tensions in broader organizational and industrial settings where BMI projects are adopted in collaboration (Best et al., 2022).

Eventually, when comparing the occurrences of tensions' management responses at each unit of analysis (organizational, network and institutional), our findings reveal a global lack of visibility of the institutional level, which is a less mentioned, or even unperceived unit. Indeed, although some interviewees identify *regulation* (ECO<sup>2</sup>-BUILD, SMART&GREEN) as crucial for driving partners to co-create environmental value despite their fear to assume heavy financial costs hampering value capture, institutional responses are still not identified by the vast majority of interviewees. This finding can be explained by the fact that regulation has been more constraining and, thus, more visible in the building industry (namely with RE2020 as well as other norms on materials and carbon emissions) than in other sectors for over a decade (Beerepoot and Beerepoot, 2007). Still, the lack of identification of the institutional level in the other cases is concerning, as a growing number of scholars have proven the importance of considering the institutional level for anticipating and managing BMI challenges whatever the industry (Berglund and Sandström, 2013; Ilyas et al., 2023; Pache and Santos, 2013; Rey-Garcia et al., 2020; Zhang et al., 2023). Indeed, one needs to acknowledge that BMI "*are not just deliberate, ideal value creation architectures, but rather shifting geometries that are also*

*path-dependent and largely embedded in institutional settings*”: “*Conditions exogenous and endogenous to the field— mostly beyond the control of partners—shape the evolution of collaborative business modeling in continuous interaction with the planned efforts of participating stakeholders to deal with arising tensions in practice*” (Rey-Garcia et al., 2020, p.36). Thus, we hope that future BMI research will be able to further capture the role of institutional responses in BMI adoption and the management of alignment tensions.

### 5.3. *Methodological and managerial contributions, limitations and perspectives for future BMI research*

By relying on a mixed-method methodological design based on the conduct of both focus groups and semi-structured interviews, following Best et al.’s (2021) qualitative study on tensions and responses in collaborative social purpose BMI, our research is one of the scarce focusing on alignment tensions in the very moment of their emergence (during the focus groups), and to detail the modalities of their treatment in later stages of BMI adoption (these modalities being detailed in the semi-structures interviews).

Our theoretical contributions also entail concrete managerial implications as, in January 2023, our alignment model was developed by NEWTEX focal company in the form of a strategic tool for assessing the compatibility between different value creation logics supported by partners implied in innovation projects. This strategic tool, which was already shared with NEWTEX partners, could be used in other companies for anticipating alignment tensions, before adopting BMI. Furthermore, by identifying the multi-level responses used for managing alignment tensions, our study should help managers to generate global (economic, environmental and social) value through the collaborative adoption of BMI involving numerous internal and external actors.

Beyond these contributions, our study has some limitations that lead us to propose future research perspectives. First, we deliberately chose to focus on the adoption phase of BMI for elaborating a more detailed framing of alignment tensions and the different levels of analysis involved in their associated responses. A complementary approach that could help analyzing BMI alignment tensions and the responses proposed towards them would be the processual approach (Best et al., 2022), which could help assessing the evolution of alignment tensions, as well as the effects of the responses used to manage them on global value generation during the later stages of BMI (implementation and exploitation). Eventually, our study draws on a qualitative design, which fits with the focus on rather understudied research subjects

(Siggelkow, 2007; Yin, 2003), such as the qualification of alignment tensions and their responses in the collaborative adoption of BMI. However, the recourse to quantitative studies, which are still missing to the BMI literature (Foss and Saebi, 2017), should be helpful to future research for testing our framework in a wider range of organizational and institutional settings.

# DISCUSSION ET CONCLUSION

## INTRODUCTION GENERALE

1. Genèse, contexte et enjeux de la recherche
2. Cadre théorique, problématique et questions de recherche
3. Design de recherche
4. Contributions de la recherche
5. Architecture de la thèse

*Quelles sont les logiques qui guident l'adoption de la BMI et comment répondre aux pressions et tensions qui lui sont associées aux différents niveaux ?*



## RESULTATS

### Chapitre 1

*QR 1 : Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multiniveaux associées ?*

### Chapitre 2

*QR 2 : Quelles sont les réponses des entreprises établies du secteur de l'énergie envers les pressions externes et tensions internes liées à l'adoption d'une digitally driven BMI ?*

### Chapitre 3

*QR 3 : Comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative de la BMI ?*



## DISCUSSION ET CONCLUSION

1. Synthèse des résultats de la recherche
2. Contributions théoriques
3. Contributions méthodologiques
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## 1. Synthèse des résultats de la recherche

Notre recherche avait pour objectif principal d'**éclairer les logiques qui guident l'adoption de la BMI, et la manière dont les organisations répondent aux pressions et tensions qui leur sont associées aux différents niveaux** (organisationnel, réseau de valeur et institutionnel), afin de contribuer à la littérature émergente qui traite de la « face sombre » de l'adoption de la BMI (Heidenreich *et al.*, 2022 ; Snihur et Bocken, 2022). Conformément à cet objectif, nous avons articulé notre thèse autour de trois questions de recherche complémentaires permettant d'appréhender le phénomène de l'adoption de la BMI de manière holistique, selon une approche multiniveau renouvelée (John, 2005).

En réponse au manque de conceptualisation de la notion centrale « d'architecture » qui conduit à une fragmentation de la littérature BMI (Foss et Saebi, 2018 ; Teece, 2010), notre **premier chapitre** a cherché à élaborer un cadre conceptuel unifié pour identifier les architectures BMI à partir de différentes logiques (Brenk *et al.*, 2019 ; Grieco, 2021 ; Kim, 2017 ; Spiess-Knafl *et al.*, 2015 ; Schneckenberg *et al.*, 2019), que celles-ci soient orientées vers la capture de valeur économique pour l'organisation ou la création de valeur sociale et/ou environnementale pour le réseau et la société. La question adressée à ce titre était celle de savoir : « **Quelles sont les logiques guidant l'adoption de la BMI et les architectures de mécanismes multi-niveaux associées ?** ». Pour y répondre, nous nous sommes appuyés sur le cadre conceptuel de la « Stratégie comme philosophie morale » (Singer, 1994), mobilisé pour identifier les logiques d'adoption de la BMI, que nous avons combiné à une approche multiniveau de la BMI (Bocken et al., 2013), déployée quant à elle pour identifier les architectures de mécanismes de création, livraison et capture de valeur aux niveaux organisationnel, réseau et sociétal. Au plan méthodologique, nous avons conduit une revue systématique (Denyer et Tranfield, 2009) de la littérature BMI, celle-ci nous permettant d'accéder à un grand nombre de cas et donc de logiques et d'architectures différentes. Ce faisant, cette recherche nous a permis d'identifier trois principales logiques d'adoption de BMI et architectures de mécanismes multiniveaux associées.

La première architecture identifiée est celle fondée sur « **l'égoïsme rationnel** » (Singer, 1994), une logique caractérisée par la finalité de capturer un maximum valeur économique au seul niveau organisationnel (logique de profit), et où la création et livraison de valeur économique avec des partenaires du réseau de valeur constitue un moyen pour atteindre cette finalité à court terme. La seconde architecture est fondée sur « **la sympathie rationnelle** »



(Singer, 1994) : ici, la BMI est également adoptée dans l'objectif de capturer de la valeur économique au niveau organisationnel à plus long terme. Cependant, cette architecture implique de collaborer plus étroitement avec le réseau de valeur pour répondre à de nouvelles exigences sociétales de création (contrainte) de valeur sociale et/ou environnementale. La dernière architecture identifiée est celle de « **l'engagement rationnel** » (Singer, 1994), où la finalité visée par l'adoption de la BMI est la création (volontaire) de valeur sociale et/ou environnementale au niveau du réseau de valeur et/ou de la société, au moyen d'une collaboration étroite avec les partenaires et autres parties prenantes externes.

Au-delà du dévoilement des logiques qui guident l'adoption de la BMI et de la définition des architectures de mécanismes multiniveaux qui leur sont associées, cette revue de littérature a eu pour intérêt d'identifier les principales lacunes de la recherche **sur l'adoption de la BMI** et de formuler en fonction de celles-ci des **perspectives de recherche future** à partir de la mobilisation de notre cadre multi-niveau. La première perspective envisagée est de **qualifier l'alignement entre les mécanismes de création, livraison et capture de valeur en fonction de la logique qui sous-tend l'adoption de la BMI**. En effet, la question de l'alignement des mécanismes par la BMI constitue encore à ce jour une question cruciale, notamment dans le contexte des organisations qui cherchent à concilier une mission sociale et/ou environnementale avec leur solvabilité financière, mais relativement peu étudiée dans la littérature (Foss et Saebi, 2018 ; Sjödin *et al.*, 2020). La seconde proposition de recherche formulée est **d'analyser la gestion des tensions générées par l'adoption collaborative de la BMI en fonction de l'alignement entre les logiques soutenues par les acteurs internes et externes**, ceux-ci pouvant supporter des logiques différentes d'adoption de la BMI qu'il serait possible d'identifier et comparer à partir de notre cadre conceptuel. En effet, de nombreuses études fondées sur une approche multiniveau de la BMI indiquent que la BMI adoptée par des partenaires qui souhaitent co-crée et co-délivrer de la valeur, mais selon des objectifs différents (générer du profit ou accomplir une mission sociale par exemple), est susceptible de faire émerger de nombreuses tensions dont les modalités de gestion restent encore largement méconnues (Best *et al.*, 2021, 2022 ; Bouncken *et al.*, 2016b ; Brock *et al.*, 2019 ; Solaimani *et al.*, 2018 ; Visnjic *et al.*, 2018). Enfin, dans la mesure où un certain nombre de chercheurs sur les BMI montrent que la BMI peut revenir à opérer un changement global de logique du BM (Bocken *et al.*, 2014 ; Bjorklund *et al.*, 2020 ; Bosbach *et al.*, 2020 ; Hanafizadeh *et al.*, 2021 ; Rask & Günzel-Jensen, 2019 ; Sabatier *et al.*, 2012 ; Schneider *et al.*, 2013 ; Yang *et al.*, 2017), nous proposons comme troisième perspective **d'étudier le(s) changement(s) de logique**

**impliqués par la BMI selon une approche processuelle doublée d'une étude multiniveau.**

En effet, la combinaison de ces approches pourrait permettre de rendre compte à la fois des différentes étapes de ce changement (de l'initiation de la BMI à sa mobilisation opérationnelle) et de leurs répercussions aux différents niveaux, notamment en termes de création, livraison et capture de valeur.

Le **deuxième chapitre** de notre thèse, qui a fait appel à une étude qualitative de cas unique aux unités emboîtées, a visé à affiner les types de pressions et tensions auxquelles se heurtent les entreprises établies qui adoptent une *digitally driven* BMI (Klos *et al.*, 2021 ; Latilla *et al.*, 2020 ; Mao *et al.*, 2020 ; Remane *et al.*, 2017 ; Sund *et al.*, 2021 ; Svahn *et al.*, 2017), et révéler les réponses (encore largement méconnues) apportées à celles-ci lors de l'adoption (Dellermann *et al.*, 2017 ; Jocevski, 2020 ; Kamalaldin *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Paiola et Gebauer, 2020 ; Rachinger *et al.*, 2019). La question adressée était la suivante : « **Quelles sont les réponses des entreprises établies aux pressions externes et tensions internes liées à l'adoption d'une *digitally driven* BMI ?** »

Grâce à la mobilisation d'une approche multiniveau qui intègre les apports de la théorie néo-institutionnelle (Oliver, 1991 ; Pedersen et Gwozdz, 2018), notre recherche fait partie des rares études à **s'intéresser à l'adoption contrainte de la BMI, en réponse à d'importantes pressions externes** (normes et exigences sociétales) exercées au niveau institutionnel (Berglund et Sandström, 2013), au-delà des seules pressions d'interdépendance ou de compétition rencontrées avec les partenaires du réseau de valeur (Björkdahl, 2020 ; Dellermann, 2017 ; Kamalaldin *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Urbinati *et al.*, 2019). Dans la continuité d'autres recherches qui mobilisent une approche multiniveau de la BMI (Bocken et Geradts, 2020 ; Dellermann *et al.*, 2017 ; Jocevski, 2020 ; Kamalaldin *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Paiola et Gebauer, 2020 ; Rachinger *et al.*, 2019), notre travail permet plus encore de **révéler que la digitalisation renforce les interconnexions entre pressions externes et tensions internes**, complexifiant ainsi la mobilisation de réponses adaptées lors de l'adoption de la BMI.

Nos résultats coïncident également avec d'autres recherches fondées sur la théorie néo-institutionnelle qui montrent que **face à des pressions institutionnelles de forte intensité** (i.e., normes européennes imposant l'intégration de technologies numériques pour opérer la transition énergétique), **la principale réponse apportée par les entreprises établies est de se**

**conformer rapidement à celles-ci** (Pache et Santos, 2021). Cependant, en montrant que cette conformation rapide aux exigences institutionnelles via l'adoption de la BMI s'effectue **au détriment de la prise en compte des nombreuses tensions internes** rencontrées au plan stratégique, managérial et culturel, notre recherche permet d'enrichir la littérature néo-institutionnelle par l'identification de désalignements organisationnels qui compromettent la pérennité de la stratégie de conformation inhérente à l'adoption de la BMI.

Enfin, en nous intéressant spécifiquement à l'adoption de la BMI engendrée par l'intégration d'une technologie numérique (*digitally-driven* BMI), nos résultats complètent les études qui démontrent le **rôle ambivalent de la digitalisation dans l'adoption de la BMI et ses répercussions aux différents niveaux** (Hiteva et Foxon, 2021 ; Paiola et Gebauer, 2017 ; Urbinati *et al.*, 2019). En effet, nos résultats révèlent que le numérique constitue à la fois un nouveau vecteur de normes (et donc de pressions exercées au niveau institutionnel) et d'interdépendances au niveau du réseau de valeur, un catalyseur de tensions au niveau organisationnel, une modalité de réponse organisationnelle (en l'occurrence inadaptée) à ces pressions et tensions, mais également une opportunité de développement stratégique pour l'entreprise (en tant qu'antécédent de la BMI). En ce sens, **notre étude invite les entreprises établies à redoubler de vigilance lorsqu'elles intègrent une nouvelle technologie numérique, celle-ci pouvant profondément déstabiliser l'organisation en créant ou renforçant certaines pressions externes et tensions internes.**

Notre **troisième chapitre**, fondé sur une étude qualitative de cas multiple, avait pour objectif d'éclairer la question de l'adoption collaborative de la BMI par une organisation et ses partenaires, soit une modalité particulière d'adoption qui suscite de fréquentes tensions liées à des divergences d'objectifs et d'intérêts (Best *et al.*, 2022; Moroz and Gamble, 2021; Oskam *et al.*, 2020; Pedersen *et al.*, 2022; Rey-Garcia *et al.*, 2020; Stal *et al.*, 2022; Stubbs, 2019; Van Bommel, 2018; Velter *et al.*, 2020). Dans la mesure où les modalités de gestion de ces tensions - que nous qualifions de tensions d'alignement - restent largement méconnues (Best *et al.*, 2022), ce chapitre s'est attaché à comprendre **comment qualifier les tensions d'alignement entre différentes logiques et identifier des réponses adaptées lors de l'adoption collaborative de la BMI**. Pour répondre à cet objectif, nous avons mobilisé une étude de cas multiple conduite au sein de quatre organisations focales et leurs partenaires (Siggelkow, 2007 ; Yin, 2003) fondée sur une approche multiniveau de la BMI intégrant le cadre conceptuel de Singer (1994).

Nos résultats permettent de **qualifier l’alignement des acteurs grâce à l’identification des principales logiques qui se trouvent mises en tension lors de l’adoption**, ainsi que les **réponses spécifiques proposées à ces dernières aux différents niveaux de l’organisation, du réseau de valeur et des institutions**. L’analyse révèle que la principale logique guidant l’adoption collaborative de la BMI est celle de la « **sympathie rationnelle** » (Singer, 1994) : l’adoption de la BMI est alors motivée par la volonté de capturer davantage de valeur économique au niveau organisationnel, moyennant de la création (contrainte) de valeur sociale et environnementale avec les partenaires. Dans les quatre cas, la sympathie rationnelle se trouve au cœur de tensions d’intensité variable avec les autres logiques identifiées, à savoir « l’expressivité rationnelle »<sup>17</sup>, « l’engagement rationnel »<sup>18</sup>, « l’utilitarisme »<sup>19</sup> et la « déontologie »<sup>20</sup> (Singer, 1994). Dans la continuité d’autres études qui traitent du « pluralisme de valeur » inhérent à l’adoption collaborative d’une BMI (Best *et al.*, 2021), notre analyse révèle cependant que **la coexistence de plusieurs logiques n’est pas nécessairement nuisible à l’adoption de la BMI, dès lors que les tensions qu’elles génèrent sont identifiées et que des réponses adaptées envers ces dernières sont proposées à différents niveaux**.

Nos résultats montrent que les **réponses** apportées aux tensions d’alignement sont principalement mises en œuvre **aux niveaux du réseau de valeur et de l’organisation**. Dans les quatre cas, et donc indépendamment des logiques de BMI soutenues, les acteurs soulignent l’importance de discuter en toute transparence des objectifs des partenaires en matière de création de valeur (*valuing value*) et d’assurer la fluidité de la BMI en intégrant un ou plusieurs coordinateurs en charge de communiquer sur les objectifs et avancements de la BMI (*enabling cycle*). Au-delà de ces réponses communes, nous avons identifié toutefois d’autres modalités de gestion des tensions d’alignement susceptibles de varier en fonction des logiques BMI soutenues. Dans le cas où les acteurs soutiennent une logique qui vise à créer volontairement de la valeur sociale et/ou environnementale au niveau du réseau (*engagement rationnel* ou *déontologie*), nous constatons que les organisations mobilisent davantage de réponses **informelles**, telles que l’engagement collectif pour diffuser leurs objectifs de création de valeur sociale ou environnementale auprès des acteurs internes et externes (*co-engagement*) (cf.

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<sup>17</sup> Dans le cas de l’expressivité rationnelle, la finalité de la BMI est de capturer davantage de valeur économique au niveau de l’organisation grâce à une stratégie de différenciation.

<sup>18</sup> Lorsque son adoption est guidée par l’engagement rationnel, la BMI consiste à créer volontairement de la valeur sociale et environnementale au niveau du réseau de valeur grâce à la collaboration avec les partenaires.

<sup>19</sup> Guidée par l’utilitarisme, l’adoption de la BMI vise à maximiser les intérêts économiques, sociaux et environnementaux de tous les partenaires.

<sup>20</sup> Quand elle se fonde sur la déontologie, l’adoption de la BMI vise à créer de la valeur sociale au niveau du réseau de valeur, par souci de devoir envers les partenaires.

CONNECT-HUB et ECO<sup>2</sup>-BUILD). A l'inverse, lorsque la logique soutenue est davantage portée sur la capture de valeur économique par l'organisation (*sympathie rationnelle* et *expressivité rationnelle*), le réseau mobilise davantage de réponses **formelles**, comme la contractualisation des relations (*co-accountability*) afin de sécuriser les intérêts organisationnels de chaque partenaire (cf. SMART&GREEN et NEWTEX).

Si certains cas (ECO<sup>2</sup>-BUILD et SMART&GREEN) mobilisent également l'appui sur la réglementation (*regulation*) afin de forcer l'alignement entre partenaires autour de l'objectif de créer davantage de valeur environnementale, nous avons constaté cependant un **manque de visibilité du niveau institutionnel** dans l'ensemble des réponses identifiées par les quatre cas. Ce résultat peut être interprété à l'aune des différences de secteurs auxquels sont rattachés les cas, celui de la construction (secteur d'ECO<sup>2</sup>-BUILD et SMART&GREEN) étant soumis à de fortes contraintes réglementaires depuis maintenant plus d'une décennie (Beerepoot et Beerepoot, 2007). Toutefois, un nombre croissant de recherches sur la BMI démontre que la prise en compte du niveau institutionnel reste essentielle dans l'ensemble des secteurs industriels, dans la mesure où, au-delà de la seule réglementation, certaines exigences sociétales peuvent affecter l'adoption de la BMI et faire émerger des tensions spécifiques qu'il importe d'anticiper et gérer (Berglund et Sandström, 2013 ; Ilyas *et al.*, 2023 ; Pache et Santos, 2013 ; Rey-Garcia *et al.*, 2020 ; Zhang *et al.*, 2023).

## 2. Contributions théoriques de la recherche

Les résultats de nos recherches nous permettent d'aboutir à un cadre multiniveau de l'adoption de la BMI, à même d'en dévoiler les logiques et pressions, tensions et réponses qui leur sont associées aux différents niveaux. Ce faisant, **les principales contributions théoriques que nous développons sont de trois ordres.**

Tout d'abord, en mobilisant le cadre conceptuel de Singer (1994) pour identifier les logiques qui sous-tendent le choix d'adopter une BMI, nous contribuons à la littérature portant sur les antécédents de la BMI et, plus largement, à **démontrer l'intérêt de repenser les décisions stratégiques à l'aune de la philosophie morale** dans le champ du management stratégique de l'innovation. Par ailleurs, en intégrant le niveau institutionnel à notre cadre pour caractériser les pressions et réponses affectant l'adoption de la BMI, notre recherche permet d'étendre la littérature multiniveau de la BMI actuelle, celle-ci se concentrant davantage sur les enjeux qui se manifestent aux niveaux de l'organisation et du réseau de valeur. Enfin, en dressant une **typologie précise des réponses aux pressions et tensions** qui affectent l'adoption de la BMI,

notre recherche vise une double contribution à la littérature multiniveau des BMI et à la littérature néo-institutionnelle.

2.1. *Repenser les antécédents de la BMI en fonction des logiques qui guident son adoption : les contributions de « la stratégie comme philosophie morale » au champ du management stratégique de l'innovation*

Dans la mesure où l'étude des antécédents de la BMI constitue à ce jour un manque important de la littérature (Foss et Saebi, 2017), un nombre croissant d'études appellent à révéler les différentes logiques qui expliquent le choix initial de reconfigurer les mécanismes et/ou l'architecture du BM (Grieco, 2021 ; Kim, 2017 ; Spiess-Knafl *et al.*, 2015 ; Schneckenberg *et al.*, 2019).

En réponse à cet appel, et dans le prolongement d'autres rares études s'intéressant aux fondations cognitives de la BMI (Bhatti *et al.*, 2021 ; Frankenberger et Sauer, 2019 ; Martins *et al.*, 2015), notre recherche met en perspective l'adoption de la BMI à l'aune de la stratégie comme philosophie morale (Singer, 1994), un cadre conceptuel qui précise les logiques (dénommées « rationalités » par Singer) dont résultent différentes stratégies. En définissant ces logiques en fonction des finalités qui leur sont associés, « la stratégie comme philosophie morale » nous permet de développer une vision holistique des motifs qui guident le choix d'adopter la BMI et de reconfigurer les mécanismes de création, livraison et capture de valeur à des niveaux distincts. Plus encore, en englobant les logiques orientées sur la capture de valeur au niveau organisationnel jusqu'à la création de valeur sociale et/ou environnementale au-delà des frontières de l'organisation, nous contribuons à réduire la fragmentation de la littérature BMI (Foss et Saebi, 2017 ; Wirtz *et al.*, 2016) en mettant au jour un cadre unifié pour en étudier les antécédents cognitifs, que la BMI se développe selon un modèle traditionnel orienté vers le profit ou selon un modèle « durable » (Bocken *et al.*, 2013).

Au-delà de la littérature BMI, la mise au jour des logiques guidant l'adoption d'une innovation pourrait contribuer plus largement au champ du management stratégique de l'innovation selon deux modalités. D'une part, la typologie des logiques d'adoption que nous intégrons à notre cadre multiniveau aide à clarifier le « pluralisme de valeur » (Best *et al.*, 2021) inhérent à l'innovation, notamment lorsque celle-ci consiste en un projet collectif impliquant plusieurs organisations. En identifiant les différentes finalités (complémentaires ou conflictuelles) visées par les acteurs internes et externes engagés dans l'adoption collaborative d'une BMI, notre recherche est l'une des rares, à ce jour, à proposer un cadre pour qualifier de manière précise l'alignement stratégique autour d'un projet d'innovation commun mis en œuvre

au niveau du réseau de valeur ou de l'écosystème (Adner, 2017). D'autre part, étant donnée la dimension intégrative du cadre de Singer (1994) concernant les finalités qui guident la décision d'adopter une certaine forme de stratégie, notre recherche pourrait contribuer à alimenter la littérature sur les antécédents de l'adoption d'une innovation (Damanpour et Schneider, 2006 ; Rogers, 1995) et notamment d'autres études ayant considéré les antécédents cognitifs de l'adoption, au-delà des seuls antécédents structurels de cette dernière (Lee et Csaszar, 2020 ; Marzi *et al.*, 2023).

## 2.2. *Développer la recherche multiniveau sur les BMI en intégrant le niveau institutionnel*

Grâce à l'intégration conjointe du niveau du réseau de valeur et du niveau institutionnel à notre cadre multiniveau, notre recherche apporte une voie de réponse aux récentes études sur l'adoption de la BMI qui appellent à développer une vision plus holistique de ce phénomène en rendant compte des facteurs susceptibles de l'affecter au-delà des frontières organisationnelles (Berglund et Sandström, 2013 ; Best *et al.*, 2021 ; 2022 ; Rey-Garcia *et al.*, 2020). Les rôles des institutions dans l'adoption de la BMI étant encore sous-estimés d'une majorité de recherches (Berglund et Sandström, 2013 ; Rey-Garcia *et al.*, 2020), notre cadre multiniveau est l'un des rares à prendre en compte l'existence de pressions institutionnelles qui contraignent les entreprises à adopter une BMI (Berglund et Sandström, 2013 ; Oliver, 1991 ; Pedersen et Gwozdz, 2018). En ce sens, nos travaux complètent, tout en les dépassant, d'autres recherches développant une approche multiniveau des BMI centrée sur les pressions d'interdépendance et de compétitivité exercées au niveau du réseau de valeur qui poussent les entreprises à adopter une BMI (Björkdahl, 2020 ; Dellermann, 2017 ; Kamalaldin *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Urbinati *et al.*, 2019).

Par ailleurs, dans la lignée d'autres recherches adoptant une perspective multiniveau de la BMI (Bocken et Geradts, 2020 ; Dellermann *et al.*, 2017 ; Jocevski, 2020 ; Kamalaldin *et al.*, 2020 ; Köhtamaki *et al.*, 2019 ; Paiola et Gebauer, 2020 ; Rachinger *et al.*, 2019), nous mettons en évidence l'existence d'interconnexions entre pressions externes et tensions internes (stratégiques, managériales, culturelles, structurelles) qui affectent l'adoption. Ces interconnexions étant renforcées par la prise en compte des pressions exercées au niveau institutionnel, telles que l'émergence de nouvelles exigences sociétales et normes qui déstabilisent l'organisation focale, nous contribuons à démontrer l'intérêt d'une approche multiniveau (voire inter niveau) pour rendre compte de la perméabilité des niveaux d'analyse impliqués dans l'adoption de la BMI (Bocken et Geradts, 2020). Cette prise en compte des interconnexions entre pressions externes et tensions internes qui complexifient voire menacent

la pérennité de l'adoption peut contribuer à alimenter la recherche sur la « face sombre » de la BMI (Heidenreich *et al.*, 2022).

### *2.3. Dresser une typologie des réponses aux pressions et tensions associées à l'adoption de la BMI : une double contribution à la littérature néo-institutionnelle et à la littérature multiniveau de la BMI*

En dressant une typologie élargie des réponses qui peuvent être adressées aux pressions et tensions qui affectent l'adoption de la BMI aux différents niveaux de l'organisation, du réseau de valeur et des institutions, notre recherche contribue à éclairer la question (encore largement méconnue) de la gestion des tensions associées à la BMI (Best *et al.*, 2021 ; 2022 ; Oskam *et al.*, 2020 ; Rey-Garcia *et al.*, 2020). Cette typologie des réponses adressées aux pressions et tensions qui affectent la BMI implique une double contribution à la littérature néo-institutionnelle et à la littérature multiniveau de la BMI.

D'une part, dans la mesure où il permet d'identifier les types de réponses envers les pressions externes impliqués par l'adoption d'une BMI, notre cadre multiniveau s'inscrit dans la continuité des recherches en stratégie fondées sur la théorie néo-institutionnelle (Oliver, 1991 ; Oliver et Holzinger, 2008 ; Pedersen et Gwozdz, 2018). L'appui sur la théorie néo-institutionnelle nous permet de dégager un large panel de réponses envers les pressions externes, allant de la conformation (passive) à des exigences externes jusqu'à la recherche (proactive) d'opportunités stratégiques (Oliver, 1991 ; Pedersen et Gwozdz, 2018). En ce sens, nos travaux enrichissent la littérature multiniveau de la BMI, et plus particulièrement les études qui se sont intéressées aux réponses apportées par les entreprises envers des pressions externes qui influent sur leur évolution stratégique (Berglund et Sandström, 2013 ; Fraser et Ansari, 2021 ; Pache et Santos, 2010). Cependant, du fait de la prise en compte conjointe des tensions internes et pressions externes dans notre cadre multiniveau, nous contribuons réciproquement à la littérature néo-institutionnelle en montrant que les réponses aux pressions externes peuvent se révéler inadaptées, dans la mesure où celles-ci ne permettent pas de solutionner les tensions stratégiques, culturelles, managériales et structurelles qui menacent la pérennité de l'adoption de la BMI.

D'autre part, en intégrant à notre typologie les réponses aux tensions d'alignement à l'œuvre dans l'adoption collaborative des BMI, notre travail vise à contribuer à la littérature multiniveau de la BMI en comblant le manque de recherches sur les modalités précises de la cocréation de valeur au niveau d'un réseau (Best *et al.*, 2021 ; 2022). L'absence de prise en compte des tensions d'alignement pouvant conduire à détruire de la valeur au lieu d'en générer via la BMI



(Snihur et Bocken, 2022), la connaissance des réponses qui leur sont adressées s'avère cruciale. Dans la continuité d'autres recherches récentes ((Best *et al.*, 2022 ; Moroz et Gamble, 2021 ; Oskam *et al.*, 2020 ; Pedersen *et al.*, 2022 ; Rey-Garcia *et al.*, 2020 ; Stal *et al.*, 2022 ; Stubbs, 2019 ; Van Bommel, 2018 ; Velter *et al.*, 2020), nous montrons que ces tensions d'alignement proviennent de divergences d'intérêts et d'objectifs entre acteurs positionnés aux différents niveaux de l'organisation focale, des partenaires du réseau de valeur et de la société, ce qui implique d'adopter une approche multiniveau doublée d'une approche cognitive (Martins *et al.*, 2015) pour identifier des réponses adaptées (Best *et al.*, 2021 ; 2022).

### 3. Contributions méthodologiques

Dans la mesure où nous mobilisons dans l'ensemble de la thèse des méthodologies qualitatives mixtes (revue de littérature systématique, étude de cas unique aux unités emboîtées et étude de cas multiple) qui nous permettent d'accroître le potentiel d'interprétation et de croisement de nos résultats (Denzin, 1978 ; Siggelkow, 2007 ; Thurmond, 2001 ; Yin, 2003), les contributions visées sont également d'ordre méthodologique. Plus particulièrement, dans notre troisième chapitre où nous nous attachons à comprendre les tensions d'alignement entre différentes logiques impliquées dans l'adoption d'une BMI collaborative, nous mobilisons à la fois des focus groups et entretiens semi-dirigés. La conduite de focus groups nous permet d'étudier les tensions d'alignement *in vivo* (Best *et al.*, 2021), c'est-à-dire au moment même de leur émergence, dans le contexte d'une séance collective de réflexion autour de la proposition de valeur focale associée à la BMI. Les résultats des focus groups sont par ailleurs confrontés à des perceptions recueillies *ex vivo*, lors d'entretiens semi-directifs avec des acteurs ayant participé aux focus groups, mais aussi avec de nouveaux acteurs, auxquels nous demandons leur perception de la proposition de valeur focale et des éventuelles tensions d'alignement qui lui sont associées. **Cette combinaison des focus groups et entretiens, encore très peu mobilisée dans le champ du management stratégique de l'innovation, nous permet donc de contribuer à la fois à l'émergence des méthodes mixtes dans le champ de la BMI (Best *et al.*, 2021), et de confronter notre outil de mesure d'alignement aux différentes logiques d'adoption de la BMI telles qu'elles s'expriment lors de débats collectifs (focus groups) et de réflexions individuelles (entretiens).**

### 4. Contributions managériales de la recherche

Dans le prolongement de nos contributions théoriques, et en lien direct avec l'intégration de la présente thèse à la chaire de recherche IOPEN, nos travaux impliquent un certain nombre

de contributions managériales pour les entreprises souhaitant générer davantage de valeur en capitalisant sur l'adoption fructueuse d'une BMI.

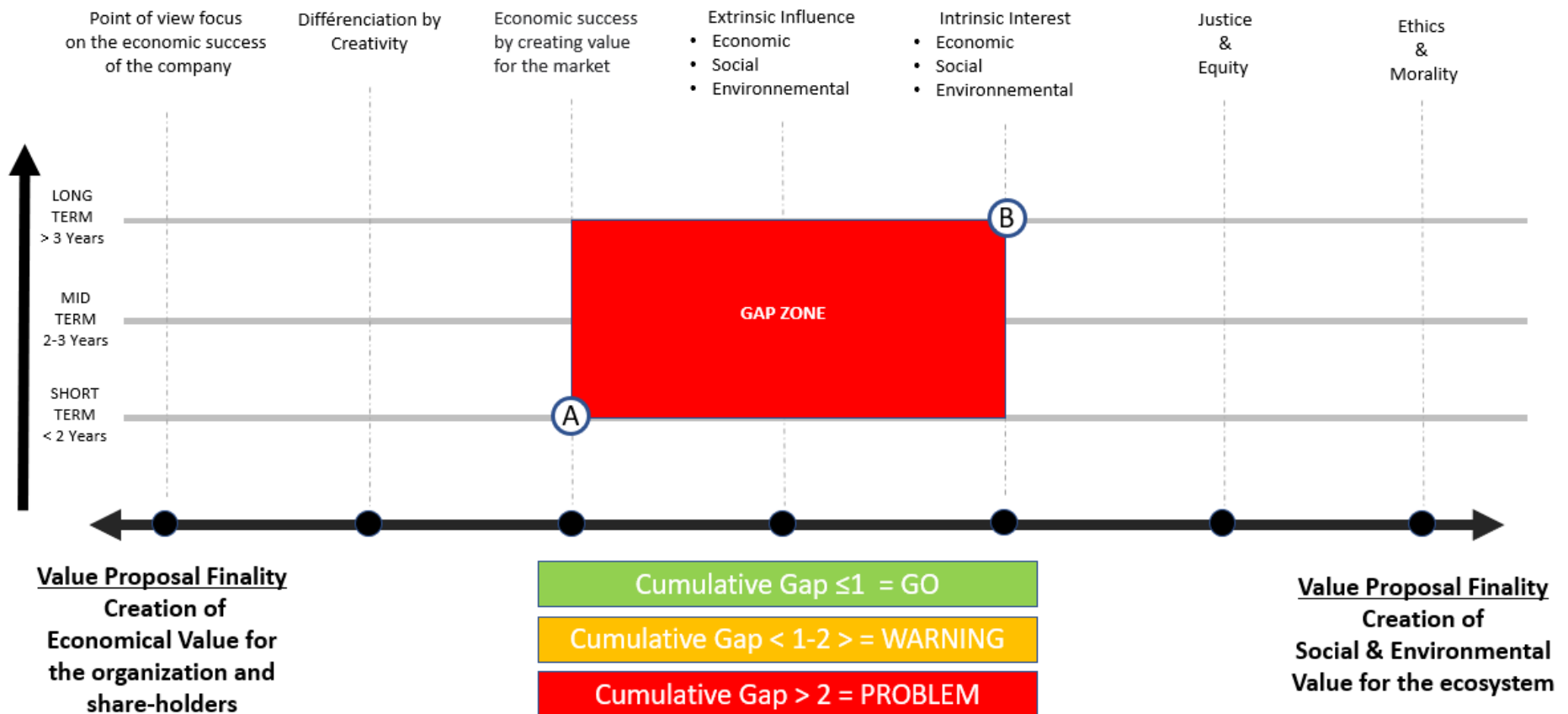
Tout d'abord, **en identifiant les logiques qui guident le choix d'adopter la BMI, nous contribuons à aider les managers à identifier de manière plus précise les différentes finalités qui guident le choix stratégique de reconfigurer le BM de leur organisation**, afin de véritablement générer de la valeur via la BMI. En effet, la mise au jour des logiques qui guident l'adoption de la BMI devrait permettre aux entreprises d'avoir une vision systémique des différentes modalités de création, livraison et capture de valeur en fonction de leur adéquation au principal objectif visé, qu'il s'agisse de capturer de la valeur économique au seul niveau de l'organisation ou de créer de la valeur sociale et/ou environnementale aux niveaux du réseau de valeur voire de la société dans son ensemble.

La mise au jour des logiques d'adoption peut également **améliorer la gestion des risques associés à la BMI**, en aidant les dirigeants à **anticiper les tensions et pressions** susceptibles de l'affecter aux différents niveaux (organisationnel, réseau et institutionnel). Cette contribution est d'autant plus importante à l'ère du numérique et des Grand challenges sociétaux, où la perméabilité des frontières organisationnelles rend difficile l'anticipation de ces pressions et tensions qui peuvent menacer le succès de l'adoption de la BMI.

Dans le cas de l'adoption **collaborative** de la BMI par une organisation focale et ses partenaires, notre recherche peut également **aider à renforcer l'analyse de risques mais aussi des opportunités par les managers en tenant compte dès la phase précoce d'initiation des potentielles divergences d'objectifs et d'intérêts** des différents acteurs impliqués (employés, partenaires et acteurs institutionnels notamment). A ce titre, la sensibilisation qui a été faite auprès des mécènes de la chaire concernant le continuum de logiques d'adoption de la BMI a déjà permis d'obtenir des retombées concrètes. En effet, l'une des entreprises étudiées (l'organisation focale du cas NEWTEX) s'est appuyée sur notre cadre conceptuel pour élaborer un **outil de pilotage** servant à évaluer leur alignement stratégique avec leurs partenaires d'innovation (voir Figure 18 ci-dessous). Cette entreprise a cependant ajouté une dimension temporelle afin de distinguer entre les stratégies d'innovation orientées à court et long terme. Ainsi, l'outil de pilotage développé par l'organisation focale de NEWTEX permet de mesurer l'alignement entre partenaires selon deux grandes modalités : (1) la logique (finalité) de l'innovation et (2) son orientation temporelle (court ou long terme). L'écart entre différentes logiques et orientations temporelles peut ainsi être représenté visuellement par une « gap zone » dont l'étendue indique le besoin d'anticiper des tensions d'alignement, et de rediscuter

des intérêts et objectifs du projet avec les partenaires. Cet outil, en phase de test depuis janvier 2023, devrait également être développé dans les prochains mois dans le cadre d'une collaboration entre l'organisation focale de NEWTEX et une autre entreprise (l'organisation focale de SMART&GREEN), celle-ci s'étant montrée fortement intéressée par la portée d'application de l'outil en interne, (pour vérifier la cohérence de la stratégie d'innovation avec les objectifs des employés et de l'entreprise) et en externe (pour sélectionner des partenaires d'innovation ayant des objectifs alignés à ceux de l'entreprise).

**Figure 18.** Outil de pilotage de l'alignement stratégique développé par l'organisation focale de NEWTEX

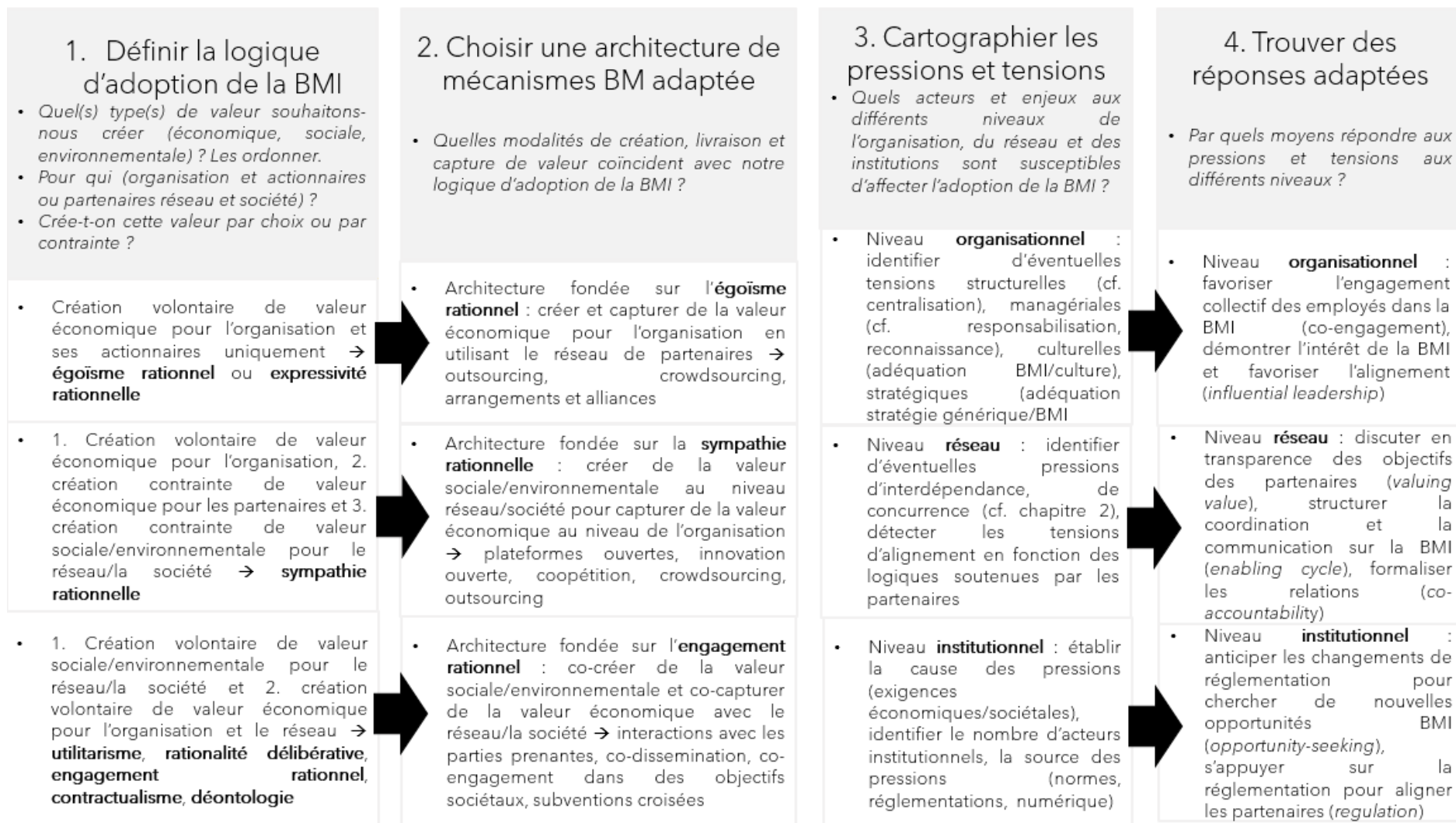


Notre deuxième principale contribution managériale concerne la **typologie que nous dressons des réponses adressées aux pressions et tensions** qui affectent l'adoption de la BMI aux différents niveaux. En effet, dans la mesure où les entreprises rencontrent d'importantes difficultés à anticiper conjointement les enjeux internes et externes posés par la BMI (Christensen, 2016), les pressions et tensions multiniveaux qui affectent l'adoption sont largement susceptibles de ne pas être prises en compte, ou de faire l'objet de réponses inappropriées (Best *et al.*, 2022). Face à ces difficultés, notre travail pourrait permettre aux managers **d'identifier à la fois des réponses insuffisantes voire contreproductives envers des pressions et tensions interconnectées** (chapitre 2) **mais également des solutions efficaces pour pallier certaines difficultés liées aux tensions d'alignement dans l'adoption collaborative de la BMI** (chapitre 3).

Pour anticiper et gérer les difficultés associées à l'adoption de la BMI (individuelle ou collaborative), **nous proposons d'utiliser notre cadre multi-niveau pour guider une réflexion en quatre étapes durant la phase d'initiation de la BMI**. Tout d'abord, nous recommandons aux managers de définir collectivement (avec les autres acteurs internes, voire les partenaires externes engagés dans le projet) la logique d'ensemble qui motive l'adoption, en établissant notamment si celle-ci est davantage orientée vers la capture de valeur économique par l'organisation ou plutôt orientée vers la création de valeur sociale ou environnementale au niveau du réseau et de la société (cf. chapitres 1 et 3). En deuxième étape, nous conseillons de choisir des mécanismes de création, livraison et capture de valeur en cohérence avec cette logique : à ce titre, il serait possible de s'inspirer des trois architectures de mécanismes multi-niveaux que nous identifions dans notre premier chapitre (architecture fondée sur l'égoïsme rationnel, architecture fondée sur la sympathie rationnelle et architecture fondée sur l'engagement rationnel). En troisième lieu, nous encourageons les managers à anticiper les tensions et pressions en cartographiant les acteurs et enjeux susceptibles d'affecter l'adoption aux différents niveaux de l'organisation, du réseau et des institutions (cf. chapitre 2). Enfin, en fonction des tensions et pressions identifiées, nous proposons de mobiliser différentes voies de réponses parmi celles que nous identifions aux niveaux organisationnel, réseau et institutionnel (cf. chapitres 2 et 3). Deux des réponses identifiées dans notre troisième chapitre sont à ce titre fortement recommandées, dans la mesure où celles-ci sont valorisées par la majorité des acteurs interrogés, quelle que soit la logique de BMI soutenue : rediscuter de la valeur visée par la BMI avec les acteurs (*valuing value*) et structurer la coordination du projet de BMI (par exemple, en désignant un ou plusieurs coordinateurs) afin de communiquer sur le projet et centraliser les

intérêts et requêtes des acteurs internes et externes (*enabling cycle*). Nous synthétisons ce processus de réflexion en quatre temps dans la figure 19 ci-dessous.

**Figure 19.** Processus de réflexion en quatre temps pour anticiper et gérer les risques et opportunités associés à l'adoption de la BMI



## 5. Limites et perspectives de recherche

Au-delà de ces contributions théoriques et managériales, notre recherche comporte un certain nombre de **limites** qui ouvrent la voie à des perspectives de recherche future sur l'adoption de la BMI. Les limites principales que nous voyons à notre travail concernent la portée des résultats liée au contexte spécifique d'étude, le choix de méthodologies uniquement qualitatives, l'intégration sous-jacente du niveau individuel dans notre cadre multiniveau ainsi que l'absence d'étude processuelle de la BMI au-delà de la seule phase d'adoption.

La première limite que nous voyons à notre travail concerne la **portée des résultats liée à la spécificité du contexte d'étude**. En effet, notre terrain d'enquête est celui d'organisations françaises privées à but lucratif, parties prenantes d'un projet de recherche commun (la chaire IOPEN) et étudiées dans la période de pandémie de COVID-19. Par conséquent, certaines logiques, pressions, tensions et réponses identifiées ont pu être influencées par ces contingences. Afin de renforcer notre démarche et la cohérence de nos résultats, il importerait donc de répliquer notre cadre multiniveau dans d'autres contextes organisationnels et internationaux susceptibles de donner à voir d'autres logiques, pressions et tensions affectant l'adoption de la BMI et, dès lors de confronter les réponses associées. Aussi, nous invitons notamment les recherches futures à étudier l'adoption de la BMI dans le **contexte des organisations hybrides et des organisations à but non lucratif**, ces dernières étant globalement marginalisées de la littérature actuelle, bien qu'elles rencontrent de fortes pressions à reconfigurer leurs mécanismes de création, livraison et capture de valeur, suivant des logiques particulières (Alberti et Garrido, 2017 ; McDonald *et al.*, 2021). Par ailleurs, la plupart des recherches sur les BMI étant réalisées au sein d'organisations occidentales issues de pays développés, nous invitons les chercheurs à étudier la BMI **dans des pays en voie de développement**, ces derniers offrant à voir de nombreux cas d'adoption expérimentale de BMI (Mihalache et Volberda, 2021).

La portée de nos résultats est également limitée par notre choix de mobiliser des **méthodes uniquement qualitatives** pour étudier l'adoption de la BMI. Si les méthodologies qualitatives ont pour intérêt d'éclairer en profondeur des questions de recherche encore peu traitées dans la littérature (ce qui est bien le cas de notre problématique), la portée de leurs résultats reste cependant limitée par le nombre d'observations recueillies et l'impossibilité pour le chercheur de contrôler certaines variables qui affectent le phénomène étudié (Siggelkow, 2007 ; Yin, 2003). Etant donné le **manque d'études quantitatives** représentées dans la littérature BMI (Foss et Saebi, 2017 ; Heidenreich *et al.*, 2022), une manière d'enrichir nos travaux pourrait



être de confronter notre cadre multiniveau à un échantillon d'organisations plus larges, afin de tester statistiquement les relations que nous identifions entre les logiques, pressions, tensions et réponses impliquées dans l'adoption de la BMI. Une autre voie méthodologique originale pourrait consister à **utiliser des méthodes d'analyse qualitative comparative (QCA), et notamment celle de type *fuzzy-set*, afin d'étudier les combinaisons-types de logiques, pressions, tensions et réponses associées à l'adoption de la BMI** dans de nombreux contextes organisationnels et industriels.

Une autre limite de notre travail est la **prise en compte sous-jacente du niveau individuel** dans notre approche multiniveau. En effet, si nous tenons à explorer les représentations individuelles des managers pour identifier les logiques guidant l'adoption de la BMI, nous ne considérons pas le niveau individuel comme unité d'analyse des pressions, tensions et réponses. Ce choix s'explique par la difficulté de prendre en compte le niveau individuel pour étudier les interdépendances entre pressions et tensions affectant l'adoption de la BMI, et les réponses associées dans leur ensemble (cette question nécessitant une « prise de hauteur » par rapport au phénomène de BMI). Néanmoins, si notre recherche s'était uniquement concentrée sur la question des logiques guidant l'adoption de la BMI, une piste prometteuse aurait pu être **d'étudier les relations entre logiques individuelles et logiques organisationnelles, et leurs effets sur l'adoption de la BMI. Cette question pourrait notamment être analysée sous l'angle des micro-fondations de l'innovation** (Fernandes *et al.*, 2023 ; Palmié *et al.*, 2023), celle-ci permettant d'identifier avec précision les facteurs individuels susceptibles d'affecter l'adoption d'une innovation.

Enfin, notre travail se concentrant sur la **seule phase d'adoption de la BMI**, nous ne pouvons observer les possibles variations des logiques, pressions, tensions et réponses qui pourraient affecter le nouveau BM au fur et à mesure de son développement. Ce choix est au départ justifié par le manque d'attention porté aux nombreux défis inhérents à la phase spécifique d'adoption ainsi que par la relative émergence des projets de BMI dans les entreprises de la chaire que nous étudions. Cependant, **une voie d'enrichissement majeure pour notre travail pourrait être de se fonder sur une approche processuelle de la BMI** (Björkdahl *et al.*, 2022) **afin d'observer les changements de logiques, d'architectures de mécanismes de création, livraison et capture de valeur, ainsi que les effets des réponses aux pressions et tensions dans le temps.** Combinée à la théorie des **capacités dynamiques**, cette approche processuelle pourrait notamment permettre **d'identifier d'autres formes de**

**réponses à adresser aux pressions et tensions qui affectent l'adoption de la BMI selon la phase observée (Best *et al.*, 2022).**

En définitive, par la présente thèse, nous espérons contribuer à la littérature BMI en offrant une meilleure compréhension des modalités de son adoption, aux différents niveaux. En dépit des limites inhérentes à cette recherche, nous espérons offrir aux chercheurs des perspectives futures à même d'enrichir ou de confronter le cadre que nous développons à l'aune d'autres contextes, méthodologies et ancrages théoriques.

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## **ANNEXES**

### Annexe 1. Grille de codage du chapitre 1

CODE GROUP	CODE ID	DEFINITION AND CODE SOURCE	CODE SOURCE
Definitions of BM/BMI concepts	100.BM_definition	Given definition of BM	deductive (Teece, 2010)
	101.BMI_definition	Given definition of BMI	deductive (Foss & Saebi, 2017)
	102.value_creat_definition	Given definition of value creation	deductive (Teece, 2010)
	103.value_deliv_definition	Given definition of value delivery	deductive (Teece, 2010)
	104.value_capt_definition	Given definition of value capture	deductive (Teece, 2010)
BMI rationales	111.BMI_rat_egoism	Rationale underlying BMI is rational egoism: BMI supports shareholder value creation for achieving self-interests only	deductive (Singer, 1994)
	112.BMI_rat_sympath	Rationale underlying BMI is rational sympathy: BMI constrains to serve stakeholders interests for achieving self-interests	deductive (Singer, 1994)
	113.BMI_rat_commit	Rationale underlying BMI is rational commitment: BMI consists of the firm's voluntary commitment to a non-financial cause	deductive (Singer, 1994)
	114.BMI_rat_delib	Rationale underlying BMI is deliberative rationality: BMI consists of deliberating on goals in order to engage in a political dialogue with stakeholders	deductive (Singer, 1994)
	115.BMI_rat_express	Rationale underlying BMI is expressive rationality: BMI is formulated to achieve an individual or organizational sense of autonomy	deductive (Singer, 1994)
	116.BMI_rat_systemic	Rationale underlying BMI is systemic rationality: BMI emerged over time as a function of the historical organization's experience and capabilities	deductive (Singer, 1994)
	121.BMI_eth_utilit	Rationale underlying BMI is utilitarianism: use of social cost-benefit analysis to choose BMI strategy (achieving the greatest good for the greatest number)	deductive (Singer, 1994)
	122.BMI_eth_contract	Rationale underlying BMI is contractarianism: BMI is based on concerns of fairness and justice	deductive (Singer, 1994)
	123.BMI_eth_deont	Rationale underlying BMI is deontology: moral duties are deliberately integrated into BMI strategy	deductive (Singer, 1994)

BMI multi-level mechanisms	210.value_archi_change	BMI consists of a change of value architecture	deductive (Foss & Saebi, 2017)
	211.value_creat_change	BMI consists of a change of value creation mechanism	deductive (Foss & Saebi, 2017)
	212.value_deliv_change	BMI consists of a change of value delivery mechanism	deductive (Foss & Saebi, 2017)
	213.value_capt_change	BMI consists of a change of value capture mechanism	deductive (Foss & Saebi, 2017)
	222a.value_creat_lev_org_by	With the BMI, value is created by the focal organization	deductive (Lepak et al., 2007)
	222b.value_creat_lev_org_for	With the BMI, value is created for an organization	deductive (Lepak et al., 2007)
	223a.value_creat_lev_vnetwork_by	With the BMI, value is created by the value network (external partners involved in direct relationships with the focal firm)	deductive (Bocken et al., 2013)
	223b.value_creat_lev_vnetwork_for	With the BMI, value is created for the value network (external partners involved in direct relationships with the focal firm)	deductive (Bocken et al., 2013)
	224a.value_creat_lev_soc_by	With the BMI, value is created by members of the society / institutions	deductive (Lepak et al., 2007)
	224b.value_creat_lev_soc_for	With the BMI, value is created for members of the society / institutions	deductive (Lepak et al., 2007)
	232.value_deliv_lev_org	BMI enables value delivery at the organizational level	deductive (Lepak et al., 2007; Teece, 2010)
	233.value_deliv_lev_vnetwork	BMI enables value delivery at the value network level (external partners involved in direct relationships with the focal firm)	deductive (Bocken et al., 2013)
	234.value_deliv_lev_soc	BMI enables value delivery at the societal level	deductive (Lepak et al., 2007; Teece, 2010)
	242.value_capt_lev_org	BMI enables value capture at the organizational level	deductive (Lepak et al., 2007)
	243.value_capt_lev_vnetwork	BMI enables value capture at the value network level	deductive (Bocken et al., 2013)
244.value_capt_lev_soc	BMI enables value capture at the societal level	deductive (Lepak et al., 2007)	
Added free codes	value_logic_change	BMI implies a change of logic for creating, delivering and/or capturing value (new BM purpose)	inductive: often mentioned by authors as a new way of thinking about the purpose of business activities and associated mechanisms, eventually resulting in BMI
	value_creat_tension	BMI implies tensions in value creation mechanisms	inductive: often mentioned by authors when value creation mechanisms are driven by conflicting purposes (e.g., serving both a financial and social cause)

**Annexe 2.** Corpus des 79 articles du chapitre 1

<b>Authors</b>	<b>Title</b>	<b>Journal</b>	<b>Year</b>
Abrahamsson <i>et al.</i>	Business model innovation of international new ventures: An empirical study in a Swedish context.	<i>Journal of International Entrepreneurship</i>	2019
Agarwal <i>et al.</i>	Evolution of the Indian LPG industry: Exploring conditions for public sector business model innovation.	<i>Research Policy</i>	2021
Angeli and Jaiswal	Business Model Innovation for Inclusive Health Care Delivery at the Bottom of the Pyramid.	<i>Organization &amp; Environment</i>	2016
Baber <i>et al.</i>	Effectuation logic in digital business model transformation.	<i>Journal of Small Business and Enterprise Development</i>	2019
Bagheri <i>et al.</i>	Using the crowd for business model innovation: the case of Digikala.	<i>R&amp;D Management</i>	2020
Barth <i>et al.</i>	Unpacking sustainable business models in the Swedish agricultural sector– the challenges of technological, social and organisational innovation.	<i>Journal of Cleaner Production</i>	2021
Bashir and Farooq	The synergetic effect of knowledge management and business model innovation on firm competence.	<i>International Journal of Innovation Science,</i>	2018
Best <i>et al.</i>	Business model innovation within SPOs: Exploring the antecedents and mechanisms facilitating multi-level value co-creation within a value-network.	<i>Journal of Business Research</i>	2021
Best <i>et al.</i>	Mission or margin? Using dynamic capabilities to manage tensions in social purpose organisations' business model innovation.	<i>Journal of Business Research</i>	2021
Björkdahl	Technology cross-fertilization and the business model: The case of integrating ICTs in mechanical engineering products	<i>Research Policy</i>	2009
Björklund <i>et al.</i>	Expanding entrepreneurial solution spaces in times of crisis: Business model experimentation amongst packaged food and beverage ventures.	<i>Journal of Business Venturing Insights</i>	2020
Bocken <i>et al.</i>	A literature and practice review to develop sustainable business model archetypes.	<i>Journal of Cleaner Production</i>	2014
Bosbach <i>et al.</i>	More can be better: operating multiple business models in a corporate portfolio.	<i>Journal of Business Strategy</i>	2020
Bouncken and Fredrich	Business model innovation in alliances: Successful configurations.	<i>Journal of Business Research</i>	2016
Bouncken and Fredrich	Good fences make good neighbors? Directions and safeguards in alliances on business model innovation.	<i>Journal of Business Research</i>	2016

Brock <i>et al.</i>	Light the way for smart cities: Lessons from Philips Lighting.	<i>Technological Forecasting and Social Change</i>	2019
Burström <i>et al.</i>	AI-enabled business-model innovation and transformation in industrial ecosystems: A framework, model and outline for further research.	<i>Journal of Business Research</i>	2021
Carraresi and Bröring	How does business model redesign foster resilience in emerging circular value chains?	<i>Journal of Cleaner Production</i>	2021
De Silva <i>et al.</i>	Business model innovation by international social purpose organizations: The role of dynamic capabilities.	<i>Journal of Business Research</i>	2021
Dopfer <i>et al.</i>	Adapt and strive: How ventures under resource constraints create value through business model adaptations.	<i>Creativity &amp; Innovation Management</i>	2017
Ernst <i>et al.</i>	The art museum as lab to re-calibrate values towards sustainable development.	<i>Journal of Cleaner Production</i>	2016
Fehrer <i>et al.</i>	A systemic logic for platform business models.	<i>Journal of Service Management</i>	2018
Fjeldstad and Snow	Business models and organization design.	<i>Long Range Planning</i>	2018
Fobbe and Hilletoft	The role of stakeholder interaction in sustainable business models. A systematic literature review.	<i>Journal of Cleaner Production</i>	2021
Foss and Saebi	Business models and business model innovation: Between wicked and paradigmatic problems.	<i>Long Range Planning</i>	2018
Gebauer <i>et al.</i>	Business model innovations for overcoming barriers in the base-of-the-pyramid market.	<i>Industry &amp; Innovation</i>	2017
Gebauer <i>et al.</i>	How to convert digital offerings into revenue enhancement – Conceptualizing business model dynamics through explorative case studies.	<i>Industrial Marketing Management</i>	2020
Grieco	Innovating the innovated: Business model innovation process in sharing economy companies.	<i>Creativity &amp; Innovation Management</i>	2021
Günzel and Holm	One size does not fit all -- understanding the front-end and back-end of business model innovation	<i>International Journal of Innovation Management</i>	2013
Hanafizadeh <i>et al.</i>	Business model innovation driven by the internet of things technology, in internet service providers' business context.	<i>Information Systems &amp; E-Business Management</i>	2021
Hofmann	Business approach as driver or obstructer of sustainability transitions?	<i>Journal of Cleaner Production</i>	2019
Hoßbach <i>et al.</i>	The Unfolding of Value Sources During Online Business Model Transformation.	<i>Journal of Business Models</i>	2016

Iheanachor <i>et al.</i>	Business model innovation at the bottom of the pyramid – A case of mobile money agents.	<i>Journal of Business Research</i>	2021
Jensen <i>et al.</i>	Creating sustainable value through remanufacturing: Three industry cases.	<i>Journal of Cleaner Production</i>	2019
Kamalaldin <i>et al.</i>	Transforming provider-customer relationships in digital servitization: A relational view on digitalization.	<i>Industrial Marketing Management</i>	2020
Kastalli and Van Looy	Disentangling the impact of service business model innovation on manufacturing firm performance.	<i>Journal of Operations Management</i>	2013
Klein <i>et al.</i>	How to stay on the road? A business model perspective on mission drift in social purpose organizations.	<i>Journal of Business Research</i>	2021
Kuckertz <i>et al.</i>	Responding to the greatest challenges? Value creation in ecological startups.	<i>Journal of Cleaner Production</i>	2019
Kukkamalla <i>et al.</i>	The new BMW: business model innovation transforms an automotive leader.	<i>Journal of Business Strategy</i>	2021
Kullak <i>et al.</i>	Enhancing value creation in social purpose organizations: Business models that leverage networks.	<i>Journal of Business Research</i>	2021
Layrisse <i>et al.</i>	What social enterprises can learn from the freemium business model.	<i>Academia Latinoamericana de Administración</i>	2021
Lehtimäki <i>et al.</i>	Strategic Decisions Related to Circular Business Model in a Forerunner Company: Challenges Due to Path Dependency and Lock-In.	<i>South Asian Journal of Business &amp; Management Cases</i>	2020
Matzler <i>et al.</i>	Business model innovation: coffee triumphs for Nespresso.	<i>Journal of Business Strategy</i>	2013
McDonald <i>et al.</i>	Nonprofit business model innovation as a response to existential environmental threats: Performing arts in the United States.	<i>Journal of Business Research</i>	2021
Müller <i>et al.</i>	Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0.	<i>Technological Forecasting and Social Change</i>	2018
Mütterlein and Kunz	Innovate alone or with others? Influence of entrepreneurial orientation and alliance orientation on media business model innovation.	<i>Journal of Media Business Studies</i>	2017
Nußholz	A circular business model mapping tool for creating value from prolonged product lifetime and closed material loops.	<i>Journal of Cleaner Production</i>	2018
Rachinger <i>et al.</i>	Digitalization and its influence on business model innovation.	<i>Journal of Manufacturing Technology Management</i>	2019



Rask and Günzel-Jensen	Business model design and performance in nascent markets.	<i>Management Decision</i>	2020
Rayna and Striukova	From rapid prototyping to home fabrication: How 3D printing is changing business model innovation.	<i>Technological Forecasting and Social Change</i>	2016
Reficco <i>et al.</i>	From donation-based NPO to social enterprise: A journey of transformation through business-model innovation.	<i>Journal of Business Research</i>	2021
Reinhardt <i>et al.</i>	Towards sustainable business models for electric vehicle battery second use: A critical review.	<i>Journal of Environmental Management</i>	2019
Ritter and Schanz	The sharing economy: A comprehensive business model framework.	<i>Journal of Cleaner Production</i>	2019
Rodriguez <i>et al.</i>	Enterprise resource planning and business model innovation: process, evolution and outcome.	<i>European Journal of Innovation Management</i>	2020
Rossignoli and Lionzo	Network impact on business models for sustainability: Case study in the energy sector.	<i>Journal of Cleaner Production</i>	2018
Sabatier <i>et al.</i>	When technological discontinuities and disruptive business models challenge dominant industry logics: Insights from the drugs industry.	<i>Technological Forecasting and Social Change</i>	2012
Schneckenberg <i>et al.</i>	Business model innovation and decision making: uncovering mechanisms for coping with uncertainty.	<i>R&amp;D Management</i>	2017
Schneider <i>et al.</i>	Business model innovation in the aviation industry.	<i>International Journal of Product Development.</i>	2013
Shakeel <i>et al.</i>	Anatomy of sustainable business model innovation.	<i>Journal of Cleaner Production</i>	2020
Shomali and Pinkse	The consequences of smart grids for the business model of electricity firms.	<i>Journal of Cleaner Production</i>	2016
Short <i>et al.</i>	From Refining Sugar to Growing Tomatoes.	<i>Journal of Industrial Ecology</i>	2014
Siebold	Reference points for business model. innovation in social purpose organizations: A stakeholder perspective.	<i>Journal of Business Research</i>	2021
Simonsson and Agarwal	Perception of value delivered in digital servitization.	<i>Industrial Marketing Management</i>	2021
Sjödin <i>et al.</i>	Value Creation and Value Capture Alignment in Business Model Innovation: A Process View on Outcome-Based Business Models.	<i>Journal of Product Innovation Management</i>	2020

Sorescu <i>et al.</i>	Innovations in Retail Business Models.	<i>Journal of Retailing</i>	2011
Sorri <i>et al.</i>	Business Model Innovation with Platform Canvas.	<i>Journal of Business Models</i>	2019
Sousa-Zomer and Cauchick Miguel	Sustainable business models as an innovation strategy in the water sector: An empirical investigation of a sustainable product-service system.	<i>Journal of Cleaner Production</i>	2018
To <i>et al.</i>	The logic of innovative value proposition: A schema for characterizing and predicting business model evolution.	<i>Journal of Business Research</i>	2020
Velter <i>et al.</i>	Sustainable business model innovation: The role of boundary work for multi-stakeholder alignment.	<i>Journal of Cleaner Production</i>	2020
Visnjic <i>et al.</i>	Only the Brave: Product Innovation, Service Business Model Innovation, and Their Impact on Performance.	<i>Journal of Product Innovation Management</i>	2016
Visnjic <i>et al.</i>	The path to outcome delivery: Interplay of service market strategy and open business models.	<i>Technovation</i>	2018
Weerawardena <i>et al.</i>	Business model innovation in social purpose organizations: Conceptualizing dual social-economic value creation.	<i>Journal of Business Research</i>	2021
Weissbrod and Bocken	Developing sustainable business experimentation capability – A case study.	<i>Journal of Cleaner Production</i>	2017
Wlömert and Papiés	International heterogeneity in the associations of new business models and broadband Internet with music revenue and piracy.	<i>International Journal of Research in Marketing</i>	2019
Wu <i>et al.</i>	Customer knowledge management and IT-enabled business model innovation: A conceptual framework and a case study from China.	<i>European Management Journal</i>	2013
Yang <i>et al.</i>	Value uncaptured perspective for sustainable business model innovation	<i>Journal of Cleaner Production</i>	2017
Yang <i>et al.</i>	Product-service systems business models for circular supply chains	<i>Production Planning &amp; Control</i>	2018
Yderfält and Roxenhall	Real estate business model innovation and the impact of ego network structure.	<i>Management Research Review</i>	2017

### Annexe 3. Caractéristiques et volume des données du chapitre 2

Primary data	Business Unit 1 interview documents		Business Unit 2 interview documents	
	- Interview with top manager 1	44 pages	- Interview with top manager 1	53 pages
	- Interview with middle manager 1	22 pages	- Interview with top manager 2	28 pages
	- Interview with middle manager 2	17 pages	- Interview with middle manager 1	34 pages
	- Interview with operational employee 1	21 pages	- Interview with middle manager 2	22 pages
	- Interview with operational employee 2	25 pages	- Interview with middle manager 3	17 pages
	- Interview with operational employee 3	32 pages	- Interview with middle manager 4	43 pages
	- Interview with operational employee 4	18 pages	- Interview with middle manager 5	18 pages
	- Interview with operational employee 5	37 pages	- Interview with middle manager 6	24 pages
			- Interview with middle manager 7	26 pages
	- Interview with operational employee 6	30 pages	- Interview with operational employee 1	26 pages
- Interview with operational employee 2			27 pages	
= 9 documents (246 pages)		= 11 documents (318 pages)		
<b>= 20 transcripts (564 pages)</b>				
Secondary data	BMI documents		BMI-related project documents	
	- PDF press release introducing the BMI project and co-construction steps	2 pages	- Power Point document introducing Business Unit 1 and the logistic transformation project (as well as its relationships with the national BMI)	18 pages
	- PDF booklet synthesizing the main strategic axes of the BMI adopted in collaboration with internal and external stakeholders	12 pages	- Power Point document introducing the intervention agencies transformation project of Business Unit 2	17 pages
	- Word document introducing the innovation context of the firm and the associated role of a digital crowdsourcing platform	1 page		
	- PDF press release introducing the role of big data in the digital and firm environmental transformation	26 pages		
	- PDF booklet introducing the development of electrical mobility	11 pages	- Power Point document introducing an additional transformation sub-project of Business Unit 2 (related to client electric connection services)	19 pages
	- PDF press release introducing the development of smart grid services	26 pages		
	- PDF press release introducing the development of new sustainable electric connection services (including smart grid services)	23 pages		
= 7 documents (101 pages)		= 3 documents (54 pages)		
<b>= 10 documents (155 pages)</b>				

#### Annexe 4. Guide d'entretien du chapitre 2

<b>Interviewee introduction</b>	Q1. Could you introduce yourself through your job, past training, seniority and evolution in the firm?
	Q2. Do you have managerial responsibilities? If you do, on what extent and in which staff?
<b>BMI characterization</b>	Q3. Do you know any transformation project(s) related to your firm? If you do, which one(s)? <i>(if unspecified: What type of transformation is involved? Since when does it take place? What is the scale of this transformation?)</i>
	Q4. What is your level of involvement in this/these transformation project(s)? On a practical level, what does it require from you?
<b>BMI external pressures and internal tensions) at:</b>  - <b>Firm level</b> - <b>Value network level</b> - <b>Institutional level</b>	Q5. Is collaborative innovation part of your firm's strategy? If it is, since when?
	Q6. Are you incited to collaboratively innovate with internal and/or external partners in order to create value? <i>(if unspecified: With who? Why? How?)</i>
	Q7. Could you give us a concrete example of a collaborative innovation project implying internal and/or external partners?
	Q8. Did some collaborative innovation projects fail? Why? <i>(if unspecified: What kind of barriers were faced?)</i>
	Q9. Beyond the public utility mission of your firm, are social and environmental issues voluntarily included in your firm's activities and relationships with its stakeholders? <i>(if unspecified: Why? Are internal and/or external stakeholders concerted about the firm's activities?)</i>
	Q10. Is there a department, a unit, a staff or a single person dedicated to collaborative innovation in your firm? If there is, what is its/his/her role?
<b>Organizational features and practices in support of BMI adoption</b>	Q11. Are there managerial practices fostering collaborative innovation in your firm? Are there managerial practices which do not yet exist in your firm but seem important to you in order to foster collaborative innovation?
	Q12. Do you think there is a collaborative innovation culture (i.e. shared values) in your firm?
	Q13. Do you think that collaborative innovation with internal and/or external stakeholders implies some risks? Why?
<b>Digitalization roles</b>	Q14. Do you have any digital technology that allow you to collaboratively innovate? Could you give us some examples? <i>(if unspecified: What is their role in value co-creation? What are their effects?)</i>

## Annexe 5. Principales co-occurrences et occurrences du chapitre 2

External pressures - BMI adoption		External pressures - Internal tensions		Internal tensions and external pressures - Firm's responses	
Institutional pressures related to social fitness <b>(Cause)</b> (= 58 occurrences)	BMI adoption (= 255 occurrences)	Digitalization <b>(Control)</b> (= 170 occurrences) <sup>91</sup> occurrences)	Organizational tensions (merged codes) (= 182 occurrences)	Institutional pressures (merged codes) (= 110 occurrences)	Strategic response: acquiescence (= 38 occurrences)
= 37 co-occurrences located in: - 16 interviews (7 in BU1 and 9 in BU2) - 6 secondary data documents		= 45 co-occurrences located in: - 15 interviews (7 in BU1 and 8 in BU2) - 2 secondary data documents		= 35 co-occurrences located in: - 15 interviews (7 in BU1 and 8 in BU2) - 4 secondary data documents	
Institutional pressures exerted with a high <b>Control</b> degree (= 35 occurrences)	Digitalization (= 170 occurrences)	Structural tensions (= 89 occurrences)	Organizational tensions (merged codes) (= 182 occurrences)	Organizational tensions (merged codes) (= 182 occurrences)	Organizational response: adoption of digital tools (= 35 occurrences)
= 19 co-occurrences located in: - 6 interviews (2 in BU1 and 4 in BU2) - 4 secondary data documents		= 31 co-occurrences located in: - 10 interviews (6 in BU1 and 4 in BU2) - 1 secondary data document		= 16 co-occurrences located in: - 7 interviews (2 in BU1 and 5 in BU2) - 1 secondary data document	
Value network pressures related to <b>interdependence</b> issues (= 32 occurrences)	BMI adoption (= 255 occurrences)	Strategic tensions (= 77 occurrences)	Organizational tensions (merged codes) (= 182 occurrences)	Organizational tensions (merged codes) (= 182 occurrences)	Managerial response: employees' empowerment (= 40 occurrences)
= 19 co-occurrences located in: - 9 interviews (3 in BU1 and 6 in BU2) - 4 secondary data documents		= 30 co-occurrences located in: - 13 interviews (8 in BU1 and 5 in BU2) - 1 secondary data document		= 10 co-occurrences located in: - 4 interviews (2 in BU1 and 2 in BU2)	
Institutional pressures highly consistent with organizational goals <b>(Content)</b> (= 19 occurrences)	BMI adoption (= 255 occurrences)	Managerial tensions (= 98 occurrences)	Organizational tensions (= 182 occurrences)	Value network pressures (merged codes) (= 40 occurrences)	Firm's acquiescence (= 38 occurrences)
= 16 co-occurrences located in: - 13 interviews (5 in BU1 and 8 in BU2)		= 23 co-occurrences located in: - 9 interviews (7 in BU1 and 2 in BU2)		= 10 co-occurrences located in: - 4 interviews (1 in BU1 and 3 in BU2) - 2 secondary data documents	

**Annexe 6. Guides des focus groups et entretiens semi-dirigés du chapitre 3**

Focus groups guide	Phase 1 (10mn)	Individual brainstorming: each participant thinks about and writes down the value proposition that best describe(s) the studied BMI project, without sharing it with other participants.
	Phase 2 (30mn)	Collective brainstorming: each individual value proposition is displayed on a shared screen and its relevance is assessed by the other participants, in order to reformulate and validate a common value proposition that fits everyone's perception on BMI. If no consensus is achieved, keywords generating alignment tensions are displayed in a red color and further discussed with participants.
	Phase 3 (30mn)	Collective brainstorming; participants are asked to identify the main activities and partners that/who could help setting up the common value proposition.
Interviews guide	Q0	Introduction to the research team and project (brief explanation of goals, methodological design and timeline)
	Q1	Could you introduce yourself through your current position in the company and your previous career and training?
	Q2	For you, what is the project [name of the BMI project]? What is or would be your (individual) role in its implementation?
	Q3	When did this project start and what is its current progress?
	Q4	Does the value proposition that was formulated at the end of the first phase of this study (focus groups) seem to be aligned with you company's strategy? How do you see it as a source of value creation for your company? For the value network? For society?
	Q5	Do you think all the partners listed within the value network could share a common goal/objective? If yes or no, why?
	Q6	How could partners coordinate? Is there one or several partners responsible for the coordination? Do you think it is important to have someone in charge of this coordination? Have key stakeholders (public/private) played an intermediary role in the emergence of this value network?  Are the rules of the game well set up? Or will/should they be?  What is the role (that would be) played by your organization?
	Q7	Is there any subject on this project that we haven't talked about which seems important to you?

**Annexe 7. Grille de codage du chapitre 3**

<b>Code category</b>	<b>Code name</b>		<b>Source</b>	<b>Definition</b>
BMI rationales	Rational egoism		Deductive (Singer, 1994)	BMI serves only the organization's and its shareholders' interests.
	Rational sympathy			BMI serves stakeholders' interests to achieve organizational interests.
	Rational expressivity			BMI pursues an organizational sense of autonomy.
	Rational commitment			BMI deliberately serves a non-financial cause.
	Deliberative rationality			BMI involves a political dialogue on organizational goals with external stakeholders.
	Utilitarianism			BMI is based on a social cost-benefit analysis aimed at achieving the greatest good for the greatest number.
	Contractarianism			BMI integrates justice and social fairness concerns with strategy.
	Deontology			BMI is driven by the respect of moral duties.
	Systemic rationality			BMI emerges over time as a function of the historical organization's experience and capabilities.
Tensions' management mechanisms	Organizational level	Co-engagement	Deductive (Best et al., 2022)	Clarifying customers' expectations, challenging realities
		Co-delivery		Training support and advice, challenging realities, signposting customers, co-joined working arrangements
		Co-production		Joint training
		Co-experience		Shared expertise, training
		Co-improvisation		Problem solving
		Co-evaluation		Stakeholder satisfaction, feedback generation, testimonials, performance monitoring and reporting
		Valuing value	Deductive (Oskam et al., 2020)	The discovery process through which multiple actors from an organization search for agreement about what environmental, social, and economic value to create; how to share this value; and thereby, how to satisfy each actor's interests.
		Enabling cycle	Deductive (Rey-Garcia et al., 2020)	The reconfiguration of assets, leveraging of processes and systems, and the integration of resources at the organizational level
		Exerting influential leadership	Inductive	Ability to elaborate and diffuse a powerful and convincing strategic vision, which drives internal and external actors into the same direction

	Value network level	Co-experience	Deductive (Best et al., 2022)	History of working together, evidencing quality and performance
		Co-accountability		Fulfilling mandatory requirements, governance, representative structures, shared decision-making, monitoring and reporting
		Co-design		Streamlining, quality norms, new systems development
		Co-engagement		Shared knowledge, expertise and evidence, strategic consultations
		Co-improvisation		Dialogical consultation
		Co-exchange		Online platforms
		Co-promotion	Professional kitemarks, marketing events, brand raising, testimonials	
		Valuing value	Deductive (Oskam et al., 2020)	The discovery process through which multiple actors from the value network search for agreement about what environmental, social, and economic value to create; how to share this value; and thereby, how to satisfy each actor's interests.
		Enabling cycle	Deductive (Rey-Garcia et al., 2020)	The reconfiguration of assets, leveraging of processes and systems, and the integration of resources at the network level.
	Institutional level	Co-dissemination	Deductive (Best et al., 2022)	Impact demonstration, strategic engagement, strategic consultation, lobbying, impact demonstration and reporting, performance reporting
		Co-engagement		Consultation events, bi-lateral discussions, lobbying
		Co-accountability		Contract compliance
		Co-promotion		Lobbying
		Co-maintenance		Procedural justice
		Co-evaluation		Social return on investment
		Valuing value	Deductive (Oskam et al., 2020)	The discovery process through which institutional actors search for agreement about what environmental, social, and economic value to create; how to share this value; and thereby, how to satisfy each actor's interests.
		Enabling cycle	Deductive (Rey-Garcia et al., 2020)	The reconfiguration of assets, leveraging of processes and systems, and the integration of resources at the institutional level.
		Regulation	Inductive	Enforcing partners' alignment through the implementation of institutional rules and norms



**Annexe 8. Principales occurrences du chapitre 3**

		Total	C1		C2		C3		C4		
			INT	EXT	INT	EXT	INT	EXT	INT	EXT	
BMI rationales	Rational sympathy		226	31	37	23	17	16	34	41	27
	Rational commitment		171	48	11	42	21	6	15	16	12
	Deontology		61	29	13	17	1	0	0	0	1
	Rational expressivity		49	4	2	3	0	1	0	12	24
	Utilitarianism		29	1	2	3	0	16	6	1	0
Tensions' management mechanisms	Organizational level	Co-engagement	31	5	6	8	1	3	0	4	4
		Leadership	26	10	2	1	0	3	2	4	4
	Value network level	Enabling cycle	51	10	12	4	0	7	4	11	3
		Valuing value	47	11	14	5	1	3	4	4	5
		Co-accountability	35	0	7	3	0	7	3	11	4
		Co-evaluation	13	2	5	1	0	3	0	1	1
		Co-engagement	12	0	2	1	0	4	0	1	4
	Institutional level	Regulation	15	0	1	1	3	6	4	0	0
		Co-dissemination	5	0	0	0	1	2	2	0	0



## Résumé

A l'ère des grands challenges numériques, environnementaux et sociaux, les entreprises sont enclines à reconfigurer leur modèle d'affaires (*business model*) afin de créer, livrer et capturer durablement de la valeur au-delà de leurs seules frontières organisationnelles. Ce phénomène, qualifié d'innovation de business model (BMI), est en nette voie d'accélération à l'échelle internationale depuis une dizaine d'années et suscite donc un intérêt croissant tant au sein du milieu socio-professionnel que du monde académique. Malgré sa popularité, la BMI fait cependant l'objet de fréquents échecs, notamment lors de la phase précoce de son adoption. En effet, l'adoption d'une BMI suppose de répondre à de nombreuses difficultés généralement non anticipées par les managers, telles que des pressions et tensions positionnées aux différents niveaux de l'organisation, du réseau de valeur et des institutions. Cette thèse, structurée autour de trois articles de recherche, s'inscrit dans la continuité des travaux qui se sont attachés à préciser l'origine, la nature et les voies de réponses à ces difficultés associées à l'adoption de la BMI selon une approche multiniveau. Notre objectif est de remonter aux différentes logiques qui motivent l'adoption de la BMI et de déterminer les types de pressions, tensions et réponses qui leur sont associées aux différents niveaux. Au plan théorique, cette thèse développe un cadre multiniveau original, intégrant les apports de la « stratégie comme philosophie morale » pour identifier précisément les logiques initiant l'adoption de la BMI, et ceux de la théorie néo-institutionnelle pour établir une typologie affinée des pressions, tensions et réponses qui affectent l'adoption. Au plan empirique, nous mobilisons une méthodologie qualitative mixte, fondée sur une revue de littérature systématique, une étude de cas unique aux unités emboîtées et une étude de cas multiple.

Nos principaux résultats sont de trois ordres. Premièrement, nous parvenons à identifier les principales logiques qui motivent l'adoption d'une BMI et donnent lieu à trois principales architectures de BMI impliquant la reconfiguration des mécanismes de création, livraison et capture de valeur à différents niveaux (organisationnel, réseau et sociétal). Deuxièmement, nous révélons que la coexistence de différentes logiques organisationnelles et institutionnelles dans le contexte d'accélération de la transition numérique peut se manifester par l'émergence de pressions externes (aux niveaux du réseau de valeur et des institutions) et de tensions internes (au niveau organisationnel) qui contraignent l'adoption de la BMI et complexifient la mobilisation de réponses organisationnelles adaptées. Enfin, dans le cas où la BMI est adoptée collaborativement par une organisation focale et ses partenaires, nous qualifions la nature des tensions d'alignement qui proviennent de la coexistence de différentes logiques soutenues par les acteurs internes et externes et proposons des voies de réponses pour transformer ces tensions en opportunité de création de valeur. Ces résultats nous permettent de développer des contributions théoriques aux différents champs de la BMI, de la littérature néo-institutionnelle et du management stratégique de l'innovation. Dans la continuité de ces apports théoriques, nous formulons également des recommandations managériales pour aider les organisations à anticiper et maîtriser les risques multiniveaux associés à l'adoption d'une BMI.

**Mots-clés : innovation de business model, adoption d'une innovation, multiniveau, logiques, pressions, tensions**

## Summary

In the era of digital, environmental and social grand challenges, firms are likely to reconfigure their business model in order to create, deliver and capture value beyond their sole organizational boundaries. This phenomenon, qualified as business model innovation (BMI), has been rapidly increasing at the international scale for a decade, and thus generates the growing interest of both the socio-professional and academic areas. Despite of its popularity, BMI is still subject to frequent failures, especially during the early phase of its adoption. Indeed, BMI adoption implies to respond to numerous difficulties, which are generally not anticipated by managers, such as pressures and tensions occurring at the various levels of the organization, value network and institutions. This thesis, which is structured around three research papers, is in line with studies that aim to precise the origins, nature and possible responses to these difficulties associated to BMI adoption, through a multi-level perspective. Our goal is to go back to the different rationales that motivate BMI adoption and to identify their associated types of pressures, tensions and responses that emerge at different levels. From a theoretical perspective, this thesis develops an original multi-level framework, which integrates the contributions of the « strategy as moral philosophy » so as to further identify the rationales initiating BMI adoption, and the contributions of the neo-institutional theory for refining the typology of pressures, tensions and responses affecting adoption. Empirically, we draw on a mixed qualitative methodological design which implies a systematic review, a single case study with embedded units and a multiple case study.

Our main results are threefold. First, we manage to identify the main rationales that motivate BMI adoption and lead to three main architectures of BMI which imply the reconfiguration of value creation, delivery and capture mechanisms at various levels (organizational, network and societal). Second, we reveal that in the context of digital transition, the coexistence of different organizational and institutional rationales can result in the emergence of external pressures (at the value network and institutional levels) and internal tensions (at the organizational level) which constrain the adoption of BMI and complexify the mobilization of appropriate organizational responses. At last, in cases where BMI is collaboratively adopted by a focal organization and its partners, we qualify the nature of alignment tensions that result from the coexistence of different rationales supported by internal and external actors, and propose possible responses for transforming such tensions into value creation opportunities. These results enable us to develop theoretical contributions to the various fields of BMI, neo-institutional literature and strategic management of innovation. In line with these theoretical contributions, we establish managerial recommendations that should help organizations to anticipate and manage the multi-level risks associated to BMI adoption.

**Keywords: Business model innovation, innovation adoption, multi-level, rationales, pressures, tensions**