



LUND UNIVERSITY
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INSIGHTS IN THE INDIVIDUAL ECO-INTRAPRENEUR

A Single Case Study Exploring the Individual Drivers of Employees
Facilitating Eco-Intrapreneurship

by

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Abstract

Title: Insights in the Individual Eco-Intrapreneur: A Single Case Study Exploring the Individual Drivers of Employees Facilitating Eco-Intrapreneurship

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Research Question: What are the individual drivers of employees facilitating eco-intrapreneurship and how do these individual drivers of employees facilitate eco-intrapreneurship?

Methodology: Investigating the individual drivers and their facilitating role on eco-intrapreneurship, this single case study applied a qualitative research method. Strengthening this study, a control group (intrapreneurs) within the same organizational context was incorporated to first identify eco-intrapreneurial drivers before analysing their dynamic relations. Throughout an abductive research design was adopted. The data collection occurred via semi-structured interviews and was further analysed by following the methodology introduced by Gioia, Corley and Hamilton (2012) and partly elements presented by Eisenhardt (1989).

Theoretical Perspective: This study opens the black box of eco-intrapreneurial drivers at an individual level by gaining a holistic understanding of the latter. Prior insights into the research context was gained by consulting existing literature in the field of intrapreneurship and eco-innovation. Furthermore, literature discussing intrapreneurial drivers from a personal level as well as ecopreneurship (entrepreneurship and eco-innovation) was reviewed to receive first insights into possible facilitating drivers and their interrelations of eco-intrapreneurs.

Conclusion: Eco-intrapreneurs were identified to distinguish themselves with having an environmental mindset and a higher level of proactiveness, ambidexterity and determination compared to the intrapreneurial control group. Further, the need for an environmental purpose, strong intrinsic motivation and the ability of identifying the economic opportunities within environmental solutions surfaced as unique. This study found general intrapreneurial behaviours to lay the basis within eco-intrapreneurs. Acting within the environmental context, the characteristics of ambidexterity and determination appeared as key facilitators for the eco-intrapreneurs to balance personal values with organizational values. Further, the intrinsic drive proved fundamental to identify opportunities within the field of eco-innovation. Finally, the intrapreneurial core and influential attitudes as well as characteristics facilitate eco-intrapreneurs to identify economic value within their personal field of interest, crucial when operating within an organization. This research follows scholars' call and closes a research gap by taking an initial step to uncover the individual drivers of eco-intrapreneurship and their facilitating role.

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Abbreviations

EI	Environmental Innovation
IG	Interview Guide
RQ	Research Question
SOI	Sustainability Oriented Innovation

*“Why should I be studying for a future that soon may be no more,
when no one is doing anything to save that future?”*

(Thunberg, 2018)

1 Introduction

1.1 Background

Throughout the last centuries, climate change has evolved to a major issue affecting individuals all over the world. Especially businesses are increasingly pressurised to adjust their practices and to become more sustainable (Adams et al., 2016; Tidd & Bessant, 2014). Therefore, organizations today do not only face the challenge of staying proactive and competitive in an ever-changing environment but also to embrace sustainable development. Defined as “*development that meets the needs of the present without compromising the ability of future generations to meet their own need*” (Adams et al., 2016, p.181), sustainability, covering the triple bottom line - people, planet and profit - has become an integral part of today’s society (Salimath, 2018; Siqueira & Pitassi, 2016; Tidd & Bessant, 2014). The rich and constantly expanding literature on sustainability is thus unsurprising.

The concept of sustainability has also enjoyed increasing popularity within the innovation literature. Nidumolu, Prahalad and Ranagswami (2009) explain this by highlighting the ability of companies to fully embrace sustainability through innovation and thereby circumvent critical opinions. Scholars most commonly refer to this kind of innovation as sustainability-oriented innovation (SOI) (Adams et al., 2016). By “*making intentional changes to an organization’s philosophy and values, as well as to its products, processes or practices*” (Adams et al., 2016, p.181), SOI follows the definite intent to create value for society and the planet while capturing economic value (Adams et al., 2016; Siqueira & Pitassi, 2016). It thus does not only represent a fundamental tool to overcome sustainability issues, but also an opportunity for businesses to acquire competitive advantages (Adams et al., 2016).

Deriving from SOI, the specific subfield of eco-innovation (EI) arose, focusing on achieving economic returns majorly through the environmental or ecological aspect (Klewitz & Hansen, 2014; Siqueira & Pitassi, 2016). EI is recently experiencing growing business interest and importance due to increasing environmental challenges and resource limitations (Salimath, 2018; Siqueira & Pitassi, 2016; Tidd & Bessant, 2014). Primarily triggered by regulations, public concerns and the goal of competitive advantage (Gast, Gundolf & Cesinger, 2017), EI aims at reducing the environmental impact of organizations through redesigning existing processes and procedures (Horbach & Jacob, 2018). Throughout existing literature, scholars

have not agreed on a global definition of EI. Therefore, this study will utilize the definition provided by Kemp and Pearson (2007, p.7), identifying EI as

“the production, assimilation or exploitation of a product, production process, service or management or business method that is novel to the organization [...] and which results, throughout its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resources use [...] compared to relevant alternatives”.

Although EI cannot only contribute to a better environment but also majorly benefit companies (Bossle et al., 2016; Horbach, Rammer & Rennings, 2012), executives commonly do not proactively incorporate this type of innovation (Blanka, 2018). Reason is its perceived costly, complex and radical approach (Schaltegger & Wagner, 2011), required strategic shift (Horbach & Jacob, 2018) and high uncertainty (Siqueira & Pitassi, 2016), compared to conventional innovations (Adams et al, 2012) anticipated as less costly (Bossle et al., 2016). Nonetheless, EI frequently emerges as innovation driven by individual intrapreneurs.

Since environmental preferences are personal matters (Schaltegger, 2002) and individuals drive entrepreneurial thinking (Menzel, Aaltio & Ulijn, 2007; Rigtering & Weitzel, 2013; Schaltegger, 2002), literature has identified the individual employee as elementary factor for the appearance of organizational EI. Yet, the humans behind the herein introduced concept of eco-intrapreneurship - combining the two concepts of EI and intrapreneurship - have barely been researched. This raises the need to explore this field and to gain first insights in the emergence of intrapreneurial EI. Gaining a better understanding of the individual eco-intrapreneur could help companies to stimulate environmental innovation practices, leading to improved environmental performances, economic benefits and competitive advantages.

1.2 Problem Discussion

Aiming on the combined development of environmentally friendly and economic valuable solutions, EI is recently experiencing an essential increase of interest and importance for businesses (Salimath, 2018; Siqueira & Pitassi, 2016; Tidd & Bessant, 2014). Not only because customer concerns and (inter-)national regulations are pushing organizations towards a more sustainable thinking, but also because companies are slowly starting to recognize the economic and competitive benefits coming with a more environmentally friendly business orientation (Bossle, et al., 2016; Horbach, Rammer & Rennings, 2012; Polman & Bhattacharya, 2016).

Since “*there will not be any innovation without the individual being involved*” (Menzel, Aaltio & Ulijn, 2007, p.734), “*the decision to opt for intrapreneurship remains an individual and personal decision*” (Rigtering & Weitzel 2013, p.342), and “*environmental preferences are personal concerns*” (Schaltegger, 2002, p.47), the individual employee was identified as crucial strategic factor in organizational EI (Horbach & Jacob, 2018).

The interest in the specific research area of eco-intrapreneurship arose in questioning those employees’ personal drivers and their facilitating role on the emergence of EI within organizations. In this case, as aiming on obtaining an overall picture of these influencing factors, the notion **individual drivers** refers to the personal dimensions of *intrapreneurial behaviours, characteristics and attitudes* (Neessen, et al., 2018).

So far, there seems to be no common understanding of the individual drivers, forming intrapreneurial employees in general (Blanka, 2018; Douglas & Fitzsimmons, 2013; Neessen et al., 2018) and much less in specific contexts (Neessen et al., 2018), like eco-intrapreneurship. While the individual entrepreneurial concept has to some extent been linked to EI under the notion of ecopreneurship (Rodgers, 2010), the eco-intrapreneur context has in previous research only focused on an industry and firm level (Bossle et al., 2016; Horbach & Jacob, 2018; Horbach, Rammer & Rennings, 2012). Therefore, Horbach and Jacob (2018) emphasize the urging need for further in-depth research focusing at the individual level, to receive valuable insights and understandings of the dynamics driving employees to engage in EI. This call is supported by Santini (2017), claiming the need to understand how eco-intrapreneurs’ idealistic traits influence a company’s everyday life. Also, Neessen et al. (2018) emphasize the importance of focusing on individual intrapreneurs in different contexts to better understand intrapreneurship in general.

Since entrepreneurs differ from intrapreneurs (Camelo-Ordaz et al., 2011; Kuratko, Morris & Covin, 2011; Martiarena, 2013) and entrepreneurs contrast from ecopreneurs (Rodgers, 2010; Santini, 2017), it is also expected that the factors driving an ordinary intrapreneur to engage in conventional innovations are different from those driving an eco-intrapreneur to engage in EI. For example, as mostly relatively radical in its nature (Schaltegger & Wagner, 2011), requiring a strategic shift (Horbach & Jacob, 2018) and coming with high uncertainties (Siqueira & Pitassi, 2016), EI is seldomly proactively incorporated in business practices (Blanka, 2018). Besides, as “*market dynamics are different from environmental dynamics*” (Siqueira & Pitassi, 2016, p.1181), a fundamental conflict of objectives arises when combining the concepts of

sustainability and innovation (Siqueira & Pitassi, 2016). Eco-intrapreneurs are therefore expected to be confronted with greater obstacles and challenges than ordinary intrapreneurs, whereby different characteristics, attitudes and behaviours are anticipated. This anticipation is supported by the fact that the specific context of EI needs divergent organizational factors than general organizational innovation (Chang, 2012). Consequently, it can be argued that there is a research gap in understanding which individual drivers influence eco-intrapreneurship and how those facilitate this specific type of intrapreneurship.

Gaining an understanding of the individuals behind the concept of eco-intrapreneurship can fundamentally benefit companies to better support environmental innovation practices, leading to improved environmental performances, economic benefits and competitive advantages. But also, from a theoretical perspective, getting a deeper understanding of those factors triggering individual intrapreneurs to follow ecological initiatives and their facilitating role on eco-intrapreneurship, can serve as fundament for future research. The importance of closing this gap is underpinned by Salimath (2018, p.353), stating that *“it may be helpful to know the boundaries and assumptions under which environmental entrepreneurship can be effective in organizations”*.

1.3 Research Question

In line with the above problem discussion and the lack of current knowledge in the field of eco-intrapreneurship, this study will investigate the following research question (RQ):

What are the individual drivers of employees facilitating eco-intrapreneurship and how do these individual drivers of employees facilitate eco-intrapreneurship?

1.4 Research Purpose

The aim of this research is to close the identified research gap and thereby to contribute to the understanding of individual intrapreneurial drivers, in the specific context of eco-intrapreneurship.

With the focus on individual eco-intrapreneurs, this qualitative one case study aims to open a new field of research in the arising topic of EI while contributing to existing knowledge in the field of intrapreneurship. Focusing on individual intrapreneurs in different contexts was

identified as an important step within existing literature to better understand the emerging field of intrapreneurship in general. By entering the specific and unresearched field of eco-intrapreneurship, this research follows the scholars' call.

More specifically, this research aims to create a deeper and more nuanced understanding of individual drivers and their facilitating role on eco-intrapreneurship. It therefore follows another call of opening the "black box" to understand how eco-intrapreneurs' idealistic traits influence a company's everyday life. Furthermore, the research aims to trigger the interest of scholars to further investigate the eco-intrapreneurial context. An in-depth understanding of such is vital for businesses to organize and structure appropriately for EI.

Additionally, as existing literature fails to draw a large picture of individual intrapreneurial driver interactions, the aim of this thesis is to support the creation of a more complete description. By applying different dimensions of intrapreneurial drivers, this research intends to create a holistic understanding of how eco-intrapreneurial behaviour, attitudes and characteristics are interconnected and thereby facilitate eco-intrapreneurship.

Overall, existing literature in the field of EI and intrapreneurship is extended and refined through this research's unique theoretical and practical contribution. The uniqueness is underpinned by the investigation between eco-intrapreneurs and a control group of ordinary intrapreneurs, taking place within the same context, leading to more representative findings. Only by means of a control group it can be ensured that truly specific drivers for eco-intrapreneurs are identified. Existing literature rarely elaborates on specific intrapreneurial drivers, complicating the determination of those drivers only applicable to eco-intrapreneurs.

1.5 Case Company

A Swedish, globally leading construction products manufacturer represents the case company of this research. Similar to the majority of companies worldwide, it is facing the need of embracing sustainability and reducing its environmental footprint by redesigning processes and products (Tidd & Bessant, 2014). However, operating in the construction industry, seen as conservative and unsustainable (Woolthuis & Klein, 2010), it is situated in an unfavourable environment for radical innovation and EI. But also, the company itself is missing prerequisites that literature identifies as vital for the support of radical and eco-intrapreneurial behaviour. To be highlighted here are insufficient ideation time and missing incentive schemes for innovative

behaviour (Kuratko, Morris & Covin, 2011), next to incoherent commitment and support for EI by the executive level (Chang, 2012).

Despite research agreeing on the vital role of specific structures and processes for eco-intrapreneurship, the company currently and in the past worked on employee-initiated ideas, primarily aiming at offering an environmentally friendly market solution. Since the focus of this research is on the investigation of individual drivers of employees and their facilitating role on eco-intrapreneurship, this case company represents a suitable research object. Eco-intrapreneurs, working under such unfavourable conditions are expected to have strong eco-intrapreneurial drivers. Being able to study those will therefore give in-depth insights into the fundamental eco-intrapreneurial behaviours, attitudes and characteristics.

Besides, by employing ordinary intrapreneurs working under the same conditions, it provides a suitable control group. This will allow for an appropriate comparison ground, to identify the true distinct drivers of eco-intrapreneurs.

1.6 Report Outline

This thesis is divided into six main sections. While the first provided insights into the scope and necessity for this research, the following chapter reviews existing literature in the field of EI and intrapreneurship. Thereafter, the methodology is described before showing relevant research findings. To answer the RQ, the fifth chapter identifies specific eco-intrapreneurial drivers by opposing the findings with the control group. Those drivers are then analysed leading to novel knowledge displayed in a grounded theory model. The final chapter concludes and discusses practical and theoretical implications from this research. Besides, it displays the study's limitations and presents an outlook on future research topics.

2 Literature Review

This literature review serves as an introduction to the concept of eco-intrapreneurship by elaborating on its two overarching themes of EI and intrapreneurship. First, the overarching concept of sustainability-oriented innovation is introduced before detailing on EI. Second, the concept of intrapreneurship is discussed by first giving few insights into the organizational level of intrapreneurship before focusing on the individual level. Here, an emphasis is placed on reviewing existing literature discussing intrapreneurial drivers on an individual level. Finally, the scarce literature combining those themes - eco-intrapreneurship - is discussed.

2.1 Eco-Innovation

2.1.1 Sustainability Oriented Innovation

The term sustainability has become an integral part of today's world. The global call is triggered by the current and future challenges faced due to climate change and global warming (Tidd & Bessant, 2014). Additionally, the understanding of growing energy and raw material scarcity urge executives and individuals to embrace alternatives (Tidd & Bessant, 2014) and sustainable development. Sustainable development is defined as "*development that meets the needs of the present without compromising the ability of future generations to meet their own need*" (Adams et al., 2016, p.181). At its core, the term sustainability focuses on the triple bottom line - people, planet and profit (Salimath, 2018; Siqueira & Pitassi, 2016; Tidd & Bessant, 2014).

The innovation literature has also identified the large potential arising from sustainability. As mentioned by Nidumolu, Prahalad and Ranagswami (2009, p.58), pioneer companies are understanding the urge for sustainability as the "*innovation's new frontier*". This phenomenon has been termed differently such as sustainable lead innovation, sustainable development innovation (Tidd & Bessant, 2014) or sustainability-oriented innovation (SOI) (Adams et al., 2016).

Being the most common terminology, SOI is defined as "*making intentional changes to an organization's philosophy [...], its products, processes or practices, to serve the specific purpose of creating and realizing social and environmental value in addition to economic returns*" (Adams et al., 2016, p.181). Therefore, the focus lays on creating business models

generating value for the society and the planet while capturing value (Adams et al., 2016; Tidd & Bessant, 2014). Unsurprisingly, SOI is viewed as an organizational “*journey*” (Adams et al., 2016) or “*direction*” (Klewitz & Hansen, 2014).

Primarily, the change of becoming a sustainable business is fostered by new regulations, standards and metrics (Tidd & Bessant, 2014; Nidumolu, Prahalad & Ranagswami, 2009). This change is accompanied by new opportunities and threats. While the opportunities allow to strengthen a company’s competitiveness and to simultaneously reduce costs and increase the operational efficiency (Bossle et al., 2016; Horbach, Rammer & Rennings, 2012), some executives remain sceptical towards these financial benefits (Nidumolu, Prahalad & Ranagswami, 2009; Tidd & Bessant, 2014). This can be explained by the often radical nature of sustainable product, service or process innovation (Klewitz & Hansen, 2014; Tidd & Bessant, 2014). Although SOI can also be of incremental nature, it should be emphasised that it is mostly accompanied by radical transformation (Adams et al., 2016) and a high level of uncertainty (Siqueira & Pitassi, 2016). Additionally, Adams et al. (2016) mention the unpredictability of SOI by not having previous proof about attaining the desired goals.

2.1.2 The Concept of Eco-Innovation

As pointed out, SOI creates solutions beneficial for people (social), planet (environmental) and profits (economic). Yet, this term gets often mistakenly associated with the concepts of green-, environmental- and eco-innovation (Karakaya, Hidalgo & Nuur, 2014). While latter ones are primarily focusing on the environmental aspect (Klewitz & Hansen, 2014; Siqueira & Pitassi, 2016), SOI – as a much broader concept – also takes the social and economic dimensions into account (Siqueira & Pitassi, 2016).

This research focuses on EI, a sub-part of SOI. Yet, as the terms sustainability and environment are commonly used interchangeably by literature and society, this research will at times do so as well, to not falsify later findings.

Although the term EI has meanwhile become widely accepted among scholars (Karakaya, Hidalgo & Nuur, 2014), its definition has not found a common ground yet. For example, Fussler and James (1996, in Karakaya, Hidalgo & Nuur, 2014, p.394) define EI as “*new products and processes that provide customer and business value but significantly decrease environmental impact*”. Andersen (2008, p.5) describes it as “*innovations which are able to attract green rents*”.

of the market". And the OECD (2005, in Kemp & Pearson, 2007 p.7) characterizes EI as *"the creation or implementation of new, or significantly improved, products, processes, marketing methods, organizational structures and institutional arrangements which lead to environmental improvements compared to relevant alternatives"*. In this study, however, Kemp and Pearson's (2007, p.7) definition as

"the production, assimilation or exploitation of a product, production process, service or management or business method that is novel to the organization [...] and which results, throughout its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resources use [...] compared to relevant alternatives"

has been used as foundation, as it is perceived as better fit. It describes EI as a novelty where instead of economic reasons the positive environmental effect stands at the forefront of the development. Besides, it does not expect the innovation to achieve a big impact from the launch onwards but grants time throughout the life cycle (Kemp & Pearson, 2007).

EI is pushed or respectively pulled by different factors. Literature mainly distinguishes between four: (1) *regulations*, (2) *public concerns*, (3) *expected competitive advantage*, and (4) *top management commitment* (Gast, Gundolf & Cesinger, 2017). Additionally, *firm specific factors* and *technology* are two drivers that are explicitly mentioned in some other studies (Bossle, 2016; Horbach, Rammer & Rennings, 2012). Most EI, however, is majorly driven by regulations (Bossle, 2016; Horbach, Rammer & Rennings, 2012).

Those innovations originating from such external pressures are declared as reactive or involuntary (Salimath, 2018). Typically, established large organizations, prioritizing economic objectives over social and environmental objectives, use this path (Gast, Gundolf & Cesinger, 2017). But innovations do not necessarily have to occur accidentally. They can also be strategically planned and systematically initiated (Gast, Gundolf & Cesinger, 2017). Such proactive or voluntary innovations (Salimath, 2018) are mostly triggered by internal factors (Bossle, 2016).

No matter what approach is chosen, EI, as being part of SOI, is often of radical nature and comes with some major challenges. The needed strategic shifts in a company's goals and practices (Horbach & Jacob, 2018) need to be initiated by top management. However, due to EI's lacking fit with traditional innovation activities, as well as greater uncertainties regarding

technology and the market (Horbach & Jacob, 2018), it often meets resistance from the top-level (Blanka, 2018). Firms are still inexperienced with discovering the potential of EI (Porter & van der Linde, 1995), like increasing efficiency leading to cost savings (Horbach, Rammer & Rennings, 2012) or positive impacts on critical success factors as design and performance (Bossle et al., 2016).

“Market dynamics are different from environmental dynamics” (Siqueira & Pitassi, 2016), whereby a fundamental conflict of objectives arises when combining the concepts of sustainability and innovation (Siqueira & Pitassi, 2016). While latter one strives for market growth and increasing consumption (Teece, Pisano & Shuen, 1997), sustainability is actually looking for the opposite (Schäpke & Rauschmayer, 2014). Sustainable values like empathy and ethical behaviour collide with the productivity improvement and cost reduction mindset of organisations (Siqueira & Pitassi, 2016). Businesses’ purpose is to generate profits and to provide returns to their investors (Salimath, 2018), yet, as eco-friendly products are still perceived as too expensive (Horbach, Rammer & Rennings, 2012), sustainable economic development cannot be ensured (Bocken & Short, 2016). Those contrasting views put employees in a situation where they must decide between going green or making profits (Santini, 2017). According to Polman and Bhattacharya (2016) this often leads – based on a rational cost-benefit calculus – to a behaviour suppressing employees’ personal values in order to please their organisation’s goal of maximizing profits.

Across the field of EI, the individual level is rare. Past studies either adapted an industry level or firm level perspective (Bossle et al., 2016; Horbach & Jacob, 2018; Horbach, Rammer & Rennings, 2012). In their quantitative research, Horbach and Jacob (2018) took a first step to uncover how individual personal characteristics (gender) influence the degree of an organization's EI adaption. Tapping into this field, the researchers opened *“this black box”* (Horbach & Jacob, 2018, p.924) to take a first step in understanding the individual level in EI. Their paper highlights the key role the individual level plays for EI from a gender perspective while underlining the necessity for further clarification and understanding of EI and the individual level (Horbach & Jacob, 2018). The need for further in-depth research to receive valuable insights and to gain a broad understanding of the dynamics of EI at an individual level is large. As stated by Klewitz and Hansen (2014), EI research lacks knowledge on matters such as employee learning and competencies to embrace sustainability.

2.2 Intrapreneurship

2.2.1 Intrapreneurial Organization

The foundation of an intrapreneurial organization is laid by its structure and culture (Foss, Woll & Moilanen, 2013; Kesting & Ulhøi, 2010; Kuratko, Morris & Covin, 2011). Various intra organizational elements influence the degree to which employees feel encouraged and supported in innovative activities. Scholars identify various frame elements or prerequisites that create an innovative company. Despite the varying number of prerequisites per scholar, researchers agree that the promotion and adoption of an organizational wide entrepreneurial mindset is crucial (Buhl, Blazejewski & Dittmer, 2016; Foss, Woll & Moilanen, 2013; Kesting & Ulhøi, 2010; Kuratko, Morris & Covin, 2011; Marques et al., 2018). Simultaneously, it is agreed that this is also the most challenging (Kesting & Ulhøi, 2010).

A general firm level frame for an innovative company evolves around five prerequisite elements: (1) *administrative support*, (2) *autonomy*, (3) *rewards*, (4) *time* and (5) *internal procedures* (Buhl, Blazejewski & Dittmer, 2016; Foss, Woll & Moilanen, 2013; Kesting & Ulhøi, 2010; Kuratko, Morris & Covin, 2011; Marques et al., 2018). First, the degree of innovativeness is dependent on the support individuals receive from the organization. This includes the support from management as well as the acknowledgement from colleagues (Kesting & Ulhøi, 2010; Kuratko, Morris & Covin, 2011). Second, various scholars have emphasised that innovative behaviour flourishes best when individuals receive autonomy (Buhl, Blazejewski & Dittmer, 2016; Kuratko, Morris & Covin, 2011). This autonomy does not only encompass the freedom an individual receives, but also the amount of resources one is able to make use of (Buhl, Blazejewski & Dittmer, 2016). Third, innovation seems to be paralleled by incentives and reward schemes. Scholars coherently state the importance of extrinsic (e.g. monetary) and intrinsic rewards (e.g. recognition) to successfully engage employees in innovative and entrepreneurial behaviour (Buhl, Blazejewski & Dittmer, 2016; Kesting & Ulhøi, 2010; Kuratko, Morris & Covin, 2011). Fourth, innovative behaviour requires the introduction of slack time for innovation (Kuratko, Morris & Covin, 2011). Granting dedicated time for innovation can in some cases function as incentive and prove for management support.

The above presents a firm level frame which companies need to adapt to allow for organizational innovation. In the specific context of EI, however, Chang (2012 *in* Bossle et al.,

2016, p.868) presents three divergent organizational factors fostering this type of innovation: (1) *environmental leadership*, (2) *environmental culture*, and (3) *environmental capabilities*.

2.2.2 Intrapreneurial Individual

Intrapreneurship is defined as “*the recognition and exploitation of opportunities within established firms*” (Salimath, 2018, p.336) and according to Antoncic and Hisrich (2003, p.20), it “*should be viewed [...] as an essentially activity-based or activity-oriented concept that operates at the organizational boundary and stretches current organizational products and services, technologies, norms, orientations, structures, or operations into new directions*”. Intrapreneurship is therefore seen as important innovation driver for companies (Salimath, 2018), which has already been the focus of numerous research studies.

Yet, those studies were mostly limited to the organizational level only (Blanka, 2018; Neessen et al., 2018). However, the individual intrapreneurial level, implying a bottom-up approach (Blanka, 2018; Neessen et al., 2018) where employees actively “*initiate, support or even drive/lead the processes*” (Høyrup, 2012, p.8) of innovation has seldomly been tackled (Åmo, 2010; Blanka, 2018; Neessen et al., 2018). This is quite surprising, as “*entrepreneurial thinking starts first with individuals*” (Schaltegger, 2002, p.47). Intrapreneurs are thus identified as important capability, contributing to the business innovation process and growth (Åmo 2010; Woo, 2018). An *intrapreneur* – as termed by Pinchot (1985) – is “*a person within a large corporation who takes direct responsibility for turning an idea into a profitable finished product through assertive risk-taking and innovation*” (American Heritage Dictionary, 1992, in Salimath, 2018, p.337). Their behaviour is assumed to significantly influence a company’s performance, as “*the decision to opt for intrapreneurship remains an individual and personal decision*” (Rigtering & Weitzel 2013, p.342).

While research on individual self-employed entrepreneurs is quite rich, direct research on those determinants describing an intrapreneur has barely been conducted (Blanka, 2018; Douglas & Fitzsimmons, 2013; Reuther et al., 2018; Woo, 2018). Early studies had adopted characteristics describing entrepreneurship, yet, these did not appropriately reveal the specific characteristics of intrapreneurship (Woo, 2018). Intrapreneurs are different persons than entrepreneurs (Camelo-Ordaz et al., 2011; Kuratko, Morris & Covin, 2011; Martiarena, 2013). While latter aim to start new companies, former are embedded in existing organizational boundaries (Blanka, 2018) and develop new areas of business (Camelo-Ordaz et al., 2011). The main difference between those two concepts therefore lays within the context they occur (Pinchot,

1985). Although intrapreneurship is said to root in entrepreneurship, several differences separate those concepts (Camelo-Ordaz et al., 2011; Martiarena, 2013), whereby it is essential to consider both types of individuals separately (Douglas & Fitzsimmons, 2013).

Intrapreneurial behaviour is of strategic importance for companies (Neessen et al., 2018). Scholars agree that when intrapreneurial employees are involved in the innovation process, the possibility for radical innovation is larger than innovating based on market needs (Kesting & Ulhøi, 2010). But little is known about the personality behind intrapreneurs (Douglas & Fitzsimmons, 2013). Hence, the field of individual intrapreneurship is gaining increasing research attention (Blanka, 2018) as it is of benefit for researchers and managers to better understand those factors driving an individual's intrapreneurial behaviour in general (Blanka, 2018; Douglas & Fitzsimmons, 2013) but also in different functions and contexts (Neessen et al., 2018).

Today, literature on intrapreneurial drivers appears mostly on an organizational level (Fellnhöfer, 2017). Neessen et al. (2018) agree to this statement by highlighting the common thread of viewing intrapreneurship as organizational characteristics within existing literature instead of on an individual level. Referring to intrapreneurship as a multilevel construct, scholars state the need to view intrapreneurship as a broader concept than the behaviours of innovativeness, proactiveness and risk-taking (Fellnhöfer, 2017; Neessen et al., 2018; Razavi & Ab Aziz, 2017). Additionally, it is argued that existing literature fails to draw a large picture of intrapreneurial drivers (Neessen et al., 2018). Often intrapreneurship is researched in combination with one of those drivers only (Neessen et al., 2018), whereby the current knowledge is quite scattered.

Therefore, scholars have begun to create models to visualise the variety of intrapreneurial drivers. An example is shown by Marques, Valante and Lages (2018) explaining intrapreneurial drivers among six aspects (sociodemographic and professional variables; psychological factors; cognitive factors; motivations; entrepreneurial skills; intrapreneur/entrepreneur conditions). Apart from former aspects lacking a clear distinction between entrepreneurial and intrapreneurial drivers, Neessen et al. (2018) argue that existing models lack a clear set-up. Contributing to existing knowledge by conducting an extensive literature review focusing on the individual level, Neessen et al. (2018) draw a holistic picture on individual intrapreneurial drivers. This is achieved by systematically separating them in three aspects: intrapreneurial (1) *behaviour*, (2) *characteristics* and (3) *attitudes* (Neessen et al., 2018). It should be highlighted

that although finding three explicit dimensions, those are strongly interrelated as characteristics and attitudes influence the overall intrapreneurial behaviour (Ajzen, 1991; Neessen et al., 2018).

It should be emphasised that throughout this study the notion of intrapreneurship is equated to the individual and not organizational level of intrapreneurship. Also, arguing for Neessen et al.'s (2018) thorough literature review to form a strong basis for future research on the individual intrapreneurial level, their framework was used for further investigations in this area.

2.2.2.1. Intrapreneurial Behaviour

The first dimension of drivers is defined as intrapreneurial behaviour by Neessen et al. (2018). While existing literature shows a strong interrelation between an individual's behaviour, personal characteristics and attitudes, it is understood that the latter two lay the foundation for the behaviour (Ajzen, 1991; Neessen et al., 2018; Razavi & Ab Aziz, 2017). Hereafter, intrapreneurial behaviours are elaborated on in three sub-dimensions; (1) *entrepreneurial orientation*, (2) *opportunity recognition* and (3) *network*.

Entrepreneurial Orientation

Widely known as entrepreneurial orientation, the most commonly referred to behaviours encompass innovativeness, proactiveness and risk-taking (Baczynska, Rowinski & Cybis, 2016; Fellnofer, 2017; Neessen et al., 2018; Razavi & Ab Aziz, 2017). Innovativeness is related to the concept of creativity and the engagement to make connections between external information to create something new (Baczynska, Rowinski & Cybis, 2016; Sundgren & Styhre, 2003). Proactiveness is broadly referred to as being positive towards a duty and the anticipation of projects (Baczynska, Rowinski & Cybis, 2016; Kuratko, Morris & Covin, 2011). Smith, Rees and Murray (2016) emphasize proactiveness to include the intrapreneurial continuous search for new challenges and selling solutions within the company (Kuratko, Morris & Covin, 2011). Therefore, the higher the level of proactivity, the more ideas are said to be accepted (Blanka, 2018). Termed as risk-taking (Fellnofer, 2017) explains how uncertainties are being handled (Baczynska, Rowinski & Cybis, 2016). Although reaching consensus on those three behaviours to be fundamental intrapreneurial behaviours, existing literature has mostly reviewed entrepreneurial orientation from an organizational perspective only (Fellnofer, 2017).

Studying the relation between those aspects with innovation performance, Baczynska, Rowinski and Cybis (2016) identify the entrepreneurial orientation as core competencies. This

behavioural impact is supported by Fellnofer (2017), stating that the individuals extend of entrepreneurial orientation is closely related to the innovation success. To understand the degree of influence of those three components on the intrapreneurial behaviour, existing literature mostly compares entrepreneurial orientation between entrepreneurs and intrapreneurs. Scholars identify proactiveness and innovation to be similar to entrepreneurs (Martiarena, 2013). However, especially the risk-taking behaviour is found to be less developed compared to entrepreneurs due to the safe environment created through the organizational context (Camelo-Ordaz et al., 2011; Martiarena, 2013; Razavi & Ab Aziz, 2017). Martiarena (2013) found intrapreneurs to engage in riskier behaviour when tangible incentives are offered. This study therefore draws a clear connection between intrapreneurial attitudes and the intrapreneurial behaviour.

Opportunity Recognition

An understanding of the underlying system of opportunity recognition within innovation is provided by Baron (2006). In his research, Baron (2006) argues that the recognition of opportunities is dependent on the individuals experience. Being strongly dependent on the individual justifies the complexity of understanding opportunity recognition. Found in this definition, the identification of opportunities is triggered by an external event which is then viewed through the lens of personal experience and knowledge (Baron, 2006). This study highlights that the type of recognized opportunity can be dependent on the personal interests. Baron (2006) found that when focusing on a specific area or factor the likelihood of identifying opportunities within that field is strongly increased. Additionally, research found that the extent to which intrapreneurs are exposed to innovative activities affects the amount of identified opportunities (Baggen et al., 2016).

Also, the weakening effect of the organizational context on intrapreneurial opportunity recognition is supported by several scholars emphasizing that the increasing involvement in improvement projects or innovation projects based on managerial enquiry reduces the ability to recognize opportunities (Martiarena, 2013; Smith, Rees & Murray, 2016). Opportunity recognition is proven to closely depend on the intrapreneurial characteristics (Baron, 2006; Martiarena, 2013).

Network

Another dimension within intrapreneurial behaviour is the importance of a network. Scholars agree that the organizational context in which intrapreneurs are active emphasis the need to

build a large network to advance innovation (Neessen et al., 2018; Razavi & Ab Aziz, 2017; Smith, Rees and Murray, 2016). Besides the earlier discussed entrepreneurial orientation, the research by Razavi & Ab Aziz (2017) found the network to have a strong influence on the intrapreneurial behaviour. Especially the need for intrapreneurs to diplomatically navigate within the organization organism and to tackle obstacles shows the importance of a network (Smith, Rees & Murray, 2016). Mentioning the fundamental need of advanced social skills, Smith, Rees and Murray (2016) likewise show the interconnection between intrapreneurial characteristics and intrapreneurial behaviour.

2.2.2.2.Characteristics

Characteristic is defined as “*a typical or noticeable feature of someone or something*” (Cambridge Dictionary, n.d.). Following, characteristic variables clustered in three distinctive sub-categories are discussed: (1) *skills*, (2) *self-efficacy* and (3) *personal ability*.

Skills

Regarding the first dimension, various ones can be found in literature (Neessen et al. 2018). Amongst others, scholars talk about initiative (Blanka, 2018; Rigtering & Weitzel, 2013), absorptive capacity, problem-solving (Neessen et al., 2018), dedication (Kuratko, Morris & Covin, 2011), goal orientation and willingness (Kuratko, Morris & Covin, 2011; Woo, 2018). According to Neessen et al. (2018), however, there seems to be not one skill/ability, more prevalent than the other. Overall, an intrapreneur needs to be a visionary (Hisrisch, 1990), that is not only dreaming but also doing (Kuratko, Morris & Covin, 2011).

Persistency, another ability frequently mentioned, appears of importance for intrapreneurs (Blanka, 2018; Hisrisch, 1990; Neessen et al., 2018; Rigtering & Weitzel, 2013). Within the organizational context it often comes to setbacks, frustrations and obstacles for intrapreneurs where persistence is argued to overcome these (Hisrisch, 1990) and therefore to influence innovation performance (Blanka, 2018). In such situations also optimism (Blanka, 2018; Kuratko, Morris & Covin, 2011), resilience (Neessen et al., 2018) and emotional stability (Woo, 2018) are found to be important abilities of intrapreneurs among existing literature. In his study, Woo (2018), even claims emotional stability as significant for intrapreneurial orientation.

Different than other scholars, Woo (2018) describes extraversion, openness, and conscientiousness as personality traits positively related with intrapreneurship. However,

looking at the meaning of those concepts, it becomes obvious that they come down to the same or at least similar variables as mentioned before. Extraversion is linked to energy, assertiveness, ambition, seeking excitement, stimulation and optimism (Woo, 2018). Openness is associated with curiosity, non-traditionality, creativity and adaptability (Woo, 2018). Finally, conscientiousness relates to work motivation, goal orientation, self-control, achievement motivation, and organizing and planning behaviour (Woo, 2018).

Individual ambidexterity is also emphasized as an ability of significant importance for intrapreneurs (Rosing & Zacher, 2017). So far, however, it is predominantly researched on the organizational level rather than on the individual level (Rosing & Zacher, 2017). The concept refers to “*the combination of individual exploration and exploitation*” (Rosing & Zacher, 2017, p.696). It implies the individual’s competence to divagate from established knowledge in order to search for new ways (exploration), while still relying on existing routines and incrementally improving things (exploitation) (Rosing & Zacher, 2017). Intrapreneurs are working within the boundaries of company politics and therefore must find the balance between the old processes and new opportunities (Rosing & Zacher, 2017). Only if showing personal initiative and being able to challenge corporations’ beliefs, an intrapreneur will be able to overcome the context and to find the opportunity for new creations (Hisrich, 1990; Rigtering & Weitzel, 2013). Throughout, the skill of flexibility is fundamental (Hisrich, 1990).

Self-Efficacy

Within the dimension of perception of their own capabilities, self-efficacy is a frequently recurring concept (Blanka, 2018; Douglas & Fitzsimmons, 2013; Neessen et al., 2018). It describes the individuals’ belief to successfully perform a certain task (Wang et al., 2013) and is substantially driving intrapreneurial intentions (Douglas & Fitzsimmons, 2013). Higher levels of self-efficacy thus lead to higher intentions to act intrapreneurial and to show related behaviour (Neessen et al., 2018). Therefore, a clear relation surfaces between the intrapreneurial characteristics and intrapreneurial behaviour (Woo, 2018).

Personal Ability

Self-efficacy in combination with past experience and personal knowledge makes up a person’s perception of abilities, influencing their behaviour (Neessen et al., 2018). Gaining intrapreneurial experience can foster intrapreneurial skills and competencies, leading to higher levels of self-perception (Blanka, 2018). Besides, past experience positively influences

intrapreneurial activities (Neessen et al., 2018). Personal knowledge from education and training, on the other side, improves an employee's opportunity recognition capabilities (Baron, 2006) and increases their probability of becoming an intrapreneur (Neessen et al., 2018). Again, an interrelation can be drawn between the intrapreneurial characteristic influencing the intrapreneurial opportunity recognition (Baron, 2006; Neessen et al., 2018).

Research on intrapreneurial characteristics still resides at the beginning and is therefore very scattered. It does not follow clear lines, yet, the underlying literature shows recurring patterns. The framework of Neessen et al. (2018) provides a good baseline allowing the categorization of the different findings in overarching dimensions.

2.2.2.3. Attitudes

Following Ajzen (1991), attitudes represent an individual's opinion of either agreeing or disagreeing on a specific topic. The following discusses three explicit sub-dimensions: (1) *job satisfaction*, (2) *motivation* and (3) *intrapreneurial intention*. Attitudes are argued to strongly influence an individual's behaviour (Ajzen, 1991) and in the context of intrapreneurship to be crucial for individuals to engage in intrapreneurial intentions (Douglas & Fitzsimmons, 2013; Marques et al., 2018; Monsen, Patzelt & Saxton, 2010; Neessen et al., 2018; Razavi & Ab Aziz, 2017).

Job Satisfaction

A fundamental dimension within intrapreneurial attitudes is the relation to the organization. Neessen et al. (2018, p.564) strengthen this understanding claiming that "*the relation between the intrapreneur and the organization make an intrapreneur an intrapreneur*". Consulting existing literature on this topic shows that the relation to the organization is strongly related to the employee's satisfaction and more specifically the job satisfaction (Antoncic & Antoncic, 2011; Delmas & Pekovic, 2018; Kahn, 1990; Mustafa, Martin & Hughes, 2016).

The connection of those two is shown by studying the relation between job satisfaction and managerial entrepreneurial behaviour (Mustafa, Martin & Hughes, 2016). Basing the concept of job satisfaction on psychological ownership found that a higher perception of projects being their own, increases intrapreneurial behaviours (Mustafa, Martin & Hughes, 2016). Additionally, the study conducted by Antoncic and Antoncic (2011) creates a link between employee satisfaction, intrapreneurship and organizational growth. Different to other research,

employee satisfaction is identified to encompass four key elements including work conditions and employee loyalty (Antoncic & Antoncic, 2011). Their findings highlight intrapreneurship to take on a facilitating component between employee satisfaction and organizational growth (Antoncic & Antoncic, 2011).

Despite showing the interrelation between job satisfaction, organizational engagement and intrapreneurship, no consensus is found among existing scholars on the aspects leading to direct job satisfaction. Different to above mentioned studies, Delmas and Pekovic (2018) state that job satisfaction incorporates the notion of meaningfulness. Aligning this with innovation, they found that low job satisfaction results in low innovation while raising the argument that perceived meaningfulness of employees appears to be larger than satisfaction in general (Delmas & Pekovic, 2018). Already Kahn (1990) mentioned the importance of meaningfulness for job satisfaction and job engagement. This general terminology includes the employees' feeling of being valued and appreciated, fostering employee job satisfaction (Kahn, 1990). Perceiving job satisfaction as fundamental for every behaviour (Kahn, 1990; Mustafa, Martin & Hughes, 2016), the concept of meaningfulness is accompanied with the notion of having a sense of safety (e.g. not harming own career) and availability (e.g. physical resources) (Kahn, 1990). The latter prove important as individuals are found to dedicate not only their physiological and cognitive ability when working but are also found to be emotionally attached (Kahn, 1990).

Motivation

The general concept of motivation appears to be a crucial aspect (Delmas & Pekovic, 2018; Neessen et al., 2018; Sundgren & Styhre, 2003). As stated by Ryan and Deci (2000), motivation refers to being inspired to take a certain action. Highlighting the variation of motivation type and degree per individual, a clear distinction appears between intrinsic motivation and extrinsic motivation.

Former is defined as taking a certain action based on personal interest or joy (Ryan & Deci, 2000). Delmas and Pekovic (2018) strengthen this notion by relating it to an activity without clear connection to external rewards. Throughout existing literature, intrinsic motivation is referred to in different ways. While Ryan and Deci (2000) and Sundgren and Styhre (2003) identify interest, joy and challenge as adjectives relating to intrinsic motivation, Delmas and Pekovic (2018) add the individual's learning opportunity to be crucial. Opposite, extrinsic motivation is triggered from a tangible incentive (Delmas & Pekovic, 2018; Ryan & Deci,

2000). Referred to as instrumental value by Ryan and Deci (2000), the type of incentive triggering extrinsic motivation can be various such as monetary compensation or increasing personal ego.

Within the intrapreneurial literature, no common understanding of specific intrapreneurial motivators exists. Hisrich (1990) understands the intrapreneurial motivation to be related to career prospects and receiving tangible incentives. Accordingly, appropriate rewarding schemes are found crucial for intrapreneurial behaviour (Martirena, 2013). Similar, Chan et al. (2017) agree to latter by identifying an increasing intrapreneurial motivation when having a high professional and leadership motivation (extrinsic motivation). However, the literature review conducted by Neessen et al. (2018) identifies mainly motivations of intrinsic nature, such as enthusiasm, ambition and meaning. Similar outcomes were attained by Smith, Rees and Murray (2016) stating intrapreneurial intrinsic motivation to be various and to include passion towards their organizational role, recognition and learning. The strength of intrinsic motivation is supported by Delmas and Pekovic (2018), identifying the effect of motivation on a specific type of innovation. Making an important contribution to existing literature in the field of intrapreneurship and sustainable innovation, their findings show that this specific innovation type is stimulated by the intrapreneur's intrinsic motivation.

Intrapreneurial Intention

The final intrapreneurial attitude is identified as the individual's intention to act intrapreneurial (Neessen et al., 2018). Referring to Douglas and Fitzsimmons (2013), an intention is deeply intertwined with the individual's behaviour. Accordingly, scholars agree that the personal attitude towards a behaviour determines the degree of intention to act out this behaviour (Douglas & Fitzsimmons, 2013; Neessen et al., 2018). Although, the need for a clear understanding of intrapreneurial intention is crucial for corporations to identify supporting methods to enhance the intrapreneurial intention of individuals, existing literature fragmentally covers explicitly intrapreneurial intention (Douglas & Fitzsimmons, 2013; Neessen et al., 2018). Therefore, a consensus among scholars is lacking with regards to specific factors influencing intrapreneurial intention (Marques et al., 2018; Monsen, Patzelt & Saxton, 2010; Neessen et al., 2018; Razavi & Ab Aziz, 2017).

Monsen, Patzelt and Saxton (2010) found that the possibility of high risk and additional workload negatively correlate with having an intrapreneurial intention. Strengthening this

finding, Douglas and Fitzsimmons (2013) and Marques et al. (2018) likewise identified a negative effect of the degree of risk-taking and the intrapreneurial intention.

Another supportive influential factor on intrapreneurial intention is found to be the individual's motivation and more specifically the monetary return to be expected from the outcome of a behaviour (Monsen, Patzelt & Saxton, 2010). Accordingly, it is argued that the individual's type of motivation influences its willingness to act intrapreneurial. Existing literature emphasised the facilitating effect of extrinsic motivation on intrapreneurial intention (Monsen, Patzelt & Saxton, 2010), however, found a weak mediating role of self-motivation (intrinsic motivation) on intrapreneurial intention (Neessen et al., 2018).

The multifaceted nature of factors influencing intrapreneurial intentions is highlighted in the research conducted by Razavi and Ab Aziz (2017). Concluding, it is stated that entrepreneurial orientation and networking have a positive impact on intrapreneurial intentions (Razavi & Ab Aziz, 2017). As these entrepreneurial orientation factors are categorised within intrapreneurial behaviour by Neessen et al. (2018), another relation surfaces between the larger dimensions of intrapreneurial attitudes and behaviour.

Overall, this review has emphasized the strong interrelation between the three intrapreneurial dimensions. Additionally, to the apparent scarcity of existing literature thoroughly covering all above dimensions, the lack of consensus was highlighted. An overview of the findings is shown in App.8.1.

2.3 Relations between Theoretical Concepts

By investigating the type of individual drivers and their facilitating role on eco-intrapreneurship, this research aims to contribute to the existing research fields of intrapreneurship and EI. Therefore, the terminology of eco-intrapreneurship is employed combining both concepts. With "*the exploitation of environmental opportunities within established firms*" (Salimath, 2018, p.336), it describes a specific intrapreneurial innovation context which to the current understanding has not received attention on its own. If even, it has either only been researched in combination or interchangeably with the notion of ecopreneurship. Therefore, existing literature discussing the concept of ecopreneurship is consulted before drawing a line to the concept of eco-intrapreneurship. Finally, possible research findings are elaborated on.

Ecopreneurship, also referred to as sustainable, environmental or green entrepreneurship in literature (Rodgers, 2010), has mostly only been discussed from the pure entrepreneurial view by literature. It derives from the broader concept of sustainable entrepreneurship and is majorly following environmentally friendly principles, aiming to identify, evaluate and seize EI, in order to minimize environmental impacts (Rodgers, 2010). As there is no one widely accepted term for this approach, there is also no complete accordance regarding the definition of ecopreneurs (Setyawati et al., 2018). According to Linnanen (2002), ecopreneurs are commonly self-employed, a non-profit business and opportunists or successful. Differently, Gibbs (2006, in Setyawati et al., 2018, p.1) defines ecopreneurs as *“those entrepreneurs who combine their business activities with environmental awareness in a push to shift the cornerstone of economic development towards a far eco-friendlier basis”*. And Kearins and Collins (2012) characterise them as champions who influence market norms to favour sustainability and the environment. Nevertheless, those varying definitions uncover a common ground, giving a hint on the main difference between individual entrepreneurs and ecopreneurs.

Divergent from entrepreneurs, ecopreneurs value the environment over profits (Kirkwood & Walton, 2010; Setyawati et al., 2018). Nevertheless, their aim is to still earn financial benefits by decreasing environmental problems (Gast, Gundolf & Cesinger, 2017). Ecopreneurs are described to be motivated intrinsically as well as by personal reasons towards EI practices and are convinced to reach ecological benefits through their behaviour (Gast, Gundolf, & Cesinger, 2017). They have strong ethical reasonings (Linnanen, 2002), green values and passion for their value offer (Kirkwood & Walton, 2010). Besides the idea of earning a living, being their own boss and closing market gaps (Gliedt & Parker, 2007; Kirkwood & Walton, 2010), ecopreneurs are motivated to create new ventures, to spread their green values and to educate society (Kirkwood & Walton, 2010; Shepherd et al., 2013, in Gast, Gundolf, & Cesinger, 2017). Concluding, while sharing a common baseline (Kirkwood & Walton, 2010; Santini 2017), ecopreneurs have a lower materialistic attitude and higher environmental responsibility than entrepreneurs (Santini, 2017). Yet, the debate on what differentiates entrepreneurs and ecopreneurs is far from over (Santini, 2017).

Because ecopreneurs have so far mostly only been discussed from the pure entrepreneurial view, not much seems to be known about the individuals behind eco-intrapreneurship. Yet, as the concepts of EI and intrapreneurship experience increasing interest for businesses, and as the individual factor is of fundamental importance for both (Schaltegger, 2002), a behavioural

perspective is needed to understand how eco-intrapreneurs' idealistic traits influence a company's everyday life (Santini, 2017). Referring to the broader term of SOI, Delmas and Pekovic (2018) support the former call for further research on the individual level of entrepreneurial thinking within the field of sustainable and therefore also EI.

Answering to this increasing need, this exploratory research investigates the individual drivers and their facilitating role on eco-intrapreneurship. Since entrepreneurs differ from intrapreneurs (Camelo-Ordaz et al., 2011; Martiarena, 2013) and entrepreneurs contrast from ecopreneurs (Rodgers, 2010; Santini, 2017), it is also expected that the factors driving an ordinary intrapreneur to engage in conventional innovations are different from those driving an eco-intrapreneur to engage in EI. Considering that personal attitudes, values and motivations play a key role in the differences between entrepreneurs and ecopreneurs (Santini, 2017), similar contrasts are awaited within the intrapreneurial perspective.

Connecting the concept of eco-intrapreneurship with the earlier literature review on intrapreneurial drivers, certain similarities and differences are assumed to appear from this research's findings. Identified as most important aspects within intrapreneurial behaviour, innovativeness, proactiveness and risk-taking (Baczynska, Rowinski & Cybis, 2016; Fellnhofer, 2017; Neessen et al., 2018; Razavi & Ab Aziz, 2017) are also assumed to be found among eco-intrapreneurs. Yet, different to intrapreneurs and based on the rather uncertain nature of EI (Siqueira & Pitassi, 2016) a stronger degree of risk-taking is expected from eco-intrapreneurs. Additionally, understanding the personal experience and interest to be fundamentally guiding when recognizing opportunities (Baron, 2006), it is assumed for eco-intrapreneurs to have a stronger environmental affection compared to intrapreneurs.

No particular differences are foreseen with regards to the network. Similar, referring to intrapreneurial characteristics no specific skill is awaited to be more predominant compared to intrapreneurs. Assuming for eco-intrapreneurs to have similar commitments as intrapreneurs with regards to exploiting the current business while exploring new opportunities, skills such as ambidexterity are likely to be of similar importance (Rosing & Zacher, 2017). However, the skill of persistence is expected to be more crucial for eco-intrapreneurs to successfully overcome obstacles and setbacks and therefore strengthen the eco-intrapreneurial behaviour (Hisrich, 1990). This is again based on the uncertain nature of EI and likely resistance from management.

Finally, referring to Schaltegger (2002), environmental preferences are a personal matter and therefore argued to be intrinsically rooted. Accordingly, this study expects to identify a prominently intrinsic motivation to engage in eco-intrapreneurship compared to general intrapreneurship. Additionally, although scholars have not found a consensus on specific intention triggers, these are understood as vital to the intrapreneurial behaviour (Marques et al., 2018; Monsen, Patzelt & Saxton, 2010; Neessen et al., 2018; Razavi & Ab Aziz, 2017). Different to earlier findings, it is not assumed to find high risk as weakening the intrapreneurial intention. Since EI is referred to as uncertain, a higher degree of risk-taking appears necessary when engaging in EI.

Finally, by applying the three dimensions of intrapreneurial drivers introduced by Neessen et al. (2018), this research aims to receive a holistic understanding of how eco-intrapreneurial attitudes, characteristics and behaviours are interconnected. Acknowledging the influential role of characteristics and attitudes, it is expected for both to show strong relations to the eco-intrapreneurial behaviour. Agreeing to Neessen et al. (2018), their extensive literature review forms a strong basis for future research on the individual intrapreneurial level. Therefore, these three dimensions will hereafter be applied as guidance for the further investigation of this research.

3 Methodology

3.1 Research Approach

This research focuses on the identification of individual drivers to engage in bottom-up EI. Especially the emergence of these drivers at an individual level are to be interpreted as social construct. This implies, that individuals feel subjectively triggered by various factors such as the organizational and the personal environment (Bryman & Bell, 2011). Strengthening this argument, Bryman and Bell (2011) argue that the view and interpretation of reality differs among individuals and therefore within social constructs. It is thus crucial to view social sciences and natural sciences as different justifying an interpretive epistemology strategy for this research (Bryman & Bell, 2011).

While not only the social construct is subject to continuous change based on social interactions, so are the perceived drivers on an individual level. The latter emerge, change or alter through interactions of individuals or variations within the external environment. This therefore corresponds to the constructive ontology (Bryman & Bell, 2011). Accordingly, this research applies the constructive concept of interpretive epistemology (Bryman & Bell, 2011). Combining these two research strategies allows for a deeper understanding of the varying actions and thoughts of individuals (Bryman & Bell, 2011). Additionally, it allows to decrease the researchers' personal biases as their prior experience and knowledge is seen as part of this research (Bryman & Bell, 2011).

3.2 Research Design & Strategy

Although EI and intrapreneurship have separately been subject of a few studies, their interrelation in form of eco-intrapreneurship remains unknown. This is especially the case when understanding this phenomenon at an individual level. Following the argument of this research, it allows to primarily create an initial understanding of eco-intrapreneurship. In line, this research aims to understand the individual drivers and their facilitating role on eco-intrapreneurship. Simultaneously, existing knowledge within the broad field of intrapreneurship is extended. The exploratory nature of this nascent topic justifies the qualitative research approach compared to quantitative research (Bryman & Bell, 2011). Aspired to create theory and new concepts, a qualitative research is most suitable (Bryman & Bell, 2011).

To ensure the largest learning opportunity as stated by Stake (*in* Bryman & Bell, 2011), the research design is a case study of a single organization. Designing this research accordingly, allows to thoroughly analyse the drivers of eco-intrapreneurship and their facilitating role. Combining the exploratory nature of this research and the research purpose, this in-depth study is only possible when limiting the level of analysis to *individuals* (Bryman & Bell, 2011). Additionally, focusing on analysing a general phenomenon with the aim of generalizability within the fields of EI and intrapreneurship, this research employs an instrumental case (Bryman & Bell, 2011).

Following one RQ, this research focuses on two parts. First, the identification of eco-intrapreneurial drivers is accompanied by distinguishing them from general intrapreneurial drivers. Second, their interrelation is identified. With the support of a control group consisting of ordinary intrapreneurs, this research first applies a comparative design (Bryman & Bell, 2011) examining found eco-intrapreneurial drivers in contrast to intrapreneurial drivers. The choice of utilizing a control group for intrapreneurs is fourfold. First, only by means of a control group it can be ensured to identify specific eco-intrapreneurial drivers instead of general intrapreneurial drivers. Second, existing literature rarely elaborates on specific intrapreneurial drivers which would complicate the ability to thoroughly compare the identified drivers. Third, increasing the transferability of the research findings, identified eco-intrapreneurial drivers should be compared with intrapreneurial drivers within the same context. Lacking the coverage of intrapreneurial drivers within the context of EI, utilizing existing literature is not favourable. Fourth, to thoroughly understand the reasoning behind individual eco-intrapreneurial drivers, it is crucial to receive insights into the intrapreneurial perception of EI. Lacking this reference in existing literature encourages the use of a control group. Accordingly, a greater and more profound contribution of this research is guaranteed by investigating two cases within the single organization: (1) *eco-intrapreneurial drivers* and (2) *intrapreneurial drivers*. Again, an emphasis is placed on latter case to solely function as control group within this research. Following the recommendations of Bryman and Bell (2011), a trustworthy comparison of drivers is ensured by applying the same research methods. Identifying similarities and differences, a deeper understanding in the research topic and social phenomena is gained (Bryman & Bell, 2011). Generally, this research remains exploratory at its core of one case (eco-intrapreneurs) to identify individual drivers and their facilitating effect on eco-intrapreneurship.

Focusing on understanding individual drivers and their facilitating role on eco-intrapreneurship, this research takes an abductive approach (Bryman & Bell, 2011). Therefore, inductive and deductive elements are included (Bryman & Bell, 2011). Former approach is triggered by observation and aims to develop theory which can be generalized (Bryman & Bell, 2011). Additionally, it allows to generate novel concepts (Bryman & Bell, 2011). Accordingly, it is applied by staying literature blind throughout the data gathering and initial data analysis (Gioia, Corley & Hamilton, 2012). However, to justify the research gap and contribution, existing literature was reviewed prior to the study allowing for a holistic understanding of the topic. Similar, the final step within the data analysis employs deductive elements to relate findings back to literature to avoid the reinvention of existing knowledge (Bryman & Bell, 2011; Gioia, Corley & Hamilton, 2012). Finally, the comparative element within the data analysis (comparing both cases) utilizes a framework for neutral comparison, adopted from existing literature. Accordingly, both approaches are partly intertwined. Following an iterative process when gathering, analysing and comparing collected data with concepts found in existing literature, this research applies a grounded theory design (Bryman & Bell, 2011).

3.3 Research Process

The context of this research is a large Swedish building construction product manufacturer. Based on several meetings and discussions with employees, paired with observations, it became obvious that the emergence of intrapreneurial EI projects in the given context is particular. Whereas the construction industry is identified as conservative and unsustainable (Woolthuis & Klein, 2010), the organizational context of this case study reveals lacking supportive structures for a company to foster innovation (Buhl, Blazejewski & Dittmer, 2016; Kesting & Ulhøi, 2010). Still, the latter emerged in this case company raising the interest of understanding the individuals behind this innovation. Further to this intriguing object for further investigation, it is argued that individuals' drivers are to be strongly developed and therefore clearer to identify within this given context.

Following these first insights, existing literature was consulted including the topics of intrapreneurship and EI. Receiving little insights into the combined concept of eco-intrapreneurship existing knowledge on ecopreneurship (entrepreneurship & EI) was consulted. Although Gioia, Corley and Hamilton (2012) state the importance of remaining literature blind as long as possible to better comprehend the individuals' perspective, this initial literature

review was fundamental to identify the specific research area and existing gaps. Furthermore, this preliminary review offered the chance to fully grasp the concept of EI and to understand the complex nature of individual intrapreneurial drivers. Simultaneously, existing concepts were identified proving as supportive tools for later conducted interviews and data analysis.

Sequentially, conducting unstructured interviews allowed for a deeper understanding of the research context while receiving new insights into individual drivers fostering EI. Simultaneously, additional literature was consulted in an iterative manner to identify further concepts and frameworks before setting various RQs. This iterative literature review enhanced the credibility of this research topic while clearly defining its boundaries (Bryman & Bell, 2011). Finally, one RQ with two foci was formulated being researchable, related to existing knowledge and ensuring a contribution (Bryman & Bell, 2011). This RQ functioned as a golden thread throughout this study, laid the foundation for the semi-structured interviews and remained broad enough for later adjustments required throughout the process (Bryman & Bell, 2011).

Led by the RQ, semi-structured interviews were conducted resulting in empirical data. Prior, two interview guides (IG) were designed by consulting existing concepts or individual drivers within intrapreneurship as a baseline for interview topics. The two cases required for some minor changes within each IG to eliminate the possibility of guiding questions. This represents the utilization of the concept of EI. Accordingly, this term was utilized only after being mentioned by the eco-intrapreneur and only towards the end when interviewing intrapreneurs. Therefore, both IGs remain similar and the gathered data therefore comparable. Subsequently, these IGs were tested by performing pilot interviews, resulting in refined IGs ensuring the collection of the desired data (Bryman & Bell, 2011).

Thereafter, the analysis of the gathered data was performed in coherence with primarily the methodologies presented by Gioia, Corley and Hamilton (2012) and elements of Eisenhardt (1989). Applying the grounded theory, an iterative process of simultaneously collecting and analysing data while reviewing literature was followed (Bryman & Bell, 2011). Based on generated data and emerging theories, the researchers were able to refine and adapt the data collection process accordingly (Gioia, Corley & Hamilton, 2012). After reaching a theoretical saturation (Bryman & Bell, 2011) for both research cases, the data collection process was terminated.

Aiming to generate new knowledge, the cases were studied by means of the data analysis methodology introduced by Gioia, Corley and Hamilton (2012). The following comparison followed the recommendation of Eisenhardt (1989) to thoroughly focus on each case separately before comparing the outcomes of eco-intrapreneurial drivers to the control group. Finally, the grounded theory model developed in this study was created solely on found eco-intrapreneurial drivers.

3.4 Data Collection Methods

The data collection method is guided by the research design, its purpose (Bryman & Bell, 2011) and RQ (Gioia, Corley & Hamilton, 2012). The case study design of this qualitative research justified the purpose sampling method. More specifically, this study applied a theoretical sampling often employed within grounded theory (Bryman & Bell, 2011). This form of non-probable sampling allowed for a strategic sampling in consistency with the RQ (Bryman & Bell, 2011).

Throughout, primary data was collected by conducting unstructured and semi-structured interviews, company documents and observations. Secondary data was gathered through existing literature. Referring to the triangulation method by Bryman and Bell (2011), a thorough understanding of the context the interviewees operate in was gained. Especially the unstructured interviews together with observations were vital to set a research area and formulate the RQ. Thereafter, the data gathered through semi-structured interviews laid the crucial foundation for the theory emerging from this study (Bryman & Bell, 2011).

3.4.1 Semi-Structured Interviews

The sampling of this research follows the research aim of understanding the role of individual employee drivers and their facilitating role on eco-intrapreneurship. Referring to the two cases (1) *eco-intrapreneurial drivers* and (2) *intrapreneurial drivers* (control group), the applied sampling method results in two samples.

Overall, the purposive sampling for the semi-structured interviews followed three steps. First, supported by the company's idea council, managing the internal innovation initiatives, existing intrapreneurial initiatives within the case company were identified. Second, the initiatives' aim

was identified with their support. This step was fundamental to separate EI initiatives from other innovation initiatives.

EI initiatives were identified as primarily aiming at having a positive impact on the environment (Horbach & Jacob, 2018) whereas other innovation initiatives follow other main targets (e.g. economic benefit). A total of 12 potential initiatives were found, nine general ones compared to three EI initiatives. Characterized as small population, the number of EI initiatives is justified by the context of the case company weakly supporting this type of innovation.

Third, aiming at identifying the intrapreneurial drivers of individual employees allowed to further narrow the sample. Again, with the support of the idea council, individuals participating in these initiatives were identified and classified as being *intrapreneurs* (innovation initiative) or *eco-intrapreneurs* (EI initiative) based on the following definitions:

Eco-Intrapreneur: *Individual freely taking the decision to stretch the current state by recognizing opportunities primarily aiming at environmental improvements and showing their willingness to exploit an eco-innovative idea through action-oriented activities and combining vision with action.* (Antoncic & Hisrich, 2003; Klewitz & Hansen, 2014; Salimath, 2018)

Intrapreneur: *Individual freely taking the decision to stretch the current state by recognizing opportunities not primarily aiming at environmental improvements and showing their willingness to exploit an innovative idea through action-oriented activities and combining vision with action.* (Antoncic & Hisrich, 2003; Salimath, 2018)

Apart from these definitions, the identification of eco-intrapreneurs and intrapreneurs was supported through earlier company insights, previously conducted unstructured interviews, observations and the support of the idea council. The representability of both samples is ensured by drawing from a cross-departmental population and various hierarchical levels up until the decision-making level (e.g. departmental director).

Due to the small population, the sample was not further limited by additional dimensions such as personal characteristics. Supported by Bryman and Bell (2011), a broader data collection ensured a better understanding of this study. Therefore, a total of 16 potential interviewees were

identified (8 eco-intrapreneurs and 7 intrapreneurs) and reached out via digital interview invitations. Resulting from unavailability or refusal to participate in this research, a total of 11 employees were interviewed (6 eco-intrapreneurs and 5 intrapreneurs).

Hereafter, the sample is displayed by differentiating between EI and general innovation initiative (Table 1 & 2). For transparency, each interviewee is listed with its job rank and the aim of the initiative. Allowing traceability throughout this research while guaranteeing anonymity, actual names have been replaced by codes.

EI Initiative			
Date	Rank	Interviewee	Identified Aim of Initiative
24.04.	Employee	I.1	Introducing Circular Economy
16.04.	Middle Management	I.2	
17.04.	Middle Management	I.3	
02.05.	Middle Management	I.4	
26.04.	Employee	I.5	Reducing Carbon Footprint
07.05.	Employee	I.6	New Plant-Based Product Component

Table 1: Eco-Intrapreneur Sampling

Innovation Initiative			
Date	Rank	Interviewee	Identified Aim of Initiative
16.04.	Middle Management	I.7	New Product Offer
17.04.	Employee	I.8	Extending Product Offer with Service
25.04.	Employee	I.9	New Product Offer
26.04.	Employee	I.10	Internal Product Development Improvement
07.05.	Middle Management	I.11	Internal Product Development Improvement

Table 2: Intrapreneur Sampling

3.4.2 Interview Guide

Conducting semi-structured interviews, appropriate IGs were designed by consulting the recommendations of Bryman and Bell (2011). Although the IG represents a structured list of topics to be investigated to answer the RQ, it is crucial to guarantee for enough flexibility for the researchers to gather rich data and to alter the questions when needed (Bryman & Bell, 2011; Gioia, Corley & Hamilton, 2012). Coherent with the iterative research process, the IGs were initially designed in a more open manner to allow for new concepts to emerge. Again, although the IGs were tailored to a small degree to not influence interviewees, the comparability was ensured. Throughout the interviews and in line with the data analysis, those IGs were adjusted to be more focused.

Overall, the IGs deploy various question types and carefully phrased questions to not lead the interviewee (Bryman & Bell, 2011). Furthermore, functioning as a baseline to ensure that all categories of potential drivers are investigated during the interviews, the tentative framework of intrapreneurial driver categories identified by Neessen et al. (2018) was consulted: intrapreneurial (1) *behaviour*, (2) *characteristics* and (3) *attitudes*. Generally, both IGs consist of six similar categories: (1) *interview set-up*, (2) *general background*, (3) *understand the (eco-)innovation initiation*, (4) *personal drivers for (eco-)innovation*, (5) *challenges* and (6) *closing questions* (App.8.2). Hereafter, all topics are further elaborated on.

The first category presents the opportunity to cover all formalities by informing the interviewee about the research purpose and by clarifying questions regarding the topic of confidentiality (Bryman & Bell, 2011). Moreover, the interview structure is introduced and potential concerns of recording the interview eliminated.

Aiming at breaking the ice and making the interviewee feel at ease, the interview continues with the second category. This aims at generating an understanding of the interviewee by asking specific questions about the interviewee's professional path and current job duties. Also, initial insights are gained on the current (eco-)innovation by understanding their period of participation in this initiative and how they identified the opportunity. Further, the context is set by gaining insights on the (eco-)innovation initiation throughout the third category. Using a funnelling set-up of the questions, the aim of this category is to identify the first underlying drivers for this (eco-)innovation initiation. Applying open-ended indirect questions, the drivers on a macro and later micro level are shortly investigated (Bryman & Bell, 2011).

After establishing a picture of the context, the focus for the fourth category is narrowed to an individual level to achieve a thorough understanding of personal drivers for (eco-)innovation. This focus shift is clearly indicated to the interviewee by means of a structuring question (Bryman & Bell, 2011). Reflecting the research purpose, existing intrapreneurial driver categories identified by Neessen et al. (2018) supported the creation of suitable questions. Functioning only as reference when formulating the interview questions to not disregard aspects of drivers, the exact wording is avoided. Thereby, leading questions and answers are prevented. For the eco-intrapreneurial IG, this category simultaneously aims at understanding the relation between intrapreneurship and EI and follows three sections. First, the focus lays on investigating the interviewee's behaviour, attitudes and characteristics on an individual level (Neessen et al., 2018). Second, the concept of "having a positive environmental impact" is introduced to make an initial connection between the individual level drivers and EI. Third, the focus is broadened again by incorporating the organizational context with regards to (eco-) innovation initiatives. Latter section refers to the initial aim of complementing this study by additionally understanding the effect of the organizational context on eco-intrapreneurial drivers. Although this focus was dropped due to weak data gathering on this topic, certain data resulting from those questions is at times incorporated in this research. The control group IG followed the above sections, however, dismissed the EI component to avoid leading questions. Receiving thorough insights is guaranteed by applying a variety of question types, especially *indirect questions, follow-up questions* and *probing questions* (Bryman & Bell, 2011).

Lastly, the fifth category covers the topic of challenges. The focus lays on identifying the drivers of employees to overcome those challenges paired with their learnings. Therefore, questions aim to elaborate on past and future challenges and to identify the behaviour of employees towards those challenges. An emphasis is placed on the underlying driver of individuals to further engage in (eco-)innovation initiatives despite facing those challenges. The latter is achieved by applying *specific questions, probing questions* and *direct questions* (Bryman & Bell, 2011).

Granting the interviewee the opportunity to complement previous information or to add new insights, the interview ends with closing questions (Bryman & Bell, 2011). To receive the interviewee's personal opinion, the final question is directive on the topic of EI (Bryman & Bell, 2011). The latter and few prior interview sections required the application of closed questions to ensure the collection of reliable data (Bryman & Bell, 2011).

3.4.3 Interview Preparation

Allowing the interviewers to gain deeper and richer data by understanding the verbal and non-verbal communication of the interviewee, all semi-structured interviews were conducted face-to-face (Bryman & Bell, 2011). Identifying that interviewees felt most comfortable in their usual environment, all interviews were conducted at the case company in separately booked meeting rooms. The latter ensured a quiet environment without possible disturbances (Bryman & Bell, 2011). Furthermore, being two interviewers allowed to create an informal interview setting in which the interviewee could feel safe and comfortable (Bryman & Bell, 2011).

The international background of the researchers required all semi-structured interviews to be conducted in English. Based on the interviewees' fluency in English, a potential language barrier was not identified as a limitation.

Conducting all interviews with two interviewers was beneficial for three reasons. First, both interviewers followed different roles throughout the interviews. While one interviewer took the role of the main interviewer and guided the interview, the other interviewer adopted a rather passive role. The latter ensured that all aspects of the IG were covered and had the possibility of intervening the interview to deepen the understanding on specific topics or to steer the direction of the interview (Bryman & Bell, 2011). Second, having these different interviewer roles paired with different styles of asking questions offered the chance to receive thicker data, leading to an in-depth understanding. Third, although Bryman and Bell (2011) highlight that research is unusually value-free, the personal bias of each interviewer was decreased by including two interviewers. Still, referring to the constructive concept of interpretive epistemology of this research, a potential personal bias due to prior experience and knowledge are identified as part of this research (Bryman & Bell, 2011).

Finally, all interviews were recorded with the agreement of each interviewee and later transcribed. Ensuring a high level of honesty from the interviewee's, the participation was voluntary and all interviews were kept anonymously.

3.4.4 Ethical Consideration

Consulting the ethical recommendations by Bryman and Bell (2011), this research was conducted within ethical boundaries. Most commonly occurring among researchers and interviewees throughout a research, ethical issues are to be prevented within four principles.

First, the *harm to participants* which can appear among researchers and interviewees in forms of physical harm or harm to their personal or professional development (Bryman & Bell, 2011) was avoided by anonymizing the collected data and to not reveal the case company nor interviewees' job title. Despite the challenge of anticipating all potential harms (Bryman & Bell, 2011), this research studying a small population, reduced latter by clearly informing about the risk of participating in this research and the possibility of dropping out at any time.

Second, a *lack of informed consent* is anticipated on, by providing the interviewee with information about the general research topic and individual level of investigation (Bryman & Bell, 2011). Also, the voluntary participation in this research is emphasized and the interview begun by addressing the data gathering tools and techniques. Although enough information should be shared prior to the interview to ensure an informed consent, it proved challenging to find the appropriate balance without decreasing the authenticity of interview answers (Bryman & Bell, 2011).

Third, the possible *invasion of privacy* is anticipated by ensuring a high degree of anonymity, confidentiality and transparency of research tools and process to the interviewee. Also, allowing the interviewees to withdraw from the research at any time mitigates this (Bryman & Bell, 2011).

Fourth, the degree to which the interviewee might experience *deception* is mitigated by revealing crucial research information allowing the interviewee to make a decisive decision about their participation prior to the interview anticipates this ethical matter. In line, it is ensured that this information does not draw an unreal picture of the actual research study. Still, the challenge remains to identify and share the right amount of information without strongly influencing the interviewees' answers (Bryman & Bell, 2011).

3.5 Data Analysis

Until today, the focus of existing literature lacked an understanding of individual drivers of employees facilitating eco-intrapreneurship. Contributing to the scarce knowledge within this field, this exploratory study aims to develop novel concepts and theory. This goal combined with the qualitative nature of this research is supported by the grounded theory framework (Bryman & Bell, 2011; Gioia, Corley & Hamilton, 2012).

Facilitating the data analysis and allowing for an iterative process, which is key within the grounded theory, all conducted interviews were primary transcribed (Bryman & Bell, 2011). Additionally, analysing the data based on transcribed interviews reduced the researchers' confirmation bias and the incorporation of personal social constructs (Bryman & Bell, 2011). Although impossible to analyse qualitative data objectively, a degree of objectivity is reached by means of transcribed interviews (Bryman & Bell, 2011).

To develop novel concepts and theory, Gioia, Corley and Hamilton (2012) introduce a data analysis approach build in four steps. This systematic approach follows a framework showing the transformation of raw data into novel concepts while displaying the informant's and researchers' voices (Gioia, Corley & Hamilton, 2012, p.18). Utilizing this framework and accordingly the visualisation of performed steps (data structure) strengthened the research transparency and simultaneously its reliability (Gioia, Corley & Hamilton, 2012). Allowing to first identify special eco-intrapreneurial drivers, above analysis steps were separately performed for both cases. Following the recommendation of Eisenhardt (1989), this allowed to gain a thorough understanding of each case separately before comparing them cross-functionally. The comparison of found eco-intrapreneurial drivers with the established control group, followed the visualization of the dynamic relationships among identified eco-intrapreneurial concepts. As argued by Gioia, Corley and Hamilton (2012), the theory build within this research is shown in a novel framework displaying the dynamic relationships.

First, each case was analysed without consulting existing literature ultimately reducing the confirmation bias (Gioia, Corley & Hamilton, 2012) potentially limiting the research outcomes. Alongside the importance of remaining literature blind, the interviewees were identified as "*knowledgeable agents*" (Gioia, Corley & Hamilton, 2012, p.17) justifying the adaption of their terminology throughout the first step. Finally, the exploratory research purpose of this research justified the application of open coding for the data analysis (Bryman & Bell, 2011).

This coding method assisted the identification of novel concepts based on gathered data rather than concepts found within existing literature.

According to Gioia, Corley and Hamilton (2012), the first step aims at identifying the interviewees' perception on the conducted research topic. Establishing a deep understanding of the informant, first crucial quotes referring to individual drivers within all transcribed interviews were highlighted (Gioia, Corley & Hamilton, 2012). This was done, by first carefully reading the interview without coding, to receive a better understanding for the interview at hand. Only afterwards, the interview was read a second time and simultaneously coded. Crucial quotes were then labelled in the interviewee's terminology according to emerging codes (Gioia, Corley & Hamilton, 2012). Analysing both cases separately a total of 316 1st order concepts were identified (191 eco-intrapreneur & 125 intrapreneur).

Thereafter, these 1st order concepts resulted in broader 2nd order themes. By further developing the 1st order concepts based on their differences and similarities, a total of 61 2nd order themes were found (35 eco-intrapreneur & 26 intrapreneur). Representing the transitional phase between the informants' perspective into the researchers' perspective, these themes were labelled based on a combination of theoretical and interviewee terminologies (Bryman & Bell, 2011; Gioia, Corley & Hamilton, 2012). This labelling was performed in a joint effort of both interviewers.

In a final step, earlier identified 2nd order themes were further developed in overarching aggregated dimensions. A total of 15 aggregated dimensions were identified resulting from 8 eco-intrapreneur and 7 intrapreneur. These aggregated dimensions showed only vital findings and as argued by Gioia, Corley and Hamilton (2012), represent a high degree of generalizability. Remaining literature blind in the previous steps to allow for the emergence of nascent concepts, the final step was supported by existing theory (Gioia, Corley & Hamilton, 2012).

The above steps were performed until no additional concepts appeared from the data review (Bryman & Bell, 2011). Thereafter, based on these aggregated dimensions a comparison of eco-intrapreneurial drivers with the control group was performed. Ensuring the liability and fair comparison of the data, the aggregated dimensions of each case were clustered within the three dimensions of intrapreneurial drivers (behaviour, characteristic and attitudes) introduced by Neessen et al. (2018). The description of the dimensions supported the categorization of aggregated dimensions by identifying the best fit. Accordingly, a neutral basis for comparison

was created while ensuring the creation of nascent concepts throughout the first steps. Staying true to Eisenhardt (1989), unique patterns were identified within each case before its comparison contributed to a robust research outcome.

Following this comparison, solely the outcome of eco-intrapreneurs was further developed into a dynamic model grounded in data (Gioia, Corley & Hamilton, 2012). Based on the findings and literature a grounded theory model was created. A clear overview of latter was generated by transparently visualizing the relationships among different concepts (Gioia, Corley & Hamilton, 2012). Avoiding the possibility of reinventing existing theories, this dynamic model was created by iteratively consulting existing literature and analysed data (Gioia, Corley & Hamilton, 2012).

3.6 Research Evaluation

To assess the quality of a qualitative research, Guba and Lincoln (1994, *in* Bryman & Bell, 2011) introduce the following evaluation criteria: (1) *credibility*, (2) *transferability*, (3) *dependability*, (4) *confirmability* and (5) *authenticity*.

Credibility of this research is ensured by applying a triangulation methodology. Thereby, within this study, data from three different sources is gained namely, semi-structured interviews, thorough literature review and the application of a control group (Bryman & Bell, 2011). Reducing misunderstandings from gathered data, cross-checking the outcome from different sources increased credibility. Despite the small population size, this study also ensured an appropriate sample size to draw conclusions from.

Transferability of this research is guaranteed by presenting a “*thick description*” (Bryman & Bell, 2011, p.398) of the context and execution of this research. Therefore, other researchers receive the possibility of making own judgements of the outcome and transfer of theory (Bryman & Bell, 2011). Simultaneously, utilizing data methods aiming to generate generalizability, developed theory ensures a high level of transferability (Gioia, Corley & Hamilton, 2012).

Dependability reflects the quantitative research criterium of reliability (Bryman & Bell, 2011). This research guarantees dependability by transparently elaborating the research methods and steps while mentioning potential research limitations. Additionally, the application of a

consistent process of data gathering by means of an IG strengthens the dependability (Bryman & Bell, 2011).

Although full objectivity is impossible to ensure in qualitative research, *confirmability* longs for the researcher to reduce possible subjectivity and biases (Bryman & Bell, 2011). The constructive concept of interpretive epistemology deployed in this research, reduces the bias of the researcher as prior experiences and knowledge belong to the research (Bryman & Bell, 2011). Additionally, the biases throughout unstructured and semi-structured interviews were decreased by conducting them with both interviewers. Misunderstanding of data was reduced and therefore objectivity increased by applying the methodology introduced by Gioia, Corley and Hamilton (2012). Referring to Bryman and Bell (2011), objectivity is supported by analysing gathered data in a joint effort allowing for two perspectives.

The research ensures *authenticity* by incorporating individuals throughout various departments and among different hierarchical levels in the research sample (Bryman & Bell, 2011). Furthermore, the exploratory nature of this research in a yet rarely studied research field supports the notion of authenticity.

3.7 Generalizability

Through the investigation of a single case study within this research, it appears challenging to obtain external validity. Especially, the investigation of a case within a certain setting might reduce its generalizability (Bryman & Bell, 2011). Still, following the methodology approach introduced by Gioia, Corley and Hamilton (2012), allows to generalize the findings. Creating concepts possible to apply in other domains, the findings paired with theory increase generalizability (Gioia, Corley & Hamilton, 2012). The obtained findings are argued to be employed in the context of EI and within a conservative organizational environment where despite little management support still eco-intrapreneurial activities occur.

4 Findings

Hereafter, the research findings are objectively presented without incorporating existing literature. Former result from data collected within the construction industry, characterised as conservative and unsustainable (Woolthuis & Klein, 2010). Further, the case company's weak organizational context for innovation allowed for a clear identification of individual drivers facilitating EI and their interrelation.

Facilitating the readability and to maintain the context of each case, first the findings of the eco-intrapreneurs and thereafter the control group are shown separately. Furthermore, the findings are structured according to the three dimensions by Neessen et al. (2018). Supported by examples of possible sub-dimensions (App.8.1), the aggregated dimensions were categorised accordingly.

Despite the variety of gathered data, the findings are solely supported by the most representable quotes. Latter were chosen based on their ability to strengthen the respective 2nd order themes. Furthermore, the journey from raw data to aggregated dimensions is visualized by means of data structures (Gioia, Corley & Hamilton, 2012).

4.1 Eco-Intrapreneur

4.1.1 Innovative Behaviour

4.1.1.1. Innovative Personality

The innovative personality was found as an eco-intrapreneurial behaviour. Core elements include a scrutinized mindset, curious personality and excitement to innovative. Additionally, an experience in innovating and experimenting complement this behaviour.

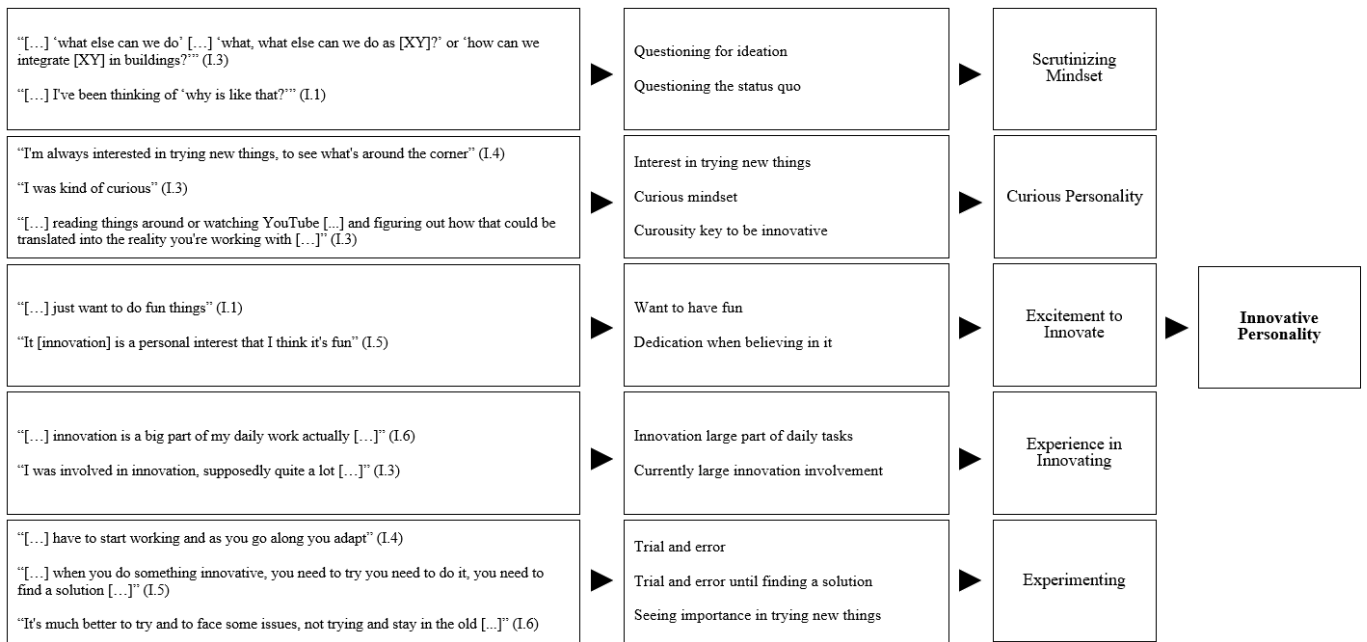


Figure 1: Data Structure of Innovative Personality

A reappearing theme within the collected data was the interviewees ability of continuously questioning. With a **scrutinizing mindset**, eco-intrapreneurs questioned not only the organization's internal situation but also the external competitive set. An emphasis was on constantly questioning the "why".

Curious personality was identified based on the interviewees' general interest of doing something new or finding new opportunities by broadening the personal horizon. The data showed that eco-intrapreneurs viewed curiosity vital for innovation.

The findings emphasised the notion of **excitement to innovate**. This theme reflects the interviewees' urge to have fun and enjoy the activity of innovating.

The theme **experience in innovating** resulted from previous experiences or current exposures in innovation of eco-intrapreneurs. Additionally, some interviewees saw themselves as being large contributors to new innovative ideas.

Practically trying out new things a theme emerged from the interviewees' involvement in **experimenting**. All eco-intrapreneurs showed a strong conviction to trying out new possibilities and not giving up on ideas or possibilities before deliberately testing them. Raw data highlighted the interviewees' continuous urge for trial and error.

4.1.1.2. Initiator

Being an initiator surfaced throughout the investigation of eco-intrapreneurs. Interviewees were found to pave the way for innovation activities, utilizing their supportive network and having an independent working habit.

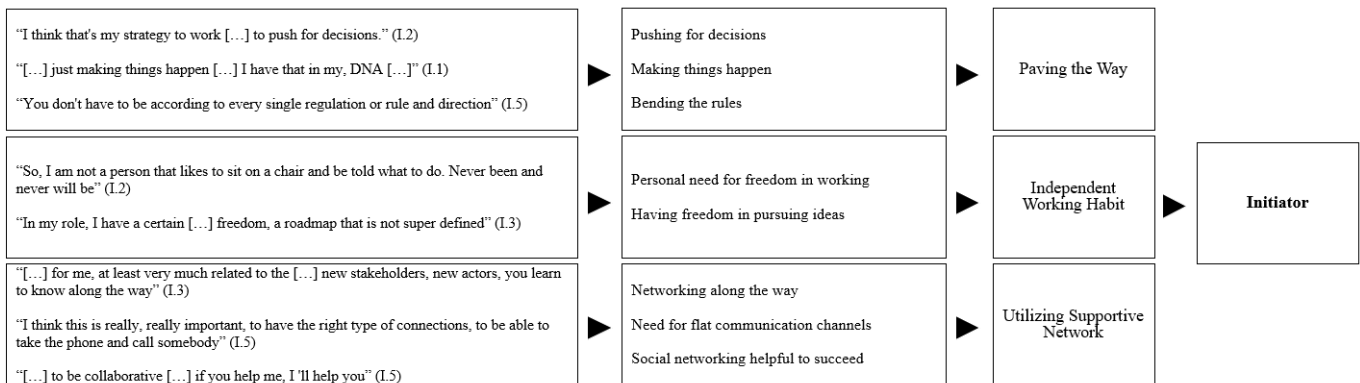


Figure 2: Data Structure of Initiator

Complementing, eco-intrapreneurs were found to **pave the way** for future innovations. The findings showed the interviewees' ability to convince other employees and to push for decisions to advance a project. Especially, bending the rules was found helpful.

Reflecting a minimal theme, **independent working habit** highlighted the interviewees' need to work independently without tight guidelines. The importance of following their own roads was highlighted.

Utilizing supportive network proved essential to work with innovation. The urge for flat communication channels within an organization was found crucial for interviewees. Throughout, the findings showed that eco-intrapreneurs constantly created and broadened their social network.

4.1.1.3. Environmental Business Thinking

The ability of having an environmental business thinking was found to root within the innovative behaviour. Accordingly, recognizing new business opportunities from the market and within environmental matters was found as important as creating financial value for the organization.

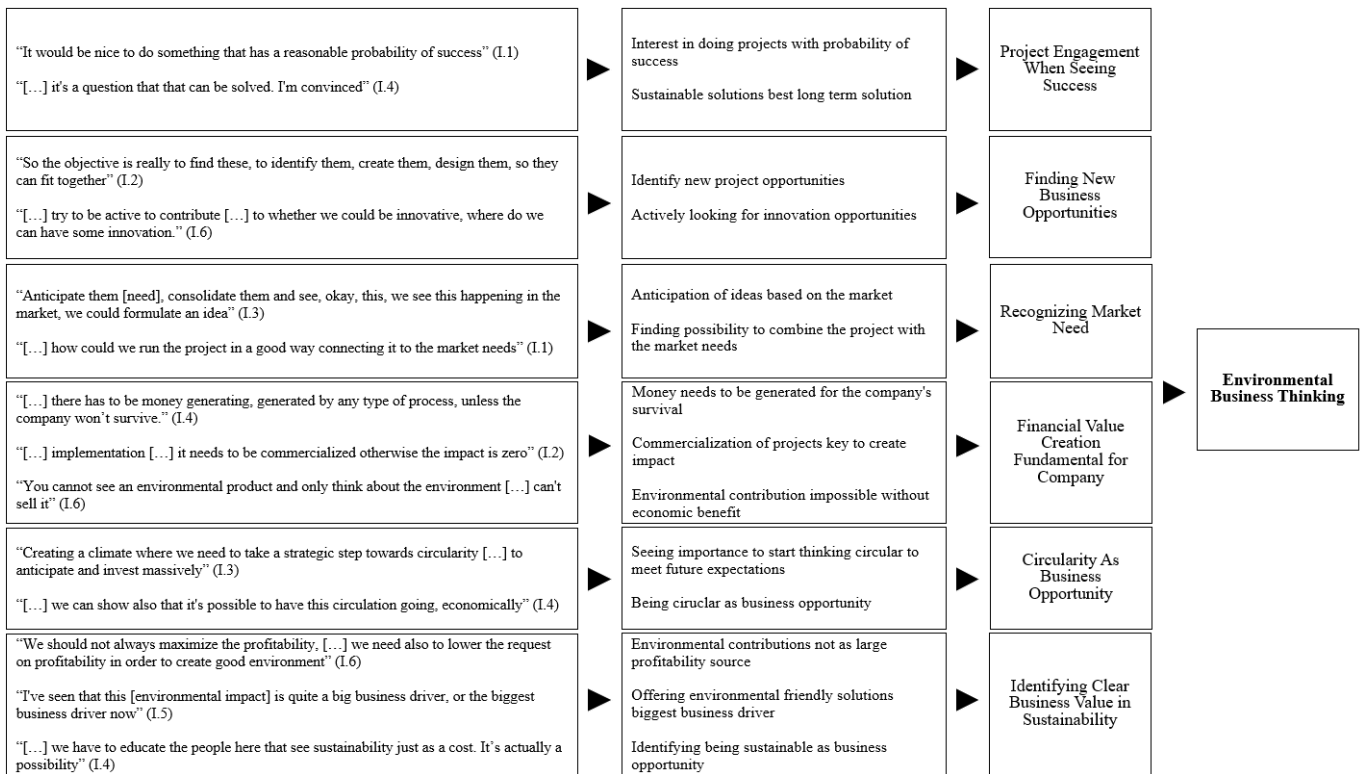


Figure 3: Data Structure of Environmental Business Thinking

A theme emerging from the findings is the interviewees' **project engagement when seeing success**. Eco-intrapreneurs were found to engage when seeing feasible ideas due to their drive of seeing success.

The findings showed the interviewees' ability of **finding new business opportunities**. A continuous outward looking ability of the individuals supported the identification of business opportunities. Raw data highlighted the identification of new opportunities based on personal interests.

Recognizing market needs showed a minimal finding. Interviewees stretched the need to anticipate ideas based on the market and therefore to find new project ideas incorporating market needs.

Another theme referred to **financial value creation fundamental for company**. The eco-intrapreneurs saw the importance of generating revenue for the company within every innovation project, including EI. Raw data emphasized this notion, showing that commercialization is key.

To meet the future needs of the market and to generate revenue from raw resources, the theme **circularity as business opportunity** emerged. Raw data highlighted the interviewees believe in circularity to offer the connection between a business opportunity and achieving

environmental improvements. Additionally, eco-intrapreneurs acknowledged making new products from old as elementary.

Identifying clear business value in sustainability represents a stand-alone theme. Interviewees highlighted the benefit of sustainability as business opportunity or even as strongest business driver today. The findings showed that interviewees identified environmental contributions to currently not represent a large profitability source.

4.1.2 Characteristics

4.1.2.1. Ambidexterity

Ambidexterity characterised the eco-intrapreneurs based on the ability to operate within organizational boundaries while also looking for disruption when innovating. Therefore, while following the organizational image and engaging in incremental innovation, interviewees also looked for change and uniqueness.

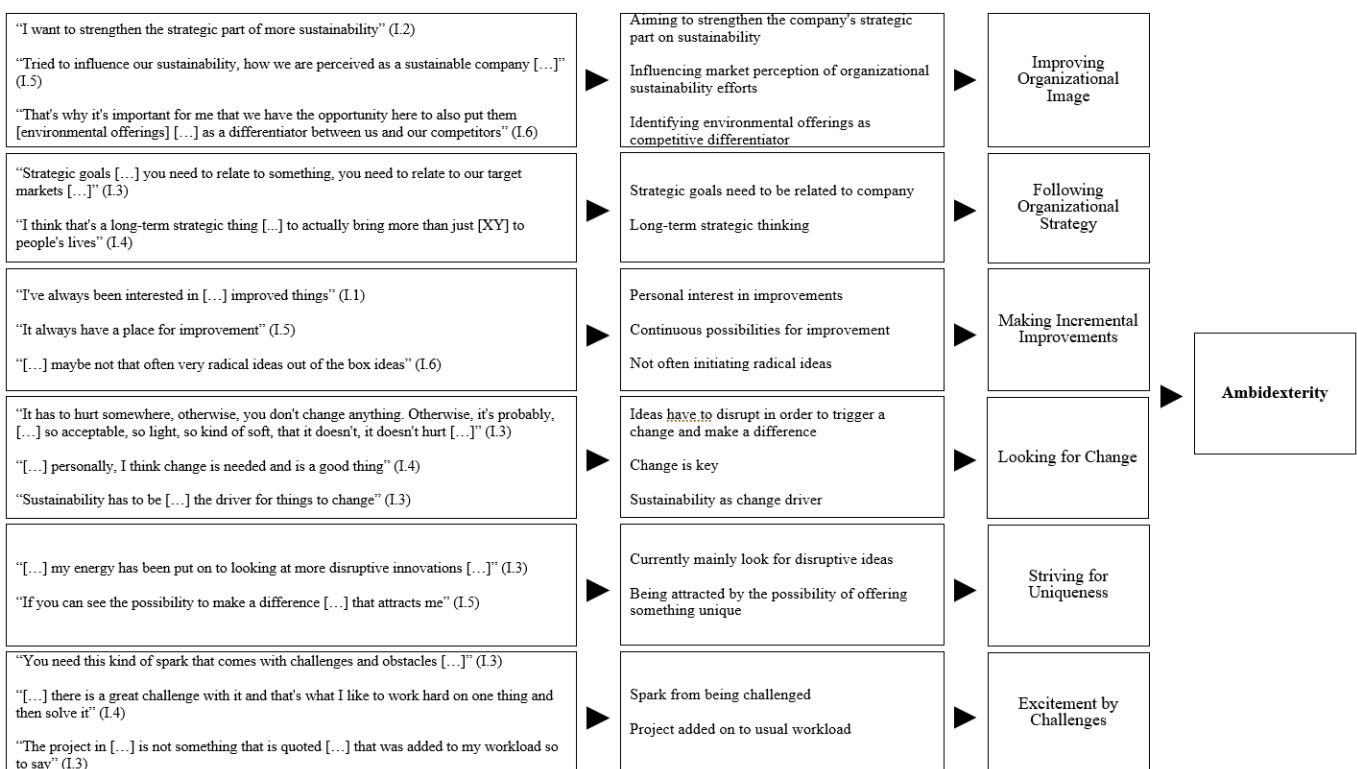


Figure 4: Data Structure of Ambidexterity

Improving organizational image derived as finding due to the interviewees' aim of strengthening the organization's market perception. These findings embraced the organizational brand improvement with regards to sustainability and identified environmental offerings as vital.

Also, interviewees were found as **following** the **organizational strategy** when innovating. Supporting this, eco-intrapreneurs showed a long-term strategic thinking.

Making incremental improvements, emerged from the interviewees believe and interest in continuous improvements. Also, the findings showed that most commonly past innovation was of incremental nature.

Different, the findings found that eco-intrapreneurs are also **looking for change**. This resulted from a deep conviction that change can only occur through disruption. Especially, within the field of EI interviewees mentioned change to be key.

Striving for uniqueness appeared as eco-intrapreneurs were found to be attracted by offering something unique. Raw data showed that interviewees increasingly looked to provide differentiation through innovation.

Facing challenges throughout the innovation process was referred to as being a spark. In turn, also feeling rewarded when combating those, the theme of personal **excitement by challenges** arose.

4.1.2.2. Environmental Mindset

Environmental mindset was found as another crucial characteristic, evolving around the environmental aspect to represent a prerequisite when innovating. Additionally, having an environmental background and experience were core to this mindset.

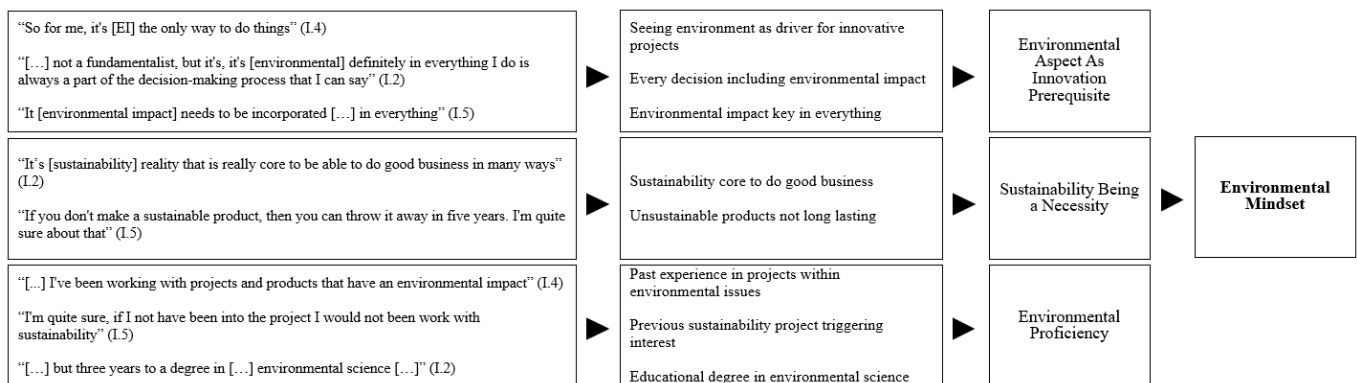


Figure 5: Data Structure of Environmental Mindset

Laying a foundation in every innovation, the theme **environmental aspect as innovation prerequisite** arose. The interviewees were found to have a strong personal interest in the environmental aspect and involve latter in every decision-making process. Therefore, having a positive environmental footprint showed a driver for current and future innovation projects.

Sustainability being a necessity was based on the interviewees' conviction that sustainability is core to good business, future benefits and future growth. Eco-intrapreneurs recognized the urgency of offering environmentally friendly offerings to remain close to the market needs. Findings highlighted sustainability to be a long-term solution as unsustainable products are seen to have no future.

The theme **environmental proficiency** resulted from the professional background of interviewees within the environmental topic. Eco-intrapreneurs were found to have developed their environmental experience based on educational backgrounds or previous engagement in EI projects. The environmental background did not appear as fundamental to develop a strong environmental interest.

4.1.2.3. Determination

Consisting among others of action orientation, resilience and optimism, determination appeared to characterise eco-intrapreneurs. Former traits are extended through the ability of focusing on essentials and to make conscious decisions.

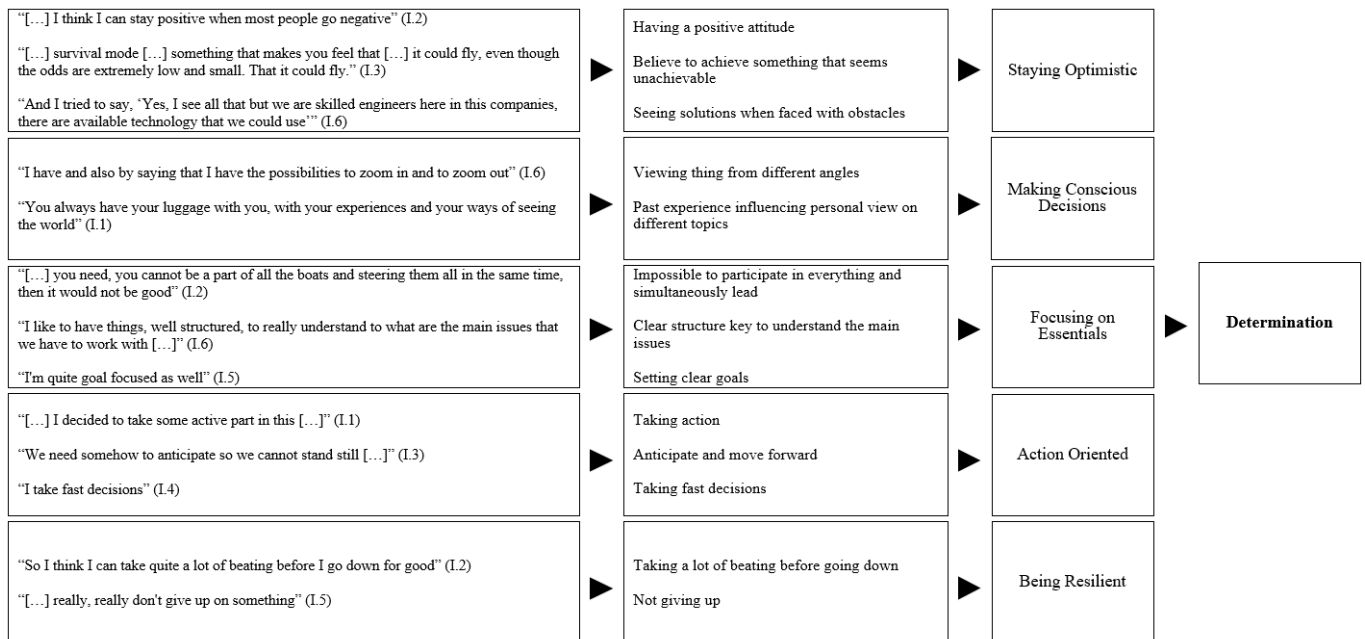


Figure 6: Data Structure of Determination

The eco-intrapreneurs characterised themselves as having a positive attitude and to not lose confidence. **Staying optimistic** furthermore arose from the interviewees confidence to achieve things labelled as unachievable.

Making conscious decisions appeared from the interviewees' ability to change perspectives and reflect on situations before acting. Findings highlighted the interviewees past experience to have strongly influenced the individual's perception.

Also, interviewees showed the ability to **focus on essentials**. Eco-intrapreneurs believed it to be impossible to participate in everything and simultaneously take the lead. Understanding the core, focusing on the project aim and setting clear goals were identified as crucial.

A main finding refers to the theme of **action oriented**. Interviewees were found to take the step from having an idea to initiating it. Additionally, by anticipating and advancing projects, eco-intrapreneurs showed a clear motive to just do it.

The theme **being resilient** emerged from the findings based on the ability to take a lot of beating before going down. While the interviewees showed a strong mindset to not give up, the findings also surfaced the eco-intrapreneurial patience to pursue disruptive ideas.

4.1.3 Attitudes

4.1.3.1. Intrinsic Motivation

Appearing as personal attitude, eco-intrapreneurs showed strong intrinsic motivation by advancing their personal skill set and receiving non-financial appreciation.

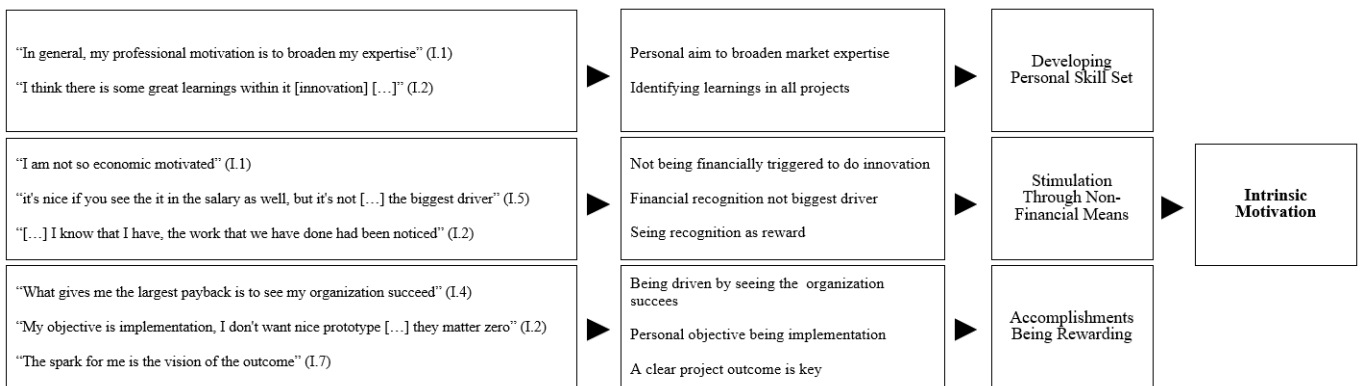


Figure 7: Data Structure of Intrinsic Motivation

Identifying personal satisfaction from widening the personal competence and retrieving learnings from previous projects, the theme of **developing personal skill set** emerged. The findings showed that interviewees continuously enlarge it by questioning areas beyond personal duties.

Stimulation through non-financial means represents another theme. Most interviewees engaged in innovation without financial triggers. A highlight was placed on experiencing recognition to be a strong intrinsic motivator.

Identifying **accomplishments as being rewarding**, highlighted the interviewees motivation of seeing tangible success or effects. Referring to latter, the interviewees perceived project accomplishments and organizational success as rewarding.

4.1.3.2. Environmental Purpose

Resulting from an intrinsic urge to contribute to a better environment, the dimension of environmental purpose surfaced. This purpose was extended through the aim of creating a market impact, making a valuable difference.

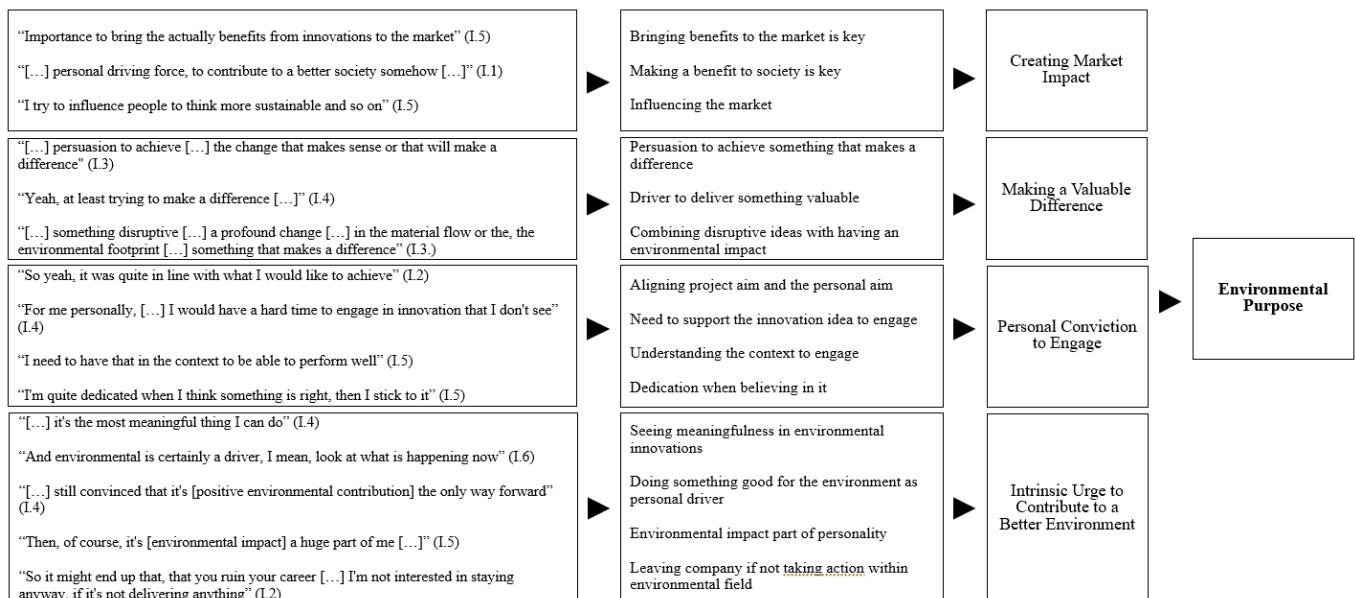


Figure 8: Data Structure of Environmental Purpose

The findings showed a strong need of **creating positive market impacts**. Highlighting the additional need to create an impact on customers, some eco-intrapreneurs were found to aim to influence the market.

Making a valuable difference, the eco-intrapreneurs were found persuaded to achieve a long-term impact by creating a valuable difference. Especially, the combination of market differentiation and achieving disrupted ideas with a positive environmental impact was highlighted.

Emphasising the necessity of understanding the purpose and context when innovating, interviewees longed to have a **personal conviction to engage**. Therefore, eco-intrapreneurs

aimed to align the project purpose with their personal aim. The interviewees' dedication within a project appeared dependent on their own believes.

The **intrinsic urge to contribute to a better environment** was identified as another theme. The eco-intrapreneurs showed a clear interest in the environmental impact and in some cases identified the latter as part of their personality. Continuously improving the environmental footprint was aimed for within the personal and professional context. Emphasis was placed in the interviewees' conviction to leave the company if no environmental actions were to be taken.

4.2 Intrapreneur

4.2.1 Innovative Behaviour

4.2.1.1. Innovative Personality

Having an innovative personality was found a fundamental behaviour of the intrapreneurs. Core elements appear to be a combination of a scrutinized mindset with an excitement of creating new things. Additionally, they have an innovation proficiency and excitement to experiment and being adventurous.

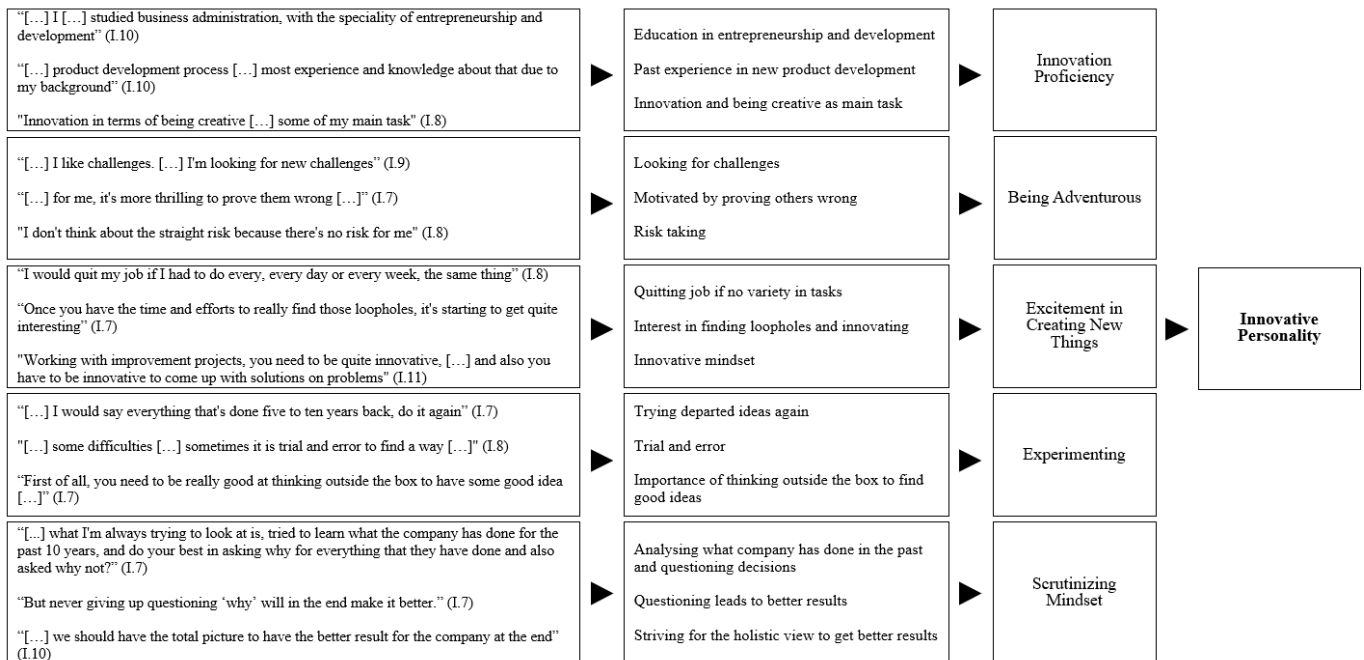


Figure 9: Data Structure of Innovative Personality

Having an **innovative proficiency** was found to be a trigger for intrapreneurs to engage in innovative projects. The combination of experience in new product development and

innovation as one of the main tasks enabled their innovative view. Some of the interviewees had an educational background in entrepreneurship.

The interviews revealed the theme of **being adventurous**. The interviewees were found to look for challenges and were motivated by proving other people wrong with their actions. Besides, their energized and fearless personalities made them more risk taking.

Another theme that emerged was the **intrapreneurs' excitement in creating new things**. Ideating every day made them stay busy and motivated. Without this variation in their job, the interviewees highlighted to potentially quit. The innovative mindset and excitement in working with something new appeared to be triggered by their interest in innovative projects.

Trial and error, the importance of thinking outside the box and the requirement of a free working approach were recurring topics, underlying the intrapreneurs' interest in **experimenting**. By changing the view and retrying old ideas, intrapreneurs were looking for new opportunities. Combining company competencies, interviewees made use of their creative mindset to identify innovative ideas.

Another reappearing theme was a **scrutinized mindset**. The collected data revealed the interviewees' ability of continuously questioning the "why" and their interest in analysing the company's past decisions in order to find better results. Requiring seeing the whole picture, intrapreneurs aimed at making ideas work throughout the value chain.

4.2.1.2. Social Skills

Found throughout the interviews, social skills represent a basic behaviour of intrapreneurs and is compound of communication and team player abilities.

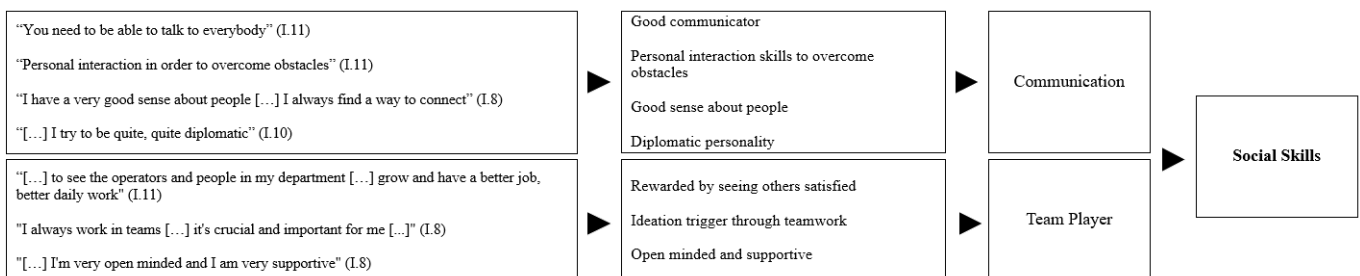


Figure 10: Data Structure of Social Skills

The collected data highlighted the importance of **social skills** for intrapreneurs. Being a good communicator, able to talk to everybody, personal skills and a good sense about people as well as having a diplomatic personality helped overcoming obstacles.

Also, of importance seemed to be an open minded and supportive personality seeing own success in being able to help others being successful and satisfied. The ideation process of such **team players** was found to be triggered through teamwork.

4.2.1.3. Conventional Business Thinking

A distinctive concept describing ordinary intrapreneurs, surfaced as conventional business thinking. Accordingly, interviewees appeared sales focused and aiming to increase efficiency through innovation. Besides, cost was found to be superior to sustainability, whereby they were showing sustainable reactivity.

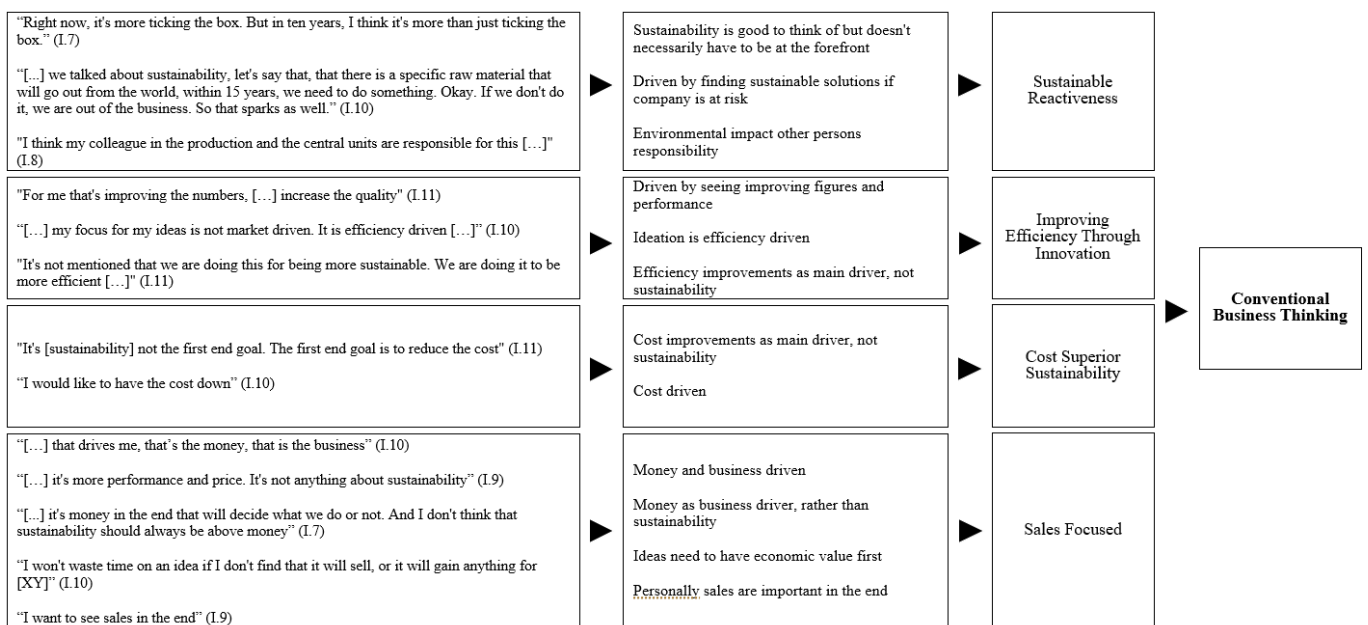


Figure 11: Data Structure of Conventional Business Thinking

Personally, the interviewees did not identify sustainability to be the biggest importance for now. Intrapreneurs appeared to only start thinking about sustainable aspects when seeing the company at risk or to receive approval for projects. Sustainability surfaced as being more like something to “ticking a box” and not part of the personal responsibilities, demonstrating **sustainable reactivity**.

Improving efficiency through innovation was another theme, underlining the intrapreneurs’ conventional business thinking. The ideation efforts were found to be mainly driven to improve figures and performance. Different, sustainable improvements were seen as positive side effect of such efficiency improvements but not their main driver.

To be highlighted, the theme **cost superior sustainability** emerged, emphasising cost improvements as main driver for innovative ideas, rather than sustainability. Therefore, those

projects showing sustainable efforts predominantly came down to the cost aspect as main driving force.

Lastly, the findings showed intrapreneurs to be majorly **sales focused**. Often, the personal aim for new developments was found to be higher margins or obtaining differentiation, both being important money generators. Projects lacking to show economic value through sales or other economic gains were highlighted to not be interesting. The money surfaced as essential factor showing what to do and not to do.

4.2.2 Characteristics

4.2.2.1. Safe Exploration

Based on the intrapreneurs' inclination of being cautious, systematic and to preferably only engage in feasible ideas, the dimension of safe exploration arose. Additionally, the need of following clear targets and strategic reasonings to foster engagement appeared.

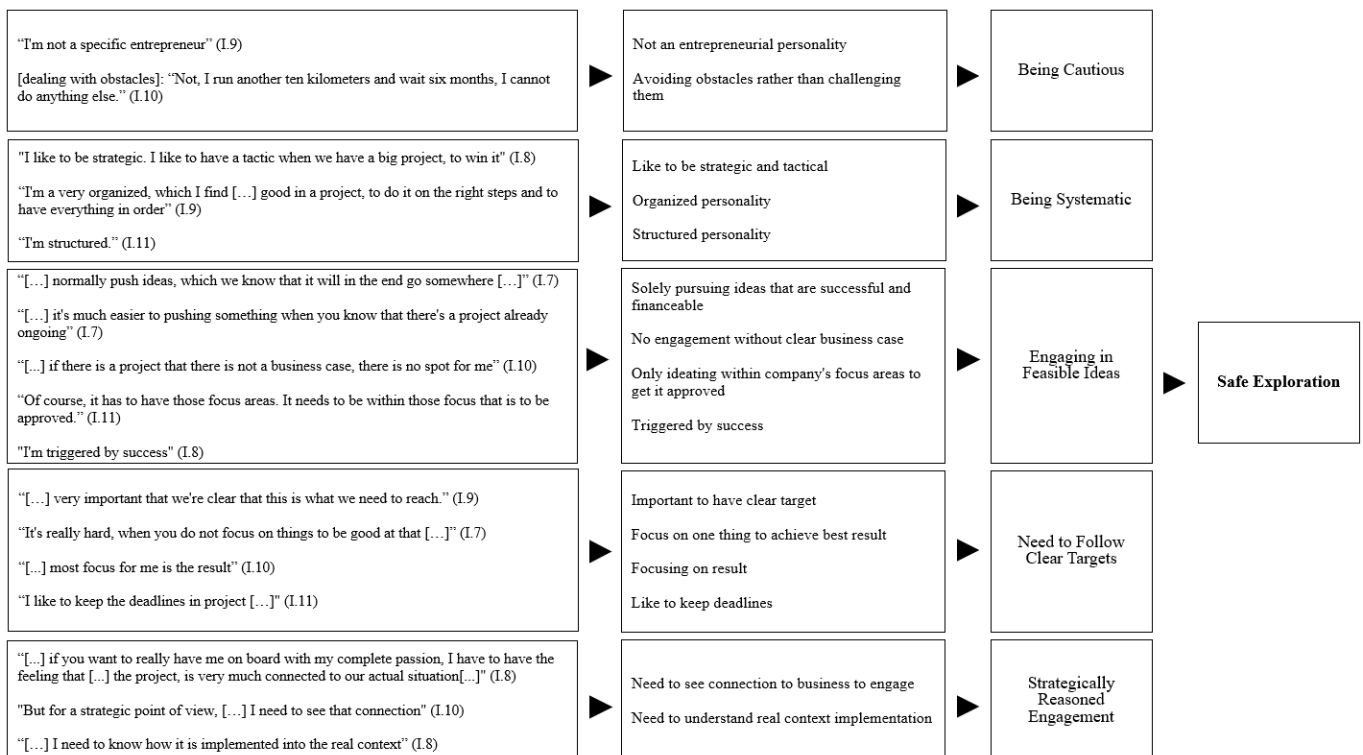


Figure 12: Data Structure of Safe Exploration

Intrapreneurs appeared to avoid obstacles rather than challenging them, leading to **being cautious**.

Intrapreneurs were also identified as **being systematic**. The findings found a preference for stepwise strategic and tactical approaches when facing larger projects. This was enhanced by having organized and structured personalities.

Triggered by success and reaching targets, intrapreneurs were typically **engaging in feasible ideas** with a high likelihood of implementation. Therefore, the intrapreneurs were found to preferably ideate within the company’s focus areas to get ideas approved and financed by the company. It was highlighted that engagement was uncommon without clear business cases.

The findings additionally revealed the **need to follow clear targets**. The interviewees emphasized their target-oriented personalities and result focus. Following clear targets while having a clear focus to achieve the best results proved to be important.

Another stand-alone theme showed a **strategically reasoned engagement** as fundamental. The interviewees showed the need to see a connection between the idea and business practices in order to engage. Only when understanding the context and reason intrapreneurs truly engage.

4.2.2.2. Eagerness

Dedication and the initiative to push innovative ideas was found to root within eagerness, a basic concept for intrapreneurship.

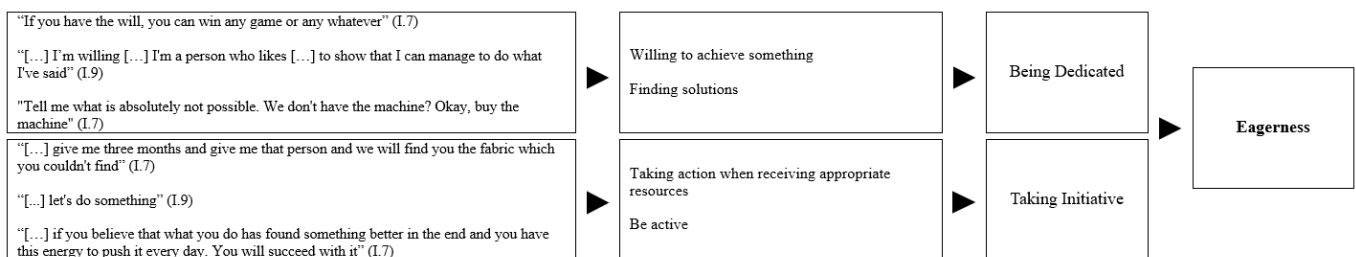


Figure 13: Data Structure of Eagerness

Being dedicated appeared as stand-alone concept by the interviewees persistency and willingness to achieve something. The findings reflected for the ‘not giving up’ and convincing personality, facilitating the identification of solutions and achievement of goals. Throughout the interviews the importance of a pushing personality was highlighted.

Additionally, **taking initiative** emerged as important theme for intrapreneurs. When receiving the appropriate resources, interviewees showed no hesitation to act and lead the development

of an approved idea. The believe in something surfaced as crucial aspect to ensure a project’s success and to push for ideas.

4.2.3 Attitudes

4.2.3.1. Business Purpose

Intrapreneurs were identified as being business protective by means of contributing to the organizational success with incremental market-oriented ideas, resulting in competitive advantages. Sustainability was identified as side effect.

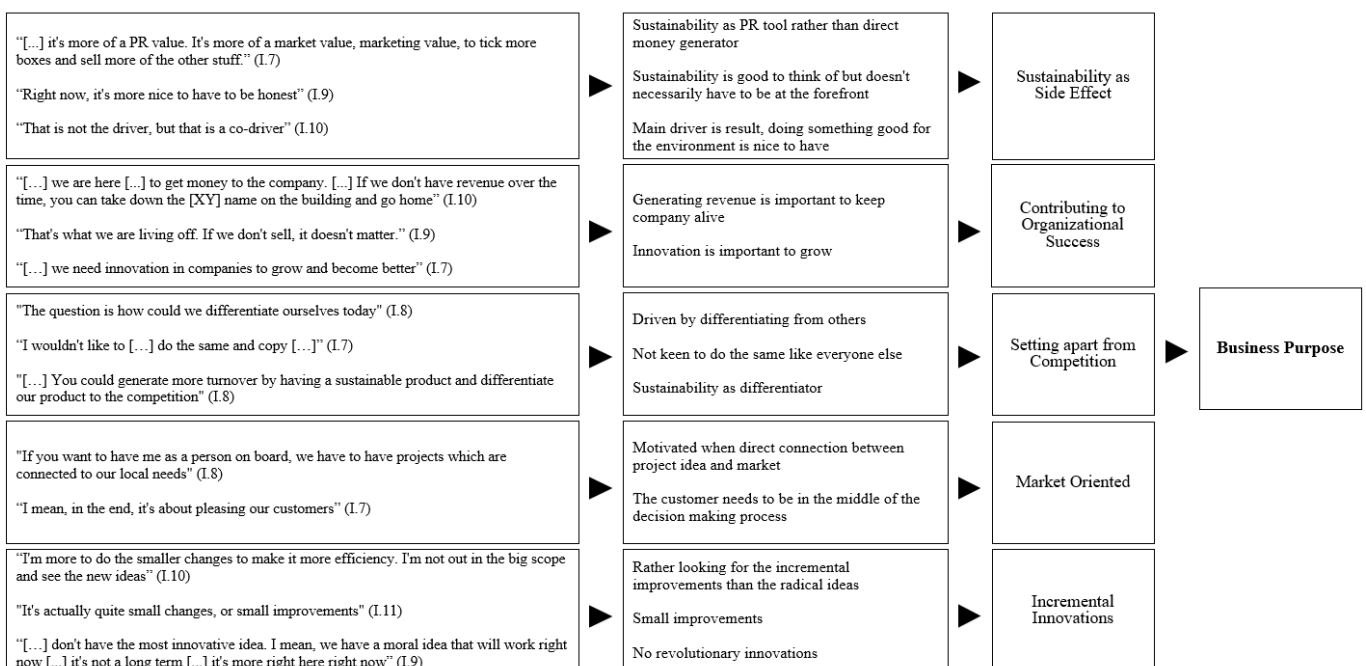


Figure 14: Data Structure of Attitude

So far intrapreneurs identified sustainability as PR tool, rather than direct money generator. **Sustainability as side effect** showed this concept to not be at the forefront. Instead, the findings unveiled the generated result to be the main driver in order to contribute to the organizational success.

By keeping the bigger business in mind intrapreneurs appeared to be driven by **contributing to organizational success**. The findings highlighted the intrapreneurs perception of continuous improvements and innovation to be essential to grow. Yet, revenue generation was emphasized as prerequisite for developments to keep the company alive.

The data revealed, that intrapreneurs were looking for ways to differentiate from competition. The aim to not do the same as everyone else was mentioned during the interviews. **Setting apart from competition**, was therefore seen as innovation trigger.

When ideating, the interviewees were found to be **market oriented**. Combining project ideas and the market through pragmatic solutions, the findings found the customer to be in the middle of the decision-making process for intrapreneurs. Furthermore, it appeared as rewarding when receiving positive market feedback.

Intrapreneurs appeared to rather look for **incremental innovations** than the radical ideas. Throughout the interviews, small process improvements instead of revolutionary innovations were highlighted as sufficient. The improvement of products often followed the need of having a checkbox on everything.

4.2.3.2. Motivation

Motivation was found to facilitate the pursuit of innovation. Intrapreneurs appeared to be stimulated by a combination of intrinsic and extrinsic rewards, compound of receiving appreciation, financial means and personal development.

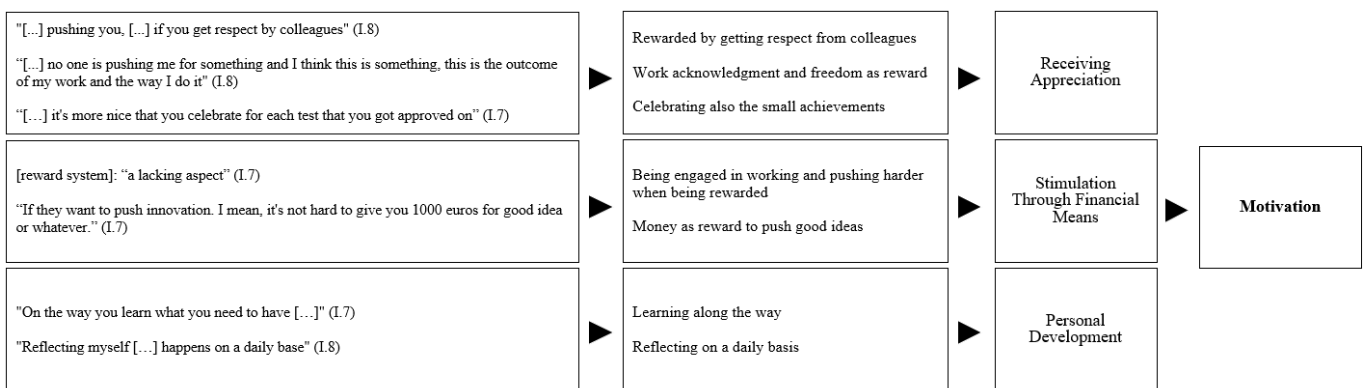


Figure 15: Data Structure of Motivation

A stand-alone theme emerged from the findings as **receiving appreciation**. For intrapreneurs it proved rewarding when receiving recognition and respect for conducted work. Furthermore, the celebration of the small achievements and being granted a free way of working was found to be important.

Throughout the interviews, a strong emphasis was placed on the work **stimulation through financial means**. This defined the means to engage intrapreneurs to work and push harder.

Although identified as not longing for big rewards, money appeared as useful innovation pusher.

Personal development was another theme proving motivating for intrapreneurs. The findings showed a clear interest in receiving feedback and learning along the way. Additionally, intrapreneurs characterised themselves as being self-critical and reflective. Also, curiosity was found to be triggered when identifying a chance to gain something from it.

5 Discussion

The afore defined aggregated dimensions show personal drivers that trigger eco-intrapreneurs' respectively ordinary intrapreneurs' engagement in eco- and ordinary innovations. To answer the RQ of identifying individual drivers and their facilitating effect on eco-intrapreneurship, those drivers clearly characterising eco-intrapreneurs are first investigated. Accordingly, this chapter begins with the comparison between the drivers for eco-intrapreneurs and the control group.

After specifying the eco-intrapreneurial drivers, their dynamic interrelations were understood to fully answer the RQ. Visualising these interrelations, the created grounded theory model is introduced. Afterwards, the dynamic relationships between the identified drivers are discussed.

5.1 Drivers of Eco-Intrapreneurship

Comparing the findings based on the three dimensions of behaviour, attitudes and characteristics (Neessen et al., 2018), readability is increased by giving an overview of the aggregate dimensions (Table 3 - 5). A more comprehensive comparison overview containing the respective second order themes can be found in the appendix (8.3). Ensuring a solid comparison, related intrapreneurial literature and interview quotes are incorporated.

Intrapreneurial Behaviour

Intrapreneurial Dimensions	Eco-Intrapreneur	Intrapreneur
<i>Behaviour</i>	Innovative Personality	Innovative Personality
	Initiator	-
	-	Social Skills
	Environmental Business Thinking	Conventional Business Thinking

Table 3: Overview Identified Behavioural Drivers

Neessen et al. (2018) describe the sub-dimensions of innovativeness, proactiveness, opportunity recognition, risk-taking and networking as fundamental when aiming to innovate within organizational boundaries. Both groups show those basic behaviours (“[...] *just making things happen [...] I’ve that in my, DNA [...]*” (I.1); “[...] *being creative [...] some of my main tasks*” (I.8); “*I don’t think about the straight risk [...]*” (I.8)), yet they differentiate in their peculiarities.

While eco-intrapreneurs and intrapreneurs share an equal innovative personality, they differentiate in the levels of proactivity. Compared to the control group, eco-intrapreneurs are clearly identified as initiators, actively pushing and paving the way for their innovative ideas (“*I’m not a person that likes to sit on a chair and be told what to do [...]*” (I.2)) by determinedly utilizing their network (“[...] *really important, to have the right type of connections [...]*” (I.5)) and convincing others. Proactivity refers to autonomously analysing a problem and finding solutions, but also about selling them within the company (Kuratko, Morris & Covin, 2011).

Since proactiveness includes the continuous search for new challenges (Smith, Rees & Murray, 2016) and as EI is said to come with major challenges, like higher uncertainties than traditional innovation activities (Horbach & Jacob, 2018) and therefore faces resistance from the top-level (Blanka, 2018), high levels of proactivity are expected to be a typical behaviour of eco-intrapreneurs. In contrast, the control groups’ proactivity level is not seen that distinctive.

Another difference is found within opportunity recognition, a fundamental capability for entrepreneurial and therefore intrapreneurial behaviour (Baron, 2006) and thus unsurprisingly represented in both groups. However, since ordinary innovations aim on market growth and increasing consumption (Teece, Pisano & Shuen, 1997), intrapreneurs have a more conventional, sales, costs and efficiency focused business thinking when ideating (“*I want to see sales in the end*” (I.9)). Opposite, the main development aim of EI is a positive environmental effect (Kemp & Pearson, 2007), whereby eco-intrapreneurs continuously keep the environmental aspect in mind (“[...] *not a fundamentalist, but it’s [...] always a part of the decision-making process [...]*” (I.2)). Conclusively, eco-intrapreneurs separate themselves from the intrapreneurs through a clear environmental business driven opportunity recognition process. This finding follows those of ecopreneurs, also valuing the environment over profits (Setyawati et al., 2018; Kirkwood & Walton, 2010).

Still, eco-intrapreneurs do not ideate such solutions at any costs. They know about the fundamental need of creating financial value for the company (“*You cannot see an environmental product and only think about the environment [...] can’t sell it*” (I.6)) and thus

consciously try to combine economical with environmental aspects (*"We should not always maximize the profitability, [...] we need also to lower the request on profitability in order to create good environment"* (I.6)). Focusing on latter, allows them to recognize clear business value in being sustainable and offering environmental business opportunities (Baron, 2006; Porter & van der Linde, 1995) (*"[...] we have to educate the people here that see sustainability just as a cost. It's actually a possibility"* (I.4)). Intrapreneurs, however, are more sustainable reactive (*"Right now, it's more ticking the box."* (I.7)), not identifying sustainability as the biggest driver for now. Still, cost remains superior (*"The first end goal is to reduce the cost"* (I.11)) and the environmental aspects are rather seen as other persons' responsibilities (*"I think my colleagues [...] are responsible for this [...]"* (I.8)).

Characteristics

Intrapreneurial Dimensions	Eco-Intrapreneur	Intrapreneur
<i>Characteristics</i>	Ambidexterity	Safe Exploration
	Environmental Mindset	-
	Determination	Eagerness

Table 4: Overview Identified Characteristics Drivers

Literature describes intrapreneurial employees by several characteristics (Neessen et al., 2018). One of these is ambidexterity, representing a vital ability for individual innovative performance (Rosing & Zacher, 2017). Operating within company boundaries, intrapreneurs must be able to find the balance between incremental (old processes) and radical changes (new opportunities) (Rosing & Zacher, 2017).

The findings evidence this ability within both interviewee groups. Yet, it appeared more dominant for eco-intrapreneurs. They are excited by challenges (*"[...] there is a great challenge with it and that's what I like to work hard on [...] and then solve it"* (I.4)), strive for uniqueness (*"[...] looking at more disruptive innovations [...]"* (I.3)) and look for change through radical ideas (*"It has to hurt somewhere, otherwise, you don't change anything [...]"* (I.3)), while making incremental improvements and following the organizational strategy (*"[...] always [...]"*

place for improvement" (I.5)). Testing new things lying outside the company's boundaries while not forgetting about the old within those boundaries, eco-intrapreneurs intensively apply their ambidextrous capabilities (Rosing & Zacher, 2017). Contrary, intrapreneurs appear less ambidextrous. They show a safer exploration approach, commonly centred around the company's focus areas ("*... It needs to be within those focus that is to be approved" (I.11)*). Besides, they preferably only engage in promising ideas showing a clear business case ("*... if there is a project that there is not a business case, there is no spot for me" (I.10)*), making them very systematic and cautious.

Only by showing ambidextrous abilities and being able to challenge corporations' beliefs, an intrapreneur is able to overcome the context and find the opportunity for new creations (Hisrich, 1990; Rigtering & Weitzel, 2013). Typically, established organizations prioritize economic objectives over social and environmental objectives (Gast, Gundolf & Cesinger, 2017). As sustainable values and behaviour collide with the productivity improvement and cost reduction mindset of organisations (Siqueira & Pitassi, 2016) high levels of ambidexterity are identified as a distinctive eco-intrapreneurial characteristic. Emphasising this finding, no assimilable levels of this trait are shown by the control group.

Another identified character of eco-intrapreneurs is determination. It does not overly differentiate from the intrapreneurs' identified eagerness, yet, eco-intrapreneurs appear to be more resilient. Evidencing from findings, eco-intrapreneurs are constantly getting-up after confronted with setbacks and stay optimistic. Similar traits are seen for the intrapreneurs, but not as distinctive.

Within the organizational context setbacks, frustrations and obstacles for intrapreneurs are common (Hisrich, 1990). Optimism (Blanka, 2018; Kuratko, Morris & Covin, 2011) and resilience (Neessen et al., 2018) are argued to overcome those crises (Duchek, 2018). Based on the uncertain nature of EI and likely resistance from management, high resilience is thus expected to distinguish eco-intrapreneurs. Again, perceived lower resilience levels among the control group underpin this finding.

A distinctive eco-intrapreneurial characteristic is environmental mindset. Eco-intrapreneurs see sustainability as a necessity and prerequisite when ideating ("*It needs to be incorporated [...] in everything" (I.5)*). Contrary, do not show such characteristics, being rather reactive to sustainable improvements and identifying it as nice to have rather than a must have ("*Right*

now, it's more nice to have [...]” (I.9)). The clear focus of eco-intrapreneurs on environmental matters appears to justify their ability of recognizing clear opportunities in the specific field of EI. Similar, this aspect differentiates ecopreneurs from entrepreneurs (Kirkwood & Walton, 2010).

Attitudes

Intrapreneurial Dimensions	Eco-Intrapreneur	Intrapreneur
<i>Attitudes</i>	Intrinsic Motivation	Motivation
	Environmental Purpose	Business Purpose

Table 5: Overview Identified Attitudes Drivers

Concerning attitudes, eco-intrapreneurs, were found to strive for an environmental purpose in the things they do (“[...] persuasion to achieve [...] the change that makes sense or that will make a difference” (I.3)). Literature agrees for the purpose and meaningfulness to be a general primary motivation when working for social or environmental causes (Lukeš & Stephan, 2012). Eco-intrapreneurs’ intention to innovate is to find long lasting value for society, environment and business (“If you don't make a sustainable product, then you can throw it away in five years” (I.5)). They are intrinsically motivated to contribute to a better environment and want to make a difference by creating a market impact (“[...] persuasion to achieve [...] a difference” (I.3)). Different, intrapreneurs strive for a business purpose (“[...] that drives me, [...] the business” (I.10)). Their intention to innovate is to gain competitive advantage and to contribute to the organizational success (“[...] we are here [...] to get money to the company” (I.7)). Again, sustainability is seen as a nice side effect and not as necessity (“That is not the driver, but that is a co-driver” (I.10)). Equal to entrepreneurs, motivated by income and profit (Lukeš & Stephan, 2012), intrapreneurs’ main driver is the result (“[...] most focus for me is the result” (I.10)).

Above findings show that eco-intrapreneurs, compared to intrapreneurs, are very much intrinsically motivated. Besides, their intention to act eco-intrapreneurial is driven by a clear environmental purpose. Both findings are expected to represent a specific attitude for eco-intrapreneurs. It is underpinned by similar findings for ecopreneurs, also convinced to reach

ecological benefits through their behaviour and described to be motivated intrinsically as well as by personal reasons towards EI practices (Gast, Gundolf, & Cesinger, 2017).

Conclusion

Eco-intrapreneurs and general intrapreneurs appear to share the same baseline when it comes to innovative behaviour, characteristics and attitudes. Nevertheless, the comparison presented several differences, revealing the drivers for eco-intrapreneurs to engage in EI within organizational boundaries. They are clearly influenced by their (1) *environmental mindset*, (2) *ability to see great economic opportunities within environmental solutions*, (3) *environmental purpose*, (4) *intrinsic motivation* and (5) *more proactive, ambidextrous and determined innovation approach*. Overall, as in the ecopreneur vs. entrepreneur case (Santini, 2017), the personal attitudes, values and motivations play a key role in the distinction of ordinary intrapreneurs and eco-intrapreneurs.

5.2 Grounded Theory Model

The identified interrelations between the aggregated dimensions surfaced throughout the conducted interviews, allowing for the creation of a grounded theory model (Fig.16). This model presents how the dynamic relations between individual drivers of employees facilitate eco-intrapreneurship. Especially the dynamic relation between attitudes and characteristics leading to a certain behaviour is reinforced.

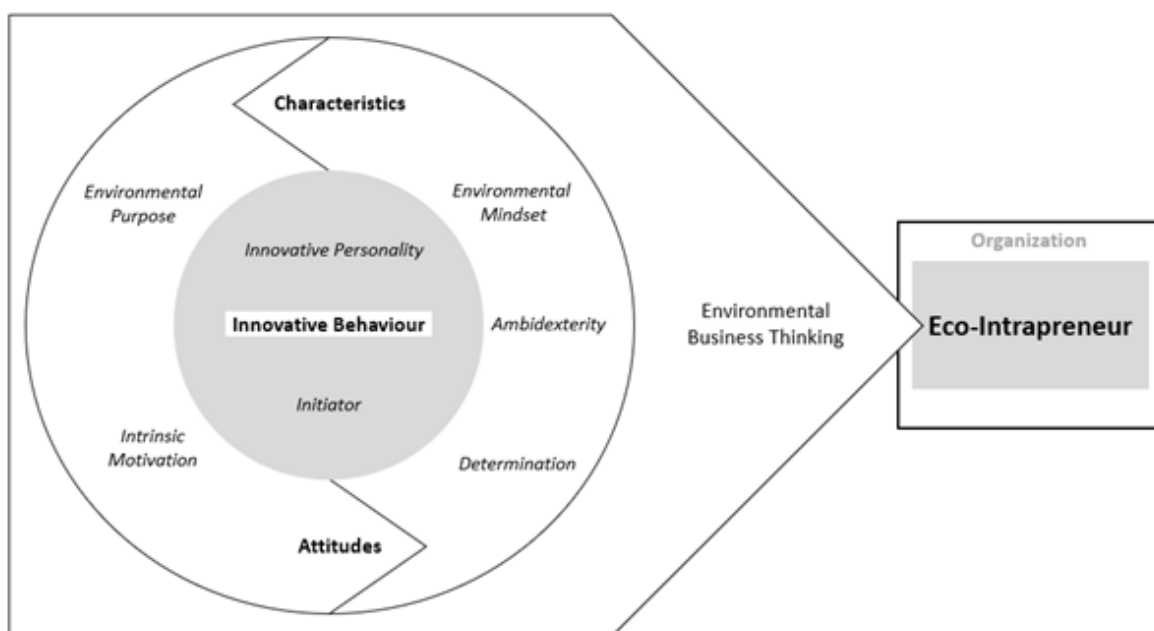


Figure 16: Grounded Theory Model

In the centre of each eco-intrapreneur lays a general **innovative behaviour**, represented by an *innovative personality* and distinct *initiator* capabilities. It is surrounded by specific **characteristics** of *environmental mindset*, *ambidexterity* and *determination*, as well as specific **attitudes** of *environmental purpose* and *intrinsic motivation*. Those characteristics and attitudes by themselves, however, do not drive an individual to act eco-intrapreneurial per se. Only through their dynamic interaction the general innovative behaviour can be fundamentally influenced, and a focused *environmental business thinking* triggered. Yet, only focusing on environmental factors while ideating, does not facilitate eco-intrapreneurship. Exclusively through the identification and initiation of environmental business opportunities within organizational boundaries an ordinary employee becomes an **eco-intrapreneur**.

5.3 Facilitators of Eco-Intrapreneurship

Hereafter, earlier findings are analysed to explain the creation of the above introduced grounded theory model. Throughout, supporting quotes and related findings from the literature motivating the found interrelation between the aggregated dimensions are incorporated.

Innovative Behaviour:

The findings show that at its core, the eco-intrapreneur roots a general innovative behaviour, including **innovative personality**. Evidencing from earlier findings, this innovative personality employs a scrutinizing mindset which allows the individual to generate a holistic picture of the company and simultaneously the market (“[...] ‘*what else can we do*’ [...] ‘*what, what else can we do as [XY]?*’ or ‘*how can we integrate [XY] in buildings?*’” (I.3)). This in turn allows to make connections between external information which enables the eco-intrapreneur to behave innovatively. Consulting existing opportunity recognition literature shows that scrutinizing strongly influences the individual pattern recognition (Baron, 2006).

Among others, Baczynska, Rowinski and Cybis (2016) argue for this innovative personality, in combination with risk-taking and proactiveness, to be fundamental intrapreneurial behaviours. The risk-taking behaviour is confirmed by the interviewees’ general curiosity to investigate new and uncertain areas (“*I’m always interested in trying new things, to see what’s around the corner*” (I.4)). Especially the uncertain context given in EI (Adams et al., 2016) and the usually weak support of top management (Blanka, 2018) can cause this behaviour to be risky. Simultaneously, described as “journey” by Adams et al. (2016), this context calls for a high level of proactiveness of eco-intrapreneurs. Only through a proactive behaviour, intrapreneurs

can overcome the organizational boundaries to identify new opportunities (Hisrich, 1990; Rigtering & Weitzel, 2013). This behaviour is reflected by being an **initiator**. Showing a stronger developed proactivity compared to intrapreneurs, eco-intrapreneurs are likely to take the initiative ("*[...] just making things happen [...] I have that in my, DNA [...]*" (I.1)). Despite its crucial role for an intrapreneurial behaviour, this proactiveness is argued to be fundamental for eco-intrapreneurs. Scholars emphasise the environmental matter to be personal and therefore EI to be personal (Schaltegger, 2002). Accordingly, eco-intrapreneurs are found to internally "*[...] push for decisions*" (I.2), fostering this type of innovation (Bossle, 2016; Salimath, 2018). Simultaneously, eco-intrapreneurs are found to be supported in this behaviour through their network and freedom in daily tasks ("*[...] to be collaborative [...] if you help me, I'll help you*" (I.5); "*So, I'm not a person that likes to sit on a chair and be told what to do. Never been and never will be*" (I.2)).

Fundamentally, the above behaviour strongly influences the opportunity recognition of eco-intrapreneurs. According to Baron (2006), the pattern recognition of entrepreneurs and respectively of intrapreneurs is influenced by the continuous search for new opportunities, their past experience and personal interest. Detached from the EI context, eco-intrapreneurs displayed a background in innovation ("*I was involved in innovation, supposedly quite a lot [...]*" (I.3)) and strong enjoyment in this activity which increases the number of recognized opportunities (Baggen et al., 2016).

Although laying the core of eco-intrapreneurship, the above behaviours are argued to not be stand-alone but to be influenced by a combination of characteristics and attitudes (Ajzen, 1991).

Characteristics:

Leaving the core shows that the above initiating behaviour is fostered by the personal ability of **determination**. Eco-intrapreneurs prove a high degree of resilience ("*[...] really don't give up on something*" (I.5)) paired with staying optimistic ("*[...] I can stay positive when most people go negative*" (I.2)). Especially within the organizational context, literature emphasises this characteristic to overcome setbacks and obstacles usually found within organizations (Hisrich, 1990). Connecting this general organizational context with EI, those obstacles are assumed to be more predominant, justifying a stronger need for determination. Supporting, eco-intrapreneurs are found to take action instead of standing still ("*We need somehow to anticipate so we cannot stand still [...]*" (I.3)). This characteristic appears as driving force for the earlier mentioned proactivity.

Performing within the organizational context causes eco-intrapreneurs to act according to organizational objectives. Siqueira and Pitassi (2016) found the organization to often urge employees to neglect personal values and interests to be compliant with the organizational strategy. Contrary to this statement, eco-intrapreneurs are found to balance their personal interest with the organizational expectations (*"I want to strengthen the strategic part of more sustainability" (I.2)*). Accordingly, eco-intrapreneurs engage in incremental improvements in line with the organizational strategy and simultaneously look to identify new opportunities within their field of interest. Despite the common focus on economic growth by established organizations (Gast, Gundolf & Cesinger, 2017), eco-intrapreneurs strongly believe in the need for change to ensure a long-term organizational growth (*"Sustainability has to be [...] the driver for things to change." (I.3)*). This characteristic of balancing the own values (something new) with the organizational need (something old) is recognized as part of individual **ambidexterity** by scholars (Rosing & Zacher, 2017) and identified as significantly important for eco-intrapreneurs. The uncertain context of EI and need for a strong personal interest within the environmental concern (Schaltegger, 2002), explain the stronger ability of ambidexterity among eco-intrapreneurs.

Additionally, the affection of eco-intrapreneurs for challenges supports ambidexterity and to not neglecting the personal values and believes (*"You need this kind of spark that comes with challenges and obstacles [...] (I.3)*). This combination of excitement for challenges, determination and loyalty to own attitudes and the organization emphasises the intrapreneurial intentions (*"[...] there is a great challenge with it and that's what I like to work hard on one thing and then solve it" (I.4)*). This contradicts with scholars such as Monsen, Patzelt and Saxton (2010), concluding a minimizing effect on intrapreneurial intention when facing additional workload and high-risk innovation. Therefore, an interrelation surfaces between attitudes and characteristics by seeing challenge as motivation factor (Sundgren & Styhre, 2003).

Generally, the often radical nature of EI (Horbach & Jacob, 2018) and the organizational context allow to argue that without the characteristic of ambidexterity eco-intrapreneurship would not be acted upon by individuals. Lacking this balancing ability, it is likely for intrapreneurs to neglect their personal attitudes (Polman & Bhattacharya, 2016). This emphasises ambidexterity to be a fundamental driver facilitating eco-intrapreneurship.

Another distinctive characteristic represents the **environmental mindset**. Mentioned by Baron (2006), the personal background and interests influence the type of recognized opportunities. Termed as “luggage” of past environmental experiences and influencing how external factors are being viewed (*"You always have your luggage with you, with your experiences and your ways of seeing the world" (I.1)*), reinforces the influencing relation between characteristics and behaviours. Although majorly showing environmental backgrounds, this research found that the interest and conviction in the environmental aspect can also be fostered through the participation in an EI project (*"I'm quite sure, if I not have been into the project I would not been work with sustainability" (I.5)*). However, the environmental interest itself does not automatically lead to eco-intrapreneurship. Specific attitudes are required to trigger an eco-intrapreneurial behaviour and to embrace the environmental aspect within all innovation projects (*"It needs to be incorporated [...] in everything" (I.5)*). This evidences the dynamic relation between characteristics and attitudes.

Attitudes:

Siqueira and Pitassi (2016) argue that organizations first value economic growth before turning their attention to environmental factors. Operating in such context, eco-intrapreneurs need to have a strong internal driving force allowing them to act according to their believes. Evidence is provided that the combination of **intrinsic motivation** paired with the past experience of eco-intrapreneurs enables this strong conviction, while at the same time influencing the environmental mindset (*"[...] not a fundamentalist, but it's, it's definitely in everything I do is always a part of the decision-making process that I can say" (I.2)*). It should be pointed out, that although a strong intrinsic motivation exists, eco-intrapreneurs emphasise to not be environmental fundamentalists. Latter fosters the ambidextrous character, of balancing the personal and organizational interests instead of primarily following own interests. Supportive, Ryan and Deci (2000) describe motivation as inspiration to act. Therefore, motivation has been identified as closely interrelated with the intention to act intrapreneurial (Monsen, Patzelt & Saxton, 2010) and to be an essential driver of intrapreneurial and eco-intrapreneurial behaviour (e.g. Delmas & Pekovic, 2018; Gast, Gundolf, & Cesinger, 2017; Neessen et al., 2018).

Different to existing knowledge and evidencing from the findings, primarily intrinsic motivations are found within eco-intrapreneurs (*"In general, my professional motivation is to broaden my expertise" (I.1)*). One reason for this intrinsic motivation is found within the unsupportive organizational context often encountered within EI. Described as needing a

strategic organizational shift (Horbach & Jacob, 2018) and often radical nature (Schaltegger & Wagner, 2011), EI is often accompanied by top management resistance (Blanka, 2018). Therefore, it is unlikely for extrinsic motivation (e.g. bonus) to support EI. Another reason for the primarily intrinsic motivation is found in the strong personal dimension within EI. In line, findings show individuals to act upon EI due to intrapersonal motives. Consulting literature on ecopreneurship highlights the personal reasoning and intrinsic motivation as driver for entrepreneurial EI (Gast, Gundolf, & Cesinger, 2017). Besides, the weak facilitating role of self-motivation on intrapreneurial intention (Neessen et al., 2018) is disproved within eco-intrapreneurship by this study.

Environmental purpose shows a fundamental driver for eco-intrapreneurs and is interrelated with characteristics and thereby driving eco-intrapreneurial behaviour (“[...] *it's the most meaningful thing I can do*” (I.4)). This purpose is triggered through an external event or grows from within, leading to the intrinsic urge to contribute to a better environment (“*And environmental is certainly a driver, I mean, look at what is happening now*” (I.6)). This urge is strengthened by only engaging in innovation when recognizing a clear meaning behind it (“*I'm quite dedicated when I think something is right, then I stick to it*” (I.5)). This suggests for the environmental purpose to be strongly rooted within the individual (“*Then, of course, it's a huge part of me [...]*” (I.5)) and is again supported by Schaltegger (2002), identifying the environmental preference as something personal. Identifying environmental purpose as embracing environmentally friendly values, similarities to ecopreneurial drivers of green values and passion are found (Kirkwood & Walton, 2010). Additional similarities are revealed, as eco-intrapreneurs aim to influence people (“*I try to influence people to think more sustainable and so on*” (I.5)) and ecopreneurs aim to educate society (Kirkwood & Walton, 2010).

Overall, above attitudes in combination with earlier characteristics, facilitate eco-intrapreneurial behaviour. Literature supports this understanding as the personal attitude sets the extent to which an individual is intended to act out a behaviour (Douglas & Fitzsimmons, 2013; Neessen et al., 2018). The concept of pattern recognition (Baron, 2006) agreed to the fundamental role of above identified drivers to identify opportunities. Resulting from the personal interest, skills and past experience, it is argued for an individual to only behave eco-intrapreneurial when combining the above attitudes and characteristics (Ajzen, 1991). Furthermore, solely the intrapreneurial core allows the individual to identify business opportunities within the field of EI.

Behaving in line with an **environmental business thinking** is crucial within the organizational context. Supporting the organization to follow their strategy, individuals need to acknowledge for innovation of any type to generate revenue (*"You cannot see an environmental product and only think about the environment [...] can't sell it" (I.6)*). This appears fundamental for all intrapreneurs and is recognized within eco-intrapreneurs (*"[...] there has to be money generating, generated by any type of process, unless the company won't survive."* (I.4)). Accordingly, the core intrapreneurial behaviour paired with earlier drivers enable the eco-intrapreneur to identify economic value within the environmental aspect. Existing literature highlights, that companies do not yet fully embrace EI due to the difficulty of grasping its potential (Gast, Gundolf & Cesinger, 2017; Siqueira & Pitassi, 2016). Therefore, the EI initiative has to come from the individual, who combines the economic objective of the organization with the environmental factor and proves its feasibility internally (*"[...] we can show also that it's possible to have this circulation going, economically"* (I.4)). Again, this refers to the ambidextrous character and its facilitating role.

Literature found ecopreneurs to value the environmental aspect over the economic return (Setyawati et al., 2018; Kirkwood & Walton, 2010). In line with Gast, Gundolf and Cesinger (2017), eco-intrapreneurs need to earn financial benefits by decreasing environmental problems like ecopreneurs. Supporting, this research discovered for eco-intrapreneurs to not strive for large economic benefits, however, to generate environmental impact over the economic profit (*"We should not always maximize the profitability, [...] we need also to lower the request on profitability in order to create good environment"* (I.6)). This behaviour shows further interrelations with earlier attitudes (environmental purpose & intrinsic motivation) and characteristics (environmental mindset).

Overall, the grounded theory model displays the dynamic relation between the dimensions facilitating eco-intrapreneurship. Concluding from earlier research expectations (*see 2.3*) and agreeing to scholars, the entrepreneurial behaviours are found to be as crucial for intrapreneurs as for eco-intrapreneurs. However, although the context of EI allows to expect a high degree of risk-taking, this was not found within this research. Different, the need of strong persistence and environmental affection among eco-intrapreneurs was proven. Finally, reflecting the differences between entrepreneurs and ecopreneurs, similar differences such as the environmental values and intrinsic motivation were found between intrapreneurs and eco-intrapreneurs.

6 Implementation

6.1 Conclusion

This research aimed at investigating the individual drivers of employees and their facilitating effect on eco-intrapreneurship. Opening the “black box” of eco-intrapreneurship, it applied relevant theory from the broader concepts of intrapreneurship and EI. Apart from the intrapreneurial core of each eco-intrapreneur, the drivers stemming from personal characteristics and attitudes represent the key facilitators for eco-intrapreneurship. Exploring this phenomenon by means of a single-case study, allowed to receive a thorough understanding of the individual drivers of eco-intrapreneurship and their facilitating role. Insights within this study were strengthened by applying a control group from the same organizational context.

The core of eco-intrapreneurship was found to root within an intrapreneurial behaviour. Besides showing an innovative personality, the initiating behaviour appeared fundamental for eco-intrapreneurs. Engaging in proactivity appeared crucial when dealing with EI, an uncertain innovation.

Triggering those behaviours, the characteristic of determination surfaced as vital for eco-intrapreneurs to overcome organizational obstacles which are foreseen to be more likely in EI. Different to intrapreneurs, this research found the characteristic of ambidexterity to be significant. Operating within the organizational context, eco-intrapreneurs are required to act according to organizational objectives. Latter deviated from the control group, as eco-intrapreneurs were found to not neglect their personal values and interests to be compliant with the company. Accordingly, balancing the own interest with the objectives of the organization, the ability of ambidexterity proved to be a fundamental driver facilitating eco-intrapreneurial behaviour.

Additionally, an environmental mindset appeared crucial within this study for eco-intrapreneurs to see the environment as an innovation prerequisite. Within the uncertain context of EI (Siqueira & Pitassi, 2016) and unfavourable organizational context, the strong intrinsic drive compared to intrapreneurs surfaced. Especially this type of innovation, which often faces top-management resistance (Blanka, 2018), justifies extrinsic motivation to be unlikely. Deviating from intrapreneurs, however like ecopreneurs, eco-intrapreneurs showed strong intrinsic motivation. Additionally, this research discovered the nascent facilitating driver of environmental purpose. The need of having a real impact and contributing to a better

environment with own actions appeared as fundamental driver. The above attitudes proved to strongly influence the later eco-intrapreneurial behaviour.

Only with the above baseline the eco-intrapreneur was found to embrace an environmental business thinking and to identify the economic value behind EI, needed when working within organizational boundaries.

Concluding, eco-intrapreneurial drivers differ from intrapreneurial drivers. Holistically, the personal attitudes and characteristics facilitate the final eco-intrapreneurial behaviour and therefore eco-intrapreneurship. More specifically, based on an intrapreneurial core, the personal environmental attitudes and intrinsic motivation paired with ambidexterity, determination and an environmental mindset, facilitate eco-intrapreneurship. Finally, similarities and differences were found among eco-intrapreneurs, intrapreneurs and ecopreneurs.

6.2 Theoretical Implications

By investigating the individual drivers and their facilitating role on eco-intrapreneurship, this qualitative one case study opened a new field of research in the arising topic of EI and closed the identified research gap. It therefore does not only add to existing EI literature, but also refines knowledge in the broader field of SOI.

Following scholars' calls, this research created a deeper and more nuanced understanding of mentioned drivers and lays the basis for further in-depth investigations on eco-intrapreneurs. Besides, future research on the general eco-intrapreneurship context can take advantage of these findings.

Simultaneously, this study contributes to the emerging literature on intrapreneurship. Investigations on intrapreneurial individuals are scarce. Focusing on individual intrapreneurs in different contexts was therefore identified as an important step to better understand this field. Studying the specific context of eco-intrapreneurship adds to that understanding.

Additionally, this thesis supports the creation of a more complete picture of individual intrapreneurial driver interactions. By applying different dimensions of intrapreneurial drivers, a more holistic understanding of the interconnections of intrapreneurial behaviour, attitudes and characteristics is created.

6.3 Managerial Implications

This research discovered that it is not the general intrapreneurial behaviour per se, that leads to EI. In addition, specific interrelating individual characteristics and attitudes are needed to facilitate eco-intrapreneurship. With the increasing need for companies to embrace environmental practices and knowing about the importance of the individual in this process, understanding the humans behind eco-intrapreneurship proves of great importance to management in order to stimulate EI.

The findings of this research enable management to identify and support those individuals facilitating EI even in unfavourable environments. First, a candidate needs to be an intrapreneur at its core and show general intrapreneurial attitudes to actually be able to identify business opportunities within organizational boundaries. Furthermore, a strong conviction within environmental matters is needed to steer the opportunity recognition process in the right direction. Yet, candidates should not be fundamentalists but possess strong ambidexterity abilities enabling the balance between personal and organizational values. Referring to the organizational need of generating economic benefits, eco-intrapreneurs need to have economic thinking skills and know that a focus on pure environmental aspects is not feasible. They need the ability of keeping a holistic view. Additionally, high levels of determination and resilience should exist, to be able to overcome internal and external challenges.

Lastly, eco-intrapreneurs are strongly intrinsic motivated, whereby the introduction of extrinsic reward schemes is not found promising within eco-intrapreneurship. Instead, management should opt for personalized motivational schemes allowing individuals to strengthen their intrinsic motivation.

Overall it can be said, that even if circumstances might not be favourable for EI, employing the right people will allow the emergence of eco-intrapreneurship. Nevertheless, if taking today's climate challenges serious, companies should not hesitate to carry out those structural and strategic changes needed for the support of truly eco-intrapreneurial actions.

6.4 Limitations

This research does not come without potential limitations, identified as important for this study. First, the investigation of a single case study highlights potential constraints for the generalizability of the research outcome. Peculiarities of this study are represented by the

conservative industry and a case company, showing weak innovation support especially in regard to EI. Therefore, the findings might not be directly applicable to less conservative industries or more intrapreneurial organizations. It would have been interesting to enrich this research by a comparison of eco-intrapreneurs within different organizational contexts. However, due to resource constraints, a multiple case study was not feasible.

Despite the individual level focus, the organization's influence on employees should not be neglected. This raises the possibility of identified drivers to be of different importance in other organization and industry contexts. Although the influential ability of the company level appears relevant to investigate in combination with eco-intrapreneurial drivers, the time constraint within this research did not allow for it. Furthermore, the iterative process of this research allowed to change the research focus throughout the process. Previously aiming to include the organizational context within this research, data was gathered accordingly. After shifting the focus, this research still utilized all gathered data which might result in data to be influenced by the organizational context.

Following the aim of this research, the holistic picture created within this explorative research allowed for first insights into the concept of eco-intrapreneurship on an individual level. However, it does not facilitate an in-depth understanding of eco-intrapreneurs on each dimension and identified driver.

Finally, the applied methodology shows potential limitations to this research. Despite qualitative research to not allow for total objectivity, the utilized constructive concept of interpretive epistemology allowed to integrate potential biases as part of the study (Bryman & Bell, 2011).

6.5 Future Research

This study should serve as basis for future research within the field of eco-intrapreneurship. First, representing an explorative research, the findings need to be validated. Accordingly, quantitative research methods should be used to strengthen and complement the insights gained in this research. Also, replications of this research approach in other company and industry contexts would allow for confirmation of the individual drivers and their facilitating effect on eco-intrapreneurship. This way it can be investigated how and which drivers are exposed to variation through external influences or how more favourable environments influence eco-intrapreneurs.

Second, it is recommended to deepen the gained knowledge by investigating the facilitating role of the single dimensions and main drivers on eco-intrapreneurship.

Third, this research permitted to draw some conclusions about the organizational impact on eco-intrapreneurship and vice versa. Nonetheless, a thorough understanding of its interdependency is argued to be important to complement this research's findings and existing literature. Such study could support organizations to trigger eco-intrapreneurship on an individual level and support the identification of a favourable environment.

Finally, the concept of eco-intrapreneurship in general should be further researched by means of quantitative research to create a more solid understanding.

7 List of References

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8 Appendix

8.1 Overview Individual Drivers

Intrapreneurial Dimension	Sub-dimension	References
Behaviour	Entrepreneurial orientation (<i>innovativeness, proactiveness, risk-taking</i>)	Baczynska, Rowinski & Cybis, 2016; Camelo-Ordaz et al., 2011; Fellnhofer, 2017; Kuratko, Morris & Covin, 2011; Martiarena, 2013; Neessen et al., 2018; Razavi & Ab Aziz, 2017; Smith, Rees & Murray, 2016; Sundgren & Styhre, 2003
	Opportunity recognition	Baron, 2006; Martiarena, 2013; Smith, Rees & Murray, 2016
	Network	Neessen et al., 2018; Razavi & Ab Aziz, 2017; Smith, Rees & Murray, 2016
Characteristics	Skills (<i>absorptive capacity, ambidexterity conscientiousness, dedication, emotional stability, extraversion, flexibility, goal orientation, openness, optimism, persistency, problem-solving, resilience, taking initiative, willingness</i>)	Blanka, 2018; Hisrich, 1990; Kuratko, Morris & Covin, 2011; Neessen et al., 2018; Rigtering & Weitzel, 2013; Woo, 2018
	Self-efficacy	Blanka, 2018; Douglas & Fitzsimmons, 2013; Neessen et al., 2018; Woo, 2018
	Personal Ability (<i>personal knowledge, past experience</i>)	Baron, 2006; Blanka, 2018; Neessen et al., 2018
Attitudes	Job Satisfaction (<i>job engagement, job meaningfulness relation to organization</i>)	Antoncic & Antoncic; 2011; Delmas & Pekovic, 2018; Kahn, 1990; Mustafa, Martin & Hughes, 2016
	Motivation (<i>extrinsic motivation – e.g. monetary compensation, professional/ leadership prospect, intrinsic motivation - e.g. joy, challenge, learning opportunity, recognition</i>)	Chan et al., 2017; Delmas & Pekovic, 2018; Hisrich, 1990; Martiarena, 2013; Neessen et al., 2018; Ryan & Deci, 2000; Smith et al., 2016); Sundgren & Styhre, 2003
	Intrapreneurial Intention	Douglas & Fitzsimmons, 2013; Marques et al., 2018; Monsen, Patzelt & Saxton, 2010; Neessen et al., 2018; Razavi & Ab Aziz, 2017

Table 6: Overview of Intrapreneurial Drivers

8.2 Interview Guide

Interview Guide Eco-Intrapreneur:

General Background:

1. Shortly, what were your major professional career steps up until today?
 - a. How much were you confronted with innovative and/or creative tasks?
2. Please briefly tell us about your current main daily tasks according to your job description.
 - a. How much do you think innovation is part of these daily tasks?
3. Could you elaborate on how you became part of this project/initiate the idea?

Understand the Eco-Innovation Initiation:

4. What were the external drivers for this project?
5. What were the internal drivers for this project?
 - a. How was the project idea perceived by others (internally)?
6. What is the main aim of the project?

Personal Drivers for Eco-innovation

As stated, (...) is the aim of the project, however shifting the focus to a personal level...

7. What do you personally want to achieve with this project?
8. What makes you engage in this project?
9. Overall, and please feel free to take some time to think, could you please name three personal core characteristics, that describe you best.
 - a. How do these characteristics influence your engagement in this project?
10. How do your previous professional or private experience influence you in the type of innovation you engage in?
11. Based on the above, what encouraged you to move from the idea recognition to its initiation? / from realizing the opportunity to participating in this project?
 - a. How did you recognize the opportunity?

As we understood, this project focuses on having a positive environmental impact.

12. To what extent is ensuring a positive environmental impact a prerequisite for you when looking for innovation opportunities?

13. How does having a positive environmental impact influence your private life?
14. How does the company perceive environmentally friendly ideas?

Coming back on what was earlier stated (...)

15. If not having been asked to participate, would you have shown initiative to participate?
 - a. If so, what other aspects would have encouraged you to participate?
16. How does the organization support you in driving/ participating in this project?
17. How are you assessed on the project?
18. What type of support from the organizational context are your missing?
19. What are your efforts to broaden your horizon?

Challenges

20. What obstacles do you encounter within the company when developing/initiating this project?
 - a. How do/did you deal with these obstacles?
21. Despite the mentioned obstacles, what future obstacles do you foresee for this project?
 - a. What encourages you to continue this project?
22. What are your personal learnings from this project so far that will help you in the future with other projects?

Closing Questions

23. What other types of projects would you like to initiate/ engage in the future or past?
 - a. How did you come up with those?
24. As you might have noticed we are looking for your intrinsic drivers making you initiate or engage in environmental innovations. Are there any personal values, motivators, characteristics, past experiences, etc. that you would like to emphasize or add?

Interview Guide Intrapreneur:

General Background:

1. Shortly, what were your major professional career steps up until today?
 - a. How much were you confronted with innovative and/or creative tasks?
2. Please briefly tell us about your current main daily tasks according to your job description
 - a. How much do you think innovation is part of these daily tasks?

As we know, you have recently initiated a new project (...)

3. Could you shortly elaborate on how you recognized the opportunity?

Understand the Innovation Initiation:

4. What were the external drivers for this project?
5. What were the internal drivers for this project?
 - a. How was the project perceived by others (internally)?
6. What is the main aim of the project?

Personal Drivers for Innovation

As stated, (...) is the aim of the project, however shifting the focus to a personal level...

7. What do you personally want to achieve with this project?
8. What made you initiate this project?
9. Overall, and please feel free to take some time to think, could you please name three core characteristics, that describe you best.
 - a. How do these characteristics influence your engagement in this project?
10. How do your previous professional or private experience influence you in the type of innovation you engage in?
11. Based on the above, what encouraged you to move from realizing the opportunity to initiating this project?
12. What characteristics does a project need to offer for you to engage in it?
13. How does the organization support you in driving/ participating in this project?
14. How are you assessed on the project?
15. What type of support from the organizational context are your missing?
16. What are your efforts to broaden your horizon?

Challenges

17. What obstacles do you encounter within the company when developing this project?
 - a. How do/did you deal with these obstacles?
18. Despite the mentioned obstacles, what future obstacles do you foresee for this project?
 - a. What encourages you to continue this project?
 - b. What encourages you to still exploit new opportunities?
19. What are your personal learnings from this project so far that will help you in the future with other projects?

Closing Questions

20. What other types of projects would you like to engage in the future or past?

As we understood, this project focuses on having a (...) impact. Today, large forces support or urge the need towards sustainability and more specifically having a positive environmental footprint.

21. To what extent is ensuring a positive environmental impact a prerequisite for you when looking for innovation opportunities?
 - a. Why is that?
22. As you might have noticed we are looking for your intrinsic drivers making you engage in innovations. Are there any personal values, motivators, characteristics, past experiences, etc. that you would like to emphasize or add?

8.3 Overview Comparison

Intrapreneurial Dimensions	Eco-Intrapreneur	Intrapreneur
<i>Behaviour</i>	Innovative Personality <ul style="list-style-type: none"> • Experience in Innovating • Curious Personality • Excitement to Innovate • Scrutinizing Mindset • Experimenting 	Innovative Personality <ul style="list-style-type: none"> • Innovation Proficiency • Being Adventurous • Excitement in Creating New Things • Scrutinizing Mindset • Experimenting
	Initiator <ul style="list-style-type: none"> • Paving the Way • Independent Working Habit • Utilizing Supportive Network 	-
	-	Social Skills <ul style="list-style-type: none"> • Communication • Team Player
	Environmental Business Thinking <ul style="list-style-type: none"> • Project Engagement When Seeing Success • Finding New Business Opportunities • Recognizing Market Need • Financial Value Creation Fundamental for Company • Circularity as Business Opportunities • Identifying Clear Business Value in Sustainability 	Conventional Business Thinking <ul style="list-style-type: none"> • Sustainable Reactiveness • Improving Efficiency Through Innovation • Cost Superior Sustainability • Sales Focused

Table 7: Overview Comparison Behaviours

Intrapreneurial Dimensions	Eco-Intrapreneur	Intrapreneur
<i>Characteristics</i>	Ambidexterity <ul style="list-style-type: none"> • Improving Organizational Image • Following Organizational Strategy • Making Incremental Improvements • Looking for Change • Striving for Uniqueness • Excitement by Challenge 	Safe Exploration <ul style="list-style-type: none"> • Being Cautious • Being Systematic • Engaging in Feasible Ideas • Need to Follow Clear Targets • Strategically Reasoned Engagement
	Environmental Mindset <ul style="list-style-type: none"> • Environmental Aspect as Innovation Prerequisite • Sustainability Being A Necessity • Environmental Proficiency 	-
	Determination <ul style="list-style-type: none"> • Staying Optimistic • Making Conscious Decisions • Focusing on Essentials • Action Oriented • Being Resilient 	Eagerness <ul style="list-style-type: none"> • Being Dedicated • Taking Initiative

Table 8: Overview Comparison Characteristics

Intrapreneurial Dimensions	Eco-Intrapreneur	Intrapreneur
<i>Attitudes</i>	Intrinsic Motivation <ul style="list-style-type: none"> • Developing Personal Skillset • Stimulation Through Non-Financial Means • Accomplishments Being Rewarding 	Motivation <ul style="list-style-type: none"> • Personal Development • Receiving Appreciation • Stimulation Through Financial Means
	Environmental Purpose <ul style="list-style-type: none"> • Creating Market Impact • Making A Valuable Difference • Personal Conviction to Engage • Intrinsic Urge to Contribute to Better Environment 	Business Purpose <ul style="list-style-type: none"> • Sustainability as Side Effect • Contributing to Organizational Success • Setting Apart from Competition • Market Oriented • Incremental Innovations

Table 9: Overview Comparison Attitudes