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Managing Sustainability Transformations: A Managerial Framing Approach

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Abstract

This study explores, from managers' perspective, transformative management activities in mobilising sustainability transformations. Sustainability transformations are fundamental changes in cultures, structures and practices that move socio-technical systems towards more sustainable forms of production and consumption. Sustainability managers across different sectors are increasingly searching for new ways to advance such transformations, as conventional management appears ill-suited to tackling complex sustainability challenges, such as climate change. This research posits transformative management activities as an alternative approach. The framework of transformative management activities is based on an explorative study of managerial framing; that is how managers make sense of their actions, role, and purpose in managing sustainability initiatives. Data were generated from in-depth interviews with 10 sustainability managers who had facilitated sustainability transformations in their respective contexts. The nine activities were framed as: challenging the dominant environment through reflexivity; creating space for multi-vocal collaboration; aligning collaborators' future visions; restructuring principles, processes and practices; removing mental, physical and cultural barriers; designing effective feedback loops; influencing public discourse and action; ensuring the transparency of sustainability efforts; and co-constructing a new environment. Categorising these activities according to different management levels and management styles reveals the breadth and depth of managers' professional capacities required to mobilise such transformations. The research extends previous literature on sustainability transformations by combining a transition management (TM) perspective with management activities and by introducing the managerial framing approach. The nine transformative management activities help practitioners reframe their management activities vis-à-vis TM principles, gaining alternative means of mobilising the sustainability transformations needed in this era.

Keywords: Business sustainability, sustainability management, sustainability transformations, sustainability transitions, transition management, framing

1. Introduction

Sustainability, as a strategic part of any business today, should be addressed through transformative management. Sustainability challenges (e.g. climate change, resource depletion, global injustice) are characterised by high complexity, structural uncertainty and resistance to simple solutions, so they are difficult to tackle with *management as usual* (Van Den Bergh et al., 2011; Olsson et al., 2014; Eisenhardt et al., 2016; Gaziulusoy and Ryan, 2017). However, to date, companies largely respond to these challenges by using conventional management practices, leading to incremental, rather than fundamental, changes that are insufficient (Markard et al., 2012). A recent survey showed that more than half of corporate executives were troubled about how to manage sustainability and respond to the grand challenges their companies are facing (McKinsey, 2014). As traditional well-ordered, linear and hierarchical management activities are ill-suited to managing such complex issues, their widespread use might explain the lack of success in capturing the full value of sustainability for companies, stakeholders and the wider society (Etzion et al., 2017). Companies are thus searching for alternative ways to manage sustainability and contribute to the necessary sustainability transformations (Loorbach and Wijsman, 2013; Hörisch, 2018). This research suggests transformative management activities as an alternative.

Sustainability transformations are defined in this study as fundamental changes in societal cultures, structures and practices through which established socio-technical systems shift to more sustainable modes of production and consumption (Markard et al., 2012; Loorbach and Wijsman, 2013). Given that sustainability transformations call for innovative ideas and action (Eisenhardt et al., 2016; Etzion et al., 2017), managers need to use new methods of dealing with sustainability (Cagnin, 2018). Management activities, as the key components of any organisational strategy (Moorman and Day, 2016), involve the use of different resources to serve organisational purposes (Zott and Amit, 2010). Hence, by

reframing conventional management activities, managers may reconfigure their actions, roles and purposes in dealing with persistent sustainability challenges, and generate proactive and innovative action. When managers 'become conscious of their roles in reproducing structures and elect to make new, imaginative choices to challenge dominant patterns', a transformative effect occurs (Blocker and Barrios, 2015, 268). Challenging the dominant patterns implies fundamental changes in ways of thinking (cultures), ways of organising (structures) and ways of doing (practices) (Gorissen et al., 2016), suggesting that managers may mobilise sustainability transformations by framing their activities in new ways.

This research therefore takes a relational perspective on sustainability. As one of the three metatheoretical perspectives on sustainability, the relational perspective emphasises framing as a mechanism for sustainability transformations (Garud and Gehman, 2012). It is important to note that the definition of sustainability may vary because it is context specific and subject to interpretation. As this research focuses on managers in commercial organisations, the concept of *business sustainability 3.0* (Dyllick and Muff, 2016) is used, asserting that a truly sustainable business shifts its focus from minimising its negative environmental and social impacts to understanding how it can create a significant positive impact on the challenges that society confronts. One prime example of such a shift in focus is illustrated by frontrunner companies, which are moving from a linear to a circular economy. For example, a leading forestry company, UPM, has moved from focusing on incremental improvements in sustainability to finding innovative and radical solutions to resource depletion. Based on its circular eco-design approach, it has created a whole new business concept, *Biofore*, and simultaneously helped to develop the modern forestry industry as well as transform its own business (Lahtinen, et al., 2018).

Against this background, the purpose of this research is to explore and analyse, from managers' perspectives, transformative management activities in mobilising

sustainability transformations. As this phenomenon is new in the literature, theoretical triangulation is used, combining the theoretical approaches of management activities (e.g. Zott and Amit, 2010) and transition management (TM, e.g. Loorbach and Rotmans, 2010). To understand the real-world phenomenon of sustainability management from managers' perspectives, the research draws on the foundational work on framing (Goffman, 1974). Framing describes the process of how perceptions of social reality can be shaped and how these perceptions then mobilise actors and further influence their actions (Benford and Snow, 2000). This managerial framing approach on sustainability transformations is so far lacking in the literature. Furthermore, empirical research that examines managers' efforts vis-à-vis sustainability transformations remains under-developed (Loorbach and Wijsman, 2013; Etzion et al., 2017; Gorissen et al., 2016; Cagnin, 2018). This study aims to address this gap by answering the following two questions: (1) How do sustainability managers frame their management activities in running sustainability initiatives, and (2) how do these activities relate to one another in terms of mobilising sustainability transformations? In doing so, the research contributes to the sustainability transformation literature by developing a framework of nine transformative management activities and an organising taxonomy for sustainability managers seeking to proactively engage with sustainability transformations.

2. Literature review

The research draws theoretically on recent advances in two complementary research streams. The theoretical streams of management activities and TM are combined to build a theoretical framework for transformative management activities in the context of sustainability transformations. The former creates a basis for understanding resource utilisation in the context of sustainability management and highlights the action-oriented nature of managers' jobs. The latter provides an understanding of the means of advancing transformations. Hence, as the research is explorative in nature, the role of theory is to

provide guidance, not to act as a straitjacket (Gummesson, 2006). The theoretical framework links these two streams of literature to create a lens through which the real-world phenomenon of transformative management activities can be empirically explored.

2.1. Management activities

Management is generally described as planning, organising, commanding, coordinating and controlling (Fayol, 1949; in Watson, 2006). This widespread description of management functions suggests that management is a relatively linear and control-based activity (Etzion et al., 2017). This approach positions an organisation as an essentially exogenous environment, where predicting, planning and goal-setting are fairly straightforward (Wiltbank et al., 2006). This study refers to such an approach as conventional management, of which a famous example is Kaplan and Norton's (2008) *balanced scorecard* (Etzion et al., 2017).

The management functions approach provides a conceptual toolbox to address the concrete actions of managers (Manser et al., 2016). However, this study uses the term *activities* instead of *functions* to highlight their action-oriented nature. Management activities are considered the basic elements of any organisation and are central to strategy (Moorman and Day, 2016). Manser et al. (2016) used a similar approach, proposing that management activities are highly interdependent and that different combinations of activities lead to different outcomes. Thus, depending on a company's desired outcome, it must apply a specific set of existing management activities or create new ones (Närvänen et al., 2018). Specific activities require different management styles, calling for either a more data-driven and analytical approach, or a more intuitive and creative one (Ogilvie, 1998). In summary, management activities are action levers that utilise different resources to serve a specific company purpose (Zott and Amit, 2010).

As stated earlier, conventional activities are ill-suited to managing sustainability initiatives dealing with grand challenges and aiming to achieve fundamental changes in the systems of production and consumption. Conventional management activities may even push sustainability initiatives in the wrong direction because relying on pre-selected goals, ready-made plans and well-ordered processes could lead managers to miss emerging, unseen future solutions (Svensson and Wagner, 2011). In effect, the particularities of transformations require management that is more proactive (Etzion et al., 2017), disruptive (Gaziulusoy and Ryan, 2017) and creative (Cagnin, 2018). Few scholars have suggested promising approaches as alternatives to conventional sustainability management. Ferraro et al. (2015; see also Etzion et al., 2017) introduced a sociological concept of robust action to promote sustainability transformations. Gaziulusoy and Ryan (2017; see also Mok and Gaziulusoy, 2018) presented a design thinking approach to lead such transformations. A group of scholars (e.g. Rotmans, Kemp and van Asselt, 2001; Loorbach et al., 2010) developed a theoretical approach of TM, drawing on transition thinking and dynamics of change to proactively manage transitions towards sustainability. In this study, we use the latter approach of TM to elevate conventional management activities into action levers mobilising sustainability transformations.

2.2. Transition management

TM is a nascent research stream that provides a process approach to managing changes in the dominant ways of thinking, organising and doing in unsustainable socio-technical systems (Loorbach et al., 2010). TM has so far been applied primarily to the activities of governmental organisations aiming to accelerate transformations (Hölscher, Wittmayer and Loorbach, 2018), but it can also provide a viable approach to the management activities of business organisations aiming to advance such changes (Loorbach and Wijsman, 2013). TM distinguishes four different areas of activity required for transitions: strategic,

tactical, operational and reflexive; these are briefly outlined in Table 1 (for an extensive description, see Loorbach, 2010).

Table 1: Four areas of activity required for transitions

Area of activity	Characteristics	Illustrative example
Strategic	Relating to long-term goals and visions	Reformulating strategy, introducing new technologies, products and services
Tactical	Relating to the breakdown and build-up of system structures	Aligning investments, rules, incentives and infrastructure with the new vision, initiating collaborations
Operational	Relating to short-term and everyday decisions and actions	Changing system structures through experiments, changing everyday practices
Reflexive	Relating to the evaluation of the existing situation in various areas	Debating, evaluating and researching means by which cultures, structures and practices may be reframed

Source: Modified from Loorbach and Rotmans (2010) and Gaziulusoy and Ryan (2017)

In addition to different areas of activity outlined in Table 1, there are four lenses that TM recognises as essential in accelerating transitions: *multi-level*, *multi-actor*, *multi-phase* and *multi-pattern.* The multi-level lens addresses the dynamics of change within and between different levels of the operating environment—the macro level of societal trends and evolutions (landscape); the meso level of dominant cultures, structures and practices (regime); and the micro level of new technologies, new rules and new organisational arrangements (niche) (Geels, 2011). The multi-level lens is necessary for understanding transformations, as systemic changes are considered innovations at the micro level for competing with dominant structures and practices at the meso level, aiming to positively influence developments and trends at the macro level (Gorissen et al., 2016). Thus, managers need to critically scrutinise the entire system—existing trends, dominant structures and barriers to change, as well as social and cultural practices.

Second, the multi-actor lens requires relevant actors to collaborate, recognising the reach of sustainability issues extending beyond a wide range of stakeholders (Gorissen et al., 2016). TM suggests that relevant actors be invited into interactive innovation spaces,

transition arenas, and, as informal networks, these spaces enhance the understanding of differences in interests, activities and needs (Olsson et al., 2014). These spaces can also act as initial incubators within which actors co-design and co-produce new systemic solutions (Loorbach and Rotmans, 2010). Thus, managers should create space for prolonged teamwork between relevant actors within and outside the organisation in order to broaden ideas (Olsson et al., 2014).

Third, the multi-phase lens describes the different phases through which transitions arise (Loorbach et al., 2010). Because of the evolving nature of sustainability issues, the actual design of transitions has a high degree of emergence, in contrast to a linear process and a predictable outcome (Gorissen et al., 2016). However, whilst transitions emerge non-linearly and iteratively, this is not to say that sustainability transitions do not have a goal: they are purposive in the sense of addressing persistent problems (Gaziulusoy and Ryan, 2017) and having a shared vision for a desirable and sustainable future (Taanman et al., 2012). This means that managers need to handle uncertainty and complexity whilst modifying the problem, defining the goal and designing the actions throughout different phases (Etzion et al., 2017).

Finally, the multi-pattern lens describes new patterns emerging from a range of innovative sources (Gorissen et al., 2016). Instead of relying only on existing resources and competencies as the starting point for sustainability initiatives, TM promotes the creative use of different sources to unlock existing path-dependent and self-reinforcing systems that often lead to *sustainability as usual* (Gaziulusoy and Ryan, 2017). TM thus encourages managers to use their imagination and embrace an ambiguous environment as a catalyst for creative action, rather than implementing only rational–logical activities designed to reduce uncertainty by collecting and analysing more data (Ogilvie, 1998).

Figure 1 presents the research approach used with regard to the aforementioned transformative management activities. The research approach proposes that sustainability managers can mobilise sustainability transformations by framing their current management activities vis-à-vis TM principles and engaging what is labelled here as transformative management activities. Although the core in Figure 1 is sustainability manager → transformative management activities → sustainability transformation, the research approach recognises this as a dynamic and iterative process, in which learning from successful (and unsuccessful) transformations refine management activities and offer input for managers' reframing.

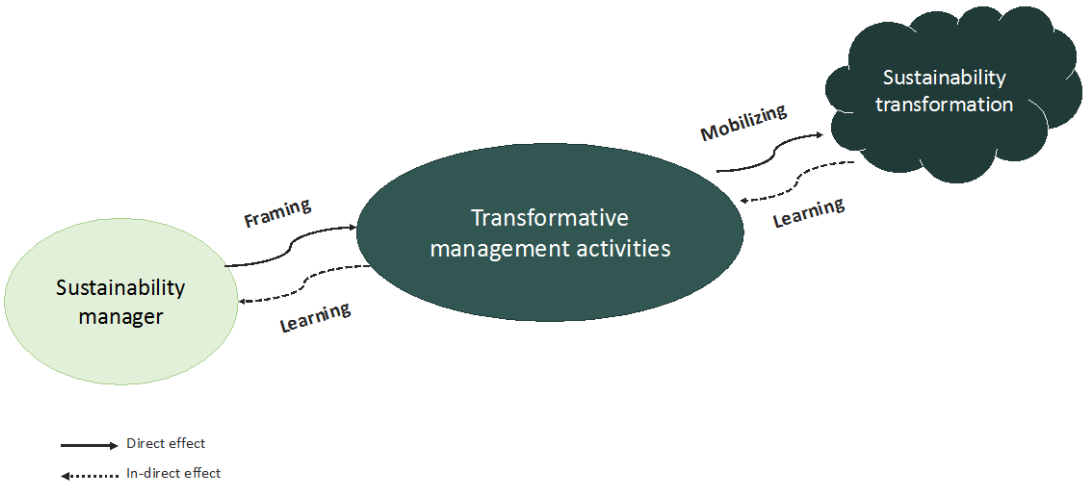

Figure 1: A theoretical foundation for exploring transformative management activities

Source: Authors' synthesis of the literature on management activities and TM

Taking the conceptual insights together, the previous literature on management activities suggests that transformative management activities, as action levers, may utilise or create resources (mental, social, physical, capital) to serve the purpose of sustainability initiatives in mobilising sustainability transformations. In addition, the previous literature on TM indicates that these activities can be categorised into four areas of activity: strategic, tactical, operational and reflexive. These activities need to consider (1) the trends and

challenges at multiple levels, (2) the multitude of different actors involved, (3) the non-linear phases through which transitions emerge and (4) the innovative range of sources for new patterns to emerge.

3. Methodology

3.1. Data generation through in-depth interviews

The research is positioned in the context of discovery and thus uses an explorative methodological approach. To explore and capture the complexity, context and persona in managerial framing, qualitative in-depth interviews (Gummesson, 2006) were conducted with 10 sustainability managers who spearhead sustainability initiatives in medium to large global companies based in Finland. In-depth interviews enabled detailed and rich descriptions (Granot et al., 2012) of how these managers make sense of their actions, roles and purposes. Sustainability managers were considered a relevant group to study because they have the responsibility of strategising, making decisions and executing sustainability initiatives in companies. For reasons of confidentiality, only details of the participants' positions and industry are given, together with the nature of the sustainability transformation mobilised by the respective companies (see Table 2).

Table 2: Study participants

Participant	Position or title	Field of business	Nature of transformation
A	Senior vice president, sustainability communications	Food & beverage	Product/service innovation
B	Senior vice president, corporate responsibility	Retail	Process innovation
C	Senior vice president, sustainability	Retail	Process innovation
D	Director, design management, responsibility	Consumer goods	Influence on public discourse
E	Director, corporate responsibility	Forestry	Process innovation
F	Senior vice president, communications, sustainability	Service business	Influence on public discourse
G	Director, quality, responsibility	Food & beverage	Product/service innovation
H	Vice president, environment, responsibility	Paper and pulp	Process innovation

I	Director, corporate responsibility	Energy	Product/service innovation
J	Director, sustainable development	Transportation	Process innovation

Source: Compiled by the authors from the participants' data

Because of the explorative nature of the research, the interview protocol was unstructured (Corbin and Morse, 2003). It did not use a predetermined list of specific questions to be discussed with the participants; instead, a few open-ended guiding questions relating to the research phenomenon being explored were used. These guiding questions consisted of two types (Spradley, 1979) regarding the management of sustainability initiatives: general questions, such as 'What is the role of sustainability in this company?' and 'Take me through a day in your job', and more specific questions, such as 'How does sustainability management differ from other types of management in your opinion?' and 'Describe the most recent sustainability initiative you managed'. Direct questions concerning management activities, or transformative traits, were not asked, but every time a participant mentioned an activity or transformation, follow-up questions were asked to gain a better understanding of how the activity was framed or where the transformability stemmed from, such as 'How do you see this as transformative?' The in-depth interviews were conducted between October 2017 and May 2018, with each interview lasting from 50 to 80 minutes and totalling to 68 transcribed pages.

Saturation is central to qualitative sampling. Saturation forces the researcher to combine data generation and analysis, rather than treat them as separate stages in a linear process because knowing the number of interviews needed in advance is difficult (Baker and Edwards, 2012). Following the basic rule in qualitative research, the study did not aim to establish frequencies within the data but to elicit a rich range of responses (Baker and Edwards, 2012). Interviews were conducted for as long as new themes continued to emerge, that is, until the understanding of the phenomenon deepened and the saturation point was achieved (Granot et al., 2012). As meanings in human life are often shared and patterns of

action are repetitive (Saldaña, 2016), recurrent framings started to emerge at an early stage, and the saturation point was reached.

The participants were selected through theoretical sampling, that is, they were selected because they were able to generate insights into the phenomenon (Eisenhardt and Graebner, 2007; Eisenhardt et al., 2016). The sampling criteria included both organisational and personal factors. First, the participants needed to represent companies that operate in domains where sustainability transformations are most needed or relevant, such as the energy, retail and food industries (Geels, 2011). These companies should be medium to large in size and hold strong positions with *complementary assets* (Rothaermel, 2001), making them powerful actors in terms of accelerating system-wide changes compared with social-purpose start-ups. Focus was placed on companies that had proven success in relation to sustainability transformations. Here, success was defined as an assessment based on the social, environmental, technical and commercial performance of their sustainability initiatives (Manser et al., 2016). This assessment was made using the companies' reported results, together with the 2017 Sustainability Brand Index, and The Global 100 Most Sustainable Corporations Index, to provide complementary insights into the quality and quantity of the sustainability efforts. In relation to personal characteristics, the participants' organisational roles and experiences had to be relevant to the study, and they had to have been involved in successful transformations. Finally, these participants brought about sustainability transformations in different ways: either by developing product/service innovations, creating process innovations or influencing public discourse and action. An example of each of these types of transformation is given in Table 3.

Table 3: Examples of the three types of transformations from the data

Type of transformation	Sustainability initiative	Purpose of the initiative

Developing a product/service innovation	Drafting new nutritional guidelines for healthier, nutritionally balanced convenience meals and educating consumers about healthy eating (Participant G)	To transform the convenience food sector by facilitating consumers to choose and eat healthier meals, eventually contributing to the long-term health of the nation in an obesogenic environment
Creating a process innovation	Innovating a new, sustainable business model and ancillary production processes based on a systemic approach (Participant H)	To transform the pulp and paper industry by implementing circular economy principles and utilising side streams, eventually cultivating the well-being of the larger ecosystem with limited resources
Influencing public discourse/action	Taking a visible societal stand on gender issues in brand positioning, series of marketing campaigns and a new collection launch (Participant D)	To transform the socio-cultural imagery of femininity by empowering women from all walks of life, eventually improving the state of public discourse and action on gender norms

Source: Compiled by the authors from the empirical data

3.2. Framing as an analytical approach

Framing was chosen as an analytical tool to understand how managers frame their management activities and how these activities might help or hinder their respective companies in mobilising transformations. Scholars tend to focus on frames as content or framing as action (Benford and Snow, 2000); the latter approach was followed here, with framing being used to describe the socially situated process of meaning construction (Cornelissen and Werner, 2014). Goffman (1986) famously defined framing as the active task of figuring out what is going on, without which no utterance could be interpreted. Although framing shapes how actors interpret what is going on, it also shapes the behaviour that follows. This means that framing has a performative role in mobilising actors and shaping their actions (Benford and Snow, 2000). As shown by Cagnin (2018), changing the course of an action happens by framing the problem and future pathways in new ways—that is, reframing. Reframing, then, requires fluidity of thought between what is and what could be (Werner and Cornelissen, 2014).

Different framings were developed through thematic analysis by coding, categorising and reporting themes within the data (Braun and Clarke, 2006). By referring to

developing themes rather than identifying themes as pre-existing truths, the active role that the researcher plays in thematising meanings was acknowledged (Holloway and Todres, 2003). Themes are defined here as 'meaningful entities constructed from recurrent codes that unify disparate data, and capture something important about the data in relation to the research question' (Braun and Clarke, 2006, 82). When conducting thematic analysis through a constructionist paradigm, themes are seen as socially constructed rather than inherent in an individual's mind (Burr, 1995). In thematic analysis, themes can be developed in an inductive *bottom up* way or a deductive *top down* way (Braun and Clarke, 2006). This study followed the inductive method, meaning that our thematic analysis was data driven rather than theory driven. Inductive logic implies that the developed themes are strongly linked to the data and are not squeezed to fit into a pre-existing coding frame motivated by previous research (Patton, 2015). However, as Braun and Clarke (2006) importantly note, researchers cannot free themselves of their theoretical commitments even in inductive thematic analysis. As themes cannot be developed in an epistemological vacuum, our analysis is therefore recognised to have some deductive traits also.

Thematic analysis began by entering the transcribed interviews into a qualitative data analysis program, ATLAS.ti. As the goal of the research is to develop a new theory instead of testing existing theory (Yadav, 2011), the codes used were based on the language and expressions used by the participants, instead of using *a priori* codes drawn from previous research (Saldaña, 2016). In addition, as the purpose of the research is to explore and analyse transformative management activities in mobilising sustainability transformations from managers' own perspective, managers' own voices were honoured, and the analysis was grounded in their perspectives, starting from coding.

Table 4: Example of the coding and thematisation of the data

Data: Quotation	**Coding**	**Theme**	**Framing**

'Earlier, we communicated about our sustainability initiatives mainly on our website, but now, we are moving from one-way communication towards having active discussions with all our key stakeholder groups in these regular meetings. Who has time to read those website articles these days?'	In vivo codes: "one-way communication", "active discussion", "all our key stakeholder groups", "regular meetings" Process codes: moving from, having active discussions Concept codes: Appreciating real dialogue	Facilitating a more active collaboration with key stakeholders	Creating space for multi-participant collaboration

Source: Compiled by the authors from the data analysis

Table 4 exemplifies the coding and thematisation of the data. Multiple coding methods were used to capture the subjective (in vivo codes), action-oriented (process codes) and deep (concept codes) essence of the data. Our electronic coding scheme combined in vivo and process coding as the first-cycle coding methods, as well as concept coding as the second-cycle coding method. As a meaning-driven coding method, in vivo codes use participants' own words and expressions as codes rather than researcher-generated codes (Saldaña, 2016). As an activity-driven coding method, process coding uses only gerunds (-ing words) as codes to capture action in the data. By using in vivo and process coding, the study was aligned with managers' perspectives and thus refrained from applying preconceptions about sustainability management and its related codes to the data. These first-cycle codes were then transcended into concept codes to extract a *bigger picture* beyond a single feature or action. In effect, concept coding proceeds from particular codes towards more abstract-level ideas. The coding and thematisation procedure was iterative until themes became exhaustive and mutually exclusive (Bailey, 1994). Finally, the managerial framings were developed based on these themes, representing the transformative management activities.

3.3. Assessing the quality of the research process

The quality of this research is assessed through the concepts of trustworthiness, authenticity, credibility and relevance. The trustworthiness of this research was enhanced through a systematic and transparent research process, including the use of theoretical sampling (Eisenhardt et al., 2016) and the general principles of analysing qualitative

interviews (Granot et al., 2012). For the purpose of ensuring the authenticity of the interviews, the participants were encouraged to speak about the themes from their own perspective and in their own language, staying faithful to how they make sense of the phenomenon (Granot et al., 2012). The transparency of the study was established by recognising the potential limitations of subjective interpretations; the processes for generating and analysing the data were therefore described in detail, and the related data extracts were presented and discussed together with the study's findings (Corbin and Strauss, 2008). In terms of improving the credibility of the findings, the various ways in which the managerial responses reflected different activities were discussed. The objective of the data analysis was to reach a shared understanding and interpretation of the data (Alvesson and Sandberg, 2011). Finally, applying a qualitative, inductive approach enhanced the practical relevance of the research; qualitative approaches are known to generate new and innovative ideas, cope with complexity and use contextual understanding to analyse constructs that are difficult to measure, all critical factors in addressing grand challenges and the particularities of sustainability transformations (Eisenhardt et al., 2016).

4. Findings and discussion

Based on the managerial framings, nine transformative management activities were formed to answer the first research question, 'How do sustainability managers frame their management activities in running sustainability initiatives?' These activities are shown in Table 5. To answer the second research question, 'How do these activities relate to one another in terms of facilitating sustainability transformations?', the activities are organised in a taxonomy based on two dimensions of management levels and styles. This taxonomy is presented in Figure 2.

Table 5: Transformative management activities based on managerial framing

Transformative management activity	Driving question	Illustrative quote

Challenging the dominant environment through reflexivity	How can we improve the current conditions?	We're not just accepting the environmental problems caused by the meat and dairy industry as an unavoidable part of our business, but we're constantly developing new technologies to challenge the status quo in the industry (Participant A).
Creating space for multi-vocal collaboration	Who do we want to include?	To enable idea sharing, we invited 12 key stakeholder groups to take part in designing our sustainability program. With over 1,300 ideas, the online think tank has become an ongoing source of ideas (Participant F).
Aligning collaborators' future visions	How do we want the future to look?	We conducted interviews with different actors (from design and logistics to non-governmental organisations and customers), and basing on the themes raised in these interviews, we had workshops in which we then built our shared vision and three different scenarios (Participant E).
Restructuring principles, processes and practices	How else could this be done?	We've restructured the whole way we operate. Someone asked me what our sustainability program is like, and I answered that this whole company is a sustainability program (Participant H).
Removing mental, physical and cultural barriers	What stops us from doing this?	For many of our customers, it's like a learned behaviour that when they come to our shop, they come for alcoholic beverages like wine; they don't come to buy non-alcoholic drinks even if the selection is superb. We need to overcome that (Participant B).
Designing effective feedback loops	When do we know we are succeeding?	Especially with new initiatives, we strive to obtain ongoing feedback to provide fast and accurate information on how we're doing, compared with measuring only the outcome (Participant J).
Influencing public discourse and action	How can we affect the ways others think and act?	By taking social stances, we're setting up discussions about equality issues. It's at the core of this company, and we aim to bring it to the core of society by being an active conversation partner (Participant C).
Ensuring the transparency of sustainability efforts	How do we ensure that people know what we know?	Our customers expect transparent, concrete actions rather than aspirational promises. We need to walk the talk and show the path we walk (Participant I).
Co-constructing a new environment	How do we redefine the new environment through our actions?	As a part of our pro-environmental business, I'm personally lobbying more than before in an attempt to influence policy decision-making in Brussels and in industry organisations in Finland (Participant E).

Source: Compiled by the authors from the empirical data

The activities presented in Table 5 are discussed in detail in Sections 4.1–4.10.

4.1. Challenging the dominant environment through reflexivity

The participants framed the challenging of existing institutions, structures and practices as essential for sustainability transformation, instead of just accepting them as *de facto*. Participant D summarised this point: 'More of the same will lead to more of the same, and that won't lead to any real progress in this industry'. The participants showed optimism in challenging the status quo on different levels and as business actors bringing improvements to the way things are currently done:

> We need to be brave in challenging the status quo, the way things are done in our industry—even more so, because the status quo often lies. A common misconception is that consumers want performance and low price, which we see every day as not being the case with our organic products; so, I try to encourage our team to challenge the status quo first in their own thinking and then in the industry we operate in (Participant C).

As shown in the quotation above, the participants used reflexivity in framing their operating environment as endogenous to the efforts of the company, that is, extending their reach of influence. This is the opposite of non-reflexive management approaches that view the environment as exogenous, given and beyond their reach (Wiltbank et al., 2006).

4.2. Creating space for multi-vocal collaboration

The participants framed their management as extending across traditional silos within the company and between other relevant actors. Collaboration is of fundamental value because relevant knowledge is dispersed across many individuals and is not fully accessible to any one actor (Hayek, 1945 in Sarasvathy and Dew, 2005). The participants described means of initiating collaboration (e.g. facilitating workshops or online think tanks), allowing collaboration (e.g. being open to differing perspectives and developing mutual understanding), facilitating collaboration (e.g. building networks and ecosystems) and prolonging it (e.g. creating a shared purpose):

> By collaborating with our key stakeholders, we have gained access to much wider knowledge about environmental degradation, which is one of the key issues in our sustainability program. If we relied only on the knowledge inside our company, we would have been likely to choose less-relevant targets and less-effective means to get there (Participant H).

As Participant H describes, multi-vocal collaboration can develop new capabilities with respect to sustainability. In addition to fact-based knowledge, skills and attributes (e.g. creativity and courage) were also discussed: 'Finding ways to put technology, life sciences, legislation and our business together requires creativity, but you also have to be bold to do that' (Participant A). The participants largely framed collaboration as a way to build common ground and create change that extends outside the company.

4.3. Aligning collaborators' future visions

The participants framed the alignment of actors' objectives across different domains (e.g. policy-making, NGOs, customers) as a key issue in achieving a desired future state. As there is no single preferred version of the future, it is likely that the priorities for sustainability visions vary across actors (Gaziulusoy and Ryan, 2017). The participants recognised their managerial role in achieving a shared vision by first encouraging collaborators to develop their future visions regarding the targeted issue (for example, gender equality), and then developing a shared future vision building on the individual visions:

> We have learned that everyone involved needs to be united by the same mutually created vision; otherwise, collaboration will later become difficult, and conflicts will arise. We have also learned that you can never impose your own vision on everyone else no matter how aspirational or desirable it is (Participant D).

The diverse visions were seen to serve as a useful source of creativity in anticipating alternative future directions. As stated by Participant B, involving actors outside

the organisation was also considered helpful in activating imagination: ‘Otherwise, our vision would look much like the vision of the people working here, and the scope of the challenges is a bit wider’ (Participant B).

4.4. Restructuring principles, processes and practices

To engage in innovative sustainability initiatives addressing grand challenges, the participants discussed the need to restructure principles, processes and practices. The participants framed restructuring as questioning the established ways of their management. It was related to roles and responsibilities, rules and norms, tasks and decision-making, as well as to priorities and performance indicators, the influence of which could span collaborators, as Participant A stated:

> Through our quality and production renewal, we have introduced new sustainability criteria for our suppliers, and we start to reward them progressively when they restructure their own manufacturing step by step to meet our standards. Thus, our restructuring affects theirs.

The organisational culture needs to be open and responsive to restructuring ways of thinking and doing (Loorbach et al., 2010). To create such a culture, the participants described management efforts, such as promoting a self-leading structure, implementing distributed decision-making and using longer time horizons, as well as developing practices to incite new ideas, promote experimentation and support the scaling-up of viable innovations.

4.5. Removing mental, physical and cultural barriers

Relative to restructuring, the participants discussed obstacles that stall transformative actions. Obstacles were identified both inside and outside the organisation. The participants discussed mental barriers (e.g. fear or reluctance to do something differently), physical barriers (e.g. lack of time, budget or knowledge-intensive resources)

and cultural barriers (e.g. an existing organisational culture that did not enable systemic innovations). In addition, current socio-cultural preferences were recognised, as Participant A described:

> Driven by our aim to improve national health, we are doubling the amount of low-sugar and sugar-free products by 2020. Now, we are conducting many taste experiments with consumers to get the taste right so that it won't become a barrier to choosing healthier products. We consider the taste as an even greater barrier than price for consumers when they choose healthier products.

Framing their management efforts to remove barriers, the participants discussed the importance of becoming aware of tangible and intangible obstacles. The participants recognised that people are usually aware of tangible barriers (e.g. regulations, extra costs) but are less aware of intangible ones (e.g. managers' mental models, conflicting values or socio-cultural practices that might hinder behavioural change). When searching for innovative solutions to sustainability problems, managers need to determine the barriers and understand how these can be overcome (Van Den Bergh et al., 2011).

4.6. Designing effective feedback loops

The participants framed feedback as a key resource in modifying the vision, redesigning actions to move towards this vision, reducing the misallocation of resources and anticipating windows of opportunity. The participants framed their management efforts in terms of continuous improvement, and effective feedback loops were considered important in providing real-time information about the links between current means and the future vision, as Participant F stated:

> As we move forward with our sustainability program, the expectations of our stakeholders increase, and previous expectations turn into hygiene factors. We need to

> get continuous feedback from the field, instead of measuring the final outcome to show we're going in the right direction.

The participants pointed to the need to rethink current feedback mechanisms, such as traditional sustainability reporting that might sustain certain technological or paradigmatic *lock-ins* (Loorbach et al., 2010). The participants referred to several effective feedback loops, such as social media channels (Twitter, Facebook, WhatsApp), customer surveys, third-party assessments, 360° appraisals and experiments. Participant C stated, 'I try to trigger this *learning by doing* mentality with our people because, after all, we have little prior knowledge of how we should solve problems, such as inequality. I see small failures that might follow from experiments as one important way of offering feedback to do things better'.

4.7. Influencing public discourse and action

The participants framed business actors as important influencers in society, who produce and reproduce public discourse and socio-cultural practices. The participants framed their societal and environmental stewardship in two ways: either by taking stances on societal issues with an aim to influence public discourse, or by acting as role models to inspire others to change their course of action. These societal stances were practiced in various forms, including marketing campaigns, product launches and civil endeavours. Participant D stated the following:

> I'm challenging our people to be active in speaking up and getting involved in public discourse. I think it's not an option to have *no opinion* these days; it's an opinion already, in itself, if you stay silent. We have a voice, as all companies do, and I firmly believe we should use it.

The participants described improving societal and/or environmental well-being as the ultimate objective of their sustainability initiatives. However, *quasi-governmental*

(Biraghi et al., 2017) actions on issues over which people are often divided might be controversial or even risky. Acknowledging this, the participants emphasised the need to understand societal issues and their root causes thoroughly before taking any action.

4.8. Ensuring the transparency of sustainability efforts

The participants described their ambitions for transparency in terms of exceeding the norm, which focuses only on the favourable aspects or beneficial outcomes of companies' actions. The participants emphasised the importance of disclosing unfavourable aspects, challenges or failures that almost unavoidably follow an experimental approach in order to be truly transparent. This kind of balanced transparency (Basu and Palazzo, 2008) was considered important in fostering credibility amongst different collaborators.

> Doing something good here, which happens to get into a sustainability report, doesn't compensate for the majority of the business doing something bad over there. I think transparency for the whole business is really important, as the aim is to make the entire business sustainable, not just those areas we decide to include in the reports (Participant H).

As the quotation above shows, the participants obliquely criticised traditional sustainability reporting, as it might not, in all cases, reveal the true nature of a company's sustainability engagement. Sustainability communications that allow full disclosure were seen as necessary for creating systemic change because omitting important information would limit the necessary feedback from the market, dampen stakeholders' trust and create a vacuum of frontrunners who openly share which of their innovative experiments worked and did not work.

4.9. Co-constructing a new environment

The participants showed confidence that their sustainability initiatives can and should bring systemic change within their operating environment. This was recognised to

happen in three ways: developing new offerings to improve the well-being of individuals and communities, innovating and implementing solutions to enhance the functioning of society and influencing public discourse and government decision-making to increase the resilience of the wider ecosystem. The participants' positive impact was thought to be leveraged if they ended up as role models for others in the industry, acting as catalysts for co-constructing a new environment:

> We have still so much to do in terms of accepting diversity and eradicating racism in Finland. I wish, as our company is almost like an institution in Finland, that when we stand behind certain values, we are jointly creating a new, multi-ethnic Finland. New Finland is about accepting diversity. We are building that future (Participant D).

As in the quotation above, the participants acknowledged their opportunities to contribute to the creation of a new environment through transformative efforts in fighting against climate change or resource depletion, as well as in supporting gender equality or minority rights. However, the participants perceived the management of these efforts as difficult because of the unavoidable time lags and unpredictability of efforts *ex ante*. New environments take a long time to develop, if they ever do so (Sarasvathy and Dew, 2005).

4.10. A taxonomy of transformative management activities

A taxonomy, shown in Figure 2, answers the second research question, 'How do these activities relate to one another in terms of mobilising sustainability transformations?', by organising the nine transformative management activities along the following management dimensions:

(1) Whether the activities relate to the strategic, tactical or operational management levels
(2) Whether the activities call for more analytical or more intuitive management styles

The taxonomy aims to help managers in carrying out the nine transformative management activities by distinguishing different levels and styles of managerial action. As

Olsson et al. (2014) assert, often, the reason for sustainability initiatives falling short in creating a systemic change is not the lack of individuals' innovative and transformative capacity but how this capacity is used. The taxonomy can support sustainability managers in unleashing their transformative capacity by helping them grasp and appreciate the breadth and depth of the transformative management activities. In effect, whilst managers might typically focus on one management level and emphasise one of the two management styles, the taxonomy shows that in order to mobilise sustainability transformations, they need to use activities at all the three management levels and use both styles of management.

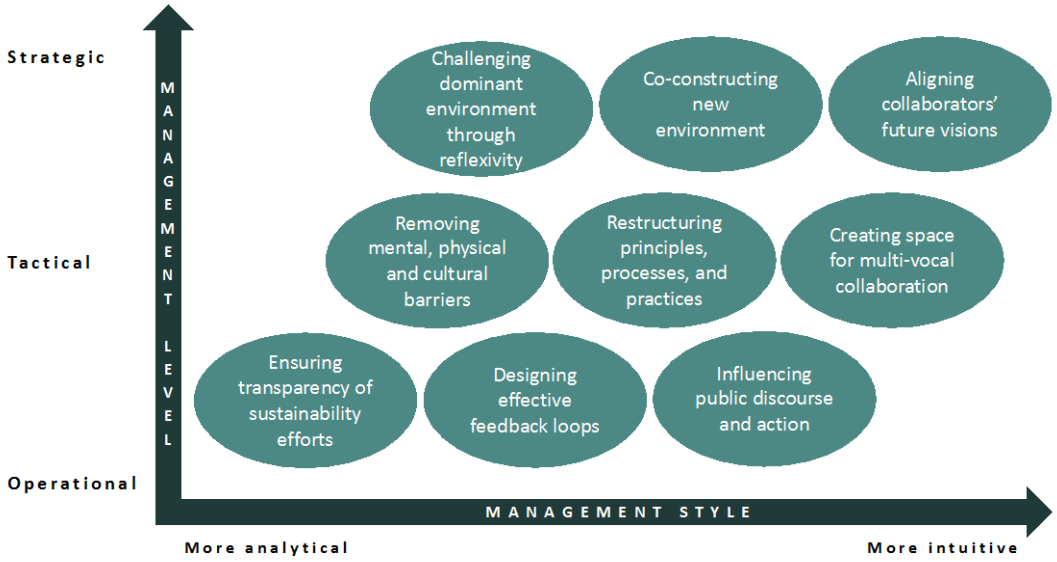

Figure 2: Taxonomy of transformative management activities

Source: Compiled by the authors from the empirical data analysis

First, the nine transformative management activities can be organised according to strategic, tactical and operational levels. This division follows the four areas of activity required by transitions (Loorbach and Rotmans, 2010). As the fourth area, reflexive relates to a reflective evaluation of the current situation in various areas; it was not included as its own level in the taxonomy but was included in all the other three levels on the vertical dimension. As summarised by Gaziulusoy and Ryan (2017), *strategic activities* involve the formation of a future vision with a group of innovative thinkers that will lead to changes in the cultures,

structures and processes of a socio-technical system. Then, *tactical activities* implement these changes by creating suitable circumstances for multi-participant collaboration and by overcoming inhibiting barriers. Finally, *operational activities* create new everyday practices through experiments and the learning by doing mentality. Thus, the nine transformative management activities operate at the level of strategic envisioning, tactical implementation and operational execution, which are all needed to advance sustainability transformations (Fiss and Zajac, 2006).

Second, these activities can be placed on a continuum of management styles, reflecting more analytical or intuitive management orientations. Those activities that reflect a more analytical orientation involve managers in carefully scrutinising the situation, making assumptions and taking action with an optimisation mindset. Conversely, those activities with a more intuitive orientation involve diagnosing, interpreting and shaping a new action with an imaginative mindset. At the strategic level, activities were slightly leaning towards more intuitive orientation, benefiting from creative thinking and the generation of new ideas through imagination, whereas at the operational level, activities slightly inclined towards the more analytic end, relying on analysing data and taking action accordingly. When it comes to management styles, managers are likely to differ in terms of their natural tendencies. For instance, managers who are analytical probably prefer data-driven metrics and numerical targets, whereas their counterparts who are intuitive probably appreciate envisioning the goals and proposed action in more creative ways (Pauwels et al., 2009). However, managers aiming to mobilise sustainability transformations need to balance their intellect and imagination, as different activities demand different management styles.

5. Reflections and conclusions

The purpose of this research was to explore and analyse, from managers' perspectives, transformative management activities in mobilising sustainability

transformations. To meet this purpose, the research gave voice to sustainability managers by using framing as an analytical approach to understand how managers frame their management activities, that is, how they make sense of their purpose, roles and actions in managing sustainability initiatives. The article demonstrates the kind of interactive reframing approach suggesting that it is through framing the problem, the alternative solutions and the activities in between, in new ways, that brings managers closer to mobilising sustainability transformations. By addressing the mechanisms of framing and reframing in bringing these transformations forward, the research is in line with those studies taking a relational metatheoretical perspective on sustainability (Garud and Gehman, 2012).

The research makes several contributions to the current literature of sustainability transformations. The study is amongst the first ones to apply the framing approach to honour managers' voices and to increase the understanding of managing sustainability transformations from managers' own perspective. Basing on the managerial framings, the research establishes a qualitative framework of nine transformative management activities. By linking the theoretical approach of TM to management activities, the study sheds light on the conceptual nature of these activities. The activities are characterised as systemic, collaborative, emergent and creative, reflecting their transformative qualities. They are also conceptualised as action levers that can utilise or create resources (mental, social, physical, capital) to mobilise sustainability transformations, reflecting their action-oriented nature.

In practical terms, given that the framework of nine transformative management activities is an initial attempt to offer a contemporary expression of sustainability management, mapping the sector-wide implications of implementing this framework in practice is too early. However, the framework provides insights for managers into reframing their activities in dealing with persistent sustainability challenges. The taxonomy that

organises these activities according to the previously specified management levels and management styles also reveals the breadth and depth of managers' professional capacities needed to create a system-wide change. By becoming aware of the strategic, tactical and operational levels, as well as the more analytical and intuitive management styles that transformative management implies, managers can first identify the levels and styles that they currently operate in and then expand their capacity in both dimensions. Taken together, the article aims to help managers overcome the current culpability in sustainability management—the incremental, rather than fundamental, impact of their actions—which can lead to reinforcing entrenched unsustainable lock-ins, be it in the ecological, social or economic sense (Dyllick and Muff, 2016).

Besides the theoretical contributions and the practical implications this research offers, it also comes along with some limitations that open up interesting future research opportunities. The research applies an inductive data-driven approach, making the subjective interpretation of the authors an unavoidable, yet important, part of the analysis. Next, as the research was conducted in Finland, the cultural similarities of the interviewees, who had the same nationality, might influence the activities developed on the basis of the managers' framings. Yet, globalisation has been deemed to homogenise such aspects as the culture, values and processes of internationally operating companies (Carr, 2005). Context-wise, although theoretical sampling was used to form a diverse group of interviewees, the research falls short in understanding how the implementation of these activities might look for different companies in different sectors. Such an implementation may depend, for example, on company size and structure, organisational culture, decision-making styles and policies, strategy and market position, as well as history and path dependencies. Other reasons might also explain the success of sustainability transformations for the respective companies than implement these activities. For example, the whole energy sector is shifting towards

renewable energy sources, making sustainability transformations easier to achieve for an energy company than for a company that is the first or the only mover in its sector. Furthermore, the internal dynamics of these companies are likely to play a role. As companies are often given a mandate by their board, moving beyond incremental impact towards creating a systemic change might not be in the hands of sustainability managers. More research is needed to understand these contingencies better, and we suggest the following future research opportunities to build upon and expand our findings:

- exploring the context specificity of transformative management activities by conducting similar studies in different sectors and/or organisations
- exploring how each of these activities is implemented in depth through a case study approach
- exploring how reframing of management happens in practice by conducting an ethnographic study or action research or by observing managers *in situ*
- identifying best practices for carrying out each of these activities
- measuring the impact of implementing these activities in practice through quantitative examination
- comparing the activities at other layers of companies, such as the board of directors, top management teams, line managers and workers

As expressed at the beginning of this study, sustainability initiatives that target persistent sustainability challenges cannot be addressed through conventional management approaches. Managers need to think outside their narrow specialisms (Gaziulusoy and Ryan, 2017) and translate that thinking into transformative management activities. The research suggests that this translation can be done by reframing current management activities vis-à-vis TM principles. A final yet necessary reflection of this research corroborates the notion that there is an urgent need for alternative means of sustainability management not only because sustainability challenges are pressing but also because the current ways of managing them have not been effective in mobilising the sustainability transformations needed in this era.

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