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Making desirable futures: Conceptualising the role of future-making in impact investing and social entrepreneurship

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Thesis submitted in fulfilment of the requirements for the degree of

PhD

under the supervision of Jarrod Ormiston, René Kemp & Susanne Pratt.

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Kiia Strömmer, declare that this thesis, is submitted in fulfilment of the requirements for the award of PhD, in the TD School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements for a degree at any other academic institution except as fully acknowledged within the text. This thesis is the result of a Collaborative Doctoral Research Degree program with Maastricht University & University of Technology Sydney.

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Papers:

1. Strömmer K., & Ormiston, J. Forward-looking impact assessment – An interdisciplinary systematic review and research agenda
2. Strömmer, K., & Ormiston, J. Projecting towards desirable futures: Unpacking predictive, explorative and normative futuring techniques in impact measurement
3. Strömmer, K., & Ormiston, J. From temporal disconnects to temporal translation: Backcasting and foresight as bridges between near and distant futures
4. Strömmer, K., & Ormiston, J. “We’re not the crypto-bros”: The role of utopian-dystopian imaginaries in reframing, solidifying and demarcating collective identities in nascent entrepreneurial fields
5. Strömmer, K., & Ormiston, J. Motivated by the future: The performative role of futures in entrepreneurial motivation

Table of Contents

List of Tables

List of Figures

Making desirable futures: Conceptualising the role of future-making in impact investing and social entrepreneurship

Abstract

This thesis aims to deepen our understanding of how organisations and individuals assess, navigate and shape desirable futures. By integrating insights from organisational studies on temporality and future-making, as well as insights from futures studies, the research examines how impact investors and social entrepreneurs are engaging with future-making to enact desirable futures. The thesis is structured around five key studies: a systematic literature review that highlights gaps in the current understanding of forward-looking impact assessment, an investigation into the diverse futuring techniques used in impact investing, a study on temporal oscillation that explores how impact investors bridge near and distant futures, a paper analysising of how utopian and dystopian imaginaries are shaping collective identities in the emerging decentralised finance, blockchain-for-good field, and finally investigation into how future imaginaries have a performative role in entrepreneurial motivations. The research reveals the mechanisms through which these actors enact imagined desirable futures by connecting distant futures to the present. The thesis contributes to the fields of organisational theory on temporality and future-making, impact investing and entrepreneurship by shedding light on the importance of pluralistic understandings of futures, and unpacking the myriad ways in which organisations and individuals engage with these futures.

CHAPTER 1 - INTRODUCTION

1.1 Motivation for the research

The world is facing challenges that demand urgent and comprehensive action. Climate change, social inequality, resource depletion, and global health crises are just some of the complex issues that require us to rethink how we address long-term societal impacts (Beckert, 2013; George et al., 2019). These challenges, often referred to as grand challenges (George et al., 2016), are characterised by their complexity, uncertainty, and interconnectedness, making them difficult to solve with conventional approaches (Gümüsay et al., 2022). As these challenges intensify, there is a growing recognition that our ability to anticipate, prepare for, and shape future outcomes is critical in creating sustainable and just societies. Addressing grand challenges requires organisations and individuals to embed future-oriented thinking into their decision-making processes, recognising that the actions we take today will shape the futures of tomorrow (Beckert, 2013; Feuls et al., 2024). This research is motivated by the need to better understand how organisational actors can contribute to addressing these challenges of the future (and present) through engaging with future-making practices.

The ability to engage with the future is becoming increasingly important in a world characterised by uncertainty and change. Future-making refers to practices involved in producing and enacting the future in the present, by making sense of, and evaluating possible, probable and desirable futures (Beckert, 2013; Dator, 2019; Wenzel et al., 2020; Whyte et al., 2022), and therefore bringing imagined futures into action in the present (Beckert, 2013, 2021; Feuls et al., 2024; Hernes & Schultz, 2020). What this means is that future is considered in a pluralistic way, and not that is a fixed, objective 'thing' to be quantified or uncovered, but rather a multifaceted, dynamic and open-ended phenomenon encompassing a multitude of horizons and possibilities (Emirbayer & Mische, 1998; Wenzel et al., 2020).

The purpose of this thesis is to study the overarching research question of "*how do organisations and individuals assess, navigate and shape desirable futures?"*. To study this question, the thesis delves into the research contexts of impact investing and social/sustainable entrepreneurship. In the midst of growing global challenges, entrepreneurs are increasingly developing impact-driven ventures and mobilising resources to tackle environmental, social and economic challenges of the future (Clough

et al., 2019; George et al., 2019). At the same time, the landscape of investing has witnessed a shift towards sustainability and impact, in recognition of the role that capital allocation plays in addressing the world's most pressing environmental and social challenges (Agrawal & Hockerts, 2021; Daggers & Nicholls, 2016; Logue & Grimes, 2022). While traditional investment practices have predominantly centred on assessing future financial risks and returns, the emerging field of impact investing includes the added complexity of assessing potential social or environmental impacts, as investors attempt to achieve their desired visions for the future through investing in social entrepreneurs (Arjaliès et al., 2023). Therefore, both contexts of impact investing and social entrepreneurship provide intriguing context to study how individuals and organisations enact their desirable futures, as actors in these fields are actively trying to understand how actions today impact the future world.

1.2 Theoretical background

This theoretical background section explores three key areas: temporality in organisational studies, future-making, and futures studies. Temporality in organisational studies examines how organisations navigate the past, present, and future in decision-making and strategic alignment. Future-making focuses on how organisational actors actively shape futures through day-to-day practices. Finally, Futures Studies offers insights into structured methodologies for imagining alternative futures, including foresight and backcasting, which enhance the understanding of future-oriented organisational practices. Together, these perspectives build a transdisciplinary foundation to explore how organisations and individuals assess, navigate and shape desirable futures.

1.2.1 Temporality in organisational studies

Temporality in organisational studies addresses how organisations navigate time by connecting the past, present, and future. Time is not merely a backdrop to organisational processes but is actively constructed and reconstructed by individuals and groups within organisations (Bansal et al., 2022; Blagoev et al., 2023). This view aligns with process-based perspectives that see organisations as sites of ongoing human action, shaped by evolving temporal structures (Tsoukas & Chia, 2002). Time, as conceptualised in organisational studies, is dynamic and multifaceted, involving interactions between historical trajectories, present concerns, and future aspirations (Hernes, 2014; Hernes &

Feuls, 2024; Reinecke & Ansari, 2015). Such perspectives highlight how temporal orientations fundamentally shape how organisations act, strategise, and create value (Yakura, 2002; Kaplan & Orlikowski, 2013).

The notion of temporal work describes efforts to influence, sustain, or redirect temporal assumptions and patterns (Kaplan & Orlikowski, 2013). Temporal work highlights the importance of managing multiple, overlapping timelines that may conflict with each other, thus creating opportunities for strategic alignment or misalignment (Kunisch et al., 2017). Historically, strategy research has focused on time-related concepts such as speed, rhythm, and sequence, often treating time as a variable to be measured against performance outcomes (Mosakowski & Earley, 2000; Baum & Wally, 2003). However, more recent research shifts attention to how organisational actors actively engage with time, shaping temporal phenomena through practices that influence strategic outcomes (Kaplan & Orlikowski, 2013; Emirbayer & Mische, 1998). As Slawinski and Bansal (2015) note, organisations often face intertemporal tensions, particularly when balancing short-term operational demands with long-term sustainability goals. Time, thus, becomes a crucial element in understanding how organisations pursue sustainability and innovation, as they must anticipate future outcomes while responding to immediate pressures (Adam, 2013; Feuls et al., 2024; Slawinski & Bansal, 2015). By engaging in temporal work, organisations can shape their temporal landscape to better navigate the uncertainties and challenges posed by a dynamic, fast-paced environment.

The concept of temporal work has emerged as a central framework for understanding how organisations navigate temporal tensions. Temporal work describes the deliberate practices through which organisational actors reimagine the future, reinterpret the past, and address the concerns of the present in ways that generate coherence and strategic alignment (Kaplan & Orlikowski, 2013). Temporal work is critical for managing the intertemporal tensions that arise when organisations attempt to balance short-term pressures with long-term goals, such as sustainability and innovation (Slawinski & Bansal, 2015; Feuls et al., 2024). These tensions are particularly pronounced in contexts where short-term operational demands risk undermining the pursuit of distant future outcomes (Marginson & McAulay, 2008). As Adam (2013) argues, time is both a constraint and a resource, shaping not only what organisations can achieve but also how they prioritise competing objectives.

A process-based view of time also underscores the interconnectedness of temporal orientations. Scholars have highlighted the concept of temporal depth, which refers to the extent to which individuals and organisations consider the past and future in their decision-making processes (Bluedorn, 2002). While short temporal depths often focus on immediate, tangible outcomes, longer temporal depths enable organisations to engage with distant future, or past, horizons and their implications for strategic action (Reinecke & Ansari, 2017; Augustine et al., 2019). Temporal depth also interacts with what Mische (2009) terms projective reach, the degree to which time frames extend into short-, medium-, and long-term horizons. The competing temporal orientations within organisations, including short-termism and long-term thinking, often create opportunities and challenges for temporal restructuring (Laverty, 1996; Bansal et al., 2022).

Central to understanding temporality in organisational studies is the interplay between continuity and change. Historically, change has been studied as a linear progression, often framed through models like Lewin's freeze-unfreeze-refreeze or Weick and Quinn's distinction between episodic and continuous change (Weick & Quinn, 1999; Romanelli & Tushman, 1994). However, process-based perspectives argue for a more nuanced view that conceives change and continuity as co-existing phenomena (Blagoev et al., 2023). Tsoukas and Chia (2002) introduce the notion of indivisible continuity, which sees change as an ongoing, emergent process embedded in the flow of organisational life. Hernes (2014) builds on this by suggesting that continuity involves connecting moments across time, allowing organisations to construct coherent narratives that bridge the past, present, and future.

The construction and reconstruction of organisational narratives are vital for temporal work. Narratives serve as tools for making sense of temporal complexity, enabling actors to align their actions with both historical trajectories and future aspirations (Emirbayer & Mische, 1998; Schultz & Hernes, 2013). Temporal narratives are not merely retrospective; they are forward-looking, allowing organisations to project their goals and strategies into the future (Garud et al., 2014).

Moreover, recent scholarship has emphasised the collective dimensions of temporal work, highlighting how actors collaboratively engage in temporal restructuring to navigate complex temporal landscapes (Bansal et al., 2022). Temporal commons, defined as shared conceptualisations of time within organisational cultures, provide the foundation

for such collective efforts (Bluedorn & Martin, 2006). By aligning diverse temporal orientations, organisations can foster coherence across multiple temporal horizons, enabling strategic adaptability and resilience (Kaplan & Orlikowski, 2013; Reinecke & Ansari, 2015).

Temporality is a critical lens for understanding organisations and organising. By engaging in temporal work, organisations actively shape their temporal landscapes. This capacity to navigate the interplay between the past, present, and future is particularly essential. Through these temporal practices, organisations demonstrate how time is not merely a contextual factor but a central dimension of strategy, identity, and collective action.

1.2.2 Future-making

In organisational studies, there has been a recent shift towards seeing organisational futuring not just as predicting and forecasting the future, but rather actively engaging it through day-to-day practices (Wenzel, 2022). In the current uncertain world, facing grand challenges, organisational actors are increasingly embedding future-making practices into their everyday activities (Wenzel et al., 2020), and bringing imagined futures into action in the present (Beckert, 2013, 2021; Hernes & Schultz, 2020). This shift in organisational research reflects a broader movement towards a more comprehensive conceptualisation of future-making. As noted, future-making refers to ”the specific ways in which actors produce and enact future” (Wenzel et al., 2020: 1443). The future is not a fixed, objective ‘thing’ to be quantified or uncovered, but rather a multifaceted, dynamic and open-ended aspect of organisational life that encompasses a multitude of horizons and possibilities (Emirbayer & Mische, 1998; Wenzel et al., 2020). Thus, future-making involves the dynamic interplay of organisational goals, societal expectations, and emerging trends, allowing organisations to anticipate and prepare for multiple potential futures (Beckert, 2013). In this way, future-making is not merely about predicting the future but actively shaping it in alignment with broader societal goals (Gümüsay & Reinecke, 2022).

An integral element to future-making is future imaginaries. Individuals and organisations invoke images of possible, probable or preferred futures based on trends, assumptions, hopes and expectations of how future might unfold (Beckert, 2013, 2021; Dator, 2019; Whyte et al., 2022). Future imaginaries are visions of possible futures that reflect societal hopes, fears, and expectations, and are shaped by cultural, social, and political contexts,

as well as historical experiences, contemporary knowledge, and speculative imagination (McNeil et al., 2016). These imaginaries shape how organisations construct and enact the future in the present (Oomen et al., 2021; Wenzel et al., 2020). Rather than viewing the future as a predictable outcome that can be engineered through scientific methods, it should be seen as a dynamic and unpredictable space. Thus, imagined futures are not just fantasies but guideposts for action based on understandings of the past, present, and future (Beckert, 2013, 2021). Future imaginaries are thereby generative as they shape 'expectations, provide structure and legitimation' (Borup et al., 2006, p.286). Imagined futures provide a 'prospective structure' (Van Lente & Rip, 1998) that shapes orientations for action (Beckert & Bronk, 2018).

Thus, future-making refers to practices involved in producing and enacting the future, by making sense and evaluating possible, probable and desirable futures (Beckert, 2013; Dator, 2019; Wenzel et al., 2020; Whyte et al., 2022). Recently, more research has focused and highlighted how organisations attempt to develop a shared understanding of desirable futures, and how organisations attempt to enact these imagined futures (Alimadadi et al., 2022; Augustine et al., 2019; Gümüsay & Reinecke, 2022; Thompson & Byrne, 2022). Organisations engage in prospective, imaginative work to "structure the future by imagining some desirable state," often through scenario planning, strategic narratives, and prospective sensemaking (Gioia and Mehra, 1996: 1229; Bruskin & Mikkelsen, 2020; Kaplan & Orlikowski, 2013). Desirable futures arise in social processes that include fantasy and fictional hypotheticals and that can break with present conventions and institutionalised beliefs (Beckert, 2013; Augustine et al., 2019; Gioia & Thomas, 1996). This hypothetical quality expands beyond the immediate, clearly defined options (Beckert, 2013; Mische, 2009), supplying hope and the emotional conviction that another world is possible, which can catalyse transformative change (Mische, 2009, 2014). Actors also engage undesirable futures thinking about imagined consequences (Alimadadi et al., 2022; Baumgartner et al., 2008).

1.2.3 Futures Studies

The prior research from organisational research has not adequately paid attention to the pluralistic ways in which actors think and enact future. As Wenzel et al. (2020) argue, there is a need to focus on the pluralistic ways in which actors are making the future in

order to take the future more seriously as a problematic category. To extend our understanding of the pluralistic ways in which actors think and enact the future, we draw on insights from the Futures Studies. Futures studies is dedicated to studying futures – what alternative futures are, what thinking about the futures entails, or how futures can be studied (Dator, 2019), or how desirable futures can be achieved, and how they are defined (Hedrén & Linnér, 2009).

What distinguishes Future Studies from other research fields is its explicit focus on futures and its different understandings (Niiniluoto, 2022). Rather than treating the future as a predetermined outcome, futures studies emphasises the plurality of futures, what might happen, what could happen, and what should happen (Börjeson et al., 2006), or what might not happen, what could not happen, or should not happen. The aim is not solely to predict the future but rather actively engage with it through structured methodologies such as scenario planning, foresight, and speculative design (Hedrén & Linnér, 2009). Connecting insights from Future Studies benefits organisational literature, particularly, research on different future-making practices. For example, foresight is an important concept in Future Studies. This refers to the process of 'foreseeing' the future, by pinning it down on something happening in the 'now' (Malaska, 2013; Sardar, 2010). In other words, foresight embodies the element of imagining the future, but in the terms of what should be done in order to achieve the wanted future, or at least a version of it.

1.3 Research contexts

This research investigates future-making of desirable futures across three key contexts: future-oriented impact assessment, impact investing, and social entrepreneurship. Each of these contexts provides a unique perspective on how organisations and individuals engage with the future to address social and environmental challenges – and enact their desirable futures.

1.3.1 Effects, outcomes & impact

Effects, outcomes and impact are studied across a wide range of fields, from evaluation and policy to social and environmental assessment. The definitions vary across these fields. A common starting point is the theory of change, which makes explicit how a program or intervention is supposed to work, why, who it will benefit, and under what conditions success is possible (Weiss, 1995, 1997). In other words, it describes the causal

pathways between activities and their outcomes. This idea has been elaborated into theory-driven evaluation (Chen, 1990) and into practical guidance on purposeful use of program theory to clarify assumptions and evidence across evaluation stages (Funnell & Rogers, 2011).

The broader evaluation literature has emphasized that impact concerns the most consequential level of change. Scriven (1967, 1991) defines evaluation as the systematic judgment of merit, worth, and significance, which provides a foundation for treating impacts as the most meaningful changes. Patton (2008, 2010) re-centres this tradition on intended use by intended users and introduces developmental evaluation as a way to capture and adaptively learn about impacts in complex, evolving initiatives. At the same time, making credible claims about impact often requires working under real-world constraints. Bamberger et al., (2012) argue that valuation must combine mixed methods, reconstructed baselines, and pragmatic strategies. Mayne (2001) proposes contribution analysis as a structured way to build a credible contribution story about impacts when experimental attribution is not feasible. Similarly, Pawson and Tilley (1997) developed realist evaluation, which explains impacts in terms of context–mechanism–outcome configurations and asks what works, for whom, under which circumstances.

While there is no single agreed-upon distinction, a common convention in impact measurement literature, is to view these levels of effects, outcomes and impacts (OECD, 2002; Ebrahim & Rangan, 2014; Jäger & Rothe, 2013). This convention is also adopted in this thesis. According to Ebrahim & Rangan (2014), effects are used to describe more immediate or short-term changes directly experienced by stakeholders. Outcomes refer to intermediate or medium-term shifts that result from those effects, such as changes in behaviours, practices, or organisational performance. Impacts are generally reserved for more enduring, systemic, or long-term changes that may be direct or indirect, intended or unintended, and which often extend beyond the immediate target group to broader societal or environmental domains (e.g., poverty reduction, climate change mitigation, or structural shifts in economic development).

1.3.2 Future-oriented impact assessment

Impact assessment refers to the practices involved in understanding the intended or actual contribution of actions focused on addressing sustainability challenges (Ebrahim &

Rangan, 2014; Jäger & Rothe, 2013). These assessments are used by a wide range of organisations, including corporations, non-profits, governments, and investors, to measure the social, environmental, and economic effects of their activities (Esteves et al., 2012; Maas & Liket, 2011). Impact assessment has tended to focus on retrospective assessments, analysing the outcomes of projects and interventions after they have been implemented (Maas & Liket, 2011; Grieco et al., 2015). Impact assessment practices can help organisations account for their past actions by evaluating changes related to specific stakeholders and assessing whether broader societal or environmental impacts have been achieved. These retrospective evaluations are crucial in understanding the effectiveness of strategies and are widely used across sectors to inform future decision-making (Grieco et al., 2015).

Yet, in response to increasing uncertainty and complexity in addressing sustainability challenges, there has been a growing interest in future-oriented impact assessment. This approach seeks to project, forecast, or anticipate the potential impacts of current actions and decisions on future societal outcomes, or impacts (Greig & Duinker, 2014). Future-oriented impact assessment emphasises the need to move beyond evaluating past or present effects, to better understanding the long-term consequences of decisions (Duinker & Greig, 2007; Trautwein, 2020). In other words, to move from retrospectively evaluating the past, or monitoring the future, to trying to proactively understand how actions today can impact the future. By adopting a forward-looking, future-oriented approach to impact assessment, organisations can align their strategies with future societal goals, helping to navigate the inherent uncertainties of future outcomes (Lockie, 2001; Paltsev et al., 2015).

In recent years, there has been a growing recognition of the limitations of retrospective approaches of impact assessment in addressing the complexities of global challenges such as climate change, inequality, and resource depletion (Fichter et al., 2023; Trautwein, 2020). This has led to the emergence of future-oriented impact assessment, which emphasises the importance of anticipating and projecting the long-term effects of current actions (Duinker & Greig, 2007; Greig & Duinker, 2014). By incorporating future-oriented methodologies, such as scenario planning and forecasting, organisations can align their strategies with broader societal goals and navigate the inherent uncertainties of addressing systemic issues (Trautwein, 2020; Wenzel et al., 2020).

Future making offers valuable insights into the evolving role of impact assessment. Traditionally seen as a tool for accountability, impact assessment is increasingly viewed as a forward-looking practice that enables organisations to engage with possible, probable, and desirable futures (Beckert, 2013; Borup et al., 2006). By integrating future-oriented dimensions, organisations can move beyond simply measuring past outcomes to actively shaping their contributions to sustainable and equitable futures. This shift highlights the performative nature of impact assessment, wherein imagined futures influence present actions and decision-making processes (Beckert, 2013; Hernes & Schultz, 2020).

1.3.3 Impact investing

Impact investing refers to investments made with the intention of generating positive, measurable social and environmental impact alongside a financial return (Daggers & Nicholls, 2016). This emerging field encompasses a wide range of actors, including institutional investors, venture capitalists, and development finance institutions, who seek to support ventures addressing global challenges such as poverty alleviation, renewable energy, and financial inclusion (Agrawal & Hockerts, 2021). While traditional investment practices have predominantly centred on assessing future financial risks and returns, the emerging field of impact investing includes the added complexity of assessing potential social or environmental impacts, as investors attempt to achieve their desired visions for the future through investing in entrepreneurs (Arjaliès et al., 2023). While there is a lot of research exploring the financial side of assessing for investment decision-making (e.g., Ademi et al., 2023; Drover et al., 2016; Guarana et al., 2022), the research has not paid sufficient attention to the future-oriented processes involved in assessing and projecting impact risks and returns of impact investment.

Impact investing is inherently a future-oriented practice, as investors often consider the short-term financial risks and returns, and also the long-term social and environmental impacts of their investments (Arjaliès et al., 2023). Impact investors apply a variety of tools and frameworks to assess the anticipated impact of their investments, making impact measurement a key part of the investment decision process (Hazenberg & Paterson-Young, 2022). These frameworks include both qualitative and quantitative measures to ensure that social and environmental impacts are considered alongside financial performance (Agrawal & Hockerts, 2021). As impact investing is inherently a future-

oriented practice, it provides a rich context for studying the intersection of finance and future-making, where long-term sustainability objectives align with investment strategies aimed at creating systemic change in addressing global challenges.

The theoretical lens of future-making provides a rich perspective to understand the practices of impact investors. As future-making refers to how actors produce and enact futures in the present by imagining possible, probable, and preferred futures (Beckert, 2013; Wenzel et al., 2020). Impact investing embodies these processes in their everyday practices, as those require investors to imagine multiple potential futures, evaluate their desirability, and actively shape pathways toward these futures. This process involves using tools which enable investors to envision alternative scenarios and identify actionable steps to bring preferred futures into being. In similar manner as investors use tools to project financial risk and return, impact investors have to consider the impact risk and return (Jaya, 2024). By aligning short-term decisions with long-term aspirations, these practices highlight the performative role of future imaginaries in shaping the investment landscape (Sardar, 2010; Vergragt & Quist, 2011).

1.3.4 Social entrepreneurship

Social entrepreneurship is widely regarded as a means for addressing persistent social problems through innovative, market-driven approaches (Gupta et al., 2020). Social entrepreneurs pursue ventures that combine the creation of social value with economic sustainability, focusing on solutions for issues such as environmental protection, and financial inclusion (Bygrave & Minniti, 2000; Hockerts, 2019). Unlike traditional entrepreneurship, where profit maximisation is the primary goal, social entrepreneurship seeks to generate positive externalities that benefit society at large (Mair & Martí, 2006; Santos, 2012). Social enterprises often operate at the intersection of the public, private, and nonprofit sectors, using business model to achieve both social and economic objectives (Urbano et al., 2010). This dual mission of social enterprises creates unique challenges, requiring innovative governance structures and impact measurement tools to balance competing goals of financial viability and social impact (Rawhouser et al., 2017).

Social entrepreneurship and impact measurement are closely linked because the success of social enterprises often depends on their ability to demonstrate their impact (Rawhouser et al., 2017; Ormiston, 2019). Social enterprises operate with the goal of

creating social value, addressing complex social issues, and generating sustainable solutions (Di Domenico et al., 2010). Measuring their social impact allows these organisations to assess the effectiveness of their activities and ensure that they are achieving their intended goals. It also helps them communicate their value to stakeholders such as investors, beneficiaries, and the public. This process of impact measurement requires the use of various frameworks and tools that capture both qualitative and quantitative data, providing a comprehensive view of the outcomes and long-term effects of social enterprise initiatives (Rawhouser et al., 2017; Nicholls, 2009).

Social entrepreneurship is inherently forward-looking, as these actors often work to address long-term societal issues while responding to immediate needs (Hernes & Schultz, 2020). To create meaningful and sustainable change, social entrepreneurs must consider how their actions today influence the futures they aim to build. The interplay between present constraints and future aspirations is central to the strategic decision-making of social enterprises, requiring an active engagement with future-oriented processes (Beckert, 2013).

Future-making provides a compelling theoretical lens to explore the temporal dynamics of social entrepreneurship. It highlights how these actors produce and enact imagined futures by embedding them into their present-day activities (Beckert, 2013; Hernes & Schultz, 2020). Social entrepreneurs engage with future imaginaries, visions of possible, probable, or desirable futures, which guide their actions and serve as tools for mobilising resources and fostering collective action (Borup et al., 2006; Oomen et al., 2021). These imaginaries play a dual role: they inspire innovation and collaboration while also shaping the identity and legitimacy of social enterprises within their broader ecosystems.

1.4 Aims and objectives

The main objective of this research is to deepen our understanding of how organisations and individuals assess, navigate and shape potential desirable futures. To answer this research question, five sub-questions were set, each forming research paper.

Paper 1: How and why do organisations utilise future-oriented impact assessment?

The purpose of this paper is to explore forward-looking, future-oriented approaches to impact assessment. Through a systematic literature review, the study identifies key

themes, challenges, and gaps in the current understanding of forward-looking impact assessment. The paper aims to develop an integrated process model that highlights the relationships between the antecedents, methods, and effects of forward-looking impact assessment, offering a comprehensive research agenda to advance the field.

Paper 2: How do impact investors use future-oriented impact assessment to understand and enact desirable futures?

The purpose of this paper is to explore how impact investors use future-oriented impact assessment techniques to project and enact desirable futures. By examining 40 European impact investors, the study identifies three key futuring techniques, predictive, explorative, and normative, that are employed to navigate the uncertainties of social and environmental outcomes. Predictive techniques focus on forecasting likely impacts, explorative techniques consider a range of possible futures, and normative techniques evaluate the desirability of different potential outcomes based on ethical and value-driven criteria. The paper aims to contribute to the growing literature on future-making in impact investing by revealing the complex, multifaceted approaches investors take to shape sustainable and impactful futures through their investments.

Paper 3: How do social actors navigate and connect distant futures and near future events?

The purpose of this paper is to examine the mechanisms through which social actors translate between near and distant futures, particularly within the field of impact investing. By conducting a field-level study with 40 European impact investors, this study unpacks how temporal reflexivity enables these actors to overcome temporal disconnects - being stuck either in the near future or the distant future. The aim is to explore how foresight and backcasting are employed as tools for translating between these temporal horizons, allowing investors to address both imminent concerns and long-term societal goals

Paper 4: How do utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields?

The purpose of this paper is to explore how utopian and dystopian imaginaries shape collective identity in nascent entrepreneurial fields. By employing Textor's (1980) ethnographic futures method, the paper uncovers how these competing future

imaginaries, utopian and dystopian, exist in a dialectical relationship, influencing how blockchain-for-good entrepreneurs form coalitions, distance themselves from others, and establish a collective identity as 'good actors' within the field. The findings contribute to the literature on future imaginaries by demonstrating how the utopia-dystopia dialectic shapes entrepreneurial visions for the future, and plays a crucial role in the formation of collective identities.

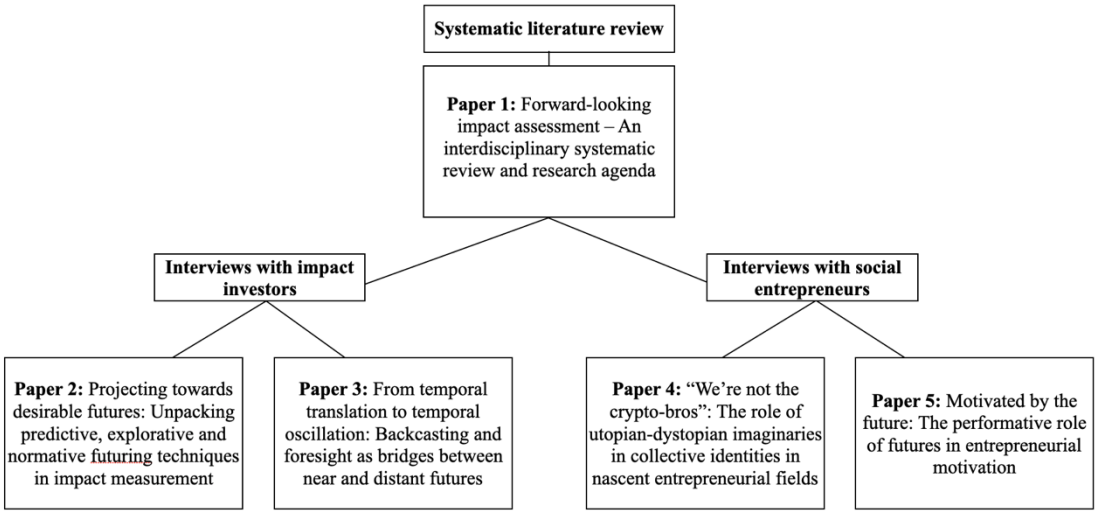
Paper 5: How do future imaginaries motivate entrepreneurial action?

The purpose of this paper is to explore how expectations, imaginaries, and narratives of the future shape entrepreneurial motivation. Drawing on interviews with 40 blockchain entrepreneurs working on decentralised finance for societal good, the study adapts Textor's ethnographic futures method to examine how entrepreneurs envision probable, possible, and preferred futures. The paper reveals how expectations anchor motivation in current trends, imaginaries expand the horizon of what is possible, and narratives provide the bridge between the two, translating imagined futures into present-day action. By investigating this interplay, the study contributes to the literature on entrepreneurial motivation and future-making, offering new insights into how actors are driven by the future to build ventures that reimagine financial systems.

1.5 Research methodology

This section briefly introduces the research methodology. The thesis utilises a range of qualitative research methods to explore how organisations and individuals assess, navigate and shape potential desirable futures. The thesis consists of five articles, looking at the phenomenon of futuring and impact from different perspectives. For the aims of this research, the project was built upon three different data sets; (i) systematic literature review, (ii) interviews with impact investors and (iii) interviews with social entrepreneurs.

Figure 1 Research structure



1.5.1 Research approach

This thesis adopts a theory-building process approach, where the primary aim is not to test predefined hypotheses, but to develop process models that capture the dynamic and temporal nature of how futures are enacted in impact investing and entrepreneurship. Following Langley's (1999) strategies for theorizing from process data, the focus lies in tracing sequences, mechanisms, and oscillations across contexts, rather than reducing observations to variables and co-occurrence counts. Consistent with Eisenhardt and Graebner's (2007) logic of theory building from cases, the research relies on rich qualitative evidence, including interviews and textual material, to inductively surface constructs and relationships that can inform mid-range theory. Through this orientation, the thesis can answer questions 'how' and 'why' in more under-theorised domains (Eisenhardt & Graebner, 2007). Moreover, inspired by Langley and Meziani's (2020) emphasis on making interviews meaningful, the thesis treats interview data not as static accounts but as opportunities to co-construct narratives that reveal actors' organising logics, such as future imaginaries. Taken together, this process-oriented, inductive approach positions the thesis within an established tradition of qualitative research that privileges model building as the bridge between empirical richness and theoretical contribution.

While adopting this approach, I am mindful that my role as a research is not neutral but shaped by my own positionality. Rather than attempting to bracket out these influences

entirely, I adopt a reflexive approach that recognises the co-construction of knowledge with participants, aligning with calls to treat positionality not as a limitation but as a resource for producing situated, transparent, and ethically grounded accounts of organisational future-making (Berkovic, 2023).

1.5.2 Systematic literature review

A systematic literature review of impact assessment studies was conducted to identify emerging trends and research gaps on forward-looking, future-oriented approaches to impact assessment (Tranfield et al., 2003), and to question *"how and why do organisations utilise forward-looking, future-oriented approaches to impact assessment"*.

An interdisciplinary approach was adopted for the review to synthesise and contrast different perspectives on impact assessment, methods and approaches across disciplines (Burgers et al., 2019). Based on previous systematic reviews in the fields of sustainability, impact assessment, sustainable innovation and circular economy (see, e.g., Cillo et al., 2019; Sassanelli et al., 2019; Takalo et al., 2020), 22 keywords related to impact assessment, and 7 to forward-looking temporality, were identified, with which the search was conducted. After screening the initial 7147 abstracts, 178 were chosen for the review. A thematic analysis was conducted to ensure an in-depth review of the articles. The analysis was done partly inductively and partly deductively. Accordingly, some codes were determined beforehand (e.g., advantages/disadvantages, type of organisation, impact assessment domain), and others emerged from the analysis (e.g., authors' comprehension of future or uncertainty). The findings shows: (i) descriptive findings on the leading journals publishing research on forward-looking impact assessment and the terminology used in the field; (ii) an integrated process model of forward-looking impact assessment; (iii) the antecedents; (iv) methods; (iv) the effects; and (v) the challenges of forward-looking impact assessment.

1.5.3 Impact investor interviews

Based on the results of the systematic literature review, the focus for the empirical work was directed to impact investors, as they are often the actors utilising forward-looking impact assessments. This data sets employs a qualitative, interpretative design using semi-structured interviews with European impact investors, to examine how futures are

constructed and operationalised in investment processes and impact assessment. The idea was to study the impact investing field, and how actors within that field enact futures. This data collection resulted in two research papers. First, focusing on the future-oriented impact assessment methods, addressing the differences and similarities of futuring methods focusing on predictive, explorative and normative futuring. Second, focusing on how impact investors take into consideration different time-frames, and translating distant future visions to near future actions.

1.5.3.1 Interview process overview

A central starting point for identifying interviewees was the member list of Impact Europe (formerly the European Venture Philanthropy Association, EVPA), which serves as the main membership organisation for impact investors in Europe. Impact Europe brings together a broad range of actors including foundations, charities, NGOs, family offices, sustainable asset managers, development finance institutions, and institutional investors such as pension funds and insurance companies. This diversity reflects the heterogeneity of the European impact investing landscape, where different types of organisations channel capital and expertise into impact-oriented activities. By drawing on this membership base, the study was able to capture perspectives across the spectrum of impact investing, while also supplementing the sample with non-member organisations to ensure stronger geographic representation.

To further balance the sample geographically, we segmented Europe (UN geoscheme) and actively targeted under-represented regions, notably Eastern and Southern Europe, where Impact Europe's membership was thinner, adding non-member contacts accordingly. This strategy yielded 40 interviews across 17 European countries and a range of organisational forms to represent the impact investing field. We sought heterogeneity in roles and seniority to capture variation in how future-making is practiced: CEOs and managers (strategy/mandate), investment specialists (deal structuring), and impact assessment specialists (metrics, evaluation). An overview of positions by organisation type and country is provided in the following chapters, as well as in the Appendix 1, which includes an interview protocol.

Interviews were semi-structured, conducted via Zoom, and lasted roughly 45–60 minutes (some extending longer in chapter-specific datasets). All interviews were audio-recorded

with explicit consent, transcribed verbatim, and anonymised for analysis. Organisational websites and reports were analysed before and after interviews to strengthen context and triangulate statements. Ethical approval was granted by Maastricht University's ERCIC (ERCIC_261_04_06_2021, 20 Aug 2021); informed consent was obtained in writing and verbally.

During the interviews, and apprentice role was adopted (Langley & Meziani, 2022). What this means is that interviewees were encouraged to reflect upon and make explicit their practical knowledge through think-aloud and critical incident techniques (Erikson & Simon, 1998), to capture the mechanisms at play when impact investors are making decisions involving understanding of the future. Participants were asked to talk through their thinking and actions throughout their investment process, and also to focus on examples of moments where investors are engaging with futures.

1.5.3.2 Analysis

Transcripts were analysed in Atlas.ti using an iterative, multi-step strategy. First, open coding was conducted to surface themes related to how participants imagine the future, how such imaginaries shape investment decisions, and how they see the future of their fund and the field, following established thematic procedures (Gioia; Nowell et al., 2017). Second, codes were structured to, for instance, differentiate between different types of understandings of the future. For example, if futuring was formal or informal, which time horizon interviewees were talking about, or overall how did they thought about the future. To ground analysis in concrete decisions despite interview length, we used critical incident prompts to elicit specific episodes across the investment process (fund design; origination; due diligence/structuring; post-investment). This supported a process-level mapping of, for instance, when near vs. distant futures and different futuring modes are invoked. Interviews were complemented with public documents (websites, reports) to contextualise and cross-check claims, integrating these materials into the coding workspace. Interestingly, we did not find drastic differences between investor types to draw comparative conclusions, but want to note that subsample sizes are small.

Coding was mostly done by the PhD candidate, however, throughout the process, the first supervisor was involved, and also looked through the coding frame, as well as coded some interview questions throughout the interviews, and some interview transcriptions.

We paid special attention to the prospective nature of investing and the role of understanding the future, and how this in turn shapes decision-making. The interviews were designed to elicit in-depth accounts on how investors make impact investment decisions, how they consider impact and how do they perceive the impact investing field, thus this affected the analysis as well.

1.5.3.3 Limitations

These methodological choices have some main limitations. First, while the sample reflects the diversity of Impact Europe's membership, it is important to note a bias towards foundations, NGOs, charities, and sustainable asset managers, with relatively few institutional investors (e.g., pension funds, insurance companies, large asset owners) represented directly. Out of the forty interviews conducted, only five organisations could be clearly classified as institutional investors in their own. However, some the asset managers and development finance institutions included in the sample manage capital on behalf of institutional investors, meaning that institutional perspectives were indirectly represented. Still the direct voice of institutional investors remains limited in this dataset. Yet, as Impact Europe is working as a field-builder in Europe, it was seen as appropriate starting point for the field-level study (Logue & Grimes, 2022). Future research would benefit from more extensive engagement with institutional investors to better understand their motivations, constraints, and practices in shaping impact investing markets.

Second, stricter definitions of impact investing might not classify all interviewed actors as impact investors, as some may not have placed equal emphasis on financial and impact goals. However, all interviewees self-reported to be impact investors and were recognised as part of the European impact investing field, making their perspectives relevant to this study. Also, even though some investors are classified as foundations or not-for-profit asset managers, all interviewees were nonetheless engaged in active investment practices, allocating capital with the explicit intention of generating both financial and social or environmental returns. Their organisational form thus does not diminish their role as investors, but rather highlights the diversity of structures through which impact investing is practiced.

Third, although public documents, websites, and reports from the organisations were used to contextualise the interviews, the triangulation of data could have been more

systematically applied. Formal information such as annual reports, investment mandates, and published impact assessments could have been more thoroughly examined and exploited to complement the interview data and reduce potential biases. This study therefore relies more heavily on interviewees' accounts than on documentary evidence, which limits the ability to fully cross-verify the claims made. Future research could strengthen triangulation by incorporating a more systematic documentary analysis alongside interviews.

1.5.4 Social entrepreneur interviews

Another empirical focus is social entrepreneurs. We decided to focus on the emerging field of entrepreneurship, where future is more prevalent, to understand future imaginaries, in both acting as defining identities, as well as motivating entrepreneurs. This being the field of blockchain, and particularly using blockhain for good in financial setting, or decentralised finance (DeFi). We treat these ventures as social entrepreneurs insofar as they explicitly articulate public-good aims (e.g., inclusion, transparency, redistribution) alongside commercial viability, and position their offerings as solutions to societal problems rather than purely as financial products. DeFi is a fitting site because technical change and normative claims are tightly coupled, field conventions are unsettled, and boundary work around "doing good" is ongoing, conditions under which future-making becomes present.

Methodologically, the project adopts a qualitative, interpretive, comparative design centred on semi-structured interviews scaffolded by Textor's ethnographic futures approach. This protocol elicits three scenario narratives, optimistic/utopian, pessimistic/dystopian, and most likely/probable, in participants' own terms. It is well suited to uncovering how entrepreneurs construct futures, attach meanings and emotions to them, and link those futures to near-term intentions, while retaining a common analytic frame for within- and cross-case comparison. Appendix 2 includes a full interview protocol.

This data also resulted two research papers. One focusing on how utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields, and one focusing on how images of the future can motivate entrepreneurial action.

1.5.4.1 Interview process overview

To access entrepreneurs explicitly oriented toward public-good applications of blockchain, the study began with the PositiveBlockchain.io database, which lists blockchain ventures oriented towards social and environmental aims. This offered practical way into the "blockchain for good" community, and finding ventures within the decentralised finance sub-domain. To reduce single-source bias and widen the coverage, recommendation were also asked from the initial interviewees. 40 interviews were conducted across six continents, and a range of decentralised finance sub-domains (charity/donations, digital identity/credit scoring, cryptocurrencies, financial inclusion, investing, peer-to-peer transactions, verification, and insurance), capturing the diversity of the emerging "blockchain for good" field. Given the study's focus on imaginaries, strategy, and intended action, founders were primarily targeted.

Interviews were semi-structured and conducted in a conversational manner consistent with Textor's ethnographic futures approach (Textor, 1995). Following brief background questions, each participant articulated three imaginary narratives in their own terms: a best-possible yet still achievable future (utopian), a realistic worst-case future (dystopian), and the most probable future. Time horizons and levels of analysis were not pre-specified, and prompts were intentionally minimal to keep the interviewee "in charge." In line with Textor's (1980) approach, plausibility boundaries were encouraged to avoid extremes ("everything is perfect" or "doomsday tomorrow") while preserving openness for elaboration. Interviews were typically 45–60 minutes in length.

All sessions followed a standard sequence: invitation and information sheet, written and verbal consent, audio recording with explicit permission, and anonymisation prior to analysis. Ethical approval was granted by Maastricht University's ERCIC (ERCIC_415_1_2_2023_Kemp, 28 February 2023).

To strengthen contextual understanding and enable basic triangulation, I collected publicly available materials for each venture (white papers, reports, websites) before and after the interviews. These sources informed interview preparation, supported clarification where needed, and were revisited during analysis to check the consistency between formal organisational narratives and interview accounts.

1.5.4.2 Analysis

Coding was conducted by the candidate in Atlas.ti and followed the logic of Textor's ethnographic futures protocol. Within each interview, answers were first segmented into utopian, dystopian, and probable. An open-coding pass then surfaced first-order concepts associated with each scenario (imaginaries, rationales, intended actions). Next, a thematic analysis was conducted related these codes to emergent mechanisms and field processes. For Paper 4, this included the identification of utopian dystopias and dystopian utopias (instances where one actor's utopia mirrored another's dystopia), alongside themes of othering and competition for utopias that informed collective identity in the nascent field. For Paper 5, coding linked to motivational mechanisms. A final integrative pass consolidated second-order themes and aggregate dimensions to enable robust cross-case comparison. In accordance with ethnographic futures research method (Textor, 1980; 1995), the focus was on comparing and contrasting the future scenarios of the interviewees.

In similar manner as with the impact investors' interviewees, the PhD candidate coded the interviews, with assistance of the first supervisor. Public documents (white papers, websites, reports) were integrated into the Atlas.ti project and consulted to triangulate formal narratives with interview accounts and to clarify ambiguities. Reflexive memos documented assumptions and steps taken to bracket them during coding and interpretation. These sources informed interview preparation, were revisited during analysis to check consistency between formal communications and interview narratives, and were used to note convergence and dissonance relevant to scenario content and intended action.

1.5.4.3 Limitations

This dataset is subject to some limitations. Using PositiveBlockchain.io as the primary sampling frame, complemented by snowball referrals, although coverage spans six continents and multiple DeFi sub-domains, distribution is uneven and largely English-language, and the categorisation of ventures into a single sub-domain occasionally required judgment where offerings overlapped. The Textor protocol elicits imaginary narratives rather than outcomes, what this means that interviews created a space for the entrepreneurs to imagine the utopias and dystopias that may not be 'created' otherwise. Also the utopias can present ideas, instead of what the entrepreneurs are actually doing.

Yet, there is value in enlighten these imaginaries, and ideals, to understand the field. Moreover, this field, being nascent, is fast-moving, and thus a longitudinal follow-up could show how the articulated futures translate into realised outcomes.

1.6 Thesis structure

This thesis includes five research chapters. Table 1 presents an overview of each paper, and where they have been presented, submitted and published.

Table 1 Research stages

Research context	Paper(s)	Stage
Systematic literature review	Paper 1: Forward-looking impact assessment – An interdisciplinary systematic review and research agenda	Published in *Journal of Cleaner Production* Strömmer, K., & Ormiston, J. (2022). Forward-looking impact assessment – An interdisciplinary systematic review and research agenda. Journal of Cleaner Production, 377. Presented at: Strömmer, K., & Ormiston, J. (2022). Forward-looking impact assessment -- an interdisciplinary systematic review and research agenda. Academy of Management Annual Meeting Proceedings, 2022. Seattle, the USA, August, 2022. Strömmer, K., & Ormiston, J. (2021). Forward-looking impact assessment - An interdisciplinary systematic review and research agenda. 8th EMES International Research Conference on Social Enterprise. Teruel, Spain, October, 2021. Special issue workshop at Journal of Cleaner Production
Impact investing interviews	Paper 2: Projecting towards desirable futures: Unpacking predictive, explorative and normative futuring techniques in impact measurement	Under second-round review at *Journal of Business Ethics* Presented at: Strömmer, K & Ormiston. J. (2023). Impact assessment as future-making: Unpacking the practices of predictive, explorative and normative futuring. 39th EGOS Colloquium. Cagliari, Italy, July 2023.
	Paper 3: From translation to temporal oscillation: Backcasting and foresight as bridges between near and distant futures	Preparing manuscript to be submitted to *Organization Science* Presented at: Strömmer, K., & Ormiston, J. (2023). Creating spaces to imagine near and distant futures. Academy of Management Annual Meeting Proceedings, 2023. Boston, the USA, August, 2023. Strömmer, K. & Ormiston, J. (2023). Creating Spaces to Imagine Utopian and Dystopian Futures: The Role of Backcasting and Foresight as Bridges Between Near and Distant Futures. Empowering Futures – Long-Term Governance, Democracy and Futures Research. Turku, Finland, June 2023.

		Strömmer, K & Ormiston. J. (2023). Creating spaces to imagine utopian and dystopian futures: The role of backcasting and foresight as bridges between near and distant futures. 17th Organization Studies Workshop. Athens, Greece, May 2023. Strömmer, K. & Ormiston, J. (2022). Creating spaces to imagine utopian and dystopian futures: The role of backcasting and foresight as bridges between near and distant futures. 38th EGOS Colloquium. Vienna, Austria, July, 2022.
Social entrepreneur interviews	Paper 4: "We're not the crypto-bros": The role of utopian-dystopian imaginaries in reframing, solidifying and demarcating collective identities in nascent entrepreneurial fields	Preparing revisions for *Entrepreneurship Theory and Practice* Presented at: Strömmer, K., & Ormiston, J. (2025). "We're Not the Crypto-Bros": The Role of Utopian-Dystopian Imaginaries in Collective Identities. Academy of Management Annual Meeting Proceedings, 2025. Copenhagen, Denmark, August, 2025. Strömmer, K & Ormiston. J. (2024). Role of Utopian-Dystopian Imaginaries in Collective Identities. 40th EGOS Colloquium. Milano, Italy, July 2024.
	Paper 5: Motivated by the future: The performative role of futures in entrepreneurial motivation	Preparing manuscript to be submitted to *Small Business Economics* Presented at Special issue workshop in Journal of Business Venturing Insights

1.7 Contributions

By exploring of how organisations and individuals assess, navigate and shape desirable futures, the thesis makes five main contributions. First, the thesis shows how organisational focus on futures is not limited to prediction or forecasting activities, but there are various different ways in which organisations actively shape their desirable futures. Second, the thesis notes how organisations and individuals with temporal reflexivity are able to transcend their temporal structures and connect their future visions with performative action. Third, the thesis notes how desirable and undesirable future imaginaries are dynamic and interconnected and play a role when organisations are making decisions. Fourth, the thesis shows how incorporating future-oriented dimension to impact assessment is essential for more holistic approach in understanding how actions today impact our future world. Fifth, the thesis emphasises how future-oriented processes, or future-making practices, are essential for fostering lasting impact and systemic change. Table 2 unpacks these contributions more.

Table 2 Contributions

Contribution	Explanation	Papers
Organisational futuring extends beyond prediction to actively shape desirable futures	This research highlights that organisational futuring involves more than merely predicting the future; it includes explorative, normative, and value-driven approaches that help shape and respond to a complexity of plurality of potential futures. Organisations and individuals in their everyday future-making processes can envision multiple outcomes and actively steer toward desirable futures rather than just forecasting them.	**Paper 1:** Argues for a broader conception of impact assessment that emphasises exploration over prediction. **Paper 2:** Provides a typology of predictive, explorative, and normative techniques used in assessing impact and shaping futures. **Paper 3:** Demonstrates how actors navigate between present and future possibilities, shaping outcomes beyond prediction.
Temporal oscillation connects future visions with present actions	Temporal oscillation enables organisations and individuals to connect envisioned futures to present actions, allowing them to respond to changing circumstances. Through oscillation between present, near and distant future, actors can keep sustained focus on distant future events while not forgetting the immediate needs.	**Paper 3:** Identifies temporal oscillation as a key mechanism in navigating temporal tensions, helping actors address immediate concerns while keeping distant future goals in consideration. **Paper 2:** Notes how normative futuring methods as can act as a basis long-term impact considerations in present values and practices.
Desirable and undesirable imaginaries play a dynamic and interconnected role in decision-making	Desirable (utopian) and undesirable (dystopian) imaginaries are not static; they interact and evolve, shaping the ways actors envision and pursue futures. Desirable and undesirable imaginaries have dialectical relationship, which can guide organisations in assessing potential pathways and in defining what future outcomes align with or diverge from their values and goals.	**Paper 4:** Explores the interaction between utopian and dystopian imaginaries, illustrating how they shape aspirations. **Paper 3**: Reinforces this by showing how temporal translation and especially backcasting allows actors to dynamically navigate between imagined desirable and undesirable futures, translating long-term visions into concrete actions. **Paper 5**: Demonstrates how entrepreneurs articulate utopian and dystopian imaginaries to shape their motivations, highlighting how imaginaries influence their entrepreneurial choices.
Incorporating future-oriented temporal dimensions enables holistic impact assessment	Effective impact assessment requires a nuanced understanding of temporal dimensions that moves beyond linear timeframes, incorporating past experiences, present realities, and future aspirations. Future-oriented approaches enable organisations to address complex grand challenges by aligning current strategies with future goals.	**Paper 1:** Emphasises the importance of future-oriented impact assessment to tackle challenges like sustainability and climate change. **Paper 2:** Extends this by showing that diverse futuring techniques enable organisations to integrate ethical and temporal considerations, addressing the interconnected nature of past, present, and future in their assessments.
Future-oriented processes can help organisations in fostering lasting impact and systemic change	Organisations and individuals use future-oriented processes to achieve outcomes, and also to drive systemic change. By aligning near-term activities with long-term, or distant future goals, they create enduring impacts that address complex societal challenges, such as climate change and social inequality.	**Paper 1:** Introduces the importance of future-oriented impact assessment in tackling grand challenges, framing it as essential for systemic impacts that go beyond effects or outcomes. **Paper 2:** Highlights "polytemporal synergy" as a mechanism for aligning near and distant futures, which enables actors to address current needs while also paving the way for systemic changes that last. **Paper 3:** Discusses normative futuring shows how actors use values-driven approaches to shape desirable, long-term futures, which is central to lasting impact. **Paper 5**: Illustrates how imaginaries act as a performative motivating entrepreneurship, guiding ventures that seek systemic change by aligning business models with long-term visions.

1.8 A pluralistic normative lens of future-making

This research project was developed to explore how organisations and individuals assess, navigate, and shape desirable futures in the contexts of impact investing, social entrepreneurship, and future-oriented impact assessment. The research integrates theoretical perspectives on temporality, future-making, and futures studies, bringing a set of conceptual frames to illuminate how these actors engage with futures, explicitly or implicitly, and the implications of their actions.

This research project evolved from the recognition that future-making is not only the explicit forecasting practices, but also in everyday mundane activities (Wenzel et al., 2020). While impact investors and social entrepreneurs are contexts that inherently involve thinking about and acting upon future possibilities, these practices are often implicit rather than explicit. For example, investors make assumptions about the future when assessing risks and returns, while entrepreneurs envision the long-term societal value of their ventures. However, these actors do not explicitly use terms like "temporal oscillation" or "future imaginaries" in their work. Instead, their everyday practices implicitly reflect these theoretical concepts, which this research brings forward through conceptualization and theorisation. By introducing a futures lens, this research reveals the underlying dynamics of how these actors engage with the future in their activities.

One key dimension of the research is the focus on how futures are conceptualised and positioned. Futures are not treated as static or predetermined, instead, they are open-ended, multifaceted, and dynamic phenomena (Wenzel et al., 2020). This perspective enables a shift from viewing futures solely as risks to be mitigated, or something to be known through forecasting, to also recognising their generative and performative potential. For instance, actors in these fields often engage with both desirable and undesirable futures, using techniques such as foresight and backcasting to navigate between aspirations and constraints.

The research also reflects on the practices of those striving to drive meaningful change. Studying desirable and undesirable futures inevitably means that research is engaging with normative contexts. Futures are not neutral, they are shaped by values and assumptions, particularly in fields such as impact investing and social entrepreneurship. These contexts are inherently future-oriented and are underpinned by actors striving to shape particular visions of the future. This makes them especially compelling for

examining the interplay between desirable and undesirable futures. However, my role as a researcher is not to evaluate or determine what constitutes a desirable future. Instead, my focus is on understanding how these actors construct, navigate, and enact their imagined futures, bringing theoretical clarity to their underlying processes and practices.

The normative nature of these fields highlights the complexities of future-making. While sustainability, for example, is often positioned as a universal aspiration, its meaning and implications vary significantly across contexts. These variations reflect the diversity of values, priorities, and imaginaries that influence how different actors envision and act upon the future. Using a conceptual lens rooted in future-making, this research seeks to explore how desirable and undesirable futures are articulated and enacted without imposing normative judgments – reinforcing the importance of understanding futures as open-ended, contested, and situated phenomena.

CHAPTER 2 - FORWARD-LOOKING IMPACT ASSESSMENT – AN INTERDISCIPLINARY SYSTEMATIC REVIEW AND RESEARCH AGENDA

Strömmer, K., & Ormiston, J. (2022). Forward-looking impact assessment – An interdisciplinary systematic review and research agenda. *Journal of Cleaner Production, 377*, 134322. https://doi.org/10.1016/j.jclepro.2022.134322

This chapter provides the foundation for understanding the role of future-oriented impact assessment in addressing complex societal challenges. As the first study of this thesis, the systematic literature review examines how organisations engage with forward-looking impact assessment practices to anticipate and shape long-term outcomes. By synthesizing insights from an interdisciplinary academic articles, the chapter identifies key themes, challenges, and gaps in the current understanding of how and why do organisations utilise forward-looking, future-oriented approaches to impact assessment.

The purpose of this review is twofold: to explore the conceptual and methodological foundations of future-oriented impact assessment and to develop an integrated process model that highlights the antecedents, methods, and effects of these approaches. The findings emphasise the importance of moving beyond retrospective evaluations to consider how actions today can contribute to our future world. This forward-looking perspective is particularly relevant in the context of addressing sustainability challenges, where long-term impact is often uncertain and multi-dimensional.

By mapping the existing literature, this study establishes a foundation for the empirical work presented in subsequent chapters. The review contributes to the broader discussion on future-making by highlighting the necessity of integrating temporal dimensions into impact assessment practices. This chapter thus sets the stage for exploring how individuals and organisations navigate and shape desirable futures, connecting the theoretical framework introduced earlier with the empirical investigations that follow.

Forward-looking impact assessment – An interdisciplinary systematic review and research agenda

Abstract

New and established ventures are under increasing pressure to consider how their current actions impact our future world. Whilst many practitioners are paying greater attention to their future impact, most impact assessment research focuses on the retrospective measurement of impact. Limited studies have explored how impact assessment is used as a tool to forecast or predict the intended impact of organisational action. This study aims to overcome this gap by exploring forward-looking approaches to impact assessment. An interdisciplinary systematic review of the impact assessment literature was conducted to answer the question: "How and why do organisations utilise forward-looking, future-oriented approaches to impact assessment?". The findings elaborate on the common research themes, challenges, and gaps in understanding forward-looking impact assessment. An integrated process model is developed to show the relationships between various antecedents, methods, and effects of forward-looking impact assessment. Based on the review, the paper puts forward a research agenda to provoke further inquiry on forward-looking, future-oriented approaches to impact assessments related to four research themes: uncertainty, values and assumptions, stakeholder cooperation, and learning. The study contributes to the impact assessment literature by providing an overview of how the current literature comprehends forward-looking approaches and insights into how a more holistic view of temporality in impact assessment can be developed.

Keywords: impact assessment; forward-looking; temporality; futures thinking

2.1 Introduction

Grand societal challenges such as climate change, population growth, resource depletion, and rising inequality require organisations and individuals to consider how their actions today impact our future world. Entrepreneurs, policymakers, non-profit organisations, corporations, and investors are thereby proactively paying attention to the impact of their activities. As Wenzel et al. (2020, p. 1441) point out, societal actors "have recently 'rediscovered' the future as a problematic, open-ended category in organisational life, one that they cannot delineate through planning practices alone". Organisations are questioning what is knowable about the future and are producing new ways in which they enact the future to address grand challenges. Particularly for entrepreneurial organisations, which play a crucial role in solving these grand challenges, it is essential to proactively understand how novel business models, products, services, and processes can create positive impact (Horne, 2019). As organisations attempt to solve these grand challenges, impact assessment practices can help them maximise their contributions while minimising their negative impact (George et al., 2019; Ormiston, 2019; Rawhouser et al., 2019).

Impact assessment refers to the practices involved in understanding, measuring and reporting the intended or actual contribution of actions focused on addressing sustainability challenges (Ebrahim & Rangan, 2014; Jäger & Rothe, 2013). Scholars have defined the term 'impact' in several ways, resulting in various terms such as outcomes, performance, outputs, or impact. However, as Ebrahim and Rangan (2014) argue, impact should be understood as going beyond short and medium-term outcomes by making a lasting change at a societal level. Outcomes are viewed as changes directly related to specific stakeholders, whereas impact refers to changes at the broader system level (Wagner et al., 2021). The lasting societal changes needed to achieve the United Nations Sustainable Development Goals (SDGs) provide a clear example of what sustainability impact might look like in practice (Bond et al., 2012; Pope et al., 2017; Trautwein 2020). The notion of impact evoked in this paper can thereby be understood as a lasting contribution to achieving sustainable development, along the three dimensions of economic, social and environmental value creation (UN, 2015; Trautwein, 2020; Schaltegger & Wagner, 2011).

Both new and established ventures are adopting forward-looking impact assessment practices, such as impact forecasting (Duinker & Greig, 2007; Farrukh & Holgado, 2020), foresight (Amanatidou, 2017) impact projection (Arnell et al., 2004; Paltsev et al., 2015), and impact prediction (Lockie, 2001; Partal & Dunphy, 2016), to help overcome the challenges of relying on historical performance data and retrospective evaluations (Hörisch et al., 2015; Trautwein, 2020). Despite the uptake in practice, academic research has paid limited attention to future-oriented impact assessment practices and how they are used to forecast, project, or predict organisational impact. Indeed, temporality itself has been relatively unexplored within the impact assessment literature. This paper aims to overcome this gap by conducting an interdisciplinary systematic literature review on how emerging perspectives within the impact assessment literature understand the future. The study explores the question: "how and why do organisations utilise forward-looking, future-oriented approaches to impact assessment?".

Whilst impact assessment was initially developed for predicting impact, several reviews have indicated that forward-looking assessment methods form only a minority of the impact assessment methods (Esteves et al., 2012; Grieco et al., 2015). For instance, Maas and Liket (2011a) classified thirty different impact assessment methods and concluded that only a few show clear orientations to particular timeframes and that only a limited number of methods focus on prospective assessment. Similarly, Grieco et al. (2015) used temporal frames to analyse different social impact assessment models and concluded that most models are retrospective or ongoing, whereas prospective models form only a small minority. Given the limited focus on prospective assessment, scholars have called for more explicit recognition of temporal aspects of impact assessment (Esteves et al., 2012; Rawhouser et al., 2019). There have also been calls for research exploring the role of prediction in impact assessment and how this shapes organisational decision-making (Duinker & Greig, 2007; Morrison-Saunders & Arts, 2005; Trautwein, 2020).

Despite the wealth of research and reviews on various impact assessment methods, no review systematically addresses temporality and future-oriented approaches to impact assessment. Past systematic reviews have focused on: reviewing and classifying different impact assessment methods and models (Bare & Gloria, 2008; Grieco et al., 2015; Maas & Liket, 2011a); delineating best practices (Esteves et al., 2012; Morgan, 2012); integrating different assessment methodologies (Dendena & Corsi, 2015; Gunn & Noble,

2011); or on providing an overview of the research field and its trends (Greig & Duinker, 2014). These reviews highlight that impact assessment is still profoundly a fragmented field and that understanding of the temporal nature of impact assessment remains limited. In addition, reviews have raised concerns about the limitations of 'predictive science' in assessments (Bare & Gloria, 2008; Gunn & Noble, 2011), yet how to overcome these limitations remains a question.

To overcome these challenges, a systematic literature review was conducted to explore how impact assessment literature comprehends forward-looking, future-oriented approaches. The review aims to develop an integrated process model to shed light on emerging perspectives on forward-looking impact assessment, synthesise existing research insights, and identify opportunities for further theoretical extension (Post et al., 2020). The paper adopts an interdisciplinary approach (Burgers et al., 2019) for the systematic review to incorporate insights from disciplines such as environmental science, management, development studies, public administration, law and economics. Through the systematic search and screening process, 178 articles were identified that had an explicit focus on impact assessment and either focus on temporality in general or a focus on forward-looking impact assessment. A thematic analysis was conducted on these 178 articles to identify common themes and develop a research agenda for forward-looking impact assessment.

The findings suggest that despite gaining attention in various streams of impact assessment literature, research on forward-looking assessment is somewhat disjointed and occurring in particular disciplinary silos. The analysis reveals: (i) the internal and external drivers of forward-looking impact assessment; (ii) the common methods used and the roles of different stakeholders; (iii) the organisational and societal effects; and (iv) the challenges actors experience when assessing impact with future-oriented lenses. An integrated process model is developed that shows the relationships between antecedents, methods, and effects of forward-looking impact assessment and how the challenges moderate these relationships. Based on the findings, an integrated process model and a research agenda is developed, which calls for more research on forward-looking impact assessment related to uncertainty, values and assumptions, learning and stakeholder cooperation. The review contributes to the broader conversation on impact assessment by highlighting the role of forward-looking approaches in creating positive impact and

addressing grand challenges. Overall, the review, the integrated process model, and the research agenda aim to evoke discussion and further exploration of forward-looking impact assessment approaches and highlight novel arenas to investigate forward-looking approaches.

2.2 Temporality and the value of forward-looking approaches to impact assessment

Temporality refers to different conceptions of relations with time and how time passing shapes the essence of things (Hernes et al., 2013) or even the experience of being (Heidegger, 1927). Temporal theories have provided lenses for researchers to interpret the meaning and complexities of the world by making temporal dimensions explicit (Hernes et al., 2013). For example, in the management literature, strategizing is inherently linked with temporal work, as it involves reimaging future possibilities, rethinking the past and considering the present (Kaplan & Orlikowski, 2013). Broader academic fields exploring temporality, future thinking and future-making have gained attention. Especially in the field of futures studies, which is dedicated to studying alternative futures, what the future knowledge is, how to acquire knowledge about the future and what it means (Burhan & Cakir, 2020; Sardar, 2010). Future-making is not just about focusing on one perspective or element of time but a more holistic understanding of how time is experienced and how actors produce and enact the future (Wenzel et al., 2020). Impact assessment research could benefit from incorporating insights from disciplines with a more explicit focus on temporality and future-making.

Temporality has been valued to some extent in the impact assessment literature. For example, authors have explored temporality in impact assessment by examining how impact varies at different points of time (Stewart-Oaten & Bence, 2001). Others have argued for an ongoing perspective on impact assessment, in which assessments are not limited to one temporal dimension but are conducted continuously (Bailey & Saunders, 1988). Authors have also focused on retrospective ex-post impact assessment, which refers to post-decision stages when impacts are monitored and evaluated (Morrison-Saunders & Arts, 2005). While most impact assessment frameworks focus on retrospective assessments (Maas & Liket, 2011a), forward-looking impact assessment is gaining traction in the broader impact assessment literature. Early research on impact assessment explicitly focused on prediction practices; however, since the 1990s, the focus

of the literature has shifted to emphasise ex-post assessments (Duarte & Sánchez, 2020). In recent years, impact assessment practice has evolved towards a more forward-looking approach, and thus scholars have called for more attention to predictions and forecasts in impact assessment literature (Duarte & Sánchez, 2020).

In practice, there has been an increase of initiatives focusing especially on projecting, predicting and forecasting impact. Examples include Social Impact Projection, which incorporates economic orientation for projecting social impacts (Griffin, 2019); the Upright Project, which measures impact through a concept of net impact, a sum of positive and negative impacts (Upright, n.d.); or the European Union's (EU) initiative to conduct ex-ante impact assessment for every policy proposal (EU Commission, 2014). There has also been an increase in consulting firms focusing on impact (Bodde et al., 2018; Pollock & Williams, 2010). In addition, some academic studies have begun to explore these practices, with a wide range of terms for forward-looking impact assessment, such as predicting (Greig & Duinker, 2014; Partal & Dunphy, 2016), ex-ante (Chopin et al., 2016; Roes & Patel, 2011), forecasting (Duinker & Greig, 2007; Farrukh & Holgado, 2020), pre-decision (Morrison-Saunders & Bailey, 2003), projecting (Arnell et al., 2004), or forward-looking (Wu et al., 2018). We argue that practice is ahead of academia in this context.

New ventures are also driving the focus on future-oriented impact assessment. As entrepreneurs are widely considered vital in contributing to sustainable development, exploring and understanding their intended impact is essential (George et al., 2019; Horne, 2019). Entrepreneurial actors often have to demonstrate their prospective impact on different stakeholders, such as decision-makers in politics, society and business (Trautwein, 2020). However, new ventures face particular challenges regarding impact assessment, such as a lack of established practices and historical performance data and a highly uncertain future (Hörisch et al., 2015). Thus, forward-looking approaches to impact assessment are necessary for new ventures, yet Trautwein (2020) notes how start-up-specific forward-looking impact assessment practices have been largely missing from the literature. Enhancing the proactive understanding of the impact of new ventures is crucial for advancing their role in sustainable development (Horne, 2019).

We see that the impact assessment literature could be enhanced by adopting the notions of temporality, futures and foresight. For this systematic review, we consider forward-looking impact assessment as incorporating futures thinking into impact assessments. Rather than treating time as a linear trajectory of organisational life, "focusing on future-making practices implies that the future is not an objective 'thing' out there, waiting to be measured through supposedly more or less accurate planning techniques" (Wenzel, 2020, p. 1444). Similarly, Duinker and Greig (2007) note that forward-looking impact assessment methods are not just about forecasting and predicting the future but rather about describing and exploring alternative possibilities of futures. Likewise, foresight, futures thinking, and future-making are not just about making assumptions about how things will turn out but a holistic comprehension of temporality and alternative futures. Embodying this notion in the impact assessment literature could enhance ways of 'making' the future.

2.3 Methods

A systematic literature review of impact assessment studies was conducted to identify emerging trends and research gaps on forward-looking, future-oriented approaches to impact assessment (Tranfield et al., 2003). An interdisciplinary approach was adopted for the review to synthesise and contrast different perspectives on impact assessment, methods and approaches across disciplines (Burgers et al., 2019). This systematic literature review followed the Tranfield et al. (2003) three-stage approach to ensure transparency.

2.3.1 Planning and conducting the review

In the first stage of analysis, databases and keywords were identified for the search. Following previous systematic reviews in the fields of sustainability, impact assessment, sustainable innovation and circular economy (see, e.g., Cillo et al., 2019; Sassanelli et al., 2019; Takalo et al., 2020) and in order to ensure a multidisciplinary perspective, three databases were selected for the search: Scopus, Science Direct and Web of Science. These databases capture studies from various relevant fields, including environmental sciences, social sciences, economics, business and management sciences, law, engineering, arts and humanities and environmental studies. Based on past reviews on social and environmental impact assessment (Duinker & Greig, 2007; Geisler, 1993; Ormiston, 2019; Ormiston &

Castellas, 2019), 22 keywords were identified: 14 keywords refer to different dimensions of impact assessment, and eight refer to forward-looking temporality (see Table 3).

Table 3 Keywords

Keyword 1: impact assessment	Keyword 2: temporality
Impact assess*	Ex-ante
Impact measure*	Forecast*
Impact manage*	Pre decision
Impact invest*	Temporal*
Impact evaluat*	Projection
Social accounting	Forward looking
Environmental accounting	Prediction
Social performance	Foresight
Social reporting	
Environmental reporting	
Performance evaluat*	
Performance measure*	
Outcome measure*	
Sustainability assess*	

In the second stage, a search was conducted on the three databases using combinations of these 22 keywords. Boolean AND/OR terms were utilised to form a keyword string to search keywords, titles and abstracts. Table 4 provides an example of a search string for Web of Science.

Table 4 Search string example

Database	Search String
Web of Science	TOPIC: (("impact assess*" OR "impact measure*" OR "impact manage*" OR "impact invest*" OR "social accounting" OR "environmental accounting" OR "social performance" OR "social reporting" OR "environmental reporting" OR "impact evaluat*" OR "performance evaluat*" OR "performance measure*" OR "outcome measure*" OR “sustainability assess*”)) AND TOPIC: (("Ex ante" OR "forecast*" OR "pre decision" OR "temporal*" OR "projection*" OR "forward looking" OR "prediction" OR “foresight”))

The inclusion and exclusion criteria were applied to refine the search further, as detailed in Table 5. Only peer-reviewed, scholarly articles written in English and published before June 2021 were included. Given the interdisciplinary scope, the included articles were from a wide range of disciplines, the six most common: environmental sciences and studies, green sustainable science technology, ecology, economics, management and development studies. The search excluded other records, such as conference reviews or book chapters and records in other languages. Disciplines unrelated to the review, such as medicine, veterinary and mathematics, were also excluded. The search resulted in 7147

records. Due to the use of three databases, there were duplicates among these records. The deduplication process resulted in excluding 1463 records. Therefore, 5684 records were chosen for the first screening (see Figure 2).

Table 5 Inclusion and exclusion criteria

Criteria	Included	Excluded
Literature type	Journal articles	Other documents, e.g., book chapters, conference proceedings
Language	English	Non-English
Timeline	Before June 2021	Published June 2021, or after
Subject area	Interdisciplinary	Some disciplines: e.g., medicine, pharmacy, dentistry, veterinary, mathematics, neuroscience

2.3.2 Screening

The screening was conducted on the titles and abstracts of the 5684 records identified in the search. This first step ensured that the chosen records were relevant to the paper's focus. The main criteria for inclusion were that the chosen articles should indicate in their abstract an explicit focus on impact assessment phenomena and either focus on temporality in general (e.g., adding temporal elements to assessments) or a focus on a future-oriented approach. After the screening, 175 articles were chosen for the full-text analysis (see Figure 2).

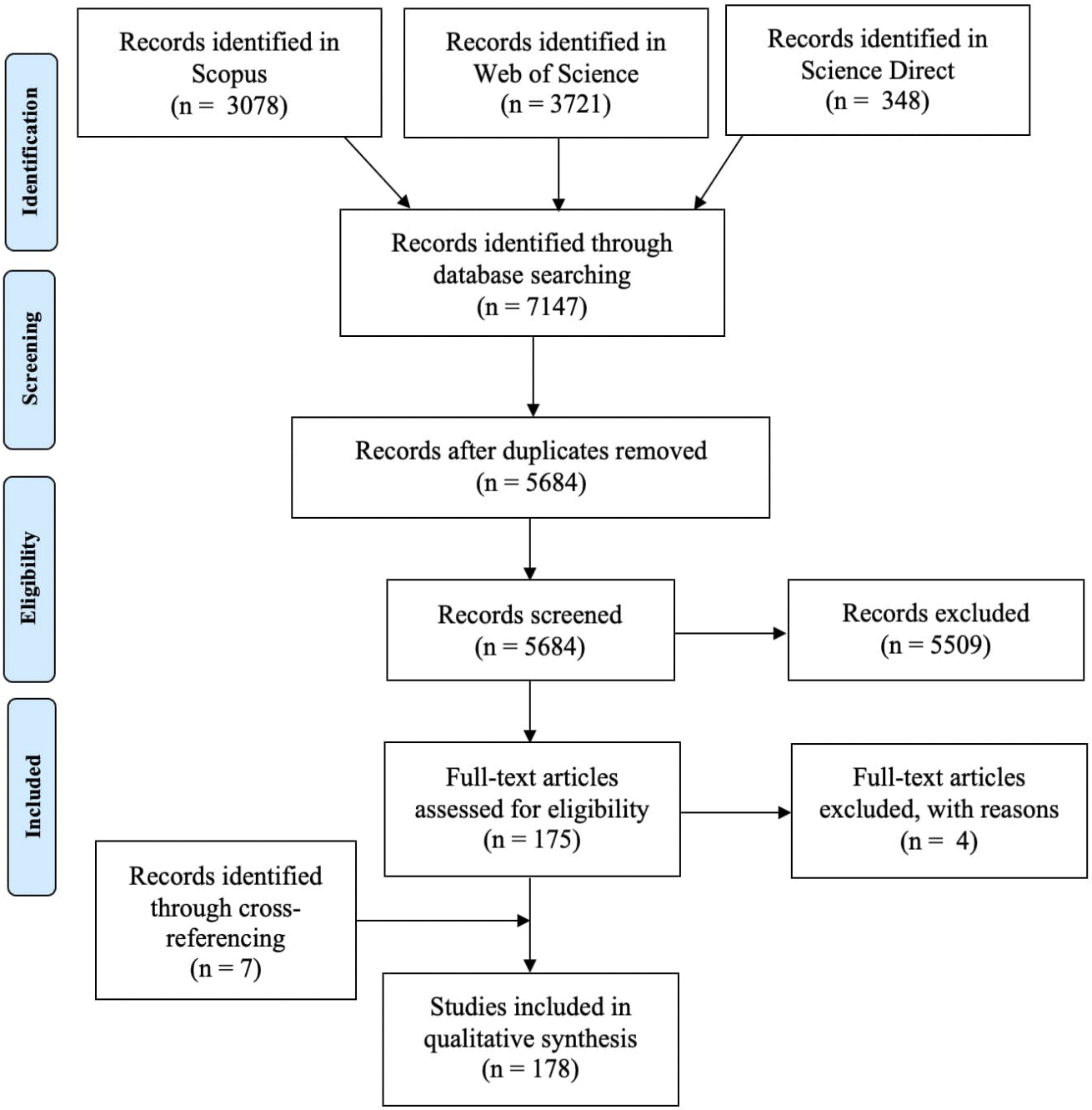
2.3.3 Analysis

Based on similar systematic reviews (Felsberger & Reiner, 2020; Wong & Ho, 2015), a thematic analysis was conducted to ensure an in-depth review of the articles. As part of the in-depth reading of the articles, four articles were found not to be relevant. Further, an additional seven relevant studies were identified through the analysis using a snowballing technique, which refers to adding articles frequently mentioned in the already identified articles while still applying the inclusion/exclusion criteria (Gunn & Noble, 2011). Therefore, 178 articles were included in the analysis (175 initial articles, less four irrelevant articles, plus seven new articles from snowballing). Figure 2 shows the flow of information according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) (Moher et al., 2009).

A combination of ATLAS.ti and Microsoft Excel was used in the coding process. The analysis was done partly inductively and partly deductively. Accordingly, some codes were determined beforehand (e.g., advantages/disadvantages, type of organisation,

impact assessment domain), and others emerged from the analysis (e.g., authors' comprehension of future or uncertainty). Following Kirchherr et al. (2016), the first ten articles were analysed, and the coding frame was re-evaluated. This process was repeated after half of the articles were analysed.

Figure 2 PRISMA, Flow of information



2.4 Findings

The findings are organised into six sections to answer the research question of "how and why do organisations utilise forward-looking, future-oriented approaches to impact assessment": (i) descriptive findings on the leading journals publishing research on forward-looking impact assessment and the terminology used in the field; (ii) an integrated process model to summarise the relationships between the antecedents, methods and effects of forward-looking impact assessment; (iii) the antecedents; (iv) methods; (iv) the effects; and (v) the challenges of forward-looking impact assessment.

2.4.1 Descriptive findings

2.4.1.1 Journals publishing research on forward-looking impact assessment

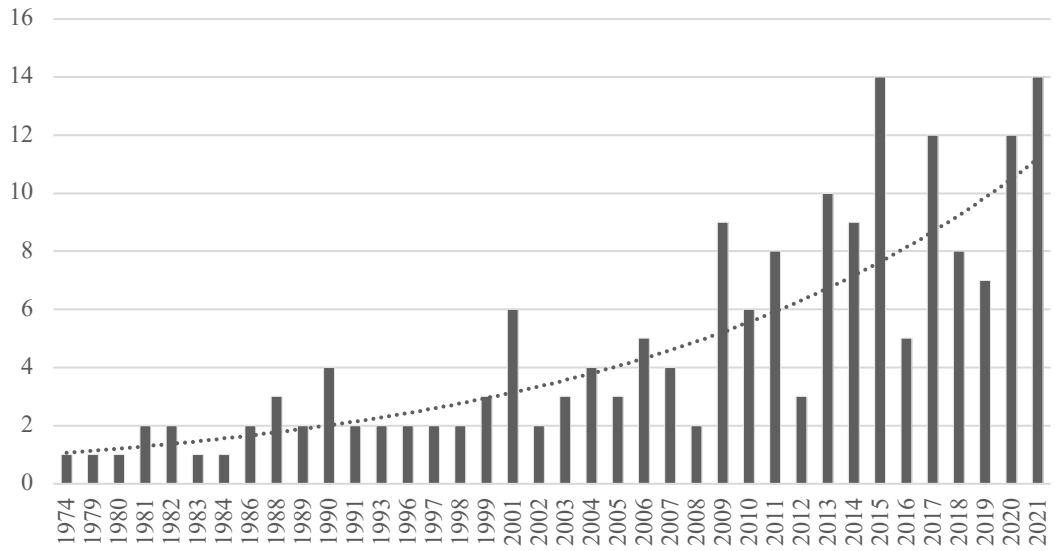
In total, 178 articles from 98 different journals from different disciplines, including environmental sciences, management, law, public administration and economics, were analysed. The wide range of journals highlights the interdisciplinary nature of research on forward-looking impact assessment. Table 6 notes the most common journals. The top three journals were the Environmental Impact Assessment Review, the Sustainability journal and the Journal of Environmental Management. These three journals accounted for over 25 per cent of all articles published, highlighting the dominance of environmental over social in studies of forward-looking impact assessment.

Table 6 Journals publishing papers on forward-looking impact assessment

Journals	Number of articles
Environmental Impact Assessment Review	25
Sustainability	11
Journal of Environmental Management	9
Impact Assessment and Project Appraisal	8
Journal of Cleaner Production	7
Environmental Management	6
Foresight	4
Ecology and Society	3
Climate Change	3
Environmental Science and Policy	3
Technological Forecasting and Social Change	3

Figure 3 shows the distribution of the publication years for the reviewed articles. There has been a steady increase in the interest in forward-looking impact assessment, which has heightened in recent years.

Figure 3 Publication years



2.4.1.2 Domains of forward-looking impact assessment

Table 7 illustrates that forward-looking impact assessment is most used in the domain of environmental impact assessment (EIA). We suspect that environmental dimensions of impact may be easier to quantifiably model or predict compared to social dimensions of impact. Further, it has been argued that knowledge inquiry in the environmental sphere has more enhanced theoretical foundations and empirically grounded knowledge to make sound predictions than in the social sphere (Lockie, 2001). For instance, future energy efficiency scenarios (Hoang et al., 2017) or future land-use sustainability (Thiel, 2009) may be easier to calculate and predict in comparison to qualitatively assessing the social complexities of impact (Berkhout et al., 2002; Geisler, 1993). However, social impact assessment (SIA) represents only a tiny minority of the research on forward-looking assessment, which does not reflect the impact assessment literature in general, where SIA is better represented (Lockie, 2001).

Table 7 Popular impact assessment domains

Approach	Number of times used in the articles
EIA	49
Policy	31
Climate change	17
General	16
Sustainability	12
SIA	9
Performance measurement	7

2.4.1.3 Terminology for forward-looking impact assessment

A wide range of terms are used to describe the practices of forward-looking impact assessment. Table 8 presents the most frequently used terms in the analysed articles. Predict was the most common (60), then ex-ante (52), forecast (19) and foresight (16).

Table 8 Terms related to forward-looking impact assessment

Terms referring to temporality	Number of articles using the term
Predict	60
Ex-ante	52
Forecast	19
Foresight	16
Project	13
Temporality	11
Other	9

Definitions of impact assessment in these studies appear conflicted about whether impact assessment is inherently future-oriented or whether forward-looking elements are simply part of the broader practice of impact assessment. For example, some authors define impact assessment as an attempt to anticipate and understand potential directions (Coates et al., 2001), which by definition refers to the future-oriented temporality. Similarly, several authors defined impact assessment in line with the International Association for Impact Assessment's definition of a "process of identifying the future consequences of a current or proposed action" (Bond et al., 2018; Schindler et al., 2016). In contrast, other scholars see the forward-looking dimension as a phase in impact assessment. These studies define impact assessment as a process that reaches across time, with the future entwined with the past and present (Antunes et al., 2001; Duarte & Sánchez, 2020). For example, Bodde et al. (2018, p.2) define environmental impact assessment as "systematic decision support processes that aims to identify, predict, evaluate and mitigate environmental effects", how prediction is phase of assessment.

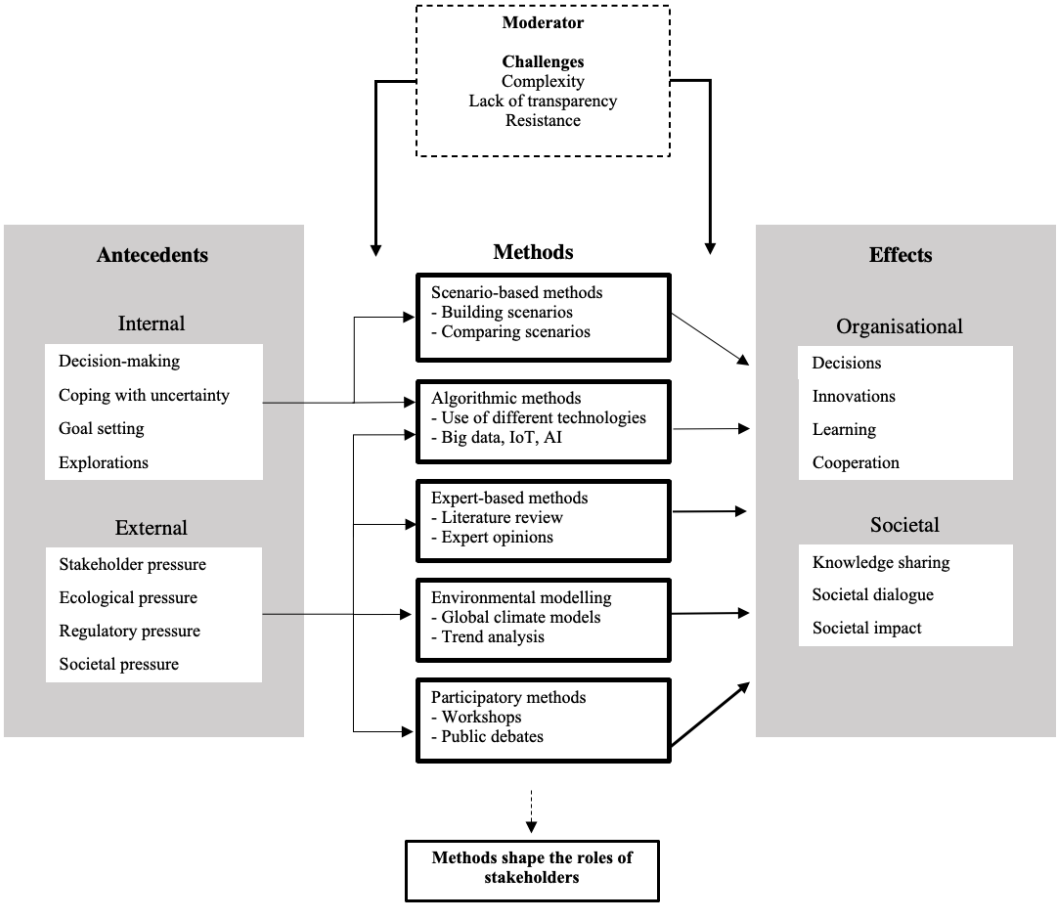
Based on our review of the literature, we argue that forward-looking impact assessment can be understood as a process that establishes an explicit relationship between impact and the future. We note that future-oriented lenses to assessing impact may differ epistemologically (i.e., how to acquire knowledge about the future) and ontologically (i.e., is it plausible to know the future, can it be accounted as scientific), as the authors have several different comprehensions of the future and impact. However, what connects

these processes is that futures are explored explicitly, and there is an attempt to make a connection between impact and the future by exploring futures.

2.4.2 An integrated process model of forward-looking impact assessment

Figure 4 provides an integrated process model that summarises the findings by: (i) highlighting the internal and external antecedents; (ii) outlining the diverse methods utilised in impact assessment and the different roles stakeholders have; (iii) examining organisational and societal effects; and (iv) revealing the challenges that moderate the processes of forward-looking impact assessment. The process model also illustrates the relationships between antecedents or preconditions, particular methods, and the nature of effects of forward-looking impact assessment. By ‘effects’, we are referring to organisational and societal consequences that result from engaging with forward-looking impact assessment. As seen in Figure 4, research reveals that specific internal or external antecedents tend to lead to the choice of specific methods. Further, the choice of methods tends to dictate the roles different stakeholders of impact assessment take. Finally, while all methods can lead to organisational and societal effects, the findings show that expert-based methods, environmental modelling, and participatory methods have a stronger tendency to accelerate societal-level effects. However, these relations are moderated by challenges.

Figure 4 An integrated process model of forward-looking impact assessment



In the remainder of the findings, the core elements of forward-looking impact assessment are unpacked through exploring the antecedents, methods, effects, and challenges detailed in the analysed articles.

2.4.3 Antecedents

The analysis revealed multiple internal and external antecedents that drive organisations to conduct forward-looking impact assessment. These antecedents also tend to shape the choice of the method utilised by those initiating and conducting forward-looking impact assessment.

2.4.3.1 Internal antecedents

The analysis revealed four main internal antecedents to forward-looking impact assessment: (i) decision-making and strategising; (ii) goal-setting; (iii) exploration and innovation; and (iv) coping with uncertainty.

Decision-making and strategising – Most articles identified decision-making or strategising as the main reasons organisations conduct forward-looking impact assessment. Forward-looking impact assessment is often used as a tool to help decision-makers select between various potential actions by comparing likely outcomes (Gasparatos et al., 2008; Schindler et al., 2016). In the context of impact investing, while investors are aiming to direct capital to ventures that are expected to yield social and environmental benefits, forward-looking impact assessment can bring forward essential information on which investments provide the best prospects for impactful contribution (Barber et al., 2021; Roundy et al., 2017). Similarly, forward-looking assessment can be used to explore if proposed policies are adequate to address social and environmental challenges (Nieminen & Hyytinen, 2015). By utilising forward-looking impact assessment, actors are not just analysing potential scenarios but exploring strategies and actions to respond to upcoming opportunities and threats (Amanatidou, 2017).

Goal-setting – Forward-looking impact assessments are often utilised for setting goals. Future-oriented impact assessment can help explore achievable goals under various scenarios (Arvanitis et al., 2015; Fink et al., 2005). For instance, for actors hoping to contribute to the SDGs, forward-looking impact assessment can be used as a tool to set targets for these specific goals and help in making the targets "future-proof" (Henzler et al., 2020, p.19). Financiers also use forward-looking impact assessment practices to set goals for new ventures, such as social enterprises intending to scale their impact (Aschari-Lincoln & Jacobs, 2018).

Exploration and innovation – Forward-looking impact assessment is often initiated to explore novel phenomena or innovations (Bojorquez-Tapia, 1989; Duinker & Greig, 2007). For example, in the context of unprecedented grand challenges such as climate change or biodiversity loss, forward-looking assessment can provide information for decision-makers to analyse the possible future outcomes of enacting policies in new uncertain environments (Gontier et al., 2006; Hacking, 2019). By exploring novel phenomena, forward-looking impact assessments are utilised for determining the impacts of innovations that have not yet been implemented. Especially for entrepreneurs, it is often crucial to attempt to anticipate the potential of innovations and how they can create social and environmental value (Clark & Brennan, 2016; Coates et al., 2001). Some authors argue that forward-looking impact assessment is part of the innovation process as

it is essentially next-step-thinking and focuses on examining what to do next to ensure impactful contribution (Amanatidou, 2017). As future-oriented approaches are not limited to looking at existing conditions to measure impact, they are often embedded with an exploratory 'out-of-the-box' attitude which can initiate new ways of thinking or doing (Berkhout et al., 2002; Weber et al., 2009).

Coping with uncertainty about the future – A final internal antecedent for actors to engage with forward-looking impact assessment is to cope with uncertainty about the future and minimise risks. Organisations often face uncertainty when planning their future and assessing the future can help address uncertainties (Duinker & Greig, 2007). As forward-looking impact assessments are conducted before the execution of the projects, undesirable impacts can be identified and potentially avoided through planning and analysis (Bojorquez-Tapia, 1989; Duinker, 1989). However, forward-looking impact assessments also hold uncertainties. As the future cannot be known, future-oriented impact assessments cannot be entirely accurate predictions of the future and thus, always hold uncertainties. Uncertainties can be transparently communicated in the assessments when ambitions and fears are defined beforehand. Forward-looking assessments can also help organisations with risk management, as a range of possible outcomes are considered (Andoseh et al., 2014). By having a future-oriented outlook, organisations can ensure that they have included futures thinking in their planning, which allows them to better cope with uncertainty.

2.4.3.2 External Antecedents

The analysis revealed four main external antecedents to forward-looking impact assessment: (i) regulatory pressure, (ii) stakeholder pressure, (iii) societal pressure, and (iv) ecological pressure.

Regulatory pressure – Regulations and legal obligations are viewed as drivers for forward-looking impact assessment. Impact assessments are sometimes legally required for larger projects before they are implemented (Arvanitis et al., 2015; Leung et al., 2015). Research has explored the legal requirements for environmental impact assessment (EIA) in certain jurisdictions, including China (Bao et al., 2009), Mexico (Bojorquez-Tapia, 1989), and Sweden (Bäcklund, 2009). Governments can guide actors by requiring forward-looking impact assessments that define which aspects should be valued and

assessed (Carini et al., 2018; Greig & Duinker, 2014). Similarly, the European Commission has a policy that requires forward-looking impact assessments for each significant policy proposal (Canoy et al., 2010). Several articles explored these well-established forward-looking assessment practices in the EU context and noted how the assessments have improved the quality of policies and helped to consider different values and dimensions of impact (Carini et al., 2018; Helming et al., 2013).

Stakeholder pressure **–** Our analysis suggests some organisations face pressure from their external stakeholders to initiate forward-looking impact assessment, which may also shape how assessment is conducted. For example, for new ventures, the pressure to initiate assessments can come from investors, as they are often required to assess impact in a forward-looking way to show investors the potential impacts of novel innovations (Addy et al., 2019; Clark & Brennan, 2016). Pressure from influential stakeholders such as investors or the government can lead to positivity biases in impact assessment when favourable results are needed to execute projects (Cardenas & Halman, 2016; Wachs, 1990). In other cases, organisations may initiate forward-looking impact assessments to provide a space for external stakeholders to voice their opinions. As Hallegette et al. (2011) note, different actors usually have different desires for the future. By assessing impacts before the execution of projects, different stakeholders can make their views about the future explicit (Bäcklund, 2009; Hermanns et al., 2015).

Societal pressure – Our analysis suggests that expectations from the broader public influence the practices of forward-looking impact assessment. Decision-makers operating in the public sphere often engage with impact assessment to gain societal legitimacy (Bond et al., 2015; Maas & Liket, 2011b). Various studies have explored how societal pressure motivates organisations to conduct forward-looking impact assessment. This research highlights how actors engage with forward-looking impact assessment to ensure that their actions are carefully planned and that positive and negative impacts are proactively considered (Bäcklund, 2009; Helming et al., 2011). For example, assessments are conducted because they are seen as ‘good practice’, or part of corporate social responsibility (Lee & Huang, 2020; Maas & Liket, 2011b).

Ecological pressure – Many actors conduct forward-looking impact assessment in response to ecological pressures. Various ecological problems, such as climate change,

biodiversity loss, and pollution, have drawn the attention of actors to recognise the urgency to consider their environmental impacts. Climate change impact assessment was a prevalent theme throughout the analysed articles. Climate change is projected from various perspectives, for instance, its effects on food security (Arnell et al., 2004; Blanc & Reilly, 2017) or how it accelerates uncertainty of the future (Burke et al., 2015). Ecological pressure has influenced how forward-looking impact assessments are conducted. For example, for climate change impact assessment, it is sometimes necessary to look beyond the most likely scenarios, and understand even the most extreme scenarios, as tipping points can become more likely if certain emission reduction targets are not met (Lenton & Ciscar, 2013; Runhaar et al., 2016).

2.4.4 Methods

As detailed in Figure 3, methods are central to forward-looking impact assessment – different antecedents dictate which methods actors choose to utilise, and the choice of methods shapes what effects assessments engender. The choice of method also influences stakeholders' roles in the assessment process.

2.4.4.1 Methods for forward-looking impact assessment

Five main categories for impact assessment methods emerged from the analysis: (i) scenario-based methods; (ii) algorithmic methods; (iii) expert-based methods; (iv) environmental modelling; and (v) participatory methods. Table 9 details the definition, advantages, limitations, and examples of each of these main categories of methods.

Table 9 Overview of forward-looking impact assessment methods

Method	Advantages	Limitations	Examples
Scenario-based methods ▪ Methods that use scenarios as the basis for assessment through building bespoke impact scenarios, or analysing existing scenarios and their impact ▪ 57 examples out of 178 articles	▪ Provides a platform for futures thinking (of possibilities, appropriate responses, and consequences) ▪ Moves beyond predicting ▪ Can present development pathways ▪ Powerful tool for asking questions and for expanding timeframes ▪ Useful even when unreliable/extreme, (e.g., food for thought, even most extreme scenarios should be considered for risk-management)	▪ It is not possible to cover full range of possibilities ▪ Difficulties in setting boundaries (e.g., geographical) ▪ Relies on available data ▪ Actual impacts may differ substantially ▪ Descriptive nature	▪ Scenario analysis ▪ Use of existing scenarios (e.g., IPCC) ▪ Scenario storylines ▪ Wind-tunnelling ▪ Drivers for change analysis ▪ Future-scorecard ▪ Scenario grouping
Algorithmic methods ▪ Methods that emphasise the use of technology and algorithmic techniques for computation in the impact assessment process ▪ 16 examples out of 178 articles	▪ Possibility to analyse impacts under varying conditions and with alternative interventions ▪ Useful for testing robustness ▪ Possibility to test multiple scenarios ▪ Provides comparable quantitative data	▪ Quality of output reflects quality of information input ▪ Difficulties in differentiating between induced and natural impact ▪ Expensive ▪ Lack of transparency of normative dimension	▪ Use of big data ▪ Use of artificial intelligence ▪ Use of machine learning ▪ Simulations
Expert-based methods ▪ Methods that rely on knowledge from multiple experts ▪ 23 examples out of 178 articles	▪ Pooling different information sources ▪ Integrating views of different experts ▪ Experts can lead assessments and draw final conclusions ▪ Setting high standards ▪ Producing and sharing knowledge	▪ Experts are often limited to their own field, e.g., political decision-making can be more complex ▪ Requires significant resources ▪ Accuracy of experts ▪ Experts may have very differing views about the future developments	▪ Literature review ▪ Delphi method ▪ Consultations ▪ Expert gatherings ▪ Expert opinion processing

Environmental modelling ▪ Methods that utilise models to understand future environmental impact ▪ 44 examples out of 178 articles	▪ Possibility to visualise results ▪ Analysing changes ▪ Viewed as 'gold standard' to quantify impacts of climate change	▪ Explores likelihoods rather than concrete measures ▪ Models can not represent complex realities ▪ Models are focused on analysing "physical" impacts ▪ Accuracy of information input	▪ Global climate models ▪ Trend analysis ▪ Uncertainty models ▪ General circulation models ▪ Energy modelling ▪ Simulation modelling
Participatory methods ▪ Methods that emphasise involving multiple stakeholders throughout the assessment process ▪ 33 examples out of 178 articles	▪ Can enhance stakeholder cooperation by identifying their views, fears and hopes ▪ Induces collective learning ▪ Enhances public debate ▪ Richness of discussions and debates, can create thought-provoking scenarios ▪ Enhances legitimacy of assessments ▪ Incorporating local knowledge	▪ Stakeholders may hold persistent assumptions ▪ Moralisation of impact assessment (considering what should happen instead of what may happen) ▪ Difficulties in taking into consideration all stakeholder preferences ▪ Stakeholders will not have equal power	▪ Workshops ▪ Participative scenarios ▪ Imaginative storytelling ▪ Debates ▪ Observation studies ▪ Interviews of stakeholders ▪ Networks

Scenario analysis – Scenario analysis was the most common method explored in the analysed articles. Scenario analysis refers to methods that use scenarios as the basis for assessment through building bespoke impact scenarios or analysing existing scenarios. As Duinker and Greig (2007) describe, scenario analysis provides a platform for future thinking since, instead of focusing on predicting specific outcomes, scenarios are used to understand and explore multiple alternative futures. Examples of scenario analysis include analysing IPCC-scenarios (Paltsev et al., 2015), wind-tunnelling (Glover et al., 2016), future scorecards (Fink et al., 2005), and scenario storylines (Zhu et al., 2011). Scenario analysis can be used to compare different decisions and what kind of scenarios they might generate (Hallegatte et al., 2011). In addition, scenario analyses are used to explore windows of opportunities that could be achievable or avoidable due to different courses of action (Deal & Pan, 2017; Partidário, 2007). The descriptive nature of scenario analysis has been seen as a limitation, as the outcomes of scenario analysis can substantially differ from the actual impacts (Blanc & Reilly, 2017).

Algorithmic methods – Algorithmic methods emphasise using technology in the impact assessment process through artificial intelligence, machine learning, or the Internet of things. Examples of algorithmic methods include using big data, machine learning or building impact prediction software (Kuldna et al., 2015; Lang & Siler, 2013; Wu et al., 2018). Algorithmic methods are argued for going beyond climate modelling and often explore topics beyond environmental concerns, such as corporate social responsibility (Lee & Huang, 2020) or building impactful investment portfolios (Bender et al., 2019). Algorithmic methods are used for testing scenarios by bringing robustness to the analysis or by bringing forward "eye-opening" scenarios that experts have not considered (Kuldna et al., 2015). However, the results or outputs of these assessments reflect the information or inputs. Thus, there is a concern about how to differentiate between the induced and natural impacts (Guisande et al., 2018). Authors argue that these methods will develop further in the future and enable more detailed and complex prediction of impacts, and ultimately provide reliable forward-looking impact assessments with reduced costs and time (Duarte & Sánchez, 2020).

Expert-based methods – Expert-based methods refer to the methods where experts' knowledge is at the core of the assessment. Examples of expert-based methods include expert opinion processing (Fontela, 2003), the Delphi method (Burhan & Cakir, 2020), and literature reviews (Mandai & Souza, 2021). These methods rely on experts' insights and are sometimes required by law (Kruopien et al., 2009). Expert-based methods either focus on the consultation of an

expert or group of experts or pooling together expertise knowledge. For instance, the Delphi method gathers specialists to provide input based on their expertise to forecast impacts in a structured way (Burhan & Cakir, 2020; Fonseca et al., 2020). However, these methods are limited by disagreements between experts about future developments in their particular fields, and it may be challenging to know which view to incorporate (Dilly & Hu, 2009).

Environmental modelling – Environmental modelling was the second most common method for forward-looking impact assessment identified in the literature. Environmental modelling refers to methods that utilise models to understand the future environmental impact. Examples of environmental modelling include Global Climate models (Farjad et al., 2019), energy modelling (Capros et al., 2012), and general circulation models (Rowland et al., 2011). Proponents of environmental modelling argue that these methods can establish certainty compared to qualitatively analysed scenarios and provide visualisations to assist decision-making (Deal & Pan, 2017). Decision-makers, however, often share the concern over models not representing complex realities (Delanghe & Muldur, 2013).

Participatory methods – Participatory methods refer to approaches that emphasise involving multiple stakeholders throughout the assessment process. Examples of participatory methods include workshops (Spickett et al., 2011), debates (Nilsson & Weitz, 2019), and imaginative storytelling (Glover et al., 2016). Numerous analysed articles called for participation from various stakeholders in forward-looking impact assessment. Proponents of participatory methods argue that truly collaborative efforts are needed for forward-looking impact assessments to co-create shared visions of the future and encourage resilient behaviour changes by multiple actors (Berkhout et al., 2002; Hallegatte et al., 2011). Collaborative assessments can foster cooperation by building visions for desirable futures and coordinating actions between multiple stakeholders (Johnston, 2012), leading to societal outcomes such as knowledge sharing or public dialogue. Limitations of participatory methods include the moralisation of the future (i.e., methods can lead to considering what should happen instead of what may happen) (Berkhout et al., 2002) and the power differentials between stakeholders (Hermanns et al., 2015; Shields et al., 2011).

2.4.4.2 Who conducts forward-looking impact assessment

As noted, the choice of method dictates which stakeholders have a role in the assessment and which type of role they undertake. When discussing who conducts the forward-looking impact

assessment, studies identify different roles for stakeholders: (i) the ones who conduct the assessments (researchers, practitioners, consultants); (ii) the ones who initiate assessments (organisations, governments, policymakers, investors); and (iii) the ones for whom assessments are conducted (public, customers). Not all groups are discussed in every paper. For example, some papers focus on the assessor without specifying who initiated the assessment. The same stakeholders may also play a role in multiple stages of the impact assessment process.

Assessors – Most articles suggest that the principal conductor of the assessments is either an impact assessment expert/professional/practitioner/consultant or a researcher. Some papers argue that assessments should be conducted by a group of experts with mixed backgrounds and expertise to improve accuracy (Helming et al., 2011; Mandelik et al., 2005; Partidário, 2007). Assessors are often involved in the assessment throughout the process. However, sometimes assessors' roles may be to consult only in parts of the assessment. In more recent papers, the role of consultants has also been examined in more detail (Bodde et al., 2018; Henzler et al., 2020), suggesting that experts should have an advisory role when forward-looking assessments are conducted (Arvanitis et al., 2015).

Initiators – Corporations, nonprofit organisations, government agencies, policymakers and investors are viewed as the initiators of forward-looking impact assessment. Initiators, however, may also be actively involved in the assessment process. For instance, when organisations initiate impact assessment to evaluate their sustainability and values, they may also want to be involved in the process and report the results to stakeholders (Bailey & Saunders, 1988). Government agencies initiate forward-looking impact assessments to enhance their understanding of the impact of various projects, policies or programs (Andoseh et al., 2014; Carini et al., 2018). Policymakers often want to initiate impact assessment to learn more about specific topics, such as human rights (Hoffman, 2020) or biodiversity (Bigard et al., 2017). Finally, investors may initiate possible investees' impact assessments to evaluate investment opportunities (Addy et al., 2019).

Beneficiaries – Our analysis highlights that the general public and customers can also have a role in impact assessment. This involvement is often limited to certain stages of the assessment process. For example, assessors often organise public workshops for dialogue or brainstorming (Lockie, 2001). The general public can be involved to have a direct effect on decision-making (Dilly & Hu, 2009; Schindler et al., 2016), to provide data (Antunes et al., 2001), or to indicate

their perceptions of the legitimacy of a particular action (Bond et al., 2018). In addition, assessment reports can be used as a communication tool to inform the public about policies (Bäcklund, 2009) or to build a sustainable reputation in customers' eyes (Maas & Liket, 2011b).

2.4.5 Effects

As depicted in the integrated process model (Figure 3), all methods were observed to lead to organisational and societal effects. However, with specific methods, achieving societal-level effects was more common. The methods listed towards the bottom of Figure 3 have a higher tendency to contribute to societal-level effects (e.g., participatory methods were viewed as the most likely to generate societal-level effects).

2.4.5.1 Organisational effects

The analysis revealed four primary organisational effects of conducting forward-looking impact assessment: (i) decision-making, (ii) innovation, (iii) learning, and (iv) cooperation. All these effects can spill over to create organisational outcomes, and even act as antecedents of impact.

Decision-making – Forward-looking impact assessments can enhance decision-making, for instance, by influencing if or how policies are enacted (Bäcklund, 2009; Carini et al., 2018). Making 'better decisions' through careful planning is also one of the internal antecedents. The most significant advantage of assessing impact with a future-oriented outlook is that there is a possibility to take impact into account and plan decisions and strategies proactively. In contrast, retrospective impact assessment can only be reactive. For example, the EU policy of conducting an ex-ante review of policy proposals is said to prompt better policies since impact assessment results can be utilised in policy negotiations to shape the best possible economic, social or environmental impact (Bäcklund, 2009; Helming et al., 2011). Scholars also note how forward-looking impact assessment can lead to decisions being more risk resilient and minimising uncertainties. For example, Bender et al. (2019) discussed how climate change impact assessments can help build investment strategies that both mitigate the impact of climate risks today and adapt to climate risks in the future.

Innovation – Forward-looking impact assessments can contribute to innovations: they can improve the knowledge of innovations or accelerate innovation processes. Forward-looking

impact assessments have a particular role in generating knowledge on novel phenomena, such as innovations, as impacts are not yet actualised (Berkhout et al., 2002; Henzler et al., 2020). Overall, when organisations decide to deliberately focus on futures thinking this can lead to an increase in innovative performance (Poteralska & Sacio-Szymańska, 2014). For example, assessments can be used to enhance understanding of the social impact of technological innovations and their potential directions (Coates et al., 2001). In addition, these assessments can be used to attract funders (Addy et al., 2019) or show alignment with sustainability for reputation purposes (Maas & Liket, 2011b). Forward-looking impact assessments can also accelerate innovative ways of conducting or thinking about policies, decisions, strategies, or projects (Berkhout et al., 2002; Weber et al., 2009). Forward-looking impact assessment can ensure that innovations are future-proof and hence, lead to "positive impacts across three dimensions of sustainability" (Henzler et al., 2020, p. 18).

Learning – Learning is often positioned as one of the main effects of forward-looking impact assessment. Many studies frame forward-looking impact assessment as a learning process (Berkhout et al., 2002; Bojorquez-Tapia, 1989; Duinker & Greig, 2007) which can help organisations to enhance their decision-making processes by learning about possible impacts (Aschari-Lincoln & Jacobs, 2018; Bodde et al., 2018). For example, forward-looking impact assessments based on learning can help policymakers understand their decisions' nuanced impacts by facilitating insights into complex contexts and thus bridge science and policy (Kuldna et al., 2015; Schindler et al., 2016). Forward-looking impact assessment can foster dynamic mutual learning between stakeholders (Arvanitis et al., 2015; Owens et al., 2004). This is particularly relevant when actors are exploring futures, as the purpose is not just to collect information from the different stakeholders but a dynamic process of knowledge exchange, learning and even democracy (Berkhout et al., 2002; Lockie, 2001). Shields et al. (2011, p.1225) note that "sustainable development is not a destination; it is an ongoing journey that must be supported by knowledge, social learning and adaption". Forward-looking impact assessment can be viewed as contributing to the ongoing journey to sustainability impact through ex-ante decision-making support.

Cooperation – Forward-looking impact assessments can enhance cooperation among stakeholders, as assessments can lead to collective learning (Amanatidou, 2017). Forward-looking assessments can create dialogue and bring forward stakeholders' perceptions of what needs to be valued (Berkhout et al., 2002; Shields et al., 2011; Wachs, 1990). For example, in

the context of EU decision-making, the ex-ante policy impact assessments enhance collective learning and cross-sectional cooperation, as experts must come together to build multidisciplinary scenarios of possible impacts (Thiel, 2009). By conducting forward-looking impact assessments, organisations can make themselves more attractive to stakeholders by demonstrating their impacts before they are actualised. Measures of social and ecological value are increasingly expected when trying to attract funds or external support from investors (Clark & Brennan, 2016; De Jong & Muhonen, 2021). Collective impact assessment practices do more than just collect information from the different stakeholders. Collaborative efforts involve a dynamic process of knowledge sharing, which can lead to societal impact when stakeholders agree to work towards common goals (Amanatidou, 2017; Berkhout et al., 2002; Hermanns et al., 2015).

2.4.5.2 Societal effects

The analysis revealed three primary societal effects of conducting forward-looking impact assessment: (i) knowledge sharing, (ii) societal dialogue, and (iii) societal impact.

Knowledge sharing – Forward-looking impact assessment is used for knowledge sharing between various stakeholders. For example, the public may have limited knowledge of socio-economic or ecological impacts of climate change and therefore minimal understanding of how/why governments devote resources to climate change adaptation efforts, yet transparent forward-looking impact assessments can inform the public about their rationales (Rowland et al., 2011). Papers often noted how forward-looking impact assessment resulted in some form of reporting. For example, corporations sharing information about their actions (Chakhovich, 2019), governments informing the public about policy proposals (Vidueira et al., 2014), or reports raising awareness and sharing information on impact concerns (Johnston, 2012; Pope et al., 2017). Articles also discussed how impact assessments are often scientific inquiries themselves – impact assessment is about researching what impact particular actions may have. Environmental modelling is often considered an exemplary method for sharing knowledge (Deal & Pan, 2017). Knowledge is developed in the organisations conducting the impact assessments (Amanatidou, 2017; Mandelik et al., 2005), and this knowledge can be shared in impact assessment reports (Johnston, 2012; Pope et al., 2017). Rowland et al. (2011) highlight how the knowledge generated and shared through forward-looking impact assessment can shape future impact by providing informed awareness for a range of stakeholders on the processes needed to ensure flourishing ecosystems.

Societal dialogue - Forward-looking impact assessment can initiate societal dialogue. As different members of society are likely to have differing views about the future, forward-looking impact assessments can work as a communication tool to inform the public about decision-making processes and rationales and give the public a chance to voice their opinions (Hallegatte et al., 2011). Authors also discussed how the public should be incorporated into assessments. In the development context, local knowledge of local conditions is needed to complement and challenge experts' ideas on development projects (Schindler et al., 2016). Future-oriented impact assessment is said to be enhance democracy through creating inclusive, open, and transparent assessments, which include public engagement in participatory methods (Amanatidou, 2017). These participatory approaches have the potential to lead to long-lasting social impact as new actors collaborate to achieve collective future goals and combat grand challenges (Amantidou, 2017). Thus, a societal effect for forward-looking assessments is public dialogue, which can potentially ensure that decision-making is democratic.

Societal impact – Forward-looking impact assessment aims to ensure that positive societal impacts are maximised, and negative societal impacts are minimised. The purpose of investigating future alternatives is to select courses of action that yield "the greatest net benefits for society" (Lockie, 2001, p.276). Despite the uncertainties of predicting the future, decision-makers must make decisions about the future and evaluate which predicted impacts are more or less significant (Fink et al., 2005; Nieminen & Hyytinen, 2015). Authors often emphasise that forward-looking impact assessments are not just a set of predictions, but a learning tool for explorations, challenging assumptions, and broadening perspectives (Bojorquez-Tapia, 1989; Duinker & Greig, 2007). Therefore, forward-looking impact assessment can foster long-term, system-level societal impact by bringing forward alternative views on the future and guiding the action towards more sustainable futures. What is essential for forward-looking impact assessment is not to try to predict what will happen in the future but rather help to shape it (Partidário, 2007), as the "success of tomorrow's situation depends on decisions made today" (Helming et al., 2011, p.1). For example, forward-looking impact assessment can ensure that "future societies will be better equipped through greater knowledge and resources to deal with climate impacts", by translating the results of the assessment studies to social realities that decision-makers can understand (Berkhout et al., 2002, p. 84).

2.4.6 Challenges as a moderator

The analysis also revealed three significant challenges faced by organisations conducting forward-looking impact assessments: (i) complexity, (ii) lack of transparency, and (iii) resistance. As depicted in the integrated process model (Figure 3), these challenges moderate the relationships between the antecedents, methods, and effects.

Complexity – A consistent theme in the literature on forward-looking impact assessments is that it is a complex practice given the inherent difficulties in predicting future impacts (Bond et al., 2018; Cardenas & Halman, 2016). Complexity also influences which impact assessment method actors choose and how well methods can provide desired effects. Due to this complexity, forward-looking impact assessment is often viewed as a 'black box' for decision-makers, yet they still have to base decisions on the assessments (Helming et al., 2013; Wachs, 1990). Given the complexity, forward-looking impact assessment is viewed as costly (Clark & Brennan, 2016; Lee, 1983). The complexity is compounded by the limited availability of appropriate data (Henzler et al., 2020). For example, when examining the impact related to climate change, there is often insufficient data to address all potential impacts (Blanc & Reilly, 2017). Studies on impact investors also highlight the challenges associated with the lack of data. Investors are not only trying to predict which entrepreneurs are likely to grow their business but also aiming to maximise impact, meaning predicting investments can yield financial and impactful returns (Burton, 2020).

Lack of transparency – Many studies indicate that forward-looking impact assessments sometimes lack transparency. Forward-looking impact assessments are inherently rooted in the assessor's perceptions of what is valued or what to assess. However, assessors' perceptions may not always be correct, and there can be some unknown unknowns, yet the unexpected impacts should be acknowledged too (Podhora et al., 2013). Lack of transparency can influence what effects specific assessment methods provide. For instance, many examples of biodiversity issues are being overlooked by the assessors in EIAs, and thus not included in assessments (Bigard et al., 2017; Mandelik et al., 2005). The assessment process is imbued with the assessors', often implicit, values as they choose the focus points (Bodde et al., 2018; Duarte & Sánchez, 2020; Owens et al., 2004). However, decision-makers and the public are often largely unaware of inherent subjectivity, normative dimensions related to assessments, or scientific inquiries in general (Macintosh, 2010; Owens et al., 2004). Wachs (1990, p.141) argues that "forecasts are presented to the public as the results of unbiased scientific procedures, yet they

are often highly subjective exercises in advocacy". The values entrenched in the assessments often remain implicit and thereby contribute to the lack of transparency.

Resistance – A final challenge for forward-looking impact assessment is stakeholder resistance to assessing impact or how it is assessed. Some actors perceive forward-looking impact assessments as inconvenient and another layer of bureaucracy that demands resources (Bäcklund, 2009; Lee, 1983). On the other hand, impact assessments may be costly and delay project approval, and therefore actors are incentivised to conduct rapid assessments with favourable results (Cardenas & Halman, 2016; Wachs, 1990). Conflicting views of stakeholders is another source of resistance, as stakeholders cannot always agree on what a desirable future would look like or how to get there, or their preferences keep changing or conflicting with each other (Hallegatte et al., 2011). However, the differing views of stakeholders should not necessarily be viewed as a challenge. Some studies suggest that by trying to understand and incorporate different views, stakeholders can negotiate, make themselves heard, cooperate, and even make assessments more productive and harmonious (Macintosh, 2010; Owens et al., 2004). However, there is no straightforward guide on holistically and consistently incorporating all relevant stakeholders.

2.5 Research agenda

Based on the analysis, we identified four main themes that provide fruitful avenues for future research in forward-looking impact assessment: (i) uncertainty; (ii) values and assumptions; (iii) stakeholder cooperation; and (iv) learning. Table 10 below summarises how each research theme could be explored in the context of antecedents, methods, and effects and highlights potential research questions.

Table 10 Research agenda

Themes	Antecedents	Methods, Challenges	Effects	Research Questions
Uncertainty	- Organisational actors' rationales to engage with future-making in uncertain environments - Forward-looking impact assessments as coping mechanisms for uncertainty - Future Studies comprehensions of uncertainty	- Approaches to enhance forward-looking impact assessment to limit uncertainties - Methods to diminish uncertainty in forward-looking impact assessments (e.g., from Future Studies)	- Transparency regarding uncertainty in impact assessment reports - The role of forward-looking impact assessments and innovation in highly uncertain environments (e.g., new venture creation)	- How do actors cope with the uncertain results of future-oriented assessments? - How to incorporate different comprehensions and tools to cope with uncertainty of the future? - How do new ventures demonstrate their impact in the absence of retrospective data? - What is the relationship between forward-looking impact assessment and innovation performance? - How does uncertainty shape the choice of forward-looking impact assessment methods?
Values & assumptions	- Exploring underlying assumptions and values that underpin the decision to engage in forward-looking impact assessments	- Integrating multiple value creation understanding to forward-looking impact assessments - Mirroring the practices of EIA to SIA in forward-looking assessments	- Conflict created by forward-looking impact assessments - Society's values and desires in forward-looking impact assessments	- How do values and assumptions of the assessor shape forward-looking impact assessment? - How do forward-looking impact assessments incorporate multiple value creation? - How do conflicting or changing values about the future shape forward-looking impact assessment?
Stakeholder cooperation	- External pressures to conduct forward-looking impact assessment and related resistance - The effects of interaction dynamics between stakeholders on impact assessments	- Varieties of influence/power relations stakeholders can have in the forward-looking impact assessment process - Addressing the changing preferences of stakeholders	- Co-creation of impact between stakeholders - Decision-making based on shared values visions about the future	- How and why do different stakeholders influence forward-looking impact assessments? - How does forward-looking impact assessment shape stakeholder cooperation? - How do organisations utilise forward-looking impact assessments to build shared visions of the future? - How does stakeholder pressure to assess future impact effect cooperation?
Learning	- The link between learning and innovation in forward-looking impact assessment, especially in new ventures - Future-oriented organisations and willingness to engage with learning	- Conducting forward-looking impact assessments based on learning, instead of predicting - Learning about complexities of social realities through forward-looking impact assessment	- The decision-making process based on forward-looking impact assessments - The learning types related to forward-looking impact assessment - Knowledge sharing and forward-looking impact assessment	- How and why is forward-looking impact assessment used as a tool for organisational learning? - How do forward-looking impact assessments shape organisational decisions? - What is the relationship between forward-looking impact assessment and external knowledge sharing? - What are the relationships between decision-making, learning and knowledge sharing?

Uncertainty – Many reviewed studies discussed the inherent uncertainty related to forward-looking impact assessment (see, e.g., Bodde et al., 2018; Bond et al., 2015; Leung et al., 2015). Studies discussed uncertainty in two distinct ways: (i) uncertainty about the future and (ii) uncertainty about future assessments. As the future is uncertain, authors argue that assessments can help diminish this uncertainty (see, e.g., Bojorquez-Tapia, 1989; Duinker, 1989). However, studies also discussed how assessments of the future are uncertain as we can never know the future accurately. Thus, uncertainty can be seen as a challenge or shortcoming of forward-looking impact assessments (e.g., Addy et al., 2019; Geisler, 1993). For example, Leung et al. (2015) highlight that research has not provided a mechanism to cope with uncertainty in forward-looking impact assessments beyond explicit communication of that uncertainty in impact assessment reports. Building on the work of Leung et al., (2015), future research could consider how uncertain conditions surrounding forward-looking impact assessment influence decision-making. The impact assessment literature would also benefit from incorporating insights from the field of Future Studies and their explorations of uncertainty and tools to cope with it (e.g., chaos theory, weak signalling, wild cards, stable/unstable uncertainty) (Nováky & Gubik, 2018). This way, the research could answer how actors in highly uncertain environments such as entrepreneurs, venture capitalists and product developers can assess their future impact.

Values & Assumptions – Many studies emphasised how different values and assumptions underpin forward-looking impact assessments (e.g., Berkhout et al., 2002; Cardenas & Halman, 2016; Duinker & Greig, 2007). Forward-looking impact assessments are often shaped by a specific set of values of the assessor/s, as assessing encompasses normative elements (Den Hond & Groenewegen, 1996; Res et al., 2006). In future-oriented assessments, an assessor cannot base their evaluations on historical performance data. Instead, they need to rely on assumptions influenced by their values. For example, these values can guide the assessment to focus on a particular dimension of sustainability (i.e., social, environmental, economic) or guide which impacts are seen as significant (Duinker & Greig, 2007). Authors have argued for more holistic approaches that are more explicit about the different values underpinning the assessments (Pope et al., 2017). Future research could benefit by integrating concepts from sustainability studies on values (Kenter et al., 2019). For example, time-oriented analysis could capture, sort and explain the diversities and complexities of sustainability, given that the norms of ‘futurity’ is

inherent to long-term sustainable development (Bornemann & Strassheim, 2019). Alternatively, embodying the concept of multiple value creation would emphasise a holistic understanding of their values and co-creation with stakeholders (Simberová & Kita, 2020). These comprehensions could move forward-looking impact assessment literature to explicit considerations on how values and assumptions shape perspectives on the future.

Stakeholder cooperation – As highlighted in the findings section, most studies call for the involvement of a wide range of stakeholders in the forward-looking impact assessment process (see, e.g., Amanatidou, 2017; Bond et al., 2018; Hallegatte et al., 2011). Forward-looking impact assessments can enhance and accelerate cooperation among stakeholders by allowing diverse stakeholders to share their visions and desires about the future (Bäcklund, 2009; De Jong & Muhonen, 2021). Despite the emphasis on stakeholder involvement, there is limited insight on ensuring forward-looking impact assessment is genuinely collaborative or participatory. Future research could explore the implications of authentic versus tokenistic[1] stakeholder participation in forward-looking impact assessment, which has been an issue, for instance, in the related field of health impact assessment (Kemm, 2005). Stakeholder theory provides a valuable lens for examining the authenticity of stakeholder participation through attention to concepts of value creation, stakeholder legitimacy, and stakeholder salience (Freeman & David, 1983; Parmar et al., 2010). By incorporating stakeholder theory in the study of forward-looking impact assessment, future research could build on previous work on stakeholders that have explored: who has a voice and influence (Shields et al., 2011), how actors deal with competing values that characterise complex social situations (Lockie, 2001), how cooperation influences shared visions of the future (Hallegatte et al., 2011), or how actors can deal with changing preferences.

Learning – Many studies analysed in this review argue that forward-looking impact assessment is not simply about predicting and forecasting outcomes, but rather a learning tool for exploring futures, broadening perspectives, challenging assumptions and

[1] Tokenistic approaches to stakeholder participation occur when stakeholders are only involved for appearance purposes or to give legitimacy to the assessment without providing actual input. Alternatively, authentic stakeholder participation approaches involve input being genuinely incorporated into the assessment.

enhancing dynamic cooperation (see e.g., Bojorquez-Tapia, 1989; Duinker & Greig, 2007). Future research could explore learning more explicitly in the context of forward-looking impact assessment and explain how learning happens and what it entails. Building on the work of Berkhout et al. (2002), studies of forward-looking impact assessment could be enhanced by theories and concepts of organisational learning. Scenario analysis and organisational learning have similar functions, as both can bind communities together and enable behaviour change (Berkhout et al., 2002). By focusing on learning explicitly and integrating theories of organisational learning, future research could answer queries about how decision-makers use their learnings from assessment results when making decisions (Bojorquez-Tapia, 1989), how actors can learn about innovations or novel phenomena (Clark & Brennan, 2016), and how actors exchange the knowledge acquired through forward-looking impact assessment. Future research on learning could connect to the other research themes in this research agenda. Learning in forward-looking impact assessment can lead to coping with uncertainties, mutual dynamic learning with stakeholders, and fostering learning that integrates different values.

2.6 Discussion

While there is a growing focus by entrepreneurs, organisations, policymakers, and consultants on forward-looking impact assessment, academia has lagged behind when it comes to an understanding of the future-oriented elements of impact assessment. This paper contributes to a better understanding of temporality in impact assessment by unpacking how and why organisations utilise forward-looking approaches to impact assessment. The analysis of 178 relevant articles discussing the phenomenon has allowed us to develop an integrated process model that shows the relationships between the antecedents, methods, and effects of forward-looking impact assessment. Building on these findings, we propose a research agenda to explore further the themes of uncertainty, values and assumptions, stakeholder cooperation, and learning in the context of forward-looking impact assessment.

The paper makes three key contributions to the broader conversation on impact assessment. First, the review contributes to the impact assessment literature by highlighting the importance of incorporating a deeper understanding of the future to tackle grand challenges. Future-oriented impact assessment practices are essential in

tackling grand challenges such as climate change, sustainability, and biodiversity, as they assist in making policies, decisions and strategies that are simultaneously future- and impact-conscious. The need for a forward-looking perspective is increasing as actors discover how futures thinking is an essential part of organisational life, given their exposure to these challenges and responsibility to address them (Wenzel, 2020). In particular, future-oriented impact assessment practices are essential for entrepreneurial organisations trying to contribute to these grand challenges (Trautwein, 2020).

Second, building on the work of Dendena and Corsi (2015), we emphasise that impact assessment research and practice can benefit from making temporal dimensions explicit, not limited to forward-looking elements. By making the temporal dimension explicit, impact assessment practice and research could become more imbued with values and learning. When the notion of having an impact is understood beyond linear conceptions of time (i.e., past, present, future), this can facilitate cooperation among stakeholders through mutual learning and understanding of each other's values and desires for impactful contributions. Using forward-looking impact assessment to understand how different stakeholders are thrown from their past, absorbed in the present and projected into the future can assist in developing shared visions.

Finally, we contribute a more holistic understanding of forward-looking impact assessment that moves beyond prediction. Whilst, for some authors, forward-looking impact assessment is essentially making predictions, we hope that impact assessment literature moves beyond this to a broader conception that appreciates the practices of future-making (Sardar, 2010; Wenzel et al., 2020). For example, in the context of new ventures, forward-looking impact assessment can be considered as a learning tool to explore possibilities and outcomes of different directions to illustrate impact. What is essential for forward-looking impact assessments is not making predictions but rather trying to influence the future by initiating explicit explorations of multiple futures.

We acknowledge that there are some limitations related to this systematic review. First, the search was limited to peer-reviewed English journals, meaning that some relevant articles might have been neglected from potentially relevant publications. Further, the systematic search for relevant articles was limited to reviewing records by titles, abstract and keywords. As a result, there may be articles not discovered in the search that explore

the concept of forward-looking impact assessment in the body of the paper but do not indicate this in the introductory materials. Finally, as forward-looking impact assessment has been growing more in practice than in academic research, it would be beneficial for future studies and review to include the grey literature on impact assessment (Trautwein, 2020). However, for the scope of this paper, we chose to focus on how the academic community perceives the concept of forward-looking impact assessment.

2.7 Conclusion

An interdisciplinary systematic literature review was conducted to enhance understanding of the emerging research themes, challenges and gaps in understanding future-oriented impact assessment. The analysis identified the different antecedents, methods and effects of forward-looking impact assessment. The findings show that internal drivers to assess impact with future-oriented lenses are decision-making, goal-setting, innovating and coping with uncertainty. External drivers are regulatory, stakeholders, and societal and ecological pressure. The review explored how assessments are conducted and by whom and identified complexity, lack of transparency and resistance as the main challenges for forward-looking impact assessment processes. The analysis showed that forward-looking impact assessment could lead to organisational effects of enhanced decision-making, innovation, learning and cooperation, and societal effects of societal dialogue, knowledge sharing and societal impact. We propose a research agenda that explores four research themes in forward-looking impact assessment: uncertainty, values and assumptions, stakeholder cooperation, and learning. By explicitly reviewing how forward-looking, future-oriented approaches are comprehended in the impact assessment literature, we hope to evoke further explicit explorations of temporality and futures thinking in impact assessment research.

CHAPTER 3 – PROJECTING TOWARDS DESIRABLE FUTURES: UNPACKING PREDICTIVE, EXPLORATIVE AND NORMATIVE FUTURING TECHNIQUES IN IMPACT MEASUREMENT

This chapter builds on the foundational insights from the systematic literature review and delves deeper into the practices of future-oriented impact assessment within the context of impact investing. The study focuses on how impact investors employ diverse futuring techniques to project and enact desirable futures in a field inherently shaped by uncertainty and complexity. By investigating these practices, this chapter aims to unravel the mechanisms through which investors navigate the interplay of ethical considerations, strategic goals, and societal challenges.

The objective of this paper is to explore the use of predictive, explorative, and normative futuring techniques within impact measurement. Predictive techniques involve forecasting likely outcomes based on existing trends and data, explorative techniques emphasise the consideration of multiple possible futures, and normative techniques focus on aligning potential outcomes with value-driven criteria and ethical principles. These approaches collectively show how investors engage with temporal complexity to align their investments with long-term societal objectives.

This study draws upon empirical data collected from interviews with impact investors across Europe, offering insights into how these actors navigate the uncertainties associated with long-term social and environmental change. By analysing the interplay between these futuring techniques, the chapter provides a nuanced understanding of how impact investors manage the tension between immediate actions and distant goals.

The findings contribute to the literature on future-making by demonstrating how structured, forward-looking approaches to impact measurement enable organisations to bridge the gap between the present and the future. This chapter highlights the importance of integrating diverse temporal strategies to foster sustainable and desirable futures, setting the stage for subsequent discussions on the dynamic interplay of near and distant futures.

Projecting towards desirable futures: Unpacking predictive, explorative and normative futuring techniques in impact measurement

Abstract

Research on impact measurement has predominantly focused on retrospective forms of measurement, overlooking the future-oriented processes involved in assessing and projecting potential impact. This study addresses this gap by exploring the variety of futuring techniques through which organisational actors identify, measure and enact imaginaries of desirable futures. Impact assessment in impact investing provides a rich site for investigating these techniques, as impact investors explore potential desirable futures through impact measurement practices that are inherently value-laden and shaped by ethical considerations. Based on 40 interviews with European impact investors, we examine how impact investors use future-oriented impact assessment technique to understand, measure and enact potential futures. Our findings reveal three broad categories of futuring techniques: predictive, explorative, and normative. Our analysis reveals the formal and informal ways that impact investors combine the futuring techniques as they project towards desirable futures. Our study contributes to the literature on impact measurement and future-making by highlighting the complex, multifaceted and value-laden nature of future-oriented impact measurement.

Keywords: Impact assessment; impact investing; futuring; future-making; normative futures

3.1 Introduction

The landscape of investing has witnessed a shift towards considerations of ethics, sustainability and impact, in recognition of the role that capital allocation plays in addressing the world's most pressing environmental and social challenges (Agrawal & Hockerts, 2021; Daggers & Nicholls, 2016; Höchstädter & Scheck, 2015; Hockerts et al., 2022; Logue & Grimes, 2022). While traditional investment practices have predominantly centred on assessing future financial risks and returns, the emerging field of impact investing includes the added complexity of measuring potential social or environmental impacts, as investors attempt to achieve their desired visions for the future (Arjaliès et al., 2023). Whilst the roots of impact assessment practice stem from attempts to predict future impact, the vast majority of impact assessment research has focused on retrospective measurement (Esteves et al., 2012; Grieco et al., 2015; Maas & Liket, 2011). Limited research has focused on future-oriented processes involved in assessing and projecting impact risks and returns of impact investment (Strömmer & Ormiston, 2022). To overcome this gap, this paper explores the question: *"How do impact investors use future-oriented impact assessment to understand and enact desirable futures?"*

Impact assessment in impact investing can be viewed as a form of future-making, as investors attempt to understand and shape desirable futures through their investments (Duinker & Greig, 2007; Strömmer & Ormiston, 2022). *Future-making* refers to the practices involved in producing and enacting the future in the present, by making sense of and evaluating possible, probable and desirable futures (Beckert, 2013; Dator, 2019; Wenzel et al., 2020; Whyte et al., 2022). The existing literature on future-making has often treated the future in an undifferentiated way (Thompson & Byrne, 2022), neglecting the plurality of possible futures and the variety of futuring techniques (Augustine et al., 2019). This literature has highlighted multiple futuring techniques, including practical knowledge (Thompson & Byrne, 2022), future narratives (Garud et al., 2014), future imaginaries (Duinker & Greig, 2007), and fabulations (Hjort, 2013). Despite their valuable contributions, these studies often consider a singular technique for futuring, rather than appreciating the suite of different practices involved in imagining and enacting possible futures (Oomen et al., 2022). This paper thereby moves towards a pluralistic view of the future that is not a fixed, objective 'thing' to be quantified or uncovered, but views futures as multifaceted, dynamic and open-ended encompassing a multitude of horizons and possibilities (Emirbayer & Mische, 1998; Wenzel et al., 2020).

Impact assessment provides an ideal site for exploring future-making as it includes practices involved understanding the intended of actions focusing on addressing sustainability challenges (Ebrahim & Rangan, 2014; Jäger & Rothe, 2013). Impact assessment in impact investing is a context where actors deliberately engage with future-making (Gümüsay & Reinecke, 2022), as field-level actors seek to create a vision and promise of a desirable future through their investments (Logue & Grimes, 2022). Future-oriented impact assessment is inherently a value-laden process, as it involves ethical and normative considerations in determining the desirability of future outcomes (Casanovas & Jones, 2022; Molecke & Pinske, 2017). Future-oriented impact assessment thereby involves ethical sensemaking, as investors juggle their impact aspirations with market-driven realities (Dahlman, 2022; Meng et al., 2022)

We conducted semi-structured interviews with 40 impact investors in Europe to understand the futuring techniques impact investors enact when assessing the impact of potential investments. We focused on future-oriented impact assessment processes, where investors consider their imaginings and projections of financial and impact risk and returns. In our conversations with investors, we focused on both formal and informal impact assessment practices to capture the diverse ways in which impact investors construct futures in the present.

Our findings highlight the nuanced ways in which impact investors enact the future by unpacking three broad categories of futuring techniques used in impact assessment: predictive, explorative, and normative. Predictive approaches involve forecasting the likely impacts and implications of different actions or decisions based on data and modelling. Explorative approaches involve exploring and understanding the potential impacts and implications of different actions or decisions. Normative approaches focus on evaluating the desirability of proposed actions or decisions based on explicit criteria and values. Beyond formal methods of impact assessment, investors also engage with informal futuring techniques that also guide their investment decision-making. Impact investors engage in informal futuring by creating possibility spaces for exploring futures and impacts through their everyday rhythms and activities. Our research suggests that investors often use a combination of these approaches in their efforts to respond to and shape potential futures.

Our study contributes to the literature on impact assessment by highlighting the complex combination of futuring techniques invesotrs engage with as they attempt toshape the future. We illustrate a diverse range of futuring techniques (i.e., predictive, explorative and normative) that actors use when thinking about and enacting the future throughout impact measurement. We highlight the importance of normative futuring techniques investors engage in when projecting towards desirable (Alimadadi et al., 2022; Dahlman, 2022: Meng et al., 2022). Finally, we underline the significance of informal futuring techniques involved in impact measurement, which have been underexplored in the futures and impact measurement literature (Börjeson et al., 2006; Wenzel, 2022).

3.2 Literature review: Impact assessment and future-making

3.2.1 Impact assessment as a future-oriented practice

Impact assessment refers to the practices involved in understanding the intended or actual contribution of actions focused on addressing sustainability challenges (Ebrahim & Rangan, 2014; Jäger & Rothe, 2013). Impact assessment involves the use of various methods, tools and frameworks to assess the impacts of interventions, policies or programs on different stakeholders and environments (Ebrahim & Rangan, 2014; Molecke & Pinkse, 2017; Rawhouser et al., 2019). Scholars have contested the definition of impact, with various terms, such as outcome, performance, output, or impact, being used to describe the phenomenon (Ormiston, 2019). However, as Ebrahim and Rangan (2014) argued, impact should be understood as going beyond short and medium-term outcomes by making a lasting change at a societal level.

Impact assessment is an inherently temporal practice, as actors either retrospectively measure the results of projects, reactively monitor their impact, or proactively assess the future impact that different courses of action could engender. Whilst the roots of impact assessment practice stem from attempts to predict impact, the vast majority of impact assessment methods, as well as the related research, focus on retrospective measurement (Esteves et al., 2012; Grieco et al., 2015; Maas & Liket, 2011). Recent studies have called for greater focus on future-oriented elements of impact assessment to account for how in practice, more and more organisations have realised how crucial it is to consider how actions today impact the future (Fichter et al., 2023; Strömmer & Ormiston, 2022). This focus on future impact has been accompanied by a range of approaches including impact

forecasting (Duinker & Greig, 2007; Farrukh & Holgado, 2020), impact projection (Arnell et al., 2004; Paltsev et al., 2015), and impact prediction (Lockie, 2001; Partal & Dunphy, 2016).

Prior research on future-oriented impact assessment has focused on how organisations can forecast the impact of their new products and services (Trautwein, 2020), predict environmental impact (Zhu et al., 2011), gain legitimacy (Berkhout et al., 2002), or deal with uncertainties of the future (Bond et al., 2015). What connects these processes is that futures are explored explicitly, and there is an attempt to make a connection between impact and the future by exploring futures and possibilities, and more importantly what makes them desirable. In this sense, future-oriented impact assessment should be viewed as a value-laden process, as it involves determining the desirability of future outcomes based on both ethical and normative considerations (Casanovas & Jones, 2022). For example, Meng et al., (2022), argue that impact assessment process is shaped by ethical sensemaking, where decision-makers rely on personal values, societal norms, and their broader understanding of stakeholder impacts to forecast and justify their actions. This negotiation of values is integral to impact assessment, as practitioners project possible futures and assess the desirability of those futures through the lenses of social justice, environmental stewardship, and economic equity (Dahlman, 2022). This paper dives deeper into these practices of future-oriented impact assessment, focusing on the range of ways impact investors envision and enact the future.

3.2.2 Impact assessment as future-making

An emerging stream of literature on future-making in organisations notes how organisations are not merely assessing or predicting the future, but actively enacting it through their day-to-day practices. In the face of uncertainties and the grand challenges society is facing, organisational actors are increasingly embedding future-making practices into their everyday activities (Wenzel et al., 2020), and bringing imagined futures into action in the present (Beckert, 2013, 2021; Hernes & Schultz, 2020). This shift in organisational research reflects a broader movement away from a focus solely on forecasting or predicting the future and towards a more comprehensive conceptualisation of future-making. Research has highlighted how organisations attempt to develop a shared understanding of desirable futures, and how organisations attempt to enact these imagined futures (Alimadadi et al., 2022; Augustine et al., 2019; Gümüsay & Reinecke,

2022; Thompson & Byrne, 2022). However, despite these advances, prior research has not fully explored the pluralistic ways in which actors think about and enact the future (Wenzel et al., 2020).

To extend our understanding of the pluralistic ways in which organisational actors think about and enact the future, we draw on understandings from Futures Studies. Futures Studies is a field dedicated to studying futures – what alternative futures are, what thinking about the future entails, or how futures can be studied (Dator, 2019), or how desirable futures can be achieved, and how they are defined (Hedrén & Linnér, 2009). We draw on the typology by Börjeson et al. (2006) to differentiate between actors' attempts to understand what will happen (probable futures), what can happen (explorative futures) and what should happen (normative futures). This typology has been widely used in the field of futures studies to understand, categorise and differentiate various futuring techniques (Nowack et al., 2011; Maier et al., 2016; Finnveden et al., 2009; Bishop et al., 2007; Copeland et al., 2023; Mentese et al., 2023). Research on future-making in the broader fields of management, organisation studies and business ethics has not sufficiently explored this breadth of futuring. Studies have mainly focused on the predictive techniques used by organisations, such as foresight or forecasting capabilities (Durand, 2003), risk management (Beck, 1992; Hardy & Maguire, 2016), or planning practices (Bibri, 2018; Whittington et al., 2017). While some work has focused on explorative techniques in strategising (Kaplan & Orlikowski, 2013; Kornberger, 2013; Mintzberg, 1990), there is still an insufficient understanding of more normative futuring techniques. Understanding the normative elements of futuring is necessary as ethics are inherently connected to future-making, with time playing a critical role in shaping how ethical decisions are made and how organisationa actors cultivate responsible practices (Kuepers at al., 2023) What is still missing from the literature is a more comprehensive understanding of how organisational actors use diverse futuring techniques in their engagements with the future, and the ways in which they explore what is probable, possible and/or desirable, as well as improbable, impossible and/or undesirable.

3.3 Methods

In order to investigate the diversity of futuring techniques involved in future-oriented impact assessment we carried out in-depth semi-structured interviews with a diverse range of impact investors throughout Europe. The focus of these interviews was on the

impact-investing process and the practices involved in impact assessment. We paid special attention to the prospective nature of investing and the role of impact assessment in understanding the future, and how this in turn shapes decision-making. The interviews were designed to elicit in-depth accounts of the participants' experiences and views on impact investing and impact assessment, as well as on the practices used by their organisations. The full interview protocol can be found in Appendix 1.

A total of 40 interviews were conducted, involving impact investors from 17 European countries. As outlined in Table 11, these individuals were from a variety of institutions, including development finance institutions, NGOs, family funds, banks, and non-profit and for-profit funds (e.g., private equity, venture capital, government funds). Our initial point of contact for potential interviewees was the Impact Europe member list, as the Impact Europe serves as a community for European impact investors. To guarantee broad geographical representation, we also reached out to non-member impact investors, as well as investors recommended by the interviewed participants. Each interview was conducted over Zoom and spanned a duration of 45 to 60 minutes and was recorded and transcribed to facilitate subsequent analysis. Participants granted explicit consent for their interviews to be recorded, and all information was anonymised within the transcripts. Additional documents (e.g., website materials, reports) were obtained from the organisations' websites to ensure that the interviewer had relevant contextual knowledge, as well as to address any gaps after the interview.

Table 11 Overview of the interviewees

Group	Country	Interviewee's position	Tag
Asset manager for-profit			
	Denmark	Investment	Denmark FP asset manager
	Estonia	Investment	Estonia FP asset manager
	France	Investment	France FP asset manager
	France	Management	France FP asset manager 2
	Germany	Assessment	Germany FP asset manager
	The Netherlands	Management	Netherlands FP asset manager
	The Netherlands	Management	Netherlands FP asset manager 2
	North Macedonia	Assessment	North Macedonia FP asset manager
	Poland	Investment	Poland FP asset manager
	Portugal	Assessment	Portugal FP asset manager
	Spain	Management	Spain FP asset manager
	Switzerland	Assessment	Switzerland FP asset manager
	UK	Assessment	UK FP asset manager
Asset manager not-for-profit			
	Luxembourg	Assessment	Luxembourg NFP asset manager
	Germany	Management	Germany NFP asset manager

	Germany	Management	Germany NFP asset manager 2
	Portugal	Assessment	Portugal NFP asset manager
	Romania	Assessment	Romania NFP asset manager
	The Netherlands	Assessment	Netherlands NFP asset manager
	UK	Assessment	UK NFP asset manager
Development finance institution			
	Finland	Assessment	Finland development FI
	Finland	Management	Finland development FI 2
	The Netherlands	Management	Netherlands development FI
	The Netherlands	Management	Netherlands development FI 2
Foundation			
	Austria	Management	Austria foundation
	Belgium	Management	Belgium foundation
	Finland	Investment	Finland foundation
	France	Management	France foundation
	Germany	Investment	Germany foundation
	Portugal	Investment	Portugal foundation
	Spain	Management	Spain foundation
	Switzerland	Assessment	Switzerland foundation
	Switzerland	Management	Switzerland foundation 2
Diversified financial institution			
	Belgium	Assessment	Belgium diversified FI
	Finland	Investment	Finland diversified FI
	Spain	Assessment	Spain diversified FI
Family office			
	Norway	Investment	Norway family office
	Switzerland	Assessment	Switzerland family office
Other			
	Belgium	Investment	Belgium other
	The Netherlands	Assessment	Netherlands other

Thematic analysis was conducted to identify emerging themes and interpret the interviews (Nowell et al., 2017). To extend our understanding of the pluralistic ways in which investors think about and enact the future, we draw on understandings from futures studies, in particular the common differentiation of probable, possible and preferable futures (Bell, 2002). For instance, this categorisation, or rather a way of considering different futures has been used to understand what will happen (e.g. forecasting techniques), what can happen (e.g., exploring the possibilities or impossibilities for the future), and what should happen (e.g., normative strains of what a good future society should look like) (Kicker, 2009).

We commenced our investigation by categorising the impact assessment methods employed by the investors as one of three types: predictive, explorative and normative. Subsequently, within each of these categories, we dived deeper into the underlying reasons for employing specific impact assessment methods, as well as the perceived advantages and limitations associated with each method. Table 12 provides an overview

of the various impact assessment methods, organised by category (predictive, explorative, and normative), and Appendix 3 shows the data table.

During this first phase of analysis, we noted that impact investors were engaging in these different futuring techniques in their everyday activities. This insight enabled us to recognise that futuring techniques are not solely confined to formal methods, tools and practices; rather, they also permeate the investors' informal practices. Consequently, in the second phase, we expanded the scope of our inquiry to explore the informal futuring techniques these investors engage in throughout their investment activities.

In the third phase of our analysis, we delved into the interplay between formal and informal futuring techniques employed by investors. Our analysis illuminated the dynamic relationship between these two approaches, revealing how they often complement and inform one another, despite the potential tensions between them. While formal futuring techniques provide a structured and systematic framework for assessing potential impacts, informal futuring allows for an exploration of the nuances and contextual elements often absent in more formal approaches. Investors frequently shifted between these techniques in their decision-making processes, drawing from the rigour of formal methods while also leaning into the intuitive insights offered by informal approaches.

Table 12 Categorisation of futuring techniques for impact assessment

Category	Formal methods	Informal futuring	Advantages	Limitations
Predictive: What will happen	-Impact forecasting -Life-cycle assessment -Monitor forecasting (e.g., setting impact KPIs) -Impact scenarios -Quantitative impact modelling -Social return of investment -Impact scoring	Thoughts and ideas on what are the most likely developments or least likely developments, or what will happen given specific events	-Enhancing the understanding of likely developments (e.g., for planning, or comparing investees) -Mitigating risks -Managing expectations -Standardisation, comparison of investees -Understanding impact on a larger scale -Understanding how/when to use resources	-Sometimes not possible, or extremely difficult -Results not always trustworthy -Difficult to compare values and assumptions - Lack of availability of data -Some issues not possible to model (e.g., unexpected events such as COVID-19) -Value-laden, cherry-picking data
Explorative: What could happen	- Environmental modelling - Multi-criteria analysis - Strategic impact assessment - Strategic horizon scanning - Strategic option analysis	Thoughts and ideas on what could happen regarding external developments, or a range of decisions	-Understanding long-term impacts (going beyond the investment period) -Understanding indirect impacts -Learning about the subject matter -Focused decision-making (e.g., aspects that are new for the investors) -Proof for investors -Alignment/cooperation with investees	-Need for external advisors -Sometimes no need to know, does not inform the investment decision-making necessarily -Disconnect between intention and execution -Struggle between two goals (financial versus impact gains)
Normative: What should happen	- Impact thesis - Cost-benefit analysis - Cost-effective analysis - Impact backcasting - Impact risk assessment	Thoughts and ideas on what ideally would happen, on how targets can be efficiently met, or what are prioritised targets	-Enhanced focus on impact targets -Effective in achieving impact targets -Proof for investors/donors -Knowing what to do, pathway thinking -Long-term/systemic perspective -Justification for action	-Challenging to define the targets -Challenging to know what is effective/efficient -Agency in change -Preferred futures for whom -Difficult to justify to investors

In the fourth phase of analysis, we moved from examining single excerpts to identifying patterns of futuring practices across organisational attributes. Building on the categories of predictive, explorative, and normative futuring, and thereby formal and informal, we examined how these practices were expressed differently by investors depending on contextual characteristics, organisational type, size, age, and role. We also analysed different geographies, but could not conclude any specific differentiations. For example, how for-profit asset managers tended to narrate predictive–informal practices through market intuition, or how foundations often articulated explorative–informal practices in dialogical and value-laden ways. The outcome of this phase is presented in Table 13., which provides a structured overview of how futuring techniques take shape in practice across diverse organisational settings.

Table 13 Patterns of futuring techniques across organisational attributes

Attribute		Predictive Formal	Predictive Informal	Explorative Formal	Explorative Informal	Normative Formal	Normative Informal
Maturity	Older:	Emphasis on models, risk frameworks, reporting	Long-standing ideas, seen cycles	Scenario modelling, stress-testing	Reflective dialogues within established teams	Instutionalised ESG, Mission-driven visions (e.g., SDG alignment)	Legacy visions
	Younger:	Some forecasting, less systematic	Use of instinct, founder ideas	Creative scenario-planning for opportunities	Linked to entrepreneurial 'what-ifs'	Building impact narratives important	Value-driven imaginaries, shaping who they are
Size / Resources	Bigger:	Heavy data use, KPIs	More procedures than ideas on the future	Structured foresight teams	Informal brainstorming about unlikely but high-impact scenarios	Formal sustainability goals	Less emphasized, some cultural ideas
	Smaller:	Simpler tools	High reliance on relationships	Ad-hoc scenario use	Drawing on personal experiences to envision possible futures	Formalisation limited	Strong value narratives
Role of Interviewee	Manager:	Uses models for strategic planning	Experiences-based instincts	Workshops to set directions	Strategy-level sensemaking, what could happen	Management aligning strategy to desirable futures	Daily informal talk about purpose/values
	Investment:	Portfolio models, risk-return analysis	Gut-feelings on deals or founders	Scenario thinking	Deal-level exploration, framing investments through narrative futures	Referencing mission alignment	Personal ethical convictions guiding picks
	Impact:	Focus on metrics, or indicators	Theory of change not formalised	Structured scenario tools for evaluations	Filling gaps where data is missing, intuition	Normative benchmarks (SDGs, Paris Agreement)	Setting ideals on what should happen
Org Type	For-profit asset managers:	ROI based forecasting risk models	Reliance on financial experience to sense what is realistic	Scenario tools for understanding market opportunities	Practical conversations with partners	Some formalisation	Values framed as brand identity
	Not-for-profit asset managers:	Use predictive tools for accountability	Stronger conviction talk	Scenario planning tied to mission	Partner dialogues, imaginative speculation with NGOs	Formal mission statements	Everyday value-based thinking
	Development:	Reliance on predictive, formal "safeguards"	Limited informal role	Structure foresight programs	Partner dialogues at summits	Normative standards	Grassroots talks
	Foundation:	Some models for accountability	Rarely emphasised	Some foresight initiatives	Brainstorming sessions that link "possible" and "desirable" futures	Formal articulation of long-term visions	Strong ethical informal narratives
	Diversified Financial:	Emphasis on risk-return predictive models	Occasional instinct	Scenario stress-testing	Professional events	ESG frameworks	Rare informal value talk
	Family:	Predictive modelling	Some based on ideas of what the family values	Selective scenario use	Intergenerational conversations	Some formal articulation of legacy	Deeper value-driver imaginaries

3.4 Findings

Our findings reveal how impact investors enact the future in nuanced ways through three different ways of conducting future-oriented impact assessment: predictive, explorative and normative. Our analysis highlighted how all these approaches encompass different advantages and limitations in shaping investment decisions. Beyond the formal impact assessment methods through which investors are enacting the future, there are more informal, everyday impact practices guiding their investments through imaginations of the future that investors see as (im)probable, (im)possible, or (un)desirable.

3.4.1 Predictive futuring – what will happen?

Predictive futuring refers to methods that attempt to predict what will happen in the future by estimating the probabilities and likelihood of certain outcomes. Impact investors use predictive futuring in their impact assessment processes by forecasting the most likely developments or investigating different set of outcomes of certain actions and events.

Formal predictive impact assessment

Impact investors engage in predictive impact assessment to understand what developments would happen due to their investment. These methods include impact forecasting, life-cycle assessment, impact modelling, or scenario building. Impact investors try to predict impact to better understand their prospective investees and what kind of futures they could shape, in order to understand where to invest. This futuring technique involves predicting the potential environmental or social impact that could be achieved by investing in a particular social enterprise, or what will happen if certain conditions or event arise. These impact forecasts are usually made along with financial forecasts during the due diligence process:

> The process of due diligence includes the preparation of the financial forecast and the social impact forecast… we are trying to indicate where this enterprise can be in 3 to 4 years in terms of their financials and social impact. (Poland FP asset manager)

> We work as much as possible with evidence-based forecasting. As long as we implement these interventions strictly, we know what to expect regarding impact… when it will happen, how it will happen. There is plenty of research showing that if you do this strictly, you can expect a certain impact. (Netherlands development FI 2)

> We start modeling the cases, build financial models, and remodel all possible outcomes… different success rates and different scenarios for all the assumptions that could influence the case. (Denmark FP asset manager)

Impact investors use the insights from impact forecasting to compare investees or investment instruments to better understand which actions could generate the most impact – "We are collecting data about where the investee could be in 5 years, and therefore we are able to make better decisions" (Switzerland foundation). Investors discussed how forecasting impact allows them to recognise and mitigate the risks related to the future. Impact forecasting enables investors to make informed decisions on where to allocate resources by having a clearer picture of what needs to be done in order for the investee social enterprise to achieve the desired impact:

> Through impact forecasting, we can know the risks, we can make evaluations. We can choose the easier [pathways], and we can only know this by anticipation, when we have the influence. This has made our impact grow incrementally. (Finland development FI)

Investors also discussed how by having a wider understanding of different scenarios and different conditions, investors can better understand how and when to use their resources. For instance, investors can better identify potential limitations that might prevent an investee from achieving their impact goals, or when taking into consideration a larger pool of impacts, even beyond those generated by themselves and the investees. This understanding helps investors to determine what resources and support the investee needs to achieve their desired outcomes. By creating multiple scenarios that simulate how different investments might impact various aspects (e.g., different communities), investors can gain a better understanding of the potential outcomes of their investments on a larger scale:

> We model all the cash flow, and all this work becomes quite massive... it is estimated how much money is spent on average per participant and what kind of results are likely to be achieved. Based on this modelling, we know the financial need… we calculate how much money is required for this impact. (Finland diversified FI)

> We have some modelling possibilities when we talk about countries' job markets, GDP, formalising economic activity, or understanding the energy structures… Thus, we can understand the difference we make and the impact our investees will have. (Finland foundation)

Despite the potential benefits of forecasting, impact investors highlighted limitations related to assessing impact through forecasting methods. Most of the investors who engage with this type of futuring technique also explained how predicting is extremely difficult, and oftentimes even impossible due to issues with data quality and the uncertainty surrounding social metrics:

> Even though we try this, it's not like we have a predictable model for it, right? We can look at the historical data, look at the compositions of previous funds, and compare… based on that, we get some type of picture, a forecast, of what the fund will look like in 5 years. (Norway family office)

> We tried to actually project into the future, which itself is already a challenging thing to do… the same for financials; for impact, it's even more difficult. (Switzerland FP asset manager)

Investors also admitted that the results of forecasts are not always trustworthy and must be taken "with a grain of salt". Also, the limited availability of data and lack of data quality, limit the results of predictions, since the accuracy of the scenarios depends on the data used in their development. These limitations make it difficult for investors to make informed decisions and highlight the importance of supplementing these methods with other forms of analysis. Impact forecasting can involve assessing complex systems, which are inherently difficult to predict and are affected by numerous variables that can change over time:

> The main challenge is you want the investees to do as well as possible and be reliable for impact, and for that, we can use former studies, but the problem is that every context is different… the challenge is to incorporate these elements realistically. (Netherlands development FI 2)

> We understand how to quantify the different variables in the investment case to make everything make sense. But we have to rely on data that we get from third parties, and often it is not accurate to begin with. (Denmark FP asset manager)

> For the impact portraits on a country level, the quality of the data is often not that good. This is generally an under-investigated area. We're getting a fair amount of info on the organisation, but not really data. (Switzerland foundation 2)

Investors also noted how some impacts are impossible to model. For instance, investors discussed how many qualitative aspects of impact do not fit into their models, and how models struggle to incorporate unexpected events. As some impact areas are not possible to model, this makes it difficult to develop meaningful scenarios:

> I think our model is good where it is possible to quantify results. For instance, if you have some extremely complex issues, then this model will definitely not be what solves the problem… I think, because it is very hard to quantify and very hard to measure. (Denmark FP asset manager)

Informal Predictive Futuring

Impact investors engage in various informal approaches to futuring as part of their everyday practices. By *informal futuring*, we refer to everyday practices of engaging with the future and considering and responding to potential impacts, without necessarily using formalised impact assessment methods.

Informal techniques of predictive futuring allow space for investors to explore ideas about probable and improbable futures when making investment decisions. Our findings suggest that investors often rely on their intuition and beliefs about the future without fully engaging in formal predictive impact assessment methods:

> When doing these benchmarkings, our magic formula tells us that this pitch deck will reach the most people. But then it is… "we are going to work with 5000 different agricultural cooperatives in Latin America," and… they are going to triple their revenue in a year… it's not realistic. You sort of have to think about it and use your experience to decide if you believe it is reasonable, what is being proposed. (Romania NFP asset manager)

3.4.2 Explorative futuring – what could happen?

Explorative futuring refers to more creative methods that focus on possibilities for profound long-term changes. Impact investors use explorative futuring techniques to explore topical issues or to explore their strategic actions to question what could happen if they direct their resources to social enterprises in certain spaces.

Explorative Formal Impact Assessment

Impact investors use explorative methods to question what could happen based on external or internal factors of the fund. Examples of these methods are environmental modelling or multi-criteria analysis, strategic environmental assessment, or strategic impact assessment. Externally, these methods are used to understand issues such as economic development, political instability or climate change that are outside of the control of the investors. The rationale for the use of external futuring is that it can help investors develop more adaptive and resilient impact strategies and gain a broader understanding of the landscape in which they and their investees operate:

> We start with location and scenarios of renewable energy... By using world energy scenarios we are able to see into 2050 to understand which wind farms we should support. (Norway family office)

As opposed to focusing on external factors, some explorative methods are used to describe a range of possible consequences of internal actions. These are used to ensure that they are making informed investment decisions that align with their long-term strategies:

> On the strategic impact of these companies… obviously, there is a lot of impact, but the impact is so multi-dimensional. You have to use strategic impact assessment in a way that allows you to build a structure to understand the dimensions and manage them. (Switzerland FP asset manager)

The benefits of explorative impact assessment include the possibility to learn about long-term impacts beyond the investment period. By considering potential future scenarios and their long-term impacts, investors can better assess the sustainability of an investment, as well as its potential to generate lasting positive impact or systemic impact:

> We try to measure all those long-term effects by modelling impacts. Very diligently we can measure short-term, especially those linked to financial gain, but with impact, it has to be more long-term projection. (Denmark FP asset manager)

By engaging in explorative futuring techniques, impact investors attempt to deepen their knowledge and expertise on a particular subject matter, such as climate, healthcare or education, which can ultimately lead to more informed and impactful investment decisions. Additionally, explorative futuring can help investors identify potential blind spots or areas where they may need further education or research:

> In Zambia, for example, there was a study done, and it showed that closer to 70% of children in grade five didn't know how to read. What does that mean for those kids in public school systems? Without assessing this whole field, we would not know the value of this investee or how profound the impact is. (Netherlands development FI)

> We tried to look at the ecosystem, and we realised that if you really want to impact environmental work, you need to deal with biodiversity and water cycles. If you're not looking at the whole value chain, you don't learn about the real impact and real results. (Portugal NFP asset manager)

By exploring different future scenarios, impact investors can identify key areas of impact and prioritise them accordingly. By taking a more strategic approach to impact assessment, investors can also ensure that their investments are aligned with their overall mission and values, and that they are making the most effective use of their resources:

> Data or information helps us make data-driven, informed decisions. For us, this strategic impact assessment directs available resources toward the intended objectives and impact, and we better understand the progress we have made. Also, we are able to take corrective actions when needed, and it is a tool for learning and continuous improvement. (Finland development FI 2)

Investors also discussed how engaging in strategic futuring can help them to cooperate with social enterprises to align their ideas for the future. By engaging in a collaborative process of exploring potential futures and identifying strategic priorities, investors and social enterprises can develop a shared understanding of how best to achieve impact. Aligning strategies between investors and social enterprises can help to mitigate potential conflicts and ensure that everyone is working towards the same goals:

> There is the whole process of trying to work with them to identify how to tie impact and business together. We have to do it right away to really identify the potential areas of impact. (North Macedonia FP asset manager)

Despite the benefits, there are also some limitations. For instance, impact investors may not have the necessary expertise in-house to conduct these assessments themselves, and may need to rely on external advisors to assist them. While consulting external experts can bring valuable insights and perspectives, it can also be time-consuming and expensive:

> We normally have a very good team that specialises in different areas. However, we cannot always trust our capabilities to conduct the assessment. Then we normally have to hire some kind of specialist for a period of time. For instance, a specialist in public education. (Spain foundation)

While impact investors aim to generate both financial returns and positive social or environmental outcomes, this can be a complex and difficult balance to achieve. Explorative futuring can be useful in helping investors align their impact goals with their financial returns, but finding the right balance can still be difficult. Investors noted how results of explorative impact assessments are sometimes characterised somewhat as future-oriented "storytelling" and may not actually translate into action:

> Sometimes the assessments are like storytellers' books. There is this impact on so many levels that we are strategically thinking and making plans, but sometimes plans are… It is not always the task of the organisation itself to go and measure impact for each and every case. (Belgium foundation)

> The fact is that you have assumptions on which you base your investment decision to confirm this is the right decision in terms of financial performance in the future. But in our particular case, we also add the strategic element in terms of social or environmental impact. We try our best to encompass everything together in our due diligence. (Luxembourg NFP asset manager)

> The risk is obviously this balance between managing the strong impact drive and the business drive. Sometimes they show only one side strongly, so how do you choose then? Impact assessment won't help. (Portugal NFP asset manager)

Informal Explorative Futuring

Informal explorative futuring allows investors to ponder possible and impossible futures that might stem from investment decisions. What this means is that beyond using formal impact assessment methods, investors may have beliefs and ideas about what they deem to be possible or impossible. Driven by these potential futures, investors may choose to strategically mobilise their resources to social enterprises and projects that are actively engaged in contributing to futures they see as possible. Or alternatively, they may have the conviction that some future scenario is impossible:

> It all starts with belief. I can go into more detail about due diligence, but that comes first. So we discuss among ourselves: does something sound incredibly boring, or are they innovating… Sometimes we go for the social enterprises or charities when we believe in the impact they can create, but other market players would not even touch these companies… Only when we can imagine what might come later on… we invest. (UK NFP asset manager)

> If they don't have the mindset, we help them change their mindset. So we work on that - the belief systems, purpose… like what's your purpose in life, what is the company's purpose? What is the experience of what is possible? (France FP asset manager)

3.4.3 Normative futuring – what should happen?

Normative futuring refers to methods that explore what should happen in the future. These methods focus on identifying preferable or desirable futures and understanding what it would take to achieve those futures.

Normative formal impact assessment

Approaches to normative impact assessment explore how certain targets for desirable future impact and futures states could be reached. These methods include the impact thesis setting, cost-benefit analysis or impact backasting. Investors use normative futuring methods to explore how they might reach specific targets and goals linked with their impact objectives. For instance, they can be used when a desired future imaginary has been decided upon, and investors start to think about what resources are needed to achieve this desired future. Impact investors use normative techniques by starting from a future imaginary and working backwards to explore how this future imaginary could be achieved or avoided:

> We search for a theme, for instance, affordable housing, and we try to see the region. What are the players involved in this issue… you have the local community, you have the organisations, you have the people… and so you look at the whole value chain and try to understand how we can leverage this. (Portugal NFP asset manager)

> The investees… we have different propositions, but one thing they all have is a very clear contribution to the same mission of improving financial access for businesses in emerging markets. In all the investments, this is our focus. We understand that there are different ways to achieve this, but the future mission is the same. (Netherlands other)

An advantage of normative futuring techniques is that the results can serve as evidence for impact investors to showcase to their own investors and donors that they are making progress towards their impact targets in an effective and efficient manner. This can help to build trust and confidence, and attract additional funding, as investors can demonstrate that they are actively seeking to maximise their impact, and that money is being used effectively:

> Our work is not always the type of pitch that's easily sold to investors, [who] might be more keen to fund fancy impact initiatives or innovations… we are not focused on new green technologies but on maintaining the current ones effectively. By showing the impact data we have, we let financiers know how we play an important role in getting the transition to sustainability going. (Portugal NFP asset manager)

Investors also discussed how normative futuring techniques can enable them to focus on long-term goals and systemic impacts, instead of just outcomes or outputs. By considering the long-term implications of their investments, investors can understand what the impacts are beyond their investment periods, or how they can be part of a larger movement towards the long-term goals. The long-term, systemic nature of transformative futuring allows investors to take a more holistic approach to impact assessment, considering the broader impacts of their investments beyond short-term financial returns. This, in turn, can provide a mandate for investors to take action with a stronger sense of purpose or direction:

> What is the leverage of the foundation? We really select projects that have the ambition to reach a systemic impact… but then we help them in their phase of scaling up the solutions. (Belgium diversified FI)

> What I believe is that impact investing is one piece of the puzzle to move forward some systemic barriers. It's one piece that will hopefully enable the system to work better. We are not searching for the normal impact relationship between investors and investees, where we find a nice pool, invest in them, and do good exits. (Portugal FP asset manager)

Investors discussed the challenges that arise with normative impact assessment. For instance, when there are multiple potential impact targets that are all equally important, and decisions need to be made about which futures to prioritise. It can be difficult to determine the most efficient paths for achieving those targets. There may be multiple ways to reach a goal, depending on many factors, and impact investors may struggle to determine which approach is most likely to be successful:

> Once you say yes to a certain opportunity, you are actually saying no to many other opportunities. You need to be careful with the assessment and selection processes. You need to be clear about your strategy and objectives, your intentions, what are you trying to achieve, and find some sort of alignment between your company core values and the companies you want to support. (Finland development FI 2)

Investors also questioned the extent to which transformative futuring can reflect collective desires for the future. As normative impact assessment involves setting highly prioritised goals, the question arises as to whose vision of the future is being pursued. Normative techniques rely heavily on individual or collective judgement to determine which, or whose, priorities should shape future imaginaries. Inevitably, certain perspectives will be considered more valid than others, with investors' perspectives often shaping future imaginaries more than those of the community being impacted:

> What you often see is that organisations or funders, they want to help people. They have this idea that we want to make lives better, we want to have impact. And what is they look for the quickest, most efficient and also the most controllable way, which is often direct implementation… But when you leave as a funder, or when that organisation that was doing the work on the ground for you leaves or runs out of funding, nothing has changed. (Netherlands development FI)

Another difficulty with these normative techniques is how to justify the actions to their investors and donors. The results of these assessments focus on long-term goals and systemic changes that may not yield immediate results or direct delivery of impact, which many investors or donors demand. This can make it challenging for impact investors to demonstrate the effectiveness of their work to those who may be more focused on short-term outcomes:

> Sometimes it's very obvious that investors want to focus on the business case. For instance, with these immigrant women, if they get well, they get a job, and the public will save money. But there always needs to be someone willing to pay for that change to occur. And sometimes it is not that simple… the more complex the change, the more difficult it is to find funds. (Finland development FI)

> Our investors gave us the chance to work toward sustainability. I mean, our work in that area is great, and we are doing a great job. But they could easily, very often this happens, lack the patience to wait for the sustainability impacts. (Germany foundation)

Informal normative impact assessment

Informal techniques for normative futuring allow investors to imagine desirable and undesirable visions of the future. These considerations are based on their values, mission, and purpose, as well as their observations and experiences. This informal aspect of normative futuring is a significant component of investors' decision-making processes, as it allows them to envision and strive towards a preferred future based on their beliefs:

> We only invest in India, and now we started to invest in Africa. But how do you compare the impact there with the impact in India? Or how do you compare investing an Indian education company or offshore wind park in Norway, on what does create more impact?... That is why we have to follow our desires. If your desire to invest India, invest. (Switzerland family office)

3.4.4 Interplay between different impact assessments

We observed that impact investors do not restrict their decision-making on where to invest, to one way of considering the future, or one way of assessing impact, but rather use a combination of different techniques, as well as both informal and formal futuring, in their efforts to anticipate, respond to and enact potential futures. In some cases, different assessment types can support each other and compensate for limitations, whereas in other cases the techniques instead conflict and create tensions.

Interplay between formal and informal impact assessment

As noted, we observed that a mix of formal and informal futuring techniques were mentioned. Informal futuring is more embedded within the everyday actions of impact investing, whereas formal futuring involves particular methods or techniques for impact

assessment. Informal futuring techniques encompass the imaginations of probable and improbable outcomes (i.e., predictive futuring), possible and impossible scenarios (i.e., explorative futuring), and desirable and undesirable futures (i.e., normative futuring). These informal techniques often shape the choice of formal futuring techniques, or how the results of formal techniques are used.

We observed a complex interplay between formal and informal futuring that shapes the way in which investors consider the future, and thereby mobilising resources. On the one hand, synergies emerge when formal impact assessment methods and informal imaginations of the future work together to shape investment decisions. In these situations, informal techniques can compensate for the limitations of formal methods. The structured nature of formal methodologies provides a solid foundation upon which investors can build their informal imaginations of what could be (im)probable, (im)possible, or (un)desirable futures:

> We all joined impact investing, because we believe that the public sector is broken… We've had this theory that if we do this, then impacts will happen like snowball. And actually we found a lot of studies that said the same thing… theory was confirmed. (Germany foundation)

On the other hand, tensions may arise when the formal and informal techniques conflict. While formal impact assessment methods can help them estimate potential impacts, investors are also influenced by their own ideas and convictions about the probability of future events. This dimension of futuring highlights the role of personal values, ethical considerations, and visions of the future in shaping investment choices. Investors use their vision of desirable and undesirable futures to shape their investment strategies and guide their actions in the present. This can result in tension between the data-driven approach of formal techniques and the more intuitive, belief-driven approach of informal predictive futuring. The richer and more inclusive understanding of what potential futures could be that informal futuring offers can challenge formal methods by introducing a broader range of perspectives, values, and aspirations into the decision-making process. Investors may draw on their personal values, lived experiences, and visions of the future to question or expand upon the criteria and assumptions used in formal impact assessment methods:

> Our gut feeling tells us this will make a big difference in people's lives, but it is too hard to quantify success and it is too hard for payment structure or other practicalities, as the impact happens so long from now… and then we cannot invest even though we know that they will be the next big thing. (Denmark FP asset manager)

Interplay between different types of futuring

In addition to the interplay between the formal and informal approaches, our findings also reveal that impact investors often use a combination of different types of future-oriented impact assessment or futuring techniques, meaning predictive, explorative and normative, to explore more holistic views on the future.

Combining explorative and predictive futuring allows actors to explore both what could and what will likely happen. This integrated approach enables them to move beyond solely relying on what they know about probable futures and to examine a wider range of possibilities. By using predictive measures, they gain insights into the probable trends and outcomes based on existing data. Simultaneously, explorative futuring encourages them to think creatively and consider disruptive forces or emerging technologies that could reshape their landscape. However, sometimes the techniques work against each other instead and create tensions, especially when investors consider something to be possible, but the predictive measures suggest the opposite. For example, an investor might embrace the potential of a ground-breaking technology to revolutionise their industry (explorative), but their predictive analysis could paint a more conservative picture based on historical data. In order to resolve this tension, investors must overcome the contradiction, and ultimately make the decisions about the future they want to enact:

> I mean people can overpromise… We have these models for all the outcomes… But actually you have to have your radar up to think for yourself, if this is realistic, if it can actually happen. (Netherlands NFP asset manager)

Combining predictive and normative futuring techniques enables actors to explore what will and what ideally should happen. For example, they may consider the most desirable futures that are still realistic and probable. Combining these methods allows investors to align their vision of a desirable future with the probable trajectories based on current data and trends. By leveraging predictive measures, they can ground their aspirations on what is realistically achievable, ensuring that their goals, while ambitious, are not entirely utopian. However, the interplay between predictive and normative futuring can also introduce contradictions and challenges in decision-making. For instance, while predictive analysis might indicate a profitable short-term investment opportunity in a certain sector, normative considerations might deem such an investment misaligned with the broader mission of sustainable impact:

> We have very high ethical standards. We don't want to have conflict with our ethical framework. … But we know that we are not 100% certain what will happen, so we have to trust the models

> and expert opinions. And sometimes our framework adds quality, but we have to always follow the probability… We cannot choose on our own. (Netherlands development FI)

Combining explorative and normative futuring techniques facilitates the exploration of what can and what should happen. This approach allows actors to consider various possibilities for the future and assess which scenarios are both desirable and plausible, and offers a comprehensive way to envision a future that is not only possible but also aligns with their values and aspirations. This can help investors push the boundaries of imagination, promoting consideration of a myriad of potential futures, including futures that may even seem radical. Yet, this may create contradictions as well. For instance, an explorative approach might identify an emerging market trend that promises significant economic benefits, but a normative lens might reveal that pursuing such a trend could lead to environmental degradation or social inequalities. A possibility that seems exciting and innovative through an explorative lens might clash with the ethical or societal values emphasised by normative futuring; for example, using technology could clash with employment goals:

> Our main objective is getting more economic growth through employment in Africa… we had this one investment providing microloans in Africa for farms. One case was that the efficiency of one farm improved significantly since a loan was provided for new technology and equipment. That one farmer's business became a whole lot more lucrative. But actually, what ended up happening was that he could lay off a couple of his employees since he didn't need them anymore. So, in business measurements, the case was a success, but in our impact team's numbers, it was a complete failure. (Finland development FI 2)

We also observed some investors engaging with all types of futuring by using predictive, explorative and normative futuring elements in their decision-making to get a holistic view of the future. This provides investors with a comprehensive and multi-faceted perspective on the future. This ensures that they are informed by the current trends and data (predictive), and also are open to a wide variety of potential scenarios and innovations (explorative), without forgetting their own view of what would be a desirable future, or which goals should be sought after (normative). Navigating these intersections requires balancing, in which investors need to consider their strategies, have reflections and dialogues and remain adaptable to the dynamic nature of futures. By integrating all three futuring perspectives, investors can position themselves to make decisions that are informed, innovative and responsible.

3.5 Discussion & conclusion

This paper explored how impact investors construct the future through the use of future-oriented impact assessment methods. Our findings capture how impact investors shape the future through their impact assessment methods by engaging with three overarching futuring techniques: predictive, explorative, and normative. Predictive approaches forecast the impact of decisions, explorative approaches seek to understand multiple potential impacts, and normative approaches seek to examine desired futures based on values. Investors often use a combination of these futuring techniques to grapple with potential futures. Our research thereby highlights the complexity of future-making and emphasises the need for a nuanced understanding of the plurality of ways through which investorsnavigate and shape the future.

Our findings demonstrate that future-oriented impact asessment extends beyond the formal futuring techniques. We show that informal everyday practices and imaginations of the future play a significant role in guiding investors' decision-making processes. This interplay between formal and informal futuring practices reveals the multifaceted nature of future-making. Informal futuring techniques encompass the imaginations of probable and improbable outcomes (i.e., predictive futuring), possible and impossible scenarios (i.e., explorative futuring), and desirable and undesirable futures (i.e., normative futuring). Our findings indicate that these informal future imaginings influence the formal methods investors employ to understand and shape the future. At the same time, formal futuring techniques also impact how actors imagine different potential futures in their everyday informal practices. These findings echo the call from Wenzel (2022) to move beyond forecasting capabilities (i.e., formal futuring techniques) and recognise that future-making occurs in everyday practices as well. Our research contributes to a broader understanding of how organisational actors combine a range of formal and informal futuring practices in their everyday activities.

Combining predictive and explorative futuring allows investorsto explore both what can and what will likely happen. This finding resonates with the work of Whyte et al. (2022), who explored how some actors have recognised the uncertainty and plurality of possible futures, while still using foresight when their assumptions do not hold. For example, organsational actors may engage in wayfinding, which refers to the idea that actors can first try to predict the future, but alter their actions when new possibilities for the future

emerge (Chia & Holt, 2006). Or alternatively, through future perfect thinking, which accepts that there is no objective knowledge of the future, but through imagining the future as a past event, it is possible to reduce uncertainties (Kornberger, 2013). By blending these two methods, actors can gain a more comprehensive understanding of the potential implications of their decisions and develop more robust strategies for navigating an uncertain landscape.

Combining predictive and normative futuring techniques enables investorsto explore what will and what should happen. Wright (2010) devised the concept of "real utopias," which refers to utopian visions that are both feasible and grounded in practicality, situated between dreams and practice. The concept of real utopias has been used in studying the role of utopian thinking in dealing with grand challenges and understanding alternative solutions, such as the idea of basic income as an alternative to existing institutions of income distribution (Van Parijs, 2013), or the application of direct democracy in legislative decision-making (Gastil & Richards, 2013). By combining predictive and normative futuring, actors can develop a more balanced understanding of the future, identifying opportunities that align with their values and hopes for the future that are also likely to materialise.

Combining explorative and normative futuring techniques facilitates the exploration of what can and what should happen. For instance, previous literature on grand challenges has investigated how organisational actors address complex, large-scale problems by evaluating potential solutions against criteria such as feasibility, effectiveness, and alignment with societal values (Gümüsay et al., 2022). By integrating explorative and normative futuring, actors can create more informed strategies that balance the pursuit of desirable outcomes with the practical constraints of what is achievable.

Finally, the blended use of predictive, explorative and normative futuring techniques in future-making can happen when investors seek to align their ideas on probable, possible and desirable futures. Through blending all three techniques, investors seek to incorporate a diverse range of insights and perspectives as they navigate an uncertain and complex environment. By combining all of these futuring techniques, actors can better understand the implications of their actions, explore a broader array of possibilities, and assess the desirability of different futures based on their values and goals. This integrated approach

to futuring enables more informed decisions and the possibility to develop strategies that are adaptable to changing circumstances. Our findings suggest that the interplay between predictive, explorative, and normative futuring techniques is essential in helping to develop a more nuanced understanding of the future.

This insight aligns with prior research that has explored the notion of blending of practice worlds. The concept of blending builds on the idea that elements of practice intertwine to form practice worlds, which can further link to create bundles or more integrated complexes of practice (Shove et al., 2012). These complexes can constitute new practices, as entrepreneurial actors combine and integrate previously separated practices (Ormiston, 2019). Impact investors appear to be blending the practice worlds of predictive, explorative and normative futuring to form new complexes or bundles of futuring practice.

3.5.1 Contributions to literature on temporality and organisational studies

This research makes three main contributions to the literature on impact assessment and future-making. First, we illustrate a diverse range of futuring techniques (i.e., predictive, explorative and normative) that investors use when evaluating, directing resources to and shaping the future. This complexity aligns with Blagoev et al.'s (2023) observations on the management of time as a resource, structure, and process, which they argue is essential for navigating organisational challenges effectively. Our findings extend this understanding by showing that temporality and ethics are deeply intertwined, as Kuepers et al. (2023) suggest, where time itself is not just a neutral backdrop but a dynamic process that influences ethical decisions. This aligns with the notion that time and ethical decisions are mutually constitutive, and ethical considerations cannot be detached from temporal ones (Kuepers et al., 2023).

We contribute to the call by Wenzel (2022) for a more pluralistic understanding of futuring, as well as Blagoev et al's (2023) call on incorporating more complex and interdisciplinary conceptions of time, highlighting the multifaceted nature of future-making practices. Our findings demonstrated that predictive futuring, which has traditionally been seen as the primary focus of futuring practices, as well as in investment decision-making (Duinker & Greig, 2007; Wenzel et al., 2020), is only one element of futuring. By examining the ways in which actors employ explorative and normative

methods, we show the importance of considering alternative approaches to futuring that emphasise the exploration of potential possibilities and the evaluation of desirable future outcomes. These findings bring clarity to insights in prior research that suggested that investorsare not solely predicting the future, but also "making the future" through practices of visioning, projecting, executing and importantly when mobilising resources (Beckert, 2021; Clough et al., 2019; Thompson & Byrne, 2022; Wenzel, 2022; Wenzel et al., 2020). Our typology of impact assessment futuring techniques enriches the existing literature on temporality and future-making, and has practical implications for investors seeking to navigate an increasingly uncertain and complex future landscape. By embracing a more pluralistic approach to futuring, actors can better anticipate, respond to, and shape potential futures in line with their values, mission, and purpose.

Second, our findings highlighted the importance of normative futuring and ideas of preferable futures in future-making practices, particularly the techniques investors engage in when assessing the desirability of the future impact and incorporating this in investment decision-making. While previous research has acknowledged the desirability of futures (Alimadadi et al., 2022; Gümüsay & Reinecke, 2022), it has not explicitly explored the ways or methods in which investors or other actors assess the desirability of futures and incorporate this in their decision-making processes. Our study emphasises how normative futuring techniques play a pivotal role in directing future-making (Casanovas & Jones, 2022; Andersen & Tekula, 2022). Investors are not just concerned with assessing what will or could happen but also with evaluating what *should* happen, making the impact assessment process shaped by ethical decision-making, where personal values, societal norms, and broader stakeholder considerations inform future projections (Meng et al., 2022).

Exploring normative futures has been an integral part of Futures Studies research, seeking answers on how to shape a (better) future (Adam, 2011; Bell, 1971). Futures studies scholars have noted how normative futuring involves evaluating the ethical implications of various future scenarios, assessing their alignment with an organisation's values, mission, and purpose, and ultimately selecting the most desirable option (Giurco et al., 2011; Liimatainen et al., 2018). This approach to futuring encourages a more proactive stance in shaping the future, as it emphasises the need for strategic and values-driven decision-making in pursuit of preferred outcomes. By underscoring the significance of

normative futuring, our study expands the scope of research on future-making practices. It also offers practical insights for actors seeking to navigate complex and uncertain future landscapes. Recognising the importance of normative futuring encourages actors to examine their decision-making processes, ensuring that they are guided by a clear sense of purpose and a commitment to ethical and responsible action.

Finally, our findings underscored the significance of informal futuring techniques as a previously overlooked aspect in impact assessment literature. By acknowledging and exploring the interplay between formal and informal futuring practices, our study contributes to the literature on future-making and offers a more comprehensive understanding of how impact investors evaluate futures while making investment decisions. Scholars have called for a greater focus on the everyday practices of future-making (Thompson & Byrne, 2022; Wenzel, 2022; Wenzel et al., 2020; Whyte et al., 2022). Our insights on the role of informal futuring practices, in conjunction with formal methods, are essential for developing a more holistic understanding of the everyday practices of future-making (Wenzel, 2022) The synergies between formal and informal futuring emerge when structured methodologies and investors' intuitions, values, and visions of the future work together to inform investment decisions. Formal impact assessment methods provide a rigorous foundation upon which investors can build and refine their informal futuring practices. In this context, the formal and informal aspects of futuring complement each other, leading to more informed and strategic investment choices. Conversely, tensions arise when investors' informal futuring practices conflict with the insights provided by formal impact assessment methods. This can occur when investors prioritise their personal values, experiences, and beliefs about the future over the data-driven recommendations generated by formal methods. This insights aligns with insights from Molecke and Pinkse (2017) who explored how social enterprises handle the pressure to measure impact by combining and delegitimising formal methodologies, while legitimising their more informal approaches. These tensions highlight the importance of understanding the dynamic nature of the impact assessment process in impact investing and the need for a more nuanced understanding of how investors navigate these complexities.

3.5.2 Limitations

This study has several limitations that bound the claims. First, the evidence comes from 40 interviews with European impact investors, so practices and vocabularies may reflect the regional or network norms. Second, even though during the interviews, we gave the interviewees the space to talk aloud their processes, and triangulated with public documents, we note how to truly grasp their processes around futuring techniques, ethnographic methods may be more appropriate. Future research could, for example, observe investment committees, analyse internal artefacts (e.g., KPI dashboards), or follow specific deals longitudinally. Third, our perspective in this impact investing field-level study, we did not include beneficiaries, communities or investees in the sample. This we also recommend for future research endeavours.

CHAPTER 4 – FROM TEMPORAL TRANSLATION TO TEMPORAL OSCILLATION: BACKCASTING AND FORESIGHT AS BRIDGES BETWEEN NEAR AND DISTANT FUTURES

This chapter expands the exploration of future-oriented processes by delving into the concept of temporal oscillation. Building on the insights from the previous chapter's examination of futuring techniques in impact measurement, this study investigates how actors navigate and connect near and distant futures. By focusing on the mechanisms of backcasting and foresight, the chapter sheds light on how impact investors address temporal disconnects, situations where immediate actions and long-term goals seem misaligned or contradictory.

Temporal disconnects are a persistent challenge in contexts where societal or environmental impacts unfold over extended timeframes, yet decision-making often demands attention to short-term priorities. This study explores how backcasting (i.e., working backward from a desired future state) and foresight (i.e. projecting forward from present conditions) can bridge together different temporalities. These practices enable actors to reconcile competing temporalities, fostering alignment between their immediate actions and long-term visions.

This chapter also draws on the dataset of interviews with European impact investors, offering perspective on how these actors engage in temporal oscillation. Through their practices, investors connect the immediate needs of near future with aspirations of distant future.

By demonstrating how backcasting and foresight function as tools of temporal oscillation, this chapter contributes to broader discussions on organisational temporality, future-oriented decision-making, and the practical challenges of aligning near-term actions with long-term sustainability objectives.

From temporal translation to temporal oscillation:
Backcasting and foresight as bridges between near and distant futures

Abstract

In an era where society faces pressures to respond to unfolding crises while ensuring prosperity for future generations, understanding the interplay between the near and distant future becomes critical. Existing research has tended to isolate the examination of the near and distant future, often privileging the near future without appreciating the diversity of potential distant futures. This study examines the mechanisms through which social actors engage with these near and distant futures. Through a field-level study with 40 European impact investors, we reveal how some actors become 'stuck' within near or distant futures, while other actors create and find spaces to simultaneously translate between near and distant futures – what we call temporal oscillation. We unpack how actors escape 'stuckness' through temporal reflexivity, as they utilise foresight and backcasting to oscillate between the near and distant future. Our study contributes to the literature on temporality by highlighting the antecedents and implications of different temporal disconnects and revealing how temporal oscillation can create synergies between near and distant futures.

Keywords: Temporal oscillation; backcasting; foresight; near and distant future; temporal reflexivity; temporal translation

4.1 Introduction

Individuals and organisations are increasingly called upon to pursue objectives that address current concerns but also resonate with societal goals decades into the future, particularly in the context of grand challenges such as climate change and widening social inequality (Bansal & DesJardine, 2014; Ferraro et al., 2015; George et al., 2019; Slawinski & Bansal, 2015; Wright & Nyberg, 2017). For example, urban planners need to address immediate housing needs to cope with population growth in expanding metropolitan centres, while also ensuring cities are resilient against future climate challenges (Jabareen, 2013). Engaging with both near and distant futures creates layers of complexity and uncertainty, demanding actors within organisations to envision futures that include yet-to-exist actors and technologies (Rindova & Martins, 2021). However, existing research on temporality has tended to isolate examinations of the near and distant future, or treat the future in an undifferentiated way, with a bias toward the more comprehensible near futures, neglecting more complex, dynamic, and open-ended distant futures (Augustine et al., 2019; Wenzel et al., 2020).

This study seeks to overcome this gap by examining the mechanisms through which social actors translate between near and distant futures. The concept of temporal translation attempts to reconcile these disparate time horizons by exploring how actors fold multiple temporalities together, such as the past, present, and future (Dille et al., 2022). In the context of near and distant futures, temporal translation involves actors translating distant events into their present activities while projecting present understandings onto distant events (Hernes & Schultz, 2020). Translating between near and distant futures requires more than simply navigating short-term and long-term goals (e.g. March 1991; Lewis & Smith, 2014). It requires individuals to go beyond their current temporal structures (i.e. understandings based on present experience which includes the near past, present and near future), to engage with images of possible and potential distant futures (Deleuze, 2006; Hernes & Schultz, 2020). Despite recognising the need for a temporal translation to navigate the complexities of an uncertain future (Dille et al., 2022; Flyverbom & Garsten, 2021; Slawinski et al., 2017; van Marrwijk et al., 2016), the literature still lacks a thorough understanding of how social actors are able to fold temporalities together and transcend their current temporal structures.

To enhance our understanding of how social actors translate between the near and distant future, we conduct a field-level study in the domain of impact investing. Impact investing refers to practices of mobilising capital to proactively, deliberately, and measurably generate positive environmental or social impact, alongside financial returns (Daggers & Nicholls, 2016). Impact investing is inherently future-oriented, as investors seek to reconcile near-term financial risks and returns alongside visions for a more equitable and sustainable world. The field of impact investing epitomises the challenge of translating between multiple futures, as investors use various financial and impact assessment tools, frameworks and practices as instruments to understand social and economic outcomes in the near future while also creating imaginaries of potential distant futures. Investigating the field of impact investing provides an opportunity to explore how social actors not only imagine but actively work towards collective visions for desirable futures (Beckert, 2021; Gümüsay & Reinecke, 2022; Logue & Grimes, 2022).

We conducted semi-structured interviews with 40 impact investors in Europe, to understand how they engage with near and distant futures as they make impact investment decisions and assess the potential impact of their investments. The interviews focused on understanding their visions and the visions of the funds they work for, how they find investment possibilities and evaluate them, how they measure and monitor impact, how they collaborate with investee organisations, and how they see the future of the impact investing field. In our conversations with investors, we focused on both formal and informal approaches to investment decision-making and impact assessment to capture the diverse ways in which impact investors translate between near and distant futures.

The findings reveal how impact investors are able to transcend current temporal structures and translate between different futures while other actors become ‘stuck’ in particular temporalities. We show how some actors appear ‘stuck’ in the near future, which can lead to ‘temporal myopia’ (Marginson and McAulay 2008) where they become fixated on short-term results while neglecting future horizons. We show how other actors appear ‘stuck’ distant future, which results in a form of ‘visionary stasis’ where distant futures are imagined but remain disconnected from current actions. We then illustrate how certainactors are able to simultaneously focus on both near and distant future, and oscillate between them. We show how temporal reflexivity allows these individuals to escape the disconnects by engaging in backcasting and foresight to facilitate simultaneous

temporal translation. We show how actors who engage in temporal oscillation, achieve a state of synergy between the temporalities, that enables systemic change and deepens engagement with complex future scenarios.

Our study makes four core contributions to the literature on temporality and management studies. First, by highlighting the antecedents and implications of different typesof temporal translation (Dille et al., 2022; Hernes & Schultz, 2020), our study contributes to a more nuanced understanding of the mechanisms that enable and prevent social actors from translating between near and distant futures. Second, by revealing how social actors move beyond 'temporal myopia' and 'visionary stasis', we showcase the critical role of temporal reflexivity (Orlikowski & Yates, 2002) in simultaneously translating between the near or distant future, in other words, temporal oscillating. Third, we demonstrate how foresight (Sardar, 2010) and backcasting (Vergragt & Quist, 2011) serve as pivotal tools for simultaneously translating between near and distant futures, fostering what we term temporal oscillation. Finally, we highlight the transformative potential of bridging near and distant futures, unpacking the instrumental role of temporal oscillation in driving systems change and tackling societal challenges.

4.2 Near and distant futures imaginaries

Management scholars are increasingly focusing on how imaginaries of the future shape, and are shaped by, the present (Blagoev et al., 2023; Whyte et al., 2022; Comi & Whyte, 2018; Wenzel et al., 2020). Through studies of future-making (Thompson & Byrne, 2021), strategic accounts of the future (Kaplan & Orlikowski, 2013), future narratives (Garud et al., 2014), and fabulations (Hjort, 2013), management scholars have come to understand imagined futures as performative, appreciating the interplay between images of the futures and situated activity (Beckert, 2013; Hermes & Feuls, 2024; Oomen et al., 2021). These future imaginaries are not mere fantasies but act as guideposts based on understandings of the past, present and future (Beckert & Bronk, 2018). Future imaginaries allow actors to make sense of the possible, probable and preferred futures (Wenzel et al., 2020; Whyte et al., 2022) and translate those imaginaries into the present (Beckert, 2013, 2021). Imagined futures are thereby generative, as they shape expectations and provide prospective structure and legitimation (Borup et al., 2006; Van Lente & Rip, 1998). Understanding how these imagined futures shape, and are shaped

by, the present requires an appreciation of the mechanisms that allow actors to translate between temporalities.

The concept of temporal translation refers to the process by which actors combine different temporalities in the present, for example, connecting the distant past or distant future with the present to guide action (Dille et al., 2022; Vaagaasar et al., 2020). The concept of temporal translation builds on the work of Emirbayer & Mische (1998) who view social actors as embedded within "multiple temporalities at once, they can be said to be oriented toward the past, the future, and the present at any given moment" (p. 964). Through temporal translation, actors bring distant events into their current temporal structures, or their current temporal structures to the imaginaries of the distant events, which are temporalities that are perceivable based on an understanding of the near past, present and near future (Feuls et al., 2024; Hernes & Schultz, 2020). Blagoev et al. (2018) emphasise the dual role of distant events in temporal translation, unpacking how distant events are not simply constraining or enabling, but also provide guideposts for activity in the present. Thus, temporal translation is important when organisations are putting distant future goals into action (Feuls et al., 2024). For example, Wright & Nyberg (2017) show how social actors might connect with a distant future event such as climate change, even though it is not 'felt' in the present, by letting the distant climate potentialities guide actions in the now, while at the same time, they consider how the distant future may shift through these actions (Hernes & Schultz, 2020). While emerging research on temporal translation has begun to theorise how distant future events are translated into the present, we need a more nuanced understanding of the interplay between near and distant futures, and how actors are able to do this.

Both near and distant future imaginaries have a significant role in shaping how actors construct and enact the future, yet we have limited insights into the interplay between near and distant future, and how actors are able to move between and combine different temporalities of the future. Social actors construct future imaginaries of both near and distant futures based on trends, facts and assumptions that create fictional expectations about how the future will unfold (Beckert, 2013, 2021; Dator, 2019). Nearness or distance in this context refers to how distant the future state is from the present lived experience (Augustine et al. 2019), that is, the extent to which the future can be derived from the present action. Focusing on near futures involves considering futures that are within the

scope of actors' current temporal structures (Hernes & Schultz, 2020), whereas distant futures are more detached from present-day conventions (Augustine et al., 2019; Lord et al., 2015). Distant futures are thereby not limited to probabilities, and can also focus on possibilities (Clarke, 2008), or potentialities (Deleuze, 2006) or even impossibilities (Ramoglou & McMullen, 2022) for the future. Comprehension of the distant future thereby goes beyond those futures that are probable or knowable towards an understanding of those that cannot be derived or forecasted from the present.

Although some scholars have begun to study empirically how actors translate or connect the present and the distant future (e.g., Augustine et al., 2019; Bluedorn & Martin, 2006; Hernes & Schultz, 2020), there still is a limited understanding of how actors translate between near and distant futures, especially on how actors are profoundly able to keep sustained focus on the distant event, while also not losing sight on their more imminent concerns. As noted by Hernes and Schultz (2020), temporal translation requires social actors to engage in reflective and reflexive processes. Temporal reflexivity refers to actors being aware of their potential to reinforce and alter temporal structures (Orlikowski & Yates, 2002), and their ability to question and reconsider temporal assumptions (Reinecke & Ansari, 2014). Temporal reflexivity is thereby critical to translating between near and distant futures, yet we have little empirical insights into how actors address distant events while not losing sight of their imminent concerns (Hernes & Schultz, 2020).

To extend the understanding of temporal translation, this study explores how impact investors engage with near and distant futures, and the reflexive processes through which impact investors attempt to combine these different temporalities. We explore how distant futures can shape action in the present and near future, as actors begin to see themselves in that future state and thus orient actions towards (or away from) that future (Alimadadi et al., 2022; Augustine et al., 2019; Beckert, 2013). The challenge of interrelating the present and the distant future is particularly relevant to grand challenges, which require social actors to act now while committing to distant future goals (Feuls et al., 2024; Slawinski et al., 2017). By considering the near and distant future simultaneously, and not just chronologically sequencing them, we can evaluate how well actors can keep a sustained focus on both near and distant events such as climate change, loss of biodiversity, net-zero gender equality, pandemics, or technological achievements such as geo-engineering or quantum computing (Feuls et al., 2024; Hernes & Schultz, 2020;

Slawinski & Bansal, 2015). We now delve into questioning how impact investors transcend their temporal structures and translate between temporalities.

4.3 Methods

4.3.1 The research context

We focused on the individual actors within the field of impact investing to explore the interplay between the near and distant future. Impact investing refers to practices of mobilising capital to proactively, deliberately, and measurably generate positive environmental or social impact alongside financial returns (Daggers & Nicholls, 2016). Impact investing provides a fascinating context to consider the performative effects of imagined futures, as we can evaluate how investors put their future imaginaries into action by making investment decisions based on their assessments of financial returns and social impact. Conventional investing is an inherently future-oriented practice that requires individuals to anticipate and respond to different potential futures as they allocate resources towards opportunities with the expectations of future returns. Beyond traditional investing, impact investing includes the added complexity of considering and imagining potential social or environmental impacts in a future-oriented way (Arjaliès et al., 2022). The field of impact investing thereby represents a site where actors deliberately engage with future-making (Gümüsay & Reinecke, 2022) as they seek to realise collective visions for desirable futures (Logue & Grimes, 2022). Appendix 1 lays out the full interview protocol.

4.3.2 Participant selection

To gain insights on field-level approaches to translating between near and distant futures we focused on impact investors working for impact investing funds across Europe. As a starting point in approaching possible interviewees, we utilised the member list of the Impact Europe, a membership association for European-based impact investors. To ensure a heterogenous group of actors across the field we purposefully reached out to interviewees from different types of impact investment funds, different geographies, and different roles. We selected impact investors working for a range of different types of impact investing funds including development finance institutions, NGOs, family funds, banks, non-profit funds and for-profit funds (e.g., private equity, venture capital, government funds). We split Europe into four segments based on the United Nations Geoscheme list and attempted to find an equal mix of participants from Western,

Northern, Eastern and Southern European countries. To ensure a diverse geographic spread, we also contacted non-member impact investors recommended by the interviewees as Eastern and Southern Europe were underrepresented in the Impact Europe's list. We also reached out to individuals working in different roles within impact investing funds, including managers, investment specialists, and impact assessment specialists. Table 14 provides an overview of the 40 impact investors included in the study, their fund type, country, and interviewee's position within the fund.

Table 14 Overview of the interviewees

Group	Country	Interviewee's position	Tag
Asset manager for-profit			
	Denmark	Investment	Denmark FP asset manager
	Estonia	Investment	Estonia FP asset manager
	France	Investment	France FP asset manager 1
	France	Management	France FP asset manager 2
	Germany	Assessment	Germany FP asset manager
	The Netherlands	Management	Netherlands FP asset manager 1
	The Netherlands	Management	Netherlands FP asset manager 2
	North Macedonia	Assessment	North Macedonia FP asset manager
	Poland	Investment	Poland FP asset manager
	Portugal	Assessment	Portugal FP asset manager
	Spain	Management	Spain FP asset manager
	Switzerland	Assessment	Switzerland FP asset manager
	UK	Assessment	UK FP asset manager
Asset manager not-for-profit			
	Luxembourg	Assessment	Luxembourg NFP asset manager
	Germany	Management	Germany NFP asset manager 1
	Germany	Management	Germany NFP asset manager 2
	Portugal	Assessment	Portugal NFP asset manager
	Romania	Assessment	Romania NFP asset manager
	The Netherlands	Assessment	Netherlands NFP asset manager
	UK	Assessment	UK NFP asset manager
Development finance institution			
	Finland	Assessment	Finland development FI 1
	Finland	Management	Finland development FI 2
	The Netherlands	Management	Netherlands development FI 1
	The Netherlands	Management	Netherlands development FI 2
Foundation			
	Austria	Management	Austria foundation
	Belgium	Management	Belgium foundation
	Finland	Investment	Finland foundation
	France	Management	France foundation
	Germany	Investment	Germany foundation
	Portugal	Investment	Portugal foundation
	Spain	Management	Spain foundation
	Switzerland	Assessment	Switzerland foundation 1
	Switzerland	Management	Switzerland foundation 2
Diversified financial institution			

	Belgium	Assessment	Belgium diversified FI
	Finland	Investment	Finland diversified FI
	Spain	Assessment	Spain diversified FI
Family office			
	Norway	Investment	Norway family office
	Switzerland	Assessment	Switzerland family office
Other			
	Belgium	Investment	Belgium other
	The Netherlands	Assessment	Netherlands other

4.3.3 Data collection

We conducted 40 in-depth, semi-structured interviews with different types of impact investors across Europe. The interviews focused on how impact investors make investment decisions, how they consider impact, and how they perceive the impact investing field. Participants were explicitly asked for their permission to record the interview, and all information was anonymised in the transcripts. The interviews lasted between 48 and 98 minutes and were recorded and transcribed to assist in the analysis.

In order to uncover how impact investors imagine and translate between near and distant futures we adopted an 'apprentice' role during the interviews (Langley & Meziani, 2022). Through an apprentice role, we encouraged the interviewees to reflect upon and make explicit their practical knowledge through 'think-aloud' and 'critical incident' techniques (Langley & Meziani, 2022). We utilised think-aloud interviewing (Erikson & Simon, 1998) to try and capture the mechanisms at play when impact investors are making decisions involving understanding of the future. We asked questions to allow participants to talk us through their thinking and actions throughout their investment process, from designing the fund, screening and origination of deals, deal evaluation, due diligence and structuring, to post-investment phases of evaluation and collaboration. We used the critical incident technique (Flanagan, 1954) to focus on specific examples of investment decision-making to elicit examples of moments where impact investors engage with near and distant futures.

To complement the interviews, additional documents were gathered from the fund's websites before the interview to provide more knowledge about the context for the interviewer, and then analysed after the interview to fill any gaps in understanding. These documents included reports or website materials relating to their investing practices.

4.3.4 Data analysis

We analysed the interview transcripts using the Atlas.ti qualitative data analysis software. Thematic analysis was conducted to identify emerging themes in the interviews and supporting documents (Gioia et al, 2013; Nowell et al., 2017). We began by conducting open coding of the most prominent themes related to futures. This initial round of coding focused interviewees' reflections on how they imagine the future, how their images of the future shape their investment decisions, how they see the future for their fund, and how they see the future of the field of impact investing. This phase of analysis suggested that some impact investors have a strong focus on the near future and do not go beyond notions of the future that are removed from the present. Other investors appeared to be caught up in images of a distant future that seemed somewhat disconnected with their current activities. We also saw certain investors who seemed to engage with imaginaries of both near and distant futures.

One challenge in coding for near and distant futures is that there is not a set timeframe to distinguish between the near and distant. As discussed above, near futures refer to those futures that can be derived from current temporal structures, whereas distant futures are somewhat removed from understanding of the present. When coding for near and distant futures we differentiated between situations where the future imaginaries were clear (i.e., near future) versus those where it was somewhat fuzzy (i.e., distant future). This approach meant that similar timelines or goals, could be defined as discussing either near or distant future. For example, impact investors that spoke about becoming net-zero by 2050, could be in the near future, as the steps their organisation would take to become net-zero were clearly defined. Whereas for other impact investors the same goal could be viewed as being in the distant future, as the goal is rather stated pledge, rather than something involved concrete actions.

In the next phase of our analysis, we zoomed in on different phases of the investment process to explore when investors are imagining the near or distant future. Based on the reflections offered by the participants in responses to think-aloud and critical incident questions, we analysed how impact investors engage with probable, possible and potential futures throughout the impact investment process. We isolated reflections on fund design, deal origination, due diligence and impact evaluation as core moments where impact investors discussed invoking near and distant futures. This analysis revealed specific

examples of moments in the investment process where impact investor appeared to be emphasise certain temporalities over others, as well as examples of how investors were simultaneously translating between near and distant futures.

In the third phase, we aimed to analyse how certain investors seemed caught in temporal disconnects (i.e., focusing in the near or stuck in the distant future) while others were able to simultaneously translate between these temporalities. We identified the specific examples in which actors were able to consider the near and distant future and simultaneously translate between them. We also identified the specific examples where actors appeared to be stuck in either the near or distant futures. For each of these examples, we analysed the antecedents of being stuck or engaging in temporal translation. Based on these insights, we viewed temporal reflexivity as a core antecedent in moving from temporal disconnects to temporal oscillation.

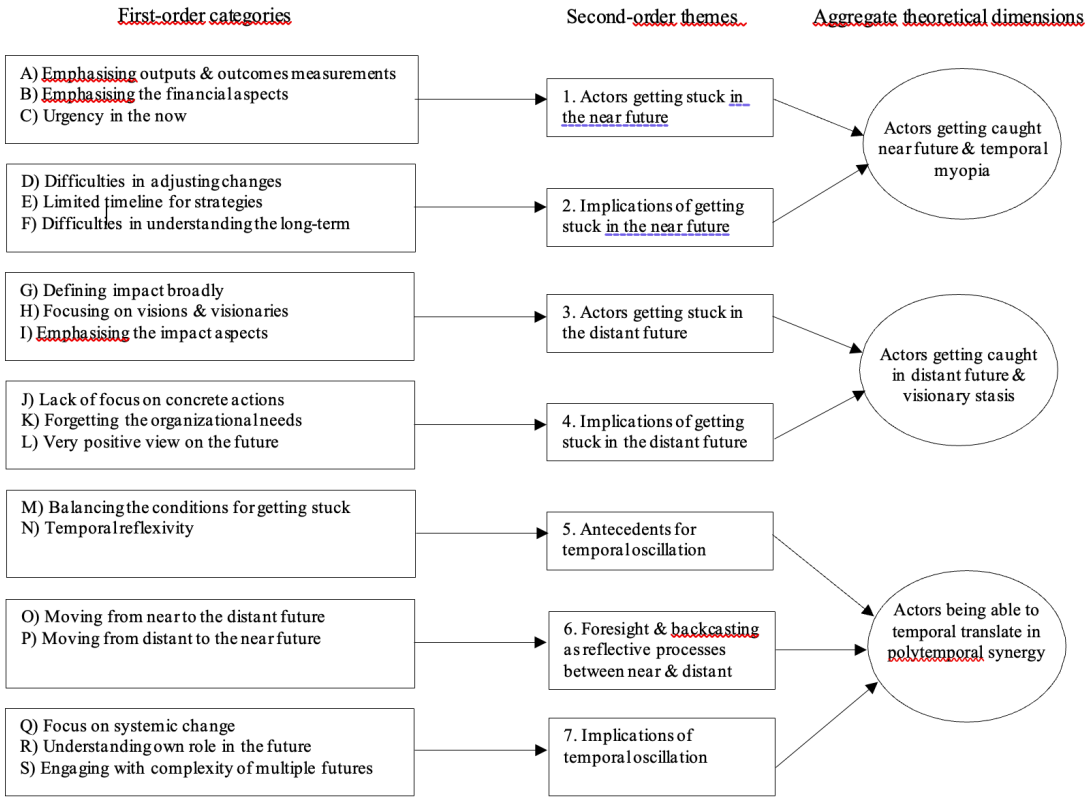
In the fourth phase of analysis, we aimed to unpack what it was, that actors who were engaging in temporal oscillation, were doing differently to those who were stuck in the near or distant future. Our analysis suggested that these actors were engaging in foresight and backcasting as approaches to simultaneously translate between near and distant futures. Backcasting stood out as novel process for discussing the distant future for those engaging in temporal translation, as these act were able to paint an imaginaries of a distant futures, then talk us backwards towards the present and discuss potential turning points. We observed multiple moments throughout the impact investment process where these actors were employing these approaches to engage in temporal oscillation.

In the final phases of analysis, we aimed to analyse the implications for those actors stuck in the near or distant future and those actors who were engaging in temporal oscillation. Impact investors caught in the near future appeared to have difficulties in adjusting to changes and relatively limited investment horizons. We viewed this as a form of temporal myopia, whereby these actors are not able to engage with more distant futures as their sight was focused on the near future. Impact investors caught in the distant future seemed to be overly optimistic about the future without being able to articulate the steps necessary to reach that future. We labelled this form of temporal disconnect ‘visionary stasis’, capturing how these investors are caught in their visions while forgetting the imminent concerns. Actors who were engaging in temporal oscillation seemed to reflect a better

ability to focus on systemic change, understand their own role in the future, and engage with the complexities of projecting towards multiple futures. We labelled this 'polytemporal synergy' to reflect how these impact investors integrate different time horizons and perspectives, creating synergies between their immediate needs and distant visions.

Figure 5 provides an overview of themes that emerged from the data analysis, highlighting the antecedents of temporal disconnects and temporal translation and the implications. Appendix 4 provides exemplary quotes for the first-order categories in the data structure.

Figure 5 Data structure



4.4. Findings

Our findings reveal while some impact investors are able to simultaneously translate, or temporal oscillate between the near and distant futures, other investors appear to be experiencing a temporal disconnects whereby they become stuck within a particular temporal structure. Our analysis begins by unpacking these degrees of temporal translation, showing how impact investors become stuck in the near or distant future.

We show how impact investors who become stuck in the near future tend to experience 'temporal myopia', whereby they become fixated on short terms results. We explain how impact investors who become stuck in the distant future experience what we term 'visionary stasis', where visions for the future remain disconnected from current action. Our analysis then highlights how certain actors overcome this 'stuckness' through temporal reflexivity and engaging in foresight and backcasting as processes to support simultaneous temporal translation. We use the term temporal oscillation to describe this phenomenon, as actors are constantly moving between the temporalities, and keeping sustained focus on distant future events, while also keeping sight on their imminent concerns. We illustrate the ways in which these actors use foresight and backcasting to translate between near and distant futures, and how these processes contribute to a state of 'polytemporal synergy' which enables a deeper engagement with the complexity of systems change.

4.4.1 Temporal Disconnect #1: Getting stuck in the near future

We observe that temporal disconnects emerge when impact investors become overly concerned with the near future. In these situations, impact investors appear solely, or excessively, focused on the present and near future. While they might consider the distant future, there is no active consideration how this distant future could be achieved, or how current actions affect the distant future. For example, they might reference a vision statement for what a distant future looks like – "*We enable villages to prosper through sustainable holistic knowledge… as we take these land mines out, we are almost certain of impact, it is no brainer"* (Belgium, Foundation) - but that vision remains disconnect from their current and near future actions. These impact investors are often preoccupied with the near past and the present, meaning that their projections of the future are restricted to the near future and what can be predicted with some accuracy. When getting stuck in the near future, impact investors tend to trust (somewhat blindly) their forecasting practices in their investment decision-making. They focus heavily on creating models of probable scenarios for potential financial and impact risk and return in the short term. These probable scenarios may extent to longer time periods, such as 10+ years, however, they are limited to known factors, and do not explore the complexities of potential distant futures.

4.4.1.1 Antecedents for getting stuck in the near future

We observed various antecedents for impact investors getting stuck in the near future. First, when impact investors define impact narrowly, they have the tendency to stay within their current temporal structures, and not reflect upon distant future impacts. Instead of considering the potential long-lasting impact of a prospective investment, these investors tend to base their decisions on their understanding of the immediate effects of activities. Multiple participants reflected on simple short-term output metrics as key indicators of future impact such as number of workshops conducted, food aid delivered, grants provided, or people employed, instead of lasting impacts such as improved quality of life, slowing of climate change, or systemic changes.

> For instance, working with these kids to graduate ninth grade. Well, obviously, do they graduate or not—that's a binary function. It's quite easy to measure. (Denmark FP asset manager)

> We calculate how many previously unemployed individuals, in the last three months, are now entering the employment market. We provide a digital workshop course on how to enter the employment market, and through that, we can show we are successful. (Finland Diversified FI)

The investors stuck in the near future tended to prioritise these easier to measure output indicators rather than developing more complex measurement to understand impact in the distant future, as illustrated in the following quote about tackling economic inequality:

> It is not necessary that we have to have those long-term projections… If it is about employment, for example, how many employees you have now? How many are women? How many other minorities? These are what we are going to be measuring throughout the investment. (Estonia, FP asset manager)

Impact investors getting stuck in the near future also appeared to overemphasise the financial aspects their investment relative to the impact aspects. Impact investors motivated by financial performance were more likely to be caught in current temporal structures as they rely heavily on past performance, with limited exploration of future possibilities. These investors tend to be preoccupied with the financial evaluation of the possible investee (i.e., evaluating their financial prospects rather than impact) or overly focused on financial returns (i.e., seeing impact investing merely as a strategy for higher financial returns). This bias towards financial indicators results in a focus on past data and evidence to project into the near future.

> In projects that work well, the timeline for when the impact happens to when financial effects are created has to be quite short, because you can already start seeing if there is an impact after a few months… Making an impact in this area should create so much financial savings that it can actually pay back the investor and the requirements of return, and fund the entire project basically. (Denmark, FP asset manager)

Another antecedent for impact investors to get stuck in the near future, is when investors' goals are limited to the near future, thus closing off imaginings of distant futures. For

instance, this could be driven by the need to address urgent impact goals in the present, which takes away space to think about longer-term aspects.

> For now, we only focus getting the COVID situation better in Nepal for these farmers. But challenge is that you want to do as good and be reliable as possible… But in five years, I would like to see us scale, there are big opportunities we could take, there are huge challenges. But now we are too small and too busy. (The Netherlands, Development FI 2)

Similarly, financial pressures regarding the viability of the fund and the need to generate an investment pipeline also prevent the consideration of more distant goals in more uncertain futures.

> The challenge right now is the shelter. I don't know people that have 2 million to throw out of the window, but actually, that is what we need. We have a minimum cost of 2 million so that right now we could provide even just decent conditions for the people living in the [refugee] shelters. That is the only focus right now for us… After maybe three years we can start tackling some other things. (Germany, NFP asset manager 2).

4.4.1.2 Implications of getting stuck in the near future – Temporal Myopia

Impact investors who are stuck in the near future appear to experience a state of 'temporal myopia', whereby they become fixated on the short-term and are unable to move beyond their current temporal structures in their situated activity. Our analysis suggests multiple implications that stem from this temporal myopia including challenges in adjusting to unanticipated events, limiting investment horizons, and disregarding how the cumulative effects of short-term actions shape the distant future.

Our analysis suggests these impact investors have a hard time adjusting to unexpected changes. When impact investors are focused on the more predictable near future, they may not prepare enough, or take into consideration, the risks or uncertainties of distant futures.

> Mission drift can happen and happens. We focus on massive things, like really big issues in the UK like curing the whole problem with unhoused people. But then all of sudden we are dealing with real estate developers and that is not our core. We would like to actually help people but constantly we run into these new players or issues we did not want to (UK, FP asset manager)

Similarly, while the COVID-19 pandemic was a surprising event for all the impact investors interviewed, those who were stuck in the near future appeared more likely to be thrown off guard by this unexpected event.

> But then our first year of operating, we only focused on training locals. And then we had COVID. They had a full lockdown in Nepal, although there were hardly any infections, so we couldn't even start the actual program. So now, we are at least a year behind schedule. And since we don't have tangible results, our funding partners are leaving us. We don't even want to discuss the next phases. It is ridiculous that we can't even almost continue at all now, because funds were cut, and we used everything in the training. (Netherlands, Development FI 2)

Experiencing temporal myopia seemed to limit how 'far' into the future investors are willing to imagine when exploring investment opportunities. Their reflections suggest that they often lose sight of possibilities for the distant future when focusing on probabilities of the near future – futures that are known to them and that are predictable based on current trends and events. For instance, investors may see lasting impact as difficult to measure and feel as though it is easier to stay within their current temporal structures and only measure aspects in the present or near future.

> And I think it's very difficult to measure impact. [Whereas] to document and report the number of people who attended school, or you can report the number of eye surgeries conducted. That's very quantifiable, and I can always report on that… I can't focus on the life quality improved, I can't focus on communities lifted out of poverty. (Switzerland, Foundation 1)

Investors who are stuck in the near future, also appear to underappreciate or ignore how their short-term actions might shape a more distant future. They appear less likely to engage in deliberate thinking and exploration of the distant future, and have limited reflections on how their actions today might create impact in the distant future. For example, many of these impact investors are working towards more sustainable societies as a goal, but the link between their actions today, and what these more sustainable societies might look like is missing.

> We have a lot of data because of the nature of the these bonds. I can tell you exactly what is the impact of our training, which people have the highest likelihood. But we cannot really attribute those impacts to our mechanisms. We can tell about the individuals. (Finland, Diversified FI)

The reflections from impact investors stuck in the near future suggests that they have a limited focus on distant future events in their investment-decision making practices, even though distant events (i.e., long-lasting impact and societal transformations) are often the rationale for their funds to engage in impact investing in the first place. Contributing to alternative distant futures, such as reversing, mitigating or adapting to climate change, preserving biodiversity, supporting marginalized groups, or poverty alleviation, are often the main purposes for impact investors to exist. For many investors, these visions for the future are left in the background, with the individual actors occupied with only near-future events and showing a limited understanding of how these near-future events will lead to the desired distant futures.

4.4.2 Temporal Disconnect #2: Getting stuck in the distant future

Another temporal disconnect that we observed was when impact investors appear stuck in the distant future. In these situations, investors seem to be preoccupied by their grandiose and optimistic visions for the distant future, without appreciating near term

realities and challenges. This limited attention to the present and near future can lead to challenges in comprehending the concrete steps and turning points needed to reach their desired imagined distant futures. We label this phenomenon ‘getting stuck in the distant future’.

4.4.2.1 Antecedents for getting stuck in the distant future

We observe various antecedents for impact investors getting stuck in the distant future. First, investors stuck in the distant future appear to be captured by, enamoured with, their imaginaries or visions for a desirable distant future. In these situations, impact investors make investment decisions based on the alignment of prospective investees with those visions, thereby basing decisions on their intuition or gut feeling. For example, many impact investors reflected on how they and their investees will be able to “make a change” by trusting in their visions. For these impact investors, trusting in these visions is what will lead to future results.

> Sometimes you can just trust your gut feeling, or instinct about what type of people these are. (Switzerland, Foundation 2)

> Make sure that you put people in the company, if you are sharing the good vision, then you know, they will embrace it, and it will become dominant. (France, FP asset manager 2)

Impact investors stuck in the distant future tend to define social and environmental impact in a broad sense, and often do not engage with impact assessment practices. These actors appear to assume that their actions in the near future will lead to their desired distant future, thereby taking long-lasting impact for granted. For instance, one impact investor active in providing safe drinking water, described how an action in the near future, such as preventing economic losses, will have a spill-over effect, and lead to even all challenges being solved.

> It’s no brainer, of course. The fact is you don’t need to look into it, pay attention to it. If you focus on being cost effective, it will spill-over to main challenges being solved… We just prevent them becoming poor. (Belgium, Diversified FI)

Despite the sound reasoning, these investors often have no concrete theories or plans of how they will ensure that this distant future imaginary will be actualised.

Investors who become stuck in the distant future also tend to have a strong focus on the impact side of the impact investing decision-making, sometimes ignoring financial constraints. These investors often place less emphasis on how investees are performing now, and just focus on what their impact goals are for the future. Some of these impact

investors appear to be captured by the words of 'visionaries', entrepreneurs, and CEOs, who have ambitious imaginaries of their desired distant future. These investors strongly believe in backing people they view as changemakers and trusting them to shape the distant future.

> Some people have this grit what I am looking for, that can be enough to make it or break it. (Netherlands, FP asset manager 1)

> Really it is a matter of relevance. We don't care what you've done, or model all the financials. Other investors can do that. The old world says: "what is not measured is worthless", but that is not true anymore. We rather just focus on the generosity or solidarity of the solution, not how much was the return. (France, FP assessment manager 2)

4.4.2.2 Implications of getting stuck in the distant future – Visionary Stasis

Despite the positive benefits of engaging with distant futures to generate social impact, we observed multiple negative implications for impact investors stuck in these distant futures. Impact investors who are stuck in the distant future appear caught in a state of 'visionary stasis', whereby their optimistic ideas for desirable futures are removed from near-term realities and challenges. Conversations with these investors suggested that they lack an understanding of the mechanisms required to translate their visions into present actions, leading a form of stasis that undermines their more dynamic visions. The implications of this stasis include: overlooking concrete steps needed in the present, ignoring organisational needs, limiting critical perspectives on their actions and the field.

We also observed that impact investors stuck in the distant future often struggle to articulate the steps or actions in the now that will contribute to their future visions. By getting stuck in the distant future, these investors sometimes lose sight of more imminent concerns and focus only on the possibilities for the future rather than the probabilities regarding how to get to the imagined distant future. Being captured by these visions results in the impact investors placing blind faith and trust in the investees and entrepreneurs to achieve those visions.

> Our selection process, it's basically to assess the excellence of the organisation of the individuals be behind the project, who's running and who's managing the projects. (Belgium, Diversified FI)

> We are very proud of what we are. We have added quality, we have added value. Our ethical framework is going to work. We know 100% sure. We just have to keep that in mind and celebrate. The entrepreneurs they can do the work. (Netherlands, FP asset manager 1)

We recognised that impact investors stuck in the distant future tend to ignore the needs of their fund or organisation in the present or near future which can lead to problems or even failures. When investors are emphasising their very distant futures, or addressing

very long-term societal needs, they may forget the organisational needs for running their fund. Impact investors who were focused on the impact goals solely, sometimes explained how they have had failures in the organisational side.

> To be honest, I don't know what to do with our company. Nobody else would see these cases as failure, since we checked all of our impact boxes, we were serving the community, changes happened. But we only considered everything so vague, and now we cannot hire more people. Are we actually more in trouble now… We have not provided impact and not financial results, and investments are cut. (France, FP asset manager 2)

> Our vision is to impact the whole European Union and the community, and dyslexia is one of these big problems around. So we made investment in Spain for it, and bought these books to promote awareness and spread around, so dyslexia would be noticed earlier to push this social plan for low income families… But then we notice that these books cost too much and we did not have available funds for distribution. (Spain, FP asset manager)

Finally, impact investors stuck in distant future often have overtly positive view about their actions, their funds and the future. When discussing their distant future visions for the impact space they use very optimistic and emotive language, and appear less likely to be critical of their fund, their organisation or the field.

> Our business just keeps going up, really just upwards… Our only goal is to do good, which is great in itself... It feels so good just to help out these kids. (Switzerland, Foundation 2)

> Well, if we now have evidence that you can achieve both in your investment, why on earth would investors continue to invest in companies that are only after one meaning the financial performance? … with impact investing, bringing the proof that entrepreneurship, the liberal market, the supply and demand dynamics, and all together the capitalist system can also foster emergence of such solutions. (Luxembourg NFP asset manager)

While imagining distant futures, the state of visionary stasis results in a situation where these actors fail to reflect back on their current temporal structures and ongoing actions. In some ways this can viewed as taking future impact for granted. This state of visionary stasis was much more common amongst impact investors working in nascent funds. These newer funds often do not have the capabilities to conduct more complex scenario modelling or impact assessments, and thereby need to rely on their ideas, feelings, and visions to make decisions. These impact investors often describe how focusing on the visions is easier than undertaking structured ex-ante assessments to consider future impact. Individuals working for these funds might also be overly optimistic as they have yet to run up against the challenges involved in trying to have impact through financial interventions.

> We like to focus on the positive sides instead of the challenges. If we think there are a lot of advantages to have a better world, we would invest. Impact measurement needs resources, you know, and it is different area completely of the business and sometimes very difficult… it is not definitely the main thing to measure, the plans are more important. (France, FP asset manager 2)

> Yes measures are very good if you manage to be discipline, but often you are just creating too much cost and sense of being active. What you really should be looking at is selling your ideas to your target groups and us

> investors. So you don't really need to measure the really highest best impact, it is about selling and when you can sell you have the best highest impact. (Germany, NFP asset manager 1)

4.4.3 Temporal oscillation

Our analysis suggests that some impact investors are engaging in simultaneous temporal translation, with constant movement between temporalities. In other words, simultaneous temporal translation leads to them keeping sustained focus on distant events and imminent concerns, what we call temporal oscillation. Our findings suggest that temporal reflexivity is a vital antecedent to temporal oscillation, as it allows actors to reconcile and integrate the antecedents that otherwise lead to actors becoming stuck in the near or distant futures. For example, through engaging in temporal reflexivity impact investors are able to harmonize impact and financial concerns, elements that, when viewed in isolation, contribute to temporal disconnects. Our analysis suggests that temporal reflexivity enables impact investors to engage with two distinct processes which allow them to simultaneously translate distant events into their current temporal structures: (i) foresight, which propels actors from the current moment and near future towards a multitude of potential futures, and (ii) backcasting, where actors think backwards from desired future imaginaries to explore the actions and turning points which would shape current action. We view foresight and backcasting as ways of reflecting that allow tempotal oscillation between near and distant futures.

4.4.3.1 Antecedents of temporal oscillation – Temporal reflexivity

Our findings suggest that impact investors create conditions for temporal oscillation by harmonizing the antecedents between getting stuck in the near and distant future. Impact investors who engage in temporal oscillation transcend their temporal structures by integrating the urgency of immediate goals with the vision of long-lasting impact. Temporal reflexivity plays a pivotal role in this process, as it allows investors to critically examine and adjust their temporal assumptions and strategies. By being temporally reflexive, impact investors can challenge and reshape their understanding of time, thereby preventing an overt focus on either the near or distant future. This duality of perspective ensures that while they address the urgent needs of the present, such as the sustainability of their funds, they do not lose sight of their overarching mission to generate long-lasting impact.

Impact investors exhibiting temporal reflexivity appear to balance immediate needs of their funds and their investees with their broader objectives of contributing to systemic change. Multiple investors reflected how they consider not only the immediate impact of their investments but also their enduring effects beyond the life of the investment, after the investors' active involvement ends.

> We have tried to stay on a values level, so we talk about why are you doing this, what are you ambitions? But also how is your team structured, did you run into conflicts? In the end it is about understand what is your business model, where are you right now, how can we help… Then for us, and our team, we have to make decisions if these align with our goal of sustainability, the systems change. (The Netherlands, FP asset manager 2)

> We say that they don't have to be perfect from day one. But you need to understand the capacity of their ability to take things step by step. And then not to impose heavy requirements on those companies. At the end of the day, you want them to survive. And it's a long-term objective… Once you are exiting from that company, at least the procedures and the process, they will stay and they should stay there. And they need to be able to see the value of these practices… so when we exit the impact will just grow without our attribution. (Finland, Development FI 1)

> We believe in the approach we take… a systemic approach. We are enabling this power shift. So it's not, we try to not only conduct those one-time efforts, but we look on the system as a whole. And therefore, I if I believe in that approach, I also, of course, look beyond today. And definitely try to equip the person or the beneficiary with something which has long lasting…And I suppose for all of us, right, so who can predict the future? None of us can, but what we can do is influence today, and try to put us as well as our beneficiaries on a foundation, which enables and provides opportunities for what is next… Because, yeah, at the very end, this should be the primary goal, making ourselves obsolete. (Austria, Foundation)

Impact investors exhibiting temporal reflexivity reflect on how they compromise when they feel disconnects between the near and distant future. The following quotes show how these investors are able to critically evaluate their temporal assumptions as they consider which investment opportunities can deliver on both near-term requirements and distant impact goals.

> We understand that there are not many investable companies for us out there. Combining the commercial sense, the business practices, often they don't necessarily live up to the international standards with these investments. Because then you need to understand, what is the long-term real impact of this investment, the net impact? There might be some unintended negative impact down the line in the future. So what is the potential, do they have competence and willingness to create impact years and years to come… and same time, there is robust due diligence, evaluation of investment opportunity. (Norway, Family office)

> Without kind of this bigger picture that systems change is really difficult: it takes a long time, it's messy, but that's life. And so if you really want to do something meaningful, something sustainable, you've got to engage with the messiness of the future. (Netherlands, Development FI 1)

Through temporal reflexivity, impact investors attempt to acknowledge immediate concerns while also preserving their capacity to focus on the distant future. By being temporally reflexive impact investors can grant themselves and their investees space to achieve meaningful and lasting impact by not overprioritizing near term demands. The following quotes demonstrate how temporal reflexivity involves a balance between immediate demands and more distant transformative goals.

> Our investors understand that this will take time. This is not the same as any other fund they have invested. But they still want statements and metrics, more details. Because that is what donors are looking for, to me saying that I am reporting out my data on regular basis, structured way, so I can tell you exactly what you like to hear. But actually, we now realise that we have to give ourselves, and they have to give us the chance to work towards sustainability, self-reliance. To give us space to do great job. (Switzerland, FP asset manager)

> It has been important to free yourself and focus. Forget the surveys and get to actually important, to balance the positive impact. So we combine two ways: very quickly assess ambitions, and then to have more detailed analysis on everything. You cannot be top of everything, but it is important to endorse our investees to look beyond the business right now. (France, FP asset manager)

4.4.3.2 Processes of temporal translation – Foresight and Backcasting

When zooming in on our analysis of the actors who engaged in temporal reflexivity, and thereby temporal oscillation, we observed foresight and backcasting as the main approaches they use to translate back and forth between the near and distant futures. Foresight refers to the process of 'foreseeing' futures, by pinning them down to something happening in the now (Sardar, 2010). Foresight is not limited to forecasting practices, rather foresight is used to consider and explore multiple possibilities and potentialities for different futures. Investors engage in foresight to understand what kind of possible futures their actions in the near future can lead to. For instance, impact investors discuss using foresight strategically to explore possibilities for their investments, strategic options for their funds, and the futures they might create.

> Now you have to assess targets for the future where you say, okay, everybody can set a target for multiple years or whatever, but it's the hard thing is how it's going to end. How it's going to be in reality later on. We really have to try to make our assumptions for the future. [We] have to find the most reliable criteria we can, to minimise the risk that it's not ending up the way we expect it. (Germany, foundation)

Many impact investors reflected upon engaging in collaborative foresight processes with stakeholders including prospective investees, current investees, board members, and donors. In collaborative foresight processes, investors discuss how they bring together stakeholders to co-create possible futures.

> There are a lot of brilliant people, to co-design with people where they want. It's one of the only foundations in the world who gets really co-construct. … ultimately, impact is about what do I change in your life? Let's say I want to impact you, what do I change in your life? So we better talk to each other before we start, to make sure of that first. Second, what will change in your life if the need is fulfilled? And third, how can we measure that? So, you co-construct that at the beginning. (France, FP asset manager)

Impact investors also utilise backcasting as a process to translate between the near and distant future. Backcasting refers to the process of imagining a distant future and looking backward from this distant future imaginary to the present to plan how this distant future could be achieved or avoided (Vergragt & Quist, 2011).

Impact investors engage in backcasting is through setting a clear vision for the future, then working backwards to see how they might invest in the direction of that desired distant future.

One example shows an investor imagining a future where there is clean water for all people in the world, then working backwards from that goal towards a plan to realise different solutions in 2050, in 2025, and finding possible investees to contribute to those solutions in the present:

> So basically, safe drinking water is a massive issue, we need to solve it. We believe that creating sustainable approaches, helping, supporting, or empowering people is more sustainable than just giving. The mission we have is to enable vulnerable populations to access safe drinking water in a sustainable way. We do it through a model that's applying social business principle. It's an entrepreneurial model… We go and educate the villages on entrepreneurialism, and then choose a few to run these wells… Others get the education, others get the job… We want 10 million people drinking our water in 2050, and 3 million drinking in 2025, so we want real impact on health (France, foundation)

Another example illustrates how an impact investor imagines a distant future where the energy transition has happened, then they explain three smaller goals they would need to focus on in the near future in order to reach this distant future.

> Our vision for the future is the one of energy transition and decarbonisation. The main ambition is that through supporting technological development, we are able to be major contributors to energy transition and decarbonisation. We hope that through investment, we are both creating positive impact on the climate and environment while also generating a good financial return…We decided to focus on three sectors…So renewable energy is the thing that will fuel the energy transition. Crop tech is basically everything that needs to happen in order to live in sustainable agriculture. And wild fishing and also other ocean-related competence. (Norway, family office)

We also uncovered reflections on impact investors engaging in backcasting alongside other stakeholders to imagine shared views on distant futures. When investors involve their investees in the backcasting process, it creates a space for the co-creation of the future and for focusing on systemic challenges. A collaborative approach to backcasting avoids an overreliance on investor views of the future by considering different stakeholders' perspectives on what possible, potential or desirable futures could or should be.

> We do have a different process which we're running, which is a little more truly co-designing [future action], which is a little more complicated, where we have a problem up front that we define, and then we bring people together, and they actually sort of discuss the issue and then form teams, and then we work them through a design process, and then at the end of it, select some of the things that are proposed. (Portugal, NFP asset manager)

> Our vision in future is to create a place where we gather, homeless people, designers, politicians, creatives, and people like that, to design the city of the future. (France, FP asset manager)

Impact investors invoke both desirable or undesirable future imaginaries when engaging with backcasting. Through backcasting, impact investors reflect on how they can create imaginaries of desirable or idealised distant futures and then link them back to their

current temporal structures to understand how this future could be achieved. For instance, they might a vision for the distant future of a world with better social equality, then, through backcasting, they keep these distant future imaginaries present in their near-term actions.

> The vision for the future, one is that future comes together in terms of enabling all people to live up to their fullest potential, no matter their background, no matter they're there, no matter their background, or their physical or psychological condition… we constantly have this in mind in our documenting even. (Austria, Foundation)

Some impact investors discussed how they engage in backcasting through imagining the worst-case scenarios or undesirable futures for the imagined distant future, and then think backwards to how this future could be avoided. For instance, the investor how through backcasting they imagine alternative economies rather than simply recreating current unjust economic conditions.

> Because then we have to learn that, and we have to react to that and then and then takes too much time...due to our previous experiences, recreate conditions that we understand. So it's these habits. And what I'm constantly saying to people, is, if you want a new economy, if you want a better framework, or whatever you call it, you have to also work on that in a different way, you have to create it in a different way' You can't use the same tools' you can't say use the same culture' you can't use the same agreements, you have to work on different stuff. (The Netherlands, FP asset manager 2)

4.4.3.3 Implications of temporal translation - Polytemporal Synergy

Impact investors who are able transcending their temporal structures and oscillate between near and distant future appear to reach a state of 'polytemporal synergy'. By simultaneously working from the present towards the distant future, and working from the distant towards the present, polytemporal synergy allows impact investors to develop a dynamic view of time with a sustained focus on distant events, without ignoring their ongoing activities. In essence, temporal oscillation enables these impact investors to navigate the complexities of multiple futures, balancing the immediacy of the now with the expansiveness of the distant, thus facilitating a more effective approach to achieving sustainable impact.

We observed that investors oscillating between the near and distant future appear better able to focus on systemic change. By transcending their temporal structures, these investors seem better equipped to consider the distant futures outside of their comprehension, and at the same time reflect on how these distant futures could be altered. As illustrated in the quote below, these investors seem better able to understand how to create long-lasting impact or systemic change.

> We believe in the approach we take… a systemic approach. We are enabling this power shift. So it's not we try to not only conduct those one time efforts, but we look on the system as a whole. And therefore, if I believe in that approach, I also, of course, look beyond today. And definitely try to equip the person or the beneficiary with something which has long lasting…And I suppose for all of us, right, so who can predict the future? None of us can, but what we can do is influence today, and try to put us as well as our beneficiaries on a foundation, which enables and provides opportunities for what is next… at the very end, this should be the primary goal, making ourselves obsolete. (Austria, Foundation)

Impact investors engaging in temporal oscillation seem to establish clearer roles or duties for themselves in working towards their distant future imaginaries. Through polytemporal synergy they are able to create a better understanding of their own role in impacting the future. Investors getting stuck in the distant future appear too trusting that impact will simply happen. Impact investors engaging in temporal oscillation are actively considering what they are doing in the now, how it is going to affect the distant future, and how the distant future affects the now. Temporal oscillation thereby enables them to understand their role in achieving their desirable distant futures.

> It is very cool to have smaller projects like microfinance or SDGs, but it cannot be the only criteria for impact investing. We have to do something bigger, address bigger issues like the climate change, because it will happen. Or financial inclusion will be even worse in the future. So we cannot solve everything in financial or climate issues, but we have to do something, because it is important… we have to understand our responsibility and do what we can in our arena. (Spain, Foundation)

We also noticed that investors who are engaging in temporal osciallation are more focused on building the capacity of their investees. When investors reflect on the near and distant future, they are more aware of how actions today impact the future world. This enables them to prioritise certain actions in the present or near future that will build the pathways for impact in the distant future. In other words, they are more willing to prioritise actions and support for investees today, which will not necessarily generate results in the near future, but in the distant future.

> We have very well structured planning for the social and financial impact goals and reporting, but actually those are there just to help the enterprises. We want us and them to be realistic on setting by goals, but really the work now just about building better tools for the future, building the capacity to achieving the goals far into the future… we don't know when we would achieve those goals, or are they even achievable… but right now the tools are supporting the organisations. (North Macedonia, FP asset manager)

Finally, when transcending their temporal structures, and oscillating between the near and distant, impact investors seem better able to engage with complexity and appreciate a range of possibilities for potential futures. Whereas, investors stuck in the near or distant future are often taking impact, or futures for granted, investors who transcend their temporal structures seem more likely to focus on multiple possibilities for the future.

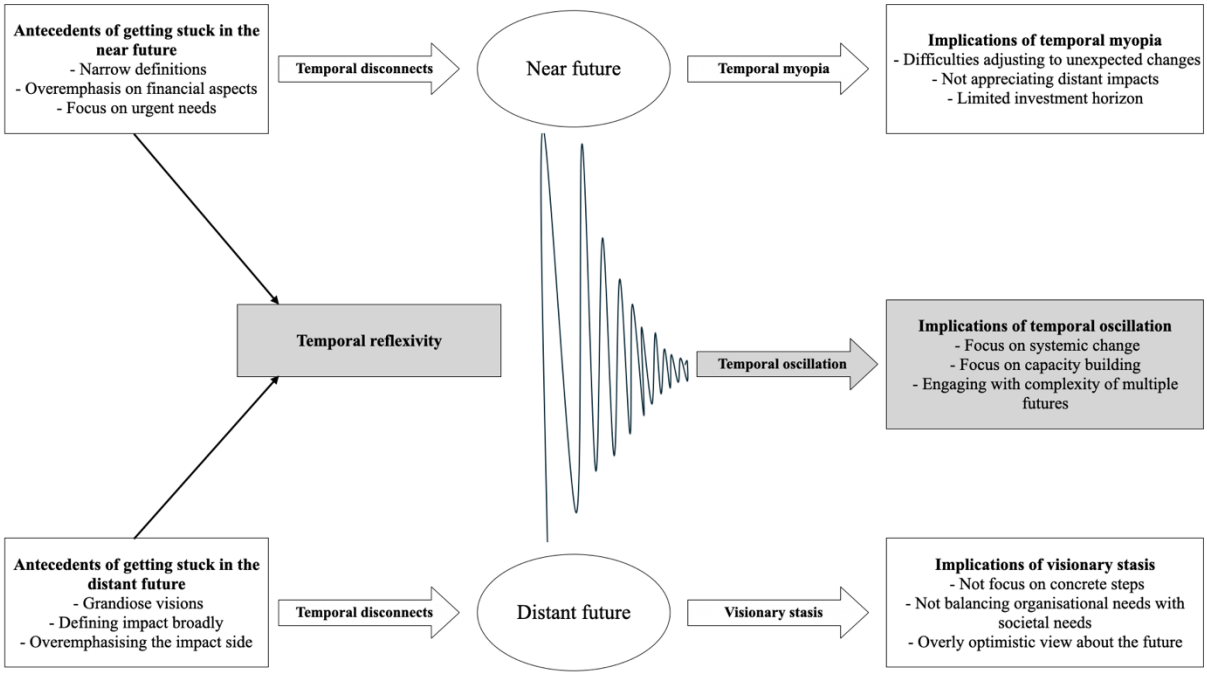
> Especially investors, everyone is looking for a straight and clear impact drive. And it's like, people are moving away from complexity, but the thing is, impact investing is to deal with complexity, you know, love to be inspired by nature… the more complex it is. And complexity doesn't mean that it's complicated, it's just means that it has a lot more layers of understanding. (Portugal, NFP asset manager)

> I think the different [measurement] systems and standards out there, they are not realistic. To be a bit reflective, the social impact are inherently complex… you cannot have universally standardised systems. Social outcomes are not financial outcomes. So outcomes can be hundreds and hundreds of different things… Embrace the complexity, embrace the diversity of social impact looks like. (The Netherlands, Development FI 1)

4.5 Discussion

Our objectives in this study were to understand how social actors engage with and translate between near and distant futures. Through our conversations with multiple actors within the field of impact investing, we uncovered different types of temporal translation. Some investors seem to emphasise the near future, or get stuck in the near future in their translation efforts, whereas other emphasise and get stuck with the distant future. While they are considering both timeframes, they are missing temporal reflexivity and therefore they are missing the constant movement between near and distant to facilitate the sustained focus on distant events, while keeping the focus on also more imminent concerns. We show how certain actors move beyond these disconnects through temporal reflexivity which allows them to engage in foresight and backcasting as processes to facilitate temporal oscillation. Figure 6 visualises these findings and highlights the antecedents and implications of these three pathways.

Figure 6 Mechanisms of temporal disconnects and temporal oscillation



For those stuck in the near future, antecedents include narrowly defining impact, prioritising financial considerations, and over-emphasising organisational survival. These

conditions lead to temporal myopia (Margison & McAualy, 2008), a state where actors are fixated on the short-term, inhibiting their ability to move beyond current temporal structures. These findings resonate with insights from Hernes and Schultz (2020), who argue that actors can become caught in current temporal structures if they do not reflect on distant events. By failing to reflect on distant futures, actors cannot separate their ongoing experiences from the distant future and thereby struggle to connect distant events to the present (Schütz, 1967). This leads impact investors stuck in the near future to take the distant future for granted. They are often inspired by the distant future imaginaries, but do not simultaneously reflect how could these distant futures be achieved. The implications of being stuck in the near future include difficulties in adjusting to unexpected changes, limited time horizons when considering strategic action, and a disregard for the power of short-term actions to shape the distant future.

Conversely, those stuck in the distant future are characterised by focusing on grandiose visions for the future, defining impact rather broadly, and having a limited focus on concrete actions that could help achieving these visions. These conditions lead to a state we call ‘visionary stasis’, where the pursuit of grand visions results in neglect for the actions needed to actualise these visions. As Lundgren-Henriksson and Tidström (2021) theorized, engaging with distant temporalities can lead to difficulties in connecting the imagined future to plausible present actions. Consequently, these investors are prone to missing out on current opportunities and fail to adapt to immediate challenges, potentially rendering their visions unattainable. In essence, being captured by their future visions hampers their ability to make necessary changes within their current temporal structures, ultimately undermining the realization of their future aspirations.

The model highlights the mechanisms that enable actors to simultaneously translate between the near and distant future – to temporally oscillate. These actors engage in temporal reflexivity (Orlikowski & Yates, 2002; Reinecke & Ansari, 2014), becoming aware of, and questioning, temporal structures, allowing them to move beyond disconnects. Temporal reflexivity facilitates a continuous process of reflection between near and distant futures through foresight and backcasting. Foresight involves a sustained focus on multiple futures, allowing investors to envision a range of possibilities and probabilities for the distant future. By engaging in foresight, social actors are able to scan the distant horizon for potential trends or disruptions, enabling them to craft strategies for

a variety of future scenarios (Cuhls, 2017). Backcasting allows these actors to envision desired futures the work backwards towards the present, identifying the steps and strategies necessary to achieve these future goals (Vergragt & Quist, 2011). The specific processes of reflection allow actors to move between the present, near and distant futures.

These mechanisms of reflexivity and oscillation enable social actors to achieve 'polytemporal synergy', a state where they can harmonise different time horizons and perspectives. Polytemporal synergy enhances the potential for impact investors to engage in systems change, as they are adapting to the future while actively shaping it through their present actions. They build capacity within their own organisations but also in the wider ecosystem, empowering others to engage with and contribute to these future visions. Understanding their role in the future becomes a pivotal aspect of their strategy, as they recognize the impact of their current decisions on future outcomes. Finally, engaging with the complexity of multiple futures allows them to navigate uncertainties and ambiguities, adapting to a rapidly changing world while remaining committed to their visions.

The model suggests that understanding and escaping temporal disconnects and engaging with temporal oscillation is crucial for social actors to navigate complex systemic challenges. Our analysis implies that social actors can benefit from developing practices of temporal reflexivity that enable them to incorporate imminent and distant concerns, remaining agile and proactive as they make the future.

4.5.1 Contributions to literature on temporality and management studies

Our study on how social actors translate between near and distant futures has resulted in multiple novel insights for the literature on temporality and management studies: (i) unpacking different degrees of temporal translation; (ii) showcasing temporal reflexivity as a mechanism for temporal oscillation; (iii) identifying foresight and backcasting as methods of temporal oscillation; (iv) highlight the role of temporal oscillation in driving systems change.

4.5.1.1 Unpacking different degrees of temporal translation

By highlighting the antecedents and implications of temporal disconnects, our study contributes to a more nuanced understanding of the mechanisms for social actors translating between near and distant futures (Dille et al., 2022; Hernes & Schultz, 2020).

Prior research has suggested that temporal tensions arise when different temporalities are isolated (Slawinski & Bansal, 2015). Our model illustrates the antecedents that lead these temporal disconnects to manifest as actors become stuck in the near or distant future. In doing so we reveal the conditions that lead to 'temporal myopia' (Marginson and McAulay 2008) and 'visionary stasis'.

Previous studies have noted how actors experience temporal myopia (Marginson and McAulay 2008), focusing solely on the near future and within their temporal structures (Nadkarni et al., 2016; Lumpkin & Brigham, 2011; Wang & Bansal, 2012). We extend the conversation by showing how actors can also become stuck outside their temporal structures, getting stuck in the distant future, in a visionary stasis. This concept of visionary stasis builds on the notion of managerial hyperopia (Mackay & Burt, 2015; Burt, Mackay & Perchard, 2015), which suggests that unintended consequences can arise when actors become overly focused on distant events while marginalising short-term considerations. By unpacking the antecedents and implications of temporal myopia and visionary stasis, we contribute to a broader understanding of the need to navigate the complexities of near and distant futures.

4.5.1.2 Temporal reflexivity as a mechanism for temporal oscillation

While previous research has acknowledged the importance of connecting the near and distant future (Slawinski & Bansal, 2015; Wright & Nyberg, 2017), it has not systematically explored how social actors transcend their temporal structures to address distant events, often assuming the present as the locus of defining pasts and futures (Mead, 1932; Mische, 2009). Our study showcases the critical role of temporal reflexivity (Orlikowski & Yates, 2002) as a mechanism to oscillate between near or distant futures. As noted, temporal reflexivity involves an awareness of one's potential to reinforce and alter temporal structures, and questioning and reconsidering temporal assumptions (Orlikowski & Yates, 2002; Reinecke & Ansari, 2014). We show that without temporal reflexivity, impact investors risk either getting stuck in their current temporal structures (i.e., near future), or in their visions (i.e, distant future). Temporal reflexivity allows actors to thrive in environments characterized by rapid change and uncertainty, as it encourages a more holistic and flexible approach to temporal tensions, instead of the duality of being far-sighted or short-sighted (Bansal & DesJardine, 2014).

4.5.1.3 Foresight and backcasting as methods of temporal oscillation

We demonstrate how the practices of foresight (Sardar, 2010) and backcasting (Vergragt & Quist, 2011) serve as pivotal mechanisms for what we term temporal oscillation. This is foresting, what we also term 'polytemporal synergy'. Hernes & Schultz (2020) argued how reflective processes help actors to transform their temporal structures, and thereby address the distant events beyond them. However, prior research has not discussed the actual processes that allow actors to move between the near and distant future, or how social actors use these processes to engage in temporal translation. Our findings thereby respond to calls for research how actors navigate the relationship between near and distant future imaginaries (Augustine et al., 2019).

We show how social actors engage with foresight to move from near to distant futures. In contrast to previous understandings of foresight as a capability or competence for dealing with the future (Wenzel, 2022), we draw on insights from futures studies that view foresight as a process of critical thinking, exploration, perception and analysis of multiple different futures (Sardar, 2010). Our findings thereby align with the work of Cunha (2002), who theorized that foresight should not be seen solely as a prediction method, but rather as an intervention and an effort to connect between temporalities – foresight as temporal reflexivity.

At the same time, backcasting allows social actors to envision a desirable future and then look backward toward the present, to explore turning points and actions aligned with distant visions (Vergragt & Quist, 2011). The desirability (or undesirability) of the future imaginaries accelerates action in the present (Alimadadi et al., 2022) and thus temporal oscillation, as actors explicitly consider how to achieve (or avoid) these futures. Backcasting explicitly tries to connect the near and distant future, as the purpose is not just to imagine the distant future, but to coordinate action accordingly (Malaska & Holstius, 2009).

Our findings show how the interplay of foresight and backcasting promotes synergies, where the near future is informed by potential distant realities, and distant aspirations are grounded in present capabilities and actions. We term this 'temporal oscillation', which refers to the harmonious and simultaneous integration, interaction and translation of different time horizons and perspectives. This can lead to 'polytemporal synergy', which

moves away from the dualistic thinking of near or distant, toward a more holistic view that takes into consideration both.

4.5.1.4 Driving systems change through temporal oscillation

Finally, we highlight the transformative potential of bridging near and distant futures, unpacking the instrumental role of temporal oscillation in driving systems change and tackling societal challenges. As argued by Hernes and Schultz (2020), simultaneous temporal translation enables actors to keep a sustained focus on distant events, without losing sight of imminent concerns. Distant events such as climate change (Slawinski & Bansal, 2012; Wright & Nyberg, 2017), require combined attention to the near and distant to balance the organisational needs and societal needs (Slawinski & Bansal, 2015). Our findings show how social actors who oscillate and constantly move between near and distant futures are better able to focus on systemic change, engage with the complexity of multiple futures, and understand their own role in shaping these futures. By fostering polytemporal synergy through temporal oscillation, social actors can develop strategies that are both responsive to immediate realities and attuned to the possibilities of the future. This alignment enables these individuals to act as change agents, leveraging their unique position to influence and reshape systems over time (Skjølsvold & Coenen, 2021). Through the lens of temporal oscillation, we show how social actors can contribute to sustainable development and create lasting impact, illustrating that the integration of multiple temporal perspectives is key to realising the full potential of impact investing.

4.6 Conclusion

In this study, we explored how social actors translate between near and distant futures within the field of impact investing. We show how some actors get stuck in the near future and only focus on their imminent outputs which leads to temporal myopia, while others get stuck in the distant future visions without concrete steps for how to approach that imagined future, which leads to visionary stasis. We show how certain actors are able to escape temporal disconnects and transcend their temporal structures, through temporal reflexivity. We show how temporal oscillation involves connecting the present and near future to the distant through foresight, and connecting the distant future to the near future and present through backcasting. We show how actors who engage in temporal oscillation are able to achieve polytemporal synergy, which enables a better understanding of the actions needed for systemic change.

We hope that this study evokes further explorations of the interplay between near and distant futures. As our research was limited to interviews with impact investors, we see it as important to study these findings in other fields where actors are grappling with near and distant futures such as social entrepreneurship, energy transitions, and ethical artificial intelligence. Further, given our reliance on interviews as the main source of data, an ethnographic study with the participants involved in future-making is needed to observe their discursive and non-discursive everyday practices involved in temporal oscillation. For instance, what are the collective practices involved in oscillating between distant futures and the imminent concerns of today? We hope that this study evokes further explorations of the interplay between near and distant futures. As our research was limited to interviews with impact investors, we see it as important to study these findings in other fields where actors are grappling with near and distant futures such as social entrepreneurship, energy transitions, and ethical artificial intelligence. Further, given our reliance on interviews as the main source of data, an ethnographic study with the participants involved in future-making is needed to observe their discursive and non-discursive everyday practices involved in temporal translation. For instance, what are the collective practices involved in translating between distant futures and the imminent concerns of today?

CHAPTER 5 – "WE'RE NOT THE CRYPTO-BROS": THE ROLE OF UTOPIAN-DYSTOPIAN IMAGINARIES IN REFRAMING, SOLIDIFYING AND DEMARCATING COLLECTIVE IDENTITIES IN NASCENT ENTREPRENEURIAL FIELDS

This chapter shifts the focus from the practices of future-making and temporal oscillation, to the emerging and dynamic context of nascent entrepreneurial fields, specifically the blockchain-for-good movement. It explores how utopian and dystopian imaginaries are leveraged to shape collective identities, offering critical insights into how future-making and future imaginaries influence the identity-building processes of entrepreneurs.

The paper examines how utopian imaginaries of decentralisation, transparency, and equitable systems are contrasted with dystopian fears of exploitation, fraud, or scams within the blockchain ecosystem. These imaginaries reflect individual aspirations or concerns, yet, they can also serve as tools for collective identity construction. Entrepreneurs in this nascent field employ these imaginaries to position themselves as "blockchain-for-good" actors, distancing their ventures from the stereotypical "crypto-bro" culture.

Drawing on interviews with blockchain entrepreneurs, this chapter delves into the dialectical relationship between utopian and dystopian imaginaries. It highlights how these imaginaries serve to both unify and demarcate the entrepreneurial field, influencing how actors see themselves, and how they engage with external stakeholders. By analysing these dynamics, the paper contributes to the broader literature on entrepreneurial identity building and future imaginaries.

This chapter thus builds on the themes of temporality and future-making introduced in earlier chapters but extends them to focus on the impact of future imaginaries can have, for instance, on identity construction. It underscores how imaginaries of desirable and undesirable futures can shape strategic actions and also the foundations of collective identity in nascent entrepreneurial fields.

“We’re not the crypto-bros”: The role of utopian-dystopian imaginaries in reframing, solidifying and demarcating collective identities in nascent entrepreneurial fields

Abstract

Images of possible, probable and preferred futures shape entrepreneurial action in the present. This paper explores how utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields. We focus on the emerging entrepreneurial field of ‘blockchain for good’ as a site to explore how utopian and dystopian imaginaries shape collective identity. We adopt a methodology from futures studies, Textor’s ethnographic futures, to elicit utopian and dystopian imaginaries through interviews with 40 blockchain entrepreneurs developing alternative approaches to decentralised finance. Our findings reveal how their utopian and dystopian imaginaries exist in a dialectical relationship, shaping and being shaped by each other to create utopian dystopias and dystopian utopias. We show how this utopia-dystopia dialectic triggers mechanisms of 'othering', 'claiming and reclaiming utopias', and 'sensing co-opted utopias' which influences collective identities as entrepreneurs establish coalitions of 'good actors' and distance themselves from those perceived as leading towards dystopian futures. Our study contributes to the literature on future imaginaries and collective identity in nascent entrepreneurial fields by showing how the dialectical relationship between utopian and dystopian imaginaries shapes collective identity formation. Further, we extend our understanding of the role of othering in creating shared utopias and shaping collective identities in emerging fields by creating coalitions of ‘good’ actors and spaces for critique of those leading a path towards another dystopia.

Keywords: Utopia; dystopia; imaginaries; collective identity; blockchain

5.1 Introduction

Individuals and organisations continually invoke images of possible, probable and preferred futures based on trends, assumptions, hopes and expectations of how the future might unfold (Beckert, 2013, 2021; Dator, 2019; Whyte et al., 2022). These imaginaries shape how organisations construct and enact the future in the present and are viewed as central to future-making practices (Oomen et al., 2021; Wenzel et al., 2020). Rather than viewing the future as a predictable outcome that can be engineered through scientific methods, it should be seen as a dynamic and unpredictable space. For instance, Dimov (2024) emphasises the need to embrace the future as a realm of perpetual novelty, where entrepreneurs navigate uncertainty. Future imaginaries often take the form of utopia and dystopia as social actors explore their most optimistic and pessimistic visions for the future. Utopian imaginaries allow space to challenge dominant paradigms and explore counter-narratives to conventional forms of organising (Gümüsay & Reinecke, 2022; Parker, 2003; Wright, 2010; Schiller-Merkens, 2022). Conversely, dystopian imaginaries serve as cautionary narratives, providing spaces to critique current and unfolding institutional fields (Bauman, 2000; Alimadadi et al., 2022; Rosa, 2010; Meyer & Quattrone, 2021).

Examining the interplay between utopias and dystopia provides an opportunity to understand how entrepreneurial fields emerge through the process of collective imagination (Beckert, 2021; Bodrožić & Adler, 2022; Lounsbury & Glynn, 2019). We know, for example, that shared imaginaries for the future play a critical role in shaping collective identities in established fields (David, Jone & Croidieu, 2023; De Cock, Nyberg & Wright, 2019). We have limited understanding however of the interplay between future imaginaries and collective identities in nascent entrepreneurial fields (Augustine et al., 2019). To address this gap, this paper explores the question: *how do utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields?*

Collective identities refer to the shared purposes, actions, and outcomes that connect social actors (Glynn, 2008; Cornelissen et al., 2007). Scholars have explored the role of collective identities within organisations, between organisations, and across institutional fields (Wry et al., 2011; Polletta & Jasper, 2001; Patvardhan, Gioia & Hamilton, 2016). The extant research has tended to focus on established organisational contexts, with a

limited understanding of how collective identities emerge and evolve in the nascent entrepreneurial field (Wry et al., 2011; Mmbaga et al., 2020). Exploring the relationship between future imaginaries and collective identities within emerging entrepreneurial fields will assist in gaining a deeper understanding of how shared fears and aspirations assist in legitimising ideas, fostering solidarity, and establishing boundaries between actors (Claeys, 2016; Lippmann & Aldrich, 2015; Brown, 2006; Saunders, 2008).

The dimension of time and conceptions of the future have often been overlooked in entrepreneurship research. Entrepreneurs' decisions are not only shaped by their resources and market conditions but also by their perceptions of time (Dimov, 2024; Lévesque and MacCrimmon, 1997; Muñoz and Dimov, 2023), or visions of the future (Berglund and Dimov, 2023). For example, entrepreneurs must strategically allocate their time and monetary resources to maximise venture success, and this strategic allocation is often guided by the entrepreneur's envisioned future outcomes and the anticipated returns on investment (Lévesque and MacCrimmon, 1997). Lévesque and Stephan (2019) argue that time is a fundamental aspect of entrepreneurship that influences everything from startup decisions to growth strategies and market entry, thus suggesting that understanding how entrepreneurs allocate and perceive time can provide deeper insights into their choices and long-term success. Going even further and building on the concept of future imaginaries, Muñoz and Dimov (2023) propose a prospective inquiry framework that encourages scholars to not only theorise about future possibilities in entrepreneurship but also actively engage shaping those futures through collaborative interventions. This study builds on the arguments by examining how different perspectives on time influence the construction and pursuit of imaginaries in nascent entrepreneurial fields.

We focus on the emerging entrepreneurial field of ‘blockchain for good’ as a site to explore how utopian and dystopian imaginaries shape collective identity. In recent years, the rise of blockchain technology has led to the emergence of a nascent field focused on delivering its own form of techno-utopia (Bina et al, 2020; Kuk & Giamporcaro, 2024). Considering the growing interest and the potential of these technologies to drive positive change (Friedman & Ormiston, 2022; Parmentola et al., 2022), we focus on blockchain entrepreneurs whose initiatives are driving social change and sustainability transitions, ‘blockchain for good’. These entrepreneurs invoke imaginaries of a future in which decentralised networks and blockchain-based systems play a key role in shaping the

world's economic, political, and social systems (Belk et al., 2022; Dimitropoulos, 2022; Husain et al., 2020). We zoom on the utopian and dystopian imaginaries of the entrepreneurs and their role in shaping the collective identity of "blockchain for good".

To study how utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields, we adopted a futures studies research method developed by Textor (1980) called ethnographic futures. This method has been widely used in futures studies to understand how social actors imagine utopias, dystopias and realistic futures. We apply this method to unpack the interplay between utopian and dystopian scenarios of blockchain entrepreneurs and how this shapes their collective identity. The method entails a specific order of questioning to elicit utopian and dystopian imaginaries and unpack respondents' desires, fears, and expectations for the future (Cheney, 2014; Gordon, 2020; Textor, 1980). This method focuses on future imaginaries in interviews by exploring three scenarios: the optimistic (utopian futures), the pessimistic (dystopian futures) and the most likely (probable futures) (Textor, 1980). We conducted a global study of 40 ethnographic futures interviews with blockchain entrepreneurs from the emerging field of blockchain for good.

Our findings show how entrepreneurs in the field of blockchain for good invoke a range of competing and interconnected utopian and dystopian imaginaries. Rather than viewing these utopian and dystopian imaginaries as opposite ends of a continuum, these utopias and dystopias are in a dialectical relationship, continually shaping and being shaped by each other. In response to these interrelated, overlapping utopias and dystopias entrepreneurial actors are actively distancing themselves from others who they feel have co-opted utopian imaginaries, making them dystopian, thereby seeking to reclaim and reframe utopian imaginaries for the field. Through these mechanisms othering and the reclamation of utopias, aligned actors appear to be developing collective identities as they establish coalitions of ‘good actors’, while creating distance from others, and spaces for critique and disassociation from those they feel are contributing to the realisation of dystopias.

We make multiple contributions to the literature on future imaginaries and collective identity in the field of entrepreneurship. First, we reveal the dialectical relationship between utopian and dystopian imaginaries and how this shapes collective identity

formation in nascent entrepreneurial fields. Second, we illustrate how actors involved in nascent entrepreneurial fields compete over the nature of utopia. Third, we highlight the role of othering in creating shared utopias and shaping collective identities in emerging fields by creating coalitions of 'good' actors and space for critique of those leading a path towards another dystopia. Fourth, we show the role of Textor's (1980;1995) ethnographic futures as a research method to eliciting the utopian and dystopian imaginaries of social actors, and to explore how they shape action. Finally, we contribute to calls for deeper understandings of the role of time and futuring in shaping entrepreneurial action (Dimov, 2024; Dimov and Güneştepe, 2024).

5.2. Literature review

5.2.1 Utopian and dystopian imaginaries

Images of the future allow individual and organisational actors to make sense of possible, probable, and preferred futures (Wenzel et al., 2020; Whyte et al., 2022). Future imaginaries are performative, as imaginations of desirable and undesirable futures can shape actions in the present (Beckert, 2013; Omen et al., 2021). Future imaginaries are collective visions of possible futures that reflect societal hopes, fears, and expectations, and are shaped by cultural, social, and political contexts, as well as historical experiences, contemporary knowledge, and speculative imagination (McNeil et al., 2016). Thus, imagined futures are not just fantasies but guideposts for action based on understandings of the past, present, and future (Beckert, 2013, 2021). Future imaginaries are thereby generative as they shape 'expectations, provide structure and legitimation' (Borup et al., 2006, p.286). Imagined futures provide a 'prospective structure' (Van Lente & Rip, 1998) that shapes orientations for action (Beckert & Bronk, 2018). For instance, for entrepreneurs future imaginaries can inspire action, and instrictically affect how entrepreneurs can attract capital (Dimov and Güneştepe, 2024).

Future imaginaries can take the form of utopias and dystopias. Utopias refer to normative and preferred narratives that contain future desires, hopes and possibilities (Bina et al, 2020; Son, 2015) Utopian imaginaries encompass "our capacity as humans for the free-floating imagination of how things could be different and better" (Burrell & Dale, 2002, p. 107). Conversely, dystopian imaginaries are cautionary tales, providing account of what we must avoid, or lamenting what we have become (Parker, 2003). Dystopia is characterised by estrangement, fear and the actions of others, of enemies (Claeys, 2016)

Exploring utopian and dystopian imaginaries in the context of technology and the monetary system raises some compelling contradictions. Dystopian imaginaries often paint technology an evil, dehumanising force that will lead humankind to self-destruction (Kunkel, 2008, Rambe & Nel, 2015). Similarly, radical utopian thought often explores the notion of a society without money (Levitas, 2023). In this sense, blockchain can be viewed as a form of techno-utopia (Dodd, 2017) where utopia imaginaries rely on the popularisation of emerging and anticipated technological innovations (Dickel & Schrape, 2017).

Utopias and dystopias are inherently entangled, "every utopia always comes with its implied dystopia - whether the dystopia of the status quo, which the utopia is engineered to address or a dystopia found in the way this specific utopia corrupts itself in practice" (Gordin, Tilley & Prakash, 2010, p. 2). This relational view encourages us to see the interplays and the underlying tensions and aspirations that drive development in this space, and how technological futures are collectively imagined and contested. We can reveal how the competing narratives can coexist and interact, influencing individual entrepreneurial strategies by also shaping collective ethos on the directions of the field developments. Utopia as the "perfect society", entails that utopia essentially is an idealogy, which depending on the utopia produces dystopia for some (Claeys, 2017), and raises the question of who defines these ideals (Fritz & Binder, 2020). This is very apparent in political discussions, such as the "Make America Great Again" narratives, of longing for the retrotopia (a utopian imaginary of the past), while producing dystopias for some in the present, as well as utopianism in the dystopian past (Hastings-Duffield, 2017). Relatedly, Clegg et al's (2012) study of the Khmer Rouge and the genocide of Cambodian people highlights the potential for a dialectic relationship between utopia and dystopia, by theorising the Khmer utopian vortex underpinning totalitarianism.

Parker's (2003) writing on utopia and organisational imagination argues that utopias are an organisational matter as they are statements of alternative forms of organisation. Utopian imaginaries take us towards 'what-could-be' (Silliance and Barker, 2012). For example, Kanter's (1968) work on utopian communities highlights the interplay of commitment, continuance, cohesion and control with 19th-century utopian communities such as the Shaker Villages. Despite compelling calls to explore the role of utopias

organisation studies (Parker, 2003; Gümüsay & Reinecke, 2022), the role of utopias in shaping organisational action has been relatively unexplored (Clegg et al. 2012), with dystopian imaginaries largely ignored within the organisational research (see for exception e.g., Suddaby et al., 2023)

5.2.2 Collective identities in nascent entrepreneurial fields

Collective identities refer to the shared purposes, actions and outputs that social actors organise around (Glynn et al, 2008; Cornelissen et al, 2007). Organisational theorists are paying increasing attention to collective identities and how they shape organisational action (Wry et al 2011; Cornellisen et al 2021; Ravasi, 2019). This research has tended to concentrate on collective identities within organisations (Ashforth & Schinoff, 2016; He & Brown, 2013; Gioia & Hamilton, 2016), between organisations (Ungureanu et al, 2020), within social movements (Polletta and Jasper, 2001; La Torre et al. 2022; Wang et al 2021), and across in institutional fields (Patvardhan, Gioia & Hamilton, 2015). These fields of study have gravitated toward a process lens on collective identities as a dynamic and fluid concept that transforms over time, rather than being a static construct (Leitch & Harrison, 2016).

Historically, research has focused on collective identities in established organisations and fields, with less attention to how nascent collective identities emerge in novel entrepreneurial contexts (Wry et al, 2011). Despite a growing stream of research on the evolution of individual entrepreneurial identities (Wagenschwanz, 2021), research focused on collective identity formation in entrepreneurship is extremely limited (Mmbaga et al, 2020). Reflecting the conventional focus of entrepreneurship research, prior studies have tended to zoom in on founders' identities as the unit of analysis (Fauchart & Gruber, 2011; O'Neil et al 2022). Some recent studies have begun to shed light on more collective-level identity formation in nascent entrepreneurial fields. Powell and Baker (2017) develop insights into how founder identities shape the collective identities of founding teams in nascent ventures, highlighting the role of exclusion in shaping in-group dynamics.

Exploring collective identities in an emerging entrepreneurial field offers an opportunity to examine how collective identities shape the development of new domains of action. Lippmann & Aldrich (2015) contend that entrepreneurs interact as they develop

communities and establish the 'rules of the game', enacting a collective identity that shapes the development of their nascent field. Instead of establishing organisational identities to position and differentiate themselves within established fields, entrepreneurs involved in the development of nascent fields engage in collectively constructing and legitimising new industries (Lippmann & Aldrich, 2015; Wry et al 2011). Drawing on the broader literature on collective identities in the organisation and management literature highlights how collective identities can help shape emerging fields. Collective identities can help construct meta-narratives by creating shared stories that help reinforce notions of the collective (Brown, 2006). Collective identities can also enhance the sense of solidarity between social actors and a distancing from others through the development of the 'we-them' dichotomy (Saunders, 2008) The development of collective identities also acts as a form of boundary work, demarcating distinctions between actors within the field (Bange et al., 2022).

We now turn to the examination of the role of utopian and dystopian imaginaries in shaping collective identities. Examining the interplay between utopian and dystopian imaginaries in an emerging entrepreneurial field provides an opportunity to unpack how collective identities are negotiated and redefined. Utopian imaginaries have been argued to be an essential element of identity formation as utopian imaginaries serve to legitimise certain ideas while delegitimising others (Kozica et al., 2015). Similarly, dystopian imaginaries can help to strengthen collective identities by establishing feelings of 'not belonging' and the conceptualisation of others or outsiders (Claeys, 2016). Zooming in on these imaginaries will allow for a better understanding of how collective identities emerge in nascent entrepreneurial fields, and how they influence the evolution of emerging industries.

5.3. Methods

5.3.1 Research site

We focus on the emerging entrepreneurial field of 'blockchain for good' as a site to explore how utopian and dystopian imaginaries shape collective identity. At its core, blockchain is a decentralised ledger technology that ensures data transparency, security, and immutability, altering how information is stored and transactions are recorded and verified (Hsieh & Vergne, 2022). As Arjaliès (2021) notes, blockchain is not merely a technological innovation; it is a manifestation of a broader ideological shift towards

decentralisation that aims to challenge traditional power structures and develop new forms of social and economic organisation.

We focused specifically on the domain of decentralised finance within the blockchain field. Decentralised Finance (DeFi) aims to revolutionise the way financial transactions are conducted by bypassing traditional financial intermediaries, such as banks and exchanges, in favour of peer-to-peer interactions (Hsieh & Vergne, 2022). As Chen & Bellavitis (2020) highlight, decentralised finance represents a paradigm shift from conventional, centralised financial systems towards a model that prioritises security and transparency through blockchain technology. Focusing on decentralised finance provides a unique opportunity to study the role of utopian and dystopian imaginaries at the intersection of technology and - a somewhat contradictory techno-utopia. Our study focused on understanding the utopian and dystopian imaginaries that drive these entrepreneurs as they develop solutions that are characterised as "blockchain for good".

5.3.2 Textor's ethnographic futures

We adapted Textor's (1995) ethnographic futures method to study the utopian and dystopian imaginaries of entrepreneurs in the emerging field of blockchain for good. The ethnographic futures research method employs a sociocultural approach to interviews to "elicit their perceptions and preferences among possible and probable alternative futures for their society and culture" (Textor, 1995, p. 461). This method is specifically focused on eliciting future imaginaries in interviews through exploring three scenarios: the optimistic (utopian futures), the pessimistic (dystopian futures) and the most likely (probable futures) Textor, 1980). These scenarios are a central aspect of the ethnographic futures research interview, and aim to give space for the participants to explain what possible futures might look like, and how they might realise those futures (Gordon, 2021). The participants themselves thereby define, what they deem as utopia, dystopia or probable future. The ethnographic futures method takes a proactive stance toward the future, by facilitating the process through which the interviewees clarify their desires, values and goals for the future, and reflect on their role in the future and in their community (Cheney, 2014). This method also allows the researcher to explore the diverse range of anticipations, fears and hopes that individuals hold about the future (Textor, 1980). Cheney (2014) highlights the four main goals of ethnographic futures interviews as providing: (i) clarity by giving space for the participants to explain the

scenarios fully, (ii) comprehensiveness by getting the interviewees to expand their thoughts, (iii) contextualisation through the sociocultural context to the future scenarios, and (iv) coherence by asking the participants to explain what caused the changes in these different futures (Cheney, 2014).

5.3.3 Participant selection

To identify potential interviewees our starting point was the PositiveBlockchain.io database. This is a comprehensive open database of companies and projects that have a focus on creating a positive impact with blockchain technology. In addition to the database, we also adopted a snowballing approach to contact blockchain for good entrepreneurs recommended by our interviewees. To ensure a heterogeneous group of interviewees, we aimed to recruit at least five representatives from each continent. Due to the often global focus of blockchain enterprises, we determined the continent by the region in which the organisation was most active. However, in cases where the focus was completely global or borderless, the location of the headquarters was used to determine the continent.

We covered at least four sub-categories of decentralised finance from each continent. All of these entrepreneurs focus on finance applications of blockchain, but can be further defined through their more specific focus, however, this categorisation can be artificial, as organisations may focus on more than one, and sometimes, for example, cryptocurrency and credit scoring, may actually refer to same solutions. We focused on the following sub-categories, as defined by the PositiveBlockchain.io database: (i) charity and donations, (ii) credit scoring and digital identity, (iii) cryptocurrencies, (iv) financial inclusion, (v) investing and impact investing, (vii) peer-to-peer transactions and (viii) verification. When multiple sub-categories applied to an organisation, we chose the one most relevant to their core offering.

We mainly targeted the founders of the organisations as we were interested in understanding the collective identities and imaginaries of entrepreneurial actors within the field. However, we also included some managerial-level informants C-suite level positions, as long as they were involved in setting the strategic direction for the enterprise. Table 15 provides an overview of the 40 ‘blockchain for good’ entrepreneurs included in the study.

Table 15 Overview of interviewees

Continent	Interviewee	Category	Tag
Africa (8)			
	Founder	Credit scoring	Africa, Credit scoring
	Founder	Credit scoring	Africa, Credit scoring
	Founder	Financial inclusion	Africa, Financial inclusion
	Founder	Investments	Africa, Investments
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 1
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 2
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 3
	Founder	Verification	Africa, Verification
Asia (5)			
	Manager	Charity	Asia, Charity
	Founder	Credit scoring	Asia, Credit scoring
	Manager	Crypto	Asia, Crypto 1
	Manager	Crypto	Asia, Crypto 2
	Founder	Insurance	Asia, Insurance
Australia (5)			
	Founder	Crypto	Australia, Crypto
	Founder	Insurance	Australia, Insurance
	Founder	Investments	Australia, Investments
	Founder	Peer-to-peer transactions	Australia, Peer-to-peer
	Manager	Verification	Australia, Verification
Europe (8)			
	Founder	Charity	Europe, Charity 1
	Founder	Charity	Europe, Charity 2
	Founder	Credit scoring	Europe, Credit scoring
	Founder	Crypto	Europe, Crypto
	Manager	Financial inclusion	Europe, Financial inclusion 1
	Manager	Financial inclusion	Europe, Financial inclusion 2
	Founder	Insurance	Europe, Insurance
	Founder	Peer-to-peer transactions	Europe, Peer-to-peer
North America (8)			
	Founder	Charity	N-America, Charity
	Founder	Credit scoring	N-America, Credit scoring 1
	Manager	Credit scoring	N-America, Credit scoring 2
	Founder	Crypto	N-America, Crypto
	Manager	Financial inclusion	N-America, Financial inclusion
	Founder	Investments	N-America, Investments
	Manager	Peer-to-peer transactions	N-America, Peer-to-peer
	Founder	Verification	N-America, Verification
South America (6)			
	Founder	Crypto	S-America, Crypto
	Founder	Financial inclusion	S-America, Financial inclusion 1
	Founder	Financial inclusion	S-America, Financial inclusion 2
	Founder	Insurance	S-America, Insurance
	Founder	Peer-to-peer transactions	S-America, Peer-to-peer 1
	Founder	Peer-to-peer transactions	S-America, Peer-to-peer 2

5.3.4 Data collection

We conducted 40 semi-structured interviews with blockchain entrepreneurs with a focus on blockchain for good. Participants were explicitly asked for their permission to record

the interview, and all information was anonymised in the transcripts. The interviews were recorded and transcribed to assist in the analysis. To complement the interviews, additional documents were gathered to provide more knowledge about the context for the interviewer and then analysed after the interview to fill any gaps in understanding. These documents included white papers, reports and website materials.

The interviews followed the ethnographic futures research method, guided by Textor's (1980) handbook. In accordance with this handbook (1980), interviews were conducted in a conversational manner, creating a non-threatening environment that encourages open and honest responses. The interviewer played the role of guiding the conversation while allowing interviewees the freedom to express their own perspectives and future imaginaries. To keep the questions open, we did not specify the context or the year for these utopian, dystopian or probable scenarios (Textor, 1995).

A central element of the method is the structure or order of questioning (Textor, 1995; 1980). We started with the optimistic scenario and asked the participant to imagine and explain what would be the best possible scenario for the future, a utopian future, which still would be realisable in their view. This was the question that often prompted the most extended answer. Next, we asked the interviewees about the other end of the spectrum, the pessimistic, worst-case scenario, or dystopian future, which could still be realistic. Even though these answers often started with simply the opposite of the optimistic scenarios, we allowed time and space for the entrepreneurs to imagine beyond this dichotomy to elicit new scenarios for these dystopian futures. Finally, we asked what they viewed as the most realistic or probable scenario. This question aimed to prompt their prediction for the future. Following the ethnographic futures research method, we put "the interviewee in charge" (Textor, 1980, p. 466) and tried not to guide them, for instance, to answer on a specific level or timeline. However, in this method, it is also vital to encourage interviewees to stay within some boundaries for the scenarios to be realistic and avoid scenarios of "everything is perfect" or "doomsday is tomorrow" (Textor, 1995).

5.3.5 Data analysis

We conducted our data analysis in accordance with the ethnographic futures research method (Textor, 1980; 1995). An essential part of ethnographic futures research is to

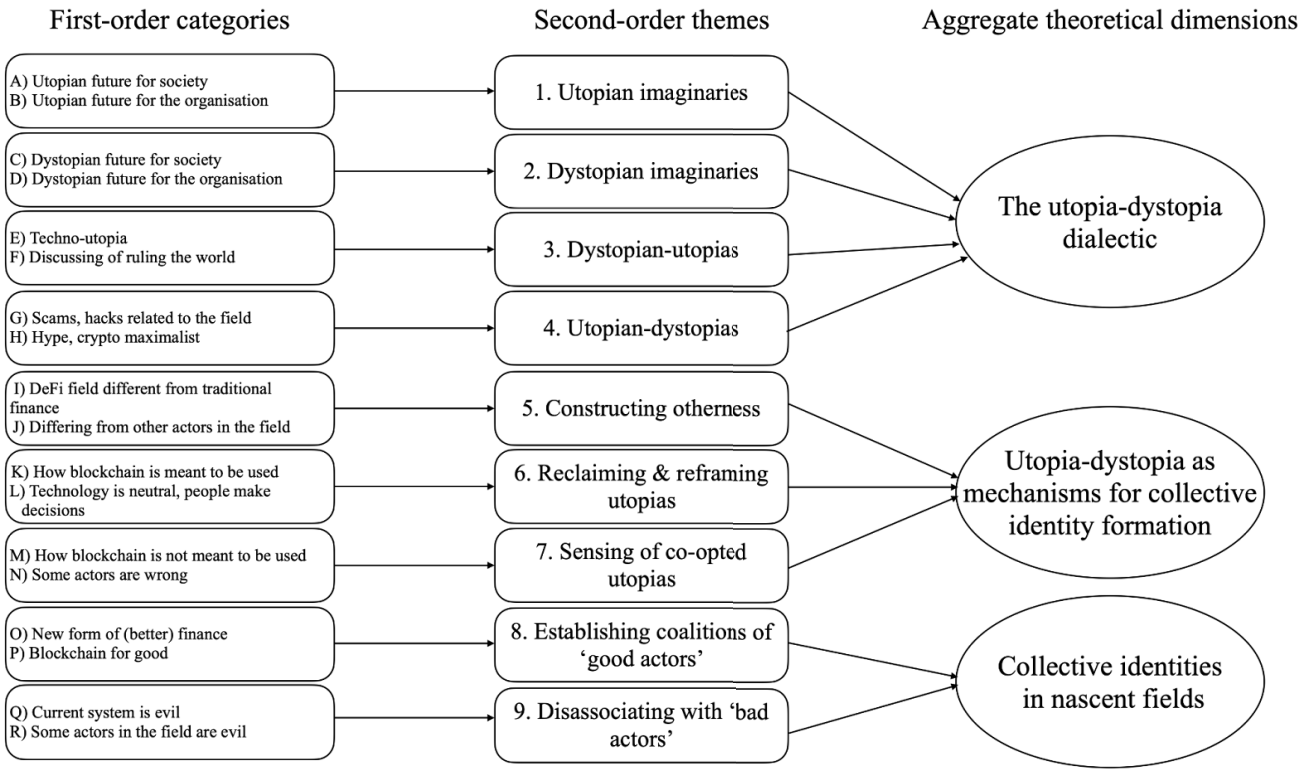
compare and contrast the future scenarios of interviewees (Textor, 1980). We thereby conducted a comparative thematic analysis of the interview transcripts using the Atlas.ti qualitative data analysis software. The thematic analysis allowed us to identify emerging themes in the interviews and supporting documents (Gioia et al, 2013; Nowell et al., 2017).

We started our analysis by isolating the utopian, dystopian and probable scenarios for each of the interviewees. Following the ethnographic futures structures, we first analysed the optimistic, then the pessimistic and lastly the realistic scenarios of each participant. This allowed us to gain a deep understanding of how each interviewee imagined the future. When analysing the utopian and dystopian scenarios for each interviewee, we noticed that there are some interconnections and overlaps between utopias and dystopias.

In accordance with the ethnographic futures approach, we then compared the future imaginaries for all the interviewees and began to notice how the entanglement between utopias and dystopias, with some respondents' dystopias aligning with others' utopias. We labelled these utopian dystopias (when the interviewees were discussing dystopias, that could be viewed as one's utopia), and dystopian utopias (when the interviewees were discussing utopias, that could be one's dystopia).

The analysis of these interconnections, also how participants' future imaginaries invoked an emerging collective. Themes of othering, coopted utopias and competition for utopias gave a sense of emerging we-them dichotomies within the field. We then zoom in on the mechanisms underpinning this collective identity formation by distinguishing themselves from others. Finally, we conducted an additional round of analysis to unpack the implications of this othering and competition for utopia, revealing how these collective identity formation mechanisms were contributing to the establishment of coalitions and demarcations within the nascent field. Figure 7 provides an overview of the themes that emerged from the data analysis. Appendix 5 provides exemplary quotes for the first-order categories in the data structure. Full interview guide can be found as Appendix 2.

Figure 7 Data structure



5.4. Findings

Our findings revealed a diverse range of utopian and dystopian imaginaries being invoked and enacted by entrepreneurs within the emerging field of blockchain for good. Our analysis suggests a dialectical relationship between these utopias and dystopias, with utopian and dystopian imaginaries infusing each other, as observed through the presence of utopian dystopias and dystopian utopias. Through our thematic analysis, we identified three main mechanisms through which the utopia-dystopia dialectic is shaping the development of collective identities. We show how constructing otherness, reclaiming and reframing utopias and sensing co-opted utopias contribute to collective identity formation in the emerging entrepreneurial field. Through these mechanisms of othering and the reclamation of utopias, aligned actors appear to be developing collective identities as they establish coalitions of 'good actors', while creating spaces for critique and disassociation from those they feel are contributing to the realisation of dystopias.

5.4.1 The utopia-dystopia dialectic of blockchain entrepreneurs

5.4.1.1 Utopian imaginaries

Our analysis revealed the different utopias of blockchain entrepreneurs, either related to a future society where blockchain applications would be ubiquitous or utopias where their organisation has shaped the future by delivering on its mission to transform finance. Blockchain entrepreneurs imagine a future society where the "Web3 world" is realised and blockchain technology is seamlessly integrated into all sectors of the economy. These utopian imaginaries relate to how they perceive the development of the entrepreneurial field or of the blockchain technology rather than their role, or their enterprises' role, in building this future. The entrepreneurs' utopian imaginaries portray a future world where blockchain has created a better world characterised by decentralisation, security, privacy, transparency, and traceability. For example, in the decentralised finance sector, utopian imaginaries describe a more sustainable world with financial inclusion for all and decentralised power throughout society.

> Why are we excited? We are giving power back to the people because a lot of these initiatives, no offence, are just the right ones. We help create solutions, and the people in the community can solve what they see as their own challenges. We enable them to gain authority in their own lives. Because now, if you do not have a job, you don't have money. But in our world, people don't need the jobs to have money. (Africa, Peer-to-peer, 2)

Despite the rhetoric around equality and disrupting power imbalances, these utopian imaginaries sometimes involve a techno-elite who is driving change:

> This is really how you make an impact for those economies. So you have the financial inclusion, the social growth, that you can benefit from that, as part of an ecosystem play, when you just deliver this tech, as you leverage poor people to do their business, you don't want to teach them how to do their business, and you don't want to complicate their life with the new technology. So you need to make it as smooth as possible with blockchain. (Africa, Financial inclusion)

Many of these entrepreneurs' utopias narrate a world where their organisation creates and dominates the entrepreneurial field. In these scenarios, the entrepreneurs see themselves as playing a central role in building the utopia, with their organisation leading the realisation of this imaginary. For example, these utopias could be related to having the biggest community, even being the only protocol or cryptocurrency used worldwide.

> We want to be the only wallet. We are claiming this on a global level. It's [all] anybody would ever need because of the multi-blockchain…we've also created a hybrid architecture behind it. So it can be as it can be 100% of everything, that is our big innovation. (Africa, Peer-to-peer, 3)

> We anticipate that there will be a massive growth once we launch. We will have exponential growth. That trust is the most important asset we have. (Europe, Crypto)

5.4.1.2 Dystopian imaginaries

The dystopian imaginaries invoked by blockchain entrepreneurs are also related to either the societal or the organisational levels when considering possible futures. Societal-level

dystopian imaginaries describe different states of the world, where, for instance, pressing grand challenges such as climate change or social inequalities remain unsolved. Dystopian imaginaries also focus on the current moment, with the dystopian present motivating entrepreneurs to create a better future. For example, many entrepreneurs describe the current economy as a dystopian world with extremely centralised power and a financial system that does not work or works only for a few.

> And then there's data protection, you own your own data, you aren't selling that with our solution. Like you do currently through Amazon, or Facebook, which is their business model, right? So you can choose how your personal data is being used, choose who sees it, and how it's used. Now you are sold to the highest bidder. (N-America, Peer-to-peer)

The dystopian imaginary associated with the rise of blockchain was also mentioned by many entrepreneurs, who also fear the increase in scams or hacks in the blockchain.

> The vast majority is a scam, I'll be honest to you. And the scams are just increasing. Or the hacks too because of errors. I really fear that when everything is just on the web. But that is how it is going to be, more breaks more scams and hacks and people losing everything. (Australia, Crypto)

Organisational-level dystopias were related to the imaginaries of the organisation not achieving its goals or mission. Often, the entrepreneurs said they fear a future where the blockchain and their solutions are not adapted fast enough or widely enough. This would mean that their mission would not be actualised, as often widescale adaption is needed for organisations to achieve their goals.

> So my biggest fear for the future is slow adoption. Because we've taken the time already, and still we don't use tokens on our blockchain. If we have slow adoption, we will go under. Frankly, literally literally what protects you from all the diseases and issues that you could have is our protocol. And a lot of people who don't understand this, only when it is reality. (N-America, Credit scoring 2)

In addition, entrepreneurs fear a dystopian future where new legislation might restrict or halt the growth of their organisation and the field.

> I would not like to see a future where coding is deemed to be anything other than free speech. Like currently, for instance, in the United States, there is a Supreme Court case, where code is deemed to be a form of free speech. And I think that's very important for the builders to feel as if they can build, you don't want to stifle creativity. Now, of course, people have to be responsible. Some sort of self-regulation is really important, because I wouldn't want to see a government coming in to stifle that in any way… And people will lose innovation because this is going to be borderless, you have to think that it's actually really important to have a more of a consistent framework and approach that allows for innovation. (N-America, Peer-to-peer)

5.4.1.3 Dystopian-utopias

When comparing the imaginaries of the blockchain entrepreneurs, we could also identify that utopias and dystopias were linked together in the sense that one's utopia can be another's dystopia. Entrepreneurs often discussed how some utopian imaginaries forward by others in the field have seemed to be rather a dystopia for them. We call these 'dystopian utopias'; in other words, a utopia that is a dystopia to others. An example of

this could be a highly techno-optimistic world, where every challenge is solved with technology, and blockchain entrepreneurs are central to power relations in society:

> In terms of governance, I think of our coin as kind of a global parliament will make global decisions… we need to make local decisions. And that's why I think a global Parliament's a global community where we collectively decide what to do and then instruct the governments to do what people really want them to do, so the governments can do execution, rather than discussing all the time and coming up with different approaches by country... We do make a collective decision and then instruct governments to implement the process. (Europe, Crypto)

> This is the pursuit of true, pursuit of free markets and capitalism everywhere through tokenisation. For me, technology represents unconditional love with free markets. We empower everyone by spreading the libertarianism and through expecting the return of everything when they use this technology with all, money, supply, health. (Australia, Investments)

5.4.1.4 Utopian-dystopias

Our analysis revealed multiple instances where blockchain entrepreneurs were discussing dystopias that would be regarded as utopias by others. We label these 'utopian dystopias'. This was the most common dystopian imaginary across the interviews. Discussions of utopian dystopias emerged as entrepreneurs criticised others in the field, explaining how the utopian imaginaries of these other organisations represented their idea of a dystopia. For instance, interviewees reflected that many blockchain entrepreneurs are using the technology to gain more power instead of decentralising it.

> What people need to realise is that is should not be 2% tech and 98% marketing hype. Like the field is now. It is just about crypto people talking about going to the moon with their currencies. Like you'll get rich doing this, sign up for my bitcoin investment scheme, and you'll get rich and don't worry about technology working and all of that is targeting the real people. This is so scary to me, but seems to be the ideal of all the crypto, at least here. It should be about taking advantage and pyramid schemes like it is now. We need to transform this. (N-America, Crypto)

The recent case of the FTX scandal in the blockchain world (Reiff, 2023) was constantly cited as a clear example of a utopian-dystopia. These imaginaries discussed how the CEO of the FTX Sam Bankman-Fried had been mismanaging, or even scamming people, despite the narrative of effective altruism utopia.

> History just keeps repeating itself. If you look at FTX, and that CEO. It's not the blockchain behind that scam, that has a problem. It just the non-transparent CEO of the company that appeared basically spreading the word of effective altruism and decentralised, transparent ecosystem. And look what happened. Terrible things that have happened over the past year just using this innovation for gaining more money, like so many others will in the future too. (Africa, Financial inclusion 1)

5.4.2 Utopia-dystopia as mechanisms for building collective identity

In comparing the utopian and dystopian imaginaries of the interviewees, we uncovered multiple ways in which these imaginaries were shaping sense of collective identity among actors in the entrepreneurial field. We recognised three main mechanisms through which

these imaginaries contributed to forming collective identities: othering, claiming and reclaiming utopias, and co-opted utopias.

5.4.2.1 Othering

The overarching mechanism through which utopian and dystopian imaginaries could be seen as shaping a sense of collective identity were through the process of othering. In describing utopian and dystopian futures, entrepreneurial actors were making a distinction between themselves and some other. We recognised two ways the interviewees were distancing themselves from others, either from others outside the blockchain field, or from others within the emerging blockchain field. In distancing themselves from more conventional or dominant fields, the entrepreneurs were attempting to consolidate themselves as part of a new collective. In framing the other, they demarcate themselves from those they view as creating a dystopian future.

> What I've learned is that the financial system is stupid. This is my experience with the stock exchange. So if you are rich you can do something you, if you're poor you care about your life, because otherwise, you will die tomorrow. Why is our financial system working like this? This is the accumulation of wealth, and power for sure. So we thought, the way of money creation is stupid. I started to do my own research and understanding the cycle and creating new world of finance, a tokenised world. (Europe, Peer-to-peer)

> Ultimately, a lot of the grey hairs, if you don't mind me calling them, will always prefer another grey hair. But decentralisation will continue, it will always continue and go further and further, and it will proliferate. Maybe it will take 10 to 15 years to get rid of these grey-haired people and how they like the finance industry to look like, but the decentralised world will be the future. (Australia, crypto)

Somewhat surprisingly, othering themselves from other actors within the blockchain field was the most common approach to establishing a notion of the collective.

> I was a massive follower of Bitcoin, in the early days. I love the Satoshi writings, and the community in the original days saying we need a parallel economy because we can't trust the way national economies work. Unfortunately, now it is like comparing a pig to a human, that how much it's similar. The whole blockchain industry has become like the financial industry, people out for making more money and pumping and dumping. They are about the NFT kittens, cryptos to the moon, just memes really. We are not the crypto bros, I say this time and time again, they are out for profiteering. We are doing something meaningful. (Australia, insurance)

5.4.2.2 Claiming and reclaiming utopias

In discussing how they differ from others within the blockchain field, we noted how blockchain entrepreneurs felt part of a collective involved in reclaiming the utopian imaginary for blockchain technology. What we mean by this is that interviewees were explained how they are building utopian imaginaries through setting the standards for what the field world should be about, not what it is becoming. In other words, they are building the collective identity by claiming and reclaiming what the future should look like, or what kind of world is being built with blockchain technology. These utopias reflect their commitment to a future where blockchain technology serves as a catalyst for

a more equitable and sustainable world. For example, the entrepreneurs discussed how they understood that the blockchain was meant to be used, or how the technology is meant to be neutral and should be utilised in the 'right' way.

> Blockchain is just a neutral technology. It is the people that are misusing it that are making it bad. Unfortunately the crypto bros have done that. So I think there needs to be a proper cleaning of all of the use Trump's term draining the swamp, of all of this forward and hype and speculation. In order for the technology itself, the roots and the rails to be exposed and to be useful. (Africa, Peer-to-peer 1)

> One of the things our coin was built to do is to reward people who can create cool things. Whatever it might be, whatever content and there is value to it. If people appreciate it, you be rewarded. We do it a very tangible way. But bigger picture is that that's really what crypto was meant to establish. Like you don't need to be a certain kind of person to send or receive money. You as an individual can participate in this no matter what color, race, gender, sex, attitude, political leanings, you are not to be excluded. You're a human being. (N-America, Crypto)

5.4.2.3 Sensing co-opted utopias

The dystopian imaginaries expressed by blockchain entrepreneurs frequently reflected on the notion of utopias imaginaries being co-opted by 'bad actors'. These entrepreneurs feel as though their utopian ideals for blockchain have become appropriated by certain actors in ways that undermine the original values, causing these utopias to morph into dystopias. Entrepreneurs discussed how the early promise of blockchain for fostering a decentralised and democratic financial system is being overshadowed by the emergence of entities that just replicate the power structures of the traditional financial world they aimed to disrupt. This co-option is seen as a betrayal of the foundational principles of blockchain, turning a potential utopia into a dystopia of concentrated power and influence.

> My biggest fear for the future, and well my prediction is that. Well in this space, more capital, more users, more exchanges, more lending protocols all that. And they are just adopting the ideas from traditional financial system and that is not even working in the Web2 world, right? There are a lot of good people working on those ideas, too, I'm not saying that. But I don't think that's what Web3 is meant to be kind of a copycat of what we already have. It doesn't work. But for so many blockchain is just a new way of making more money and becoming ultra-rich or even more ultra-rich to live these crazy lifestyles in Cayman. And it makes sense that you will replicate the same ideas and values behind that if you only know. (S-America, Financial inclusion 1)

> I feel like crypto now, it is just bad actors. They are hijacking the beauty of the technology totally. It is not meaningful use, it is not right. I generally try to focus my energy on building the future, but this field is permeating into like FBI, like you have no chance. (Australia, Peer-to-peer)

5.4.3 Shaping collective identities in nascent entrepreneurial fields

These mechanisms of othering, reclamation of utopias and sensing co-option are leading aligned actors with the field of blockchain for good to solidify collective identities as they establish coalitions of 'good actors', while creating spaces for critique and disassociation from those they feel are contributing to the realisation of dystopias.

5.4.3.1 Establishing coalitions of ‘good actors’

Supported by the practices of othering and attempting to reclaim utopias, entrepreneurs within the field are building coalitions based on shared imaginaries of ‘blockchain for good’. These coalitions are not necessarily formalised alliances or partnership but rather represent a shared commitment to leveraging blockchain technology for societal change and sustainability transitions. By establishing these coalitions, the entrepreneurs appear to be aligning themselves with those they perceive as 'good actors', with whom they feel they can create utopian standards for the field.

> Right now, the name of the game is growing, growing, growing. But that does not benefit anyone. We need to build new forms of finance, that go beyond of growing. They should unlock freedom to all, that all individuals are sovereign, not countries and their central banks, like in the past and still is, in the future no. (Europe, Verification)

> Crypto ecosystem is like fire for my life. You can use it for good things, you can use for worse things. It is just like it was at the beginning of the internet. But something different is that this can change everything even quicker, you just have to be in the good side. Building these real use cases. Like the Mandalorias we are finding what is the way. (S-America, Peer-to-peer 1)

5.4.3.2 Disassociating and creating spaces for critique

Actors in the blockchain field are also building collective identities by distancing themselves from other actors within their future imaginaries. In invoking utopia-dystopia, many entrepreneurs were vocal about distancing themselves from the hyped narratives that often surround blockchain, such as the 'to the moon' mentality of speculative trading or the exclusionary and ethically questionable 'cryptobro' culture. In their utopian and dystopian imaginaries, these entrepreneurs create clear boundaries and demarcations between their collective and the others who stand for values they reject. For example, many entrepreneurs are keen to separate their enterprise from the volatility of ICOs and the speculation inherent in cryptocurrencies. Many blockchain-for-good entrepreneurs are vocal in their critiques of those seeking quick financial gains, emphasising the need for sustainability and stability as the field develops.

> We decided not to take ICO. Now that is the most important message. It does not align with my idea about Web3. I have seen founders just having great times with ICOs. Like having $100 million dollars crazy fast. There are people living in poverty, our planet is not good. I’m all about tokenisation [technology], but please, why are we making more people rich with ICOs and contributing to the corruption and to their egos (S-America, Financial inclusion 2)

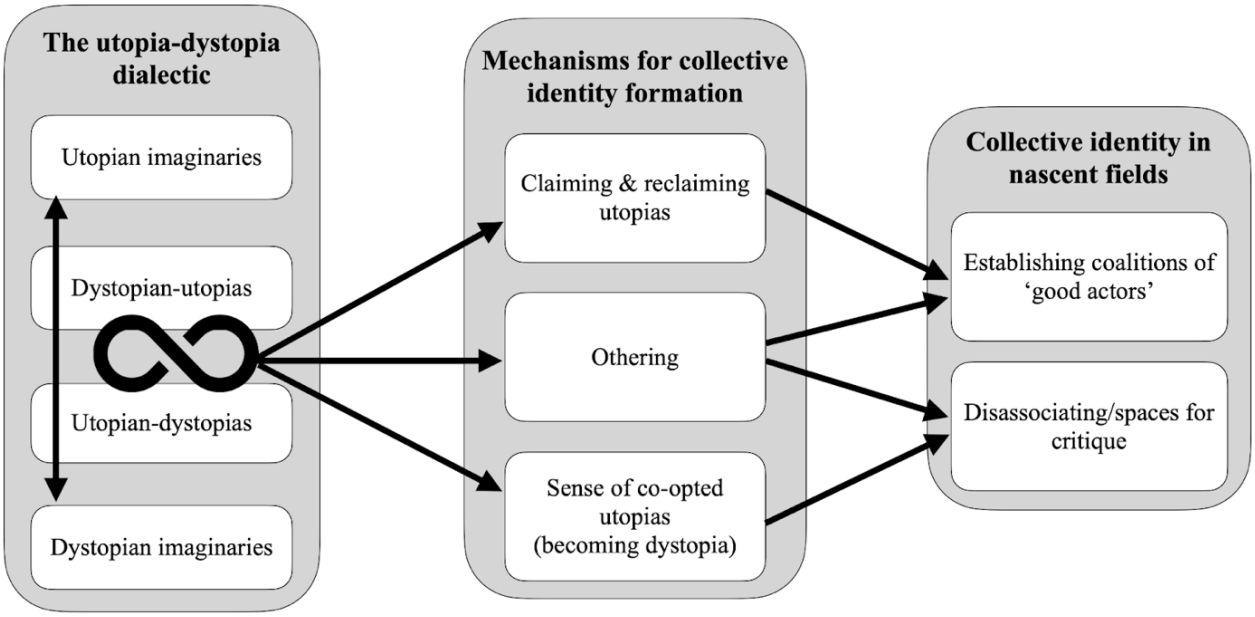
> People are finally realising, there’s already this interest, that this field is not about NFT cats, or crazy high cryptos. But actually there are various potential uses for instance climate change adaptation. (Australia, Verification)

5.5 Discussion

Our findings show how entrepreneurs in the nascent field of blockchain technology invoke a range of competing and connected utopian and dystopian views as they attempt

to enact an alternative financial system. These utopias and dystopias are in a dialectical relationship, continually shaping and informing each other. In response to these interrelated and overlapping utopias and dystopias, the entrepreneurs attempt to distance themselves from others who they feel have co-opted utopias and turned them into dystopias. They are seeking to reclaim and reframe utopian imaginaries for the emerging field. This othering and competition for utopias helps aligned actors to develop collective identities and establish coalitions of 'good actors', while creating spaces for critique and distance from those they as 'bad actors' in the field. Figure 8 visualises these findings.

Figure 8 Utopia-dystopias as a mechanism for creating collective identities in nascent entrepreneurial fields



The model illustrates the dialectical relationship between utopian and dystopian imaginaries and the mechanisms through which these imaginaries inform collective identity formation within nascent entrepreneurial fields. Utopian and dystopian imaginaries (Beckert; 2013, 2021; Bina et al. 2020), provide fertile ground for the establishment of collective identities. These imaginaries provide the 'prospective structure' (Van Lente & Rip, 1998) that shapes action with nascent entrepreneurial fields. Utopian imaginaries are aspirational, encapsulating desires for a better future, while dystopian imaginaries serve as cautionary tales that embody fears for the present and future (Claeys, 2016; Parker, 2003). The dialectic symbol illustrates the ongoing,

dynamic interaction where utopian and dystopian imaginaries inform and reshape each other, reflecting the performative nature of future imaginaries (Borup et al., 2006).

The model proposes three mechanisms through which these utopian and dystopian imaginaries influence collective identity formation. Othering is a critical mechanism through which entrepreneurs distance themselves from imaginaries for blockchain that they perceive as dystopian, thus shaping their collective identity in opposition to these views. The act of identifying someone or something as ‘other’ is common practice within organisations and fields as actors seek to shift blame or protect themselves from condemnation (Roulet & Pichler, 2020; Cabrejas, 2010). Claiming and reclaiming utopias are processes whereby entrepreneurs define and redefine what the blockchain utopia means to their broader collective. The notion of claiming and reclaiming utopia aligns with Parker’s (2003) seminal insights on the role of utopia in structuring and restructuring alternative organisational forms and fields. Finally, reflecting on utopian and dystopian imaginaries allows entrepreneurs to respond to and rectify co-opted utopias, where they consider the original values for the field to have been subverted. This insight highlights how ideologically charged imaginaries can produce dystopian outcomes for some actors, despite their claims to pursue utopian states (Claeys, 2017), thereby showcasing the inherent entanglement of utopian and dystopian imaginaries (Gordin, Tilley & Prakash, 2010).

The endpoint of the model reflects the two ways in which future imaginaries shape collective identities. The utopia-dystopia dialectic, and the processes of othering and reclamation, lead to the establishment of coalitions of 'good actors' with collective identities based on shared utopian imaginaries. This insight resonates with the work by Lippmann & Aldrich (2015), who illustrate how collective identities emerge through shared narratives and rule-setting within nascent fields. The processes of othering and sensing co-option serve to create spaces for critique and distancing or disassociation from 'bad actors'. Disassociating from the bad others solidifies the collective identity by defining the dystopian imaginaries the collective objects to. This reflects the 'we-them' dichotomy described by Saunders (2008), where boundaries are drawn to foster cohesion within a collective and to maintain clear boundaries from those who represent the dystopian imaginaries of the field.

This model unpacks the complex interplay between utopia-dystopia imaginaries and collective identity, providing a more nuanced understanding future imaginaries shape collective identities in emerging entrepreneurial fields. By theorising this dynamic, we show how the collective identities within nascent entrepreneurial fields are actively constructed through dialectical processes of othering, reclaiming and responding to co-option.

5.5.1 Contributions

We make multiple meaningful contributions to the literature on future imaginaries and collective identity in the field of entrepreneurship. First, our study expands upon the established understanding of future imaginaries by revealing the dialectical relationship between utopian and dystopian imaginaries and how this relationship shapes collective identity formation in a nascent entrepreneurial field. The dynamic states approach to entrepreneurship proposed by Levie and Lichtenstein (2010) complements our findings by underscoring the non-linear and evolving nature of these processes. Just as these scholars argue that entrepreneurial ventures continuously adapt to changing conditions, our study reveals that utopian and dystopian imaginaries are not static but dynamically interact, continually shaping and reshaping collective identities within the emerging blockchain field. By demonstrating how these imaginaries are deeply intertwined and continuously shape each other, we provide empirical support to the theoretical perspective that utopian and dystopian visions are endpoints on a continuum, but rather inherently entangled (Gordin, Tilley & Prakash, 2010). Our findings thereby caution against treating utopian and dystopian imaginaries as discrete and oppositional (Bina et al., 2020; Son, 2015). Rather, we position utopias as ideologically laden constructs that can foster dystopian realities (Claeys, 2017). In the context of techno-utopias (Dodd, 2017), understanding utopia-dystopia as a dialectic challenges conventional understanding that positions technological utopias as either inherently liberating or oppressive (Sibley, 1973; Kunkel, 2008; Rambe & Nel, 2015).

Second, we illustrate how actors involved in nascent entrepreneurial fields compete over utopian imaginaries for the field. While our findings show the notion of shared future imaginaries in driving collective identity formation, we also noted competition among actors as they seek to define the dominant utopian narrative. By revealing the contest over defining the 'correct' utopian imaginary, our findings resonate with the 'we-them'

dichotomies highlighted by Saunders (2008). Our findings thereby suggest that the formation of collective identities in nascent entrepreneurial fields is a contested process, marked by ideological schisms, which can lead to the emergence of distinct coalitions with distinct imaginaries, even within a seemingly cohesive field.

Third, we highlight the role of othering in creating shared utopias and shaping collective identities in emerging fields. Lévesque and Stephan's (2019) exploration of the temporal dimensions of entrepreneurship underscores the importance of understanding how time influences these processes, particularly in the continuous shaping of future imaginaries. We show how these mechanisms lead to the creation of coalitions of 'good' actors and spaces to critique those leading a path towards another dystopia. Scholars have contended that collective identities are predominantly formed through alignment around a common purpose (Ravasi et al., 2020). Our findings are consistent with this view, highlighting how shared utopian imaginaries can lead to coalition building. However, we contribute a novel dimension by illustrating how the act of othering, distancing oneself from dystopian scenarios associated with other actors, also plays a significant role in solidifying collective identities. This process of othering, as conceptualised by Claeys (2016), fosters internal cohesion, and more importantly is instrumental in the demarcation of boundaries within the entrepreneurial collective against a backdrop of shared threats or common 'enemies'. By doing so, we draw attention to the dual process of collective identity building in nascent fields: the coming together around shared utopias and the collective distancing from perceived dystopias. This dual process reveals a nuanced interplay between utopia-dystopias, which both define and defend the emergent collective identity.

Fourth, we illustrate the value of Textor's (1980;1995) ethnographic futures as a research method to elicit the utopian and dystopian imaginaries of social actors. While this method has been widely used to elicit utopian and dystopian imaginaries and how they shape action in the field of futures study (Textor, 1980; Cheney, 2014), this is the first time it has been utilised in organisational research. This methodological approach resonates with Dimov's (2024) assertion that the future should be embraced as a space of perpetual novelty, where uncertainty is navigated through creativity and adaptive strategies. By integrating the ethnographic futures research method into our study, we demonstrate its utility in uncovering the complex interplay between utopian and dystopian imaginaries. Our application of the method provides a structured yet open-ended approach that allows

participants to articulate their future imaginaries, shedding light on the construction and performative aspects of utopias and dystopias (Beckert, 2016; Oomen et al., 2021). This methodological adaptation contributes to the field of organisational studies by offering a novel tool for researchers to elicit a diverse range of future imaginaries.

Fifth, in exploring the role of future imaginaries in a nascent entrepreneurial field, we highligh the importance of considering the dimension of time, a factor that significantly influences how entrepreneurs envision and realise their goals. As Lévesque and Stephan (2019) highlight, time is an underexplored yet pivotal element in entrepreneurship. The concept of future imaginaries is deeply intertwined with time, particularly the way entrepreneurs envision and plan for the future. Lévesque and Stephan (2019) highlight the importance of future time perspectives in shaping entrepreneurial actions, suggesting that how entrepreneurs perceive and manage time can significantly influence the futures they imagine and strive to create. This study builds on their argument by examining how different time perspectives influence the construction and pursuit of future imaginaries in nascent entrepreneurial fields. This perspective acknowledges the nonlinearity and complexity inherent in entrepreneurial processes, suggesting that entrepreneurs continuously adapt their strategies and future imaginaries in response to evolving circumstances (Berglund & Dimov, 2023; Dimov & Güneştepe, 2024; Levie & Lichtenstein, 2010). Incorporating this dynamic view into our understanding of how entrepreneurs construct and pursue future imaginaries allows for a more nuanced appreciation of the temporal fluidity and contextual responsiveness that characterise entrepreneurial activities.

5.5.2 Limitations

First, the evidence stems from 40 interviews with blockchain-for-good entrepreneurs, many identified via PositiveBlockchain.io and snowballing. While this sample was deliberately global, it may still overrepresent ventures with a strong social-impact narrative and underrepresent “silent” or less networked actors. Second, the reliance on semi-structured interviews and ethnographic futures techniques means the data reflect how entrepreneurs talk about utopian and dystopian futures rather than how they consistently act upon them. Social desirability bias is especially salient in a context where distancing from “crypto-bro” stereotypes is performatively valuable. Third, our analysis focuses primarily on entrepreneurs, without systematically incorporating perspectives

from regulators, investors, or end-users. As a result, the collective identities we trace remain entrepreneur-centric and may not capture the full spectrum of field-level negotiations. Future research could employ longitudinal and multi-stakeholder designs to observe how imaginaries evolve during shocks such as regulatory changes or scandals, and how collective identities are maintained or fractured across time. Combining interviews with ethnographic observation, digital trace data, and archival sources would provide stronger triangulation.

5.6 Conclusion

Our study shows the intricate dynamics between utopian and dystopian imaginaries within the nascent entrepreneurial field of blockchain for good. By employing Textor's ethnographic futures methodology, we revealed how these visions shape collective identities, emphasising the dialectical nature of future imaginaries of utopias and dystopias. Entrepreneurs in this field construct their collective identities through processes of othering, reclaiming utopias, and responding to co-opted utopian visions. This dual mechanism fosters coalitions of 'good actors' and establishes boundaries against those seen as contributing to dystopian futures. Ultimately, our findings contribute to a deeper understanding of how utopian and dystopian imaginaries are not mere endpoints on a spectrum but are dynamically interwoven, continuously shaping and reshaping collective identities in emerging entrepreneurial fields.

CHAPTER 6 – MOTIVATED BY THE FUTURE: THE PERFORMATIVE ROLE OF FUTURES IN ENTREPRENEURIAL MOTIVATION

This chapter continues the exploration of future imaginaries and their performative role in entrepreneurship by examining how entrepreneurs are motivated not only by present opportunities or past experiences, but by their visions of the future. While the previous chapter focused on how utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields, this chapter shifts attention to motivations, investigating how entrepreneurs' expectations, imaginaries, and narratives articulate and pursue future-oriented goals.

Drawing on 40 interviews with blockchain entrepreneurs working in the field of decentralised finance, this study introduces a novel perspective on entrepreneurial motivation. It adopts the ethnographic futures research method to explore how entrepreneurs construct probable, possible, and preferred futures, and how these temporal constructs inform their motivation to act in the present. The analysis unpacks how expectations serve as anchors in present realities, how imaginaries expand the horizon of what is considered achievable, and how narratives create bridges between the probable and the possible.

By situating entrepreneurial motivation within the broader landscape of future-making, this chapter contributes to the entrepreneurship literature by demonstrating how future imaginaries can drive entrepreneurial action at individual, collective, and systemic levels. It also offers a methodological contribution by adapting the ethnographic futures method to entrepreneurship research, providing a structured approach to studying future-oriented motivations.

In building on the temporal and imaginative dimensions of previous chapters, this final empirical study further deepens the thesis' overarching focus on how actors assess, navigate and shape desirable futures. It underscores the importance of understanding entrepreneurial motivation as reactive or opportunity-driven, and as a forward-looking process shaped by imagined futures and their performative enactment in the present.

Motivated by the future: The performative role of futures in entrepreneurial motivation

Abstract

Entrepreneurial motivation is often understood through retrospective or present-focused lenses, emphasising opportunity recognition and resource mobilisation. This study proposes a future-oriented perspective by exploring how images of the future, including expectations, imaginaries and narratives, motivate entrepreneurial action. Drawing on 40 interviews with blockchain entrepreneurs working on decentralised finance for societal good, we adapt the ethnographic futures research method to investigate how entrepreneurs articulate probable, possible, and preferred futures. Our findings reveal that entrepreneurial motivation emerges from the interplay between structured expectations, aspirational imaginaries, and the narratives that connect them. Entrepreneurs envision transformative futures at individual, community, and systemic levels, and narrate their ventures as bridges between the present and desirable futures. We contribute to the literature on entrepreneurial motivation and future-making by showing how future imaginaries are performative and motivational, enabling actors to pursue ventures that reimagine financial systems. Methodologically, we demonstrate the value of ethnographic futures research in examining forward-looking motivations in entrepreneurship.

Keywords: Entrepreneurial motivation; future imaginaries; ethnographic futures; decentralised finance; future-making

6.1 Introduction

Entrepreneurial motivation has traditionally been studied through the lens of antecedents such as personal aspirations, market opportunities, and societal needs (Carsrud & Brännback, 2011; Chandra et al., 2021; Murnieks et al., 2020; Parker et al., 2010). This approach often emphasises the question of what happened before to drive entrepreneurial action, through antecedent-driven models of entrepreneurship, such as opportunity recognition and resource mobilisation, that anchor motivation in the present or the past (Kooij et al., 2018; Zhang et al., 2014). This paper proposes a shift in perspective: exploring how future imaginaries (Augustine et al., 2019), desirable and undesirable visions of the future, can serve as motivations in themselves. We examine how these imaginaries shape entrepreneurs' goals and also their sense of agency in creating alternative futures. As societies are facing grand challenges, including climate change, inequality, and financial inclusion, understanding how future imaginaries motivate entrepreneurial action offers a novel way to theorise entrepreneurial motivations and societal transformation (Gümüsay & Reinecke, 2024; Marti & Gond, 2018).

This paper addresses this gap by asking: how do images of futures motivate entrepreneurial actions? Adopting the ethnographic futures method (Textor, 1995), we explore the future imaginaries of 40 blockchain entrepreneurs working on "blockchain for good". This methodological approach enables a nuanced understanding of how entrepreneurs articulate their visions of optimistic, pessimistic, and probable futures, and how these imaginaries shape their motivations. By situating this inquiry within the broader context of prospective theorising (Muñoz & Dimov, 2023), we aim to advance theory that links future imaginaries to entrepreneurial motivation. In addition, by introducing the ethnographic futures research method to entrepreneurship research, we also offer a methodological contribution on how to study the role of future imaginaries in entrepreneurial action.

The findings contribute to the entrepreneurship literature by providing new insights into entrepreneurial motivations, prospective theorising, and researching futures. First, we demonstrate how future imaginaries serve as forward-looking motivators in entrepreneurship (Kooij et al., 2018; Zhang et al., 2014), particularly from the perspective of how pluralistic understandings of futures play together to build motivations (Wenzel et al., 2020). We also highlight the performative role of imaginaries in creating actionable

entrepreneurial pathways toward desirable futures (Beckert, 2021; Gümüsay & Reinecke, 2022). Finally, by adapting Textor's ethnographic futures research method to entrepreneurship research, we offer a structured approach to studying futures and their performativity (Textor, 1995; Cheney, 2014; Oomen et al., 2021).

6.2 Future as motivation

6.2.1 Constructing the future: Expectations, imaginaries, and narratives

The future is not a fixed reality but a socially constructed space shaped by expectations, imaginaries, and narratives (Garud et al., 2014; Wenzel et al., 2020; Whyte et al., 2022). Expectations serve as structured beliefs about future states of the world, guiding action by shaping what individuals and organisations anticipate based on present conditions and constraints (Witte, 2002; Bazzani, 2022). These expectations may operate at different levels of awareness, from implicit assumptions to explicit forecasts, forming the cognitive framework within which future possibilities are evaluated (Whyte et al., 2022; Börjeson et al., 2006). However, expectations alone remain anchored to past patterns and do not necessarily account for the emergence of new possibilities (Beckert, 2013).

Imaginaries, in contrast, introduce a more expansive and creative dimension to future thinking (Thompson & Byrne, 2022). They enable the construction of possible futures that are not strictly derived from existing trajectories but instead integrate normative values, hopes, and fears (Vignoli et al., 2020; Appadurai, 2013). Imaginaries allow individuals and collectives to conceptualise alternative futures, shaping long-term aspirations and influencing how societies orient themselves toward change (Beckert & Suckert, 2021).

Narratives serve as the mechanism through which imaginaries are translated into structured, actionable visions of the future (Bazzani, 2022; Garud & Giuliani, 2013; Rindova & Martins, 2022). By linking hypothetical futures to causal sequences and pathways of realisation, narratives provide coherence to imagined possibilities and shape decision-making processes (Tuckett, 2018). Without narratives, imaginaries remain speculative, while expectations may reinforce continuity rather than transformation. Together, expectations, imaginaries, and narratives construct the way individuals and societies engage with the future, shaping their perceptions, choices, and actions in the present (Bazzani, 2022).

6.2.2 Future orientation and entrepreneurial motivation

Given that different motivators shape the nature and outcomes of entrepreneurial action (Shepherd, 2015), entrepreneurial motivation has been a foundational topic, addressing the psychological, social, and economic drivers that compel individuals to create and manage ventures (Boss et al., 2023; McKelvie et al., 2021; Milanov et al., 2025). Traditional frameworks have often highlighted intrinsic and extrinsic motivations. Intrinsic factors, such as personal fulfillment and passion for innovation, are frequently linked to an entrepreneur's internal drive to achieve self-actualisation and pursue creative endeavors (Deci & Ryan, 2000; Kakatkar et al., 2024; Shane & Venkataraman, 2000). Extrinsic motivations, including financial rewards, market opportunities, and societal recognition, align with economic theories of utility maximisation and resource-based perspectives (Gartner, 1989; Newman & Barney, 2023; Riar et al., 2021). More recent studies have integrated temporal dimensions into entrepreneurial motivation, examining how past experiences, present circumstances, and future aspirations shape entrepreneurial intent (Berglund & Dimov, 2023; Muñoz & Dimov, 2023; Wood et al., 2021).

The concept of time is fundamental to human behavior, with future-oriented thinking playing a crucial role in goal-directed action (McGrath & Kelly, 1992). In psychology, the ability to foresee, anticipate, and plan for future outcomes has been identified as essential for motivation and therefore decision-making (Allemand et al., 2024; Kooij et al., 2018). This suggests that an individual's perception of the future is not just a cognitive exercise but a critical driver of their motivation. However, while the role of future orientation has been examined in psychology, its influence on entrepreneurial motivation remains relatively underexplored.

One way future orientation has been studied in management is through the concept of proactive behavior, which has been linked directly to motivation. Proactive behavior refers to when individuals anticipate, plans for, and attempts to create a future outcome that has an impact on their self or on their environment (Grant & Ashford, 2008; Nguyen et al., 2020). Parker et al. (2010) thus noted that proactivity, involves setting a proactive goal, and striving towards it driven by motivational states. Future orientation systematically influences motivation, and decision-making, shifting focus from short-term concerns to broader, long-term objectives (Muñoz & Dimov, 2023; Trope & Liberman, 2003). In this sense, entrepreneurial motivation can be understood as proactive

goal striving, where entrepreneurs are envisioning possible futures, and thereby having motivation to actively working towards making them a reality. By considering future consequences, entrepreneurs are not only motivated by personal success but by the potential to shape industries, economies, and societal structures in meaningful ways (Strathman et al., 1994; Zhang et al. 2014).

6.3 Methods

To explore how future imaginaries motivate entrepreneurial actions, this study focuses on the emerging field of decentralised finance (DeFi) within the broader "blockchain for good" domain. DeFi, a rapidly evolving sub-category of blockchain technology, seeks to transform traditional financial systems through decentralisation, transparency, and inclusivity (Chen & Bellavitis, 2020). This field provides an intriguing context for examining the interplay between future imaginaries and entrepreneurial motivation, as it is at the intersection of technological innovation and societal transformation (Rawhourser et al., 2022).

We adapted Textor's (1995) ethnographic futures method to study how future imaginaries motivate entrepreneurial actions. The ethnographic futures research method employs a sociocultural approach to interviews to elicit participants "perceptions and preferences among possible and probable alternative futures for their society and culture" (Textor, 1995, p. 461). This method is specifically focused on eliciting future imaginaries in interviews through exploring three scenarios: the optimistic (desirable futures), the pessimistic (undesirable futures) and the most likely (probable futures) (Textor, 1980). Unlike traditional approaches, ethnographic futures research takes a proactive stance toward the future, encouraging participants to articulate their values, desires, and fears. By situating these imaginaries within their sociocultural and organisational contexts, the method provides a nuanced understanding of how individuals envision and strive to shape alternative futures (Cheney, 2014). As highlighted in Table 16, the structured interview design, which begins with optimistic scenarios, then moving to pessimistic and probable futures, enables participants to articulate a broad spectrum of aspirations and concerns. This structure provides comprehensiveness and fosters contextualisation in participants' imaginaries (Textor, 1995).

Table 16 Interview questions

Phase	Questions
Warm-up	What is your background? Why did you found your organisation? What makes you excited to work with this organisation?
Textor's three questions	If you would imagine into the future, in your own words, how would you describe a future that is… A) best possible, but still achievable? B) not the absolute worst case possible, but a future you would not like to see? C) the most probable future?
Wrap-up	What are your next steps? What are you planning to do next? What is your organisation planning to do within next years?

We interviewed 40 DeFi 'blockchain for good' entrepreneurs from all continents. To identify potential interviewees our starting point was the PositiveBlockchain.io database. This is a comprehensive open database of companies and projects that have a focus on creating a positive impact with blockchain technology. In addition to the database, we also adopted a snowballing approach to contact 'blockchain for good' entrepreneurs recommended by our interviewees. To ensure a heterogeneous group of interviewees, we aimed to recruit at least five representatives from each continent. All of these entrepreneurs focus on finance applications of blockchain, but can be further defined through their more specific focus category.

Table 17 Overview of the interviewees

Continent	Interviewee	Category	Tag
Africa (8)			
	Founder	Credit scoring	Africa, Credit scoring
	Founder	Credit scoring	Africa, Credit scoring
	Founder	Financial inclusion	Africa, Financial inclusion
	Founder	Investments	Africa, Investments
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 1
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 2
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 3
	Founder	Verification	Africa, Verification
Asia (5)			
	Manager	Charity	Asia, Charity
	Founder	Credit scoring	Asia, Credit scoring
	Manager	Crypto	Asia, Crypto 1
	Manager	Crypto	Asia, Crypto 2
	Founder	Insurance	Asia, Insurance
Australia (5)			
	Founder	Crypto	Australia, Crypto
	Founder	Insurance	Australia, Insurance
	Founder	Investments	Australia, Investments
	Founder	Peer-to-peer transactions	Australia, Peer-to-peer
	Manager	Verification	Australia, Verification
Europe (8)			
	Founder	Charity	Europe, Charity 1
	Founder	Charity	Europe, Charity 2

	Founder	Credit scoring	Europe, Credit scoring
	Founder	Crypto	Europe, Crypto
	Manager	Financial inclusion	Europe, Financial inclusion 1
	Manager	Financial inclusion	Europe, Financial inclusion 2
	Founder	Insurance	Europe, Insurance
	Founder	Peer-to-peer transactions	Europe, Peer-to-peer
North America (8)			
	Founder	Charity	N-America, Charity
	Founder	Credit scoring	N-America, Credit scoring 1
	Manager	Credit scoring	N-America, Credit scoring 2
	Founder	Crypto	N-America, Crypto
	Manager	Financial inclusion	N-America, Financial inclusion
	Founder	Investments	N-America, Investments
	Manager	Peer-to-peer transactions	N-America, Peer-to-peer
	Founder	Verification	N-America, Verification
South America (6)			
	Founder	Crypto	S-America, Crypto
	Founder	Financial inclusion	S-America, Financial inclusion 1
	Founder	Financial inclusion	S-America, Financial inclusion 2
	Founder	Insurance	S-America, Insurance
	Founder	Peer-to-peer transactions	S-America, Peer-to-peer 1
	Founder	Peer-to-peer transactions	S-America, Peer-to-peer 2

We conducted our data analysis in accordance with the ethnographic futures research method (Textor, 1980; 1995). An essential part of ethnographic futures research is to compare and contrast the future scenarios of interviewees (Textor, 1980). We thereby conducted a comparative thematic analysis of the interview transcripts using the Atlas.ti qualitative data analysis software. The thematic analysis allowed us to identify emerging themes in the interviews and supporting documents (Nowell et al., 2017).

We started our analysis on comparing the different future scenarios within each interview, and then between different interviews. This allowed us to identify the imaginaries in the interviews, and the common themes of the undesirable and desirable future scenarios. In the next phase, we also contrasted the reasons entrepreneurs listed for founding their organisations, and the plans they had for the future for achieving their desirable futures. We also analysed the differences between possible futures and probable futures.

6.4 Findings

Our findings show how different conceptions of the future build motivation for entrepreneurial action. We studied the self-orientation, other-orientation, and consideration of future consequences, or system-orientation. We made the differentiation based on probable futures, possible futures, and the bridges between these two.

Table 18 Expectations, imaginaries & narratives

Future perspective/ Locus of Change	Expectations (Probable futures)	Imaginaries (Possible futures)	Narratives (Bridging present and the future, or probable and possible futures)	Impact domains
Self-oriented	Entrepreneurs expect continued financial exclusion and inefficiencies in traditional finance due to regulatory constraints and lack of transparency. Their motivations stem from navigating foreseeable industry shifts and ensuring personal success. *Currently we're creating, actually less transparency in a market that needs more transparency. I think that's typical issue and risk that we don't want to see in the future.* N-America, Verification *Realistically, I know it's going to keep growing, and there will be that tipping point that we really become massively successful, grabbing attention in a global way.* Australia, Verification	Entrepreneurs construct alternative visions for themselves beyond immediate constraints, imagining future achievements, or status that current structures do not support. These imaginaries act as motivation to pursue ventures despite uncertainty. *This decentralisation agenda… I hope that more and more people will get educated on this, because for me the most important is to know what could be done and achieved with this technology, not focusing on small chain or part of it, what we do now. But more people need education.* Africa, Credit Scoring 1 *I imagine a future where I've fundamentally changed how people interact with money, this is the norm. The system isn't built for that, but I know we can create it.* Europe, Crypto	Entrepreneurs develop strategic narratives that connect their present actions to imagined personal futures. They emphasise personal agency in bringing about systemic change, often framing their ventures as part of a broader movement toward financial sovereignty. *"For me, starting this wasn't about building product in blockchain, it was about providing independence. I see myself as part of this shift, were I am building a new world."* Africa, Credit scoring 2 *I started this project because I wanted to create the kind of financial system I wish had existed when I first got into crypto.* Africa, Peer-to-peer 2	Focus on success, career advancement, financial gains, or positioning oneself as a leader in an emerging space. *I'm excited to work with this mission, because I founded this organisation. I'm the leader and the inventor.* Europe, Credit scoring *The clients make our token valuable, we get rich, while creating value for the clients.* Asia, Crypto 2
Other-oriented	Entrepreneurs form expectations about how consumers, employees, or communities will react to emerging trends. Their motivations stem from the anticipation of meeting others' needs or responding to social shifts. *This poses a problem because I know my government doesn't agree with this particular outlook. But the banks and financial systems have failed. Communities need to raise, and we can enable it.* N-America, Crypto *For the next five years, it goes back to that banking the unbanked. I expect more unbanked communities to start using decentralized financial tools as traditional institutions continue to fail them*. Asia, Charity	Entrepreneurs imagine transformative possibilities for others, envisioning new forms of interaction, financial inclusion, or community-driven technological change. These futures are not yet probable but serve as guiding aspirations. *We really have global footprint. We want help people to get financial inclusion. Everyone to experience the world benefits the same. You know the 2023 dream. Everyone is empowered. And the currently, we see the gap of the traditional finance industry providing these kinds of services.* Asia, Charity *I think about a future where entire communities manage their own financial ecosystems without relying on banks. People will have the power to lend, or borrow or invest. A system that works for them, and not against them.* Australia, Peer-to-peer	Entrepreneurs build narratives about how their ventures will improve lives, an how they are aligning their efforts with collective progress, gaining stakeholder buy-in and mobilising support. Often presenting themselves as mediators between the old and new financial worlds. *We cannot just fully go decentralised, so we understand that we can link the worlds. The old banking worlds with this technology. Because we understand the regulatory, and the value in that too. But also, how that system is only working for the few*. Africa, Peer-to-peer 1 *Even though scams are true for this blockchain world, so is real life change. All our investors and stakeholders know what this is about, we are part of collective progress towards world that uses principles of capitalism, but not just in the hands of some.* Africa, Financial inclusion	Impact on consumers, employees, marginalised communities, or specific user groups benefiting from blockchain applications. *Any purely capital value market has lead to marginalised communities, but blockchain is the first that will not.* Europe, Charity 2 *You're able to keep this personal information more secure, rather than having it out there where anybody can access it. It's creating a community that can be connected all over the world and everything is open source. So lots of amazing brains working together.* N-America, Charity
System-oriented	Entrepreneurs analyse macro-level expectations, such as regulations, or technological adoption rates. This is shaping their motivation to align with or counteract systemic trends. *With rising inflation, or even hyperinflation, more people are looking for alternative finance. We see this an opportunity to build solutions for those who are excluded from traditional systems, knowing this shifts will accelerate the demand.*. S-America, Peer-to-peer 1 *The way things are going, blockchain is becoming another tool for Big Tech and Wall Street. But that's not what it was meant for. We're building a decentralized protocol for all.* Australia, Investments	Entrepreneurs envision radical systemic shifts, imagining new governance models, decentralized economies, or entirely restructured industries beyond what is currently feasible. These imaginaries inspire bold, disruptive initiatives. *I know that sounds really cheesy, but I truly believe we will be the reason that to end all war, and do more than any other nonprofit has ever done in history in this effort. Because it's the difference between giving someone a fish and teaching them to fish.* N-America, Credit Scoring 2 *Our crypto could actually work as a government for the world, and truly represent. We could know ahead, and align approaches, global decisions, to tackle problems such as climate change, but also pandemics.* Europe, Crypto	Entrepreneurs articulate narratives that frame their ventures as part of a broader movement for change, bridging gaps between utopian aspirations and realistic strategic action. Often they position themselves as key actors in shaping the global financial infrastructure. *I see great potential that blockchain applications or software can definitely provide to all 7 billion people. When all have the formal financial access, this will change the current status quo and really make the difference.* Asia, Charity *This isn't just about crypto or blockchain, or gaining a lot of money. It is about rethinking the ways economies work. Our system will outlive us, it is based on prioritising new things, transparency, collective ownership over profits.* Africa, Financial inclusion	Large-scale impact on governance structures, economic systems, financial markets, or institutional frameworks within blockchain and beyond. *This for me was the most holistic approach to happiness. We are changing everything, and implementing these Buddhist principles of happiness to everyone through our financial system.* Europe, Crypto. *It's no longer a question of whether institutions will adapt to decentralized finance, but how. It is going to completely new institutional frameworks, new economic system, financial markets.* S-America, Financial inclusion 2

6.4.1 Expectations – Probable Futures

Entrepreneurs' expectations are shaped by their understanding of existing trends, constraints, and likely trajectories in the financial and technological landscape. These probable futures are grounded in current realities, and thus are guiding entrepreneurs as they navigate opportunities and risks. Across self-, other-, and system-oriented perspectives, expectations vary in focus, from personal success to societal transformation and large-scale systemic shifts.

At the self-oriented level, expectations revolve around anticipated market growth, regulatory developments, and personal career trajectories. Entrepreneurs recognise the potential of blockchain-based solutions to achieve financial success and professional influence while acknowledging existing barriers such as regulatory uncertainty and public skepticism.

> For international remittances market blockchain is perfect, less expensive and secure. But there is a good deal of skepticism around that. And sometimes that cryptocurrency is trading like in casino angle. (N-America, Investments)

On the other-oriented perspective, entrepreneurs form expectations about how consumers, employees, and marginalised communities will respond to financial innovation. They anticipate that existing inefficiencies in traditional finance will continue to exclude specific populations. These expectations lead entrepreneurs to develop platforms that address financial inclusion, anticipating that people will seek decentralised financial tools as traditional systems fail to meet their needs.

> Now that we have digital identity, in many cases you can actually hold people accountable for the misuse. But that means traditional banks were not even actually interested in the misuse, they are only interested in making more money. So even even showing we have this technology, they don't care. (N-America, Charity)

At the system-oriented level, expectations center on macroeconomic conditions, regulatory shifts, and the evolving role of blockchain in financial infrastructure. Some align their strategies with these expected changes, integrating compliance measures and institutional partnerships, while others position themselves in opposition to traditional systems, leveraging the expectation of financial collapse or systemic inefficiencies as a rationale for disruption.

> I foresee by the end of decade, most of the exchanges have collapsed. Like NASDAQ. So we are all in on the alternative markets, that is where all the value will be, when we have showed what this is all about. (Africa, Peer-to-peer 3)

6.4.2 Imaginaries – Possible Futures

While expectations provide a structured vision of probable futures, imaginaries extend beyond these constraints, allowing entrepreneurs to conceptualise alternative possibilities that challenge existing financial and technological paradigms. These possible futures are not bound by current trends but instead reflect aspirational, transformative, and can be somewhat more radical visions of what could be achieved.

At the self-oriented level, entrepreneurs imagine futures where they transcend existing limitations, redefining their roles. Many envision themselves as pioneers, leaders, or disruptors shaping the next era of financial services. Their imaginaries often involve personal success and recognition, but not just in monetary terms, they also include imaginaries of empowerment and purpose.

> There are so many factors I can't predict, what will happen in the future. But I hope it is a future of all community currencies can really end tokenisation, and really bootstrap local communities, empower local communities. Let's hope for a more widespread adoption of blockchain related to real economy. (Europe, Financial inclusion 1)

In the other-oriented dimension, imaginaries revolve around the transformative potential of blockchain for communities, consumers, and underserved populations. Entrepreneurs conceptualise new forms of interaction, financial inclusion, and community-driven economic models that traditional systems fail to support.

> We have turned into more of community-driven application, we cannot make any decision without the community. We made it a bit of a social experiment. But this will be the future, this will be the way in which all organisations shall make decisions in the future. (N-America, Crypto)

At the system-oriented level, entrepreneurs imagine radical shifts in governance structures, financial markets, and institutional frameworks. Their imaginaries extend beyond individual and community-level transformation, picturing entirely new economic orders where decentralised systems replace existing centralised institutions.

> Because it is on a common ledger, this technology is building new economic order. That it is not the banks who sit in the highest chairs, but people. You and me people. We can make decisions about how financial system should work. And we know how it should be equitable. (S-America, Insurance)

Ultimately, imaginaries provide the motivation that propels entrepreneurs beyond the limitations of present realities. While expectations ground decision-making in likely outcomes, imaginaries inspire action toward futures that do not yet exist, pushing entrepreneurs to create new possibilities that redefine the financial landscape.

6.4.3 Narratives – Bridges between probable and possible futures

While expectations define what entrepreneurs believe will likely happen, and imaginaries push the boundaries of what could happen, narratives serve as the connection. Entrepreneurs construct narratives to make their aspirational futures actionable, translating their imagined possibilities into concrete steps and strategies.

At the self-oriented level, narratives allow entrepreneurs to frame their individual journeys within broader movements of change. Many articulate their ventures as personal missions, positioning themselves as pioneers shaping the financial future. This reinforces their motivation by affirming their role as active agents in shaping the future, rather than passive responders to external trends.

> I want to be among the visionaries. Be the creator. This time is similar as working for the creation of internet. But this is almost even better. Everyday in our group chats, there are new ideas on how are we improving the world. (N-America, Peer-to-peer)

Entrepreneurs also craft narratives on how their ventures will improve lives and drive collective progress. They emphasise their role as mediators between traditional financial systems and emerging decentralised alternatives, positioning their work as a bridge between existing problems and transformative solutions. These narratives are crucial in gaining stakeholder buy-in. Entrepreneurs frequently frame their ventures in terms of empowerment, inclusion, and fairness, mobilising communities around shared aspirations for a more equitable financial system.

> Our goal, our mission is to create equitable access to the world's financial infrastructure. And this is really core to what we do every single day. And it is true to every single person who works at the foundation. People actually think about whether what we're doing is improving access to financial infrastructure. Are we making the world a better place and unlocking economic potential. Are we making it so that people empowers them to have better lives, are we improving their lives. (Europe, Charity 2)

At the system-oriented level, narratives take on an even broader scope, portraying blockchain ventures as part of a global shift in financial and economic structures. Entrepreneurs articulate their work within narratives of disruption, innovation, and systemic change, arguing that their technologies are not just new tools but fundamental reconfigurations of power.

> This will affect everything. If our dreams come true, and we will be able to execute. We are even going to see different governments around the world, we could even see a borderless world. It’s actually really important to have more consistent framework and approach for the world. Not even just systemic change, but a whole new system all together. (S-America, Crypto)

6.5 Discussion & conclusion

Our findings show that entrepreneurs do not rely on a single way of thinking about the future; rather, they engage in a dynamic interplay between expectations (probable futures), imaginaries (possible futures), and narratives (bridging these two together). This combination shapes motivations by guiding why and how they pursue their ventures. Expectations anchor motivations in probable futures - those that can be derived from the current conditions (Beckert, 2016). Imaginaries expand motivations by envisioning radical possibilities that go beyond linear projections of the present (Appadurai, 2013; Beckert & Suckert, 2021). Narratives connect expectations and imaginaries, creating coherence and direction by linking desired futures with structured pathways of action (Bazzani, 2022; Garud et al., 2014; Tuckett, 2018).

Overall, expectations serve as anchors that shape entrepreneurial motivations, providing a framework for decision-making (Witte, 2002; Bazzani, 2022). While they are largely based on existing trends, they also create the foundation upon which imaginaries and narratives are built, influencing how entrepreneurs perceive their role in shaping financial futures. Future orientation can systematically influence cognition, motivation, and preferences (Trope & Liberman, 2003), which explains why entrepreneurs engage not just with what is likely but also with what could be.

Ultimately, imaginaries provide the motivational drive that propels entrepreneurs beyond the limitations of present realities (Beckert, 2013). While expectations ground decision-making in likely outcomes, imaginaries inspire action toward futures that do not yet exist, pushing entrepreneurs to create new possibilities that redefine the financial landscape (Oomen et al., 2021; Dimov, 2024). Imaginaries are performative, as they actively shape future expectations and provide legitimacy for entrepreneurial action (Borup et al., 2006; Berglund & Dimov, 2023).

Narratives act as the mechanism that turns imagined futures into viable entrepreneurial action (Garud et al., 2014; Tuckett, 2018). Without them, imaginaries risk remaining speculative, and expectations may reinforce existing limitations (Beckert & Bronk, 2018). By constructing compelling stories that connect present actions to future visions, entrepreneurs create the momentum necessary to challenge established norms, engage key audiences, and push forward financial innovation (Dimov & Güneştepe, 2024). In doing so, they mobilise resources, attract stakeholders, and justify their ventures,

demonstrating how the interplay of expectations, imaginaries, and narratives is fundamental to entrepreneurial motivation and action.

This study also has some limitations. The sample was gathered through the PositiveBlockchain.io database and recommendations, which created a diverse set of entrepreneurs united by their focus on decentralised finance for societal good. While suitable for exploring how futures motivate socially oriented ventures, this excludes many more commercially oriented or traditional actors. Future research should therefore examine how future imaginaries function as motivation in mainstream entrepreneurship, where different opportunity logics may prevail. Second, the reliance on interviews and the ethnographic futures method captures articulated imaginaries rather than observed practices, raising the risk of social-desirability bias. Future studies could triangulate discursive data with observations, archival materials, or digital traces to strengthen claims about performativity. Finally, the cross-sectional design provides only a snapshot of futures talk within a volatile industry. Longitudinal designs would help trace how expectations, imaginaries, and narratives evolve across cycles of hype, regulation, and technological change.

CHAPTER 7 – DISCUSSION

This thesis examined how organisations and individuals assess, navigate and shape desirable futures. Given the paucity of research on the topic of future making in impact investing and social entrepreneurship the thesis is exploratory in nature. The main aim is to understand better the attempts and experiences of organisations who are interested in anticipating and creating a better world. The thesis explored and pondered future-oriented processes and temporal considerations in organisational decision-making, impact assessment and the pursuit of desirable futures, such as systemic change. By integrating theoretical, practical, and methodological insights, the thesis contributes to the understanding of how organisations navigate the complexities of impacting futures, such as addressing grand societal challenges of sustainability, social change, and inequality. It is part of a growing scholarship on transformations, through a focus on futuring techniques used by impact investors and social enterprises. Through a compilation of studies, the thesis explored the interplay between temporality, future-making, futuring in impact investing and social entrepreneurship. The thesis comprises five main chapters, each addressing a specific dimension of future-making in organisations.

Paper 1 examined the literature on impact assessment, and particularly future-oriented, forward-looking impact assessment. It revealed antecedents, processes and outcomes of organisations engaging with forward-looking impact assessment. The chapter highlighted the importance of temporal dimensions in creating impact assessment frameworks that extend beyond linear models of past performance.

Paper 2 investigated the diverse range of futuring techniques employed by organisations, such as predictive, explorative, and normative techniques. It demonstrated how these techniques enable organisations to move beyond forecasting to actively shape desirable futures, and how organisational futuring includes formal and informal processes.

Paper 3 explored the concept of temporal oscillation as a mechanism for connecting near-future actions with distant future visions. The chapter introduced temporal reflexivity as an enabler of temporal oscillation and demonstrated how tools such as foresight and backcasting facilitate this process. It highlighted the potential of temporal oscillation to drive systemic change and foster resilience in uncertainty in organisations addressing complex societal issues.

Paper 4 unpacked into the role of utopian and dystopian imaginaries in organisational decision-making and identity formation. By examining the dialectical relationship between these imaginaries, the chapter uncovered how organisations navigate competing visions of the future to align their future visions with actors who they want to be associated with. The findings underscored the performative nature of imaginaries in shaping both individual and collective actions.

Paper 5 pondered how future imaginaries motivate entrepreneurial action. The paper demonstrated how expectations anchor motivations in current realities of the future projections, imaginaries expand entrepreneurial aspirations, and narratives bridge imagined futures with action. The findings underscore the performative role of imaginaries in shaping entrepreneurial motivation.

Together, these chapters provided an understanding of future-oriented processes, their theoretical foundations, and their practical applications. By addressing the temporal complexities inherent in decision-making, this thesis contributes to advancing research on temporality in organisational studies, more specifically future-making, and offers practical tools for fostering long-lasting impact. This chapter elevates the analysis from the specific cases to the organisational level. The two settings studied, impact investing and social entrepreneurship, function as example fields that make future-making especially visible. I draw mechanisms from these fields and indicate when they plausibly extend to other organisational contexts. Also building on past literature going beyond the two contexts. The thesis makes five main contributions.

Table 19 Contributions

Contribution	Papers
1. Organisational futuring extends beyond prediction to actively shaping desirable futures	**Paper 1:** Argues for a broader conception of impact assessment that emphasises exploration over prediction. **Paper 2:** Provides a typology of predictive, explorative, and normative techniques used in assessing impact and shaping futures. **Paper 3:** Demonstrates how actors navigate between present and future possibilities, shaping outcomes beyond simple prediction.
2. Temporal oscillation connects future visions with present actions	**Paper 3:** Identifies temporal oscillation as a key mechanism in navigating temporal tensions, helping actors address immediate concerns while keeping distant future goals in consideration.

	Paper 2: Notes how normative futuring methods as can act as a basis long-term impact considerations in present values and practices.
3. Desirable and undesirable imaginaries play a dynamic and interconnected role in decision-making	**Paper 4:** Explores the interaction between utopian and dystopian imaginaries, illustrating how they shape aspirations. **Paper 3**: Reinforces this by showing how temporal translation and especially backcasting allows actors to dynamically navigate between imagined desirable and undesirable futures, translating long-term visions into concrete actions. **Paper 5**: Demonstrates how entrepreneurs articulate utopian and dystopian imaginaries to shape their motivations, highlighting how imaginaries influence their entrepreneurial choices.
4. Incorporating future-oriented temporal dimensions enables holistic impact assessment	**Paper 1:** Emphasises the importance of future-oriented impact assessment to tackle challenges like sustainability and climate change. **Paper 2:** Extends this by showing that diverse futuring techniques enable organisations to integrate ethical and temporal considerations, addressing the interconnected nature of past, present, and future in their assessments.
5. Future-oriented processes can help organisations in fostering lasting impact and systemic change	**Paper 1:** Introduces the importance of future-oriented impact assessment in tackling grand challenges, framing it as essential for systemic impacts that go beyond effects or outcomes. **Paper 2:** Highlights "polytemporal synergy" as a mechanism for aligning near and distant futures, which enables actors to address current needs while also paving the way for systemic changes that last. **Paper 3:** Discusses normative futuring, and shows how actors use value-driven approaches to shape desirable, long-term futures, which is central to lasting impact. **Paper 5**: Illustrates how future imaginaries act as a performative force motivating entrepreneurship, guiding ventures that seek systemic change by aligning business models with long-term visions.

These contributions are building on past literature on impact assessment, social entrepreneurship, and particularly, temporality and future-making in organisational theory. Also, this highlights new arenas for research.

Table 20 Summary of theoretical contributions

Thesis contribution	Past literature, main ideas summarised	What this thesis adds	Theoretical future research suggestions
Organisational futuring extends beyond prediction to shaping desirable futures	-Forecasting previously dominated impact assessment (Duinker & Greig, 2007), but more recently ignored (Trautwein, 2020). -Calls for plural, everyday future-making beyond forecasting (Wenzel, 2022; Thompson & Byrne, 2022; Whyte et al., 2022). -Futures are open-ended and socially constructed (Emirbayer & Mische, 1998). -Normative futuring evaluates preferable futures (Bell, 2002; Gümüsay & Reinecke, 2022). -Foresight/backcasting link present to long-term aims (Sardar, 2010; Vergragt & Quist, 2011). -Explorative futuring broadens the possibility space (Dator, 2019; Beckert, 2013).	**Paper 1:** Broadens impact assessment beyond prediction, centres future-orientation. **Paper 2:** Typology (predictive/explorative/normative) and co-constitution of formal and informal futuring, shows ethics–temporality entanglement **Paper 3:** Shows actors shape outcomes (not only predict) via navigating present-near future-distant future.	-Examine how normative futuring becomes institutionalised across organisational types. -Theorise informal futuring as sensemaking under uncertainty. -Examine temporal-ethical paradoxes in futuring, and how organisation uncertainty, desirability and feasibility when enacting futures.
Temporal oscillation connects future visions with present actions	-Temporal tensions/myopia (Slawinski & Bansal, 2015; Marginson & McAulay, 2008). -Temporal translation (Hernes & Schultz, 2020) -Difficulty linking distant visions to plausible presents (Lundgren-Henriksson & Tidström, 2021). -Temporal reflexivity enables movement across horizons (Orlikowski & Yates, 2002; Reinecke & Ansari, 2014).	**Paper 3:** Defines temporal oscillation; specifies mechanisms: temporal reflexivity, foresight as process and backcasting as process. Names "temporal myopia" and visionary stasis and shows how to escape. **Paper 2:** Normative futuring anchors long-term aims in present values.	-Elaborate a theory of polytemporal synergy and its antecedents. -Investigate how temporal reflexivity develops as an organisational capability. -Explore oscillation as a capability enabling strategic adaptation.
Desirable & undesirable imaginaries interact dialectically in decision-making	-Utopian/dystopian imaginaries shape action (Gordin, Tilley & Prakash, 2010; Bina et al., 2020; Beckert, 2013, 2021). -Utopias can yield dystopian realities; imaginaries are ideological (Claeys, 2016, 2017; Parker, 2003).	**Paper 4:** Maps the utopia-dystopia dialect in nascent field, and its mechanisms: othering, claiming/reclaiming, co-opted utopias. Shows contested coalition building.	-Theorise the evolution of competing imaginaries within fields and how dialectics shift over time. -Integrate Future Studies theories into a framework of performartive imaginaries.

	-Imaginaries act as "prospective structures" (Van Lente & Rip, 1998; Borup et al., 2006). -Collective identity emerges via shared narratives/boundaries (Lippmann & Aldrich, 2015; Saunders, 2008; Roulet & Pichler, 2020; Cabrejas, 2010). -Time matters in entrepreneurship (Lévesque & Stephan, 2019; Dimov & Güneştepe, 2024).	**Paper 3:** Backcasting links desirable/undesirable futures to present action. **Paper 5:** Expectations, imaginaries and narratives interplay motivates action.	-Examine how imaginaries shape legitimacy.
Future-oriented temporal dimensions enable holistic impact assessment	-Impact assessment often retrospective/linear (Maas & Liket, 2011; Grieco et al., 2015) -Calls for forward-looking, complex, ethical, multi-horizon mpact assessment (Trautwein, 2020) -Normative futuring aligns assessments with values (Alimadadi et al., 2022; Gümüsay & Reinecke, 2022).	**Paper 1:** Frames forward-looking impact assessment. **Paper 2:** Shows how impact assessment is utilised via blended predictive-explorative-normative practices and the complementarity of formal/informal futuring; ethical integration.	-Advance a multi-temporal theory of impact assessment -Investigate ethical temporality, or how values evolve across time horizons. -Develop measurement frameworks capturing long-term systemic change.
Future-oriented processes foster lasting impact and systemic change	-Grand challenges demand linking near and distant horizons (Slawinski & Bansal, 2012, 2015; Wright & Nyberg, 2017) -Reflexive temporal work reshapes structures (Hernes & Schultz, 2020).	**Paper 3:** Shows pathway of temporal oscillation, polytemporal synergy and system change. **Paper 2:** Names polytemporal synergy and shows plural futuring as strategy under uncertainty. **Paper 5:** Details resource mobilisation via expectations-imaginaries-narratives.	-Theorise how organisations orchestrate multi-level time horizons. -Examine values-driven futuring as mechanism for transformation. -Model feedback loops between imaginaries, oscillation, and systemic change.

7.1 Organisational futuring extends beyond prediction to actively shape desirable futures

This research highlights that organisational futuring involves more than merely predicting the future; it includes everyday, explorative, normative, and value-driven approaches that help shape and respond to a complex plurality of potential futures. Organisations and individuals in their future-making processes can envision multiple outcomes and actively steer toward desirable futures rather than forecasting them. Paper 1 explored a broader conception of impact assessment that emphasises exploration over prediction. Paper 2 to provided typology of predictive, explorative, and normative techniques used in assessing impact and shaping futures. Paper 3 demonstrated how actors navigate between present and future possibilities, shaping outcomes beyond simple prediction.

Table 21 Organisational futuring extends beyond prediction to actively shape desirable futures

Contribution	Theory	Practice	Policy	Future research
Organisational futuring extends beyond prediction to actively shaping desirable futures.	- Expands the conceptualisation of organisational futuring beyond prediction to include explorative, normative, and value-driven approaches. - Demonstrates that future-making involves actively shaping futures rather than passively forecasting them.	- Encourages organisations to adopt a pluralistic view of potential futures and use diverse futuring techniques (predictive, explorative, and normative). - Offers practical tools for combining formal and informal futuring techniques to navigate uncertainty.	- Highlights the need for policies that incentivise long-term, systemic thinking over short-term gains. - Suggests incorporating forward-looking impact assessment frameworks into public decision-making processes.	- Explore the operationalisation of normative futuring across different organisational contexts. - Investigate the role of informal futuring practices in decision-making processes. - Examine the barriers to adopting value-driven futuring practices.

7.1.1 Theory contribution

This thesis expands the conceptualisation of organisational futuring by moving beyond traditional predictive practices to include explorative and normative approaches, as well as more everyday approaches organisations take for futuring. Predictive methods, often focused on forecasting probable outcomes, have historically dominated the organisational

literature on temporality and planning (Duinker & Greig, 2007; Wenzel et al., 2020). However, the findings align with recent calls to incorporate a pluralistic understanding of future-making, which recognises the multifaceted and dynamic nature of futures (Blagoev et al., 2023; Wenzel, 2022). This complements the growing recognition of futures as open-ended and socially constructed phenomena, rather than fixed trajectories (Emirbayer & Mische, 1998; Whyte et al., 2022). Furthermore, the integration of normative futuring highlights how ethical considerations and value-driven decision-making are central to shaping desirable futures, as these approaches evaluate not just what is probable but what is preferable (Gümüsay & Reinecke, 2022; Bell, 2002).

The thesis also demonstrates that future-making involves actively shaping futures, rather than passively forecasting them. This contribution broadens the understanding of organisational futuring by emphasising its pluralistic and value-driven dimensions. Rather than merely predicting outcomes, organisations use explorative and normative practices to shape futures in alignment with societal goals (Beckert, 2013; Gümüsay & Reinecke, 2022). By incorporating techniques such as foresight and backcasting, they actively bridge immediate actions with long-term aspirations, offering a dynamic and actionable approach to addressing societal challenges (Sardar, 2010; Vergragt & Quist, 2011). By introducing explorative futuring, the study underscores the importance of envisioning a wide range of possibilities and uncertainties (Beckert, 2013; Dator, 2019). This study enriches the theoretical understanding of organisational futuring by demonstrating its pluralistic, value-driven, and performative dimensions.

7.1.2 Practice contribution

This research offers actionable insights for organisations aiming to shape desirable futures. It encourages organisations to adopt a pluralistic approach to futuring by integrating predictive, explorative, and normative techniques. While predictive futuring remains valuable for anticipating trends, explorative and normative methods allow organisations to envision diverse scenarios and evaluate their alignment with, for instance, ethical and sustainability goals (Wenzel et al., 2020; Gümüsay & Reinecke, 2022).

The findings also emphasise the complementary roles of formal and informal futuring practices. Formal approaches, such as scenario planning and backcasting, provide structured methodologies to project and plan for long-term impacts (Vergragt & Quist,

2011). Informal techniques, including intuitive decision-making and value-based reflections, help organisations integrate broader stakeholder perspectives and align strategic actions with shared societal values (Arjaliès et al., 2022). By combining these practices, organisations can build resilience and adaptability in rapidly changing environments. For practitioners, this research underscores the importance of embedding future-making practices into organisational processes.

7.1.3 Policy contribution

The research underscores the importance of policy frameworks to also extend beyond prediction to actively shaping desirable futures. In other words, frameworks that incentivise long-term and systemic thinking over short-term gains, but still keeping the balance. By adopting forward-looking impact assessment frameworks, policymakers can ensure that public decisions align with broader societal and sustainability goals. Also, embedding forward-looking impact assessment within existing policy structures to enhance real-world applicability. Policies should encourage organisations to integrate predictive, explorative, and normative futuring practices into their strategies, fostering proactive approaches to addressing complex societal challenges (Gümüsay & Reinecke, 2022; Vergragt & Quist, 2011).

One practical implication is the inclusion of foresight and backcasting methodologies in public sector decision-making processes. Policymakers can have foresight and backcasting as part of regulatory requirements for industries with significant societal or environmental impacts. These methodologies can guide the development of regulations that account for both immediate needs and long-term aspirations, ensuring alignment with global sustainability goals such as the United Nations' Sustainable Development Goals (SDGs) (Beckert, 2013; Sardar, 2010).

7.1.4 Future research suggestions

Future research should explore the operationalisation of normative futuring practices across diverse organisational contexts, particularly in industries where long-term impact and ethical considerations are critical. Investigating how organisations balance predictive, explorative, and normative approaches in practice would provide valuable insights into the integration and challenges of pluralistic futuring.

Additionally, the role of informal futuring techniques in shaping organisational decision-making would be intriguing future research area. Studies could delve into how intuitive and value-based practices complement structured methodologies like scenario planning and backcasting, offering a nuanced understanding of their interplay.

Finally, barriers to adopting value-driven futuring practices present an important avenue for research. Examining organisational, cultural, or institutional constraints that hinder the implementation of these approaches could provide actionable recommendations for fostering a broader adoption of future-making practices in business and policy settings. These inquiries will deepen the understanding of how organisations can navigate uncertainty and actively shape desirable futures.

7.2 Temporal oscillation connects future visions with present actions

Temporal oscillation enables organisations and individuals to connect envisioned futures to present actions, allowing them to strategically shape and respond to changing circumstances. Through oscillation between present, near and distant future, actors can keep sustained focus on distant future events while not forgetting the immediate needs. Paper 3 identified temporal oscillation as a mechanism in navigating temporal tensions, helping actors address immediate concerns while keeping distant future goals in consideration. Paper 2 noted how normative futuring methods can base the long-term impact considerations in the present.

Table 22 Temporal oscillation connects future visions with present actions

Contribution	Theory	Practice	Policy	Future research
Temporal oscillation connects future visions with present actions.	- Introduces temporal oscillation as a mechanism to navigate tensions between the present and near and distant futures. - Provides a theoretical understanding of how oscillating between timeframes enables sustained focus on (distant) future goals while addressing immediate needs.	- Helps organisations address short-term pressures without losing sight of long-term strategies. - Encourages use of temporal tools (e.g., foresight, backcasting) to align current actions with distant visions. - Demonstrates how organisations can avoid being stuck in 'temporal myopia' or 'visionary stasis'	- Calls for policies that balance immediate goals (e.g., economic recovery) with long-term sustainability (e.g., climate goals). - Calls for policies that integrate backcasting into strategic planning frameworks, balancing short-term goals with long-term visions.	- Study temporal oscillation in contexts outside of impact investing (e.g., public sector, NGOs, corporations). - Investigate tools and techniques that enhance oscillation capabilities. - Explore how different industries manage temporal tensions.

7.2.1 Theory contribution

Temporal oscillation provides a critical mechanism for navigating tensions between the present and multiple temporal horizons, advancing the theoretical understanding of temporality in organisational studies. Traditionally, research on temporality has highlighted temporal tensions as points of conflict, often framing them as trade-offs between immediate operational needs and long-term strategic goals (Slawinski & Bansal, 2015; Wright & Nyberg, 2017). This contribution reframes these tensions as opportunities for dynamic interplay, where actors actively oscillate between timeframes to align present actions with distant aspirations.

The concept of temporal oscillation builds on the work of Hernes and Schultz (2020), who argue for a reflective approach to temporal structures, and extends it by showcasing how oscillation serves as a bridge between temporal disconnections. By leveraging foresight to envision distant futures and backcasting to identify pathways from future goals to present actions, organisations can foster what this thesis terms 'polytemporal

synergy', the harmonious interaction of multiple time horizons (Sardar, 2010; Vergragt & Quist, 2011).

This study also deepens the understanding of temporal reflexivity, an enabler of oscillation. Temporal reflexivity allows actors to critically evaluate and adapt their temporal assumptions, enabling movement across timeframes without being constrained by near-term time pressures or distant future idealism (Reinecke & Ansari, 2014; Orlikowski & Yates, 2002). The findings reveal that such reflexivity mitigates risks of 'temporal myopia', where actors focus solely on short-term needs (Marginson & McAulay, 2008), and 'visionary stasis', where an overemphasis on distant futures leads to inaction in the present (Mackay & Burt, 2015).

By addressing how oscillation mechanisms can drive systemic change, this contribution aligns with prior calls for research on near and distant futures (Augustine et al., 2019). It provides a framework for understanding how organisations navigate temporal complexity, connecting temporal dynamics with broader organisational outcomes, such as sustainability and innovation.

7.2.2 Practice contribution

Temporal oscillation offers actionable insights for organisations striving to balance immediate demands with long-term, or distant future, aspirations. Through temporal oscillation organisations can navigate immediate demands while keeping their long-term visions in focus. Overall, noting the recognition of near and distant future, and their interplay, is important for organisations trying to have an impact for the distant future.

The thesis also presents some tools for organisations wanting to oscillate between the near and distant. By integrating temporal tools such as foresight and backcasting, organisations can map pathways from their present actions to desired future outcomes (Sardar, 2010; Vergragt & Quist, 2011). By fostering the use of these tools, organisations can align current actions with distant visions, especially when they are used to really ponder multiple different future possibilities, or even impossibilities. These tools enable actors to anticipate potential scenarios, evaluate pathways to desired futures, and establish concrete steps that ensure short-term pressures do not undermine distant future goals.

The thesis also demonstrated how temporal oscillation can help organisations to move away from temporal myopia and visionary stasis. Organisations often risk becoming trapped in 'temporal myopia', where excessive focus on immediate outcomes overshadows broader strategic objectives (Marginson & McAulay, 2008). Conversely, some actors may get trapped in utopian thinking, or experience 'visionary stasis', over-investing in distant futures without clear actionable steps in the present (Mackay & Burt, 2015). In other words, focus on blue sky thinking without specific roadmaps or theory of change. Temporal oscillation provides a framework to mitigate these extremes by encouraging a dynamic interplay between temporal horizons, enabling organisations to remain adaptive while pursuing systemic change.

Practical application of temporal oscillation involves embedding these principles into strategic decision-making processes. For example, organisations can adopt integrated temporal frameworks where foresight activities map long-term aspirations, and backcasting identifies short-term actions necessary to achieve those goals. Such practices foster resilience and adaptability in uncertain and complex environments, allowing organisations to navigate rapid change without compromising their core mission. By adopting this approach, organisations can bridge the gap between immediate operational needs and sustained focus on transformative futures.

7.2.3 Policy contribution

Temporal oscillation highlights the critical need for policies that address immediate societal and economic goals while fostering long-term sustainability and systemic transformation. Current policy frameworks often emphasise short-term priorities, such as economic recovery or electoral cycles, at the expense of addressing distant, systemic challenges, such as climate resilience or social equity (Marginson & McAulay, 2008; Slawinski & Bansal, 2015). Incorporating temporal oscillation into policy design enables the alignment of these objectives, ensuring that immediate actions are consistent with broader, long-term visions.

Policies that integrate backcasting and foresight into strategic planning frameworks provide a structured way for governments and institutions to operationalise temporal oscillation (Sardar, 2010; Vergragt & Quist, 2011). For instance, national sustainability strategies could require agencies to employ foresight techniques to envision future scenarios and use backcasting to develop actionable plans that connect these visions to

present-day policy decisions. Such frameworks encourage decision-makers to consider multiple temporal horizons, reducing the risk of 'temporal myopia' that prioritises short-term gains over systemic outcomes.

Moreover, policies can incentivise the adoption of temporal oscillation through, for instance, funding mechanisms, or regulatory requirements. For example, granting agencies could introduce the inclusion of future-oriented impact assessments in project proposals, ensuring that funded initiatives contribute to both immediate goals and distant societal objectives. Similarly, regulatory frameworks could require periodic reviews of policies to assess their alignment with evolving long-term visions, fostering an iterative approach to policy development.

By embedding temporal oscillation into policy frameworks, governments can create an enabling environment for organisations and individuals to navigate temporal tensions effectively. This approach strengthens resilience in addressing immediate challenges and ensures sustained focus on transformative societal goals, aligning present actions with the creation of desirable futures.

7.2.4 Future research suggestions

The concept of temporal oscillation opens several promising avenues for future research. While this thesis focuses on impact investing and social entrepreneurship as a primary contexts, future studies could explore temporal oscillation in diverse sectors such as public administration, NGOs, and large corporations. Examining how temporal dynamics vary across these contexts would deepen our understanding of the mechanisms that enable organisations to navigate temporal tensions effectively (Hernes & Schultz, 2020).

There is a need for empirical studies investigating tools and techniques that enhance temporal oscillation capabilities. For instance, further research could examine the efficacy of integrating foresight and backcasting with digital technologies, such as scenario simulation software or AI-driven predictive models, to facilitate the alignment of near and distant futures (Sardar, 2010).

Lastly, cross-industry comparative studies could shed light on how different sectors manage temporal tensions. For instance, industries with rapid technological change, such as technology or healthcare, may require distinct approaches to temporal oscillation

compared to more stable industries, like infrastructure. These studies would enhance our understanding of how temporal oscillation practices are adapted and implemented in varying organisational and environmental contexts.

7.3. Desirable and undesirable imaginaries play a dynamic and interconnected role in decision-making

The thesis notes how desirable (utopian) and undesirable (dystopian) imaginaries are not static; they interact and evolve, shaping the ways actors envision and pursue futures. Desirable and undesirable imaginaries have dialectical relationship, which can guide organisations in assessing potential pathways and in defining what future outcomes align with or diverge from their values and goals. Paper 4 explored the interaction between utopian and dystopian imaginaries, illustrating how they shape aspirations. Paper 3 reinforced this by showing how temporal translation and especially backcasting allows actors to dynamically navigate between imagined desirable and undesirable futures, translating long-term visions into concrete actions. Paper 5 demonstrates how entrepreneurs articulate utopian and dystopian imaginaries, and how these shape their motivations, highlighting how imaginaries influence their choices.

Table 23 Desirable and undesirable imaginaries play a dynamic and interconnected role in decision-making

Contribution	Theory	Practice	Policy	Future research
Desirable and undesirable imaginaries play a dynamic and interconnected role in decision-making.	- Extends understanding of the dialectical relationship between utopian (desirable) and dystopian (undesirable) imaginaries. - Demonstrates that imaginaries dynamically interact, shaping collective identity and field development.	- Helps organisations use utopian and dystopian imaginaries to assess pathways and define goals. - Encourages a dynamic navigation of possible futures through mechanisms like backcasting. - Helps organisations leverage utopian imaginaries to inspire action while using dystopian imaginaries to mitigate risks.	- Suggests policies that support scenario planning exercises integrating utopian and dystopian lenses for critical societal issues. - Advocates for participatory foresight processes to identify risks and opportunities.	- Investigate the evolution of competing imaginaries in emerging entrepreneurial fields. - Explore the role of utopia-dystopia dialectics in other societal transitions (e.g., AI adoption, renewable energy) - Study how organisations maintain flexibility as imaginaries evolve.

7.3.1 Theory contribution

This contribution advances the theoretical understanding of the dialectical relationship between utopian and dystopian imaginaries, demonstrating how these dynamic and interconnected visions influence collective identity formation and organisational decision-making. Prior research has often treated utopian and dystopian imaginaries as distinct and oppositional constructs (Bina et al., 2020; Son, 2015), framing utopias as ideal outcomes and dystopias as threats to be avoided. However, this contribution underscores the inherent entanglement of these imaginaries, showing that they do not exist in isolation but actively shape and reshape one another (Claeys, 2017; Gordin, Tilley & Prakash, 2010).

By exploring how utopian and dystopian imaginaries imaginaries can mobilise collective identity formation, this research aligns with Beckert's (2013, 2021) conceptualisation of

imagined futures as central to organisational decision-making. The findings also extend the work of Wenzel et al. (2020) and Gümüsay and Reinecke (2022) on future-making, revealing that the dynamic interplay between desirable and undesirable imaginaries drives actors to construct and reconstruct their visions of the future. This interplay provides a critical mechanism for organisations to anticipate and navigate uncertainties, enabling them to adapt their strategies as conditions evolve.

Additionally, this contribution highlights how the utopia-dystopia dialectic influences collective identity formation, particularly in nascent entrepreneurial fields. Building on the work of Ravasi et al. (2020) and Lévesque and Stephan (2019), it shows how shared utopian imaginaries foster coalitions and align actors around common goals, while dystopian imaginaries serve to delineate boundaries and differentiate coalitions from competing visions. This dual process of alignment and differentiation illustrates the performative nature of imaginaries, as they guide decision-making, and shape the social and institutional contexts in which decisions are made.

Finally, this research introduces the concept of imaginaries as generative structures that provide both guidance and constraints for action. Drawing on insights from futures studies (Dator, 2019; Borup et al., 2006), it demonstrates that imaginaries function as "prospective structures" (Van Lente & Rip, 1998), shaping expectations and legitimising specific pathways. This theoretical lens broadens our understanding of how organisations and individuals engage with futures, offering new perspectives on the role of imaginaries in driving innovation, systemic change, and societal transformation.

7.3.2 Practice contribution

This contribution provides organisations with practical tools and approaches to harness the dynamic interplay between utopian and dystopian imaginaries in their decision-making processes. By engaging with both types of imaginaries, organisations can develop a nuanced understanding of potential pathways and define goals that align with their values and long-term aspirations.

Utopian imaginaries serve as a source of inspiration, enabling organisations to articulate transformative visions and mobilise resources toward ambitious objectives. At the same time, dystopian imaginaries act as critical counterpoints, helping organisations anticipate risks, identify vulnerabilities, and draft strategies to mitigate potential negative outcomes.

For instance, backcasting can be employed to align present-day actions with utopian aspirations while using dystopian scenarios to assess potential obstacles and refine strategies (Vergragt & Quist, 2011).

This dual engagement with imaginaries encourages a dynamic navigation of possible futures, allowing organisations to balance optimism with criticality. Such an approach fosters resilience and adaptability, as organisations remain prepared to pivot in response to emerging challenges while staying focused on their long-term goals. By leveraging utopian imaginaries to inspire collective action and using dystopian imaginaries to safeguard against risks, organisations can make more informed, balanced, and future-oriented decisions. Ultimately, this practice contribution underscores the importance of integrating imaginaries into organisational processes as a means of navigating uncertainty, aligning strategic actions with long-term visions, and fostering sustainable and impactful outcomes.

7.3.3 Policy contribution

This contribution suggests policies planning to integrating utopian and dystopian lenses for addressing critical societal issues. Policies should encourage organisations and decision-makers to engage with a range of future scenarios, balancing aspirations for a better future with precautions against potential challenges. By embedding these practices into policy frameworks, governments and institutions can foster proactive approaches to tackling global challenges such as climate change, social inequality, and technological disruption.

Additionally, this research advocates for participatory foresight processes that involve diverse stakeholders in envisioning and shaping future pathways. Such policies should promote inclusive dialogue and collaborative scenario development, ensuring that both utopian opportunities and dystopian risks are identified and addressed. Also highlighting, how one’s utopia can be other’s dystopia. This participatory approach can enhance the legitimacy and effectiveness of decision-making processes, aligning societal goals with long-term sustainability and equity. Also, by questioning whose utopias or dystopias are we currently pursuing.

7.3.4 Future research suggestions

Future research should investigate how competing imaginaries evolve and interact within emerging entrepreneurial fields. This exploration can offer deeper insights into the dynamics of utopian and dystopian imaginaries and their influence on collective identity and strategic decision-making. For instance, studying how different actors within a field negotiate and reconcile their imaginaries could uncover the mechanisms through which shared visions are formed and contested over time.

Another valuable avenue for research is examining the role of the utopia-dystopia dialectic in societal transitions, such as the adoption of artificial intelligence or the shift toward renewable energy systems. Understanding how these imaginaries influence organisational strategies and public policy in these contexts could provide transferable insights into managing complex transitions.

Finally, future studies should explore how organisations maintain strategic flexibility as their imaginaries evolve. Investigating the interplay between long-term visions and immediate actions in response to shifting conditions could reveal critical factors for sustaining resilience and adaptability. This research could also examine how organisations balance the inspirational potential of utopian imaginaries with the cautionary insights offered by dystopian perspectives, further advancing our understanding of how to navigate uncertain and dynamic environments.

7.4 Incorporating future-oriented temporal dimensions enables holistic impact assessment

Holistic impact assessment requires a nuanced understanding of temporal dimensions that moves beyond linear timeframes, incorporating past experiences, present realities, and future aspirations. Future-oriented approaches enable organisations to address complex grand challenges by aligning current strategies with future goals. Paper 1 emphasised the importance of future-oriented impact assessment to tackle challenges like sustainability and climate change. Paper 2 extended this by showing that diverse futuring techniques enable organisations to integrate ethical and temporal considerations, addressing the interconnected nature of past, present, and future in their assessment.

Table 24 Incorporating future-oriented temporal dimensions enables holistic impact assessment

Contribution	Theory	Practice	Policy	Future research
Incorporating future-oriented temporal dimensions enables holistic impact assessment.	- Extends impact assessment literature by integrating future-oriented temporal dimensions beyond linear timeframes. - Highlights the importance of ethical and value-driven dimensions in forward-looking assessments.	- Encourages organisations to adopt holistic impact assessments that align short-term performance with long-term aspirations. - Provides tools for addressing grand challenges like climate change through proactive assessment.	- Supports policies requiring future-oriented impact assessments for large-scale projects and investments. - Recommends temporal dimensions be made explicit in regulatory reporting (e.g., SDG-aligned strategies).	- Investigate the role of temporal dimensions in impact assessment across different sectors (e.g., education, healthcare). - Explore how organisations balance retrospective and prospective assessments.

7.4.1 Theory contribution

This contribution expands the theoretical understanding of impact assessment by integrating future-oriented temporal dimensions that go beyond traditional retrospective approaches. While prior research has predominantly focused on evaluating past outcomes (Maas & Liket, 2011; Grieco et al., 2015), this research highlights the importance of incorporating future-oriented frameworks to navigate complex, systemic challenges (Trautwein, 2020; Wenzel et al., 2020). By emphasizing forward-looking dimensions, such as foresight and backcasting, this contribution aligns with Beckert's (2013, 2021) work on imagined futures and their role in shaping organisational strategies.

Furthermore, this research underscores the ethical and value-driven aspects of impact assessment. Building on Alimadadi et al.'s (2022) and Gümüsay and Reinecke's (2022) discussions on normative futuring, it highlights how ethical considerations and societal values can guide organisations in defining desirable futures. This integration of ethical dimensions broadens the scope of impact assessment from a purely evaluative tool into a proactive mechanism for shaping desirable futures.

By providing a holistic framework that incorporates multiple temporal horizons, this contribution also addresses calls for more complex and interdisciplinary approaches to

impact assessment (Blagoev et al., 2023). It demonstrates how aligning short-term actions with long-term goals can foster systemic change, offering a more nuanced understanding of how organisations navigate the interplay between immediate needs and distant aspirations.

7.4.2 Practice contribution

From a practical perspective, this contribution equips organisations with tools to adopt holistic impact assessment practices. Incorporating temporal elements to impact assessment, meaning that different timeframes are recognised, can help organisations aligning short-term performance with long-term impact. The thesis provides a comprehensive overview of different ways future-oriented impact assessments are conducted, their limitations and opportunities.

By leveraging forward-looking impact assessment, organisations can proactively address grand challenges and develop strategies that are both adaptive and resilient. They encourage organisations to proactively engage with future uncertainties rather than reacting to immediate crises. By embedding these approaches into their impact assessments, organisations can foster resilience and adaptability, ensuring that strategies are robust against potential disruptions. These practices help organisations transcend reactive tendencies by embedding value-driven approaches into their assessment processes. By integrating ethical considerations, organisations can align with societal values but also enhance stakeholder engagement and legitimacy, fostering trust and collaboration among stakeholders.

7.4.3 Policy contribution

This research advocates for policies integrate future-oriented impact assessment frameworks into large-scale projects and investments. By embedding temporal dimensions into regulatory reporting, policymakers can ensure that organisations align their strategies with long-term sustainability objectives, such as the United Nations Sustainable Development Goals (SDGs).

Additionally, policies should encourage the adoption of participatory future-oriented impact assessment, involving diverse stakeholders in envisioning and shaping future pathways. This inclusive approach enhances the legitimacy and effectiveness of impact assessment practices, enabling policymakers to address critical societal issues, from

climate change to social inequality, in a more comprehensive and forward-looking manner.

7.4.4 Future research suggestions

Future research should explore the role of temporal dimensions in impact assessment across different sectors, such as education, healthcare, and technology. Investigating how various industries incorporate forward-looking frameworks can provide valuable insights into sector-specific challenges and opportunities.

Additionally, research should examine how organisations balance retrospective and prospective assessments to navigate the complexities of temporal tensions. Understanding this interplay can uncover strategies for achieving both short-term outcomes and long-term systemic change, further advancing the field of impact assessment.

7.5 Future-oriented processes can help organisations in fostering lasting impact and systemic change

Organisations and individuals use future-oriented processes, or future-making, to achieve immediate outcomes, and also to drive systemic changes. By aligning near-term activities with long-term, or even distant future goals, they create enduring impacts that address complex societal challenges, such as climate change and social inequality. Paper 1 introduced the importance of future-oriented impact assessment in tackling grand challenges, and framed impact assessment as essential for systemic impacts that go beyond effects or outcomes. Paper 3 highlighted polytemporal synergy as a mechanism for aligning near and distant futures, which enables actors to address current needs while also paving the way for systemic changes that last. Paper 2 discussed how normative futuring shows how actors use values-driven approaches to shape desirable, long-term futures, which is central to lasting impact. Paper 5 illustrates how future imaginaries act as performative force motivating entrepreneurship, guiding ventures that seek systemic change by aligning business models with long-term visions.

Table 25 Future-oriented processes can help organisations in fostering lasting impact and systemic change

Contribution	Theory	Practice	Policy	Future research
Future-oriented processes can help organisations in fostering lasting impact and systemic change.	- Highlights *future-oriented processes* as key to aligning near-term actions with systemic, long-term change. - Introduces *polytemporal synergy* and *temporal oscillation* as a mechanism to align temporal horizons.	- Provides organisations with strategies to foster systemic impact by aligning present activities with distant societal goals. - Encourages organisations to develop actionable pathways for long-term goals through backcasting and foresight.	- Suggests policy tools that incentivise long-term systemic investments over short-term solutions.	- Explore how polytemporal synergy operates in large-scale societal transitions (e.g., energy, urban planning). - Investigate the impact of values-driven approaches on organisational resilience. - Study how systemic change can be measured and evaluated over time.

7.5.1 Theory contribution

This contribution advances theoretical understanding by demonstrating how future-oriented processes enable organisations to bridge the gap between immediate actions and long-term systemic transformation. Existing research often treats organisational impact as confined to short-term outcomes or isolated initiatives (Grieco et al., 2015; Maas & Liket, 2011). By incorporating practices such as foresight and backcasting, this thesis aligns with concept of imagined futures as performative (Hernes & Schultz, 2020), showing how organisations can use these processes not just to envision potential futures, but also to shape them actively through deliberate action.

Temporal oscillation emerges as a mechanism for fostering systemic change, as it allows organisations to continuously re-evaluate their strategies in light of evolving circumstances and long-term objectives (Orlikowski & Yates, 2002; Reinecke & Ansari, 2014). This aligns with Wenzel et al.'s (2020) call for a more dynamic understanding of organisational futuring that moves beyond static planning to incorporate adaptive, iterative processes.

Furthermore, this research highlights the interplay between normative and explorative futuring techniques, illustrating how organisations balance ethical imperatives with strategic flexibility (Alimadadi et al., 2022; Gümüsay & Reinecke, 2022). By linking these approaches to systemic change, this contribution extends the literature on organisational temporality (Slawinski & Bansal, 2015) and provides a framework for understanding how organisations can simultaneously address present needs and future aspirations (Feuls et al., 2024).

Finally, this the thesis underscores the importance of addressing grand challenges, such as climate change and social inequality, through systemic approaches that integrate diverse temporal perspectives. By building on Hernes and Schultz's (2020) insights into temporal structures and their transformative potential, this research provides a roadmap for organisations seeking to align their actions with broader societal goals.

7.5.2 Practical contribution

This contribution provides organisations with strategies to foster systemic impact by aligning present activities with distant societal goals. Future-oriented processes, such as foresight and backcasting, offer actionable pathways for organisations to integrate long-term, or distant future aspirations into their short-term operational decisions. These tools enable organisations to anticipate potential scenarios as well as create structured strategies that address immediate needs while ensuring alignment with broader systemic transformations.

By employing foresight, organisations can critically explore multiple possible futures, identifying opportunities and risks that may influence long-term outcomes (Sardar, 2010). Backcasting, on the other hand, allows organisations to start with their desired future state and work backward, defining actionable steps that connect their current position to these long-term objectives (Vergragt & Quist, 2011). Together, these practices encourage proactive planning and adaptability, ensuring organisations can navigate uncertainties while maintaining a focus on systemic, lasting impact.

7.5.3 Policy contribution

This contribution underscores the importance of policy tools that incentivise long-term systemic investments over short-term solutions. Policies that integrate future-oriented frameworks, such as foresight and backcasting, into strategic planning processes can help

organisations align their current actions with broader societal objectives. By embedding temporal dimensions into regulatory guidelines, governments can encourage stakeholders to consider the systemic and long-term implications of their decisions.

Policies that reward organisations for adopting proactive and systemic approaches to addressing grand challenges can further drive alignment between short-term achievements and long-term aspirations, fostering systemic change at both organisational and societal levels. For example, as mentioned, future-oriented impact assessments for large-scale projects and investments can help ensure that immediate initiatives contribute to overarching goals like sustainability.

7.5.4 Future research suggestions

Future research should explore how polytemporal synergy operates in large-scale societal transitions, such as those related to energy systems and urban planning. Understanding how organisations and governments can integrate and balance multiple temporal horizons in these contexts will provide critical insights into fostering systemic change on a broader scale.

Investigating the impact of values-driven approaches on organisational resilience offers a promising avenue for research. Examining how value alignment influence an organisation's ability to navigate uncertainty and adapt to evolving challenges could have valuable theoretical and practical contributions.

Finally, there is a need to study how systemic change can be measured and evaluated over time. Developing robust frameworks and metrics to assess the long-term impacts of future-oriented processes will enhance their implementation and ensure accountability and improvement in addressing complex societal challenges.

7.6 Critical reflections

While this thesis highlights the promise of futuring techniques for impact investing and social entrepreneurship, several critical issues require further reflection. The analysis showed that predictive, explorative, and normative tools are used by investors, for example, to navigate uncertainty (Paper 2). Yet, whether these tools are applied with sufficient methodological rigour to actually deliver greater social and environmental impact remains an open question. Predictive tools risk oversimplifying uncertain futures,

explorative tools may proliferate scenarios without actionable outcomes, and normative tools can privilege particular value frameworks without robust testing of their societal effects (Duinker & Greig, 2007; Farrukh & Holgado, 2020). Thus, while futuring supports more forward-looking decision-making, there is limited empirical evidence that these techniques, as applied in practice, reliably lead to systemic change.

Impact investors and social entrepreneurs are often portrayed as central actors in addressing grand challenges (George et al., 2016; Gümüsay et al., 2022), as with this thesis. However, the findings here primarily capture their intentions and imaginaries rather than verifiable outcomes. This highlights an important limitation: future-oriented practices may motivate and guide actors, but their actual contribution to mitigating climate change, inequality, or biodiversity loss remains difficult to establish empirically (Hörisch et al., 2015; Trautwein, 2020). The performative role of imaginaries suggests that these visions can mobilise resources (Beckert, 2016), but claims that they will "solve" grand challenges must remain cautious.

Finally, it is necessary to recognise that the desirable futures imagined by impact investors and social entrepreneurs exist alongside, and sometimes in tension, with the futures promoted by mainstream investors and corporations. These dominant imaginaries may dilute or directly oppose impact-oriented futures, reinforcing short-term financial logics at the expense of systemic transformation (Slawinski & Bansal, 2015). Future-oriented impact assessment can therefore be seen not only as a tool for enabling sustainable futures but also as part of a contested field of temporal practices, where competing imaginaries shape which futures become possible.

As also shown in this thesis, defining what constitutes a "desirable" future, is never a neutral process. As shown in Papers 3 and 4, utopian and dystopian imaginaries are deeply entangled with underlying values and struggles over legitimacy. What one group envisions as a utopia may appear as a dystopia to others, revealing how future imaginaries are also instruments of power (Beckert, 2016; Augustine et al., 2019). Similarly, in impact investing and social entrepreneurship, the articulation of desirable futures reflects the priorities of particular actors, often aligned with their institutional logics and access to resources. This means that futuring practices not only enable action but also demarcate whose visions of the future are elevated and whose are marginalised. Recognising the

power-laden nature of desirability shows that futures are contested context where the capacity to define “better worlds” is unequally distributed.

These reflections highlight that futuring is not a neutral or inherently progressive practice. Its effectiveness depends on the quality of application, the systemic scale of outcomes, and the capacity to challenge competing, finance-first imaginaries that risk undermining sustainability transitions. Recognising these limits ensures that future research and practice remain attentive not only to the promise but also to the contestations of future-making.

7.7 Feasibility of sustainability pathways

While this thesis has focused on how actors engage with desirable futures through imaginaries, futuring techniques, and temporal dimensions, it is important to recognise that such future-oriented processes do not automatically translate into real-world transformation. As Turnheim and Nykvist (2019) argue, sustainability transition pathways depend not only on the imaginative and normative dimensions of futures but also on the political, institutional, and collective conditions that make them feasible. Thus, considering representation, potentials, and conditions, highlights that achieving desirable futures requires more than envisioning them. It requires concrete roadmaps and strategies for aligning interests, and transformation platforms that facilitate coordination. This distinction is particularly relevant in contexts like impact investing and social entrepreneurship, where actors may express strong normative commitments, yet may sometimes lack the articulates strategies for how change will be enacted at scale.

The findings of this thesis suggest that some actors appear trapped in temporal myopia or in forms of utopian or “blue sky” thinking, where the vision of the future is compelling but remains under-specified in terms of how it will be realised. A more explicit engagement with roadmaps and collective action programmes, including theories of change, institutional strategies, and actor coalitions, could strengthen the transformational capacity of such future-making efforts. Future research could build on this by exploring how impact-oriented actors develop, implement, or struggle to coordinate such strategies.

While this thesis explored the motivations, techniques, and tensions involved in future-making, it paid less attention to collective action strategies, theories of change, and

roadmapping. Building on the call from Turnheim & Nykvist (2019) for structured sustainability transition pathways, Table 26 adopts their facets of sustainability transition pathways through representations, potentials and conditions.

Table 26 Three facets of sustainability transition pathways, context of future-making

Representations How the future is imagined	Strategic visioning, use of future imaginaries, articulation of purpose and direction	What kind of future is being envisioned? Who is included or excluded in that vision?
Potentials How feasible or flexible those futures are	Plurality of options, scenario thinking, identification of tipping points or critical uncertainties	What options are being kept open? How does feasibility evolve over time?
Conditions What makes futures possible or likely to happen	Institutional alignment, collective action, legitimacy building, and enabling infrastructures	What needs to be in place for the envisioned future to unfold? What actors or alliances are required?

Table 27 offers a conceptual roadmap synthesising the findings of this research. It outlines key facets of future-making observed in this study and provides a framework for designing future-oriented, transformative strategies across organisational and field-level contexts.

Table 27 A Roadmap for future-making in impact investing and social entrepreneurship

Roadmap Facet	Orientation & insight	Guiding questions
Futures as representation	Pluralistic views on futures are used to represent desirable and undesirable futures. Normative, explorative, and predictive futuring help actors articulate what futures they aim to avoid or pursue.	What types of futures are being imagined, and how are they shaping identity, direction, and strategic intent?
Futures as temporal practices	Actors engage in processes such as temporal oscillation and translation, using tools such as foresight and backcasting, or narratives to bridge distant and near future goals. These tools prevent traps of both myopia or wishful thinking.	How are actors aligning their long-term aspirations with short-term actions? How are different time horizons managed?
Futures as collective programs	Future-making depends on alignment platforms: shared roadmaps, and institutional work that enable	What coalitions, roadmaps, or transformation strategies support future-making? What resistance from the status quo must be

	coalitions of actors to act collectively despite resistance.	addressed?
Futures as evaluation	Desirable futures are assessed not only by outcomes, but by the process of getting there including ethical, institutional, and social dimensions. Imaginaries are performative and shape what is seen as feasible.	How is progress toward desired futures evaluated? What values, ethics, and assumptions underpin the assessment of "success"?

7.8 Limitations

This thesis has some limitations related to its methodological approach, scope, and focus. These limitations also highlight areas for future research.

The research primarily relied on qualitative methods, including a systematic literature review, semi-structured interviews with impact investors and social entrepreneurs, and thematic analysis. These approaches provided rich, contextualised insights into future-oriented impact assessment and future-making. However, they also present constraints. For example, triangulation relied mainly on interviews supported by selectively used documents. A more systematic examination of annual reports, investment mandates, and published impact assessments could have strengthened the validity of findings. Future research should incorporate more systematic document analysis and potentially employ ethnographic or longitudinal designs to capture future-making practices, instead of processes captured in the interviews.

The sample of impact investors was primarily identified through Impact Europe's membership list, ensuring diversity across organisational types. Yet the sample was weighted toward smaller investors, with relatively few institutional investors (e.g., pension funds, insurance companies, large asset owners) directly represented. While institutional perspectives were indirectly present through asset managers and development finance institutions, the direct voice of institutional investors remains underrepresented. Future research should prioritise the inclusion of institutional investors, who play an increasingly central role in scaling impact investing, in order to better understand their motivations, decision-making processes, and influence on the field.

The focus on impact investors and social entrepreneurs provided important insights but excluded other relevant actors, such as policymakers, regulators, or grassroots

organisations. These groups also shape imaginaries of desirable futures and influence which pathways are legitimised. Importantly, investors and social entrepreneurs are often building a desirable future to someone else besides themselves, which brings forward power aspects. Future research should extend to these actors, particularly examining the interplay between top-down (policy-driven) and bottom-up (community-driven) future-making processes, and how these dynamics influence the broader impact investing ecosystem.

The empirical focus was on organisational practices in contexts where impact investing is relatively advanced, meaning Europe. This may have created a bias toward best-case scenarios and underplayed the challenges faced in less developed or more resource-constrained settings. Future research should broaden the scope to include emerging markets, low-income regions, or undercapitalised sectors, providing a more comprehensive picture of barriers, enablers, and context-specific practices in future-oriented impact assessment.

Finally, the emerging nature of future-oriented impact assessment presents a challenge. As these fields continue to develop, new methodologies, tools, and theoretical perspectives will likely emerge, potentially reshaping the findings and implications of this thesis. This highlights the importance of viewing the contributions of this research as part of an ongoing dialogue rather than definitive conclusions. Future studies should remain adaptive, building on the foundations laid here to further refine and expand our understanding of future-oriented processes in organisational contexts.

7.9 Conclusion

This thesis enhances the understanding of how organisations and individuals assess, navigate and shape desirable futures. It explored how organisations and individuals engage with future-oriented processes to address societal challenges and shape, or make, desirable futures. By examining diverse contexts of impact assessment, impact investing, and social entrepreneurship, the research highlights the multifaceted ways in which actors navigate temporal tensions, assess futures, leverage future imaginaries, and integrate forward-looking strategies into decision-making. Thesis provides foundations for advancing theoretical and practical approaches to future-making. Ultimately, this research underscores the profound potential of future-making to not only envision but actively build more just, sustainable, and impactful futures.

Impact statement

The thesis addresses one of the most pressing challenges of our time: how organisations and individuals can meaningfully contribute to solving grand challenges of the future (and therefore, present) such as climate change, social inequality, and the energy transition. These problems are characterised by complexity, uncertainty, and interdependence that make linear prediction insufficient and demand new ways of imagining and enacting futures (Beckert, 2013; Wenzel et al., 2020). While attention has been placed on technical innovations or policy instruments, less is known about how organisational actors themselves navigate time and the future in their everyday practices.

The societal relevance of this work lies in showing that future-making is not abstract or secondary, but a very much day-to-day activity how organisations organise. By analysing how impact investors and entrepreneurs mobilise desirable and undesirable imaginaries to guide present decisions, the thesis sheds light on the performative role of futures in tackling sustainability challenges. This directly speaks to the gap between long-term societal aspirations, such as the SDGs or net-zero pledges, and the short-term logics of financial markets and entrepreneurial ventures.

The problem addressed, therefore, is not merely what futures organisations anticipate, but how those futures are constructed, contested, and translated into action. By unpacking the temporal processes and futuring techniques of investors and entrepreneurs, the thesis contributes to a better understanding of how visions of the future can both enable and constrain responses to urgent societal problems. While the thesis does not necessarily argue that forward-looking impact assessment, futuring techniques, oscillating between futures, or imaginaries of desirable futures, lead to lasting impact or systematic change, what the thesis can note is future-oriented processes help organisations at least in fostering change and impact.

Impact by actors

1) Impact investors

Impact investors are encouraged to engage more critically with the futuring techniques they employ. Rather than treating predictive, explorative, or normative tools as neutral, investors should reflect on the quality and desirability of the futures these methods

construct, and how competing imaginaries in mainstream finance may undermine them. Calls to action include strengthening methodological rigour, embedding plural values into impact assessment, and recognising the performative power of futures in shaping investment decisions.

2) Social entrepreneurs

Social entrepreneurs can leverage the motivational force of desirable futures to mobilise resources and inspire action. The call to action here is to embrace futures work as a strategic tool for resilience and innovation, but also to surface and contest whose visions of "better worlds" are being privileged, ensuring that entrepreneurial futures remain inclusive and socially grounded.

3) Educators

Educators play a critical role in equipping future leaders with the skills to navigate uncertainty through imaginative and responsible futuring. Business schools in particular could embed future-making, temporal analysis, and impact assessment into their curricula. For example, to teach students to critically evaluate desirable and undesirable futures, to recognise their value-laden nature, for example when strategizing.

4) Policymakers

Policymakers are urged to recognise that the governance of grand challenges is also a governance of futures. Regulation and policy frameworks should not only incentivise long-term, sustainable investment but also create spaces where diverse imaginaries can inform collective decision-making. Calls to action include fostering transparency in how futures are constructed, supporting impact-oriented approaches that integrate temporality, and ensuring that the voices shaping desirable futures are not limited to dominant actors.

Scientific contributions

The thesis advances organisational and sustainability research in five key ways. First, it extends future-making studies by showing that organisations do not only forecast but actively construct and contest futures through everyday practices. Second, it introduces temporal oscillation as a mechanism that connects distant aspirations with near-term decisions, highlighting how actors navigate across multiple temporal horizons. Third, it demonstrates the performative role of desirable and undesirable imaginaries, showing

how utopian and dystopian visions dynamically motivate and shape action. Fourth, it contributes to the literature on impact assessment by integrating temporal dimensions into the evaluation of social and environmental outcomes, offering a more holistic framework for assessing long-term impact. Finally, it shows that future-oriented processes can help organisations align immediate actions with systemic change, thereby linking micro-level decision-making with macro-level societal transformations.

Limitations and future research

The empirical work regarding impact investors is situated primarily in European context, which constrains the generalisability of the findings across geographies and sectors. The analysis also foregrounds intentions, imaginaries, and practices rather than measuring long-term outcomes, meaning claims about contributions to grand challenges must remain cautious. Future research should therefore examine diverse contexts, including mainstream finance and the Global South, and pursue longitudinal designs to trace how desirable and undesirable futures translate into systemic change over time.

This thesis shows that futures are not distant endpoints to be awaited, but contested states to be shaped in the present – what we imagine shapes what we do, and what we do shapes what becomes.

Appendix 1: Impact investor interview protocol

1. Purpose

The interviews aimed to elicit how impact investors understand, imagine, and operationalize the future in their investment practices. This interview program underpins two thesis papers that examine how impact investors engage with futures. Across both chapters, the same field dataset, interviews with 40 European impact investors, provides the empirical basis for theorizing how investors assess impact prospectively and how they connect near-term action with distant visions.

The first purpose (Paper 2) is to explore how impact investors use future-oriented impact assessment, to project and enact desirable futures. This clarifies the repertoire of techniques investors draw on beyond forecasting and shows how these techniques are mobilized in practice. Research question: *How do impact investors use future-oriented impact assessment to understand and enact desirable futures?*

The second purpose (Paper 3) is to examine the mechanisms through which social actors translate between near and distant futures, with particular attention to temporal reflexivity and the use of foresight and backcasting, so as to overcome temporal disconnects and align immediate decisions with long-term societal goals. Research question: *How do social actors navigate and connect distant futures and near-future events?*

2. Methodological approach

The interview program follows a qualitative, semi-structured design oriented toward theory building. The aim is to develop process models that explain how investors imagine and translate future. The approach builds on Eisenhardt and Graebner's (2007) strategy of theory building from cases, where each interview is treated as an analytic "experiment" that contributes to an emerging explanation. Instead of random sampling for representativeness, participants were selected for their theoretical relevance: they were positioned to shed light on how impact investors balance short-term financial imperatives with long-term societal goals.

To strengthen the richness of the data and reduce biases associated with retrospective accounts, the interviewer adopted an apprentice stance (Langley & Meziani, 2020). Participants were encouraged to "think aloud" through their practices and to recount critical incidents that exemplified moments of temporal challenge or uncertainty. This combination of narrative reflection, scenario elicitation, and practical walk-throughs produced data that capture both the cognitive logics and the organisational processes underlying future-oriented decision making.

3. Sampling and selection of participants

The sample was constructed by focusing on actors who would represent the impact investing field. Rather than aiming for statistical representativeness, participants were selected for their ability to illuminate how impact investors in different contexts engage with futures. This meant deliberately including a heterogeneous group of 40 interviewees across European countries, spanning both mature and emerging impact investing ecosystems. Variation in country context was considered crucial, as regulatory environments, market maturity, and cultural framings of "impact" differ significantly across regions, shaping how investors imagine and enact futures.

Table A1.1. Overview of participant backgrounds

Dimension	Range represented	Rationale
Country	17 European countries	Captures variation in regulatory regimes and ecosystem maturity
Organisation type	For-profit asset managers; not-for-profit asset managers; foundations; DFIs; family offices	Allows contrasts, notes the variety in the impact investing field (& spectrum)
Role/Position	CEO, CIO, impact assessment (senior) analyst	Ensures perspectives from both strategic decision-making and impact assessment
Career background	Senior executives with decades of experience	Provides both strategic visions and operational insights, senerioity ensures knowledge on both, impact and financial side

By having a diverse sample, the idea was also, that we could compare within the field of impact investing, for instance, if for-profit asset managers compared to not-for-profit asset managers think about the future in different way. However, interestingly, we could not draw these conclusions.

All interviews lasted between 48 and 98 minutes and were conducted via Zoom. Participants were identified primarily through the Impact Europe membership list, supplemented by snowball referrals and outreach to non-member organisations. This approach ensured both breadth and depth, combining a structured entry point with network-based access to otherwise hard-to-reach actors.

Impact Europe is a European network of organisations engaged in impact investing (including impact funds, foundations, engaged grant-makers, public funders, banks, and more). Thus, it acts as an ecosystem builder and knowledge hub for best practices. Because of its membership diversity (geographic, organisational, mission-oriented) and its mission, using Impact Europe as a starting point ensured that participants are familiar with impact investing and impact assessments (through Impact Europe's reports, frameworks, workshops), it helped in situating individual interviewees with shared discourses.

While the final dataset of 40 interviews captured this diversity, it is important to note that institutional investors were underrepresented directly, with only a small number of interviewees classified as such (e.g., large investment funds and banks). However, some of the asset managers and development finance institutions included in the sample manage capital on behalf of institutional investors, meaning that institutional perspectives are indirectly reflected in the data. This composition provides valuable insights into the field but also highlights a limitation: the direct voice of institutional investors remains limited, which future research could address by engaging more extensively with these actors to understand their decision-making and influence on the market.

Not-for-profit asset managers are organisations that pool and manage capital for impact, often recycling returns into new projects rather than distributing profits, but they nonetheless act as investors by allocating funds to enterprises and initiatives with both financial and social objectives.

Moreover, what was recognized that essentially there was not drastic differences, for instance, between for-profit and not-for-profit asset managers. Therefore, we could not draw conclusions on these differences, given also the small number of both.

Table A1.2. Overview of the interviewees

Group	Country	Interviewee's position	Tag
Asset manager for-profit			
	Denmark	Investment	Denmark FP asset manager
	Estonia	Investment	Estonia FP asset manager
	France	Investment	France FP asset manager 1
	France	Management	France FP asset manager 2
	Germany	Assessment	Germany FP asset manager
	The Netherlands	Management	Netherlands FP asset manager 1
	The Netherlands	Management	Netherlands FP asset manager 2
	North Macedonia	Assessment	North Macedonia FP asset manager
	Poland	Investment	Poland FP asset manager
	Portugal	Assessment	Portugal FP asset manager
	Spain	Management	Spain FP asset manager
	Switzerland	Assessment	Switzerland FP asset manager
	UK	Assessment	UK FP asset manager
Asset manager not-for-profit			
	Luxembourg	Assessment	Luxembourg NFP asset manager
	Germany	Management	Germany NFP asset manager 1
	Germany	Management	Germany NFP asset manager 2
	Portugal	Assessment	Portugal NFP asset manager
	Romania	Assessment	Romania NFP asset manager
	The Netherlands	Assessment	Netherlands NFP asset manager
	UK	Assessment	UK NFP asset manager
Development finance institution			
	Finland	Assessment	Finland development FI 1
	Finland	Management	Finland development FI 2
	The Netherlands	Management	Netherlands development FI 1
	The Netherlands	Management	Netherlands development FI 2
Foundation			
	Austria	Management	Austria foundation
	Belgium	Management	Belgium foundation
	Finland	Investment	Finland foundation
	France	Management	France foundation
	Germany	Investment	Germany foundation
	Portugal	Investment	Portugal foundation
	Spain	Management	Spain foundation
	Switzerland	Assessment	Switzerland foundation 1
	Switzerland	Management	Switzerland foundation 2
Diversified financial institution			
	Belgium	Assessment	Belgium diversified FI
	Finland	Investment	Finland diversified FI
	Spain	Assessment	Spain diversified FI
Family office			
	Norway	Investment	Norway family office
	Switzerland	Assessment	Switzerland family office
Other			
	Belgium	Investment	Belgium other
	The Netherlands	Assessment	Netherlands other

4. Ethics, consent and confidentiality

The research protocol was reviewed and approved by the Ethical Research Committee Inner City (ERCIC) at Maastricht University (approval number: ERCIC_261_04_06_2021). This ensured that the design and implementation of the study adhered to principles of informed consent, participant confidentiality, and responsible data management.

Prior to each interview, participants were provided with an information sheet detailing the aims of the study, the voluntary nature of participation, and their right to withdraw at any time without consequence. Consent was obtained in writing and reconfirmed verbally at the start of each interview. With permission, all interviews were recorded using Zoom's secure recording function, and subsequently transcribed verbatim.

To preserve anonymity, participants' names and their organisations are not disclosed in this thesis or related publications. Instead, interviewees are identified using general descriptors such as country, organisational type, and role. This allows variation and patterns to be documented while safeguarding individual identities. Transcripts and recordings were stored securely on encrypted drives, accessible only to the researcher. Any potentially identifying details were removed during transcription and coding.

5. Interview guide

The interviews followed a semi-structured format designed to elicit both factual descriptions of investment processes and deeper reflections on how investors imagine and operationalise futures. The guide provided a flexible structure. The interviewer used probes and follow-up questions to pursue themes as they emerged, while ensuring that core areas were covered systematically across participants.

Interviews lasted between 48 and 98 minutes and typically progressed through four stages:

1. Background and role clarification (establishing context)
2. Investment process walk-through, using a think-aloud approach.
3. Exploration of temporal horizons and future imaginaries, supported by critical incident prompts.
4. Reflections on the field and closing comments.

The interviewer often adopted an apprentice role (Langley & Meziani, 2020), inviting participants to explain their reasoning as if teaching a newcomer. This encouraged them to surface tacit knowledge and to narrate the temporal logics embedded in their practices.

Interview questions:

Greetings

- Request permission for recording and ensure consent
- Share purpose, aims and intentions for the study

Warm-up

- What is your background?
- How long have you been involved with this fund?
- What is your favourite thing about working with this fund?

Past of the fund

- How did this fund come about?
- How did the fund envision its mission?

Present of the fund

- What type of sustainability/societal challenges is your fund trying to address?
- What kind of contribution you are aiming to make?
- What do you think makes your fund different or unique compared to other similar ones?

Investment process

- How do choose where/to whom to invest your resources?
- Let's discuss your investment process, starting from very beginning.
    - How do you source prospective investees? (Deal sourcing, identification)
    - How do you assess between prospective investees? (Deal screening)
    - What are the next steps? How is the due diligence process? (Due diligence)
    - What are the next steps? How are deal structured? (Deal structuring)
    - What are the next steps? How are the final decision made? (Deal closing, investment committee)
    - What are the next steps? Investment monitoring?
    - What are the next steps? Return of investment? (Exit)

Post-investment

- How do you collaborate with the investees?
- What would success mean for your fund?
- Can you give me an example of some of major successes your fund has had?
    - What would failure mean for your fund?
    - Can you give me an example of some failure your fund has had?
    - How did the fund learn from the failure?

Impact

- How do your fund assess its impact? How do you evaluate the impact of the investees?
    - Positive/negative impact?
    - How do you use this information?
- Who in your fund conducts impact assessments?
    - What type of impact assessments are conducted prior to executing projects/making investments dealing with sustainability challenges? (ex-ante)?
- Are impacts evaluated beforehand?
- How do these assessments affect your strategy/activities?
- What methodologies do you use?
- How do you gather data/where do you get your information?
- How do you consider sustainability/other dimensions of impact?
- How do you try to avoid negative impact?/ How do you try to maximize positive impact?
- What type of impact assessments are conducted after the execution of projects dealing with sustainability challenges?
    - Are impacts monitored?
    - How do these assessments affect your strategy/activities?
    - What methodologies you use?
    - How do you gather data/where do you get your information?
    - How do you consider sustainability/other dimensions of impact?
    - How do you try to avoid negative impact?
    - Is there some form of ongoing impact assessment?

Partnerships

- How closely do you work with your stakeholders?
- How do you communicate?
- What are your/their expectations?
- Do you provide some form of guidance, support or network?

Challenges
- What challenges have you faced as impact investors?
- What challenges have you faced when assessing impact?
- How do you cope with uncertainty of the future, when making investment decisions?
- How do you consider conflicting values or goals for the future?

Future
- Do you have any new ideas for the fund?
- How do you think impact assessments could be improved?
- Where would you like to see your fund in the future?
- Where would you like to see the impact investment field in the future?

Warm down
- Are there any things you wanted to talk about that you think I missed out, that is important to you?
- Do you have any questions for me?
- Provide details for any follow up conversations

6. Data handling and analysis

All interviews were conducted via Zoom, recorded with participants' consent, and subsequently transcribed verbatim. Transcriptions were anonymised by removing names, organisational identifiers, and any potentially sensitive details. Each interview was then assigned a code that combined country, organisational type, and role, which allowed patterns of variation to be tracked while safeguarding confidentiality. The transcripts, along with any supplementary materials (e.g. organisational reports, white papers, websites), were stored securely on encrypted drives accessible only to the researcher.

Analysis proceeded in several stages, consistent with a theory-building, process-oriented approach:

1. Initial familiarisation
    - Repeated reading of transcripts and analytic memos written directly after interviews.
    - Noting emergent themes around futures, time horizons, and decision processes.
2. Open coding
    - Using Atlas.ti, transcripts were coded line-by-line to capture references to practices, imaginaries, and temporal framings.
    - Codes remained close to participants' own language to minimise premature abstraction.
3. Axial and selective coding
    - Codes were clustered into categories such as futuring techniques, temporal oscillation, and decision-making logics.
    - Relationships between categories were examined, with attention to sequences, mechanisms, and contrasts across organisational types.
4. Iterative theorisation
    - Coding and interpretation proceeded iteratively, moving back and forth between data and emerging theoretical insights.
    - Patterns were compared across cases (different countries, roles, and organisations) to identify replication.
5. Integration with literature
    - Emerging models were refined by connecting them to existing theories of impact assessment, temporality, and futures studies.
    - This recursive process ensured that the findings were both empirically grounded and theoretically generative.

Table A1.3 Summary of the coding structure for impact investors' interviews

Category	Codes	Coding rule	Example indicator
1. Impact assessment & futuring methods	Predictive techniques (forecasting, KPIs, scenarios, scoring)	Talk about what will likely happen using metrics or models	"forecast/model"
	Explorative techniques	Talk about what could happen across alternatives/uncertainties	"signals" "emerging tech" "what if…"
	Normative techniques	Talk about what should happen	"desired future," "mission" "vision for 2030"
	Informal futuring	Everyday expectations, hunches, imaginaries	"we expect…" "I imagine…" "likely next"
	Method integrations/tensions	When predictive, explorative, and normative approaches are combined or conflict	"models say X but values point to Y"
	Processes connecting near and distant	Foresight/backcasting routines	"turning points," "pathway" "thinking from target"
2. Temporal orientation	Near-future focus	Prioritising immediate KPIs, financial returns, urgency	"quarterly results" "proving to investors"
	Implications of near-focus	Constraints created by short horizons	"hard to adjust," "limited runway"
	Distant-future focus	Visionary talk detached from current structures	"2030/2050 vision" "transform the system"
	Implications of distant-focus	Optimism,	"we'll get there" "assume later"
	Explicit time horizons	Concrete fund structures, investment tenors	"7-year fund," "evergreen" "exit in 5 years"
	Temporal reflexivity	Balancing or recalibrating time horizons	"step back to adjust horizons" "balance short vs long"
	Temporal translation (oscillation)	Explicit shifts near to distant and distant to near	"we consider from the endpoint"
	Outcomes of oscillation	Polytemporal synergy, systemic focus, role clarity	"systemic change" "multiple futures" "our role"

3. Decision-making processes	Formal structures	Investment committees, boards, voting	"board approval" "formal process"
	Informal decision-making	Gut feelings, experience, intuition	"gut feeling" "my instinct" "trust my judgement"
	Collective vs individual decisions	Consensus vs lead dominance	"we had to align as a team"
4. Challenges	Complexity & uncertainty	Data gaps, comparability issues, volatility	"insufficient data" "uncertain markets," "black swan"
	Lack of transparency	Hidden values/assumptions; missing domains	"subjective" "normative choices" "biodiversity missed"
	Resistance & costs	Pushback from stakeholders; costly processes	"time-consuming"
	Capacity constraints	Limited staff, expertise, time to run assessments	"we don't have people for this" "thin resources"
	Measurement	Overload of frameworks; confusion ESG vs impact	"too many tools" "hard to choose standard"
	External shocks & adaptability	Events that force rethinking (COVID, crises, policy shifts)	"after COVID" "inflation shock"
5. Opportunities & purposes	Systemic change orientation	Linking near actions to long-term societal goals	"lasting impact" "align present with future goals"
	Organisational learning/adaptation	Using impact assessment to improve practices	"learning curve" "adjust as we go"
	Legitimacy	Building credibility with LPs, peers, policymakers	"signal to LPs" "credibility" "transparency"
	Differentiation & competitive advantage	Future-focus as a niche strategy	"edge in the market"
	Scaling potential	Seeing exponential growth in impact	"in the future it will not be impact investing, just investing"
	Societal rationale	Framing assessments as shaping society	"shape the future" "tool for exploration"

6. Organisational & field context	Mission fit	How impact is defined in mandates/strategy	"our mandate," "theory of change"
	Role identity	How interviewees see their personal/professional role	"I'm an investor" "changemaker"
	Stakeholder relations	Relations with investees, co-investors, policymakers	"entrepreneur expectations" "coalition building"
7. Motivations & values	Personal values & ethics	Justice, fairness, climate responsibility	"we care about sustainability" "justice-driven" "value framework"
	Professional trajectory	Career path into impact investing	"came from finance/NGO," "career shift"
	Intrinsic motivation	Desire to make a difference or leave legacy	"want to create change," "future generations"
	Balancing dual logics	Reconciling finance with impact	"both/and mindset," "trade-off tension"
	Emotions & affect	Feelings about futures, investment, or impact work	"hopeful," "frustrated," "optimistic," "overwhelmed"
8. Future Imaginaries	Desirable imaginaries	Utopian visions of sustainable/inclusive futures	"better world," "inclusive economy"
	Undesirable imaginaries	Dystopian visions	"if we fail" "worst-case" "we don't have time"
	Plurality of futures	Recognition of multiple possible trajectories	"futures" "scenario" "uknown unknows"
	Imaginaries as motivators	Futures as a driver of investment decisions	"vision motivates strategy"
9. Power, Influence & Legitimacy	Power asymmetries	Investor vs entrepreneur dynamics	"we set terms," "dependence on capital"
	Influence on field	Norm setting, thought leadership, agenda-shaping	"pioneer," "benchmarking," "industry standards"

	Coalitions & networks	Collaborations, field-building, collective action	“working groups,” “alliances,” “co-investing”
	Policy interface	Interaction with regulators, frameworks	“aligned with SDG” “GIIN/Iris”
	Trust & relationships	Trust in partners, data, institutions	“we trust the entrepreneur”

Appendix 2: Blockchain, social entrepreneurs interview protocol

1. Purpose

The interviews aimed to elicit how blockchain entrepreneurs, particularly those developing ventures within decentralised finance (DeFi) , imagine, narrate, and act upon the future. This interview program developed two papers for the thesis that examine how future imaginaries shape both collective identities and individual motivations in a nascent and rapidly evolving entrepreneurial field. Across both chapters, the same dataset of 40 interviews with blockchain entrepreneurs provides the empirical foundation for theorising how futures are constructed, contested, and translated into entrepreneurial action.

The first purpose (Paper 4) is to explore how utopian and dystopian imaginaries of blockchain entrepreneurs influence the formation of collective identities in emerging fields. By comparing how one actor's utopia can resemble another's dystopia, the study clarifies the dynamics of othering, and competition for futures. Research question: *How do utopian and dystopian imaginaries shape collective identities in nascent entrepreneurial fields?*

The second purpose (Paper 5) is to examine the motivational role of futures, focusing on how entrepreneurs' expectations and imaginaries drive their goals and actions. This sheds light on the performative role of futures in entrepreneurship and the mechanisms through which visions of tomorrow influence decisions today. Research question: *How do images of the future motivate entrepreneurial action?*

2. Methodological approach

The interview program follows a qualitative, semi-structured design oriented toward understanding how entrepreneurs construct futures. The aim was not to quantify the prevalence of views, but to capture the imaginaries, narratives, and intended actions.

The protocol draws specifically on Textor's (1980; 1995) ethnographic futures framework, which elicits three scenario narratives: best-possible (utopian), worst-case but realistic (dystopian), and most probable. During the interview, entrepreneurs articulated these futures in their own words. The semi-structured format gave participants freedom to expand on their experiences while ensuring that the three core scenarios were consistently addressed across the dataset. To strengthen the richness of the data, the interviewer encouraged participants to move beyond abstract visions and to provide concrete examples of how futures shaped their decisions and organisational strategies.

3. Sampling and selection of participants

The sample was constructed using a maximum-variation strategy consistent with Textor's ethnographic futures approach (1995), which emphasises generating a wide range of perspectives in order to reveal both convergences and divergences in how actors imagine the future. Rather than pursuing statistical representativeness, the aim was to capture the breadth of imaginaries across the decentralised finance (DeFi) ecosystem and to compare how entrepreneurs in different contexts narrate utopian, dystopian, and probable futures.

Participants were recruited primarily from the PositiveBlockchain.io database, which catalogues ventures oriented toward social and environmental aims in the blockchain domain. This provided a structured entry point into the "blockchain for good" community.

Recruitment was supplemented by snowball referrals, allowing access to otherwise hard-to-reach actors.

Table A2.1. Overview of participant backgrounds

Dimension	Range Represented	Rationale
Continent	Six continents (Africa, Asia, Australia, Europe, North America, South America)	Global coverage and variety in imaginaries
Sub-domain of DeFi	Charity/donations; digital identity & credit scoring; cryptocurrencies; financial inclusion; investing/impact investing; peer-to-peer transactions; verification; insurance	Captures heterogeneity within the DeFi field; allows comparison of how imaginaries differ across technical and societal problem domains
Role/Position	Primarily founders, with some senior managers (C-suite)	Focus on entrepreneurs, founders are the carriers of organisational imaginaries
Career background	Mix of technology entrepreneurs, finance professionals, and social innovators	Ensures perspectives that integrate technical expertise with social mission, reflecting hybridity of "blockchain for good" ventures

In total, 40 interviews were conducted with founders and some CEOs. Founders were prioritised because they are the key carriers of organisational imaginaries. This ensured that the narratives captured reflected venture-level visions rather than isolated technical perspectives. Because many blockchain ventures operate globally, participants were categorised by the continent where the organisation was most actively present; if activities were borderless, the headquarters location was used. This enabled within- and across-region comparison, while also acknowledging the transnational and digital nature of DeFi fields.

This sampling logic created a dataset that is both diverse and analytically coherent, enabling cross-case comparison of how entrepreneurs envision best-possible, worst-case, and most probable futures, and how these imaginaries shape collective identities and entrepreneurial motivations.

Table A2.2 Overview of interviewees

Continent	Interviewee	Category	Tag
Africa (8)			
	Founder	Credit scoring	Africa, Credit scoring
	Founder	Credit scoring	Africa, Credit scoring
	Founder	Financial inclusion	Africa, Financial inclusion
	Founder	Investments	Africa, Investments
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 1
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 2
	Founder	Peer-to-peer transactions	Africa, Peer-to-peer 3
	Founder	Verification	Africa, Verification
Asia (5)			
	Manager	Charity	Asia, Charity
	Founder	Credit scoring	Asia, Credit scoring

	Manager	Crypto	Asia, Crypto 1
	Manager	Crypto	Asia, Crypto 2
	Founder	Insurance	Asia, Insurance
Australia (5)			
	Founder	Crypto	Australia, Crypto
	Founder	Insurance	Australia, Insurance
	Founder	Investments	Australia, Investments
	Founder	Peer-to-peer transactions	Australia, Peer-to-peer
	Manager	Verification	Australia, Verification
Europe (8)			
	Founder	Charity	Europe, Charity 1
	Founder	Charity	Europe, Charity 2
	Founder	Credit scoring	Europe, Credit scoring
	Founder	Crypto	Europe, Crypto
	Manager	Financial inclusion	Europe, Financial inclusion 1
	Manager	Financial inclusion	Europe, Financial inclusion 2
	Founder	Insurance	Europe, Insurance
	Founder	Peer-to-peer transactions	Europe, Peer-to-peer
North America (8)			
	Founder	Charity	N-America, Charity
	Founder	Credit scoring	N-America, Credit scoring 1
	Manager	Credit scoring	N-America, Credit scoring 2
	Founder	Crypto	N-America, Crypto
	Manager	Financial inclusion	N-America, Financial inclusion
	Founder	Investments	N-America, Investments
	Manager	Peer-to-peer transactions	N-America, Peer-to-peer
	Founder	Verification	N-America, Verification
South America (6)			
	Founder	Crypto	S-America, Crypto
	Founder	Financial inclusion	S-America, Financial inclusion 1
	Founder	Financial inclusion	S-America, Financial inclusion 2
	Founder	Insurance	S-America, Insurance
	Founder	Peer-to-peer transactions	S-America, Peer-to-peer 1
	Founder	Peer-to-peer transactions	S-America, Peer-to-peer 2

4. Ethics, consent and confidentiality

The research protocol for the blockchain entrepreneur interviews was reviewed and approved by the Ethical Research Committee Inner City (ERCIC) at Maastricht University (approval number: ERCIC_415_1_2_2023_Kemp). This approval confirmed that the study complied with ethical standards regarding informed consent, confidentiality, and responsible data management.

All participants received an information sheet prior to the interview, outlining the aims of the study, the voluntary nature of participation, and their right to withdraw at any point without explanation or consequence. Written consent was obtained before the interview, and verbal consent was confirmed at the beginning of each session. With explicit permission, interviews were recorded via Zoom and later transcribed verbatim.

To ensure confidentiality, participants' names and organisations are not disclosed in the thesis or related outputs. Instead, interviewees are identified through anonymised descriptors such as continent, sub-domain, and role. This approach allows variation and patterns in imaginaries to be highlighted without revealing identities.

Transcripts and recordings were stored securely on encrypted drives, accessible only to the researcher. During analysis, any potentially identifying details, such as references to specific clients, investors, or projects, were removed or generalised.

Interviews were conducted in a conversational, open-ended manner, and participants were encouraged to share only what they felt comfortable discussing. The researcher maintained a reflexive stance to ensure that the interview process respected participants' autonomy and protected their privacy.

5. Interview guide

The blockchain entrepreneur interviews followed a semi-structured design grounded in Textor's ethnographic futures framework. The aim was to generate rich narratives of possible futures, optimistic, pessimistic, and probable, while also capturing entrepreneurs' backgrounds and intended actions. The guide provided a consistent structure across all interviews, while allowing space for elaboration and emergent themes. Interviews lasted 30–60 minutes.

The conversation progressed through three main stages:

1. Background and venture context, clarifying the entrepreneurial setting.
2. Scenario elicitation (Textor's three questions), eliciting utopian, dystopian, and most probable futures.
3. Reflections and closing, exploring implications, motivations, and next steps.

The interviewer encouraged participants to narrate their futures in their own words without pre-specified time horizons, prompting for clarification and examples when necessary. The conversational style was designed to reduce the risk of leading questions and to surface the emotional, cognitive, and practical dimensions of future imaginaries (Textor, 1995).

Interview questions

Greetings

- Request permission for recording and ensure consent
- Share purpose, aims and intentions for the study

Warm-up and background

- Can you tell me about your venture and your role in it?
- What is your background?
- Why did you found this organisation? How did you get started in blockchain / DeFi?
- What makes you excited to work with this organisation?

Ethnographic Futures Scenarios (Textor prompts)

- If you would imagine into the future, in your own words, how would you describe a future that is…
    - Best-possible yet achievable future
    - Not the absolute worst case possible, but a future you would not like to see?
    - The most probable future? What is your prediction?

Futures to Action

- What are your next steps?
- What are you planning to do next?
- How are you trying to achieve the best possible, or avoiding the worst-case?
- What is your oganisation planning to do within next years?

6. Data handling and analysis

All interviews were conducted via Zoom, recorded with participants' consent, and subsequently transcribed verbatim. Transcripts were anonymised by removing names, venture identifiers, and any sensitive details. Each interview was coded with an anonymised tag that combined continent, sub-domain, and role, allowing for comparison across cases while protecting identities.

Recordings and transcripts were stored securely on encrypted drives accessible only to the researcher. Publicly available documents (such as venture websites, white papers, and reports) were also collected before and after the interviews to provide context and enable triangulation.

Analysis followed a process-oriented, scenario-based design, consistent with Textor's ethnographic futures framework:

1. Familiarisation
   - Repeated reading of transcripts and notes taken immediately after interviews.
   - Highlighting emergent references to hopes, fears, and expectations.
2. Scenario segmentation
   - Each transcript was divided into three scenario narratives: utopian (best possible), dystopian (worst-case but realistic), and probable (most likely).
   - This segmentation provided a consistent structure.
3. Open coding
   - Line-by-line coding of each scenario narrative in Atlas.ti, keeping codes close to participants' own language.
   - Captured references to imaginaries, rationales, and intended actions.
4. Thematic clustering
   - Codes were grouped into higher-level categories such as utopian/dystopian tensions, motivational mechanisms, and identity boundary work.
   - Attention was given to contrasts across sub-domains (e.g. financial inclusion vs. cryptocurrencies) and regions.
5. Iterative theorisation
   - Moving between data and emerging theory, the analysis identified mechanisms such as "utopian dystopias" (where one actor's utopia mirrored another's dystopia) and futures as motivators (how expectations drove entrepreneurial action).
   - This recursive process ensured that findings were empirically grounded and theoretically generative.

Table A2.2 Summary of the coding structure for social entrepreneurs'interviews

Category	Codes	Coding rule	Example indicator
1. Imaginaries, ideas on futures	Probable futures (expectations)	Claims about what is most likely to happen	"realistically", "most likely"
	Utopian futures (best possible)	Optimistic but achievable futures	"a better system", "inclusive finance"
	Dystopian futures (worst-case)	Negative futures they want to avoid	"collapse," "exploitation" "fraud"
	Locus of change	Who/what is being changed	"My venture", "The system needs to change"

Category	Codes	Coding rule	Example indicator
	Bridging narratives	How present actions connect probable and possible	"we're building X so that Y can happen"
2. Utopia–dystopia dialectic	Utopian imaginaries	Aspirational visions	"power back to people"
	Dystopian imaginaries	Fears of capture, hype, exclusion	"speculation" "wrong ideals"
	Dialect (utopian-dystopias, or dystopian utopian)	Mixed forms	"beneficial but risky"
3. Collective identity	Founder/field identity	How entrepreneurs position themselves as pioneers	"we're reimagining finance"
	Constructing otherness	Distancing from "bad actors"	"we're not the crypto-bros"
	Reclaiming utopias	Framing technology as meant to be used for good	"tech is neutral; misuse is the problem"
	Sensing co-optation	Someone took over the ideals	"they are using it wrong"
	Coalitions	Identifying with "good actors	"we align with" / "we are not like"
4. Motivations & drivers	Expectations	Using probable futures to structure plans	"we will first" / "given our contraints"
	Imaginaries as motivators	Aspirational visions expanding possibilities	"we can create"
	Narratives to action	Pathways that translate futures into present steps	"how we will achieve/avoid"
	Personal motivations	Why founders started (values, ethics, purpose)	"I wanted to change finance"
	Emotions & affect	Hope, pride, anxiety, frustration	"hopeful" "overwhelmed," "energised"
5. Venture & founder context	Founder background	Career trajectory, expertise, role identity	"came from finance"
	Venture mission & model	Theory of change, revenue, beneficiaries	"mandate" "for unbanked users"

Category	Codes	Coding rule	Example indicator
	Impact domains	What impact are they trying to achive	“Our mission is to help the environment”
	Stage of venture	Early idea vs scaling vs mature	“we’re piloting” “ready to scale”
6. Temporal orientation & horizons	Temporal horizons	Short-term, long-term, distant	“short runway” “by 2030”, “we cannot know yet”
	Temporal translation, oscillation	Moves between near and distant horizons	“because our vision, we do this”
	Tipping points / milestones	Key events or thresholds shaping futures	“turning point” “adoption threshold”
7. Technology & framing use	Tech as neutral	Framing blockchain as an enabler, not inherently good/bad	“tech itself is neutral”
	Education & capacity	Need for literacy, awareness, training	“people must understand”
	Innovation narratives	Tech as solution, disruption, or infrastructure	“alternative system”
8. Trust, ethics & legitimacy	Transparency & verification	Calls for credible, auditable practice	“market needs transparency”
	Against scams/hype	Distancing from speculation, fraud	“not profiteering”, “to the moon”
	Trust relations	Reliance or lack of trust in partners, institutions	“we trust the community” “no trust in crypto players”
	Ethical positioning	Values of justice, fairness, redistribution	“high ethical standards”
9. Stakeholders & beneficiaries	Users & communities	Who benefits, inclusion	“for the unbanked” “empower people”
	Policymakers & institutions	Mentions of regulation, advocacy	“need regulation” “set standards”
	Investors & partners	Views on capital providers, co-builders	“aligned investors” “partner coalitions”
10. Challenges & Enablers	Regulatory constraints	Legal/policy barriers	“unclear regulation” “risk of banning”
	Resources & capacity	Funding, talent, time	“lack capital,” “small team”
	Market volatility	Price cycles, external shocks (COVID, scandals)	“after COVID,” “crypto crash”

Category	Codes	Coding rule	Example indicator
	Adoption barriers	Lack of users, infrastructure gaps	"no adoption yet" "infra not ready"
11. Decision-making	Formal processes	Boards, governance structures	"founder-led"
	Informal processes	Intuition, network advice	"ask peers"
	Internal governance tensions	Conflicts between mission vs profit, decentralised vs centralised	"community vote vs founder control"
	Coalitions & partnerships	Who they collaborate with	"alliances" "joint ventures"
12. Learning	Reflexivity	Questioning assumptions	"We don't want to assume"
	Experimentation	Pilots	"MVP" "trial run"
	Adoption of tools	Uptake of new frameworks, evolving models	"we adopted impact metrics"
13. Power & Influence	Field influence	Entrepreneurs trying to set norms/standards	"we're pioneers" "leading by example"
	Power asymmetries	Tensions with VCs, regulators, big players	"they have power," "dependent on"
	Voice & legitimacy	Seeking recognition, awards, visibility	"credibility" "global stage"

Appendix 3: Coding structure for paper 2

	Advantages	Limitations
Predictive futuring	**Enhanced knowledge** *When they have no track record, I think that's very helpful to try to understand their future, and ask trustable co-investors who have already made that predictive assessment.* (Portugal Foundation) **Risk mitigation** *The returns, compared to the risks in these types of investment, is quite small. We have tried to mitigate these risks by really considering ahead what the impact will be, with different variables.* (Denmark FP asset manager) **Expectation management** *We can define the main KPIs with our investees. From the social side, we have to have strong targets, which everyone knows.* (Spain FP asset manager) **Standardisation** *We select them using a multistage scoring process… We spent a lot of time refining our process and trying to make it more inclusive. It's quite structured modelling of different investments.* (Romania NFP asset manager) **Understanding larger scale impacts** *We have also this more traditional impact logic, theory of change. This means that we analyse… we can impact different sectors or supply chains*. (Switzerland FP asset manager) **Understanding how to use resources** *The potential impact might be high, but it's maybe an institution fairly new to that field… they may need additional support and technical assistance to make that impact. So we need to model these.* (Germany NFP asset manager)	**Very difficult** *We have goals and metrics, and it's great. I can say, if we have to open 10 more stores, etc. But if you are talking about actual outcomes, we can have those projections.* (North Macedonia FP asset manager) **Not trustworthy** *We're on the edge of something new and unknown, and the question is whether we'll ultimately be able to achieve good results.* (Denmark FP asset manager) **Difficult to compare values** *It's also a matter of not imposing these on the organisations but negotiating with them to develop a set of indicators that are meaningful for all, a system of collecting data.* (Portugal Foundation) **Availability of data** *We rely as much as possible on the company data, but it really depends if that's viable. If we look at an earlier stage company, there is usually not a lot of data to really build these different cases.* (Switzerland FP asset manager) **Some impacts not possible to model** *Failures are usually driven by market developments or external factors such as the pandemic, which were out of control.* (Switzerland FP asset manager) **Cherry-picking data** *We know that by doing these impact scenarios, we are choosing the easiest cases. The cases where the impact is most obvious, and not the ones where it could be even more far-reaching. So we are cherry-picking the best data by doing this.* (Denmark FP asset manager)
Explorative futuring	**Indirect impacts** *By supporting the enterprises, they can achieve a better situation for the people in their communities. Our impact is not just exclusively on the enterprises that we support.* (Poland FP asset manager) **Long-term impacts** *Carbon footprint… it has to be a long-term view for the portfolio. It will be easier to do when we have the measures on how and on what scale we can do that.* (Portugal Foundation) **Learning** *We try to help local manufacturers by giving them access to more sustainable equipment basically, so we have to do a lot of assessments to learn what this equipment is.* (Netherlands NFP asset manager) **Focused decision-making** *These principles help a lot. We are able to constantly adjust and make better decisions. We do it differently because we really think about what can happen.* (North Macedonia FP asset manager) **Alignment with investees** *We define this as a roadmap to the future. Because it's aligned… Now, if we are really aligned, money then always flows in this direction.* (Spain FP asset manager) **Proof for investors** *We have another group, institutional investors and donors… they are looking into new ways of investing their money, not just in traditional projects or programs, but they also want to do good in another way.* (Netherlands development FI)	**Need for external advisors** *With these [social investments], we were lucky that we personally had the know-how. But continuing this work, for instance, pre-emptive health care regarding diabetes, we have to trust other expertise.* (Denmark FP asset manager) **Not necessary** *It takes a lot of resources to build a strong measurement system. And the entrepreneurs, they would rather assess on an outcome basis or project basis… rather than taking the energy to measure indirect, long-term impacts.* (Norway family office) **Disconnect on intention and execution** *Ideally, our strategy is a linear path of continuous improvement. But I think we all know this… that change happens in a spiral. And just hopefully, it moves in the right direction.* (Netherlands development FI 2) **Struggle to choose between goals** *We are more impact-oriented, because sometimes they do not have any financial return, just purely impact. But sometimes we need to have financial goals, too. Then, how do we attribute this? Those are all terms we have to balance with this complexity.* (Netherlands NFP asset manager)

Normative futuring	**Focus on targets** *We see impact design, the impactful strategy, or the impact objective we have. There are three main elements: the triple bottom line. We use the term integrated value.* (Finland development FI 2)	**Difficult to define the targets** *It's a dialogue. We explain what we are doing, they explain what they are doing, and we try to stay on a values level. So, we try to talk about why you are doing this and what your backgrounds are.* (Netherlands FP asset manager 2)
	Effective *It's very cost-effective, because you can charge anything on that. The impact is very clear, it's very direct when you give out a loan.* (Spain diversified FI)	**Difficult to define what is effective** *In most cases, we work with impact-driven organisations… but it always comes down to investment in social impact versus investment in business.* (Poland FP asset manager)
	Investor management *What's success from the measurement? It always depends very much on the benchmarking, also on your expectations. So, it is always about whether it complies with your expectations.* (Germany foundation)	**Preferred futures for whom** *That's a long-standing discussion in the sector. It's really imbalanced what's justified… funders usually have a clear target when it comes to development, and it's not so much about the beneficiary.* (Austria foundation)
	Pathway thinking *The goal is still very small, 1 million people, when you see that 2 billion people still don't have access to safe water services. But the biggest challenge is scaling. And it's hard because, you know, we're talking about infrastructure.* (France Foundation)	**Agency in change** *It cannot be one fund, one organisation, or one country, in terms of the public approach to solving certain systemic issues. It needs everyone to really be on board.* (Denmark FP asset manager)
	Long-term, systemic impacts *We try to create system change through this assessment. We try to bring more value to capital.* (Netherlands FP asset manager)	**Difficult to justify for investors** *We have the feeling that impact funds are the standard, but the expected return for impact funds is still a bit lower than phenomenal private equity funds that are completely free.* (Germany foundation)
	Justification, mandate *Building the financial ecosystem is one of our wider missions. Because, in the future, if we can make sure that we are not necessary anymore, that would be the ultimate goal.* (Netherlands development FI 2)	

Appendix 4: Coding structure for paper 3

Overarching dimensions, second-order themes and first-order categories	Representative data
Overarching dimension: *Temporal Myopia*	
1. Actors getting stuck in the near future	
A. Narrow definitions of impact	A1: If we manage to get 10 out of the 50 to graduate ninth grade, that is impact. So if you just quantify in terms of the amount of people you've impacted. (Denmark, FP asset manager)
	A2: This is more output and outcome measurement, right? Impact measurement, as you know, is extremely difficult to do, especially in the social environment. So we're at the stage of outcome and output measuring. But also, this is already a great step forward, if we can actually report on outcomes and outputs. (Switzerland, Foundation 1)
B. Over-emphasising the financial aspects	B1: We start modelling the cases and I build financial models and remodel all possible outcomes, different success rates and then different scenarios for basically all the different assumptions you could have. (Denmark, FP asset manager)
	B2: We need to help them to write financial projections and to make sure that the business will be viable. Some of the founders have the tendency to treat the business side as the second, less important area. So we come here to make sure that after our intervention these businesses will be viable. (Poland, FP asset manager)
C. Urgent issues in the present	C1: Business was growing steadily. But due to covid, we had to expand the networks of local farms and give agricultural trainings, so that this village could survive on their own. (Netherlands, Development FI 2)
	C2: We are providing emergency housing to refugee women who have to deal with domestic violence. Current accommodation is fine but it is not great. So now we try to wrap our other srvices, and get the accommodation to better level, so we can provide 24 hour care. (UK, NFP asset manager)
2. Implications of getting stuck in the near future	
D. Not being able to handle sudden changes	D1: We really hope for all the investee organisations to reach the ambition and the mission, then we are good. But now we had some issues, project will be slowed down. Yes something bad happened to our investor, and now we cannot provide or enable the funding to the old organisations they would need. We have to find other fundings or projects. (Belgium, Foundation)
	D2: Or the pandemic right? We absolutely could not predict that, but even worse that we would loose all these people, or contact to them. So years and years of work… and nothing happened. (Romania, NFP asset manager)
E. Focus on short-term results	E1: You can already start to seeing the effects after a few months, so that's good. This project works that financial effects are the same as the impact, so it happens quite shortly. (Denmark, FP asset manager)
	E2: No, I can't back up projections. It its tricky. We just focus on if the company is going to grow yearly basis. For example, they opened 10 stores in year, they will hire women. We can't really ask a company to start measuring beyond that. (Germany, FP asset manager)

F. Lack of understanding the distant	F1: We can try to focus on some mitigation of climate change now, but adaption is too far for us. (Netherlands, other) F2: We would like to contribute to the biodiversity and all that, but right now we would not know even how. (Finland, Foundation)
Overarching dimension: *Visionary Stasis*	
3. Actors getting stuck in the distant future	
G) Broad definitions of impact	G1: And the first part the impact is just okay, are these guys having impact? Or is it possible that it is happening, but just by looking at the website and business model? It's easy. (Portugal, FP asset manager) G2: That would mean no impact measurement, no impact reporting, maybe reporting, but no measurement at all. Just pick certain sectors, which from previous studies what happened, that is your impact. So impact is ideally people coming together to enjoy (Belgium, Other)
H) Emphasising visions	H1: We impact investors like to be the leaders, this is our challenge in a positive way…So at the end goal, we improve the quality of life of all the European community… it's also interesting for us to create new approach, it's something that it's always nice. And why not to create the Facebook, the social Facebook, now the social unicorn, that today doesn't exist. (Spain, FP asset manager) H2: The beauty of impact investing ultimately leads to a future where you no longer have to choose between doing good and doing well. And so we know we often see from cooperatives or family offices, you know, that they would, on the one, with their right hand, invest in companies, strategies that do not necessarily contribute to greater impact, social or environmental, and with the other hand, invest in a foundation for good goals. (Luxembourg, NFP asset manager)
I) Emphasising impact aspects	I1: It is very cool to have smaller projects like microfinance or connect to SDGs, but it cannot be the only criteria for impact investing. We have to do something bigger, address bigger issues like the climate change, because it will happen. Or financial inclusion, it will be even worse in the future. So we cannot solve everything in financial or climate issues, but we have to do something. Because it is important. (Spain, diversified FI) I1: The real question mark is on whether there will be the ultimate impact… financial return will always be unpredictable, who knows, the balancing act will be impossible. (Luxemburg, NFP asset manager)
4. Implications of getting stuck in the distant future	
J) Lack of focus on concrete actions	J1: We just trust the project that they will eventually achieve their mission and the impact they want to have. (Belgium, diversified FI) J2: So it's through encounters with entrepreneurs, that we do the assessment, we realise, okay, does this fall into our way of envisioning what impact means?... If envisions align, we invest. (Belgium, other)
H) Neglect on organisational needs	H1: The need there is on this sector for development is huge for many years, and it makes it more and more harder to participate in solving. So there is a trend that we, the funds there, we are just surviving and not growing because competition is hard but we want to solve this challenge. We just try to get the impact, but there is scarce funding. (Germany, NFP asset manager 1)

	H2: I've tried my best with this organisation but we need the best people with the best skills who would be so impact driven that they would be willing to sacrifice their earnings. So many people have quit because the impact is not enough to bring bread to the table, but this is how it is when solving global problems (France, FP asset manager, 2)
L) Overtly optimistic visions	L1: You need to be able to change the narrative and to be able to design a story that resonates with the people. And, then you can create the change you want to see. (Finland, Development FI 2)
	L2: I think that the market is moving in the right direction. There's more and more attention being going to it and also, more and more understanding, that's fine. And seeing, and financiers have an important role to play in getting the whole world transition to sustainability going. (The Netherlands, NFP asset manager)
Overarching dimension: *Temporal reflexivity*	
5. Antecedents for temporal translation	
M) Balance of the needs of today and visions for the future	M1: Before we look at any specific type of company or solution or investment opportunities, a lot of work we do and a lot of analysis on the markets and on the opportunities about the problem and the challenges that exist in society, in the economy that we feel, actually, there is an exciting opportunity for us to have a lot of impact with kind of kind of directing capital into that area. (Switzerland, FP asset manager)
	M2: We design the roadmap, because our investment cycle is not short. We don't like to burden them with too much at the beginning, because it is actually a marathon not a sprint. But you need the sprints time to time. We want to them to be good now but the remarkable will be ahead. (Norway, Family fund)
N) Questioning temporal structures and assumptions	N1: We had an incredible discussion yesterday with our investors because we are doing a 5-year target. And my claim is that it's impossible to announce 5-year targets without being part of a first step on a long-term target, that must be much more demanding, much more ambitious. (Portugal, NFP asset manager)
	N2: It's modern colonisation… And it will always be there. As long as our big institutions always attach development assistance to their political agenda. This can't be solved… Right now the dependencies are so high that we now need to add financial dependencies of countries, many cases so high that the question is, how do you break that vicious cycle? How are you able to break that? Because only if you kind of cut the financial ties, countries would be free to develop. And the system is not set up at all in order to achieve that, quite the opposite… it's really about a shift we are trying to make to this world. (Austria, foundation)
6. Foresight as a reflective process between near & distant futures	
O) Moving from near to distant unilaterally	O1: And then we have the due diligence process itself, where we scout. We have a fixed process, how we first scout, second screening, and then also catalogue of criteria going along with financial return, the impact return. We have a third level, which is called as like strategic return, like the way of how we can engage with our investment. So, we have these criteria and also structured process along how till we approve and sign the investment to the end. (Germany, Foundation)
P) Moving from near to distant collaboratively	O2: I would say inspiring the development world to acquire this approach. Our mission is not to become the biggest player in the world. We want to have a certain scale. But we believe that if we want to have a systemic change, it's even more important to have organisations adopt the approach and implement it rather than doing it by your own. So if we can create and lead this ecosystem. (France, foundation)

P1: And then you might be able to design, the roadmap I mentioned because actually, the average investment tenor is like something between 5 and 7 years, so, it's not that short. So, you might be able to do something remarkable if you plan things well ahead. (Finland, Development FI 1)

P2: We have noticed that we can add value, because sometimes the companies do not know that they are impact company. We start to understand what are they doing and then we walked together what is going to happen in the investment period and beyond. What are the baseline metrics, but also what is the social plan. (Spain, Foundation)

7. Backcasting as a reflective process between distant & near futures

Q) Moving from distant to near unilaterally

Q1: We do this at the strategic level to make sure we understand the problem in a specific context. And then also understand what could the most efficient, promising solutions look like? In the sense of business solutions, right? With the right size, with the right basically conditions, requirements for us to be able to invest into those businesses. And that's exactly kind of the strategic high-level top-down approach. (Switzerland, FP asset manager)

Q2: We were very much driven by, you know, just generating employment at first, and now we have a stronger push towards things such as gender equality, more environmental focus, and just being a little bit more intentional about the impact that we truly want to create. (North Macedonia, FP asset manager)

R) Moving from distant to near collaboratively

R1: So usually how investment works here, is we set up like 100-day plan... we have things that we need to achieve during those 100 days. So for us, that's like the window of time where we try to make sure that we're establishing the correct, you know, your technical assistance or systems for measuring impact and all that. (North Macedonia, FP asset manager)

R2: We work together upfront to support the decision making, if the deals fits with our mission, our vision, but also their mission, their vision. And then we set the requirements, what needs to be developed. (The Netherlands, Development FI 1)

Overarching dimension:
Polytemporal synergy

8. Implications of temporal translation

S) Focus on systemic change

S1: Okay, I think one of the things that that we hopefully would see in the field is taking a little bit more of a groundwork approach to, to the investments, again, just really understanding who our beneficiaries are, and really putting a lot more thought into our impact practices. You know, again, not trying, not trying to come in with an attitude of saying: I have all the money, what are you gonna do to get it? It's more like: what are you doing to help your community? And how can I help you do that? Better? So it has to be and I think it'll get there. It's more an approach of more cooperation with stakeholders. (North Macedonia, FP asset manager)

S2: I think, for me, it's actually maybe a little bit more personal view, it's, it's much more about basically going back to the very original purpose of finance, to basically support societies to support livelihoods. And I think, our capitalistic system, although it's done, an incredible wealth of good over the past decades, I think has shifted towards short termism towards financial gains for a few rather than for the mass and for society at large. And obviously, there is a lot to do in terms of supporting financing solutions for better tomorrow. And there is a still a huge capital gap, particularly also in private markets. (Switzerland, FP asset manager)

T) Understanding own role in the future

T1: I have to acknowledge that we investors have the power in this sector in general. Often investors do not acknowledge the amount of power they have. But they set the agenda, they set the expectations with impact assessment… You know, as much as the focus is often on practitioners and their approaches, because that's where the it's actually happening. The people who shape those approaches are donors and investors. (Germany, Foundation)

T2: We will work with them on their impact measurement plans. And in some cases, it's really just saying, hey, your planning looks good. In other cases, it's actually kind of really working with them. And co-designing it, I mean, really depends on their capacity. We have organisations that don't need any help, and we have organisations that need quite a bit of help in capacity building… it kind of allows them to then continue to make an impact going forward. (North Macedonia, FP asset manager)

U) Engaging with complexity of multiple future

U1: What we do is that in any investee, we have an impact plan, which is telling us, what do we expect to achieve. So, we identify KPIs that allow us to assess the contribution. And then we, we have an impact plan, but also the goals for during the investment period, going forward or progress, and at the end, we do an exit impact due diligence, to assess whether it's been actually achieved and we compare it to the plan. (France, FP asset manager 1)

U2: I know this adds a huge amount of complexity to decision-making. Things like equity, diversity, inclusion, users' voice. We all agree these are important, but actually achieving these look different to everyone. I guess we do we have to deal with even more complexity, because we also have that systems change lens that overlays it. (The Netherlands, Development FI 1)

Appendix 5: Coding structure for paper 4

Overarching dimensions, second-order themes and first-order categories	Representative data
Overarching dimension: *Utopia-dystopia dialect*	
1. Utopian imaginaries	
A. Utopian future for society	A1: We have two beliefs. One is we believe that if everything is transparent, and let's assume that the Web3 environment requires full transparency, as in, you cannot be a company in a Web3 environment unless you fully disclose all of your activities. And those activities are retrievable on the on the public ledger, I know how much carbon you made it, I know how many women you hired, I know what you pay them. And we then believe if there's a fully transparent world, and say that we have web3 can catalyze that, then in that fully transparent world, only those businesses that participate in a fully transparent world will survive. (Africa, Verification)
B. Utopian future for the organisation	A2: The world, in which this this web3 thing would have happened? Indeed, hopefully, that we can bring the integrity needed to scale the voluntary carbon market to meet the aims of the Paris Agreement. So I guess the ultimate goal is to cap climate change to 1.5 degrees warming. I guess, yeah, we'd be in a world where the Paris Agreement is met. (N-America, Investment)
	B1: Our objective definitely will be to reach massive growth. I think we have an objective of 20 million farmers in next year. So that's our dream. (Europe, Insurance)
	B2: It might take two to three years. Then we are talking about a global currency created us, and by people backed by the value of social and environmental improvements. So there is a real value behind the currency behind each single coin, there is one project one improvement, and you can easily connect improvement and coin. (Europe, Peer-to-peer)
2. Dystopian imaginaries	
C. Dystopian future for society	C1: We will see more of this happening. So we are at a point in time where this change is urgently needed. Otherwise, we're gonna run into major issues, as we call ecocide. Collapse of support system like in the oceans collapse of like, climate, mass extinction of species. So you know, the phase we're in right now is kind of comparable to the last impact of the asteroid that hit the Earth and killed the dinosaurs. (Europe, Crypto)
D. Dystopian future for the organisation	C2: Listen, human behavior doesn't change, right? And the things that motivate bad behavior, they're the same, right? It's money, sex and power. Right? That's, that's fundamental… we are just translating that into a way that works in the digital world. (N-America, Peer-to-peer)
	D1: I think it's likely to see quite a significant regulatory hit. So I think there will be a lot of exchanges collapsing. I foresee by the end of the most of the exchanges have collapsed or significantly withdrawn services… it's gonna kill off that whole sort of market. (Africa, Peer-to-peer 1)
	D2: And I think that's very much what the whole crypto industry has become. It's, it's become let's say, infiltrated by the financial industry types… And so much of what happens in cryptocurrency is gonna get shut down. Because financial regulators and banks do not want to let things happen outside their purview (Australia, Insurance)

3. Dystopia-utopias

E. Techno-utopia

E1: I think that the benefits of web3…, blockchain technology in and itself, and also Metaverse and all. We can do everything through them in the future. We can communicate, vote, pay, all through metaverse proven by blockchain. (N-America, Peer-to-peer)

E2: Obviously for us it is a no-brainer. But I guess people have not been exposed to the problems we are solving, even though they have encountered them. This is the alternative they don't even know they really need. (Asia, Crypto 2)

F. Discussing of ruling the world

F1: In politics. So the politicians don't know what their voters really like. So there's a disconnect. And right now, I feel like we're not living in a democracy in the true meaning of democracy, which means people having power we live in an oligarchy is where every four years a group of people is elected, that then has power. But the people don't have power, they cannot propose laws, they cannot vote on laws. We change that globally. (Europe, Crypto)

F2: We are creating assets out of everything. We are giving these invisible things, like helping each other a market value, high value asset, with high potential. And maybe those assets are 10 times more than a car, the value of a car for instance, as through us you can monetise everything. (S-America, Insurance)

4. Utopian-dystopias

G. Scams, hacks, related to the field

G1: With hindsight explanation for that. I think cryptocurrency was one of the most brilliant investments of our era… But now the value is not going to increase like some people believe… investing everything. (Australia, Insurance)

G2: It is true, there are so many hacks still related to blockchain, even though it is suppose to be all clear from those. It is not reality even though that is the hype. (Europe, Charity 1)

H. Hype, crypto maximalist

H1: Some are using it to just do the same things, they're trying to profit at the expense of others, they're trying to create market value where it doesn't exist this… what we are doing is to create value where it is suppose to exists, like social impact. (Australia, Insurance)

H2: People think their coin is going to be the only one. Don't they realise that we need to play with traditional system too. Banks have the role to play too. (Africa, Peer-to-peer 3)

Overarching dimension: *Utopia-dystopia as mechanisms for collective identity formation*

5. Constructing otherness

I. DeFi field different from traditional finance

I1: This system wasn't wrapped around a common belief or system. So what's a carrot? And so if you create a currency and you know, one of the interesting things when people criticize cryptocurrencies and scams, as they say, current cryptocurrencies aren't real. Well, the reality is no currency is real, right? It's paper money that your government make up. And if we lose trusting Bitcoin Bitcoin value things, if we lose trust in Venezuela, the Venezuelan currency falls down. It's no different than any other currency. But since it is better, it will take over. (Australia, Insurance)

J. Differing from other actors in the field

I2: And DeFi, I think it's going to challenge traditional finance. Yes, it's already challenging traditional finance. They fix that problem, where these contracts are being kept… the majority be to the direction of DeFi. (N-America, Charity)

J1: These wrong doings of these blockchain people… That's what really inspired me to come into this industry, and build something for what we call a more decentralized future, something that's more secure. If we look at the internet today, we see so many scams and hacks and data leaks, we can definitely build for better future. (Australia, Crypto)

J2: We are not like all the blockchain companies, we rather talk about Web3. (Europe, Charity 1)

6. Reclaiming and reframing utopias

K. How blockchain is meant to be used

K1: But bigger picture that's really what crypto was meant to establish that that ability. I don't have to be a certain kind of person, or have a certain bank balance or a certain credit score or a certain address or zip code to be included in this system. (N-America, Crypto)

K2: Even Satoshi did not think blockchain would only be for crypto. (Asia, Insurance)

L. Technology is neutral

L1: Whenever there's a scam or when there's a hack or something like that people often will gravitate towards this idea that the blockchain was tapped to or something went wrong with the blockchain or something went wrong with the underlying technology, when it's almost always there was there was an individual involved and the fraud was perpetrated, because it's like the money never actually got onto the blockchain… We just need more adoption to avoid this. (N-America, Investment)

L2: We did not ban interest because there was scams. (Europe, Financial inclusion 1)

7. Sensing of co-opeted utopias

M. How blockchain is not meant to be used

M1: The year 2022 was not a good year for the trust in crypto. Because they were bad actors, they were bad actors and doing bad things. They were just mishandling the money of the client, basically, as a bad bank, some bad banks did it some banks disappear. And this was really mishandling. It's very strange, because FTX was really supported by big America venture capitalists firms. And looks like they've been very little due diligence done in the way they were allocated money. (Africa, Investment)

M2: At the moment, it is very one-sided dialogue. Like this crazy coins, to the moon, whatever. It is not even decentralized, it is just a new system to centralize power that these people decided to do. (Australia, Verification)

N. Some actors are wrong

N1: There's a lot of things wrong with what the crypto industry. If you go back what the original concept posts, those are totally different game. (Australia, Insurance)

N2: We see a lot of revolutionary capabilities. We can solve problems. But not everything like some people think. We see this hype and people ignoring basic laws of technology, it doesn't work like that. And I say this as a technologist. (Africa, Peer-to-peer 1)

Overarching dimension:
Collective identities in nascent fields

8. Establishing coalitions of 'good actors'

O) New form of better finance

O1: Realistically, we'll have a lot of traditional finance, now in order to build the better future. But it will be different. (Asia, Crypto 2)

P) Blockchain for good

O2: Our goal is to build whole new markets, whole new ways of doing this… we will connect the world so that financial inclusion comes reality. (S-America, Insurance)

P1: In terms of scams and frauds. Like we're, we're past a lot of it already. We really are. Most of the crypto in terms of digital assets, the individual ones 956 - 99% are Ponzi schemes. But it just relies on marketing hype, artificially created. And I say this like as an as an industry participant. But there is going to be very good clap backs in next tears. Coming years we made sure that you can avoid these, with all different blockchain people. (Asia, Crypto 2)

P2: We're in love with the technology, we are proud of what we've built together with this community. but people don't understand what do you do? This is all a challenge how we communicate the value proposition instead. (S-America, Peer-to-peer 1)

9. Disassociating with 'bad actors'

Q) Current system is evil

Q1: We are creating a global health care system that is sustainable and also holistic. Different than our existing system, which is most focused on giving pills to deal with the symptoms, rather than curing causes of illness, which is often related to simple things like this, you know, nutrition and, and your diet. (Europe, Crypto)

O2: Like the banks here. They have screwed the people in Argentina multiple times. So we are building something else. With blockchain you cannot just steal all the money, like the banks did. The current system is the dystopia. (S-America, Peer-to-peer 2)

R) Some actors within the field in the field are bad

R1: We should note that honestly, some actors are evil in blockchain. But not everything is evil. Like it's sometimes maybe. (Africa, Peer-to-peer 1)

R2: I guess a challenge is to separating off crypto projects, to what we are doing. We are not linked to some crazy crypto coin, I don't know Sheiba or those. So I think there's this first challenge in just actually differentiating the blockchain and the amazing things that this technology can do versus all of these crazy, get rich, quick like hype coins and stuff. (Australia, Verification)

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