CRANFIELD UNIVERSITY

ROSINA WATSON

ENGAGING STAKEHOLDERS IN SUSTAINABILITY-ORIENTED INNOVATION

SCHOOL OF MANAGEMENT
PhD Programme

Doctor of Philosophy
Academic Year: 2013 - 2018

Supervisor: Professor Hugh Wilson
Associate Supervisor: Professor Emma Macdonald
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This thesis is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

To my father, James, with love forever

ABSTRACT

Companies increasingly collaborate with external stakeholders to deliver sustainability-oriented innovations intended to address environmental and social challenges. These partnerships have the potential to combine the diverse resources and capabilities required to implement systemic change, but suffer from conflicts and tensions arising from differences in partners' objectives driven by their contrasting institutional logics (or 'value frames'). Through three interconnected studies written as journal articles, this thesis contributes to our understanding of how companies can effectively engage their stakeholders in sustainability-oriented innovation. A systematic literature review integrates evidence from 88 scientific articles into a framework revealing the hierarchy of capabilities required to integrate a company's stakeholders in sustainability-oriented innovation. Notably, a tier of second-order stakeholder learning capabilities is identified which enables companies to acknowledge, work positively with and learn from differences between themselves and their partners. These differences, as well as the mechanisms and strategies employed to navigate them, are further investigated through eight case studies of sustainability-innovation partnerships. First, findings from a subset of five business-nonprofit partnerships are synthesized into an action-oriented 'CIMO-logic' framework which sets out the stakeholder interventions used and the value outcomes generated. Whilst project outcomes are achieved by partners enforcing their own interests through *agent control*, total value is enhanced when partners recombine their resources and capabilities through *resource integration*; this process is facilitated by partners navigating differences between their value frames through *value empathy*. Second, analysis of all eight case studies focuses in on this issue of recognizing and reconciling difference. Five dimensions of difference between partners emerge (*goal salience, goal instrumentality, temporal focus, language* and *collaborative intent*) along with five strategies deployed to reconcile tensions arising from these differences (*engagement logic alignment, cultural bridging, partner positioning, project scoping* and *success measurement*). Taken together, the thesis's findings advance our understanding of how companies can effectively integrate stakeholder perspectives into their sustainability-oriented innovation processes. They may have implications for other innovation and partnerships contexts involving stakeholders, including those from diverse institutional settings.

Keywords: sustainability-oriented innovation; environmental innovation; stakeholder engagement; cross-sector partnerships; dynamic capabilities; institutional logic; systematic literature review; value frames; CIMO-logic; paradox; open innovation

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I dedicate this thesis to my beloved father, James Ladd, who sadly passed away on 28th May 2018. Daddy was an inspiration to me having completed his degree in Physics part-time whilst starting a new business and raising three boys. He was always an innovator himself, whether manufacturing the first semi-conductors in his factory, or being an early adopter of the electric car, and has always encouraged my academic efforts. Although he will not be there in person to see me graduate I know he would have been proud of me.

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LIST OF ABBREVIATIONS

BFSF	The Better Future Supplier Forum (BT)
BPC	Beauty and Personal Care
BT	British Telecom
CIMO	Context, Intervention, Mechanism, Outcome
M&S	Marks and Spencer
NGO	Non-governmental organization
NT	The National Trust
SOI	Sustainability-oriented innovation
TSC	The Supporter's Club (BT)
WRAP	Waste and Resources Action Plan

1 INTRODUCTION

It is widely accepted that businesses can enhance their innovation processes by working with external stakeholders. This is even more the case for innovations intended to address the issues and opportunities associated with environmental and social challenges – which I term sustainability-oriented innovation (SOI). This is because tackling these challenges frequently involves 1) changing a process or a system situated beyond the boundaries of an individual organization 2) accessing a combination of resources and capabilities that do not necessarily exist solely within the commercial entity and 3) managing environmental/social as well as economic objectives. The stakeholders representing this wider system, who can provide the required resources and expertise (e.g. competitors, suppliers, charities and environmental groups) are those whom a business does not typically involve in their innovation processes. These diverse stakeholders are unlikely to share the same motivations for an innovation and are likely to have different objectives from the project and views on what defines success, so working together becomes more difficult. Companies, however need to engage in this collaborative innovation to deliver their sustainability strategies. There is therefore a need for more knowledge on how businesses can successfully engage stakeholders, often from distinct institutional settings, in sustainability-oriented innovation.

This chapter outlines the rationale for undertaking research to understand and influence the practice of engaging stakeholders in sustainability-oriented innovation, from an academic and personal perspective. The aim and objectives of the research are then set out, followed by an overview of the research design and thesis structure. The chapter concludes with an overview of how the findings have been disseminated so far.

1.1 Research rationale

The rationale is discussed from the perspective of the academic literature and from a personal perspective.

1.1.1 Academic rationale

This research is positioned in a relatively unexplored field at the intersection of overlapping bodies of literature relating to stakeholders, innovation and sustainability.

The stakeholder engagement literature historically focused on trade-offs between interests, but has more recently moved towards exploring the complementarity between stakeholders' resource allocations (Henisz, Dorobantu and Nartey, 2014) and the synergistic links between the demands of business and society (O'Riordan and Fairbrass, 2014). There is growing recognition that engaging with stakeholders can "deliver innovative solutions that benefit a particular stakeholder group while increasing the pie for all stakeholders" (Eccles, Ioannou and Serafeim, 2014, p. 2848), and that stakeholder diversity can be harnessed to drive innovation (Dawkins, 2015; Watson et al., 2018).

In the open innovation (Chesbrough, 2012; West and Bogers, 2014) and co-creation (Payne, Storbacka and Frow, 2008) literatures, researchers specifically examine how stakeholder insight can be leveraged to create more valuable innovation. However, this literature tends to focus on customers as the primary source of external insight and does not consider how the open innovation process might change if the innovations have social/environmental as well as economic objectives. Literature on innovation (R&D) alliances (Schilke, 2014) primarily focuses on partnerships with other businesses (or research institutes) and similarly does not consider the implications of SOI.

Meanwhile, the sustainability-oriented innovation (SOI) literature (Adams et al., 2012, 2016), whilst hinting that 'organizational transformation' and 'systems building' type innovation require more interdependent collaborations with stakeholders, does not explore in depth how this should be done.

There is a broad domain of literature which does specifically address partnership between profits and nonprofits pursuing environmental, social and economic outcomes. This includes cross-sector (social) partnerships (Ashraf, Ahmadsimab and Pinkse, 2017; Barroso-Méndez et al., 2016; Dentoni, Bitzer and Pascucci, 2016; Pittz and Intindola, 2015; Stadtler and Van Wassenhove, 2016) and collaborations (Murphy, Perrot and Rivera-Santos, 2012); public-private partnerships (Villani, Greco and Phillips, 2017) and collaborations (Caldwell, Roehrich and George, 2017; Quélin, Kivleniece and Lazzarini,

2017), multi-stakeholder partnerships (Sloan and Oliver, 2013), inter-organizational collaborations (Weber et al., 2017), 'base of the pyramid' partnerships (Hahn and Gold, 2014) and sustainable collaborations (Niesten et al., 2017). However, with a few exceptions (Holmes and Smart, 2009; Mirvis et al., 2016; Murphy, Perrot and Rivera-Santos, 2012), this research does not explicitly address innovation outcomes.

Although recent research in this cross-sector partnerships domain has turned to investigating how tensions between partners from different sectors can be managed (Sharma and Bansal, 2017; Stadtler and Van Wassenhove, 2016; Villani, Greco and Phillips, 2017), most research into navigating the tensions or paradoxes inherent in pursuing corporate sustainability has focused on tensions within a corporate entity (Hahn et al., 2015) or hybrid organization (Battilana and Dorado, 2010; Jay, 2013; Pache and Santos, 2010), rather than between stakeholders collaborating on an SOI project. There is therefore need for more research into how businesses can work with a wide variety of partners, often from different institutional domains, to deliver sustainability-oriented innovation.

1.1.2 Personal rationale

Before embarking on my PhD, I worked for 12 years at Home Retail Group Plc (comprising Argos Ltd and Homebase Ltd) in finance, strategy and commercial roles, before spending 3 years as Head of Corporate Responsibility from 2008 to 2011. As Head of Corporate Responsibility, I found myself in a very outward facing role, collaborating on projects with charities, nonprofit consultancies, environmental groups, suppliers, customers and other companies from within and outside our sector. This was in addition to influencing and working with almost every internal team in the business to deliver our sustainability objectives. During my tenure, we moved away from charity partnerships which were purely philanthropic, towards mutually beneficial relationships designed to drive footfall and customer and employee engagement and local community benefits as well as raising money for our charity partner - with programmes such as the Toy Exchange with Barnados[1]. In the environmental sphere, we worked with government-

[1] http://www.barnardos.org.uk/news/media_centre/press_releases.htm?ref=84679

funded nonprofit WRAP (Waste & Resources Action Programme), product suppliers and a new packaging supplier to develop reusable packaging for upholstery deliveries[2]. We also collaborated with competitors in our sector to agree and deliver against a Home Improvement Sector commitment[3] to reduce packaging and waste to landfill.

Engaging with these stakeholders on these innovation projects was very different from the typical working relationship we were used to having with product suppliers, and it was not something we as a business knew much about how to do well. It seemed to require a wide-reaching dialogue, with each party needing to explore and understand the other's needs and motivations to find common ground where value could be created and shared by all involved. It also involved setting non-financial as well as financial targets which were harder to define and measure.

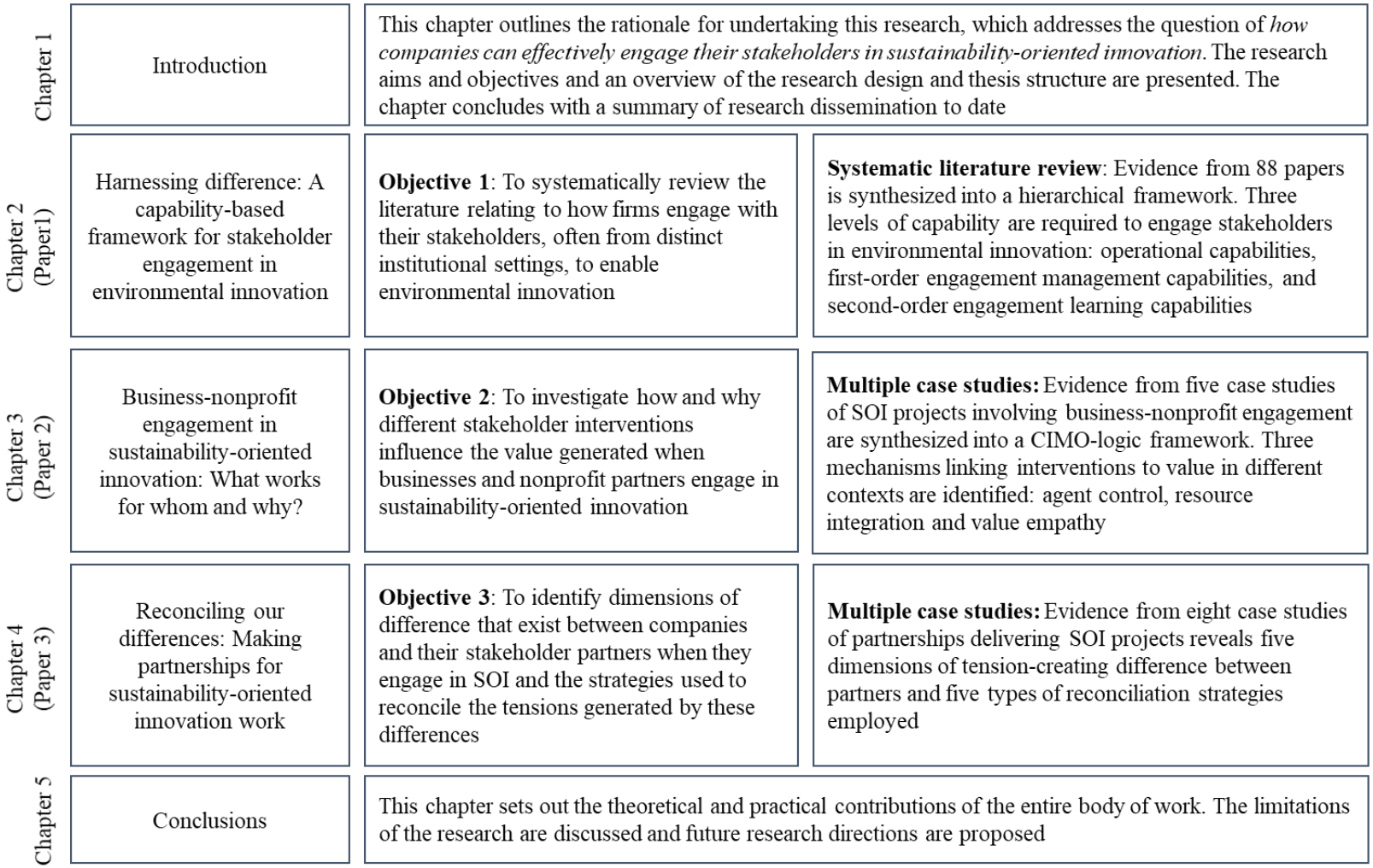
I was motivated by my experiences in this role to find out more about how to better manage these valuable stakeholder relationships to maximise the benefits to all involved, and to society more broadly. I look forward to continuing to share the findings from this research not only with fellow academics, but also through my teaching at Cranfield and with practitioners in business and in other sectors.

1.2 Research aims and objectives

This thesis contributes to our understanding of *how companies can effectively engage their stakeholders in sustainability-oriented innovation* by fulfilling three primary research objectives: (1) to systematically review the literature relating to how firms engage with their stakeholders, from distinct institutional settings, to enable environmental innovation; (2) to investigate how and why different stakeholder interventions influence the value generated when businesses engage nonprofit partners in sustainability-oriented innovation and (3) to identify the dimensions of difference that exist between companies and their stakeholder partners when they engage in SOI and the strategies used to reconcile these differences. Figure 1-1 provides a graphical summary of these objectives, the research method, the key findings associated with each objective and how they relate to the chapter structure.

[2] http://www.wrap.org.uk/sites/files/wrap/15203-06%20Argos%20CS%20LoRes.pdf
[3] http://www.wrap.org.uk/content/home-improvement-sector-commitment

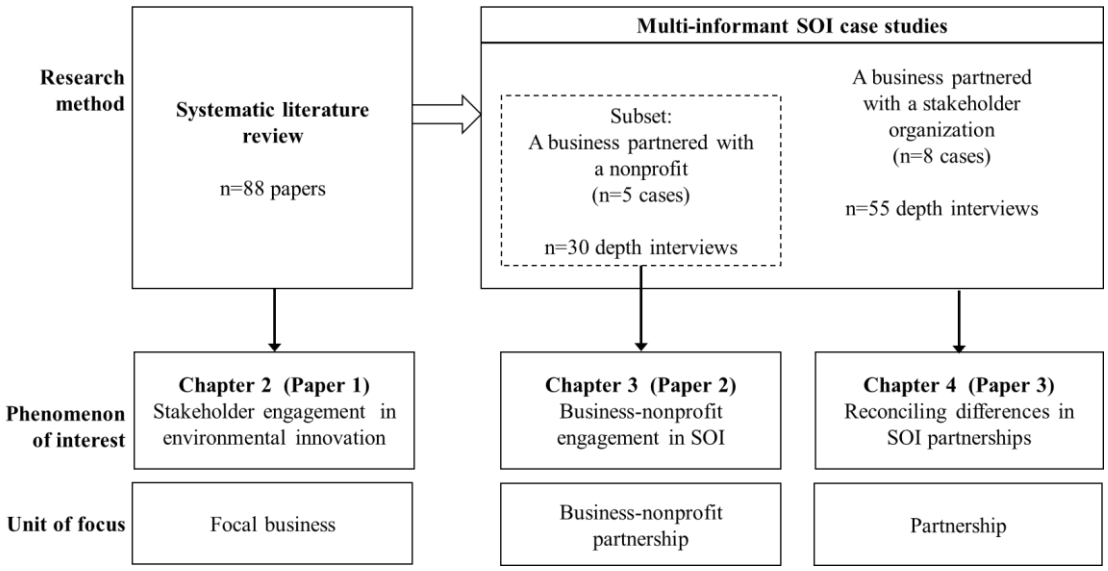
Figure 1-1 Thesis objectives, structure, research method and key findings



1.3 Overview of research design

The research was conducted as follows. First, a systematic review of the academic literature on stakeholder engagement in environmental innovation was conducted as detailed in Chapter 2. Then a qualitative study was conducted wherein eight case studies of dyadic relationships between a focal business and a stakeholder partner in relation to an identified SOI project were studied. Data collection included a total of 55 in-depth interviews conducted with representatives closely involved with the project from the focal business and the partner organization. Five of these cases involving nonprofit partners formed the data set which informs Chapter 3. The full data set from all eight cases including both for-profit and nonprofit partners informed Chapter 4. Figure 1-2 provides a graphical summary of the process and a more detailed account of the empirical research methodology is provided at Appendix A.

Figure 1-2 Overview of research design



1.4 Thesis structure

The thesis is organised in 'paper format,' that is, it is structured to deliver its contributions through a series of distinct chapters in the style of journal articles. Each chapter represents a self-contained description of the research activity relating to each of the three research objectives stated above including a literature review, methodology, results and

discussion. Taken together the chapters describe a single programme of research contributing to the overall aim of the thesis. The rest of this thesis proceeds as follows.

Chapter 2 focuses on the first research objective of systematically reviewing and synthesizing the literature relating to how firms engage with their stakeholders, from distinct institutional settings, to enable environmental innovation. This chapter outlines the systematic review approach adopted, presents an overview of the papers reviewed and synthesizes the findings into a hierarchical framework of the capabilities required to engage stakeholders in environmental innovation. Detailed tables summarize the evidence relating to each element of this framework. The chapter concludes by suggesting that the framework could provide a structure for further research into open innovation and co-creation more broadly. It also establishes the need for more research into the differences in value frames which arise between collaborators, and to understand the strategies and mechanisms employed at an individual, group and organizational level to navigate these differences. These themes are picked up in Chapters 3 and 4.

Chapter 3 addresses objective two by empirically investigating how and why different stakeholder interventions influence the value generated when businesses engage nonprofit partners in sustainability-oriented innovation. This chapter reviews the literature relating to cross-sector stakeholder engagement and partnerships, outlines the case-study methodology and synthesizes the findings from five case studies into a framework setting out the types of stakeholder interventions observed, the outcomes they generate and proposing three mechanisms through which these interventions drive outcomes in different contexts. This chapter concludes with research directions, including a call for future research into collaborations in which partners navigate differences in institutional logics to enhance shared value. This theme is developed in Chapter 4.

Chapter 4 addresses the third objective by identifying the dimensions of difference that exist between companies and their stakeholder partners when they engage in SOI and the strategies used to reconcile these differences. This chapter reviews literature relating the concept and management of difference in stakeholder partnerships. It then outlines the method used to collect and analyse the data from all eight of the cases studies, before presenting a framework setting out five potential dimensions of difference between

partners and five strategies deployed in varying combinations to reconcile those differences. The chapter concludes with contributions and suggestions for future research.

Chapter 5 brings the findings from the three papers (Chapters 2-4) together and discusses the overall contributions of the thesis and the implications this research has for practitioners. The chapter concludes with a discussion of the main limitations of this thesis and makes suggestions as to how the research could be taken forward.

1.5 Research dissemination

Table 1-1 presents a summary of research dissemination to date. As the lead author of the three papers that make up this thesis, I proposed the overall topic of the thesis and the overall scope and objectives of each paper, with discussion and refinement from my supervisor and associate supervisor, who are the second and third authors of Papers 2 and 3 and the second and fourth authors of Paper 1. I designed the research method, including data collection and data analysis, with input and advice from my supervisors. I collected and analysed all the data alone, with the sole exception of the quality assessment of the papers making up the literature review in Paper 1. This quality assessment was conducted by me and the second and third authors to establish inter-coder reliability on the quality criteria used to decide which papers were included in the review, in response to a reviewer comment. I drafted each of the three papers in full, with advice on structure and feedback on early drafts from my supervisors. The third author of Paper 1 was my PhD panel chair during the first two years of my PhD and as such contributed to the refinement of Paper 1, as well as conducting the quality review of the literature review papers as outlined above.

Table 1-1 Research dissemination

Paper	Journal papers	Conference papers and academic presentations	Practitioner presentations
Paper 1 (Chapter 2)	***Published***: Watson, R., Wilson, H.N., Smart, P. and Macdonald, E.K. (2018) 'Harnessing Difference: A Capability-Based Framework for Stakeholder Engagement in Environmental Innovation', ***Journal of Product Innovation Management,*** 35(2), pp. 254–279.	'Harnessing difference: A capability-based framework for engaging stakeholders in sustainability innovation' presented at **Academy of Management** conference, Vancouver, August 2015 'Harnessing difference: A capability-based framework for engaging stakeholders in sustainability innovation' awarded ***Thomas Hustad Best Student Paper*** at **Innovation & Product Development Management Conference**, Copenhagen, June 2015	
Paper 2 (Chapter 3)	***In second revision***: Watson, R., Wilson, H.N. and Macdonald, E.K. 'Business-nonprofit engagement in sustainability-oriented innovation: What works for whom and why?', ***Journal of Business Research***	'Engaging nonprofit stakeholders in sustainability-oriented innovation: What works for whom and why?' presented at **British Academy of Management** / Manchester Alliance Business School Sustainable Collaboration workshop, Manchester, May 2018	'Refrigerants Naturally! Collaboration case study' presented to Management and Corporate Sustainability MSc students, Cranfield, March 2018
Paper 3 (Chapter 4)	***In preparation***: Watson, R., Wilson, H.N. and Macdonald, E.K. 'Reconciling our differences: Making partnerships for sustainability-oriented innovation work.' Target journal: ***Organization Studies*** or ***Journal of Management Studies.***	'Engaging stakeholders in innovation: An overview and research directions' presented as a keynote speech at Special Session on Stakeholders and Innovation, **European Marketing Academy Conference** (EMAC), Glasgow, June 2018	'Innovation through collaboration' presented at **Customer Management Forum**, Cranfield, September 2018 'Engaging stakeholders in sustainable innovation' presented at **Cranfield School of Management Sustainability Network** event, London, December 2017

1.6 References to Chapter 1

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2 HARNESSING DIFFERENCE: A CAPABILITY-BASED FRAMEWORK FOR STAKEHOLDER ENGAGEMENT IN ENVIRONMENTAL INNOVATION

ABSTRACT

Innovation for environmental sustainability requires firms to engage with external stakeholders to access expertise, solve complex problems, and gain social legitimacy. In this open innovation context, stakeholder engagement is construed as a dynamic capability that can harness differences between external stakeholders to augment their respective resource bases. An integrative systematic review of evidence from 88 scientific articles finds that engaging stakeholders in environmental innovation requires three distinct levels of capability: specific operational capabilities; first-order dynamic capabilities to manage the engagement (engagement management capabilities); and second-order dynamic capabilities to make use of contrasting ways of seeing the world to reframe problems, combine competencies in new ways, and co-create innovative solutions (value framing), and to learn from its stakeholder engagement activities (systematized learning). These findings enhance understanding of how firms can effectively incorporate stakeholder perspectives for environmental innovation and provide an organizing framework for further research into open innovation and co-creation more broadly. Wider contributions to the dynamic capabilities literature are to i) offer a departure point for further research into the relationship between first-order and second-order dynamic capabilities, ii) suggest that institutional theory can help explain the dynamic capability of value framing, iii) build on evidence that inter-institutional learning is contingent on not only the similarity but also the differences between organizational value frames, and iv) suggest that operating capabilities impact on the effectiveness of dynamic capabilities, rather than only the other way around, as is usually assumed. A methodological contribution is made through the application of quality assessment criteria scores and intercoder reliability statistics to the selection of articles included in the systematic review.

Keywords: environmental innovation; dynamic capabilities; stakeholder engagement; institutional logics; value frames; systematic literature review

2.1 Introduction

Innovation for environmental sustainability (hereafter "environmental innovation") represents the subset of sustainability-oriented innovation (Adams et al., 2016; Klewitz and Hansen, 2014) addressing the environmental dimension of sustainability. It is defined as "the production, assimilation or exploitation of a product, production process, service or management or business method that is novel to the organisation (developing or adopting it) and which results, throughout its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resources use (including energy use) compared to relevant alternatives" (Kemp and Pearson, 2008, p.7). Environmental innovation is critically important in practice. This is because resource scarcity - evidenced by commodity prices which increased by nearly 150% from 2002 to 2010, erasing a century's worth of real price declines (World Economic Forum, 2014) - coupled with stakeholder pressure to address sustainable development have led many organizations to pursue environmental innovation as a way to achieve environmental, social and economic outcomes simultaneously.

Environmental innovation poses complex, systemic challenges for how firms engage external stakeholders such as customers, suppliers, government, civil society and NGOs. First, this type of innovation is prevalent in rapidly changing business and natural environment contexts, demanding continual resource reconfiguration (Hart, 1995). This may represent a technological frontier for the firm which due to their inexperience may require external support (De Marchi and Grandinetti, 2013). Second, it often requires engagement with multiple stakeholders who are very different from each other in terms of their institutional origins and logics and the ways they assess and value success and failure (Driessen and Hillebrand, 2013; Polonsky and Ottman, 1998). Third, it may demand innovation which moves beyond product and process innovation to business model innovation, and as such involves expertise sourced through external and unfamiliar collaboration (Albino, Dangelico and Pontrandolfo, 2012; De Marchi and Grandinetti, 2013).

Building on research identifying stakeholder engagement as an organizational capability (Ayuso et al., 2011; Hart, 1997; Hart and Sharma, 2004; Sharma and Vrendenburg, 1998), stakeholder engagement for innovation is construed as a dynamic capability - defined as

"the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al., 2007, p.516). This is because relationships with external stakeholders give firms access to resources outside their boundaries, and augment the organizational resource base (Helfat et al., 2007), and because stakeholder relationships driven by a need for innovation are more strongly geared toward resource reconfiguration than other types of alliances (Schilke, 2014). Stakeholder engagement has commonly been understood by stakeholder theorists as a transactional process whereby managers learn what is important to their various stakeholder groups, process this information internally, and try to reconcile the stakeholders' divergent, incompatible interests (Donaldson and Preston, 1995; Hill and Jones, 1992). Recent stakeholder engagement literature, however, has moved away from the idea of making trade-offs between interests, towards exploring the complementarity between stakeholders' resource allocations (Henisz, Dorobantu and Nartey, 2014) and the synergistic links between the demands of business and society (O'Riordan and Fairbrass, 2014). There is growing recognition that engaging with stakeholders can "deliver innovative solutions that benefit a particular stakeholder group while increasing the pie for all stakeholders" (Eccles, Ioannou and Serafeim, 2014, p.2848), but also that harnessing stakeholder diversity to drive innovation requires approaches which attempt to "structure and utilize discord rather than to reduce or eliminate it" (Dawkins, 2015, p.1).

Open innovation research has recently explored how firms can leverage stakeholder insight to their advantage (West et al., 2014). Collaborating with customers and other stakeholders is increasingly seen in the open innovation (Chesbrough, 2012; von Hippel, 2005; West et al., 2014) and co-creation literature (Nonaka, 1991; Payne, Storbacka and Frow, 2008) as a way to improve idea generation and concept development, resulting in products more highly valued by customers (Roberts and Candi, 2014). In addition to product and service innovation, innovation research has widened in scope to incorporate process and business model innovation (Johnson and Christensen, 2008) and now considers more diverse innovation partners including customers, suppliers or sector experts, such as universities (West and Bogers, 2014). Despite this growing academic interest, there is surprisingly limited research on engagement by public, private and charitable sector stakeholders where different institutional settings lead to inherently

different values and logics (Holmes and Smart, 2009) and for which environmental innovation offers an exemplary context.

Accordingly, this article addresses the question of ***how firms engage with their stakeholders, from distinct institutional settings, to enable environmental innovation*** through a systematic review of 88 scientific articles representing the partial and fragmented literature on stakeholder engagement for environmental innovation. Recent reviews of the sustainability-oriented innovation literature agree that this innovation depends on stakeholder collaboration activities (Adams et al., 2016), and that interaction with external actors can increase the organization's innovative capability (Klewitz and Hansen, 2014). This research builds on these reviews by narrowing the focus specifically on stakeholder engagement as an organizational capability. A methodological contribution is also made through the application of quality assessment criteria scores (Pittaway et al., 2004) and intercoder reliability statistics (Macdonald, Kleinaltenkamp and Wilson, 2016) to the selection of articles included in the review.

Taking an existing resource-based model for integrating stakeholders into new product development (Verona, 1999) as a starting point, a process of analytic induction (Bansal and Roth, 2000) was used to evolve a revised framework in light of the reviewed literature, informed by the broader literature on dynamic capabilities, organizational learning, absorptive capacity and institutional logics. A hierarchical capability-based framework describing the organizational capabilities required to engage stakeholders effectively in environmental innovation is thereby developed (shown at Figure 2-1).

The findings show that engaging with stakeholders to drive environmental innovation requires three levels of capabilities. It requires specific operational capabilities; complex first-order dynamic capabilities to manage the engagement *(engagement management capabilities)*; and second-order dynamic capabilities (*engagement learning capabilities*) to allow organizations to co-create value *(value framing)* and to learn from their engagement *(systematized learning)*. This article thereby enhances understanding of how firms can effectively incorporate stakeholder perspectives for environmental innovation and provides an organizing framework for further research in this sub-field of cross-sector innovation studies. *Value framing* enables organizations to navigate and harness the differences in the ways of seeing the world that exist between them and their stakeholder

groups. Instead of seeing these differences as unassailable conflict or as opposing positions which have to be negotiated to a compromise, managers in the innovating firm think about the complete system operating beyond the immediate boundaries of the innovation context. They empathize with the alternative value frames of their collaborators, and harness these differences by using them to rethink (or reframe) the problem, combine competencies in new ways, and co-create innovative solutions. *Systematized learning* allows organizations to learn from specific individuals working with stakeholders on discrete innovation projects, because they can share that learning across the organization, and reconfigure their human and capital resources accordingly, so that the organization is 'learning to learn' and continually developing its stakeholder engagement capabilities. It is suggested that organizations with a value framing capability also have the potential to achieve this 'higher order' learning (Quist and Tukker, 2013) because they are able to question the boundary conditions, frames or assumptions of the problems at hand.

This research therefore contributes to the burgeoning literature on innovation for environmental sustainability. Through synthesis of the current literature, a hierarchical capability framework is developed which forms a basis for future empirical research of this phenomenon. A contribution is also made to the literature on innovation models and processes which integrate the insights and perspectives of external stakeholders, such as open innovation and co-creation. Open innovation research focuses on how innovation is sourced from external agents, but has largely overlooked how this insight is integrated into businesses (West and Bogers, 2014). The capabilities framework that emerges from this review sheds light on how organizations engage their stakeholders in environmental innovation at least and may also provide a basis for an understanding of stakeholder engagement in other open innovation contexts.

Finally, wider contributions of this work to the literature on dynamic capabilities are to: i) offer a starting point for further empirical research into the relationship between first-order and second-order dynamic capabilities, building on Schilke's (2014) work on strategic alliances, ii) respond to the call for research to look at institutional theory to increase understanding of how dynamic capabilities develop (Schilke, 2014) by identifying value framing as a second-order capability, iii) build on the notion (Lane and

Lubatkin, 1998) that inter-organizational learning is dependent (inter alia) on the similarity, or difference of the value frames (or dominant logics) of the organizations through evidencing a link between value framing and systematized learning, and iv) offer evidence of operating capabilities having an impact on the effectiveness of dynamic capabilities, "in contrast to the current unidirectional emphasis in the literature on how dynamic capabilities affect operating capabilities" (Newey and Zahra, 2009, p.S82). This research offers some insight into how the three levels of capabilities co-exist and work together with potential wider implications for the dynamic capabilities literature.

The next section details the systematic review method. The hierarchical capabilities-based framework is then introduced and used to structure a synthesis of the literature. Finally, findings are discussed, along with their implications for managers and innovation teams, and future research directions are proposed.

2.2 Method

A comprehensive synthesis of academic literature on stakeholder engagement in environmental innovation was conducted using Tranfield et al.'s (2003) systematic review approach. Inspired by systematic reviews in the field of medicine, this approach allows other researchers to replicate and update the literature review by providing a transparent account of the reviewer's procedures. This review proceeded through searching, screening, and extraction/synthesis stages as follows.

2.2.1 Searching

Relevant studies were searched for in the scientific literature represented by peer-reviewed journals. An initial scoping of the literature, including previous related reviews, identified the keywords to use when constructing search strings (detailed in Table 2-1). Two leading electronic databases, EBSCO and ABI/INFORM, were searched for articles whose titles and/or abstracts contained at least one of the search terms from all four themes, by linking the strings in Table 2-1 with the Boolean operator (AND). In this way, articles addressing the concept of environmental innovation in conjunction with that of stakeholder engagement were identified. This search across both databases returned a total of 1,079 titles.

Table 2-1 Search strings

Theme	Search string
Sustainability	(sustainab* OR environmental OR green OR ecolog* OR CSR OR "corporate social responsibility" OR "social* responsib*" OR "corporate social performance" OR eco-innovation OR "green technology" OR renewable* OR remanufacture* OR "triple bottom line" OR eco-efficien* OR eco-effectiv* OR SDI OR eco?centric OR biomimicry OR "beyond greening" OR "frugal innovation" OR "reverse innovation" OR "circular economy" OR "closed-loop" OR "life-cycle analysis" OR "cleaner production" OR "trickle up innovation" OR "cradle-to-cradle" OR "social innovation" OR "bottom of the pyramid" OR BOP OR ISO 14001)
Innovation	(innovat* OR R&D OR "research and development" OR invent* OR "product development" OR "new product development" OR NPD OR "value proposition" OR "process innovation" OR "organi?* innovation)
Stakeholder	(stakeholder* OR consumer* OR customer* OR user* OR supplier* OR competitor* OR partner* OR communit* OR regulator* OR policymaker*OR government OR NGO* OR "non-governmental organi?ation" OR media OR employee* OR director* OR department* OR investor* OR entrepreneur*)
Engagement	(engagement OR interaction* OR marketing OR "relationship management" OR collaborat* OR cooperat* OR co-operat* OR co-creat* OR co-produc* OR "open innovation" OR "user innovation")

2.2.2 Screening

An initial screening of article titles and abstracts, informed by the inclusion and exclusion criteria in Table 2-2, led to the retention of 97 articles relevant to the research question. 15 additional articles were sourced from the authors' prior reading, cross-referencing and snowballing from database-sourced articles. These 112 full articles were scored independently by three authors against the quality assessment shown at Appendix 1 (Pittaway et al., 2004), with the 88 articles achieving a total score of eight (out of a possible 15) or above by the majority of the authors being retained in the review. Following Macdonald, Kleinaltenkamp and Wilson (2016), intercoder reliability was checked with the proportional reduction in loss method (Rust and Cooil, 1994) and found to be at a very satisfactory level of 95%.

Table 2-2 Inclusion and exclusion criteria

Criterion	Inclusion	Exclusion
Study type	Empirical and theoretical/conceptual studies. Peer reviewed; working /conference articles included if high quality	
Language	English	Any other language
Sector	Private sector; can include private sector firms' engagement with public sector	Any study which does not include consideration of private sector firms
Date	1970 to 2014	Any study published before 1970
Relevance	• Sustainability innovation management • Addresses sustainability innovation and stakeholder engagement processes • Level of analysis – firm level practices and processes • Innovation consistent with environmental sustainability (can also include social and economic sustainability)	• Not directly relevant to the research question – e.g. sustainability only in the sense of continuance; environment not relating to the natural environment • Level of analysis – not firm-level practices and processes (e.g. community initiatives/activities) • Innovation consistent with social but not environmental sustainability • Technical research on manufacturing/supply chain

2.2.3 Extraction and synthesis

Information from these 88 articles was summarized in an Excel spreadsheet organized under descriptive, methodological and thematic categories. The dataset from the selected articles was heterogeneous, from multiple contexts and contained a mix of empirical (qualitative and quantitative) and conceptual articles. An integrative and qualitative cross-case analysis approach to synthesis was therefore used, each article being equivalent to a case (Mays, Pope and Popay, 2005). Using an existing product development model as a starting-point (Verona, 1999) an analytic induction approach was adopted (Bansal and Roth, 2000; Wilson, 2004) whereby we considered 'cases' (here, articles) one by one to look for evidence which supported, amended or contradicted this prior theory, and iteratively modified the framework as needed to fit each new round of data. Moving between this evolving framework, the review articles, and the broader literature on dynamic capabilities, organizational learning, absorptive capacity and institutional logics, a conceptual framework of the organizational capabilities required to engage stakeholders in environmental innovation was developed, including an elaboration of the underlying dimensions of these capabilities. This analysis can be characterized as integrative (Dixon-Woods et al., 2004; Rousseau et al., 2008) since it both reviews the literature but also

organizes it in a conceptually new way. The process for naming and defining constructs follows Gioia, Corley and Hamilton (2012) whereby literature is examined to establish where an existing term accurately represents the data, and where it does not, a new term is defined from the data. The final framework is shown in Figure 2-1, with each element of the framework described and evidenced more fully in Results: A hierarchical capability-based framework

2.3 Results: Descriptive analysis

2.3.1 Journals and rankings

In line with recent reviews of sustainability-oriented innovation literature (Adams et al., 2016; Klewitz and Hansen, 2014), the reviewed articles are situated within multiple disciplines, and distributed widely across journals. Consistent with an immature body of literature, the 88 articles come from 41 journals, 28 of which provide one article each. *Journal of Cleaner Production* and *Business Strategy and the Environment* together published almost a third of the studies, with 45 articles overall in environmental or ethical journals. There are additional clusters in innovation/R&D-related (20) and marketing-related (7) journals. Research interest is increasing, with 56 articles published in 2010 or later.

Table 2-3 Journals with two or more articles in the review

Journal title	No. of articles
Journal of Cleaner Production	17
Business Strategy & the Environment	11
Journal of Product Innovation Management	5
Journal of Business Ethics	4
MIT Sloan Management Review	4
Corporate Governance: The International Journal of Business in Society	3
European Journal of Innovation Management	3
Industrial Marketing Management	3
Ecological Economics	2
Industry & Innovation	2
R&D Management	2
Research Policy	2
Technovation	2
	60

2.3.2 Type of innovation.

Klewitz & Hansen (2014) identify three types of sustainability-oriented innovation: product innovation, involving improved or new products/services; process innovation relating to the production of goods and services that increase eco-efficiency; and, organizational innovation dealing with "people and the organization of work" (OECD, 2005, p.55). Based on this classification, 26 studies address product innovation, 25 organizational innovation, 19 consider process innovation, or a combination of product and process innovation and the remaining 18 address environmental innovation generally, or do not specify an innovation type.

2.3.3 Type of research

The majority of empirical studies are qualitative (46), ranging from single case studies to 47 cases. Quantitative studies (22) tend to be based on secondary innovation surveys such as the EU Community Innovation Survey, but also use questionnaires. Very few studies are longitudinal, even though analysing the effects of stakeholder engagement on innovation might be better studied in this way (see Le Ber & Branzei, 2010a; Horbach, 2008 for exceptions). Eight studies use mixed methods and the remaining 12 are conceptual.

2.3.4 Type of stakeholder

60 articles deal primarily with external stakeholder engagement. Many of these address external stakeholders generally, with users/consumers, suppliers and NGOs most frequently researched as single stakeholder groups (Table 2-4). 28 consider engagement with internal stakeholders, typically looking at collaboration between functional teams or departments.

Table 2-4 Article by type of stakeholder

Stakeholder type	No. of articles
External stakeholders	**60**
Users/Consumers	9
Suppliers	9
NGOs/NPOs	7
Government / regulators	5
Regional networks	3
Community	3
Universities	2
External - general	22
Internal stakeholders	**28**
Total articles	**88**

2.4 Results: A hierarchical capability-based framework

Prior research has established a three-part hierarchical structure to organizational capabilities (Ambrosini and Bowman, 2009; Collis, 1994; Danneels, 2002; Winter, 2003; Zahra et al., 2006). Operational[4] capabilities are those that enable a firm to "make a living" in an equilibrium state. To adjust this equilibrium state in response to environmental changes, firms rely on first-order dynamic capabilities (Collis, 1994; Winter, 2003); these are the routines which reconfigure the organizational resource base (Schilke, 2014). Second-order capabilities operate on these first-order dynamic capabilities (Collis, 1994; Winter, 2003); these routines in turn reconfigure first-order capabilities. Second-order capabilities can be thought of as 'learning-to-learn' capabilities (Collis, 1994), double-loop learning (Argyris and Schön, 1978) or regenerative dynamic capabilities (Ambrosini and Bowman, 2009) and comprise activities such as analysing what aspects of first-order dynamic capabilities work or do not work, codifying past experience and transferring knowledge within the organisation. These activities are

[4] also referred to in the dynamic capability literature as operating routines (Zollo and Winter, 2002) zero-order capabilities (Winter, 2003) or functional capabilities (Collis, 1994; Verona, 1999)

similar to the elements of Nonaka's (1991) knowledge spiral in which organizational knowledge is embedded and institutionalized within the organization, whilst also continually developing. As Zollo and Winter (2002, p.340) explain: "Dynamic capabilities arise from learning; they constitute the firm's systematic methods for modifying operating routines. To the extent that the learning mechanisms are themselves systematic, they could be regarded as 'second-order' dynamic capabilities."

Verona (1999) developed a model which articulated the impact of the first two levels of organizational capability on the efficiency and effectiveness of new product development. At the operational level, he included technological and marketing capabilities. At the first-order level, he identified "external integrative capabilities" which absorb critical knowledge and resources from external sources and "internal integrative capabilities" which blend the technical capabilities developed in the operational areas. By refining and updating this model in the context of environmental innovation, based on the evidence from a comprehensive literature review, this article presents an enhanced framework which refines understanding of the capabilities needed to engage stakeholders in environmental innovation on these first two tiers, but also provides evidence that an additional third tier of second-order dynamics capabilities is involved.

At the operational level, stakeholder engagement in environmental innovation requires a specific *environmental capability* alongside technological and marketing capabilities. Next, it demands complex first-order dynamic capabilities (comprising processes, structure and routines) to manage engagement with both external and internal stakeholders – which are conceptualized as *engagement management capabilities*. Following Verona (1999), these are termed "external integrative" capabilities if they relate to the direct relationship with external stakeholders, and "internal integrative" if they relate to the sharing and use of the acquired information across groups of internal stakeholders. The processes and routines described in this tier of the framework can be thought of as those underlying a firm's absorptive capacity (the ability to acquire, assimilate, transform and exploit knowledge), which has more recently been conceptualized as a dynamic capability (Zahra and George, 2002). The absorptive capacity literature (Cohen and Levinthal, 1990) primarily uses R&D spending as a "coarse grained absolute measure of absorptive capacity" (Lane and Lubatkin, 1998,

p.473) whereas the dynamic capability perspective enables elaboration of the broader competencies and culture an organization requires to integrate innovation from external sources (West and Bogers, 2014).

Accordingly, evidence is found of a further tier of second-order dynamic capabilities which allow organizations to continuously learn from, modify and improve their first-order stakeholder engagement activities. Alliance learning routines have previously been conceptualized as second-order dynamic capabilities (Kale and Singh, 2007; Schilke, 2014; Zollo and Winter, 2002); in the context of this research, these capabilities are conceptualized as *engagement learning capabilities*. The review evidence suggests that organizations not only need to manage their stakeholder engagements to understand the 'know-what' and 'know-how' of environmental innovation, but also to learn at an institutional level from that engagement. This is both to enable them to improve their first-order stakeholder management capabilities, but also to allow them to maximise their potential for future inter-organizational learning by recognizing and valuing new external knowledge through the refinement of the organization's concept of its own purpose - the 'know-why' portion of its knowledge (Lane and Lubatkin, 1998) – a process we term *value framing* (after Le Ber and Branzei, 2010). The next section details each of the elements comprising this three-tier hierarchical framework (Figure 2-1) starting with first-order, then second-order and finishing with operational capabilities.

2.4.1 Engagement management capabilities

Research suggests that the environmental innovation process requires greater engagement with external stakeholders than traditional innovation (Albino, Dangelico and Pontrandolfo, 2012; Horbach, 2008; Klewitz and Hansen, 2014; De Marchi, 2012; De Marchi and Grandinetti, 2013; Petruzzelli et al., 2011). Sharma and Vrendenburg (1998) found evidence in firms with proactive environmental strategies of the development of a capability for stakeholder integration. Moreover, this external stakeholder engagement must be combined with internal stakeholder collaboration to achieve environmental innovation (Ayuso et al., 2011; Ayuso, Rodríguez and Ricart, 2006; van Bommel, 2011; Driessen and Hillebrand, 2013; Lenox and Ehrenfeld, 1997; de Medeiros, Ribeiro and Cortimiglia, 2014; Petruzzelli et al., 2011). Taking Verona's (1999) conceptualization of external and internal integrative capabilities as a starting point (i.e. firms absorb

knowledge through the use of external integrative capability; internal integrative capability then organizes its use), the dimensions which make up these engagement management capabilities, and the supporting evidence from the reviewed literature for each dimension are shown in Table 2-5 and Table 2-6 and discussed below.

2.4.1.1 External integrative capabilities

60 (of 88) articles dealt primarily with external stakeholders. Table 2-5 summarizes key insights from these articles relating to three dimensions which were found to comprise external integrative capability: *building bridges, developing engagement processes*, and *achieving alignment.*

Building bridges. The reviewed articles evidence firms using third-party organizations to act as intermediaries with stakeholder groups (Klewitz, Zeyen and Hansen, 2012; Murphy and Arenas, 2011). This "enables organizations to monitor, sense and interact with environmental forces, and to transfer information across boundaries" (Hoffmann, 2007, p.329). For example, Stafford et al. (2000) provide a detailed account of Greenpeace's role as a "strategic bridge" between a manufacturer of household appliances and its stakeholders to enable the development of a more environmentally-friendly refrigerator. Firms also make use of networks to perform this bridging function. These can be internal to the firm, such as expert panels and stakeholder advisory boards (Hansen and Grosse-Dunker, 2009), or external to the firm, involving knowledge institutions (Triguero, Moreno-Mondéjar and Davia, 2013), supply-chain partners (Roy and Whelan, 1992) and governments (Holweg, 2014; von Malmborg, 2007). A few studies recognize the importance of the individuals who play this bridge-building or boundary-spanning role (Hoffmann, 2007; Holmes and Smart, 2009; Murphy and Arenas, 2011).

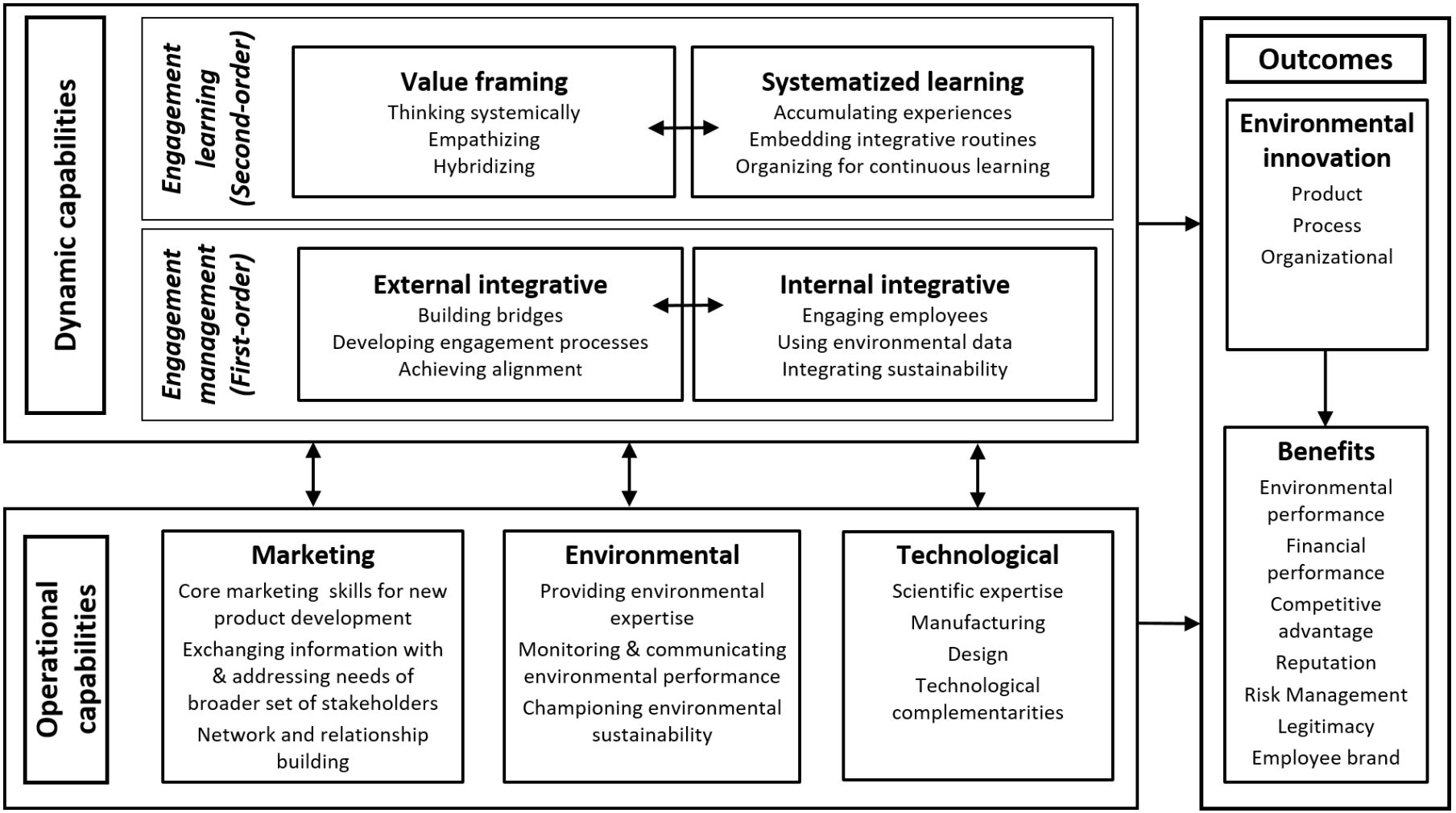

Figure 2-1 A hierarchical capability-based framework for stakeholder engagement in environmental innovation

Developing engagement processes. The evidence showed firms developing processes and methods to engage with stakeholders in a way that encourages ongoing cooperation and trust. Key success factors for these include regular interaction, direct and open communication, non-hierarchical dialogue, allowing diverse points of view to be explored, empowerment, trust, and transparency (Heiskanen and Lovio, 2010; Hoffmann, 2007; Jamali, Yianni and Abdallah, 2011; Mathur, Price and Austin, 2008; McDonald and Young, 2012; Spena and De Chiara, 2012). Users in particular need to be better incorporated into design processes by being involved earlier and more frequently (Liao, Lou and Gao, 2013).

Achieving alignment. Aligning the goals of cross-functional and inter-organizational project teams through mechanisms such as creating a shared vision, identification of multiple overlapping benefits, sharing experiences, using cooperative information systems and involving the right individuals were also found to be critical for external integration (van Bommel, 2011; Lee and Kim, 2011; Murphy and Arenas, 2011; Senge et al., 2007; Verghese and Lewis, 2007).

Table 2-5 Review findings related to external integrative capabilities

Author	Stakeholder	Finding
Building bridges		
Hansen & Grosse-Dunker, 2009	General	The social effects of innovation can be accurately assessed by means of panels of experts, stakeholder dialogues and stakeholder advisory boards
Hoffmann, 2007	Users	Boundary spanning activities enable organizations to monitor, sense and interact with environmental forces, and to transfer information across boundaries, and hence play an important part in maintaining organizational viability and adaptability
Holmes & Smart, 2009	NGOs	There are two types of boundary-spanning roles: 1) formal responsibility from senior management to 'manage' innovation opportunities 2) a 'conduit' to facilitate search and exploration to locate opportunities for innovation through idea exchange
Holweg, 2014	Government	A permanent forum for government-industry exchange can be successfully established; the joint creation of roadmaps provides a joint statement that helps government guide its policy and firms to reduce uncertainty about future policy
Klewitz, Zeyen & Hansen, 2012	Government	A proactive approach by a public intermediary is one essential push factor to trigger eco-innovations in SMEs with low absorptive capacity
von Malmborg, 2007	Regional networks	Local authorities' role in actor networks related to regional sustainable development are either teacher (they hold knowledge, information and ideas and transfer it to companies) or tutor (put companies in touch with consultants and technical experts)
Murphy & Arenas, 2011	Community	"Collaborations tend to enjoy more success when respected and independent third-party organizations are involved as facilitators and capacity builders" (p.114)
Roy & Whelan, 1992	Suppliers	The environmental impact of products can be managed though the creation of an 'issue-based' network. There should be equal representation of partners with equal financial contribution
Stafford et al., 2000	NGOs	If firms rely on a green NGO acting as a strategic bridge between a firm and its environmental stakeholders, then the timing of the goal achievement of the two parties is critical
Triguero et al., 2013	Universities	Collaborative networks with research institutes, agencies and universities are essential to drive all types of eco-innovation
Urbaniec & Gerstlberger, 2011	Suppliers	The authority and reputation of the coordinator influences the successful generation of environmental innovations and their implementation. The coordinator acts as a "multiplier" of environment-innovative industry solutions
Developing engagement processes		
Bartlett, 2009	Community	Community profiling (e.g. census information, official stats, mapping & geo-data, interviews and surveys) can "go beyond the 'surface meaning' of consultation data in order to uncover the 'hidden' wants and needs" (p.413)
van Bommel, 2011	Suppliers	Cooperation in supply networks is characterized by trust, reputation, joint programmes and cooperative information systems
Driessen & Hillebrand, 2013	General	Stakeholder issue identification for 'market' stakeholders includes focus groups, store checks, user observation studies. For 'non-market' stakeholders: monitoring of regulation, dialogue with special interest groups (SIGs), SIGs as advisors
Heiskanen & Lovio, 2010	Users	User involvement can help to enhance the acceptance of low-energy solutions. The project could have been improved had users been involved more intensively, and use been made of user participation in communication about the project
Hoffmann, 2007	Users	Success factors for consumer contribution to sustainable product development include: an open company attitude, senior management support, clearly defined roles and tasks, creative techniques, small working groups, direct communications, non-hierarchical dialogue and flexible moderation

Developing engagement processes (cont.)		
Jamali et al., 2011	General	The more innovative partnerships reported different patterns of engagement: regular interactions, open lines of communication; nurturing over time a strong cooperative competence building on trust, communication and good coordination
Kourula & Halme, 2008	NGOs	Different CR types involve different forms of cooperation: Philanthropy: sponsorship, employee volunteering; CR integration: dialogue, common programs, partnerships, consultation, research collaboration; CR innovation: common programs, partnerships
Liao et al., 2013	Users	Innovative methods are needed to encourage consumer participation in designing sustainable products that satisfy their needs, since methods to identify product eco-design issues (e.g. life-cycle analysis) mainly focus on environmental aspects not customer needs
Mathur et al., 2008	General	Key requirements for collaborative process: arenas accessible to all those with a stake; transferring power to make decisions close to those stakeholders who will be affected by them; engagement methods which allow diverse points of view to be explored
McDonald & Young, 2012	NGOs	Leadership effectiveness, communication and trust are success factors for cross-sector collaboration. Supporting factors are: government support, employee support, interaction or engagement opportunities and evaluation when planning and monitoring
Senge et al., 2007	General	Successful collaboration efforts embrace three interconnected types of work - conceptual, relational and action-driven, which form a learning ecology for systematic change. *Relational work*: Reflective conversation and working with mental models
Slotegraaf, 2012	Users/ suppliers	Businesses are developing strategies for using technology and networks to leverage input from consumers and suppliers in seeking ideas and developing new products
Spena & De Chiara, 2012	Suppliers	A more collaborative approach with suppliers fosters creativity and innovation (through inclusivity and diversity). Specific mechanisms and processes are identified
Verghese & Lewis, 2007	Suppliers	Environmental innovation in industrial packaging requires: an effective project champion; senior management/CEO support; communication and engagement with partners; an open mind; the identification of multiple benefits
Achieving alignment		
van Bommel, 2011	Suppliers	Cooperation in supply networks is characterized by: 1) trust 2) reputation 3) joint programmes 4) cooperative information systems
Lee & Kim, 2011	Suppliers	Two important factors for green innovations are coordination and alignment of project teams (e.g. monitoring and evaluation, learning from each other, sharing experiences and information), and effective communication with suppliers
Murphy &Arenas, 2011	Community	"The closer the collaborations fit with the missions, values, and strategies of each partner, the more likely the relationship will be to create value" (p.109). They tend to allocate more resources and have fewer incompatibilities in their relationship
McDonald & Young, 2012	NGOs	"Cross-sector relationships can progress along a collaboration continuum so long as partners reassess their needs and expectations and choose to continue to innovate" (p.65)
Senge et al., 2007	General	Radical methods needed for complex change processes and large scale dialogue. Systems thinking, working with mental models, fostering personal and shared vision (p.45)
Verghese & Lewis, 2007	Suppliers	Environmental innovation in industrial packaging requires: alignment of environmental objectives with business strategies; involvement of important stakeholders at beginning of project; clear and shared objectives for functional requirements and redesigning objectives

2.4.1.2 Internal integrative capabilities

Fewer articles (28 of 88) in the review deal primarily with internal stakeholders. Table 2-6 summarizes key insights from the review articles relating to the three dimensions which were found to comprise internal integrative capability: *engaging employees*, *using environmental data* and *integrating sustainability*.

Engaging employees. Employee engagement in environmental innovation can be influenced by the composition of teams (Bocken et al., 2014), and how business units and reporting lines are set up (Kiron, 2012; Kiron et al., 2013; Kruschwitz and Pflueger, 2012) as well as by the level of support provided by leaders and senior management (Bos-Brouwers, 2010; Kiron, 2012). The time and support employees receive to elaborate on innovative ideas also affects environmental innovation (Bos-Brouwers, 2010).

Using environmental data. Gathering and sharing environmental information using tools such as web-based software platforms, databases, design aids and environmental management systems (EMS) helps firms identify innovations and facilitate the internal collaboration required to implement them (Gmelin and Seuring, 2014; Hallstedt et al., 2010; Horbach, 2008; de Kraker et al., 2013; Lenox and Ehrenfeld, 1997). However, management teams should be aware that EMS can steer organizations towards the exploitation of present production systems rather than discontinuous innovations (Könnölä and Unruh, 2007).

Integrating sustainability. Environmental innovation requires collaboration between functions such as marketing, R&D/innovation, operations, and sustainability/corporate responsibility (Carrillo-Hermosilla, del Río and Könnölä, 2010; Chang and Lin, 2014; Dangelico and Pujari, 2010; Driessen and Hillebrand, 2013; de Medeiros, Ribeiro and Cortimiglia, 2014; Pujari, 2006; Pujari, Peattie and Wright, 2004; Pujari, Wright and Peattie, 2003). This can be achieved by integrating environmental criteria into processes such as strategy development, product development, marketing, and performance management across functions. Specific examples include integrating environmental impact analysis within marketing practices such as market research (Pujari, Peattie and Wright, 2004) and including green issues in new product development procedures (Driessen and Hillebrand, 2013).

Table 2-6 Review findings related to internal integrative capabilities

Author	Finding
Engaging employees	
Bocken et al., 2014	Teams should be multidisciplinary, and creativity and environmental knowledge are essential. Eco-innovation is a "collective endeavour" (p.52) between top management and R&D (highest involvement), marketing, sales, engineers and designers
Bos-Brouwers, 2010	The time and support employees receive to elaborate on innovative ideas, combined with the effort and ambitions of the owner/manager are important
Kiron, 2012	Strong support from Chairman & CEO, global strategic leadership team, four business units and an external sustainability advisory board have been crucial to building and meeting aggressive sustainability metrics [Kimberley-Clarke]
Kiron et al., 2013	The factors associated with getting economic value from sustainability activities include top management support
Kruschwitz & Pflueger, 2012	"Reporting into marketing gives us better understanding of the connections between sustainability-related issues and brand value and brand equity. We have better access to tools and more access to information that help us understand what we can do that our customers need, as well as connections into the analyst and stakeholder community" (p.4) [Dell]
Lenox & Ehrenfeld, 1997	Communicative linkages e.g. Incorporate sustainability directly into product development (integrated product development teams)
McDonald & Young, 2012	Leadership effectiveness, communication and trust were verified as success factors for cross-sector collaboration. Variables which support evolution include employee support
Using environmental data	
Dangelico & Pujari, 2010	A key challenge to integrating environmental sustainability is management of information flows and coordination of resources within and outside of the product development team
Gmelin & Seuring, 2014	Successful collaboration is dependent on technology and organized processes. Tools, inter-operability standards, architectures etc. have to be coordinated so that barriers do not prevent collaboration
Guiltinan, 2009	"Many new processes and technologies have been developed for the cross-functional communication process in firms where sustainable new product development is a priority" (e.g. "design for environment," "life cycle assessment) (p.24)
Hallstedt et al., 2010	The key ways to improve sustainability integration between senior management and product development include a standardized toolbox for sustainability-related information in decision processes
Horbach, 2008	Environmental management tools are important for the introduction of environmental product innovations
Könnölä & Unruh, 2007	While environmental management systems (EMS) may initially produce improvements in environmental performance, EMS may also constrain organizations' focus to the exploitation of present production systems rather than exploring for superior discontinuous innovations
de Kraker et al., 2013	Social network software platforms did support users in their network interactions, particularly keeping other users informed, sharing experiences and information and collaborating on joint document
Lenox & Ehrenfeld, 1997	Communicative linkages e.g. training in environmental design to designers; technical systems (databases, design aides; use of gatekeepers)
Pujari et al., 2004	"Cross functional integration enhances the diffusion of market and customer knowledge among all members of a project team, not just during development, but also at later stages of test marketing and commercialisation" (p.383)

Using environmental data (cont.)	
Slotegraaf, 2012	Businesses are developing strategies for using technology and networks to leverage input from consumers and suppliers to seek ideas and develop new products
Theyel &Hofmann, 2012	"Environmental management offers managers new perspectives on their products and processes, and these new perspectives may expose challenges and illuminate opportunities" (p.1127)
Integrating sustainability	
Ayuso et al., 2011	"Generally stakeholder engagement and innovation tend to be managed as parallel but not interconnected processes within different business functions" (p.1412)
Carrillo-Hermosilla et al., 2010	It is important for functional sectors such as R&D, marketing and operations to act together in an integrated way with external stakeholders to develop successful environmentally sustainable product innovation
Chang & Lin, 2014	"Cross-functional collaboration and environmental collaboration both have a significant positive effect on green innovation" (p.346)
Driessen & Hillebrand, 2013	Coordination mechanisms such as stakeholder management systems, guidelines, norms and procedures concerning the inclusion of green issues in NPD procedure; high level of informal communication, environmental champions, inclusion of all departments in the assessment of green issues
Guiltinan, 2009	"Design decisions at the individual product level have to be consistent with the firm's strategic priorities on positioning and growth objectives" (p.24)
Hallstedt et al., 2010	The key ways to improve sustainability integration between senior management and product development include relating long-term strategic sustainability challenges to short-term tactical business challenges, and incentive and monitoring system to implement sustainability measures
Lenox & Ehrenfeld, 1997	Communicative linkages e.g. Incorporate sustainability directly into product development (integrated product development teams); training in environmental design to designers; technical systems e.g. databases, design aides; use of gatekeepers
de Medeiros et al., 2014	Inter-functional collaboration is a key success factor for environmentally sustainable product innovation
Pujari, 2006	The market performance of green products was enhanced where there was "cross-functional co-ordination between new product development professionals and environmental specialists" (p.76)
Pujari et al., 2003	Significant relationships between the market performance of environmental NPD and independent factors such as environmental benchmarking and performance measurement processes, effective environmental database management, effective groundwork, and cross functional coordination
Pujari et al., 2004	"To foster environmental product innovation, environmental impact analysis should be integrated with marketing practices like market research … help identify product characteristics capable of satisfying customers and enhancing the firm's competitiveness" (p.383)

2.4.2 Engagement learning capabilities

The routines used to learn from alliances between commercial organizations have been conceptualized as second-order dynamic capabilities (Kale and Singh, 2007; Schilke, 2014; Zollo and Winter, 2002). These learning routines enable external stakeholder engagement techniques and internal collaboration mechanisms to develop into an organizational capability by incorporating them into the culture and processes of the organization (Driessen and Hillebrand, 2013). They enable organizations to use knowledge and experience gained from individuals or discrete innovation projects to change future action and reconfigure resources at the organizational level. This involves transferring individual and tacit knowledge into explicit organizational knowledge that can be shared among many individuals (Crossan, Lane and White, 1999; Nonaka, 1991)

Moreover, the literature suggests that dynamic capabilities consist not *only* of the organizational processes directed towards innovation and learning, but also the decision frames and heuristics that inform a firms' investment choices over time (Helfat et al., 2007). The organizational learning literature suggests that "the way an organization acquires, distributes, interprets and stores market information is tied fundamentally to the 'shared cognitions' that constitute its memory" (Sinkula, 1994, p.43) or its 'collective mind-set' (Crossan, Lane and White, 1999). These differences, however, can provide opportunity for innovation: "the confusion created by the inevitable discrepancies in meaning that occur in any organization might seem like a problem. In fact, it can be a rich source of new knowledge – if a company knows how to manage it" (Nonaka, 1991, p.167). It has also been argued that *inter-organizational* learning is greater when organizations demonstrate similar 'dominant logics' (Lane and Lubatkin, 1998). The institutional logics literature therefore offers insights into how organizations engaging with internal and external stakeholders demonstrating divergent logics can harness the potential for learning from each other.

Institutional logics (Friedland and Alford, 1991) or 'value frames' (Le Ber and Branzei, 2010a) provide social groups with values, organizing frameworks and legitimate practices to guide their behaviour in a social context (Meyer and Hammerschmid, 2006). Multiple institutional logics may impose different and potentially conflicting demands on organizations (Oliver, 1991), and researchers have looked at how hybrid organizations

deal internally with institutional pluralism (Battilana and Dorado, 2010; Reay and Hinings, 2009) and strive to combine logics to generate innovative solutions to complex problems (Jay, 2013). Reay and Hinings (2009) identify four mechanisms for managing the rivalry of competing logics – all of which allow the logics to co-exist by facilitating and strengthening the identities of separate actors, but also developing collaborative relationships between them.

Although those making the 'business case' for corporate social responsibility (CSR) (Porter and Kramer, 2006, 2011) suggest that aspects of CSR, such as environmental sustainability, are complementary with the traditional commercially-driven business models, many actors still perceive CSR as a trade-off with mainstream business objectives and activities (Barnett, 2007). So, by introducing environmental criteria into the innovation process, inconsistencies may occur between the value frames of social groupings with a commercial or a customer-centric value frame and those whose value frames are more oriented to social or environmental outcomes.

The next section presents evidence from the systematic review for how organizations can manage differences between their value frames and those of their external stakeholders, and between groups of internal stakeholders *(value framing)* in order to harness the potential value creation derived from engaging with them. It also illustrates how they can systematically learn from these value framing processes, through establishing new routines, processes and structures at the organizational level *(systematized learning*). These two second-order engagement learning capabilities are bi-directionally linked since values and culture influence organizational structures and systems, which can in turn influence organizational values and culture (Ayuso, Rodríguez and Ricart, 2006).

2.4.2.1 Value framing capability

The reviewed literature reports differences in value frames between firms and their external stakeholders (Le Ber and Branzei, 2010a; Holmes and Smart, 2009; Holweg, 2014) as well as between departments within the firm (Aschehoug, Boks and Støren, 2012; Delmas and Toffel, 2004; Guiltinan, 2009; Lenox and Ehrenfeld, 1997). The broad picture that emerges is that organizations need to proactively navigate these competing value frames. Table 2-7 summarises key insights from these articles relating to the three

dimensions which comprise this value framing capability: *thinking systemically*, *empathizing*, and *hybridizing*.

Thinking systemically. First, an organization should consider the interests of all the stakeholders involved in the complete system of relevance to the potential innovation, both within the organization and beyond its boundaries (Senge et al., 2007). Internally, differences in value frames between departments can hinder or limit the scope of environmental innovation (Lenox and Ehrenfeld, 1997; Pujari, Wright and Peattie, 2003), for example, more sustainable design practices are "likely to be somewhat constrained by corporate and marketing realities and perceptions" (Guiltinan, 2009, p.20). This requires an organization to set a purpose for environmental innovation that is greater than the individual agendas of its internal functions. Externally, thinking systemically means "focusing on issues that are larger than individual organizations and improving the related systems that can benefit all" (Senge et al., 2007, p.52). For example, automotive firms may need to shift their attention from individual company needs (such as government-funded subsidies) towards the collective needs faced by all industry players, in order to progress towards a more sustainable future for the industry (Holweg, 2014).

Empathizing. Organizations should also create the time and space to reflect on the differences in value frames between themselves and their stakeholders, independently and in dialogue with those stakeholders. Senge et al. (2007) describe this as "relational work" which involves "moving beyond 'politeness' or win-lose debates into more authentic and reflective interactions characterized by candour, openness and vulnerability" (p.47). This includes listening openly to stakeholders, without applying filters that may be associated with the listener's own value frame. For example, Aschehoug et al. (2012) found that the cultural frame of a department affected the way it responded to environmental information available from external stakeholders, resulting in a substantial gap between the information available and what the firm actually knew. In a similar vein, Hoffmann (2007) reported that the ability of a company to learn from customer involvement in sustainable product development was limited by filtering mechanisms constraining the company to information considered important by the recipient.

Hybridizing. Previous research has considered how hybrid organizations combine different institutional logics (Battilana and Dorado, 2010; Jay, 2013; Reay and Hinings,

2009). This literature has found that commercial organizations striving to incorporate environmental goals into their conventional business models also need to reconcile competing logics through a process of 'hybridizing' the logics of different internal stakeholders (Bondy and Wilson, 2013), and between their internal logics and the logics of the external stakeholders with whom they are engaging. The evidence from the review suggests two stages to this: acknowledging organizational tensions and co-creating appropriate solutions.

Acknowledging tension between value frames is an essential capability to facilitate radical thinking around new solutions to existing problems (Driessen and Hillebrand, 2013). If a partnership process is conceptualized as fundamentally non-conflictual in nature this "risks the de-legitimization of conflictual approaches to environmental action, and a retreat from radical thinking and innovative environmental solutions" (Poncelet, 2001, p.13). Once this tension is acknowledged, stakeholders can co-create solutions which deliver benefits to all parties involved, where 'co-creation' has been defined in the broader literature as working together to redefine what is valued and expected or desired on individual and collective bases (Vargo and Lusch, 2011). Le Ber & Branzei (2010) describe this hybridization process, which they term 'value frame fusion' as stakeholders initially contrasting their divergent understanding of a problem ('diagnostic frames') and then working together to deliberately develop a partnership-specific understanding of possible solutions ('prognostic frame').

Table 2-7 Review findings related to value framing capability

Author	Finding
Thinking systemically	
De-Burgos-Jiménez et al., 2011	"If the capacities of both companies and communities are strong, the conditions exist for a society with full integration of community stakeholders within a firm, and with the firm acting as just another stakeholder for solving complex social problems" (p.1382)
Foxon & Pearson, 2008	"Shared visions and strategic goals for long-term technological and institutional changes ned to be developed by public and private actors working together" (p.S159
Guiltinan, 2009	More sustainable design practices can be developed but cultural changes at the product design level are likely to be somewhat constrained by corporate and marketing realities and perceptions
Holweg, 2014	The forum required firms to shift their attention away from individual company needs and toward the collective needs faced by all industry players; from specific firm-level subsidies to the strengthening of the UK automotive industry as a whole
Lenox & Ehrenfeld, 1997	"Traditionally, environmental issues have been buffered from the design and manufacturing functions. Consequently, attitudes develop which treat environmental issues as not being of concern" "The challenge to firms is to break down the 'thought worlds' of functional groups and to create enough mutual understanding to effectively communicate information" (p.191)
Pujari et al., 2003	"Responding to sustainability challenges in industrial NPD is more likely to be hampered by organizational barriers than technical/process barriers" (p.389)
Senge et al., 2007	Commercial interests and proprietary know-how must be balanced with public interest when tackling systemic issues. This means "focusing on issues that are larger than individual organizations and improving the related systems that can benefit all" (p.52)
Empathizing	
Aschehoug et al., 2012	There is a substantial gap between environmental information available and what the firm knows due to culturing framing and filtering mechanisms
Delmas & Toffel, 2004	"Pressure is managed according to the cultural frame of the unit that receives it" (p.215). The way in which managers perceive and act on stakeholder pressure depends on company-specific factors
Hoffmann, 2007	Consumers had significantly more learning success [from contributing to sustainable product development] than the company, whose moderate learning results are explained through filtering mechanisms that constrained the company to certain information
Holmes & Smart, 2009	Cross-sector partners are "driven by very different concerns and operate according to different sets of values and cultures" (p.395)
Klewitz and Hansen, 2014	The sustainability-oriented innovation process can be remodelled by "increasing the reflexivity of the process through the interaction with external actors from the SME's value chain" (p.67)
Murphy & Arenas, 2011	Principles for cross-cultural bridge building include: Respected individuals as representatives, strong communication skills and culturally literate, empathetic, open-minded boundary spanners
Senge et al., 2007	Successful collaboration efforts embrace three interconnected types of work - conceptual, relational and action-driven, which form a learning ecology for systematic change. Relational work: Reflective conversation and working with mental models

Hybridizing	
Le Ber & Branzei, 2010	Partners initially contrast their sector-embedded diagnostic frames (divergent understanding of the problem) and then work together to deliberately develop partnership-specific prognostic frames (understanding of possible solutions)
Bönte & Dienes, 2013	There is a “not invented here” syndrome (Katz and Allen 1982) associated with external partnerships
Driessen & Hillebrand, 2013	"Acknowledging tension between stakeholder issues is the first step toward reaching consensus within the team" (p.372). Creating a culture where green issues are regularly discussed in new product development meetings
Mathur et al., 2008	A democratic approach values the process of participation for the ethical issues of equity and empowerment of citizens. The desire to engage with stakeholders in project decision-making processes is also linked to enhancing the sense of ownership of a project
Poncelet, 2001	"Conflicting interests, values, and world views with which these actors approach current natural resources and environmental quality issues" (p. 13)
Sol et al., 2013	“Creating pathways to sustainability does not occur through the mere combination of existing knowledge, but requires on-going interaction between multiple actors willing and able to lay their own values and interests on the table” (p.35)

2.4.2.2 Systemized learning capability

This second-order engagement learning capability concerns how the organization learns to learn from its stakeholder engagement activities. Guided by prior research into second-order capabilities in the context of alliance management (Schilke, 2014), evidence was sought relating to how companies analyse and codify their past experience of what works and what does not in relation to their first-order engagement management capabilities, and then transfer relevant knowledge within the organization. Table 2-8 summarizes key insights from the review relating to this systemized learning capability. Although the articles reviewed refer to this positive feedback loop between stakeholder engagement, innovation and learning (Ayuso et al., 2011; Blum-Kusterer and Hussain, 2001; Klewitz and Hansen, 2014; Sharma and Vrendenburg, 1998), there is a need for more research on the interaction between stakeholder engagement capabilities and the management of the knowledge gained from that engagement (Ayuso et al., 2011). Drawing on the indicative evidence from the literature review, three broad dimensions of a systematized learning capability are inferred: *accumulating experiences*, *embedding integrative routines* and *organizing for continuous learning.*

Accumulating experiences. Organizations learn to integrate multiple stakeholder issues over time by accumulating experiences, making this capability difficult to build overnight or copy (Driessen and Hillebrand, 2013). These experiences can be from individuals within the firm, from previous innovation projects, and from benchmarking what other companies are doing. Rather than the insight residing only with the team which owns that stakeholder relationship (e.g. sustainability teams for NGOs, marketing for customers, and public affairs for policymakers), firms need to be able to aggregate this learning at an organizational level.

Embedding integrative routines. Next, organizations need to embed the learning from these experiences across the organization. This includes reflecting on what works with respect to stakeholder engagement, and sharing and embedding that across the organization (Ayuso et al., 2011; Ayuso, Rodríguez and Ricart, 2006; de Medeiros, Ribeiro and Cortimiglia, 2014), albeit not in such a rigid way as to reduce the opportunity for future learning. For example, Unilever develops online resources including case studies and best practice guides relating to sustainability initiatives (www.unilever.com).

Organizing for continuous learning. This capability involves achieving an organizational context (comprising structure, physical resources, individual actors and culture) which is open and flexible enough to allow the management of external stakeholder relationships to continuously evolve in response to what has previously been learnt. A similar capability has been termed "knowledge reconfiguration" in the product innovation literature, defined as "the creation of an 'open' structure that makes it possible to redefine role systems and relational patterns in a flexible way in order to make it easier to recombine resources continuously" (Verona and Ravasi, 2002, p.579). The review suggests that, in the context of environmental innovation, this could include reconfiguring the supply chain to enable reverse logistics for end-of-life product take-back (Roy and Whelan, 1992), or changing the organizational structure (Horbach, 2008) particularly to a non-hierarchical structure that favours direct communication and proximity between people (Ayuso, Rodríguez and Ricart, 2006). It also involves providing "flexible structures and systems that facilitate the development of new ideas" (Ayuso et al., 2006, p.485) and "an organizational context to support experimentation and the seeking of opportunities at the business/natural environment interface….through employee compensation systems and by facilitating management discretion" (Sharma and Vrendenburg, 1998, p.742).

Table 2-8 Review findings related to systematized learning capability

Author	Finding
Ayuso et al., 2006	Dynamic capabilities for generating sustainability innovations in accordance with stakeholder needs identified as *stakeholder dialogue* and *stakeholder knowledge integration*
Ayuso et al , 2006	Companies' structures and systems to foster innovation illustrate features important for integrating stakeholder knowledge: 1) non-hierarchical structures that favour direct communication and proximity between people 2) flexible structures and systems that facilitate the development of new ideas
Ayuso et al., 2011	*Knowledge management capability*, together with internal and external stakeholder engagement capabilities has a positive effect on the sustainable innovation orientation of the firm. However, more research is needed into the relationship and interaction between these three capabilities
Blum-Kusterer & Hussain, 2001	The co-evolutionary (learning) approach to innovation (i.e. firm's norms, routines and past experiences are influential) versus the neo-classical (i.e. firms only respond to profit signals) better captures the complexity of the corporate eco-change process
Chang & Lin, 2014	Cross-functional collaboration reduces the gap between the amount of green information possessed by a firm and that which is understood by the firm. However, in the process of environmental collaboration, a high level of external green knowledge improves performance of green innovation, whereas a high level of internal green knowledge-sharing can reinforce existing expertise and operational routines, which may lead to inertia
De Marchi et al., 2013	Firms for which green innovation is strategic have different knowledge strategies as compared with those for whom it is tactical or are non-green innovators. These firms have higher R&D intensity and carry out more training as well as interacting with more and more diverse external stakeholders
Driessen & Hillebrand, 2013	Organizations learn to integrate multiple stakeholder issues over time by accumulating experiences. It is difficult to build overnight or copy from others
Horbach, 2008	The introduction of new or relevant changes of organizational structures are especially important for environmental innovations
Klewitz & Hansen, 2014	Interaction (with stakeholders) for sustainability-oriented innovation is an enabling mechanism which leads to *learning and innovative capacity-building* in SMEs that ultimately translates into innovation at the product, process and organizational level
Laperche & Uzunidis, 2012	Firms have initiated a process of reorganization or restructuring of their knowledge capital. Collaborative research has become an essential component in building knowledge capital in industrial corporations
Sharma & Vrendenburg, 1998	Firms with proactive environmental strategies developed a capability for higher-order learning, and a capability for continuous improvement. "Companies provided an organizational context to support experimentation and the seeking of opportunities at the business/natural environment interface in an efficient and effective manner through employee compensation systems and by facilitating management discretion" (p.742)
Sol et al., 2013	"Social learning as a dynamic process in which trust, commitment and reframing are continuously produced and reproduced through the (inter)actions of individual actors (p.35)
Quist & Tukker, 2013	There are three types of innovation positioned on two axes of: 1) Who learns: Small groups of niche actors to actors making up societal systems and 2) What type of learning: 1st order (incremental) to 2nd order (radical). Innovation types are: 1) Niche / local experiments 2) Optimization /redesign and 3) System innovation. Calls for more research into how 2nd order learning can be fostered in small-scale setting to stimulate similar learning in wider settings

2.4.3 Operational capabilities

Operational capabilities are the basic technical capabilities a firm must develop to support stakeholder engagement in environmental innovation. Verona's (1999) model identified marketing and technological capabilities. The review provided evidence that *marketing capability* needs to be enhanced in the context of environmental innovation with an additional *environmental capability*. There was empirical evidence in the articles that technological capability triggers environmental innovation (Horbach, 2008), however no evidence was found to support changing the articulation of technological capability from Verona (1999), which therefore remains unchanged in this articles' conceptualisation, as discussed next.

2.4.3.1 Technological capability

Verona (1999) lists four dimensions of technological capabilities: scientific expertise, manufacturing, design and technological complementarities. He cites studies which show that these underlying dimensions of technological capability are important drivers of innovation outcomes, even though dynamic capabilities may be required to deploy or recombine them in a new way. Similarly, these dimensions of technological capabilities are relevant to the framework to the extent that they are drawn on, in combination with dynamic engagement capabilities, to deliver innovations involving stakeholder engagement.

2.4.3.2 Marketing capability

The review literature reports that marketing activities, such as clear project definition, good market analysis, marketing research, and sales forecasting to gain a clear understanding of users' needs and wants, are as crucial for environmentally-friendly new products as they are for traditional new product development (Pujari, Peattie and Wright, 2004). However, in the context of environmental innovation, marketers need to provide and access information from a broader set of internal and external stakeholders (Mariadoss, Tansuhaj and Mouri, 2011; Polonsky and Ottman, 1998) without filtering the incoming information based on their 'marketing' value frame (Aschehoug, Boks and Støren, 2012), and must be more open to addressing the needs of this broader stakeholder set (Polonsky and Ottman, 1998). The need to build relationships and networks with

stakeholders is even more important for process and organizational innovations than it is for new products (Mariadoss, Tansuhaj and Mouri, 2011). Table 2-9 summarises key insights from the review articles relating to marketing capability.

2.4.3.3 Environmental capability

Three dimensions of environmental capability were identified from the reviewed literature (see Table 2-10 for details). The first is *providing environmental expertise*, for example relating to clean technology and manufacturing processes (Dangelico and Pujari, 2010). The second is *monitoring and communicating environmental performance*, which includes environmental benchmarking, performance target-setting and measurement processes, environmental database management (Pujari, Wright and Peattie, 2003), and internal and external reporting and communication. Finally, *championing environmental sustainability* takes such forms as building businesses cases, providing cross-functional project management (Pujari, Wright and Peattie, 2003), and influencing employees and decision-makers. Table 2-10 summarises key insights from the review articles relating to environmental capability.

2.4.4 Outcomes and benefits

As discussed in the descriptive analysis, the primary outcome of stakeholder engagement in the review articles was environmental innovation across the three categories identified in Klewitz and Hansen's (2014) review – product, process and organizational. The literature also discussed a range of benefits expected to accrue to organizations who engage with stakeholders in these innovations, which are presented in Table 2-11. However, no empirical evidence was found of the link between capabilities and outcomes. Different types of environmental innovation may demand different capabilities, depending on the complexity and diversity of the stakeholder perspectives which need to be integrated. Existing categorizations of environmental innovations may be of limited use in defining the capabilities required. For example, some process innovations may be wholly in the firm’s control, whereas others may involve multiple supply-chain partners, and some product innovations may be simple and easily understood by customers (e.g. recycled kitchen towel), or very complex requiring changes to national networks and consumer behaviour patterns (e.g. electric cars). An opportunity exists then to clarify the link between the types of environmental innovation and the capabilities they require.

Table 2-9 Review findings related to marketing capability

Author	Finding
Anttonen et al., 2013	Marketing efforts for advance materials efficiency services are directed to environment / health & safety professionals who cannot make purchasing decisions. The offer is not specific enough, or presented in terms of cost savings / other benefits
Aschehoug, Boks and Støren, 2012	"Sales and management may unintentionally filter out or miss the opportunity of environmental information (EI), as they are likely to be mostly occupied with sales numbers, pricing and delivery" (p. 4)
Mariadoss, Tansuhaj and Mouri, 2011	Marketing capabilities that support technical ((T) new product) and non-technical ((NT) (programme) sustainable innovation are: Product packaging (T); sales (T & NT); product development (T); channel linking (T & NT) (i.e. good networks with upstream and downstream channel members); price setting (NT); relationship building (NT) (with other constituents)
Polonsky and Ottman, 1998	The intricacies of environmental issues require that marketers involve a broad set of stakeholders in the green new product development process (p. 533). Marketers failed to include stakeholders with environmental expertise "Firms believe they must interact with customers in order to be able to educate them or change their expectations of organizational behaviour. Marketers are not simply reacting to their stakeholders' interests or constraints, but are proactive in modifying firm behaviour and working with their stakeholder to obtain the desired outcome" (p.550) "It appears that marketers are working within the constraints within the business environment i.e. using what Polonsky (1996) called an adopting strategy. It is therefore unclear if firms are designing the "best" green products or truly addressing all their stakeholder interests" (p.551)
Pujari, Peattie and Wright, 2004	"Clear project definition, good market analysis, marketing research, and sales forecasting to gain a clear understanding of users' needs and wants are all crucial for successful new products. Proficient up-front activities for environmentally responsive industrial products are as essential as in conventional new product development processes" (p.382)

Table 2-10 Review findings related to environmental capability

Author	Finding
Dangelico & Pujari, 2010	Environmental know-how, clean technology/manufacturing processes, building knowledge on measuring environmental performance of products
Kammerer, 2009	Green capabilities: Use of products' environmental attributes in marketing (45%); voluntary environmental targets for products (42%); systematic environmental analysis of products (25%); environmental training for product managers (21%); environmental management system (18%)
Pujari, 2006	Factors that influence market performance of greener products are cross-functional coordination between new product development professionals and *environmental specialists*, supplier involvement, market focus and *life-cycle analysis*
Pujari et al., 2003	Statistically significant relationships between market performance of ENPD and independent factors such as *environmental benchmarking and performance measurement processes, effective environmental database management*, effective groundwork, and cross functional coordination
Theyel and Hofmann, 2012	"Environmental management offers managers new perspectives on their products and processes, and these new perspectives may expose challenges and illuminate opportunities" (p.1127)

Table 2-11 Review findings related to outcomes of stakeholder engagement in environmental innovation

Benefit	Finding and author
Environmental performance	Environmental impact reduction (Oxborrow and Brindley, 2013); eco-efficiency (Kourula and Halme, 2008, p. 565); reducing environmental impacts of supply chain (Albino, Dangelico and Pontrandolfo, 2012); efficient use of raw materials, energy and other resources (Liao, Lou and Gao, 2013; De Marchi and Grandinetti 2013); optimized consumption thorough use of renewable and recycled materials (Liao, Lou and Gao, 2013; De Marchi and Grandinetti, 2013)
Financial performance	Financial performance (Dangelico, Pontrandolfo and Pujari, 2013; Young et al., 2010); market opportunities (Dangelico, Pontrandolfo and Pujari, 2013; Oxborrow and Brindley, 2013); access to new market segments (Gonzalez-Padron and Nason, 2009); increased revenues (Carrillo-Hermosilla, del Río and Könnölä, 2010); increased demand for products and services (Gonzalez-Padron and Nason, 2009); increased market share (Roy and Whelan, 1992); efficient processes (Lee and Kim, 2011); cost savings (Carrillo-Hermosilla, del Río and Könnölä, 2010; Gonzalez-Padron and Nason, 2009; Liao, Lou and Gao, 2013; Oxborrow and Brindley, 2013); pooling resources (Yarahmadi and Higgins, 2012); profitability (Kiron et al., 2013)
Competitive advantage	Market opportunities (Oxborrow and Brindley, 2013); new business models (Klewitz and Hansen, 2014; Kourula and Halme, 2008; Murphy and Arenas, 2011); new markets (Kourula and Halme, 2008); new commercially viable products (Aschehoug, Boks and Støren, 2012); innovative services (Bartlett, 2009); development of innovative capabilities (Bartlett, 2009); enhanced creativity (Lee and Kim, 2011); access to knowledge and expertise (Lee and Kim, 2011; Murphy and Arenas, 2011); new technological resources (Murphy and Arenas, 2011); improved management of disruptive change (Murphy and Arenas, 2011); faster adoption / customer acceptance of innovation (Nakata and Weidner, 2012)
Reputation	Reputation (Kourula and Halme, 2008; Murphy and Arenas, 2011); brand value (Kourula and Halme, 2008); brand recognition (Murphy and Arenas, 2011); customer satisfaction (Luo and Bhattacharya, 2009, p.15); trust, improved image and compliance with future legislation (Anttonen et al., 2013); attracting new customers (Carrillo-Hermosilla, del Río and Könnölä, 2010); understanding and fulfilling customer needs (Liao, Lou and Gao, 2013); consumer patronage (Murphy and Arenas, 2011)
Risk management	Reliable supply of high quality material for production (Gonzalez-Padron and Nason, 2009); better control over suppliers (Klewitz and Hansen, 2014) reduced uncertainty of future policy (Holweg, 2014); reduce reputational risk (McDonald and Young, 2012); reduce risk of negative publicity (McDonald and Young, 2012); management of uncertainty (McDonald and Young, 2012); risk sharing (Hansen and Grosse-Dunker, 2009; Roy and Whelan, 1992; Yarahmadi and Higgins, 2012)
Legitimacy	Compliance with environmental laws and regulation (Yarahmadi and Higgins, 2012); lowering of future regulation (Gonzalez-Padron and Nason, 2009); development of industry standards (Roy and Whelan, 1992)
Employee brand	Employee morale and retention (Murphy and Arenas, 2011)

2.5 Discussion

Taking a dynamic capabilities perspective on stakeholder engagement for innovation, and situating this article's contributions in the environmental innovation context not only addresses a critical global challenge in practice, but also embodies scholarly interest in open (or distributed and democratized) forms of innovation (West et al., 2014) and co-creation (Payne, Storbacka and Frow, 2008), and thereby broadens the scope for innovation studies (Johnson and Christensen, 2008). This research contributes to an understanding of the capabilities required to successfully engage stakeholders in the environmental innovation process. Engaging with stakeholders to drive environmental innovation requires three levels of capabilities: operational capabilities, first-order *engagement management capabilities*, and second-order *engagement learning capabilities.* This article identifies and elaborates the dimensions of these capabilities with examples from 88 academic articles (Tables 2-5 to 2-10).

Recent stakeholder engagement literature shows that companies which move from informing stakeholders to involving stakeholders develop internal capabilities that reduce their resource- dependence uncertainty (Herremans, Nazari and Mahmoudian, 2016), and suggests stakeholder relationships can deliver innovative 'win-win' solutions (Eccles, Ioannou and Serafeim, 2014). Prior sustainability innovation literature has taken a dynamic capabilities perspective on stakeholder dialogue (Ayuso, Rodríguez and Ricart, 2006) but has not explored second-order capabilities in this context. Dynamic capability literature has focused mostly on the interplay between first-order and second-order capabilities in the setting of alliance management (Schilke, 2014). This research adds granularity to and provides evidence of the dynamic capabilities involved in the process of integrating external knowledge sources (West and Bogers, 2014) in the environmental innovation context, where these sources are more diverse and likely to exhibit different and potentially conflicting value frames. This work therefore contributes to the stakeholder engagement literature with insights into how discord or difference can be utilized positively (Dawkins, 2015, 2014). Using evidence from the reviewed articles, we refine understanding of the operational and first-order engagement management capabilities required for stakeholder engagement in environmental innovation, and contribute to theory by identifying two second-order engagement learning capabilities.

2.5 Discussion

The framework presented in this article provides a starting point for further research into the relationship between first-order and second-order dynamic capabilities in the environmental innovation context, which may also be transferable to other open innovation contexts.

Evidence is presented to suggest that a second-order *value framing* capability underpins an organization's capability to learn from its stakeholder engagement. Value framing is the capability to navigate between the different ways of seeing the world that exist between different social groupings so that organizations can think beyond the immediate boundaries of the innovation context they are looking at, to learn to understand the alternative value frames of their potential collaborators and co-create novel solutions which harness those differences by rethinking (and re-framing) the problem, or combining competencies in new ways. By identifying value framing as a second-order capability the authors respond to the call for research to look at institutional theory to increase understanding of how dynamic capabilities develop (Schilke, 2014).

The review included articles addressing the 'value frame fusion' which occurs in cross-sector relationships between firms and NGOs (Le Ber and Branzei, 2010a; Holmes and Smart, 2009). However, more research is needed to classify and explore the instances of competing value frames which arise between firms and other external stakeholder groups, and between groups or departments within the firm, and to understand what is done at an individual, group and organizational level to navigate these differences. It could be useful to evaluate how a company's institutional approach to stakeholder engagement is interpreted and implemented at the project level. Most articles in this review take the firm as their unit of analysis (exceptions are Dangelico and Pujari, 2010; Dangelico et al., 2013; Heiskanen and Lovio, 2010; Hoffmann, 2007), suggesting an assumption that an organization's stakeholder engagement approaches are implemented consistently across the organization. This assumption could be researched by looking at how capabilities manifest themselves in diverse projects within the same organization, which could be influenced, for example, by the value frame of the department, or project manager.

Evidence is also presented that a further second-order capability, *systematized learning*, is needed to enable organizations to learn from stakeholder engagement through specific individuals working on discrete innovation projects, who then share that learning across

the organization, and by creating organizational structures and processes which support the continuous reconfiguration of externally-sourced knowledge, so that the organization is 'learning to learn' and continually developing its stakeholder engagement capabilities. This corresponds closely with Zollo and Winter's (2002) notion of 'deliberate learning,' and aligns with research in the dynamic capabilities field which suggests that systematic approaches are required to translate 'raw experience' into 'relational capabilities' - a type of dynamic capability "with the capacity to purposefully create, extend, or modify the firm's resource base, augmented to include the resources of its alliance partner" (Helfat et al., 2007, p.66). These systematic approaches are "active learning processes using systematic ways of developing people and gaining tacit knowledge, followed by knowledge codification and internalization" (Helfat et al., 2007, p.72). Further research is needed into how organizations systematically learn from engaging their stakeholders and embed what they learn into their environmental innovation processes.

By pointing to the close link between value framing and systematized learning, this research builds on evidence (Lane and Lubatkin, 2016) that inter-organizational learning is dependent (inter alia) on the similarity, or differences, in the value frames (or dominant logics) of the organizations working together. It is further argued that organizations with a value framing capability have greater potential to achieve 'higher order' learning because they are able to question the existing boundary conditions, frames or assumptions of the problems at hand (Quist and Tukker, 2013). Reay and Hinings (2009) propose that rivalry between competing logics is resolved through collaboration at micro levels but that it is "possible to create new institutional arrangements where more than one logic guides the behaviour of actors within an organizational field" (p.647). Further research is needed to explore the link between these second-order capabilities, and how a value framing capability works at the individual, group and institutional level.

This research also suggests a *bi-directional interaction between operational and dynamic capabilities.* The capabilities literature has long focused on the one-way impact of dynamic capabilities on operational capabilities. This has left unexplored the reverse effects which might manifest as the routinization and transcendence of certain operational capabilities to become potential dynamic capabilities (Helfat et al., 2007; Newey and Zahra, 2009; di Stefano, Peteraf and Verona, 2014). This includes its newly emerging

routines, such as sustainability practices. This review finds some evidence of operating capabilities having an impact on the effectiveness of dynamic capabilities in this way. Part of the environmental capability includes providing cross-functional project management (Pujari, Wright and Peattie, 2003), and influencing employees and decision-makers. Marketing capability can also help develop stakeholder engagement capability through interacting more broadly and deeply with stakeholders including, but not limited to, customers. In this way, operational capabilities can be seen as playing a role in developing dynamic stakeholder engagement capabilities. Examples of this in practice could include sustainability experts participating in external networks addressing environmental issues, or marketing professionals sharing outputs from customer focus groups relating to more environmentally-friendly products or services with external stakeholder groups, as well as across internal teams.

Although in some organizations there is a centralized functional team (CSR, environment or sustainability team), it is often a distributed capability which is located within several departments. This might take the form, for example, of sustainability steering groups or working groups composed of representatives from multiple functions; sustainability or environmental specialists embedded in other functions such as product development, marketing/communications, supply chain, operations and property; and employees acting informally as 'green champions' across the organization. This suggests that sustainability professionals are well positioned to support the development of stakeholder engagement capabilities. The sustainability marketing literature argues that marketing has a significant role in sustainability innovation (Sharma and Vrendenburg, 1998; Sheth, Sethia and Srinivas, 2010; Vargo and Lusch, 2004). Future research in this field could examine in more detail how sustainability and marketing can exploit their traditional operational capabilities to enable stakeholder engagement in environmental innovation.

Finally, the authors suggest that the capabilities framework presented in this article, and the related contributions discussed above, can extend beyond the specific context of environmental innovation to contribute to understanding of the capabilities required to engage stakeholders in co-creation and other open innovation settings.

2.5.1 Managerial implications

Organizations must consider not only which external stakeholders they engage with and how to navigate their interactions, but just as importantly, how to assimilate, interpret and learn from them to build internal capability. In many organizations, stakeholder engagement activities are siloed. The sustainability team/professional may lead the organization's engagement in cross-industry environmental networks and manage partnerships with NGOs. The marketing team own customer relationships and are expert in gathering insight, but may not consider early-stage research on more sustainable products to be a priority. The investor relations team deals with shareholders, and may not pass on signals about the priorities of responsible investors to others in the organization. R&D and innovation teams may be service providers to brand teams, and therefore not be free to respond to the sustainability trends they identify from competitors, suppliers or entrepreneurial innovators. Efforts are being made to achieve integration at board level through governance structures. However, this internal integration process needs to extend down the organization with the integration of operational activities across other parts of the business. For example, British retailer Argos included objectives for packaging reduction (sustainability team-led) in an inter-product selection process (commercial buying team-led) (Argos Ltd, personal communication).

Firms need to be conscious of the potential for competing value frames to exist between different functional groups within the firm, and find ways to harness these differences in order to achieve a common understanding and interpretation of the insight sourced from external stakeholders and what this might mean for the organization. Similarly, an organization's external stakeholder engagement must be an ongoing process for the stakeholders to fully achieve mutual understanding and learning. Many firms carry out periodic consultation exercises, often outsourced to specialist sustainability consultancies, which involve short conversations with representatives from various stakeholder groups to identify the range of stakeholder issues facing that organization. For many firms this has developed into the formation of stakeholder panels or advisory boards who sit perhaps bi-annually to review the organization's sustainability progress. However, this still does not amount to the "relational work" required to collaborate for systemic change (Senge et al., 2007). It is the investment in this relational work which

allows differences in value frames between firms and stakeholders to be understood and reflected on, and for new ways of understanding and doing to be mutually created.

2.6 Limitations and future research

This research responds to calls for better understanding about how firms can effectively integrate stakeholder perspectives into their innovation processes, particularly in the context of environmental innovation. It synthesizes existing knowledge in this field and develops a hierarchical capability-based framework for engaging stakeholders in environmental innovation, created by moving iteratively between the review data, a prior model of stakeholder integration in new product development, and broader literature on dynamic capabilities, organizational learning, absorptive capacity and institutional logics. A partial response to the question of 'How firms engage with their stakeholders, from distinct institutional settings, to enable environmental innovation?' can be addressed in terms of the structures and processes an organization deploys to manage its stakeholder engagement. However, this needs to be complemented with the cultural appreciation and relational assets required to harness the differences in the values, objectives, motivations and competencies of institutionally distinct stakeholder groups, together with a way of translating learning on a local level to how best to do this at the organizational level. This points to a need for more research on the two second-order dynamic capabilities revealed by this research – value framing and systematized learning. In depth qualitative research into partnerships between organizations and external stakeholders, across diverse innovation projects with different types of stakeholder, would be useful to explore the instances of competing value frames which arise, and to understand the strategies and mechanisms employed at an individual, group and organizational level to navigate these differences. Future research could also explore how organizations systematically learn from engaging their stakeholders and embed new knowledge into their environmental innovation processes. Longitudinal studies of such partnerships could reveal how these two second-order capabilities evolve over time within partnership dyads.

The framework was informed by a systematic review of the literature relating to stakeholder engagement in environmental innovation. However, since this context is representative of the challenges posed by increasingly inclusive innovation practices with extensive and diverse sets of external and internal stakeholders, it also provides a useful

organizing lens for further research on more distributed and democratized models of innovation. Such research could look at the role of first-order engagement management and second-order engagement learning capabilities in the implementation of open innovation or collaborative innovation projects.

2.7 References to chapter 2

*denotes articles included in the systematic review referenced in this article (75 articles). A further 13 articles making up the balance of the review are not referenced directly in this article due to space limitations. A list of these remaining articles in available on request from the author.

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Appendix 1

Table 2-12 Quality assessment criteria for review articles

Element	Level				
	0 Absence	**1 Low**	**2 Medium**	**3 High**	**Not applicable**
1.Theory robustness	The article does not provide enough information to assess this criterion	Poor awareness of existing literature and debates. Under- or over-referenced. Low validity of theory	Basic understanding of the issues around the topic being discussed. The theory is weakly related to data	Deep and broad knowledge of relevant literature and theory relevant for addressing the research. Good relations theory-data	This element is not applicable to the document or study
2.Methodology, data and supporting arguments	As above	Data inaccuracy and not related to theory. Flawed research design	Data are related to arguments, though there are some gaps. Research design may be improved	Data strongly supports arguments. Besides, the research design is robust: sampling, data gathering, data analysis is rigorous	As above
3. Implication for practice	As above	Very difficult to implement the concepts and ideas presented. Not relevant for practitioners or professionals	There is potential for implementing the proposed ideas, with minor revisions or adjustments	Significant benefit may be obtained if the ideas being discussed are put into practice	As above
4.Generalizability	As above	Only to the population studied	Generalizable to organizations of similar characteristics	High level of generalizability	As above
5. Contribution plus a short statement summarizing the article's contribution	As above	Does not make an important contribution. It is not clear the advances it makes	Although using others' ideas, builds upon the existing theory	Further develops existing knowledge, expanding the way the issue was explained so far	As above

Source: Pittaway et al. (2004)

3 BUSINESS-NONPROFIT ENGAGEMENT IN SUSTAINABILITY-ORIENTED INNOVATION: WHAT WORKS FOR WHOM AND WHY?

ABSTRACT

Sustainability-oriented innovation (SOI) involves changing products, processes, organizations and wider systems to deliver environmental, social and economic value. Nonprofit organizations can contribute the external knowledge required for SOI; however, businesses can find it difficult to engage with nonprofits due to their contrasting institutional logics. Findings from five case studies of SOI projects involving business-nonprofit engagement are synthesized into a context-intervention-mechanism-outcome (CIMO)-logic framework. Value outcomes occur through three mechanisms where partners: 1) secure value by enforcing their own interests (agent control); 2) recombine their assets and capabilities to create value for partners, society and the environment (resource integration); and 3) navigate differences between institutional logics to enhance shared value (value empathy). The salience of contextual factors, including compatibility of engagement logics as well as institutional logics, influences the interventions deployed, the mechanisms through which interventions operate, and outcomes. The framework offers practitioners a tool for selecting interventions in their own context.

Keywords: cross-sector partnerships; stakeholder engagement; sustainability-oriented innovation; CIMO-logic; institutional logics

3.1 Introduction

Sustainability-oriented innovation (SOI) involves making deliberate changes to products, processes, organizations and wider systems to deliver environmental and social as well as economic value (Adams et al., 2016). A sustainability orientation adds complexity to innovation since it may necessitate balancing these 'triple bottom line' (Elkington, 1997) (environmental, social and economic) dimensions and engaging with a broader range of stakeholders with potentially competing interests (Adams et al., 2016). Stakeholder engagement is defined as the organizational practices undertaken to involve stakeholders in a positive manner in organizational activities (Greenwood, 2007), and involves taking account of their desires and capabilities (Noland and Phillips, 2010). It can enable knowledge capture, build social capital, and provide an opportunity for social learning "where diverse stakeholders share a common forum, learn about each other's values, reflect upon their own values and create a shared vision and objectives" (Mathur, Price and Austin, 2008, p.601). Although it can be used as a control mechanism, it can also be used to enhance trust and cooperation (Greenwood, 2007) and to facilitate innovation (Ayuso et al., 2011). Innovation literature (von Hippel, 2005), notably that on open innovation (e.g. Chesbrough, 2012), suggests that "the knowledge essential to disruptive innovation is located outside the boundaries of the firm and its most powerful stakeholders" (Murphy and Arenas, 2011 p.107). Engagements between businesses and nonprofit organizations are therefore uniquely positioned to create value across economic, environmental and social dimensions (King, 2007), since nonprofits' primary purpose is the promotion of social and/or environmental goals (Murphy and Bendell, 2001).

However, the partners in a business-nonprofit engagement may have contrasting institutional logics - defined as the "set of material practices and symbolic systems including assumptions, values, and beliefs by which individuals and organizations provide meaning to their daily activity" (Thornton, Ocasio and Lounsbury, 2012, p.2) - which can make these partnerships vulnerable to conflict (Le Ber and Branzei, 2010b; Driessen and Hillebrand, 2013). Cross-sector partnership literature identifies a continuum of collaboration outcomes (Austin, 2000) ranging from conflict resolution through philanthropy to innovation (see Murphy and Arenas, 2011, p.107 for a good summary). This literature argues that business-nonprofit partnerships drive more innovative

outcomes where there is mutual interest and partners leverage their social relations (Jamali, Yianni and Abdallah, 2011). For businesses, engaging nonprofit stakeholders requires multi-faceted relational processes (Le Ber and Branzei, 2010b; Mathur, Price and Austin, 2008) and distinct organizational capabilities (Watson et al., 2018).

However, the few empirical studies that analyze nonprofit engagements in sustainability-oriented innovation focus on social (rather than environmental or triple-bottom-line) outcomes. Furthermore, their scope is limited. Of the most notable precursors to this study, Holmes and Smart (2009) analyze the context for, and outcomes from, business-NGO engagements for social innovation, but do not explore the specific interventions deployed to manage the engagement. Le Ber and Branzei (2010a) explore relational processes without linking these to context or outcomes. Both studies call for further work to complete the picture.

This paper reports findings from five case studies of SOI projects involving business-nonprofit engagement which are synthesized into a framework following context-intervention-mechanism-output (CIMO)-logic (Denyer, Tranfield and van Aken, 2008) - used to produce action-oriented syntheses of literature (Pilbeam, Alvarez and Wilson, 2012) or empirical data (Holmström, Främling and Ala-Risku, 2010). The framework sets out the *interventions* (modes of engagement) deployed to manage business-nonprofit engagement for SOI and the *outcomes* these interventions generate. Moreover, and extending prior literature, we identify *why* these modes of engagement might lead to different outcomes by evidencing three distinct *mechanisms* - agent control, resource integration and value empathy – that link interventions with outcomes. We also offer a more comprehensive 'menu' of the contextual factors affecting business-nonprofit engagement in SOI: notably, we find that the relative perceived salience of these contextual factors influences the interventions deployed, the mechanisms through which those interventions operate, and the value outcomes achieved. We find that differences between the rationales organizations hold for engaging in an innovation project ('engagement logics') form a relevant part of the engagement context, and that although these may in part be influenced by institutional logics, they merit consideration as an independent contextual variable. Our integrative framework will help practitioners in business-nonprofit partnerships select the interventions most likely to achieve their

desired outcomes, helping them to answer the question ‘what works and for whom and why?’ by depicting the mechanisms through which these interventions might work in their specific context.

3.2 Literature review

Recent stakeholder engagement literature has moved away from its original focus of making trade-offs between interests, towards exploring the complementarity between stakeholders’ resource allocations (Henisz, Dorobantu and Nartey, 2014) and the synergistic links between the demands of business and society (O’Riordan and Fairbrass, 2014). There is growing recognition that engaging with stakeholders can “deliver innovative solutions that benefit a particular stakeholder group while increasing the pie for all stakeholders” (Eccles, Ioannou and Serafeim, 2014, p. 2848), and that stakeholder diversity can be harnessed to drive innovation (Dawkins, 2015; Watson et al., 2018). We draw on the wider literature on cross-sector partnerships, public-private partnerships, collaborative innovation and sustainability-oriented innovation to identify opportunities to contribute to prior research on the outcomes, interventions and context of business-nonprofit engagement in SOI and to build new theory and evidence relating to the connections between interventions, mechanisms and outcomes.

3.2.1 Outcomes of business-nonprofit partnerships and SOI

There is growing recognition that collaboration across organizational boundaries is vital to the success of businesses’ corporate sustainability strategies (Wu, He and Duan, 2013). Research into collaborations between businesses and nonprofit organizations – often referred to as ‘cross-sector’ partnerships - identifies three types of value flowing from these engagements: value directly created from a specific engagement, value created by the ongoing relationship, and learning that flows from that engagement (Austin and Seitanidi, 2012; Kivleniece and Quelin, 2012; Koschmann, Kuhn and Pfarrer, 2012; Mirvis et al., 2016). Whilst in the sustainability-oriented innovation field, Adams et al. (2016) delineate three innovation-outcome pairs: 1) ‘eco-efficiency’ innovations which reduce harm, 2) ‘new market opportunity’ innovations that create shared value, and 3) ‘societal change’ innovations which create positive net impact. It is not clear, however, how these typologies combine or are modified in the specific case of business-nonprofit engagements for SOI.

3.2.2 Interventions supporting business-nonprofit partnerships

The literature on the modes of engagement that form the 'intervention' in CIMO-logic is promising but partial. It is known that cross-sector partnership goals need clear articulation to avoid parties misinterpreting each other from their contrasting institutional perspectives (Rondinelli and London, 2003). Innovation outcomes are thought to be particularly impacted by the scope of an inter-organizational partnership (Mandell and Steelman, 2003), with a narrow, discrete project more likely to lead to incremental, planned innovation, and an open-ended, multifaceted initiative enabling radical, unexpected change (Holmes and Moir, 2007). It is contended that both formal and informal engagement governance play a role in determining value outcomes in public-private partnerships (Kivleniece and Quelin, 2012) and "base of the pyramid" partnerships (Hahn and Gold, 2014). However, the links between governance and value outcomes have not been explored empirically in business-nonprofit partnerships. Previous studies suggest that engagement processes can support the open-minded exploration and recognition of differences in values between partner organizations, and establish trust between them (Hahn and Gold, 2014; Rondinelli and London, 2003). The role of individuals acting as 'boundary spanners' between cross-sector partners has been studied (Holmes and Smart, 2009); however, other engagement processes remain underexplored.

3.2.3 Contextual factors shaping business-nonprofit partnerships

Power balance (Holmes and Moir, 2007; Murphy, Perrot and Rivera-Santos, 2012) and resource interdependence (Ashraf, Ahmadsimab and Pinkse, 2017) have been established as contextual factors affecting business-nonprofit partnership outcomes. Research has considered how different institutional logics are combined within hybrid organizations (which mix the logics of different sectors of society i.e. the public sector, private sector and voluntary sector in a single organizational form) (Battilana and Dorado, 2010; Jay, 2013; Reay and Hinings, 2009) and within cross-sector partnerships (Le Ber and Branzei, 2010b; Rondinelli and London, 2003). Ashraf, Ahmadsimab and Pinkse's (2017) research into cross-sector partnerships in the carbon-offset market suggests an interplay between power balance, resource interdependence and logic compatibility. They find that the more partners depend on each other's resources, the harder they work to manage differences in

logics, but that power imbalances intensify the adverse effect of incompatible logics, as the less dependent organization attempts to impose its institutional logic on its partner.

Selsky and Parker (2010) have shown how partnership rationales, or 'sensemaking platforms' form part of the context for cross-sector social partnerships (cross-sector partnerships formed explicitly to address social issues and causes): A resource-dependence platform frames an engagement as a way to attract resources to solve an organization's existing problem; a social-issue platform addresses a social problem, with the added benefit of organizational 'goods' flowing back to the partners; and a societal-sector platform partnership is motivated by a need to solve societal challenges that traditional sector solutions cannot address, by learning from organizations in other sectors. However, they do not consider what would happen if partners' sensemaking platforms are not aligned.

3.2.4 Linking outcomes with interventions and context

Prior research has thus predominantly focused on outcomes, interventions or contextual factors of business-nonprofit partnerships in isolation, rather than the connections between them. Recent exceptions, in the public-private partnership context, are Quélin, Kivleniece and Lazzarini's (2017) conceptualization of economic and social value creation mechanisms and Caldwell, Roehrich and George's (2017) and Villani, Greco and Phillips's (2017) empirical studies on relational co-ordination and governance for social value creation. This research builds on this work and contributes to knowledge by asking 1) how different modes of engagement (interventions) influence the value outcomes generated by sustainability-oriented innovation projects involving business and nonprofit partners and 2) why this is the case.

3.3 Method

A multiple-case study design (Yin, 2014) was selected to provide explanations for how and why interventions lead to outcomes across cases with common characteristics, but set within a variety of sector contexts. Purposive sampling was used to identify five SOI engagements between large UK-based consumer-goods businesses and nonprofit organizations. Cases were selected to represent a range of consumer goods sectors and nonprofit partner types, comprising environmental groups, environmental consultancies

and charities. The unit of analysis was a specific SOI project, to gain richer and more focused accounts from respondents of project events and their perceptions of them. The rich data in these cases allowed us to add detail and depth to existing theoretical findings and to propose new linkages between them. See Table 3-1 for short project descriptions and data summaries.

For each case, both primary and secondary data were collected. The main data source was semi-structured interviews with individuals who worked on the SOI project representing different functions of the business and the nonprofit partner. Other key informants were a project contact who introduced us to people involved in the day-to-day activities, and in leadership positions who took more strategic decisions. We asked the business and nonprofit respondents the same questions, so we could cross-check facts and capture their different perspectives. Multiple respondents improved data reliability, and different perspectives improved the validity of theorizing (Eisenhardt and Graebner, 2007). Respondents were asked to describe project objectives and motivations, how the project was set up and run, how the relationship evolved, challenges and how they were overcome, and what was learnt from the experience. Thirty interviews (15 from businesses, 15 from nonprofits), lasting 54 minutes on average, were recorded and transcribed. Interviews were face-to-face (18 respondents), except for geographically remote respondents who participated by video (5) or telephone (7). Interviews were enriched with observation including site visits, taking part in project activities (for example, sorting recycled clothes), and observing meetings. Documentary evidence included contracts, strategy statements, activity updates, organization charts, customer and shareholder communications and internal presentations and communications materials. This was supplemented with publicly available information including case studies, online news and reports. All data was uploaded into Nvivo 11 for analysis.

Each project served as a distinct unit for analysis with the researchers moving within and across projects, and between data and extant theory, to develop constructs and their relationships (Eisenhardt, 1989) as follows:

Table 3-1 SOI project descriptions and data sources

Case (Code) Partners	Interviews (N)	Observation (hours)	Secondary sources	SOI project description
SPORT (S) British Telecom (BT) Comic Relief	4 2	2	Partnership contract; internal presentations; member communications	**The BT Supporters' Club (TSC)**: Since BT Sport launched in August 2013, BT invite new subscribers to 'give something back' by signing up to make monthly donations to TSC. Funds are managed by Comic Relief and granted to nonprofit organizations using sport to help disadvantaged young people. TSC aspires to offer members a sense of belonging and common purpose through supporting sport to achieve social goals.
CLOTHES (C) Marks and Spencer (M&S) Oxfam	3 3	4.5	Organigrams; employee communications; annual reports	**Shwopping:** An end-of-life solution for clothing purchased from M&S, developed by M&S and Oxfam and launched January 2008. Customers donate unwanted clothing at M&S or Oxfam stores and receive vouchers redeemable against future M&S purchases. 2 – 3 million garments donated per annum.
GADGETS (G) Argos WRAP	3 2	3	Video and written case studies; media articles	**Gadget Trade In**: Argos worked with WRAP (Waste & Resources Action Programme) to launch (in 2015) this trade in service, online and across nearly 800 UK stores, which allows customers to trade-in their old mobile phone or tablet in exchange for an Argos gift card redeemable against future purchases.
ICE CREAM (IC) Unilever Greenpeace	2 4	-	Internal documents; press releases; media articles; books; academic articles	**Refrigerants Naturally!** Coalition of international companies, set up in 2004, acting against global warming and ozone depletion, through replacing harmful greenhouse gases in point-of-sale cooling and freezing units with climate-friendly natural refrigerants. Current members are Unilever, Coca-Cola, Pepsico and Red Bull. Supported by Greenpeace and United Nations Environment.
BREWING (BR) Adnams National Trust	3 4	3.5	Memorandum of understanding; impact reports; internal presentations	**Process innovations**: Informal relationship centred on exchange of experiences and ideas enabling environmental innovations in both organizations including heat recovery, heat conservation, bio-gas and electric vehicles, packaging, and waste management. Adnams became active members of the Fit for the Future network, set up and largely funded by the NT in November 2012, to help nonprofit organizations become more sustainable by sharing best practice and collaborating.
Total	**30 (N) (27 hours)**	**13 hours**		

1) *Within case analysis*: multiple sources were consolidated into written case study reports for each project; then guided by CIMO-logic (Denyer, Tranfield and van Aken, 2008) segments of data were coded to 1st order concepts organized under the headings of interventions, outcomes and context; 2) *Cross-case analysis*: these concepts were then compared and consolidated across cases and aggregated into 2nd order themes (represented by the smaller boxes in Figure 3-1); 3) *Hypothesizing relationships between constructs*: finally the researchers hypothesized explanations for why interventions influenced outcomes, then verified whether these emerging relationships between constructs fitted with the evidence on a case by case basis. Where the evidence did not fit, a hypothesized explanation was revised, or rejected, or an alternative explanation was proposed. At the end of this process three distinct explanations were found to have good explanatory power across the five cases. These are shown as the three linking mechanism boxes in Figure 3-1.

3.4 Results and discussion

Figure 3-1 synthesizes the evidence from the case data to present a framework for business-nonprofit engagement in SOI. The framework outlines what works for whom and why: the stakeholder engagement interventions ('what') that facilitate value outcomes ('works') via different mechanisms ('and why'), depending on the context in which the engagement takes place (broadly, 'for whom'). We discuss in turn these value outcomes, interventions, mechanisms, and contextual factors with illustrations from the five cases SPORT, CLOTHES, GADGETS, BREWING, and ICE CREAM.

3.4.1 Value outcomes

Why do companies embark on these collaborations? What outcomes are they seeking? The outcomes from our cases did not easily fit Adams et al.'s (2016) SOI typology (i.e. eco-efficiency, new market, and societal change) described earlier, and could be more readily described in terms of value creation, defined as the amount and quality of value created for both partners and broader society (Austin, 2000; Murphy and Arenas, 2011). Two types of value were evident. The first came from partners swapping resources; in the second, resources were recombined to create new intrinsic value, creating a sum which was greater than its parts. Following Austin and Seitandi (2012), we term these

transferred resource value and *synergistic value* respectively. In some cases, value was created from the engagement process itself: we call this *interaction value* (Austin and Seitanidi, 2012). We look at these next.

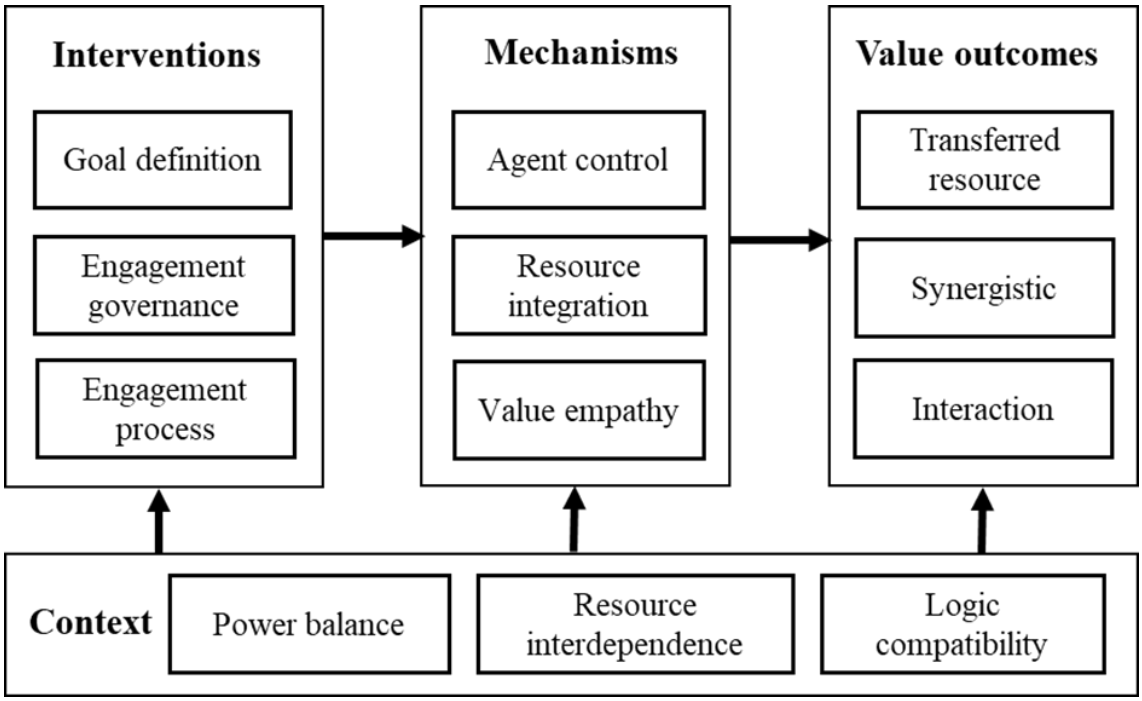

Figure 3-1 CIMO-logic framework for business-nonprofit engagement in sustainability-oriented innovation

3.4.1.1 Transferred resource value

Partners derive value in the form of resources and tangible and intangible benefits flowing to their organization. This value comes from partners effectively swapping resources - generally resources more highly valued by the receiving partner than the contributing partner. In CLOTHES, international charity Oxfam benefits from increased footfall to their shops and increased clothing donations, helped by British retailer Marks & Spencer (M&S)'s marketing spend on their joint clothing recycling initiative, branded 'Shwopping' (See Table 3-1 for case summaries). The retailer benefits from increased sales from voucher redemption, as well as meeting their 'Plan A' sustainability programme's targets for waste reduction, helped by the charity's credibility. Some transferred resource value is easily measurable, such as the businesses' increased sales in CLOTHES and in GADGETS; in other cases, resources such as new skills gained from the partners in BREWING, are harder to measure. Often, legitimacy in a specific sphere

of operations was a resource transferred from nonprofit to business. For example, in SPORT British Telecom (BT) benefited from British charity Comic Relief's credibility in sport-related fundraising, and Unilever accrued reputational benefit from working with Greenpeace in ICE CREAM. Following Austin and Seitanidi (2012), we term this transfer of tangible and intangible benefits, *transferred resource value*, defined as "the benefit derived by a partner from the receipt of a resource from the other partner" (p.731).

3.4.1.2 Synergistic value

Synergistic value can result from an innovation project due to synergy between the partners' respective resources and capabilities. This value can flow to the project partners, but also to project beneficiaries and society more broadly. For example, the unique market proposition in CLOTHES combined the charity's clothing processing capabilities and humanitarian brand with the retailer's customer reach, marketing clout and credentials as a leading sustainable brand. This unique combination of assets was beyond the reach of either party on their own. Following Austin and Seitanidi (2012), we term this *synergistic value*, since it "produces completely new forms of change due to the combinations of the collaborators' distinctive assets" (p. 731). By contrast, the ICE CREAM partnership between Unilever and Greenpeace began as a 'forced' (as opposed to 'voluntary') innovation by the business (Holmes and Moir, 2007) since it took a Greenpeace campaign to initiate innovative action from the company. This resonates with Van de Ven's (1986) observation that organizations are more disposed to protect existing practices than to develop new routines and will not take action until the 'threshold of concern' is reached. Synergistic value in BREWING had different origins, arising from a chance meeting between brewer Adnams and the UK's National Trust, a nonprofit heritage organization. An invitation issued to the brewer's sustainability team to view a renewable energy technology at a National Trust site found the technology to be unsuitable but sparked an unexpected innovation (Holmes and Moir, 2007).

3.4.1.3 Interaction value

As well as value derived from the task-related outcome of the innovation project itself, we found other intangible benefits arising from the process of partners working together. For example, the relationship forged between the individuals working on ICE CREAM enabled them to work confidently together to influence the 400 companies of the

Consumer Goods Forum to pass a Refrigeration Resolution eliminating pollutant hydroflourocarbon from all new equipment from 2015. In BREWING, the brewer formalised their commitment to two-way sharing of learning about environmental sustainability by becoming one of the few for-profit members of the heritage charity's 'Fit for the Future Network' which helps nonprofit organizations become more sustainable by sharing best practice and collaborating Following Austin and Seitanidi (2012), we term such relationship and learning outcomes *interaction value*.

The nature of the learning from projects seems to be influenced by an organization's rationale for being involved, resonating with Selsky and Parker's (2010) conceptualization of 'sensemaking platforms.' In GADGETS, multichannel retailer Argos was primarily concerned with the market knowledge that could be acquired from circular-economy nonprofit consultancy WRAP, exhibiting what Selsky and Parker (2010) call a logic of acquisition or possession, associated with partners whose partnership rationale is to acquire complementary resources. Whereas in BREWING, Adnams shared their business modelling capability with nonprofits to help them gain approval for investment in energy efficiency projects (hence increasing the UK's overall energy efficiency) demonstrating a logic of contribution (Selsky and Parker, 2010) exhibited by organizations who are seeking partners to work with to solve a broader societal issue. We found that learning associated with this logic of contribution can improve the context for future engagements, by enhancing the partners' self-perceived ability to navigate different institutional logics in the future.

3.4.2 Interventions

Three aspects of the structure and governance of engagements were observed to influence outcomes: *goal definition*, *engagement governance* and *engagement process*.

3.4.2.1 Goal definition

The cases diverged in the extent to which the joint and individual goals of the project and relationship were defined, communicated and understood. Our evidence suggests the need for mutually defined goals both for the joint project and the individual partners, confirming prior research suggesting the benefit of clearly defining and articulating the outcome goals of a business-nonprofit partnerships (Rondinelli and London, 2003) to

avoid parties misinterpreting the relationship's intentions from their contrasting institutional perspectives. In CLOTHES, the common goals of the project were clearly understood, but not enough attention was given to the points of tension between the partners' individual objectives:

> *"There are so many ways you can cut the benefits: footfall, voucher redemption, less to landfill, charity fundraising. But this also makes it harder to drive forward" (CBus3)*[5].

We also saw the need for goals to be redefined if necessary as the engagement evolves, for example in the long-running ICE CREAM coalition. In contrast to research suggesting that a focus on a narrow, discrete project is more likely to lead to incremental, planned innovation (Holmes and Moir, 2007), the narrow focus of the ICE CREAM initiative was commonly cited as a reason for its success in dramatically changing the landscape for refrigeration technology.

3.4.2.2 Engagement governance

Governance of stakeholder engagements ranged from formal contracts (SPORT) and non-contractual Service Level Agreements (CLOTHES) to membership of a coalition (ICE CREAM) or network (BREWING) and the provision of ad-hoc consultancy (GADGETS). In SPORT, the nature of the legal contract originally negotiated was reported to have had an adverse effect on the engagement, since it embodied a supplier type relationship rather than a risk and value sharing partnership arrangement. In ICE CREAM, the appointment of a third-party secretariat which facilitated the coalition's day-to-day running and represented its *"neutral voice"* (ICNp4) appeared to contribute to its success. Successful partnership governance facilitated personal relationships, for example in CLOTHES, SPORT and GADGETS, 'funnel-shaped' relationships between account managers on both sides of the engagement fostered strong personal relationships characterised by mutual trust and respect.

[5] Interview respondents were given codes. The first letter denotes the case name, Bus represents a respondent from the business partner, Np represents a respondent from the nonprofit partner, and the number represents the individual respondents from that partner.

Internal governance within each organization was also relevant to outcomes. The SPORT project did not naturally fit BT's organizational structure and became orphaned between four groups of powerful internal stakeholders. By contrast, CLOTHES was offered a supportive cultural context within M&S by the visibility and embeddedness of their 'Plan A' sustainability programme, and the *"pan-organizational group"* (CNp2) of Plan A representatives with whom Oxfam could work across functions. The way in which the project was perceived within each organization clearly influenced the engagement outcome. This internal aspect of engagement management has been less well explored in the literature (Watson et al., 2018).

3.4.2.3 Engagement process

Regular meetings and catch-up calls were used across cases to create a continuing dialogue, with face-to-face meeting being cited as more likely to facilitate openness and honesty. In ICE CREAM, meetings tended to be day-long and hosted at a neutral venue to help participants focus exclusively on the partnership. This intensive interaction allowed the individuals involved to share and strengthen personal missions which came to transcend their organizational identification and helped to create a strong group identity -*"the gang"* (ICNp1):

> *"They weren't doing this for Greenpeace or for Unilever, they were doing it for their kids" (ICNp1)*

Conversely, although Oxfam was impressed with the efficiency of M&S meetings, staff felt the short meetings did not provide space for the type of exploratory discussion that could spark innovative thinking:

> *"There's no collaboration in the innovation and the development of things" (CNp3)*

Most partnerships were supported by person-to-person relationships at CEO level. Practices such as only offering short-term contracts for nonprofit employees working on corporate partnerships (SPORT) and rotating buyers between product categories (GADGETS) was reported to inhibit the development of good personal relationships.

Other interventions supporting deeper partner engagement included immersing organizational members beyond the immediate project team in the partner's world, which involved physically taking people to visit partner sites. For example, BT's contact centre

staff visited funded sport-for-change projects (SPORT), and M&S teams visited Oxfam's emergency warehouse (CLOTHES):

> *"They can see where it's labelled actually to go to Syria or wherever it's to go to. And they're like, "Wow! That's real" (CNp1)*

Likewise, Oxfam's store managers visited M&S stores to see how they were operated. The recruitment of managers with experience of both for-profit and nonprofit sectors was also cited as a positive intervention by both partners in CLOTHES and the nonprofit partner in GADGETS. Collectively, these processes support the open-minded exploration of value differences between organizations (Rondinelli and London, 2003). Critically, they also allow trust between partners to be established - particularly important when businesses expose their internal operations to advocacy organizations, or when nonprofits risk their credibility by partnering with commercial firms (Rondinelli and London, 2003) as in CLOTHES and ICE CREAM.

As well as establishing processes to manage external stakeholder engagement, we found that project teams also collaborate extensively with internal stakeholders. This was facilitated by the governance structures already discussed, but also involved an ability to translate effectively between the partnership context and the 'home' context. In SPORT, both account managers spoke of agreeing between them the roadmap for their partnership but struggling to sell that vision into their own organizations. In GADGETS, the WRAP account manager had to dramatically shift between the commercial approach he used with Argos and the 'systems-changing' approach expected by WRAP.

3.4.3 Mechanisms

Our analysis of the cases identified three mechanisms through which these interventions work to create value. The *agent-control* mechanism draws on agency theory, whereby value is transferred through monitoring and enforcing the objectives of the collaborating parties, for example through formal contracts and reporting. The *resource integration* mechanism is informed by resource-based theory, whereby new value is created through recombining complementary resource and capabilities to create value for both partners as well as for society and the environment. Finally, the *value empathy* mechanism draws on institutional logics theory whereby value creation is enhanced through recognizing and

harnessing differences (or similarities) between partners' institutional logics. For ease of exposition, Table 3-2 assigns each case to the mechanism which was most prominent within its data and illustrates the framework shown in Figure 3-1 by listing similarly the dominant interventions, outcomes and contextual factors. We next describe each mechanism, illustrating each with one case for simplicity. However, this is not to say that other mechanisms were not also at work in those cases.

3.4.3.1 Agent control

The first mechanism was parties straightforwardly enforcing their respective objectives through legal contracts, targets, or other interventions designed to control the partner. We term this agent control. Through the lens of this mechanism, interventions deliver value in a partnership because a partner monitors and enforces the parties' objectives. SPORT illustrates this mechanism. Wrangles over the contract governing the project set the tone for the partnership. Agency issues also existed at the individual level, some BT respondents feeling that employees were not rewarded for work which drove SPORT benefits:

> *"It just doesn't feel as though it's something that will be ever seen as important enough to really get me the respect to be able to get the roles within this organization that I would like" (SBus1)*

Both partners perceived that the other had the power in the relationship, BT feeling that Comic Relief were not responsive to the partnership's needs because they were prioritising another relationship, and Comic Relief similarly not wanting to invest resource in innovating as they feared that BT might choose another nonprofit partner before their investment reaped benefits. This aligns with Holmes and Moir's (2007) finding that power imbalances can have an adverse effect on innovative outcomes, as partners who perceive they are heavily dependent on the other partner, do not contribute fully to the innovation project.

Table 3-2 Case illustrations of CIMO-logic framework

Dominant mechanism...CASE[6]	Agent control	Resource integration		Value empathy	
	SPORT	**CLOTHES**	**GADGETS**	**BREWING**	**ICE CREAM**
Primary value outcomes					
Transferred resource	Reputation, grant-making; customers	Fundraising; marketing; stores and logistics	Expertise, insight; stores, customers	Technical and business model expertise	Reputation; market scale
Synergistic	-	Increased donations; diversion of clothing from landfill	Proof of concept for circular business models	Fit for the future network	Refrigeration technology system change
Interaction	-	-	-	Learning to learn; encouraging others to share	Collaboration for solutions; trust to enable future collaborations
Primary interventions					
Goal definition	Post-hoc	Clearly defined common goals; tensions between private goals	Short term and business oriented	Process goal rather than outcome goal	Narrow focus (end) but evolving process (means)
Engagement governance	Fixed term contract; numerical reporting	Opened ended MOU; account managers; access to Plan A team	EU funded consultancy	Informal relationship → network membership	Membership of coalition; independent secretariat
Engagement process	Small team meetings; outcome-driven agenda	Strategic supplier-type relationship	Boundary spanners from both sides	Exploratory conversations and visits; alignment of organizational purpose	Group identity; personal missions transcending organizational boundaries
Salient contextual factors					
Power balance	Both partners felt lacked power	M&S dominant	Argos dominant	Balanced	Greenpeace reputational threat balanced by members' scale
Resource interdependence	BT needed to fill expertise gaps	Valued complementary assets; good brand fit	Argos scale; WRAP specialist knowledge	No interdependency	Critical Greenpeace technology
Institutional logic compatibility	Low	Medium	Low	High	Low
Engagement logic compatibility	Low	Medium	High	High	High

[6] For ease of exposition, the table shows the mechanism that is most prominently evidenced in each case

BT had an urgent need to launch the initiative in a short time period, so respondents felt that the relationship set-up had been rushed. This meant that individual and joint goals were not adequately defined*:*

> *"There was a lot of post-rationalisation after the event…it was like let's get it up there and then let's see what we can make of it" (SBus1)*

Furthermore, engagement processes were narrowly limited to the individuals directly involved, who then found it difficult to translate the project's agenda back into their respective organizations:

> *"I think the four of us always felt like we were pulling in the same direction. I think the difficulties came actually with … me internally at Comic Relief sometimes, I think [named counterpart] sometimes internally at BT" (SNp2)*

As a result, the contract governing the engagement had to be renegotiated less than a year after the initiative's launch.

In terms of outcomes, the Supporter's Club (TSC) nonetheless raised significant funds for charitable grants in the UK and internationally to fund sport to help disadvantaged young people. However, interventions were primarily focused on ensuring that the project delivered the expected benefits to the respective partners - or at least did not cost them too much - rather than generating the optimum long-term joint project outcome. BT wanted to use the project to engage with its customers in a new way and differentiate itself from its broadcast competitors, and therefore measured success in commercial terms such as attachment rates - the percentage of people signing up to BT Sport who opted to become TSC members - and customer net promoter scores (NPS). The business found it difficult to prioritise investment in the project given that the business benefits were intangible and hard to measure:

> *"because it's competing for the same cash and people's time in the business, that's the real challenge. We don't have a very sophisticated model for dealing with things that are that different" (SBus3)*

For Comic Relief, too, the project demanded a different way of working and they did not want to invest too much resource in an unproven fundraising model, and so remained focused on their usual campaign model.

The principal-agent problem arises where two parties (i.e. the principal and the agent) have different interests and asymmetric information, such that the principal cannot directly ensure that the agent is always acting in their best interest. SOI projects involve social and environmental objectives which are difficult to define and measure. They also involve multiple agency relationships: between the organizations, between the organizations and any external beneficiaries, between individuals and their own organizations, and between individuals in different organizations. These combined factors make it difficult to craft effective incentive and monitoring mechanisms, particularly in the context of significant power imbalances (Rivera-Santos, Rufín and Wassmer, 2017). In the case of SPORT, a short-term legal contract governed the relationship, the business partner tried to manage and evaluate the project *"like a product"* (SBus1), and their nonprofit partner also saw their role as supplying services which did not fit with their standard operating model. The interventions put in place to effect agent control were effective in controlling the cost and risk of the project, but also contributed to limiting the value created.

3.4.3.2 Resource integration

The second mechanism involved partners thinking about the assets and capabilities they each had to contribute, and how these could be recombined to create value for both partners as well as for society and the environment. We call this resource integration. Through the lens of this mechanism, interventions deliver value because they recombine complementary resources and capabilities in a way that creates value. CLOTHES represents a case in which the resource integration mechanism offers good explanatory power. We described earlier how the joint clothing recycling project, branded 'Shwopping,' combines Oxfam's clothing processing capabilities with M&S's customer reach, to create a unique proposition for consumers. The collaboration was universally viewed by respondents as representing a clear win-win for both organizations, for the people Oxfam's campaigns help, and for the environment. The common goals were to reduce the amount of clothing sent to landfill and to raise funds for Oxfam. The project

relationship was perceived to have an open-ended timescale, and although respondents referred to a memorandum of understanding, this did not seem to be relied upon in the governance of the relationship. Both partners expressed their long-term commitment to the relationship, despite acknowledgement that its form would be subject to M&S's business cycle. The personal relationship between the two account managers, built up over time, facilitated mutual understanding; this was supported by matching senior management relationships. The initiative also benefited from M&S's Plan A sustainability team which is distributed across its internal functions. These interventions helped the project achieve its desired outcomes, with 28 million items of clothing diverted from landfill since launch in 2008, raising £2m for Oxfam per year (Marks and Spencer, 2017). As previously described, each partner also benefited from private value flowing to their organization due to the resources contributed by their partner.

The most relevant contextual factor in this case was the partners' resource interdependence, defined as "the degree of partners' needs for each other's resources to achieve their respective goals" (Ashraf, Ahmadsimab and Pinkse, 2017, p. 797). According to resource dependence theory, organizations engage in partnerships to access resources and to achieve objectives that they are unable to achieve on their own (Pfeffer and Salancik, 1978). The ability of inter-organizational partners to offer each other complementary resources and capabilities is thus traditionally seen as a key determinant of partnership success, particularly if this is supported by organizational complementarity (for example operating systems, decision making processes and cultures) (Dyer and Singh, 1998).

However, two factors inhibited the collaboration from evolving from a 'new market opportunity' type innovation (Adams et al., 2016) to driving wholesale systems change within the textile sector. First, although both partners were committed to the project's common goals, each also had distinct objectives. Oxfam were more concerned with social benefits they could fund through the value of the donated items, whereas M&S were more concerned with environmental benefits, contrastingly focusing on the volume of items diverted from landfill. These differences led to some tensions around prioritising aspects of the project, with both sides sometimes feeling the other partner could be contributing more resource.

Second, Oxfam respondents spoke of 'commercialising' their ways of working to meet the needs of their corporate partners. This meant an increased focus on business modelling and trying to run meetings more efficiently. While this helped the day-to-day relationship, there was a feeling that there was value in the difference between the organizations that could be lost if the relationship went too far towards becoming a traditional supplier relationship:

> *"Basically, they are used to working with suppliers, so they are used to telling their suppliers what they need and not necessarily collaborating with them on stuff" (CNp3)*

Integrating resources in a way which increases the total economic, social and environmental value created is made easier if partners truly understand what represents value for themselves and for their partners. We call this value empathy, which we turn to next.

3.4.3.3 Value empathy

The value outcomes from an engagement are a function of what each organization determines is of value to it, which is shaped by its institutional logic. The third observed mechanism involves partners working to understand what represents value for themselves and for their partners: we term this value empathy. Through the lens of this mechanism, interventions deliver value by constructively navigating differences in institutional logics between partners to maximise the total economic, social and environmental value created.

BREWING represents a case in which the value empathy mechanism offers good explanatory power. Adnams and the National Trust share experiences and ideas with each other, to help them increase the eco-efficiency of their operations and properties. The engagement can be characterised as a 'friendship' between the organizations: *"a relationship partnership"* (BRNp4). There is no formal direct relationship between them, although Adnams are paid-up members of the Fit for the Future network which was set up and is primarily funded by the National Trust, who themselves are members. The goal of the relationship and this broader network is not to achieve a pre-defined outcome, but rather to support an open exchange of experience. The network's role was described as *"speed dating for environmental professionals"* (BRNp3) which acted to *"match need with knowledge"* (BRNp4). The engagement process itself is based around informal open-

ended, face-to-face conversations between like-minded individuals, often involving partners visiting each other's sites. The individuals involved look out for opportunities for each other and believe they can achieve more by working together than apart, without requiring specific evidence to support this belief:

> *"I was looking for my own organization, but I thought of Adnams straightaway" (BRNp4)*

The partners have no reason to work with each other which could be explained by resource dependency theories. Instead, both seem motivated to share knowledge by organizational cultures which encourage sharing for the greater good. In both Adnams and the National Trust, looking outward to learn from others, and in turn sharing that learning, is encouraged:

> *"Part of my remit is to share" (BRNp2); "I categorise my job into three areas, one of them is definitely networking and collaboration. That is how we, as a company, and how I can take forward what we do in environmental management, is by learning from others and sharing with others." (BRBus3)*

Although the partners are very different, their engagement centres on their similarities: their national heritage brands, their operation of heritage properties, their connectedness to local communities, and an institutional logic that sees sustainability as key to their long-term success. Respondents saw their differences as an opportunity to learn rather than a barrier to collaboration. The diversity of National Trust sites and their long-term planning horizon meant Adnams could learn from their experience of implementing a range of energy conserving technologies, while Adnams offered expertise in building business cases for investment in these technologies.

The value empathy mechanism involves interventions which not only create an exchange of resources in the context of an individual project, but also an ongoing capability to absorb knowledge across sectors. This mechanism therefore creates a positive feedback loop between learning outcomes (interaction value) from one engagement and the context (in terms of logic compatibility) for the next.

3.4.4 Context

We have referred to relevant contextual factors in our explanation of the mechanisms above. As described, and consistent with previous literature, power balance and resource interdependence are two contextual factors that affect engagement outcomes. More interestingly, our research finds evidence for logic compatibility as a third contextual variable and moreover that this comprises two sub-dimensions – compatibility of institutional logics and compatibility of engagement logics. Our case studies support recent literature arguing that organizations increasingly display a blend of institutional logics, which means businesses might find it easier to partner with some nonprofits than others (and vice versa); in addition, we found that organizations must ensure their own internal blend of logics is consistently articulated and enacted. We also suggest that compatibility in engagement logics, as well as institutional logics affects value outcomes, as discussed next.

3.4.4.1 Institutional logic compatibility

Institutional logics (Friedland and Alford, 1991) provide social groups with values, organizing frameworks and legitimate practices to guide their behaviour (Meyer and Hammerschmid, 2006). Compatibility of institutional logics refers to the extent to which logics provide congruent prescriptions for action (Besharov and Smith, 2014). A key challenge for businesses engaging nonprofits is typically the difference between their predominantly 'market' logic and the 'public good' logic of their nonprofit partner (Battilana and Dorado, 2010). However, we found examples of both business and nonprofit organizations displaying a patchwork blend of logics, as they worked to balance competing institutional demands (Pache and Santos, 2010), and we would argue that the distinction between logics is increasingly blurred (in agreement with Kivleniece and Quelin, 2012). Businesses adopt social and environmental objectives through their corporate sustainability agendas: for example, Adnams have developed a logic which links environmental and economic sustainability though the concept of 'environmental gearing' (Carter, 2017). Nonprofits adopt market-oriented goals and governance to run their revenue-generating activities, sometimes in response to the expectations and working practices of their corporate partners. For example, Oxfam's trading division runs a large commercially-oriented store network, and WRAP balances short-term economic

wins from its business-funded projects with government-funded projects delivering longer-term environmental benefits. This means that the degree of compatibility between organizational logics can vary significantly between engagements. The most relevant contextual factor in BREWING was a helpful compatibility of institutional logics at the organizational level, despite one partner being a commercial organization and the other a nonprofit.

The blending of these internal organizational logics can affect how an organization engages externally. All the for-profit organizations studied have sustainability strategies, but some of them are more seamlessly embedded into their organizations than others. We found that the more clearly and consistently an organization articulates and lives by its own values, the more clearly it can define its approach with its external partners, and the easier it is to manage the partnerships back within the company, for example at BT some respondents felt that their 'sustainability story' was not well enough integrated across internal functions, and that the sustainability team was too remote from customers and commercial reality. This lack of integration led to problems with how sustainability initiatives are reported into the business, with participants identifying that projects are pulled in different directions by different internal stakeholder groups.

3.4.4.2 Engagement logic compatibility

Our evidence suggests that organizations not only bring their embedded institutional logics to their external relationships, they may also hold contrasting rationales for a specific engagement. We term these engagement logics. Although these may be influenced in part by institutional logics at the organizational level, our findings suggest a more nuanced application of institutional logics theory is required and we thus consider engagement logics as a second and independent contextual dimension on which partners' logics may align or conflict. Our research identified cases where institutional logics were not aligned, but engagement logics were. For example, in GADGETS a very commercially focused business and a government funded for-profit were united in their intent to launch a large-scale economically viable trade-in service, even though WRAP's ultimate objective was to encourage other commercial partners to engage in similar resource efficient innovation, whereas for Argos it was primarily to attract customers and sales. Similarly, in BREWING, despite differences in organization type, both partners

entered into the relationship to share learning with the other organization, to help improve their energy efficiency, and address the common issue of climate change. The National Trust chose not to deal with Adnams through their corporate partnership team, who would have tried to secure direct financial support from Adnams, instead benefiting from the in-kind contributions of time and resource contributed in the spirit of joint problem-solving.

Conversely, in SPORT, neither institutional logics nor engagement logics seemed aligned. BT was primarily looking for a nonprofit partner to help them implement aspects of their sustainability agenda, which it was hoped would drive business benefits - such as increased consumer and employee brand affinity - and hence increased market share. On the other hand, for Comic Relief, the engagement did not directly support their own core social mission but was primarily seen as a way of attracting money and awareness to their campaigns. This incompatibility in engagement logics contributed to both parties feeling that the other was not doing enough for the initiative and their ultimate disillusionment with the partnership.

3.5 Conclusion

We present a framework for business-nonprofit engagement in SOI derived from five case studies of SOI projects. We contribute to prior literature by 1) evidencing and extending prior literature on the interventions and outcomes of SOI; 2) proposing and illustrating three mechanisms which link these interventions with value outcomes; 3) adding contingency to understanding of how businesses can engage nonprofits in SOI by illustrating the contextual factors which influence interventions, mechanisms and outcomes; and 4) proposing compatibility in engagement logic as a new contextual factor. Since our framework is derived from rich case study data, it proposes empirically valid and testable constructs and relationships (Eisenhardt, 1989) which could be explored further in future research.

3.5.1 Theoretical implications and research directions

We respond a need to “conduct research that can help us understand the processes and underlying mechanisms through which CSR actions and policies lead to particular outcomes” (Aguinis and Glavas, 2012, p. 953). We suggest that ‘one size does not fit all’ and that a heterogeneity of theoretical lenses (represented by three mechanisms) will best

serve to advance understanding of the business-nonprofit engagement phenomenon. The agent-control mechanism draws on agency theory, whereby value is transferred through monitoring and enforcing the objectives of the collaborating parties. The resource interdependence mechanism is informed by resource-based theory, whereby new value is created through recombining complementary resource and capabilities. The value empathy mechanism draws on institutional logics whereby value creation is enhanced through recognizing and harnessing differences (or similarities) between partners' institutional logics.

We introduce compatibility of engagement logics as a significant contextual factor for business-nonprofit engagements. We also offer a nuanced viewpoint on institutional logics, suggesting that because organizations increasingly display a blend of institutional logics, businesses might find it easier to partner with some nonprofits than others, and that the more clearly and consistently an organization can articulate and live by its own internal logic, the more clearly it can define its approach with its external partners. This clarity and consistency of internal logic can also affect how a stakeholder engagement is managed back within the 'home' organization. Cross-sector partnership literature predominantly considers the relationships between two collaborating organizations, whereas our cases show engagement work also happens between the individuals directly involved in the engagement and other stakeholders in their own organizations. The structures and processes associated with this internal engagement present an opportunity for future research.

Interventions which act through the value empathy mechanism (such as immersion) rely on engagement over time between individuals to generate trust and understanding. They can also help organizations to 'learn to learn' from stakeholders in future engagements, creating a positive feedback loop between one engagement and the next. Future research could examine how these interventions can be deployed at the organizational, rather than at the individual or small group level, and how the learning from these interventions can be shared, codified and applied across an organization to drive enhancement in stakeholder engagement capabilities.

Our case study approach has allowed us to develop theory relating to the management of cross-sector relationships in the context of SOI. A potential limitation of this approach is

the lack of generalizability beyond this somewhat narrow phenomenon, however, we suggest that these findings could be applicable to other contexts in which businesses collaborate outside their organizational boundaries to drive innovation and change.

3.5.2 Implications for practice

For practitioners, too, one size does not fit all, and a range of approaches (interventions) are required to deliver successful business-nonprofit engagement in SOI. Context matters, with compatibility in engagement logic, as well as institutional logics, shaping what happens. On initiating a nonprofit engagement, practitioners should therefore ask: 'What are we doing this for?' and thereby anticipate and address potential issues caused by differences in engagement logics. We found that the relative salience of contextual factors affected the interventions chosen. Interestingly, the factors themselves and their relative salience can be more a matter of perception than reality. For example, the partners in SPORT both thought that the power balance lay in the other party's favour, and perceiving this factor to be the most salient, chose to govern the relationship through a short-term legal contract. Our framework contributes to practice by offering a 'menu' of contextual factors, interventions and mechanisms for practitioners to consider when deciding what actions to take to achieve their desired stakeholder engagement outcomes, thus helping to answer the question 'what works and for whom and why?' with respect to business-nonprofit engagement for SOI.

3.6 References to chapter 3

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4 RECONCILING OUR DIFFERENCES: MAKING PARTNERSHIPS FOR SUSTAINABILITY-ORIENTED INNOVATION WORK

ABSTRACT

Companies increasingly collaborate with external stakeholders to deliver sustainability-oriented innovations. These partnerships can usefully combine diverse resources and capabilities but suffer from conflicts and tensions arising from differences in organizations' institutional logics. Through a multiple-case study of eight partnerships, a framework is developed setting out five dimensions of difference between partners, and five strategies they deploy to reconcile tensions arising from these differences. Tension-creating differences in *goal salience* and *goal instrumentality* occur not only in partnerships across sectors but also between partners in the same sector, due to differences in the way individual for-profit organizations integrate sustainability and in how nonprofits balance mission with fundraising. Differences in *collaborative intent* can also lead to tension. *Temporal focus* and *language* emerge as previously unconsidered dimensions of difference. Responses to these tensions, which the authors term 'reconciliation strategies,' include *engagement logic alignment* and *cultural bridging* which create alignment at varying levels of a partnership. Strategies of *partner positioning, project scoping* and *success measurement* add nuance to the 'separation and synthesis' typology established in the paradox literature since synthesis may occur only within a limited boundary in each organization. These insights into how organizations manage tensions with their partners have value for sustainability-oriented innovation and in other contexts, such as open innovation or multi-national and multi-channel contexts, where inter-organizational partnerships, collaborations and alliances are increasingly adopted.

Keywords: sustainability; innovation; cross-sector partnerships; institutional logics; paradox; stakeholder engagement; open innovation

4.1 Introduction

Sustainability-oriented innovation (hereafter referred to as SOI) presents businesses with a crucial opportunity to create product, processes, organizations and wider systems which achieve social and environmental benefits as well as deliver economic outcomes (Adams et al., 2016). It allows businesses to play their necessary role in addressing critical global challenges, such as climate change and poverty, as well as deliver their corporate sustainability strategies, whilst remaining economically viable. Collaboration with external stakeholders helps businesses enhance innovation in general (Payne, Storbacka and Frow, 2008; Roberts and Candi, 2014; West et al., 2014), and SOI in particular, since SOI often requires collaboration with unfamiliar partners to access external expertise (Albino, Dangelico and Pontrandolfo, 2012; De Marchi and Grandinetti, 2013) and involves working with a range of external stakeholders - who often differ in terms of their institutional origins and logics - to develop and implement innovations (Driessen and Hillebrand, 2013). These differences often present a big problem, creating tensions between collaborators and causing partnerships to fall short of achieving their objectives, or fail completely. Managing these tensions successfully can realise triple-bottom-line (Elkington, 1997) value for collaborators and society (Sharma and Bansal, 2017; Stadtler and Van Wassenhove, 2016) by creatively combining partners' diverse resources and capabilities (Borys and Jemison, 1989; Villani, Greco and Phillips, 2017; Watson et al., 2018), but it is not easy to make work in practice.

The potential tensions and paradoxes (Smith and Lewis, 2011) arising from differences in institutional logics (Thornton, Ocasio and Lounsbury, 2012) have been extensively researched in the context of 'hybrid' organizations which, by their very nature, combine the institutional logics of various sectors of society (e.g. the 'public good' logic of the public sector and the 'market logic' of the private sector) (Battilana and Dorado, 2010; Jay, 2013; Pache and Santos, 2010; Villani, Greco and Phillips, 2017).

However, even 'normal' (non-hybrid) companies have been found to exhibit a blend of logics as they pursue triple-bottom-line objectives (Hahn et al., 2015; Kivleniece and Quelin, 2012). Prior research suggests that internal tensions created by implementing corporate sustainability occur between economic, social and environmental dimensions and also between levels of analysis, in change processes and within a temporal and spatial

context (Hahn et al., 2015). A few studies have addressed tensions in cross-sector partnerships (Le Ber and Branzei, 2010a; Sharma and Bansal, 2017; Stadtler and Van Wassenhove, 2016). Among these, two paradoxes have been diagnosed: the 'commercial-social paradox' (Sharma and Bansal, 2017) follows the market-versus-public good dichotomy, whereas the 'coopetition paradox' (Stadtler and Van Wassenhove, 2016) represents a more nuanced tension between for-profit organizations wanting to collaborate for social good within a multi-stakeholder initiative but competing with other for-profit participants. These studies therefore suggest that although inter-organizational tensions partly stem from differences in institutional logic associated with an organizational type (i.e. nonprofit versus for-profit), that is not the whole story. In addition, in much of this prior literature, innovation is an implicit means to value creation rather than an explicit focus (see Mirvis et al., 2016; Murphy, Perrot and Rivera-Santos, 2012 for exceptions). So, our first objective is to identify more comprehensively the dimensions of difference that can create tensions between companies and their stakeholders when they engage specifically in sustainability-oriented innovation.

Once these various tensions have been identified and understood, how can they then be managed? In their frequently cited typology, Poole and Van de Ven, (1989) propose that paradoxes can be managed through opposition (acceptance), separation (in time or space) or synthesis. Separation and synthesis are both types of resolution strategy (Poole and Van de Ven, 1989; Smith and Lewis, 2011) which find "a means of meeting competing demands or considering divergent ideas simultaneously" (Smith and Lewis, 2011, p386). In cross-sector partnerships, researchers have shown partners accommodate each other's needs (Sharma and Bansal, 2017) and undertake actions that benefit the company and the collaboration (Stadtler and Van Wassenhove, 2016) These studies, however, each address a single partner type and one dimension of difference - making the findings more difficult to generalize beyond the cases studied – and again, innovation is not the main focus. Within companies, Hahn et al., (2015) suggest that strategic responses to corporate sustainability tensions exhibit acceptance, separation *and* synthesis-type variants. Building on this idea, our second objective is to articulate the range of strategic responses deployed by SOI partners as they look to reconcile the differences identified by our first objective, and therefore make their partnerships work for them.

A multiple-case study approach was chosen as a first step towards mapping the territory relating to these two objectives. Eight dyadic relationships between a focal business and an external stakeholder partner relating to a specific SOI project were analysed. The focal businesses represent diverse sectors within the UK consumer goods industry; their partners range from charities, nonprofit consultancies and environmental groups to competitor businesses and suppliers; and the SOI projects comprise product, process and system innovations. The case study data, comprising 46 hours of interviews with 55 respondents, 13 hours of observation and internal and publicly available secondary sources, were analysed using analytic induction (Wilson, 2004) to generate a framework setting out five tension-creating dimensions of difference between partners (goal salience, goal instrumentality, temporal focus, language and collaborative intent) and five reconciliation strategies (engagement logic alignment, cultural bridging, partner positioning, project scoping and success measurement).

The picture which emerges in terms of differences is more complex than previously thought. First, differences in institutional logics are more nuanced than market versus public good (or economic versus social/environmental objectives) and are not neatly aligned with organizational type, so that organizations exhibit a patchwork blend of logics. Second, tensions created *within* organizations due to these patchwork logics interact with differences *between* organizations, creating an array of differences but also opportunities for alignment. Third, some of these differences, such as culture and collaborative intent are not directly related to logics at all. The reconciliation strategies too are more varied and nuanced than in previous literature. Two strategies (engagement logic alignment and cultural bridging) create alignment within a spatial boundary at varying levels across the partnership, in contrast with previously discussed strategies of spatial separation. Three strategies (partner positioning, project scoping, success measurement) exhibit separation and synthesis variants but were also used in a 'hybrid' way with synthesis occurring within a defined spatial boundary.

Our findings contribute to the literature on cross-sector and inter-organizational partnerships which seek to achieve social and/or environmental as well as economic value through innovation. We develop a framework which sets out the five dimensions of tension-creating difference evidenced in these eight business-stakeholder partnerships

and organizes the partners' responses to these differences into five types. We thereby offer practitioners a 'menu' of responses to be considered in their own partnership context. We suggest that institutional logic and paradox theory provide a useful lens to explain some of the differences inherent in stakeholder partnerships for SOI, but that our examination of the thoughts and actions of the individuals and organizations involved offers new insight into the micro-foundations of managing difference in stakeholder partnerships. These insights may have implications for other inter-organizational partnerships beyond the SOI context.

4.2 Literature review

4.2.1 Stakeholders, innovation and sustainability

Innovation research has widened beyond product and service innovation to incorporate process and business model innovation (Johnson and Christensen, 2008) and now considers diverse innovation partners including customers and suppliers as well as nonprofit experts, such as universities or charities (West and Bogers, 2014). Collaborating with customers and other stakeholders is found in the open innovation (Chesbrough, 2012; von Hippel, 2005; West et al., 2014) and co-creation (Nonaka, 1991; Payne, Storbacka and Frow, 2008) literature to improve idea generation and concept development, resulting in more highly valued products (Roberts and Candi, 2014).

Stakeholder collaboration is a particular challenge in the context of sustainability-oriented innovation (hereafter referred to as SOI) which involves changing products, processes, organizations and wider systems to deliver environmental, social and economic value (Adams et al., 2016), often by attempting to implement solutions to complex, systemic environmental challenges. Companies are increasingly turning to SOI to deliver their corporate sustainability strategies (Wu, He and Duan, 2013). However, due to the inclusion of social and environmental objectives, these innovations typically require engagement with multiple stakeholders who are very different from each other in terms of their institutional origins and logics and the ways they assess and value success and failure (Driessen and Hillebrand, 2013; Polonsky and Ottman, 1998). They may involve process and business model innovation and as such require expertise sourced through external and unfamiliar collaboration (Albino, Dangelico and Pontrandolfo, 2012; De Marchi and Grandinetti, 2013). They may also represent a technological frontier for the

company which, due to its inexperience, may require external expertise (De Marchi and Grandinetti, 2013). Stakeholder partnerships which are established to pursue triple bottom line objectives take a variety of forms, as we explore next.

4.2.2 Forms and outcomes of stakeholder partnerships

A variety of forms of stakeholder partnerships pursuing environmental, social and economic outcomes have previously been researched. These include cross-sector (social) partnerships (Ashraf, Ahmadsimab and Pinkse, 2017; Barroso-Méndez et al., 2016; Dentoni, Bitzer and Pascucci, 2016; Pittz and Intindola, 2015; Stadtler and Van Wassenhove, 2016) and collaborations (Murphy, Perrot and Rivera-Santos, 2012); public-private partnerships (Villani, Greco and Phillips, 2017) and collaborations (Caldwell, Roehrich and George, 2017; Quélin, Kivleniece and Lazzarini, 2017); multi-stakeholder partnerships (Sloan and Oliver, 2013); inter-organizational collaborations (Weber et al., 2017); 'base of the pyramid' partnerships (Hahn and Gold, 2014) and sustainable collaborations (Niesten et al., 2017). These forms all represent arrangements in which organizations from diverse sectors (private, public and nonprofit) commit to work together in mutually beneficial ways to accomplish environmental and/or social and economic goals that they could not otherwise achieve alone. In much of this literature, innovation is an implicit mechanism through which value is created, however, social innovation (Murphy, Perrot and Rivera-Santos, 2012) or corporate social innovation (Mirvis et al., 2016) comes to the fore in some studies.

Recent studies have focused on the total value created for stakeholders (e.g. Villani, Greco and Phillips, 2017) as the relevant outcome from these inter-organizational relationships. Weber et al. (2017, p.933) define total joint value created as "the sum or entirety of benefits yielded from combining or exchanging core competences and resources relative to the costs" – regardless of whether the company or the partner or the beneficiaries appropriate that value (Austin and Seitanidi, 2012a; Kivleniece and Quelin, 2012). However, this value can be difficult to realize in the face of the significant differences with the potential to create conflict and tension between partners, as we explore next.

4.2.3 The concept and management of differences in institutional logics

The diverse resources and capabilities brought into collaborations between partners exhibiting institutional and organizational differences represent a significant opportunity. These hybrid arrangements can "harness differences" (Watson et al., 2018, p.254), "generate innovative solutions to complex problems" (Villani, Greco and Phillips, 2017, p.876) and create value in a way that each of the partners alone could not (Borys and Jemison, 1989). However, scholars agree that differences in institutional logics between partners present a major challenge. Institutional logics are the "set of material practices and symbolic systems including assumptions, values, and beliefs by which individuals and organizations provide meaning to their daily activity" (Thornton, Ocasio and Lounsbury, 2012, p.2). These differences in logic have been thought to be more pronounced between for-profit organizations with their predominantly commercial or 'market' logic and nonprofits with their predominantly social or 'public good' logic. Differences in institutional logics have been found to generate specific paradoxes – defined as "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith and Lewis, 2011, p.382) - since they bring about "multiple ways of acting and making sense of organizational outcomes" (Jay, 2013, p.140).

The potential tensions and paradoxes arising from differences in institutional logics have been extensively researched in the context of 'hybrid' organizations which, by their very nature, combine the institutional logics of various sectors of society (Battilana and Dorado, 2010; Jay, 2013; Pache and Santos, 2010; Villani, Greco and Phillips, 2017). Fewer studies have addressed tensions in cross-sector partnerships (Le Ber and Branzei, 2010a; Sharma and Bansal, 2017; Stadtler and Van Wassenhove, 2016) and such tensions have largely been assumed to be absent in innovation partnerships between for-profit organizations. However, two paradoxes have been diagnosed: the 'commercial-social paradox' (Sharma and Bansal, 2017) follows the market versus public good dichotomy, whereas the 'coopetition paradox' (Stadtler and Van Wassenhove, 2016) represents a more nuanced tension between for-profit organizations wanting to collaborate for social good within a multi-stakeholder initiative but competing with other for-profit participants. A conceptual paper by Hahn et al. (2015) argues that tensions can even exist *within* a non-hybrid commercial organization as its tries to implement its corporate sustainability strategy and suggests that these occur not only between economic, social

and environmental dimensions but also between levels of analysis, in change processes and within a temporal and spatial context. These studies therefore suggest 1) that tension-creating differences exist within organizations as well as between them and can occur between organizations from the same sector and 2) that although these partly stem from differences in institutional logics associated with organizational type, that is only part of the story.

Recent research has turned to investigating how these tensions can be positively managed in cross-sector partnerships to maximize their value creation potential. In their seminal paper, Poole and Van de Ven (1989) propose that paradoxes can be managed through opposition (acceptance), separation (in time or space) or synthesis. Separation and synthesis are both types of resolution strategy (Poole and Van de Ven, 1989; Smith and Lewis, 2011) which find "a means of meeting competing demands or considering divergent ideas simultaneously" (Smith and Lewis, 2011, p386). Within non-hybrid for-profit organizations Hahn et al. (2015) suggest that strategic responses to corporate sustainability tensions exhibit acceptance, separation *and* synthesis-type variants. In hybrid organizations, resolution strategies have been found to be either 'substitution strategies' involving one partners' logic gaining dominance over the other, or 'co-existence strategies' where partners find solutions that reconcile their different logics (Dunn and Jones, 2010; Kraatz and Block, 2008; Reay and Hinings, 2009). In SOI partnerships full substitution is unlikely to be an option. Sharma and Bansal (2017) investigated how business and NGOs engage a 'commercial-social paradox' through their research into five projects in India in which businesses bought goods and services from NGOs that employed disadvantaged people. They found that successful projects were characterized by managers who saw categorical boundaries between the types of organization as malleable, who recognized their interdependent interests and appreciated, rather than problematized the difference between them. These managers engaged in contextualized and iterative problem solving and accommodated their partners as well as their own needs. Stadtler and Van Wassenhove (2016) looked at how for-profit partners cope with the 'coopetition paradox' in a multi-company cross-sector partnership providing logistics support to disaster relief operations. They identified the importance of a collaborative task context (or common mission), characterized by a working reality and social clues distinct from either of the partners organizations, in managing this tension

between collaboration and competition. They observed that employees prioritized one logic without ignoring the other depending whether they were operating within this task context – "on the ground" or in their own organizational context - "in the office" (p.678).

These fascinating studies each address a single partner type and one dimension of difference - making the findings difficult to generalize beyond the cases studied. There is therefore an opportunity to identity more comprehensively the tension-creating differences between companies and their stakeholder partners when they engage in sustainability-oriented innovation, and the strategies used to reconcile them.

4.3 Method

A multiple-case study design (Yin, 2014) was used to explore the differences that exist between partners in stakeholder partnerships for SOI and the strategies used to reconcile them. Purposive sampling was used to identify eight dyadic relationships between a focal business and an external stakeholder partner relating to a specific SOI project. Cases were selected to represent a range of sectors, partner types, SOI types and contexts for engagement. Four cases involved the focal businesses partnering with nonprofit organizations (nonprofit consultancies, charities an environmental group). Two cases involved partnerships with for-profit organizations: one in the context of a buyer-seller relationship, the other in the context of a buyer-initiated supplier forum. The remaining two cases centered on a business-nonprofit relationship but within the context of multi-stakeholder initiatives which included other for-profit partners. In terms of the SOI projects, two cases related primarily to product innovations, four to process innovations and two to innovations in wider systems. This range of partnership and project contexts was sought to reflect the diversity of partnership forms employed in practice and to identify common patterns observed across types. The unit of analysis was the dyadic relationship between a focal business and their partner organization relating to a specific SOI project as described in Table 4-1. Where this relationship was within the context of a multi-stakeholder initiative, respondents representing other participants in the initiative (listed as other parties in Table 4-1) were interviewed to gain additional perspectives on the project.

Table 4-1 Case descriptions and data sources

Case (Code) Focal business ...Partner	Interviews (N)	Observation (hours)	Secondary sources	Partner type	Context	SOI project description
1.CLOTHES (C)	7					
Marks & Spencer (M&S)	4	4.5	Organigrams; employee communication; annual reports	Charity	Dyad	**Shwopping**: An end-of-life solution for clothing developed by M&S and Oxfam and launched January 2008. Customers donate unwanted clothing at M&S or Oxfam stores and receive vouchers redeemable against future M&S purchases. 2 – 3 million garments donated per annum.
Oxfam	3					
2.GADGETS (G)	5					
Argos	3	3	Video and written case studies; media articles	Nonprofit	Dyad	**Gadget Trade In**: Argos worked with WRAP (Waste & Resources Action Programme) to launch this trade in service, online and across nearly 800 UK stores in 2015.It allows customers to trade-in their old mobile phone or tablet in exchange for an Argos gift card redeemable against future purchases.
WRAP	2					
3.BEER (B)	6					
Adnams	4	-	Internal presentation; sustainability reports; sustainable attribute criteria	For-profit	Dyad	**Product & process innovations**: Adnams are the first brewery to achieve Silver on M&S's Food Sustainability Scorecard; so the beers they regularly develop for them support M&S sustainable sourcing targets. Adnams use their sustainability knowledge and experience to help enhance M&S' sustainability approach in their category. The teams are exploring the development of a beer made using waste bread from M&S.
Marks & Spencer (M&S)	2					
4.ICE CREAM (I)	6					
Unilever	2	-	Internal documents; press releases; books; media and academic articles	Charity; for-profit	Multi-stakeholder	**Refrigerants Naturally!**: Coalition of international companies, set up in 2004, taking action against global warming and ozone depletion, through replacing harmful greenhouse gases in point-of-sale cooling and freezing units with climate-friendly natural refrigerants. Current members are Unilever, Coca-Cola, Pepsico and Red Bull. Supported by Greenpeace and UN Environment.
Greenpeace	2					
Other parties[7]	2					

[7] One respondent from Coca-cola who are also members of Refrigerants Naturally; one from Forum for the Future who facilitated a repositioning workshop for the coalition

Case (Code) Focal business ...Partner	Interviews (N)	Observation (hours)	Secondary sources	Partner type	Context	SOI project description
5.PERSONAL CARE (PC) **Walmart** Forum for the Future (Forum) Other parties[8]	6 1 2 3	-	Internal reports; company websites; press releases	Nonprofit; for-profit	Multi-stakeholder	**Beauty & Personal Care**: In Sept 2014, Walmart and Target came together to support Forum's work to improve the sustainability of the beauty and personal care industry. Forum have worked with stakeholders along the value chain (chemical manufacturers, product manufacturers, brands and retailers) to agree an agenda for action –focusing initially on the development of common criteria for defining and measuring sustainable products.
6.PHONES (P) **British Telecom (BT)** Suppliers (N=2) Other parties[9]	11 8 2 1	-	Case studies; internal presentations	For-profit	Multi-stakeholder	**BT Better Future Supplier Forum**: Set up in 2012 to engage key suppliers of Consumer Devices (e.g. landline phones, broadband hubs, set top boxes) in improving the sustainability of BT's supply chain. Core objectives are 1) to manage risk 2) to reduce carbon and cost and 3) to drive innovation though an innovation competition - the "Game Changing Challenge."
7.SPORT (S) **British Telecom** Comic Relief	6 4 2	2	Contract; internal presentations; member communication	Charity	Dyad	**The BT Supporters' Club (TSC)**: Since BT Sport's launch in 2013, BT invite new subscribers to sign up to make monthly donations to TSC. Funds are managed by Comic Relief and granted to nonprofits who use sport to help disadvantaged young people. TSC aspires to offer members a sense of belonging and common purpose through supporting the use of sport to achieve social goals.
8.BREWING (BR) **Adnams** National Trust (NT)	8 4 4	3.5	Memo. of understanding; impact reports; internal presentations	Charity	Dyad; multi-stakeholder	**Process innovations**: Informal relationship centred on exchange of experiences and ideas enabling environmental innovations in both organizations (heat recovery, heat conservation, bio-gas and electric vehicles, packaging, waste management). Adnams joined Fit for the Future network (set up and funded by NT) which helps nonprofits become more sustainable by sharing best practice and collaborating.
TOTAL	**55[10] (N)** **46 hours**	**13 hours**				

[8] One respondent each from branded suppliers Johnson & Johnson, Burt's Bees and Seventh Generation
[9] One respondent from the independent consultancy employed by BT to establish and facilitate the Better Future Supplier Forum
[10] 52 unique respondents, accounting for 3 cross case duplicates

For each case, both primary and secondary data were collected as summarized in Table 4-1. The primary data source was semi-structured interviews with individuals who worked on the SOI project representing different functions of the focal business and their partner organizations. In each case we identified a lead informant who acted as a project contact and introduced us to people involved in the day-to-day activities as well as those in leadership positions who took more strategic decisions. We asked all respondents the same questions, so we could cross-check facts and capture their different perspectives. Multiple respondents improved data reliability, and different perspectives improved the validity of theorizing (Eisenhardt and Graebner, 2007). Respondents were asked to describe SOI project objectives and motivations, how the project was set up and run, how the relationship evolved, challenges and how they were overcome, and what was learnt from the experience. 55 interviews (31 with focal businesses, 18 with partners, 6 with other parties) with 52 individuals (3 were interviewed for two projects), lasting 50 minutes on average, were recorded and transcribed. Interviews were primarily face-to-face (28), with geographically remote respondents participating by video (9) or telephone (19). Interviews were enriched with observation including site visits, taking part in project activities (for example, sorting recycled clothes) and observing meetings. Respondents provided documentary evidence including contracts, strategy statements, activity updates, organization charts, customer and shareholder communications and internal presentations and communication materials. This was supplemented with publicly available information including case studies, online news and reports. All data was uploaded into Nvivo 11 for analysis.

Each project served as a distinct analytical unit for analysis with the researchers moving within and across projects, and between data and extant theory, to develop constructs and their relationships (Eisenhardt, 1989). Data analysis proceeded in the following steps.

1) *Within case analysis*. Multiple sources were consolidated into a written case study report for each project. Then, guided by our theorizing, segments of data were coded to 1st order concepts organized under the headings of differences, reconciliation strategies and outcomes.

2) *Cross-case analysis*. A form of analytic induction (Wilson, 2004), considered a suitable method for testing ideas and building theory across multiple cases (Miles and

Huberman, 1994), was then used to compare concepts across cases. Analytic induction is an iterative process entailing the sequential analysis of cases, with themes generated from the initial case being considered against subsequent cases, and refined as necessary, enabling the meaning of the theme to be continually refined (Eisenhardt, 1989). Cases were analyzed and compared in the order denoted in Table 4-1 such that contrasting partnership types were being considered in each step. Starting with Case 1, the 1st order concepts coded during the within case analysis were further analyzed and consolidated into 2nd order themes. These 2nd order themes were then expanded on and revised based on the evidence represented by the 1st order concepts in the second case, and then the third case and so on. After all eight rounds of analysis were completed, the final set of 2nd order themes under each heading were further distilled into aggregate dimensions. These final aggregate dimensions are represented by the smaller boxes in Figure 4 1.

Within-case findings were validated with company representatives where possible in the form of feedback presentations. An initial cross-case analysis was presented at a workshop for interested practitioners including representatives from three of the focal businesses studied, and structured feedback captured from nine participants was incorporated into our findings.

4.4 Results: Dimensions of difference and reconciliation strategies

Figure 4-1 synthesizes our findings from the eight case studies into an integrative framework which sets out the five dimensions of difference identified: goal salience, goal instrumentality, temporal focus, language and collaborative intent. It also outlines the five strategies used by partners to reconcile these differences: engagement logic alignment, cultural bridging, partner positioning, project scoping and success measurement. Finally, it shows the three types of outcomes found to be achieved: direct environmental/social and economic project outcomes, relationship outcomes and learning outcomes. Table 4-2 provides a definition of each dimension of difference and illustrates it with contrasting quotes from an illustrative case. Table 4-3 provides an explanation of each resolution strategy and provides case study examples of the variants observed for each strategy. Two strategies created alignment within a spatial boundary at varying levels across the partnership. Three strategies (partner positioning, project scoping, success measurement) had separation and synthesis variants but were also used in a ‘hybrid’ way.

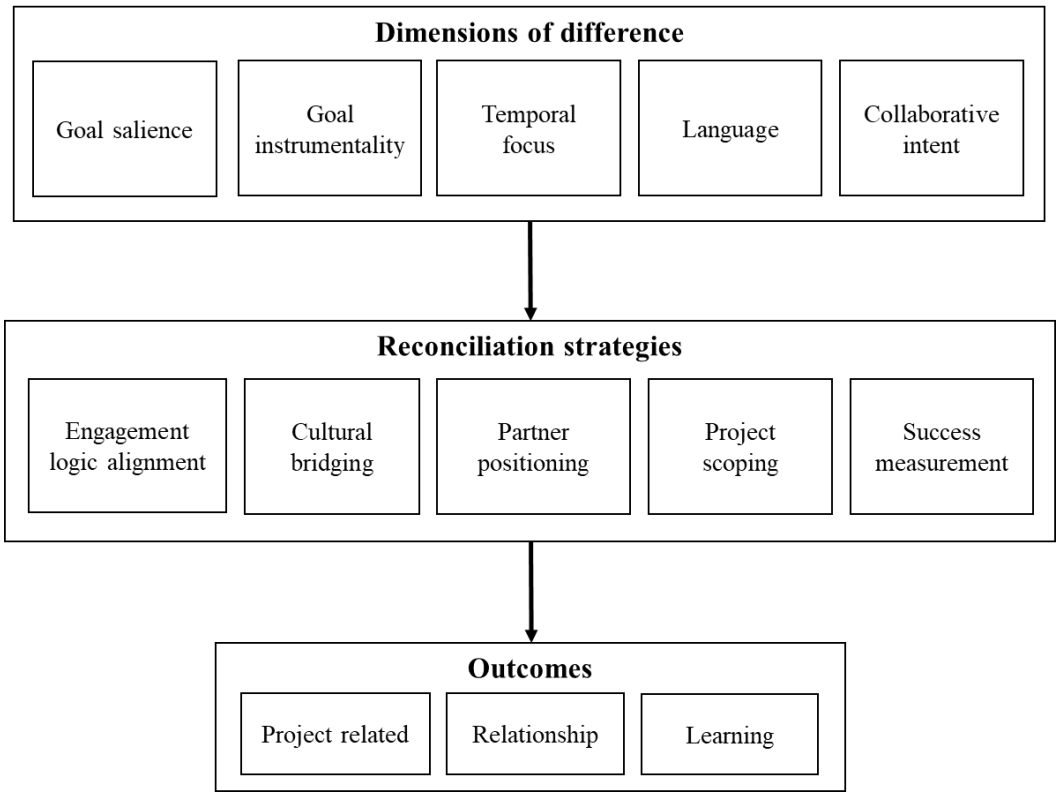

Figure 4-1 Dimensions of difference, reconciliation strategies and outcomes

4.4.1 Dimensions of tension-creating difference between partners

Our research identified five dimensions of difference between our case study dyads: goal salience, goal instrumentality, temporal focus, language and collaborative intent. Table 4-2 provides a brief description of each dimension, lists the cases in which it was salient and provides contrasting quotations from a selected illustrative case. Two differences - goal salience and goal instrumentality – can be partially explained by the differences in institutional logic associated with an organizational type (i.e. nonprofit versus for-profit), however they were also evident between for-profit partners (depending on the extent to which sustainability objectives were integrated into those businesses) and within some nonprofit organizations (as they adopted market-oriented goals and governance to run their revenue-generating activities, sometimes in response to the expectations and working practices of their corporate partners). Three further dimensions of difference emerging from our data - temporal focus, language and collaborative intent – are much less closely aligned to institutional logics associated with organizational form, and indeed differences in collaborative intent primarily occur between for-profit partners. We now discuss each dimension in more detail.

Table 4-2 Dimensions of tension-creating difference: definitions and illustrative quotations

Dimension	Definitions	Evidenced in[11]	Contrasting quotations from an illustrative case	
Goal salience	The relative priority of environmental, social and economic goals	**CLOTHES** SPORT	in the end we all want the same thing. But our purpose is to collect as many garments as possible...If it ends up raising good money for Oxfam, even better. But for us the most important thing is clothes not going to landfill (CBus2)	for M&S shwopping is all about landfill, that's not what it's about for us, it's about raising money to fight poverty (CNp2)
Goal instrumentality	The extent to which social/environmental goals are an end in themselves or means to private economic value	**GADGETS** CLOTHES PHONES SPORT PERSONAL CARE	he [project manager] was looking at it from a business case point of view, how we can get new customers in, how we can lock them in, how we can give them a gift voucher for their product and then they'd spend more...that's the reason it got driven through. I think had we come at it from just purely the environmental and sustainable, it would have taken a lot longer (GBus1)	we're coming from an environmental organisation with sustainability goals, none of that was particularly helpful in creating that relationship with business commercial contacts, where we were trying to get across some sort of commercial credibility (GNp1)
Temporal focus	The differences in time horizons for planning and decision making between partners	**ICE-CREAM** PERSONAL CARE BREWING	I think we're better than most [big companies] in terms of how we invested in capacity to shape the long term, but it's still pretty flaky when you consider the scale of the issue (ICBus1); 15 years is an impossible timespan for a company (ICBus2)	it's really important that Greenpeace has sustainability with an issue, perseverance on an issue (ICNp2); these journeys are pretty long … these kinds of collaboration are not a simple, short term project…You start a journey together with common objectives…you don't know where and when you end (ICBus2)
Language	The differences in language and /or cognitive schemas between partners	**PERSONAL CARE** CLOTHES GADGETS PHONES	There's this core problem around risk versus hazard…it's like a political ideology difference. A religious difference in how to think about the world that is almost insurmountable (PCBus1); I think chemical companies have been brought up on the risk-based assessment, and the brands were looking for more of a hazard-based approach (PCNp2)	There are some companies or NGO's that they're like, the most important thing is the hazard-based approach, or others say, the most important thing is the risk-based approach, and never the two shall cross…we recognise both of those are important and so for us that wasn't really a tough conversation (PCOther4)
Collaborative intent	The extent to which partners intend to collaborate within a competitive context	**PHONES** ICE-CREAM PERSONAL CARE	[the supplier forum] is great example of a deepening of a collaboration with a particular audience, our suppliers and the supply chain, very much focused around the 'designing our tomorrow' toolkit and the circular economy principles (PBus2)	when we called it a forum we did have this idea that maybe it would be suppliers in that same room sharing their best practices and learning from each other, but we very quickly realised that was not going to work, because they were competitors with each other, and they knew who each other were and there was no way they were going to be sharing stuff (PBus4)

[11] Case in bold is the source of the illustrative quotes

4.4.1.1 Goal salience

Goal salience means the relative priority of environmental, social and economic goals. All eight cases represent partnerships between organizations working together on innovations which deliver environmental and social goals, as well as meeting the organizations' respective economic criteria. However, the relative priority of these environmental, social and economic goals was a source of tension between partners across most cases. Some of this tension derived from the difference in organizational objectives between nonprofit organizations with their public good goals and for-profits with their market goals. However, the picture across our six cross-sector cases (i.e. projects involving collaboration between for-profits and nonprofits) was more nuanced, with some for-profits integrating their social /environmental goals into their business strategies and prioritising them more than others.

Commonly, SOI projects which delivered clear customer and commercial benefits alongside sustainability benefits would be prioritised. As an Adnams respondent commented about M&S:

> *"the buying team would always prevail…they're the ones that know what consumers want and [if] it will sell. That will always win over the fact of, hang on a minute, you can't bring that product out because it's 10% heavier than packaging or it's using plastic, not glass or whatever" (BBus3)*[12].

However, when businesses, recognising that their customers increasingly expect a more visible and active stance on sustainability issues, were observed to take a longer-term view of success they saw sustainability and long-term business success as inextricably linked, and consequently debated trade-offs between conflicting environmental/social and economic priorities. Partnerships with a nonprofit partner could help embed businesses' long-term commitments to environmental/social objectives by campaigning for and shaping publicly declared targets from which there was "*no going back*" (ICNp2). As a Greenpeace respondent put it:

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[12] Interview respondents are denoted by codes. The first letter(s) denotes the case name: Bus represents a respondent from the focal business, Np a respondent from a nonprofit partner, Fp a respondent from a for-profit partner and Other a respondent representing other parties involved in a multi-stakeholder project; the number identifies the individual respondent. A full list of respondents is at Appendix A

> *"we had to understand it [commercial reality], but we would say that the environmental impact is more important than the business imperative. These corporations have very deep pockets and once they make a public commitment of as great a significance as that of protecting the climate, then the business challenges just need to be overcome" (ICNp2).*

Interestingly, in one cross-sector case, CLOTHES, the priority of environmental versus social goals was the source of tension, with Marks & Spencer (M&S) prioritising environmental objectives and Oxfam social objectives, as an M&S manager commented:

> *"I think sometimes our purposes might be slightly different in a sense that yes, in the end we all want the same thing. But our purpose is to collect as many garments as possible...If it ends up raising good money for Oxfam, even better. But for us the most important thing is clothes not going to landfill" (CBus2).*

Tension between environmental/social and economic goals was even evident in our two business-for-profit partnerships (BEER and PHONES). In BEER, Adnams were part of M&S's Sustainable Factories initiative and the first brewery to achieve a Silver rating on the M&S Food Sustainability Scorecard. Adnams' sustainability performance brings them economic benefits (e.g. risk mitigation, cost savings, becoming supplier of choice) as well as driving environmental and social benefits. M&S's Plan A sustainability programme is also reported to bring their business economic as well as sustainability benefits. In this case, the tension lay in the extent to which M&S would balance its Plan A commitment to work only with sustainable suppliers by 2020 and its need for security of supply achieved through a broad supply base, in other words, when necessary, to prioritise its sustainability objectives over its commercial ones. This was illustrated by an Adnams respondent:

> *"those suppliers that do particularly well [sustainability performance], will get more business with M&S but he also said those that aren't doing very, well, they will have 'some more conversations' with them [rather than saying would take business away] which didn't fill me with enthusiasm" (BBus4).*

In PHONES, a supplier partner, and even some of the organization's own employees, challenged BT's sustainability priorities, commenting that the business was not prepared

to make the long-term investments required to move towards a more circular model for its products.

As expected, tensions arose due to partners prioritising environmental/social and economic goals differently. These could be further complicated by internal tensions within each partner organization when it came to trading-off one objective against another. This was the case in both cross-sector and pure for-profit partnerships. Interestingly, we also found in one case that cross-partner tensions existed between social and environmental goals. In addition, partners diverged in the extent to which environmental/social goals were an end in themselves or a means to economic goals, to which we now turn.

4.4.1.2 Goal instrumentality

Among the focal businesses, we also found differences in the extent to which environmental/social goals were understood to be an end in themselves or a means to capturing private economic value. This could affect their ability to relate to nonprofit partners for whom these environmental/social goals were primary. M&S's Plan A sustainability (CLOTHES) programme has endured and developed despite changes in the business' fortunes, however, the financial benefit of the programme was still used to justify its existence. Both GADGETS and PHONES were implemented on the strength their commercial return, as this BT manager commented:

> *"I don't think we've got a case where anyone has taken everything on board wholeheartedly and said, 'Yeah, absolutely, we're going to do all of this because it's the right thing to do.' ... where we've had success is where people have said or recognised actually…some of these things are reasonably straightforward to do, it's not going to impact the quality or the service that we want to provide. And also there's going to be a financial benefit as well" (PBus7).*

Different takes on the instrumentality of sustainability created tension in the two pure for-profit cases (BEER, PHONES), where supply partners showed more of a need than the focal businesses to convert sustainable performance into business benefit. A M&S manager said:

> *"A quote we like to use from one of our suppliers is 'why wouldn't we do this [improve sustainability]?' But then the benefits in the business relationship with M&S, I think that needs to really be focused in on. It is a difficult topic" (BFp1).*

The for-profit members of PERSONAL CARE represented different camps on this, with smaller and/or more purpose driven brands (e.g. Seventh Generations, Burts Bees, Johnson and Johnson) seeing sustainability more as an end in itself as than the bigger manufacturers:

> *"even if we are a sustainable business…if we're not engaged in a sustainable economy, the business isn't sustainable" (PCOther1);*

> *"In the area that I work in, we never talk dollars or in terms of profit or loss. We don't see these numbers at all. We're just trying to make the right decisions" (PCOther3).*

Among the nonprofit partners there was a related difference in terms of how independent their environmental/social goals were from their ability to fund themselves. Greenpeace asserted that not accepting any financial recompense from the coalition partners in ICE CREAM was critical to the initiative's success:

> *"Greenpeace have an absolute golden rule, no corporate money. Anything. We couldn't take aeroplane flights we couldn't take hotel rooms. Nothing. Nothing, nothing, nothing, nothing, nothing and that made honestly, I think it made our relationships much clearer. We were there to change them and they were there to see if they could work with us to change"* (ICNp1).

Whereas in SPORT, Comic Relief were reimbursed for services rendered per contracted rates. Forum for the Future were paid to facilitate the PERSONAL CARE project but were praised for their ability to balance impartiality as coalition convenor with driving their own broader sustainability agenda.

Partners differed in terms of whether they perceived sustainability benefits to be ends in themselves or as a means achieve economic objectives. Again, this difference existed between for-profit partners as well as in cross-sector partnerships. Both goal salience and goal instrumentality therefore did not align strictly with institutional logics associated

with organizational form as might have been expected. We next turn to differences stemming from partners' different perceptions of time.

4.4.1.3 Temporal focus

This dimension related to differences in time horizons for planning and decision-making between partners. Nonprofit partners typically had longer-term horizons than for-profits, however, Adnams and Unilever represent exceptions to this:

> *"We're an old business and a family business. So sustainability is really fundamentally important, you can't be 145 without having an eye to the long term" (BRBus2);*

> *I think we're better than most [big companies] in terms of how we invested in capacity to shape the long term, but it's still pretty flaky when you consider the scale of the issue" (ICBus1).*

Similarly, M&S's long-term commitment to their Plan A sustainability programme and its key projects, including CLOTHES, was widely cited, despite ups and downs in their business performance. The second temporal aspect commonly cited was differences in speed of decision making, with nonprofits acknowledging that their decision-making and operational processes were generally slower than their commercial counterparts. A third temporal aspect was their time management practices – with nonprofit partners in GADGETS and ICE CREAM citing the importance of being aware of their commercial partners' planning cycle and timing interventions accordingly – knowing when to push their partners and when to be bide their time and wait for a better moment.

Temporal tensions result from the tendency for companies to undervalue long-term environmental and social outcomes (Hahn et al., 2015). Although temporal differences did align somewhat to organizational types, the picture was more nuanced, with some businesses taking a longer-term perspective. Other temporal tensions were identified related to speed of decision making and the need for patience in partnerships.

4.4.1.4 Language

This dimension relates to differences in language or cognitive schemas (a mental structure of preconceived ideas, a framework representing some aspect of the world, or a system of organizing and perceiving new information) between collaborating partners and the

extent to which understanding could be achieved through common language and/or frameworks or through effective translation. These differences were cited across five cases.

In GADGETS, the lead nonprofit respondent was very conscious of the difference in language and ways of working between his business partner and his own organization and worked hard to speak their language:

> *"the reason Argos worked is because we knew them so well… we knew the language to use and the language not to use...if you can write another chapter or another paragraph that fits seamlessly into the sustainability report, you know that organisation really well" (GNp1).*

His colleague commented on the need for translation between the language used with the business partner and the language of the nonprofit 'home' organization:

> *"externally our work and GNp1's work has to be delivered in a commercial language, and then by the time he gets back to Banbury [WRAP head office] he's got the challenge of ensuring that still sounds familiar and reassuring and delivering the sustainability goals that WRAP, as an organisation, and the Government department funding WRAP's work, are wanting to hear" (GNp2).*

The WRAP respondents' ability to speak their partner's language was rewarded by unprecedented access to the commercial 'inner sanctum' represented by *"the top floor"* (GNp1) and even the board room at their business partner's head office. In an example relating to a different business partner, the WRAP account manager recounted how even wearing clothes which fitted a partner organization's norms made a difference in forming a relationship:

> *"they said to me one day, you need to come along in Lycra, which I didn't do but… next time turn[ed] up in jeans and a shirt" (GNp1).*

In ICE CREAM, the same individuals worked on the initiative for many years and built trust and understanding between them to the extent that they "*could speak shorthand together"* (ICNp1). In PHONES, a common framework and process for sustainability assessment and improvement served as a common language for the forum participants. In PERSONAL CARE, the consortium had to overcome not only a lack of consensus on

"what constitute[d] a sustainable product" (Forum for the Future, 2015, p.14) but also a major tension between two alternative ways in which member organizations conceptualised the safety of a chemical or a product:

> *"There's this core problem around risk versus hazard…it's like a political ideology difference. A religious difference in how to think about the world that is almost insurmountable" (PCBus1).*

Some cases referred to differences in language even between internal departments. Sustainability departments were sometime characterised as *"liv[ing] in a little sustainability bubble"* (CBus2) all *"talk[ing] the same language"* (PFp1). Differences between the technical (*"material"* (PBus5)) and the commercial world were also mentioned where unless technical people could talk directly to each other, as they did in ICE CREAM, true innovation could be lost because the *"technical sieve…takes out the information that you really need"* (PBus5) in commercial conversations. Conversely, in Adnams the clear 'sustainability story' united the different functions with a common understanding of what sustainability was and why it was important for the company:

> *"this common language to say that environmentalists can talk to operational people and financial people to say that we aren't just tree huggers, we're not just doing this to save the planet. We are, but it actually makes business sense" (BRBus3).*

In summary, differences in language were observed between commercial organizations and nonprofits but also between for-profit partners (e.g. technical versus commercial people) and even within organizations (e.g. sustainability people versus commercial people). This was addressed though individuals learning to speak their partner's language or the creation of a common language or framework which both partners could understand and adopt.

4.4.1.5 Collaborative intent

This final dimension resonates with Stadtler and Van Wassenhove's (2016) 'coopetition paradox' and relates to the extent to which for-profit partners succeed in collaborating on improving sustainability performance whilst at the same time remaining competitors in the market. This tension occurred in the two for-profit dyads and two multi-stakeholder coalitions involving multiple for-profits. As a senior M&S manager put it:

> *"none of us can quite work out as to how much we want to keep to us and how much we want to share, because it's everybody's greater interest to create a sustainable system in which we can all prosper" (CBus1).*

In PHONES, suppliers did not share information or collaborate directly, but only indirectly through their common customer, and the forum convenor, British Telecom (BT). In ICE CREAM engineers from Coca-Cola and Pepsi collaborated on natural refrigerant technologies. This was facilitated by high levels of personal trust and an emphasis on confidentially reported by all the project respondents:

> *"one of the engineers from Pepsi said to one of the engineers from Coke, well can you share this technology with me? The engineer from Coke said, I will share with you, except for the formula for Coca-Cola, I will share anything with you. So there was a collaboration amongst obviously serious rivals (ICNp1).*

A common theme across cases was that individuals from sustainability, R&D or technical/engineering functions collaborated more readily than those from commercial or marketing functions:

> *"We reach interesting points sometimes when some of the marketers have started to work out that … Unilever's freezers are better than Nestle or the Coke freezers are better than Pepsi, and then the conversation changes quite quickly if those people rock up at the meeting" (ICBus1).*

In PERSONAL CARE, collaboration was constrained by the commercial confidentiality around product formulations *"that recipe is critical to your differentiation"* (PCBus1). In PHONES one of the key tensions was the business wanting to work more collaboratively with the suppliers, but still wanting to maintain competition between them on innovation and price, as well as sustainability performance. In contrast, Adnams respondents saw their sustainability work as pre-competitive:

> *"That's nothing that we would be worried about sharing because actually that's helping them push the sustainability agenda. I understand that they're going to save a load of money as well as a load of gas and therefore carbon emissions. Is anyone really going to go to them because they've installed this good efficiency thing that we haven't or the fact that we did it first and they've now done it more recently? I don't think so" (BRBus3).*

As Table 4-2 shows, these five dimensions of difference were evidenced in various combinations across our cases. We now turn to our findings relating to the range of response to these differences reported by our respondents.

4.4.2 Reconciliation strategies

Our cases reveal five strategies deployed - in different permutations - in response to the salient differences exhibited in each partnership. In previous literature, strategies which find a way of meeting competing demands or divergent ideas simultaneously have been termed 'resolution strategies' (Poole and Van de Ven, 1989; Smith and Lewis, 2011). We prefer to term them 'reconciliation strategies' since they do not "imply eliminating a tension" (Smith and Lewis, 2011, p. 386) – resolving it – but rather finding a way to live with it by reconciling divergent views or beliefs. The five reconciliation strategies identified are: engagement logic alignment, cultural bridging, partner positioning, project scoping and success measurement.

Prior research has suggested that resolution strategies divide into two types. Separation strategies manage tensions by separating the two poles either spatially or temporally, with spatial separation situating the two poles at different levels (e.g. individual-organization) or different physical locations (Poole and Van de Ven, 1989). The first two strategies identified in our cases (i.e. engagement logic alignment and cultural bridging) resemble synthesis strategies but create alignment within a spatial boundary at varying levels across the partnership. The three further strategies identified were shown to have separation *and* synthesis variants but were also used in a 'hybrid' way with synthesis occurring within a defined spatial boundary. Table 4-3 provides an explanation of each strategy and provides case study examples of the variants observed for each strategy.

Table 4-3 Reconciliation strategies: explanations and case illustrations of variants

Strategy	Explanation	Illustrations of strategy variants		
	Variant: Level of spatial alignment	**Relationship**	**Project**	**Internal organization**
Engagement logic alignment	Partners aligned engagement logics (rationales for partnership) at the relationship or project level. This required clear and coherent alignment within each partner organization	In BEER, both partners entered the relationship to share learning, to improve energy efficiency and address the issue of climate change	In GADGETS, a very commercially focused business and government nonprofit aligned to launch an economically viable trade-in service	Engagement logic alignment was facilitated by each partner having a clear and coherent internal rational for the partnership - based on a common internal understanding of how sustainability fits with other objectives
	Variant: Level of spatial alignment	**Organization**	**Project**	**Individual**
Cultural bridging	Cultural bridging occurred at three levels: shared values at the organizational level; a shared project team identity; or common commitment by individuals. Intermediary organizations, networks and individuals helped bridge cultures	Shared organizational culture helped transcend differences in organization type and facilitate cooperation in CLOTHES, BEER and BREWING. Independent intermediary organizations provided a 'neutral voice' (ICECREAM) and 'translation' (PHONES)	A strong project team identity 'the gang' (ICNp1) was a success factor in ICE CREAM and PERSONAL CARE. Networks facilitated by nonprofits and for-profits facilitated bridging at project or issue level	Personal missions united partnerships. Where sustainability was less integrated, personal missions were critical but susceptible to changes in personnel. Individuals with cross-sector experience bridged differences
	Variant: reconciliation approach	**Synthesis**	**Bounded synthesis: issue level**	**Separation**
Partner positioning	Partners attempted to overcome difference by emulating their partners' approach; conversely, partners retrenched into their own established ways of working. A hybrid approach involved cooperating closely within a defined boundary but maintaining distinct roles elsewhere	Oxfam operated a deliberately more 'commercial' division which emulated their business partner's ways of working. WRAP portfolio of projects balanced short term commercial benefits meeting business partner needs with longer term environmental impacts	Greenpeace worked collaboratively with commercial partners on ICE CREAM, but were still prepared to actively campaign against them on other issues	In PHONES, BT treated the initiative as 'a product' and Comic Relief remained focus on their core campaigning

4.4 Results: Dimensions of difference and reconciliation strategies

Strategy	Explanation		Illustrations of strategy variants	
	Variant: Synthesis/separation	**Synthesis**	**Bounded synthesis: sustainability problem level**	**Separation**
Project scoping	For profit partners broadened their commercial relationships to collaborate on SOI. Applying sustainability as an innovation lens allowed partners to solve identified problems jointly. Conversely, a narrow project definition could also help transcend differences	Commercial relationships became broader and more innovative through incorporating sustainability objectives (BEER; PHONES); characterised by participants' awareness of the system in which their organizations operated and wider involvement of internal teams	The pursuit of sustainability gave a new impetus to innovative problem solving and the co-creation of technology solutions (BEER; ICE CREAM; PHONES)	The success of ICE CREAM was attributed to its narrow focus on single refrigeration equipment category around which partners could align and take action
	Variant: Synthesis/separation	**Synthesis**	**Bounded synthesis: success story level**	**Separation**
Success measurement	Collaborations set objectives and targets in different ways which acted to unite partners or further emphasise difference. Success stories could create alignment without the need for common quantifiable metrics	An ambitious common target (ICE CREAM) or vision of long-term success (PERSONAL CARE) united partners. Common targets were a source of conflict if not unachievable and/or not jointly owned (CLOTHES, SPORT)	Communicating and celebrating shared or individual success stories supported partnerships	Measures and/or targets focused on the objectives or contributions of each partner rather than a shared objective

4.4.2.1 Engagement logic alignment

The first reconciliation strategy employed involved partner organizations aligning the rationales that they held for engaging in the innovation project studied. We term these rationales 'engagement logics.' Selsky and Parker (2010) have previously suggested that partnership rationales form part of the context for cross-sector social partnerships, our findings extend this work by suggesting that creating alignment between partners' engagement logics can help transcend the differences discussed above. This strategy was applied at three levels across the cases: at relationship level, project level and internally within an organization. Our evidence suggests that partners who align their logics at the broader relationship level are more like to derive positive relationship and learning outcomes than those who align at the project level, where the outcomes are limited to achieving the project objectives. We also find that organizations who have clearly aligned engagement logics internally are more likely to achieve alignment with their partners.

Relationship level

In the case of BEER, Adnams' and the National Trust's engagement logics were aligned at the level of the overall relationship and its intended outcomes. Despite differences in organization type, both partners entered the relationship to share learning from the other organization, to help improve their energy efficiency, and address the common issue of climate change. The National Trust chose not to deal with Adnams through their corporate partnership team, who would have tried to secure direct financial support from Adnams, instead benefiting from the in-kind contributions of time and resource contributed by the business in the spirit of joint problem-solving.

Project level

In other cases, engagement logics were aligned at the project outcome level. In GADGETS a very commercially focused business (Argos) and a government funded nonprofit (WRAP) were united in their intent to launch a large-scale economically viable trade-in service, even though WRAP's ultimate objective was to encourage other commercial partners to engage in similar resource efficient innovation, whereas for Argos it was primarily to attract customers and sales.

Internal organization level

As we analysed our case study partnerships it become clear that the rationales for these external relationships were not always consistent within the respective 'home' organizations. This was more apparent in the for-profit organizations than in the nonprofits. The introduction of environmental and social performance objectives alongside economic goals resulted in some functional groups feeling more aligned with and accountable for some partnership objectives than others. We found that organizations which could coherently articulate and demonstrate their engagement logic internally were better able to communicate this and align it with their external partners' as well as manage the partnership back within their own organization. For example, in Argos, there was a consistent understanding across the sustainability and commercial teams that GADGETS was a means to drive customer engagement and commercial benefits. Conversely, in BT the rationale for SPORT was very different depending on which department the respondent represented, to the extent that their nonprofit partner lost faith in their account manager's ability to represent the general views of the company.

4.4.2.2 Cultural bridging

Cultural bridging refers to the range of approaches used by partners to carve out a common culture despite the differences between them. As with engagement logic alignment, the locus of this cultural alignment varied across projects – from shared values at the organizational level to a shared group identity within a project team, to a common personal commitment on behalf of certain individuals. This cultural alignment was often achieved with the help of intermediaries which acted as a bridge between the partner organizations. These intermediaries took a variety of forms including third-party organizations, facilitating networks or individuals. Partners achieving cultural bridging at the organization level were more likely to achieve positive outcomes from the ongoing relationship and to be receptive to learning from the other organization, whereas in those cases where the bridging took place on a more personal level between individuals the learning tended to be restricted to those immediately involved in the project and to deliver only the project outcomes

Organization level

Shared organizational cultures (such as, values, ethos, brand) facilitated collaboration in the two Adnams partnerships (BEER and BREWING) and in the case where M&S is the focal organization (CLOTHES). (M&S were also the for-profit partner in BEER). Adnams and M&S both have their sustainability objectives well integrated into their core business strategy. M&S achieve this through their Plan A sustainability programme *"which underpins everything the organisation does"* (CBus3), with its clear, challenging sustainability performance targets, and with their sustainability ('Plan A') team organised in a matrix structure across the organization. Adnams embodies their culture through making sustainability a part of their values and brand.

> *"They just know that working for Adnams means we're a responsible company from environmental, ethical, social points of view, that we always look to innovate and evolve and research. We've got guiding values that we have and that, in general, does help people understand how to act in their job" (BBus3).*

The centrality of sustainability in these two businesses meant that cultural alignment was achieved across the whole organization, rather than within the project team or individuals:

> *"the way we do business…their direction on corporate social responsibility…the quality of our brand[s], the quality of the beers that we produce… their standards are extremely high, as are ours" (BBus1)*

As a result, the partners learnt from each other in areas unrelated to the primary buyer/seller relationship – for example sharing insights around glass bottle light-weighting. Similarly, in BREWING, Adnams found common ground, this time with a nonprofit partner – the National Trust. Although on the surface, the partners are very different, they both run heritage properties, are connected to their local communities, believe that sustainability is key to their long-term success and trade under trusted 'middle-class' heritage brands. Respondents saw their differences as an opportunity to learn rather than a barrier to collaboration. The diversity of National Trust sites and their long-term planning horizon meant Adnams could learn from their experience of implementing a range of energy conserving technologies, while Adnams offered expertise in building business cases for investment in these technologies. Similarly, M&S and

Oxfam's collaboration was supported by their brand fit ('Britishness') and common experience of running large networks of high street stores.

Intermediary organizations were used to support bridging between partners. In PHONES, a third-party for-profit consultancy acted as valued intermediary between the business and its suppliers who were members of the Better Future Supplier Forum (BFSF), acting as a 'Chinese wall' between them and providing confidentiality and impartiality.

> *"I think having the intermediary works… they're [suppliers] happy to share information [cost savings] with them [the intermediary] on the proviso that it doesn't directly come back to BT" (PBus7).*

They also served as a decoupling mechanism between members winning BT's 'Game Changing Challenge' innovation competitions and being awarded contracts (this was not guaranteed). They made it possible for suppliers to declare sustainability-related cost savings to BT's sustainability team without being pressured to pass these savings through as cost price reductions. They also aided translation across cultural and language divides.

Project level

In other cases, cultural bridging was achieved at the project team level. For example, a strong group identity was a key success factor in ICE CREAM:

> *"I would say that the people in RefNat became like a gang of people who knew each other, could speak shorthand together, trusted each other, there was never ever, ever a leak" (ICNp1).*

Similarly, in PERSONAL CARE project members reported being *"closer to each other than our own company"* (PCOther3). In SPORT, the core project team shared a common agenda but found it hard to translate that back into their own organizations:

> *"I think the four of us always felt like we were pulling in the same direction. I think the difficulties came with … me internally at Comic Relief…Dave sometimes internally at BT" (SNp2).*

In some cases, multi-stakeholder networks (which included the partner organizations) convened around a project or issue helped to achieve cultural bridging. The PERSONAL CARE consortium was convened by Walmart and Target who engaged Forum for the

Future to act as an independent convenor. It was these retailers jointly exerting their influence on their suppliers to drive change which was cited as making this consortium more effective than previous efforts in the industry:

> *"because you had the retailers in the mix, they're the ones that really brought the gravitational pull that I think held us together long enough for us to have enough trust to get through" (PCOther1).*

The consortium also served to defray the risk of perceived collusion. Forum for the Future played a crucial role within the network by making recommendations based on experience in other industries; suggesting frameworks and approaches and balancing neutral facilitation with their own sustainability agenda:

> *"Forum [for the Future] is unique in that role because they're a nonprofit as well as a consultancy so they have a little bit more credibility" (PCBus1);*
>
> *"the ability to hold that view which is pro-business but also sympathetic to what the NGO's are saying, and pro-sustainability, and to be able to keep pushing from that viewpoint" (PCNp2);*
>
> *"I believe they do have an agenda of their own but I think it's a more global agenda than one specific to this industry" (PCOther3).*

ICE CREAM also operated through an effective network structure, appointing a neutral for-profit consultancy to act as the initiative's secretariat. The Fit for the Future network provided an ongoing vehicle for the BREWING partners' collaborative learning - extending its reach to other nonprofit organizations.

Individual level

In some cases, shared personal missions – articulated as *"saving the planet"* (BBus3) and *"doing it for their kids"* (ICNp1) played a significant role in bridging difference between partners:

> *"I would say everyone in the room…from the engineers to the senior management understood, we do this, we make the world better" (ICNp1);*
>
> *"We are on a common mission together but that's built over time" (PCOther5).*

In some cases, personal missions were in the context of a broader organizational or team commitment to sustainability goals. In others where sustainability was less integrated, personal missions were also critical - albeit not supported by the organization and susceptible to changes in personnel:

> *"it's not on his objectives… he likes doing it and he wants to spend time doing it because it's the right thing to do" (PBus7);*
>
> *"it only takes a change in management and all that disappears" (PBus7).*

At the very least, personal missions were an additional motivating factor for project participants:

> *"I loved the fact that you could bring something to the front line that ticked so many non-financial boxes as well whilst also doing what it needed to do for the P&L and the shareholders" (GBus2).*

Respondents commented that individuals needed to be able to bring their personal thoughts and feelings into conversation with their partners, as well as representing their organizations, acknowledging that this may sometimes mean balancing their company's views with their own. There were also stories about personal journeys, of people 'converting' to the need for, and sense of, adopting more sustainable approaches to product design and manufacture:

> *"it's a religion!" (PFp1).*

Individuals with experience of both nonprofit and for-profit organizations played a bridging role in cross-sector relationships (CNp1, CBus3, GNp1, SNp2). Individuals experienced in managing cross-sector partnerships reported playing the role of *"referee"* or *"mediator"* (CBus1) in business-nonprofit discussions. The nonprofit partners in CLOTHES and GADGETS increased their recruitment from external organizations to increase this diversity of individual experience. The role that specific individuals could play in bridging between organizations was at the forefront of GADGETS (GBus1 was an *"ambassador"* (GNp1)), and in PHONES.

4.4.2.3 Partner positioning

Our cases provided evidence of partners positioning themselves relative to their partners in response to their perceived differences. This positioning strategy took two distinct directions. Under the synthesis variant, one partner emulated their partner's approach within a division or a project. Under the separation variant, partners emphasised differences by retrenching into their established ways of working. In some cases, a spatially bounded synthesis occurred whereby organizations adopted their partners' way of working within a defined project boundary whilst maintaining a distinct role elsewhere. The emulation strategy had the benefits of making the relationship smoother from the perspective of the focal business but did run the risk of limiting the extent to which partners could learn from their differences. The separation strategy also limited learning and evolution in the relationship and only delivered narrowly defined project outcomes.

Synthesis

In two cases the nonprofit partner made concerted efforts to learn to conduct the partnership in a way that was acceptable to their corporate partners:

> *"I'm really lucky working with Oxfam, because they're so switched on. And they have people who think corporate as opposed to think charity" (CBus2).*

In CLOTHES, Oxfam's Trading division was perceived to have a more commercial way of working, more in touch with the 'real' world than its Fundraising division:

> *"Obviously we've got our programme work which is what we raise the money for… But… we're on the ground, we know what's going on in the public domain rather than fundraising" (CNp1).*

Evidence of this included a business model / financial focus: *"Let's throw our most spreadsheet happy person at it"* (CNp3); being able to put together PowerPoint slides; conducting meetings efficiently; and protecting commercial confidentiality even when it went against the nonprofit's culture of consultative decision making. This behaviour helped the charity partner to be seen as "*a supplier*" (CBus2) rather than a charity - perceived by both sides to be positive:

> *"the fact that we have a confidence to work with them as if they are suppliers, is not a bad thing. If it's a partnership that you have to hand hold at every single step, then*

> *it's more trouble than its worth. For me, the fact that we have this, and it works really, really well operationally, is a testament of how good they are and how much you trust them" (CBus4); "I think because of the way we operate there is a respect, we are not a sandal wearing, tree hugging organisation" (CNp3).*

However, from Oxfam's perspective it also limited the scope for true partnership and innovation / co-creation, for example both marketing teams collaborating in the product launch and rebrands:

> *"They are used to working with suppliers, so they are used to telling their suppliers what they need and not necessarily collaborating with them on stuff. I think that for a very long time a lot of their management team saw us as a supplier of the end result of how to deliver the clothes exchange" (CNp2).*

Oxfam respondents felt that this was a common problem in charity for-profit partnerships and that M&S was better than the norm in adopting a partnership approach:

> *"we have a couple of major partners, and this concept of being treated like a supplier is one that we strive to get over. I guess to a certain extent M&S might struggle with that, but they are more collaborative than others who literally you are just supplying a service to them. All they are interested in is measuring you against their normal service level criteria" (CNp3).*

In GADGETS, the environmental nonprofit partner also strove to:

> *"embrace commercial understanding. It doesn't mean we need to become margin chasers…but we need to understand it, not fear it" (GNp1).*

Their funding comes from a mixture of UK government funded projects and grants and 'consultancy' fees from businesses who they work with to implement resource efficient business models. This enables them to balance less radical business model innovation projects such as GADGETS which drive short term commercial benefits as well as some environmental benefits, with more radical system-wide publicly funded projects delivering more significant, but longer term, environmental benefits (e.g. The UK Plastics Pact):

> *"to be able to demonstrate, well look, we've got this flagship project with Argos, it's going all the guns, it's going to be in 700 stores, it's a major success story, and okay,*

> *it's not the most radical solution in the world, but it's happening here and now and it's with a recognised name. And then, let me tell you about these two or three niche innovators who have got these really radical ideas, but they've got no sales (GNp2)."*

Within this portfolio of projects, WRAP's role varies from emulating commercial partners and 'selling' the commercial benefits of a project, to acting as the environmental champion and challenging businesses' ambition in these more systemic government funded initiatives. In a similar way to CLOTHES, the nonprofit respondents in GADGETS found that the commercial organization defaulted to a supplier relationship (even through the project was funded through the EU Life+ partnership project REBus[13]):

> *"they're used to issuing the orders and expecting the contractors to get on with it and then we come along not as a supplier or a contractor, but a partner and therefore not working quite in that way. It took a bit of getting to know each other, I suppose, to understand that" (GNp1).*

Bounded synthesis: issue level

In other cases, partners worked closely and collaboratively (but not attempting to narrow differences through emulation) on a defined issue but maintained their differences elsewhere. This was particularly evident in ICE CREAM and PERSONAL CARE. The impetus for this long running (2004 – 2017) coalition was Greenpeace's protest against Coco-Cola's sponsorship of the 2000 "Green Olympics" in Sydney, whilst contributing to climate change through its use of HFCs to cool its drinks. However, *"out of confrontation can arise co-operation"* (ICNp2) and, in contrast to its usual campaigning model, Greenpeace decided to cooperate with Coco-Cola and other companies deploying millions of point-of-sale refrigeration units between them, to work towards replacing the harmful greenhouse gases in these units with climate-friendly natural refrigerants. A key factor in this decision was that Greenpeace had already developed a domestic refrigeration technology, GreenFreeze, which demonstrated that climate-friendly alternatives existed (Stafford, Polonsky and Hartman, 2000). They contributed this Intellectual Property freely to their coalition partners and the world. Despite the close

[13] Resource efficient business models: http://www.rebus.eu.com/resources/case-studies/

relationships that formed around this initiative, member companies were not immune to attack from Greenpeace on other issues:

> *"keep in mind you do something bad in some other part of your business, you're going to get attacked. It's not like a white card for you, no. It actually happened with Unilever. They were very happy with them on the RefNat side, and they attacked them on the other side of their business because they weren't happy with them" (ICOther3)*

> *"We realised that we need to be able to co-operate and to acknowledge a corporation when they're doing something right, even while we still hold their feet to the fire on other issues" (ICNp2).*

Separation

An alternative approach was for partners to maintain their established way of doing things in their sector and therefore reinforce their differences. This was particularly evident in SPORT:

> *"Two big organisations that are probably quite arrogant if we're honest… Comic Relief is kind of like this is the way we do things. And BT are like, well, this is how we want it done" (SBus1).*

BT treated the initiative *"like a product"* (SBus1) whilst Comic Relief remained focused on their core campaign approach:

> *"It's a bit pulling blood from a stone a little bit in terms of getting the minds on this rather than on the campaign side" (SBus1).*

BT respondents described Comic Relief as *"not budging"* (SBus2), seeing the initiative *"as a bit of a cash cow"* and putting the initiative *"in a box"* (SBus2) and even Comic Relief admitted that, beyond fundraising, they:

> *"actually don't know what other goals they [BT] had" (SNp2).*

Having detailed how a partner positioning strategy was deployed in synthesis, separation and hybrid (spatially bounded) variants, we now explain how project scoping similarly exhibited these three variants.

4.4.2.4 Project scoping

Project scoping was used to address differences in perspectives, particularly between 'buyers' and 'sellers' in the for-profit to for-profit cases. The synthesis variant involved broadening the conversation from purely commercial outcomes to integrating common sustainability objectives through innovation. In the separation variant, a narrow project definition helped transcend differences. In the hybrid variant, innovation using sustainability as a lens provided a common purpose motivating diverse teams to jointly solve identified problems.

Synthesis

The relationships between for-profit partners in BEER and PHONES became broader and more open to innovation by the incorporation of sustainability objectives into the commercial relationship:

> *"I think that brought the companies together a bit more at the higher levels, rather than the selling and buying side of things" (BBus2).*

In both cases this was described as a move from a 'teacher-pupil' relationship to a more equal partnership. As a result, supplier organizations gained access to broader range of individuals within the buying organization and were therefore able to propose innovations which met their strategic needs; and sustainability teams on both sides had to come out of their sustainability 'bubbles' to collaborate more closely with commercial functions in their own organizations:

> *"it opened the discussion from just people who are the specialists, because it actually demands down-streaming some of the activities into real business examples, real business cases. And so you can't do that just with a sustainability expert in the product line or a CSR expert in corporate headquarters" (PFp1).*

Conversely in BREWING, the nonprofit partner were keen to see their business partner derive future commercial benefits from their sustainability-focused collaboration:

> *"it would be good for Adnams to get something back commercially from the National Trust… Because they deserve that, and it would deepen the relationship in a different angle…Spreading out of just being the environmental side of things" (BRNp1).*

In PERSONAL CARE a key to achieving synthesis was enabling the participants to see their organizations in the context of the broader system or value chain. The collaborative development of this 'value map' was facilitated by Forum for the Future at the outset of the project:

> *"it helps to … see the map, see what the landscape is and understand where the commonalities are, like where the best opportunities are for working together and lean on those, and also have a keen sense of maybe where some of the friction is, and just be a little bit more careful about approaching those to keep them in the mix until it's the right time to be able to lean in and focus on them" (PCOther4).*

Bounded synthesis: sustainability problem

In some cases, the pursuit of sustainability gave a new impetus to innovative problem solving and the co-creation of technology solutions:

> *"you quite often can tease out opportunities where you're using sustainability as a lens for innovation, but it can maybe let you come at the problem, you know, from a slightly different direction. But then leads subsequently also to customer experience benefits and cost benefits" (PBus6).*

In BEER, ICE CREAM and PHONES, respondents talked about the progress that could be made when a sustainability issue was tackled by engineers who considered it as a technical challenge to be solved:

> *"it sort of opened up his mind to actually this is a better way of doing business, this is a better way of engineering" (PFp1).*

In ICE CREAM, a respondent explained how the conversation could move from collaborative problem solving back to competition when marketers got involved.

Separation

A commonly cited success factor in ICE CREAM, however, was its narrow focus on single refrigeration equipment category around which partners could align and take action. This allowed the partners to coalesce around a simple undiluted message and mission. In the latter period of the coalition the mission extended from implementing

change within the member organizations, to advocating for change in other companies and in government - but all within the segment of point-of-sale refrigeration.

Reconciliation could therefore be achieved by broadening the scope of the partners' relationship so that the commercial and sustainability relationships were more integrated. On the other hand, a narrow project scope was defined. Sustainability innovation was sometimes a bounded mutual activity around which synthesis could be achieved.

4.4.2.5 Success measurement

The success measures adopted by partnerships could be used to reconcile difference. Measures which articulated (and sometimes quantified) a co-created shared vision could unite partners despite their differences. Partner-specific measures could help partners understand their respective goals and highlight differences in objectives. Success stories and case studies were a way of communicating shared success and motivating collaboration without the need for commonly agreed quantifiable measures.

Synthesis

Success measures were effective in transcending difference when they set out and quantified a clear shared vision of long-term success which all participants believed in and worked towards – referred to in PERSONAL CARE as *"a far horizon…a North Star"* (PCOther3). In ICE CREAM the vision was to *"eliminate fluorinated gases (CFC, HCFC, HFC) in our point-of-sale cooling appliances"* as well as advocating for alternative technologies which are *"safe, efficient and reliable, whilst offering environmental benefits"* (www.naturalrefrigerants.org). The first substantive output from the PERSONAL CARE coalition was The Beauty and Personal Care Product Sustainability Rating System (The Sustainability Consortium and Forum for the Future, 2018), a common assessment tool for guiding the industry going forwards. These quantified common visions were made more valuable through partners' public commitment to them:

> *"They also had the courage at that time to make public commitments without even really understanding all the impacts of the commitments" (ICBus2).*

However, common project targets could be a source of conflict if they were unachievable and/or not jointly owned. In CLOTHES and SPORT, project targets were perceived by

the charity partners to be unrealistic and set without heeding the advice, or obtaining the buy in, of the charity partner:

> *"It's like how are we going to do that? And we wouldn't have the capacity to do that. But the seven million was, they'd just come up with a figure" (CNp1).*

Bounded synthesis: success story level

The value of creating success stories was cited in six cases. The general sense was that success breeds success, particularly in the sphere of sustainability where many of the benefits are long terms, intangible and therefore harder to measure. In GADGETS, the nonprofit partner deliberately started with a project *"that we were confident was already commercially viable"* to use *"as a vehicle to start new and harder conversations"* (GNp1). In PHONES, the opportunity for recognition and celebration of success was a big part of the success of the Game Changing Challenge innovation competition. Case studies and benchmarks could also serve to ignite positive competition amongst organizations:

> *"Examples are the real gold nuggets…they will say, well if they're doing that, we've got to do this and we've got to do it better" (PBus4).*

Some commented that solely using metrics to evaluate success could limit innovation and 'thinking out of the box,' and that using stories, visits and other ways of measuring and communicating sharing successes and failures could be more productive:

> *"I was asked to speak on one of their little video clips for the event as well. So little things like that are all more about telling the story rather than giving numbers" (BBus4);"He wants to spend more time…telling the stories" (SNp2).*

Separation

Often, however, partners were working towards and measuring project success against their own financial and non-financial objectives. Whilst environmental/social targets set by one partner were helpful in raising the profile of sustainability issues and tracking progress against them, some partners felt that these could be a somewhat blunt instrument in terms of identifying innovation opportunities:

> *"they've tried to create a one shoe fits all questionnaire for 3,000 suppliers" (BBus3).*

Interestingly, in GADGETS, the nonprofit was prepared to accept that their partner's financial and customer metrics had to be met for project to be successful and thereafter deliver environmental benefit:

> *"the team were not as focused on environmental metrics as other sustainability teams but far more focused on customer metrics and financial metrics as well. The environmental metrics and other areas come. They come later. The most important thing is ensuring that you've defined either as a breakeven project or this is what we're going to deliver in terms of your KPIs for this project…With the financial model comes senior buy-in and introduction to the commercial team and therefore links to the city [London's financial district] and investment" (GNp1).*

In GADGETS and CLOTHES, the nonprofit partners recognised the importance of quantifying non-financial benefits and the value of communicating these measures:

> *"We would always try and ensure that we are able to quantify the environmental benefits of the projects that were taking place, the CSR benefits (GNp1); "we can say to M&S consistently on a month by month basis these are the number of items that have been shwopped, this is the value to Oxfam. These are the number of vouchers that have been issued, this is the number of garments per voucher that we've had ….I think there is a trust that the information, whilst they are not hard numbers they are fairly soft numbers, only estimates, that they feel confident… they will use those figures to talk publicly about what we do" (CNp3).*

Other nonprofits recognised that they less able to move towards measuring success in a way that helped their business partners:

> *"BT want to be able to say 'We have made a difference. We have enabled a 1,000 more children to access an education' for example. And it's something that we haven't yet done. So in terms of that monitoring / evaluation, in terms of okay, what has that money made a difference, what has it been able to do. We probably haven't been good enough at doing that" (SNp2).*

Having presented evidence of the five dimensions of difference and five reconciliation strategies and their variants, we now discuss the theoretical and managerial contributions of these findings.

4.5 Discussion and conclusion

Through a multiple-case study of eight SOI partnerships, a framework is developed setting out five dimensions of difference between partners and five strategies they deploy to reconcile them. This framework is set out in Figure 4-1 with supporting evidence at Table 4-2 and Table 4-3. Tension-creating differences occur in goal salience, goal instrumentality, temporal focus, language and collaborative intent. Reconciliation strategies comprise engagement logic alignment, cultural bridging, partner positioning, project scoping and success measurement.

Our framework contributes directly to the literature on managing difference in cross-sector and inter-organizational partnerships for SOI. Our findings integrate and modify concepts of difference identified in the institutional logics and paradox literature (goal salience, goal instrumentality and collaborative intent) and extend our understanding with new dimensions of difference (temporal focus and language). We find that institutional logics are not neatly aligned with organizational type, as is tacitly assumed in much previous research (Austin and Seitanidi, 2012b; Holmes and Smart, 2009; Sharma and Bansal, 2017); rather, as commercial organizations increasingly balance social and environmental objectives with economic objectives, and as nonprofits compete for funding and prevalence, organizations exhibit a patchwork blend of logics. The tensions created within organizations due to these blended logics interact with differences between organizations, creating multiple permutations of potential differences.

Two differences - goal salience and goal instrumentality – can indeed be partially explained by the differences in institutional logic associated with an organizational type (i.e. nonprofit versus for-profit). As would be expected, social and/or environmental goals were more salient in nonprofit organizations than in their commercial counterparts, and in nonprofits these social and/or environmental goals tended to be sought as an end in themselves, rather than a means to create economic value. However, differences in goal salience and goal instrumentality were also found to exist between for-profit partners due to differences in the way these companies went about and succeeded in integrating sustainability into their corporate objectives. Moreover, tensions over goal salience were also implicit within some nonprofit organizations as they balance achieving their social and/or environmental missions with generating the funds required to operate. Tensions

generated by differences in temporal focus, language and collaborative intent were found to be less closely aligned to organizational form. For example, nonprofits did not uniformly operate with a longer-term time horizon; we found a family owned business taking a longer-term horizon, and a charity which governed its business partnerships with short term contracts operating within a shorter-term time frame. Moreover, differences in collaborative intent primarily occurred between for-profit partners.

Our research also deepens our understanding of the responses to differences in institutional logics by presenting a comprehensive map of the strategic options employed by SOI partners in the face of these multiple potential sources of difference. Paradoxes have previously been understood to be resolved through separation or synthesis (Poole and Van de Ven, 1989; Smith and Lewis, 2011), with separation being possible on either a spatial (different levels or physical location) or temporal (different times) dimension (Poole and Van de Ven, 1989). We term the responses evidenced here 'reconciliation strategies' since they do not eliminate or resolve tensions but find ways to work productively with them. We propose engagement logic alignment and cultural bridging as synthesis-type strategies that create spatially bounded alignment at varying levels across the partnership. Engagement logic alignment is a new construct which brings together prior concepts of 'interaction logics' in the strategic alliances and business networks literature (Das and Teng 2000, Bengtsson and Kock 2000) and 'sensemaking platforms' (i.e. partnership rationales) in the cross-sector partnerships literature (Selsky and Parker, 2010). Engagement alignment was found to be used at either project level or relationships level and was supported by internal alignment. Similarly, cultural bridging achieved valuable outcomes when employed at individual level or project team level as well as on an organizational level.

In line with Hahn et al.'s (2015) articulation of strategies used to respond to corporate responsibility tensions, we show that partner positioning, project scoping and success measurement exhibit separation *and* synthesis variants; however, we also found they could be used to create synthesis solely within a defined spatial boundary. In terms of partner positioning, one case exhibited a separation-type strategy, but the more common approach was for the for-profit logic to dominate as the nonprofit partner emulated their business partner within the defined project boundary or more broadly within a division or

department. This emulation was often perceived by nonprofit respondents as a positive opportunity to develop ‘market’ skills and capabilities rather than being forcibly imposed by the business partner, although it was at times seen to reduce the opportunity for genuine co-creative innovation. The more governance-related strategies of project scoping and success measurement are interesting in their ability to drive positive outcomes when applied in contrasting ways. For example, a partnership with a broad scope and a focus on means rather than ends (BEER) and a partnership with a very narrow focus and clear long-term vision (ICE CREAM) were both perceived as successful.

In fact, our framework provides a structure within which this link between reconciliation strategies and outcomes could be further explored. In line with Stadtler and Van Wassenhove's (2016) contention that separation strategies result in “narrow synergistic benefits of cooperation” (p. 656) and Sharma and Bansal's (2017) finding that actively engaging in paradoxes results in more generative and collaborative project outcomes, our evidence suggests that a different combination of strategies may be required to achieve relationship and learning outcomes than those needed to achieve a more narrowly defined project outcome. We posit that engagement logics aligned around relationship outcomes, combined with cultural bridging at the organizational level, would be more likely to drive relationships and learning outcomes, whereas engagement logics aligned at the project level, combined with a shared culture within the project team, would be more likely to drive project outcomes only.

Our detailed examination of the thoughts and actions of the individuals and organizations involved in SOI partnerships offers new insight into the micro-foundations of managing difference in stakeholder partnerships. Our respondents’ insights offer a more granular understanding of the types of strategies employed at different levels within for-profit and nonprofit organizations to reconcile difference in SOI partnerships. These insights could have implications for other inter-organizational partnerships, collaborations and alliances beyond the SOI context.

4.5.1 Managerial implications

We found that a complex combination of strategies, deployed at a range of levels within and across organizations, were used to achieve outcomes across our SOI partnerships cases. We show that there are multiple dimensions along which partners can experience

tension-creating differences, but that there are also many ways in which alignment, or synthesis can be achieved. Our framework does not offer a one-size-fits-all recipe for reconciling difference within SOI partnerships, but rather sets out a menu of the strategic responses available. Our findings suggest that managers cannot assume that the objectives and motivations of their partners are the same as their own, nor should they assume that they understand a charity or an environmental group's objectives simply because they are 'nonprofits.' It is equally important for managers to ensure that the tensions implicit in pursuing SOI are being recognised and addressed within their own organization, so they can clearly and consistently communicate their own objectives and motivations to their SOI partners.

4.5.2 Limitations and future research

The framework we present here represents an important exploratory step in setting out the dimensions of tension-creating difference encountered by companies and their stakeholder partners when they engage in SOI, and articulating the strategies used to reconcile these differences to create the desired outcomes. It could now serve as an organizing framework for quantitative investigation into the salience of the dimensions and use of the strategies across a larger sample. As discussed above, the framework also provides a structure within which the links between the reconciliation strategies employed and the outcomes generated could be further explored.

Our findings show that significant differences exist not only across the for-profit/nonprofit divide but also between for-profit partners and suggest that nonprofits partners are also likely to differ significantly along these and other dimensions. There is therefore an opportunity for more research into SOI partnerships between partners from the *same* sector. In our exploration of the data, we found evidence that the lines between the logics of for-profits and nonprofits are blurred and that organizations display a 'patchwork' blend of logics. This meant that we also identified differences in logics and priorities *within* partner organizations, influenced by which department or function a person belonged to and sometimes by the involvement they had with their external partners. Future research could further explore these internal differences, how they are managed and their impacts. We identified strategies which involved synthesis within a spatial boundary (e.g. level within an organization), it would be interesting to explore

temporal boundaries to partner's reconciliation strategies – in other words to use longitudinal data to look at how the partnerships change and evolve over time. Finally, the strategies we present demand organizational and individual capabilities which merit further exploration. For example, cultural bridging requires individuals to be empathetic to each other and organizations to put activities and structures in place which allow individuals to immerse themselves more fully in their partner's world.

4.6 References to chapter 4

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5 CONCLUSIONS

5.1 Contributions

This research contributes to our understanding of how companies can effectively integrate stakeholder perspectives into their innovation processes, particularly in the context of sustainability-oriented innovation through addressing three objectives: (1) to systematically review the literature relating to how firms engage with their stakeholders, from distinct institutional settings, to enable environmental innovation; (2) to investigate how and why different stakeholder interventions influence the value generated when businesses engage nonprofit partners in sustainability-oriented innovation (SOI); and (3) to identify the dimensions of difference that exist between companies and their stakeholder partners when they engage in SOI and the strategies used to reconcile these differences. This thesis has thereby provided at least some answers to its overall research question of *how companies can effectively engage their stakeholders in sustainability-oriented innovation*?

In this chapter, I first detail my thesis' contributions to the overlapping literature domains of (1) sustainability-oriented innovation (i.e. social innovation, environmental innovation, green new product development), (2) involving stakeholders in sustainability (i.e. cross-sector (social) partnerships and collaborations, public-private partnerships and collaborations), multi-stakeholder partnerships, inter-organizational collaborations and sustainable collaborations), and (3) involving stakeholders in innovation (i.e. open innovation, co-creation). I then discuss the broader contributions made to the dynamic capabilities, institutional logics and inter-organizational learning literatures. I conclude with contributions to management in practice. These contributions are summarised in Figure 5-1. The chapter concludes with a discussion of the limitations of the research and suggestions for future research.

Title	Domain-specific contributions	Wider theoretical contributions	Methodological/managerial contributions
Harnessing difference: A capability-based framework for stakeholder engagement in environmental innovation	Two second-order engagement learning capabilities: *value framing* and *systematized learning* *Internal integrative capabilities* necessary to share and use externally sourced insight	Bi-directional interaction between operational capabilities and **dynamic capabilities** Relationships between first-order and second order **dynamic capabilities** Use of **institutional logics** theory to explain dynamic capabilities **Inter-organizational learning** contingent on differences as well as similarities	**Review methodology**: Application of quality assessment criteria scores and intercoder reliability statistics to the selection of articles in the systematic review **Managerial**: A checklist of the capabilities required by businesses to engage with their stakeholders and to assimilate, interpret and learn from them to build internal capability
Business-nonprofit engagement in sustainability-oriented innovation: What works for whom and why?	Three mechanisms link interventions with outcomes: *agent control, resource integration, value empathy* Partner *perception of context* influences interventions used, mechanisms and outcomes	Compatibility of *engagement* logics as a relevant contextual factor [**Institutional logics**]	**Managerial:** A menu of possible types of interventions for practitioners to consider when deciding what action to take to achieve their desired outcomes in their own context, whilst being aware of the mechanisms through which the interventions might work
Reconciling our differences: Making partnerships for sustainability-oriented innovation work	Dimensions of difference of *goal salience, goal instrumentality, temporal focus, language* and *collaborative intent.* Reconciliation strategies of *engagement logic alignment, cultural bridging partner positioning, project scoping* and *measure mutuality*	*Engagement logic alignment* as a reconciliation strategy [**Institutional logics**]	**Managerial:** A practical tool for managers to systematically review how differences between them and their partner might generate tensions which may affect partnership outcomes, and to select from five possible multi-variant reconciliation strategies

Figure 5-1 Summary of contributions

5.1.1 Domain-specific contributions

Recent reviews of the sustainability-oriented innovation (SOI) literature agree that innovation depends on stakeholder collaboration activities (Adams et al., 2016) and that interaction with external actors can increase a business' innovative capability (Klewitz and Hansen, 2014). Stakeholder engagement in corporate sustainability has been identified as an organizational capability (Ayuso et al., 2011; Hart, 1997; Hart and Sharma, 2004; Sharma and Vrendenburg, 1998); however, prior literature has primarily focused on the capabilities required to manage relationships with external stakeholders, such as stakeholder engagement processes (Ayuso, Rodríguez and Ricart, 2006; Heiskanen and Lovio, 2010; Hoffmann, 2007) and goal alignment (Lee and Kim, 2011; Verghese and Lewis, 2007).

Chapter 2 focuses in on stakeholder engagement in environmental innovation (representing the subset of SOI addressing the environmental dimension of sustainability) as an organizational capability and contributes to this literature by extending and adding granularity to our understanding of these engagement management capabilities. A refined understanding of the operational capabilities required is also provided. More importantly, inspired by the alliance management literature (Schilke, 2014), an additional tier of second-order stakeholder learning capabilities are identified, which businesses need to continuously learn from their stakeholder engagement activities. Two new second-order capabilities are defined: 1) a *value framing* capability enables businesses to navigate the differences that exist between them and their stakeholders, allowing them to understand the alternative value frames of their potential collaborators, think beyond the immediate boundaries of the innovation context they are looking at and co-create novel solutions by rethinking (or 're-framing') the problem at hand, or combining competencies in new ways, 2) a *systematized learning* then enables organizations to share what is learnt from specific stakeholder engagements across the organization. This is done by creating organizational structures and processes which support the continuous reconfiguration of externally-sourced knowledge, so that the organization is 'learning to learn' and continually developing its stakeholder engagement capabilities.

My literature review also contributes to the literature on involving stakeholders in innovation (i.e. open innovation and co-creation). This literature focuses on how

innovation is sourced from external agents but has largely overlooked how this insight is integrated into businesses (West and Bogers, 2014). I address this gap by identifying and evidencing the internal integrative capabilities needed to share and use externally acquired information and insight across groups of internal stakeholders. I present these internal capabilities as an essential counterpart to external integrative capabilities.

In Chapter 3, the focus widens from organizational capabilities within a business to investigate how innovation outcomes are achieved within business-nonprofit dyads. Engagements between businesses and nonprofit organizations are uniquely positioned to create value across economic, environmental and social dimensions (King, 2007), since nonprofits' primary purpose is the promotion of social and/or environmental goals (Murphy and Bendell, 2001). However, they can be particularly vulnerable to conflict (Le Ber and Branzei, 2010b; Driessen and Hillebrand, 2013) and present an interesting context in which to examine how partners' choices of intervention can create value. Recent conceptual work suggests that an array of economic and social value creation mechanisms might be possible (Quélin, Kivleniece and Lazzarini, 2017). This research builds on this work with an empirically derived framework setting out three mechanisms which link intervention to value. Through the agent control mechanism, partners secure value by enforcing their own interests; through the resource integration mechanism they recombine their assets and capabilities to create value for partners, society and the environment; through the value empathy mechanism they navigate differences between institutional logics which might potentially derail the dyad and enhance shared value.

Whilst recent studies have researched cross-sector partnerships through either an agency theory lens (Rivera-Santos, Rufín and Wassmer, 2017), resource-based view lens (Caldwell, Roehrich and George, 2017), or institutional logics lens, I suggest that a heterogeneity of theoretical lenses (represented by our three mechanisms) will best serve an understanding of this phenomenon, depending on the context. Moreover, I propose that it is the *perception* of context by the partners, in terms of power balance, resource interdependence and logic compatibility, that may affect the interventions chosen by partners and the mechanisms through which those interventions deliver value.

A further key contribution in Chapter 3 is the identification of compatibility of engagement logics as a relevant factor setting the context for business-nonprofit SOI

partnerships. Selsky and Parker (2010) have previously suggested that partnership rationales form part of the context for cross-sector social partnerships, however, they did not consider what would happen if these rationales were incompatible. Although engagement logics may in part be influenced by the institutional logics associated with partner's contrasting organizational type, evidence is presented which suggests they merit consideration as an independent contextual variable.

In Chapter 4, I extend my case study sample to include business-for-profit partnerships and investigate the differences (associated with their distinct institutional logics or otherwise) which exist between partners and how partners act to reconcile them. This part of the research therefore 'zooms in' on the *value empathy* capability identified in Chapter 2 and the *logic compatibility* context identified in Chapter 3. The potential differences and paradoxes arising from differences in institutional logics have primarily been studied in the context of 'hybrid' organizations which combine the institutional logics of various sectors of society (Battilana and Dorado, 2010; Jay, 2013; Pache and Santos, 2010; Villani, Greco and Phillips, 2017). Even non-hybrid companies have been found to exhibit a blend of potentially competing logics as they pursue triple-bottom-line objectives (Hahn et al., 2015; Kivleniece and Quelin, 2012). A few studies have addressed tensions in cross-sector partnerships (Le Ber and Branzei, 2010a; Sharma and Bansal, 2017; Stadtler and Van Wassenhove, 2016). These have diagnosed two paradoxes: the 'commercial-social paradox' (Sharma and Bansal, 2017) follows the market-versus-public good dichotomy, whereas the 'coopetition paradox' (Stadtler and Van Wassenhove, 2016) represents a more nuanced tension between for-profit organizations collaborating for social good whilst competing with each other.

I modify, extend and integrate these previously proposed concepts of difference and contribute to the literature on cross-sector and inter-organizational partnerships for SOI by evidencing five dimensions of tension-creating difference. Two differences - *goal salience* and *goal instrumentality* – can be partially explained by the differences in institutional logic associated with an organizational type (i.e. nonprofit versus for-profit). As would be expected, social and/or environmental goals were more salient in nonprofit organizations than in their commercial counterparts, and in nonprofits these social and/or environmental goals tended to be sought as an end in themselves, rather than a means to

create economic value. However, these differences also occurred within sectors, due to differences in the way businesses integrate sustainability and equally in how nonprofits balance mission with fundraising. Differences in *collaborative intent* primarily occurred between for-profit partners. *Temporal focus* and *language* emerged as previously unconsidered dimensions of difference less closely aligned to organizational form. For example, nonprofits did not uniformly operate with a longer-term time horizon; variation included a family owned business taking a longer-term horizon, and a charity governing its business partnerships with short term contracts.

Poole and Van de Ven (1989) propose that paradoxes can be managed through opposition separation (special or temporal) or synthesis. Separation and synthesis are resolution strategies (Poole and Van de Ven, 1989; Smith and Lewis, 2011) since they find "a means of meeting competing demands or considering divergent ideas simultaneously" (Smith and Lewis, 2011, p386). In cross-sector partnership research, recent studies address a single partner type and a single dimension of difference within partnerships for whom innovation is not the main focus (Le Ber and Branzei, 2010b; Sharma and Bansal, 2017; Stadtler and Van Wassenhove, 2016). This thesis contributes to this nascent literature on managing tensions in cross-sector partnership though our detailed research into the responses of businesses and multiple types of SOI partner across the five dimensions of difference discussed above.

Five reconciliation strategies emerge, which are more varied and nuanced than suggested by previous typologies. Two strategies (*engagement logic alignment* and *cultural bridging*) create alignment within a spatial boundary at varying levels across the partnership, in contrast with previously discussed strategies of spatial separation. In line with Hahn et al.'s (2015) articulation of corporate responsibility tensions within companies, I show that *partner positioning*, *project scoping* and *success measurement* exhibit separation and synthesis variants and explain how they were also used to create synthesis within a defined spatial boundary.

The SOI context is representative of the challenges posed by increasingly inclusive innovation practices with extensive and diverse sets of external and internal stakeholders. I therefore suggest that the contributions discussed above also have implications for wider research on distributed and democratized models of innovation.

5.1.2 Wider theoretical contributions

In addition to these domain-specific contributions, wider contributions to theory are made, which are next discussed.

5.1.2.1 Dynamic capabilities

In Chapter 2, two contributions are made to the wider dynamic capability literature.

First, it is suggested that operational capabilities can influence the development of dynamic capabilities, rather than always the other way around as is commonly thought. This manifests itself as the routinization and transcendence of certain operational capabilities into dynamic capabilities (Helfat et al., 2007; Newey and Zahra, 2009; di Stefano, Peteraf and Verona, 2014). Our review finds some evidence of operational capabilities having an impact on the development of dynamic capabilities in this way. Part of the environmental capability (an operational capability) identified in Chapter 2 includes providing cross-functional project management (Pujari, Wright and Peattie, 2003), and influencing employees and decision-makers. These contribute to the development of internal integrative capability (a dynamic capability). Marketing capability (an operational capability) can similarly help to develop external integrative capability (a dynamic capability) through interacting more broadly and deeply with stakeholders including, but not limited to, customers. In this way, operational capabilities are shown to play a role in developing dynamic stakeholder engagement capabilities. Examples of this in practice include sustainability experts participating in external networks addressing environmental issues, or marketing professionals sharing outputs from customer focus groups relating to more environmentally-friendly products or services with external stakeholder groups, as well as across internal teams.

Second, a starting point is provided for further empirical research into the relationships between distinct but interdependent first-order and second-order dynamic capabilities. It has previously been suggested that stakeholder relationships driven by a need for innovation are more strongly geared toward resource reconfiguration than other types of alliances (Schilke, 2014) and are therefore likely to exhibit some second-order 'learning to learn' type capabilities (Collis, 1994). The relationship between 1st and 2nd order dynamic capabilities has previously been studied in business alliances (Schilke, 2014). I join this conversation by exploring the relationship in between 1st and 2nd order

capabilities in the context of stakeholder engagement in SOI and contribute with a hierarchical framework in which the interplay between these levels of capability and the evolution of capabilities from one type to another can be further studied.

5.1.2.2 Institutional logics

Institutional logics theory is engaged with throughout this thesis. First, I draw on the concept of contrasting institutional logics to explain the *value framing* capability in Chapter 2, showing that combining dynamics capability theory and institutional logics can offer a more plausible explanation of this key capability for stakeholder engagement in SOI. Similarly, institutional logics theory underpins the *value empathy* mechanism identified in Chapter 3, whereby value creation is enhanced through recognizing and harnessing differences between partners' institutional logics.

In Chapter 3, a novel contribution is made to this literature by extending the concept of logic compatibility to include *compatibility of engagement logics* as a relevant contextual factor for business-nonprofit engagement in SOI stakeholder engagement, as well as compatibility of institutional logics. In Chapters 3 and 4 it is argued that although engagement logics are influenced by the institutional logics associated with organizational form (i.e. nonprofit and for-profit) this is only part of the picture and that engagement logics should be considered as an independent contextual factor. In Chapter 4, I present evidence of *engagement logic alignment* as a reconciliation strategy. This strategy was applied at relationship level or project level and internally within a partner organization. Our evidence suggests that partners who can align their logics at the broader relationship level are more like to derive positive relationship and learning outcomes than those who align at the project level. It also suggests that organizations who have clearly aligned engagement logics internally are more likely to be able to achieve alignment with their partners.

5.1.2.3 Organizational learning

In Chapter 2, two interrelated second-order stakeholder learning capabilities are identified – value framing and systematized learning. This finding contributes to the inter-organizational learning literature by pointing to a close link between value framing and systematized learning. The thesis presents evidence that inter-institutional learning can be enhanced by differences between organizational value frames, rather than being

contingent on the similarity between them as previously thought (Lane and Lubatkin, 1998). Findings include that organizations with a value framing capability have greater potential to achieve 'higher order' learning because they question the existing boundary conditions, frames or assumptions of the problems at hand (Quist and Tukker, 2013).

5.1.2.4 Systematic literature review methodology

Finally, in Chapter 2, a methodological contribution is also made through the application of quality assessment criteria scores (Pittaway et al., 2004) and intercoder reliability statistics (Macdonald, Kleinaltenkamp and Wilson, 2016) to the selection of articles included in the systematic literature review.

5.1.3 Contributions to practice

In the process of sharing our research findings with practitioners, I found that our research topic and findings were of significant interest. Companies are increasingly finding themselves partnering with diverse external organizations through varied forms of partnership to grow and develop their businesses through innovation. This is not only true in the context of sustainability-oriented innovation but for innovation more broadly. Open innovation type practices seem to be on the increase and involve businesses working not only with innovation or creative agencies but also with customers, local communities, government and universities to develop new propositions (see for example Clydesdale Bank's Studio B: https://www.youandb.co.uk/studiob). Practitioners in the sustainability field are perhaps more aware than others of the challenges of working with unusual partners, particularly those for whom social and/or environmental goals are primary. However, managers in other business functions are also having to learn these partnerships skills. For example, Unilever's Sustainable Living Plan required all brands to have a sustainability purpose (Unilever, 2017), which means the marketers in those brand teams learning to work with nonprofit, community and government partners to deliver against their stated brand purposes.

The framework developed in Chapter 2 sets out the capabilities required by businesses to engage with their stakeholders and importantly to assimilate, interpret and learn from them to build internal capability. It alerts managers to the potential for different value frames to exist between themselves and their partners and even between themselves and

other functional teams within their business. The framework outlines specific dimensions of each capability that practitioners can use as a check list in their organizations. For example, for them to be able to integrate stakeholder insights internally (internal integrative capabilities) they need to engage employees, use environmental data and make sustainability an integral part of their corporate objectives. For them to be able to navigate differences in value frame with their external partners (value framing) they need to be able to think systematically, empathize with their partners and find a way for their respective value frames to co-exist.

The framework developed in Chapter 3 contributes to practice by setting out the range of possible modes of business-nonprofit engagement. It offers a 'menu' of possible types of interventions for practitioners to consider when deciding what action to take to achieve their desired outcomes, taking their specific context into account and being aware of the mechanisms through which these interventions might work. When presenting this framework to practitioners, the insight that different interventions might be required to evolve a partnership from an agent-control-type relationship to a resource-integration-type relationship or from a resource-integration-type relationship to a value-empathy-type relationship was particularly well received. It helped them think about where they want to take their partnerships in the future and consider how they might have to conduct their partner relationships differently to achieve that.

In Chapter 4, I provide a practical tool for managers who want to systematically review how differences between them and their partner might generate tensions which may affect partnership outcomes. This chapter sets out five strategies to reconcile the differences identified and provides practical examples of the various ways these strategies can be executed. Again, the contribution here is a not a one-size-fits-all recipe for success, but rather a map within which practitioners can use to navigate their own partnerships.

Although these contributions were developed from research in the field of SOI, they may have relevance in other innovation contexts which involve collaborating with partners. They may also have implications for projects that cross-national boundaries or in the context of multi-channel/omni-channel management and supply chain projects which also involve working with partners from along the value chain and beyond.

5.2 Limitations

The eight cases studied in my empirical work were selected to represent a range of sectors, partner types, SOI types and contexts for engagement (see 5.4Appendix A for more detail) and therefore to reflect the diversity of partnership forms employed in practice and to identify common patterns observed across types. However, as the case study selection was structured around the identification of focal businesses in the first instance and the subsequent identification of appropriate SOI projects, no nonprofit to nonprofit dyads were included in the sample. It would be interesting to discover how our findings on modes of engagement and reconciliation of differences would be modified or extended with the inclusion of this dyad type.

Further limitations stem from my choice of research method. The benefit of case study research to answer my research question lay in the richness of the data collected and the opportunity it presented to inductively build theory in an emerging research field. The limitations of this method, however, are two-fold.

First, the analysis of the data was subject to my own biases and subjectivity as a researcher. Four tactics were used to mitigate this potential issue: 1) multiple sources of data were sought from the perspectives of both partners in the dyad so that their accounts of events could be compared across sources and triangulated with secondary data; 2) my interpretations of the data were scrutinized by two additional researchers during formal PhD review sessions and during collaboration on the component journal style chapters, providing some independent validation of the coding and related analysis; 3) 5.4Appendix A enhances the replicability of the study by providing more detail of the empirical research method used; and 4) emerging findings were validated with company representatives in the form of feedback presentations and workshops with feedback being captured and incorporated into further analysis where possible.

Second, case study findings can be challenged as being less generalizable than quantitative studies. A multiple-case-study design, combined with sampling designed to select cases representing the diversity of partnership and project contexts, enabled us to identify patterns which were common across these diverse cases. Analytic induction was chosen as an analysis method. This allowed the researcher to iterate between the theoretical concepts used in motivating and designing each stage of the research and the

evidence gathered from our cases, and thereby: 1) corroborate, modify and advance these theoretical concepts, and 2) generate new concepts (Yin, 2014). The resulting findings thus exhibit analytic generalizability (Yin, 2014). In other words, they are generalizable to the theories developed of the phenomenon being studied. In addition, these theories may have much wider applicability than the particular cases studied - forming a set of 'working hypotheses' that could usefully be applied in other partnership contexts. The frameworks developed in this thesis could now serve as organizing frameworks for quantitative research across a broader sample. For example, future research could measure the salience of the differences identified in Chapter 4 and establish the relationships between reconciliation strategies and outcomes in the context of those differences. Other future research directions are discussed next.

5.3 Future research directions

The findings of this thesis could be extended by further work into SOI partnerships between partners in the same sector. As discussed above, our cases did not include nonprofit to nonprofit partnerships. A broader sample of business to business partnerships could also be valuable in identifying the modes of engagement and tensions that come to the fore in partnerships with a one stakeholder group as compared with another, e.g. partnerships with competitors versus partnerships with suppliers.

Chapter 2 articulates the organizational capabilities required for stakeholder engagement in SOI as identified in the extant literature. The case study data collected in the empirical phase of this research also contained rich insights into organizational capabilities and individual capabilities required for successful SOI partnerships. Analysis of this data went beyond the objectives of this PhD but would build well on the literature review insights. This is a research direction that would be particularly welcome by practitioners who recognise that partnering potentially requires different skills from the corporate mainstream and are looking to recruit, train and reward these skills (feedback from practitioner workshop, December 2017).

Chapter 2 argues that there is a hierarchy of capabilities involved in stakeholder engagement and suggests that operational capabilities can influence the development of dynamic capabilities rather than just the other way around. Chapter 3 suggests that different interventions might be required to evolve a partnership from an agent-control-

type relationship to a resource-integration-type relationship or from a resource-integration-type relationship to a value-empathy-type relationship. Chapter 3 also emphasizes the extent to which context influences the choice of interventions in a partnership. There is therefore an opportunity for longitudinal research into the evolution of stakeholder engagement capabilities, perhaps looking at the stages of maturity in a partnership or the lifecycle of a collaboration, where the context for the partnership is changing over time. This was equally an area of interest for practitioners who asked questions such as: "Is it necessary to have something early on that 'buys time' for the partnership to develop and build deep roots (some short time sales activity; legal/political decision; senior level public communication etc.)?" (Feedback from practitioner workshop, December 2017).

There is also a burning question among practitioners as to the extent to which good partnerships are purely down to relationships between individuals. Our interview protocol sought to investigate how learning from a case study project was used in future projects and whether and how any learning impacted or was used in the organization more broadly (see questions at 5.4Appendix B). Many respondents referred to the need to get better at codifying and sharing what was learnt from their collaborative innovations, but there were no examples of this being done well. As discussed above, there was a sense that organizations would like to be able to train people to be good at managing collaborative innovation but they are looking for answers as to how this can be done. Research focused on learning from collaboration, based on a sample selected specifically for this purpose, and probably taking a longitudinal approach would help respond to this practical research need as well as contributing to the literature on inter-organizational learning.

Another fruitful area for future empirical exploration would be the internal work required within organizations: 1) to integrate and learn from stakeholder insights internally (the internal integrative capabilities discussed in Chapter 2), and, 2) to ensure that their own internal logic is consistent across the organization, making it easier for them to hold a clear engagement logic (Chapters 2 and 3) for their partnerships. This research suggests that the management of differences between individuals and teams within an organization as well as the ability to share externally sourced insight within an organization are

important counterparts to external stakeholder engagement capabilities and as such would merit further investigation.

5.4 References to chapter 5

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APPENDICES

Appendix A Empirical research method: further details

This appendix provides some further details of the method used for the empirical chapters 3 and 4, to complement the method descriptions in each of those chapters.

Case study research was chosen to study the phenomenon of stakeholder engagement in sustainability-oriented innovation (SOI) as it is a rich and complex context and this method enables research to capture the depth and detail of data required to answer the 'how' and 'why' as well as the 'what' questions (Tsang, 2014) posed in this thesis. A multiple-case study design was used to provide a stronger basis for theoretical generalization for the relationships found (Yin, 2014). Within each case, multiple respondents improve data reliability, and different perspectives improve the validity of theorizing (Eisenhardt and Graebner, 2007).

The research questions addressed by this case study research are:

Chapter 3: 1) How do different modes of engagement (interventions) influence the value outcomes generated by sustainability-oriented innovation projects involving business and nonprofit partners? 2) Why is this the case?

Chapter 4: 1) What are the dimensions of tension-creating differences that exist between companies and their stakeholders when they engage specifically in sustainability-oriented innovation? 2) What strategies used to reconcile them?

A.1 Case study selection

Theoretical sampling was used to identify eight dyadic relationships between a focal business and an external stakeholder partner relating to a specific SOI project. In contrast to most research in this field, which takes a firm as the unit of analysis (see Dangelico, Pontrandolfo and Pujari, 2013; Dangelico and Pujari, 2010; Heiskanen and Lovio, 2010; Hoffmann, 2007 for exceptions), the SOI project was taken as the unit of analysis to gain richer and more focused accounts from respondents of project events and their perceptions of them.

The selection criteria for the focal businesses were as follows:

- Large publicly listed organizations in the consumer goods sector, where is it more likely due to size that multiple internal logics may coexist;
- UK based or with significant UK operational base;
- Organizations that engage with their external stakeholders in their pursuit of sustainability-oriented innovation;
- Were able to discuss at least one project which meets the SOI project selection criteria.

The selection criteria for the SOI project were as follows:

- A project which delivers a significant or novel change to the content or configuration of the value proposition offered by the company, where such change has the objective (but not necessarily the primary objective) of reducing a negative environmental or social impact or creating an environmental or social benefit;
- Involves working closely with an external stakeholder organization or group of external stakeholder organizations (e.g. suppliers);
- Can be in development, or pilot, or full launch;
- Does not need to have been deemed 'successful.'

At the same time as meeting the selection criteria, cases were selected to represent a range of sectors, partner types, SOI types and contexts for engagement. This range of partnership and project contexts was sought to reflect the diversity of partnership forms employed in practice and to identify common patterns observed across types. Accordingly, criteria for ensuring diversity across the final selection including identifying:

Focal businesses

- That represent a spread of consumer goods sectors since mimetic pressures within the same sector could limit the breadth of approaches used in a single sector;
- That vary in the degree to which sustainability has been integrated into the organization's internal logic i.e. the value frame they started out with.

Partner organizations

- That represent a spread of nonprofit and for-profit partners

- Amongst the for-profit partners selected, a spread in the degree to which, and way in which, sustainability has been integrated into the organization's internal logic i.e. the value frame they started out with;
- Amongst the nonprofit partners, a spread of nonprofit organization types e.g. charities, green NGOs, and nonprofit environmental consultancies.

SOI projects

- A spread of product, process, organizational and wider system innovations.

Engagement context

- A mix of contexts for engagement to include pure dyadic relationships, as well as dyads within the context of multi-stakeholder initiatives.

A list of the final eight SOI projects selected together with brief case descriptions of the SOI project can be found at Table 4-1. Amongst the eight cases selected:

- Four cases involve the focal businesses partnering with nonprofit organizations (nonprofit consultancies, charities and environmental groups);
- Two cases involve partnerships with for-profit organizations: one in the context of a buyer-seller relationship, the other in the context of a buyer-initiated supplier forum;
- The remaining two cases centre on business-nonprofit relationships within the context of multi-stakeholder initiatives which included other for-profit partners;
- Two cases relate primarily to product innovations, four relate to process innovations and two to innovations in wider systems.

A.2 Data collection

For each case, both primary and secondary data were collected as summarized in Table 4-1. The primary data source was semi-structured interviews with individuals who worked on the SOI project representing different functions of the focal business and their partner organizations. In each case, we identified a lead informant who acted as a project contact and introduced us to people involved in the day-to-day activities as well as those in leadership positions who took more strategic decisions.

The interviews were conducted in an open-ended manner, based around the main question "Could you tell me about the project or initiative you are involved with, where you are working with external stakeholders to help develop and deliver a sustainability-oriented innovation?" A list of follow up questions were used to a greater or lesser extent depending on how well the interview was flowing and whether the main points of discussion were being naturally addressed. Respondents were asked to describe project objectives and motivations, how the project was set up and run, how the relationship with the SOI partner evolved, challenges and how they were overcome, and what was learnt from the experience. The interview protocol can be found at Appendix B below. Focal business and partner respondents were asked the same questions, so facts could be cross-checked and different perspectives captured. Multiple respondents improved data reliability enabling triangulation of findings, and different perspectives improved the validity of theorizing (Eisenhardt and Graebner, 2007).

A total of 55 interviews (31 with focal businesses, 18 with partners, 6 with other parties) with 52 individuals (3 individuals were interviewed for two projects), lasting 50 minutes on average, were recorded and transcribed. A full list of respondents is provided at Table A-1. Interviews were primarily face-to-face (28), with geographically remote respondents participating by telephone (19) or video (9).

Table A-1 List of respondents

Case	Organization	Role	Code	Duration	Type[14]
CLOTHES					
	M&S	Director of Plan A	CBus1	0:43:20	F
	M&S	Plan A Delivery Manager	CBus2	1:05:35	F
	M&S	Plan A Marketing Manger	CBus3	0:38:15	F
	M&S	Head of Delivery, Plan A and Sustainable Business	CBus4	0:56:59	F
	Oxfam	Corporate Relationship Manager, Oxfam Trading	CNp1	0:56:14	F
	Oxfam	Head of Corporate Engagement, Oxfam Trading	CNp2	1:07:56	F
	Oxfam	Head of Marketing, Oxfam Trading	CNp3	Joint with above	F
GADGETS					
	Argos	Corporate Responsibility Manager	GBus1	0:29:30	F

[14] F denotes face-to-face interview, V denotes a video interview; P denotes a phone interview

Case	Organization	Role	Code	Duration	Type[14]
	Argos	Proposition Development Controller	GBus2	0:35:23	F
	Argos	Store Operations Commercial Project Manager	GBus3	0:34:21	F
	WRAP	Sustainable Electricals Programme Manager	GNp1	1:00:06	P
	WRAP	Key Account Manager	GNp2	1:39:40	F
BEER					
	Adnams	Head of Off Trade	BBus1	0:46:36	P
	Adnams	Head Brewer	BBus2	0:33:28	P
	Adnams	Environmental Sustainability Manager	BBus3	0:22:32	P
	Adnams	Head of Finance and Sustainability	BBus4	0:12:00	P
	M&S	Sustainability Delivery Manager, Plan A Foods Team	BFp1	1:04:53	V
	M&S	Senior Food Technologist	BFp2	0:21:31	P
ICE CREAM					
	Unilever	Climate Advocacy & Sustainability Strategy Director	ICBus1	1:04:29	P
	Unilever	Global Lead Engineer Refrigeration & HVAC	ICBus2	1:11:01	V
	Greenpeace	Solutions Director, Greenpeace International	ICNp1	1:02:09	V
	Greenpeace	Senior Policy Consultant, Greenpeace International	ICNp2	1:07:24	V
	Coca-Cola	Global Programme Director – Sustainability & Supply Chain	ICOther1	0:57:20	V
	Forum for the Future	Associate Director, Transformational Strategies	ICOther2	0:41:36	P
PERSONAL CARE					
	Walmart	Director, Product Sustainability	PCBus1	0:50:44	V
	Forum for the Future	Principle Changer Designer	PCNp1	0:1:08:07	F
	Forum for the Future	Deputy CEO & Executive Director, Asia	PCNp2	0:52:15	V
	Burt's Bees	Director of Sustainability and Authenticity	PCOther1	1:00:21	P
	Seventh Generation	Sustainable Business and Innovation Manager	PCOther2	0:47:45	P
	Johnson & Johnson	Director, Product Stewardship	PCOther3	0:48:49	P
PHONES					
	BT	Chief Sustainability Officer	PBus1	1:08:11	F
	BT	Stakeholder Analysis - Better Future Programme, Group Strategy	PBus2	Joint with above	F

Case	Organization	Role	Code	Duration	Type[14]
	BT	Environmental Sustainability, BT Group	PBus3	0:59:35	F
	BT	Governance and Sustainability	PBus4	Joint with above	F
	BT	Senior Designer, Circular Economy, BT Research & Innovation	PBus5	0:50:52 & 1:04:55	F
	BT	Chief Technologist, Energy & Sustainability	PBus6	0:43:49	P
	BT	Senior Propositions Manager, Consumer Devices	PBus7	0:55:26	P
	BT	Product Stewardship Manager, BT Consumer	PBus8	Joint with above	P
	Huawei	Deputy Managing Director, Huawei UK & Ireland	PFp1	0:58:44	F
	SGW Global	Executive Director, SGW Global	PFp2	0:55:51	F
	EPI Consulting	Managing Director	POther1	1:07:58	F
SPORT					
	BT	Head of The Supporters Club, BT Group	SBus1	0:54:22 & 1:07:22	F
	BT	Senior PR & Corporate Relations Manager	SBus2	0:55:46	F
	BT	General Manager, Acquisition Propositions: BT Sport, TV, Broadband	SBus3	0:45:53	F
	BT	Stakeholder Analysis - Better Future Programme, Group Strategy	SBus4	1:00:00	F
	Comic Relief	Head of Community Development	SNp1	0:42:53	F
	Comic Relief	Sports Partnerships Manager & Project Manager, The Supporters Club	SNp2	1:01:46	F
BREWING					
	Adnams	Chief Executive Office	BRBus1	1:30:06	F
	Adnams	Head of Finance and Sustainability	BRBus2	0:27:25	P
	Adnams	Environmental Sustainability Manager	BRBus3	0:22:32	P
	Adnams	Business Development Manager	BRBus4	0:14:10	P
	National Trust	Fit for the Future Network Manager	BRNp1	1:05:16	F
	National Trust	Environmental Advisor & Wales Projects Lead	BRNp2	0:38:01	P
	National Trust	Environmental Practices Advisor	BRNp3	0:45:31	V
	National Trust	Senior Environmental Advisor	BRNp4	0:40:09	P

Interview data was enriched with observation by the researcher where possible. It was not possible to observe project activities in ICE CREAM or PERSONAL CARE since most respondents were not UK based. More detail of observation activities is provided at Table A-2 below.

Table A-2 Detail of observations

Case	Observation activity	Time	Date
CLOTHES	Tour of Oxfam Southern Logistics Centre, Milton Keynes	1hr	1/03/15
	Tour of Oxfam Northern Logistics Centre (Wastesaver); hands on experience on clothing sortation lines	2hrs	2/06/15
	Observation of an M&S 'Fit for the Future Workshop' where the group's challenge was: "Collaborating with partners, customers and developers to find a digital solution to educate customers…in Shwopping"	1 ½ hrs	2/06/15
GADGETS	Tour of WRAP headquarters	1hr	21/09/17
	Shadowing Store Operations Commercial Project Manager on Customer Service desk, Argos Milton Keynes	2hrs	26/09/17
BREWING	Tour of Adnams brewery and distillery	2 hrs	14/06/17
	Visit to Fit for the Future network (National Trust Head office, London)	1 ½ hrs	4/07/17
SPORT	Listening in to customer calls at BT Sport call centre, London	1hr	2/05/15
	Visit to Premier League to find out about the work of the Premier League charitable fund, supported by the BT Supporter's Club	1hr	10/06/15

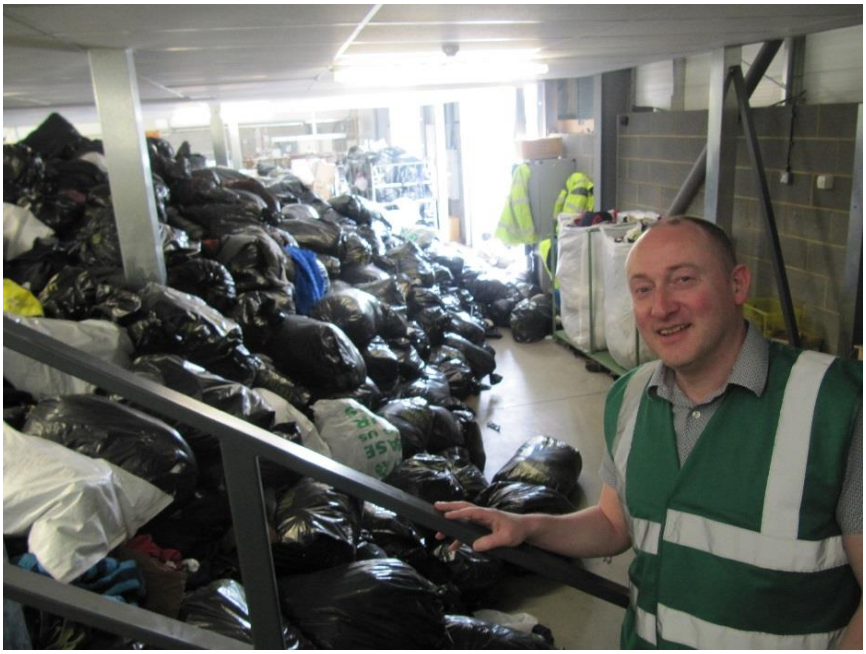

Figure A-1 Clothing awaiting sortation, Oxfam Southern Logistics centre

Figure A-2 Adnams' environmental sustainability manager at their distillery

Interviewees provided the researcher with internal documents including contracts, strategy statements, activity updates, organization charts, customer and shareholder communications and internal presentations and communication materials. This was supplemented with publicly available information including case studies, company reports, online news and reports.

A.3 Data analysis

All interview transcripts, observation notes and secondary sources were uploaded into Nvivo 11 for analysis. As outlined in Figure 1-2 in Chapter 1, five of the cases, involving nonprofit partners, formed the data set which informs Chapter 3. The full data set from all eight cases, including both for-profit and nonprofit partners, informs Chapter 4. Each SOI project served as a distinct unit of analysis with the researcher analysing within and across projects, and between data and extant theory to develop the constructs and their relationships. For each case, the first step was to consolidate the multiple sources detailed above into detailed case study reports (30 – 40 pages each). These included details of all primary and secondary data collected and were organized along themes identified in the literature review. From here, data analysis proceeded in two separate processes for the two respective data sets, as follows.

A.3.1 Chapter 3: Modes of engagement in SOI (data set: five cases)

Within case analysis

The researcher applied CIMO (Context-Intervention-Outcome-Mechanism) logic to guide a first round of coding within each case. CIMO-logic is an action-oriented approach used to identify what interventions result in what outcomes, what theoretical mechanisms explain these effects and how context impacts on these relationships (Denyer, Tranfield and van Aken, 2008). It was therefore an appropriate approach to use to address the questions of 1) how different modes of engagement (interventions) influence the value outcomes generated by sustainability-oriented innovation projects involving business and nonprofit partners and 2) why this is the case. The researcher therefore coded segments of data to 1st order concepts under the headings of interventions, outcomes and context.

Across case analysis

Following Gioia, Corley and Hamilton (2013), these 1st order concepts from each case were then compared and consolidated across cases and aggregated into 2nd order themes, these are represented by the smaller boxes in Figure 3-1. An excerpt of the coding structure relating to 'outcomes' is provided in Figure A-3 below.

Hypothesizing relationships

Drawing on theoretical explanations from prior partnership literature (including stakeholder theory, the resource-based view, institutional logics), the researcher hypothesized explanations of how interventions generated outcomes in each of the cases. The researcher checked these hypothesized explanations against the evidence on a case by case basis. Where the evidence did not fit, a hypothesized explanation was revised, or rejected, or an alternative explanation was proposed. At the end of this process three distinct mechanisms through which interventions generated outcomes were found to have good explanatory power across the five cases. These are shown as the three mechanism boxes in Figure 3-1.

Table A-3 Excerpt of coding structure: Outcomes of SOI

1st order concepts	Evidenced in cases	2nd order themes
Sales	CLOTHES, GADETS	Transferred resource value
Footfall	CLOTHES	
Brand enhancement	SPORT, CLOTHES,	
Marketing spend	CLOTHES, GADGETS	
Market/customer access	SPORT, CLOTHES, GADGETS, ICE CREAM	
Fundraising/grant-making	SPORT, CLOTHES	
Technical expertise	ICE CREAM, BEER	
Sector expertise/market insight	SPORT, CLOTHES, GADGETS, ICE CREAM	
Reputation/credibility	SPORT, CLOTHES, GADGETS, ICE CREAM	
Physical assets (stores, logistics)	CLOTHES, GADGETS	
Supply chain complementarities	CLOTHES	Synergistic value
Jointly developed technical expertise	ICE CREAM, BEER	
Proof of concept of sustainable business models	CLOTHES, GADGETS	
Reduced environmental impact	CLOTHES, GADGETS, ICE CREAM, BEER	
Wider system change	ICE CREAM	
Advocacy/influencing a wider network	ICE CREAM, BEER	Interaction value
Trust facilitation broader or future collaboration	ICE CREAM	
Credibility for future collaborations	GADGETS	
Understanding commercial ways of working	CLOTHES, GADGETS	
Culture change	BEER	

A.3.2 Chapter 4 – Reconciling tensions in SOI (data set: eight cases)

Within case analysis

Guided by our literature-derived research objectives, segments of data were coded within each case to 1st order concepts organized under the headings of differences (between partners), reconciliation strategies and outcomes.

Cross case analysis

A form of analytic induction (Wilson, 2004) was used to evaluate the presence of these concepts across the cases and to establish variations in the way they were presented across cases. This is considered a suitable method for building theory and testing ideas across multiple cases (Miles and Huberman, 1994) and has been previously applied in the field

of corporate sustainability (Bansal and Roth, 2000). As shown in Figure A-3 below, analytic induction is an iterative process entailing the sequential analysis of cases, with themes generated from the initial case being considered against subsequent cases, and refined as necessary, enabling the meaning of the theme to be continually refined (Eisenhardt, 1989). The analysis proceeded as follows:

1. Starting with Case 1, the 1st order concepts coded under each of the headings (differences, reconciliation strategies and outcome) during the within case analysis were consolidated into 2nd order themes (Gioia, Corley and Hamilton, 2013).
2. These 2nd order themes were then expanded and revised based on the evidence represented by the 1st order concepts in Case 2.
3. This process continued for all eight case. Cases were analysed in the order denoted in Table 4-1, such that contrasting partnership types were being considered in each step (i.e. the first case was a dyad with a charity partner, the second case was a dyad with a nonprofit partner, the third case was a dyad with a for-profit partner, the fourth case was a multi-stakeholder initiative involving a charity partner etc). This was done so that any new themes resulting from engagement type could be surfaced as early as possible in the rounds of analysis.
4. After all eight rounds were completed the final set of 2nd order themes under each heading were further distilled into aggregate dimensions (Gioia, Corley and Hamilton, 2013). These final aggregate dimensions are represented by the smaller boxes in Figure 4-1.

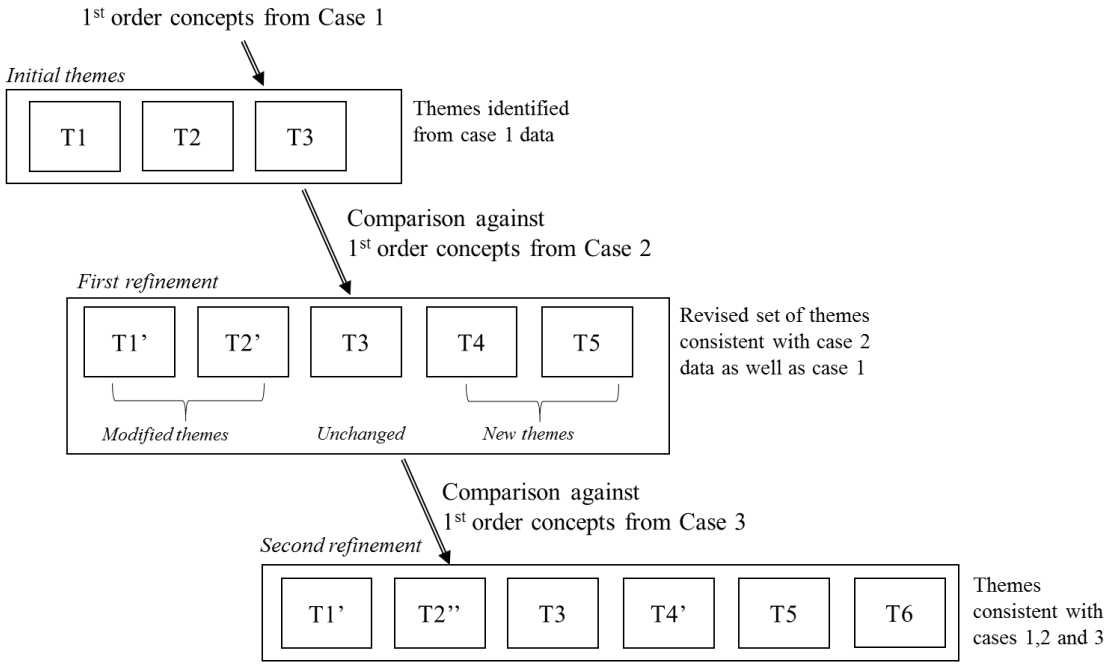

Figure A-3 Analytic induction process (adapted from Wilson, 2004)

* (T1…Tn = theme1…themen)

An example of the detailed output of the analytic induction process relating to the 'Partner Positioning' strategy is given in Table A-4. The use of analytic induction enabled the development of generic interpretations across cases. Since this method involves a trade-off between construct specificity in relation to one case, and construct applicability across cases, the researcher sought throughout the analytic induction process to balance validity with applicability.

Table A-4 Example of analytic induction output: Partner positioning

Analysis round #	1st order concepts introduced in this round by relating to the dimension (in this case, Partner positioning)	2nd order themes from this stage of analytic induction	Final aggregate dimension
1	Oxfam as a supplier Oxfam trading division Emphasis on numbers Top down speedy decision making	Emulation	**Partner positioning** with three variants: **Synthesis** (Emulation/Portfolio approach) **Bounded synthesis: issue level** (Challenge-cooperate) **Separation** (Stick to what you know)
2	Embrace commercial understanding WRAP adapting to cultures of partners Accountancy/financial models Radical versus big scale	Emulation Portfolio approach	
3	*Strategy not evidenced*	*As above*	
4	Confrontation and cooperation	Emulation Portfolio approach Challenge-cooperate	
5	*Strategy not evidenced*	*As above*	
6	Competitiveness between suppliers drives innovation Suppliers challenging focal business to be more radical	Emulation Portfolio approach Challenge-cooperate	
7	BT treats initiative as a product Comic Relief inflexible Two big arrogant organizations	Emulation Portfolio approach Challenge-cooperate Stick to what you know	
8	*Strategy not evidenced*	*As above*	

A.3.3 Validity of findings

Throughout the research, steps were taken to meet four established quality criteria for case study research (Beverland and Lindgreen, 2010; Yin, 2014), as detailed below.

Construct validity

To increase construct validity, multiple sources of evidence were collected for each case as described above, offering the researcher the opportunity to triangulate findings across multiple measures of the same phenomenon. A chain of evidence was maintained, including transcripts and original documents, case study reports, Nvivo projects and Excel and Word data summaries. Within-case findings were validated with company

representatives where possible in the form of feedback presentations. Comparisons with other case study companies were offered in these presentations when possible without compromising confidentiality. Two feedback sessions occurring early in the research process were recorded and transcribed and form an integral part of the data set, other feedback was incorporated in the form of notes taken by the researcher. An initial cross-case analysis was presented at a workshop for interested practitioners including representatives from three of the focal businesses studied, and structured feedback captured from nine participants was incorporated into our findings.

Internal validity

Constructs within cases were validated based on the extent to which they were referenced in the data set and the spread of sources from which these references originated. Data across cases was validated using analytic induction to ensure the final construct had cross-case applicability.

External validity

Analytic generalization has been used in this thesis to both 1) corroborate, modify and advance theoretical concepts referenced in designing this research and 2) generate new concepts (Yin, 2014). It is suggested that 1) the findings from these eight cases are generalizable to other business-stakeholder engagements for SOI and 2) the lessons learnt could form a set of 'working hypotheses' to be applied in other partnership contexts.

Reliability

The researcher's interpretations of the data have been scrutinized by her academic supervisors both during formal review sessions and during collaboration on the component journal articles, providing some independent validation of the coding and related analysis. This appendix has been created to provide detail of the research beyond that which was possible within the word count limits of the journal style chapters, and therefore further enhance the replicability of this study.

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Appendix B Interview protocol

Could you tell me about the project or initiative you are involved with, where you are working with external stakeholders to help develop and deliver a sustainability-oriented innovation?

Follow ups / probes

What was your organization's motivation for the project and for this partnership?

- Where did the idea come from?
- What do you think your partner's motivation was?

How do these projects fit with the overall strategy of the organization?

- How did your organization judge if the project was a success or not?
- What has been the attitude towards this project in your organization more generally?

How was this project set up and by who? Why it was set up that way?

- Who was involved internally – which departments? Has this changed over time?
- Which individuals made a difference to the project? Why?

How would you describe the relationship between you and your partner(s)? Did this change over time?

- How did you find and /or chose your partners?
- Why did you want to work with them? Why did they want to work with you?
- How did you generally talk to each other?
- How did you judge whether the project was a success or not? How did your partner(s) judge success?

In terms of the main mission of the partnership, did you ever feel you were trying to achieve different things out of it?

Tell me about any significant events or realizations during the project - leading to its success (or failure) / reinforcing the purpose of the project.

What did you learn from this projects that could be used in future projects?

Is this learning having any impact in the organization more broadly? How is your company capitalising on this learning?

What are your key learnings or reflections from these this project?

- What was it that made this project successful?
- What made it difficult / stopped it from being successful?