Strategic Leadership:
Navigating dilemmas during incumbent entry into nascent ecosystems

Stephen James Ellis

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Strategic Leadership: Navigating dilemmas during incumbent entry into nascent ecosystems

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by

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This research was conducted under Track #1 of the FINDER project: **F**ostering **I**nnovation **N**etworks in a **D**igital **Er**a. The FINDER project was a European Industrial Doctorate partnership of 4 years between Radboud University and Atos to prepare a new generation of business and entrepreneurship researchers contributing to the development of innovative ecosystems in a digital era. It sought to provide a sophisticated understanding of: the context in which business is done; the effect of technology in driving these collaborative processes; and the stakeholders involved.

Track 1's research on collaborative innovation management explores a gap in organizational studies and strategic management literature concerning the sociopolitical forces behind technological innovation within firms, between firms, and where firms engage with larger society and the natural environment. As high-tech innovation continues to favor collaboration, the insights from this research aim to help practitioners navigate challenges today and in the innovative future.

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Table of contents

Synopsis (EN)

This dissertation is composed of three empirical studies, each a single-case qualitative investigation on the incumbent firm Atos. All three studies (Chapters 2 – 4) focus on the sociopolitical dynamics behind incumbent platform strategy formulation and implementation. Respectively, these chapters: showcase the multi-directional and intertemporal legitimization activities that middle managers must engage in to enact their visions (Chapter 2); analyze the importance of a platform strategy as a signaling tool *as well as* an innovation mechanism for the incumbent firm (Chapter 3); and theorize on stakeholder-centric challenges that platform leaders may experience when attempting to develop sustainability-related innovation strategies which diverge from their incumbent firms' traditions.

Synopsis (NL)

Dit proefschrift bestaat uit drie empirische studies, elk een kwalitatief onderzoek naar het gevestigde bedrijf Atos. Alle drie de studies (hoofdstukken 2 - 4) richten zich op de sociopolitieke dynamiek achter de formulering en implementatie van de platformstrategie van de gevestigde onderneming. Respectievelijk laten deze hoofdstukken de multidirectionele en intertemporele legitimatieactiviteiten zien die middenmanagers moeten uitvoeren om hun visies uit te voeren (Hoofdstuk 2); analyseren ze het belang van een platformstrategie als signaleringsinstrument en als innovatiemechanisme voor het gevestigde bedrijf (Hoofdstuk 3); en theoretiseren ze over de uitdagingen die platformleiders kunnen ervaren als ze duurzaamheidsgerelateerde innovatiestrategieën proberen te ontwikkelen die afwijken van de tradities van hun gevestigde bedrijf.

Chapter 1

Introduction

1.1 Nascent digital ecosystems and managerial challenges

Digital technologies - such as Cloud, IoT, and Artificial Intelligence – are majorly reshaping the competitive landscape in a variety of industries; as a result, digital ecosystems emerge, wherein open collaboration among participants is prevalent and indispensably utilizes digital technology (Jacobides et al., 2019; Volberda et al., 2021). These ecosystems often coalesce around platforms, which interface the contributions and dynamics of multiple actors and other technologies (Dattée et al., 2018; Gawer, 2014). This phenomenon has major implications for industry incumbents, which have traditionally focused on developing competitive strategies and closed innovation approaches (Altman et al., 2022). Hence, while digital technology can yield many advantages for digitally born firms, traditional incumbents face significant issues owing to their different sets of structures, capabilities, and norms, as these might not immediately fit with the requirements of leveraging digital ecosystems (Bonnet & Westerman, 2020; Simsek et al., 2024; Volberda et al., 2021). Indeed, established firms need to deal with what is referred to as the ambidextrous governance problem, which pertains to tensions between their traditional governance structures and those necessitated by digital ecosystems (Altman et al., 2022). Incumbent firms need to overcome these challenges to be able to harness the advantages of digital ecosystems – speed, scope, and scale of digital business strategy (Bharadwaj et al., 2013). Overcoming these challenges involves developing novel strategic responses, particularly when the incumbent has deeply traditional business models and operational logics (Dattée et al., 2018).

These issues have implications for strategic leaders across different levels of incumbent firms. Strategic leadership is defined in this context as the responsibility of the CEO, top management team, board of directors, and other executives who are charged with directing the long-term strategic direction of the organization (Hambrick, 1989). While research on strategic leadership has traditionally centered on CEOs and top management teams, the advent of digital technologies and ecosystems necessitates a broader rethinking of strategic leadership that extends beyond just top management and organizational boundaries (Volberda et al., 2021). Strategic leaders in this emergent busienss landscape are at the forefront of dealing with clashes with traditional organizational structures and processes, which often entail cognitive inertia and conflicts within legacy systems (Simsek et al., 2024; Rafaelli et al., 2019). While managers in incumbent firms may benefit from the ample resources that these firms are well-equipped with—resources that entrepreneurs or new ventures lack—they also have to deal with the liabilities of incumbency. For example, the incumbent's reputation can be a significant asset in establishing legitimacy within nascent ecosystems (thus, a socio-cognitive resource), but the same reputation can set

expectations that conflict with the uncertainties of collaborative innovation (Fraser & Ansari, 2016; Putra et al., 2023). How firms respond to uncertain conditions is on one hand motivated by what (socio-cognitive, financial, and otherwise) resources are available to them; but also constrained by their traditional sensemaking and strategic action (Rindova & Courtney, 2020).

Within these broad strategic concerns, senior managers (SMs) remain influential for setting directions and strategies (Ma et al., 2022); however, middle managers (MMs) emerge as pivotal strategic actors. While literature has extensively documented SMs' roles in navigating strategic change (Samimi et al., 2022) and while their influence should not be discounted, MMs drive and sustain innovation from deep within the organization (Heyden et al., 2017; Tarakci et al., 2023). Their midway position between strategic formation and the daily reckoning with operational realities allows MMs to sense opportunities in the uncertain aftermath of technological disruption and implement novel strategies to seize them, using the incumbent's advantages and mitigating its disadvantages (Rindova & Courtney, 2020; Rouleau & Balogun, 2011). Focusing on digital platform development as a phenomenon of strategic action, this dissertation generally seeks to answer *how managers in incumbent firms navigate challenges inherent to strategizing in nascent digital ecosystems.*

This dissertation approaches this overarching research question from a socio-cognitive perspective of organizational process. The socio-cognitive approach emphasizes on the subjective accounts of managers and theorizing from their interactions with each other, the technologies they create and evaluations thereof (Garud & Rappa, 1994). Interpretations of and abstractions from these interactions shall inform discussions on organizational cognition and the underlying social dynamics of managerial decision-making (e.g., Raffaelli et al., 2019). Additionally, the methodological choice of examining these phenomena as process rather than variance favors a setting composed of multiple actors in a network engaged in contests to implement their respective ideas and secure positive evaluations of others; especially as these activities may (re)create new tensions across time (Garud et al., 2013).

Over the past decades, the fields of strategy and organizations have expanded their focus from purely rational decision-making processes to include how key market players—such as managers, stakeholders, and infomediaries—perceive and process information. These insights are analyzed to assess their effects on strategic initiatives, market reactions, and performance outcomes (Deephouse, 2000; Gioia & Chittipeddi, 1991; Ocasio, 1997; Pollock & Rindova, 2003). The sociocognitive

perspective, though diverse in its theoretical applications, underscores the importance of cognitive limitations, intuition, and emotional influences on the behaviors of managers and observers. It also investigates how cognitive biases and heuristics can elucidate the ways firms achieve and maintain competitive advantages (Rindova, Reger, & Dalpiaz, 2012) and how strategies develop (Pfarrer et al., 2019). This approach has grown increasingly relevant in digital ecosystems, where the rapid pace, scale, and scope of change have heightened the uncertainties faced by decision-makers (Volberda et al., 2021).

1.2 Incumbents' strategic responses to changes in the business environment

Incumbents must adapt to changing markets and technologies by transforming their business ecosystems and reconfiguring the leadership positions responsible for determining how they create and capture value (Ansari & Krop, 2012; Christensen & Bower, 1996; King & Tucci, 2002; Tushman & Anderson, 1986). Research on technological change and incumbents' adaptive responses to new technologies (Hill & Rothaermel, 2003) shows that their varying levels of success are dependent on their capabilities (Tripsas & Gavetti, 2000), knowledge (Brusoni et al., 2001), market position (Benner & Waldfogel, 2016), and managerial cognition (Eggers & Kaplan, 2009). This literature emphasizes the importance of adaptive responses to technological change.

Firms must decide, for example, when and how to invest in technological alternatives, and whether to do so through internal development or through acquisition (Eggers, 2012, 2014; Mitchell, 1989). From this perspective, incumbent strategies typically involve deciding on timing of commitment to available technologies (Eggers, 2014; Tegarden et al., 1999). However, there has been insufficient attention towards how incumbents adjust their strategies dynamically to balance their internal development activities with collective action at the ecosystem level (Moeen et al., 2020), and literature examining incumbents' attempts to influence technological change largely treats it as exogenous (Eggers & Park, 2018).

1.3 Ecosystem shaping strategies

While considerable research has shed light on how organizations adapt to changes in the environment (Dutton & Dukerich, 1991; Hrebiniak & Joyce, 1985; Levinthal & Workiewicz, 2018; Sarta et al., 2020), there is a growing attention to firms' more proactive efforts to influence the environment (Battilana et al., 2009; Gavetti et al., 2017; Greenwood & Suddaby, 2006; Patvardhan & Ramachandran, 2020; Seidel et al., 2020). Literature on institutional entrepreneurship (Battilana et al., 2009; Greenwood

& Suddaby, 2006), disruptive innovations (Christensen et al., 2000), and ecosystem strategies (Ansari et al., 2016; Snihur et al., 2018) investigate different dimensions of what makes firms successful in their attempt to modify, overturn, or break free from rule-like industry "recipes" (Spender, 1989) that define what is credible, appropriate, or legitimate (Adner & Kapoor, 2010; Jacobides et al., 2018).

From this perspective, the environment is malleable to firms' influences (Barley, 2010); for example, through introducing game changing technological or business model innovations (Markides, 2013), instigating collective actions such as standardization efforts (Gavetti et al., 2017), leveraging and controlling critical resources such as intellectual property (Masucci et al., 2020), and various political strategies such as lobbying (Hillman et al., 1999). Such strategies may secure better opportunities for value appropriation and capture by increasing alignment between the environment and a firm's (existing or intended) technological architecture and business model, ideally resulting in a sustained competitive edge (Khanagha et al., 2020).

However and to secure the equally sustained support of partners and complementors, a firm needs to ensure that its initiatives are perceived to be in line with ecosystem members' interests. Ecosystems have a paradigmatic nature (Eisenmann et al., 2011); an initiative that violates the accepted paradigms may face resistance for a variety of reasons. First, fundamental unfamiliarity may give rise to evaluative uncertainty (Bingham & Kahl, 2013), compared to existing mechanisms for value creation and capture in the ecosystem. A perception of uncertainty may indicate additional costs for different actors in the ecosystem (Suarez et al., 2015). Hence, the firm's initiative may suffer risk related to its cognitive legitimacy. Moreover, it is essential for the innovator to comply with interests of powerful complementors and resource providers, otherwise the firm may risk its socio-political legitimacy, facing backlash and resistance from others (Aldrich & Ruef, 2006).

Under such circumstances, *strategic leaders* - actors whose responsibilities include making decisions on behalf of a firm's strategic direction and in order to bring about strategic consequences (Altman & Tushman, 2017; Samimi et al., 2022) - may attempt to cease or slow down their shaping efforts. Strategic leadership is defined here as the role of the CEO, top management team, board of directors, and other executives tasked with guiding the long-term strategic course of the organization (Hambrick, 1989). Strategic leadership may occur, for instance, through undermining it via strategic communications and impression management (Cole & Chandler, 2019), depriving it from critical resources (Ansari et al., 2016), or taking legal actions (Garud et al., 2002). Compliance and conformity becomes especially

important when organizations have to deal with governments and regulatory bodies that are concerned about broader implications of the initiative on society and the environment (Garud et al., 2020). While material actions - for example, the design of the technology or its actual degree of openness - is influential in shaping evaluators' perceptions, many aspects in the early stages of an ecosystem's development are ambiguous and open to multiple interpretations. This necessitates a consideration of the socio-cognitive factors I discuss across the three empirical papers.

1.4 Summary of chapters

This dissertation explores its research question through three qualitative, empirical chapters that focus on the multinational IT firm Atos; specifically, the strategic actions taken by a team of managers within its financial services arm. The first chapter utilizes institutional theory to examine how MMs as strategic leaders utilize both discursive and performative actions to legitimize and garner support for a new innovation platform designed to integrate third-party fintech services with Atos's offerings. This platform aimed to sell bundled services composed of fintechs' niche offerings and Atos' own technology to large-scale banks and insurers. Collaborative innovation in the nascent ecosystem of fintechs reflects certain key benefits of digital ecosystems, such as reducing the costs of developing niche services in-house. However, the legitimacy actions that MMs took were at times in tension with expectations that internal and external stakeholders developed about the firm and its reputation as an IT incumbent – making concrete the importance of legitimacy as an institutional concept within platform theory literature.

The second chapter qualitatively investigates this team's development of a platform approach to innovation and emphasizes the hurdles that emerged as internal governance mechanisms faltered and the fintech ecosystem upon which it relied matured. This study illustrates how strategic and organizational challenges may arise when an incumbent aims for an orchestrating role within a nascent ecosystem. Platform strategies are one way to achieve this position, but actively managing their internal governance and external position relative to the overall pace of ecosystem innovation is crucial to prevent disintermediation – where the multiple sides of a platform market can directly engage without needing the incumbent as an intermediary orchestrator. This chapter therefore uses a stakeholder theory lens to highlight the ambidexterity challenges that incumbents face in collaborative innovation arrangements.

The third empirical chapter – Chapter 4 – focuses on Atos's response to regulations related to corporate-social responsibility. Adopting a theoretical distinction of its

target industry – financial services – as the 'core' and Atos as an IT integrator at the 'periphery,' this chapter examines how a unit within the firm resolved tensions between the need to facilitate more sustainable business practices with the need to continue traditional operations, which they did once again via a (different) platform. Due in part to the *zeitgeist* of corporate sustainability[1] and due in part to initial perceptions of a valuable market gap between sustainability ratings companies and institutional investors, the platform team saw early successes in enlisting stakeholder support to internally develop their platform approach. However, this early enthusiasm waned as the project evolved and become more defined; this definition lost the initial appeal and managerial attention recanted, scuttling the project and showing how even (seemingly) lucrative corporate-social responsibility initiatives may be overriden by traditional avenues of value capture. In adopting this stakeholder theory lens, this chapter showcases the unique challenges that units within incumbents may face when seeking to develop an unprecedented market offering from the periphery of a given industry.

1.5 Research Data Management

The qualitative data gathered for this investigation contains publicly available information, such as press releases and website snapshots, but also non-public information such as strategic discussions held among team members within the focal firm. As the topics of discussion dealt in some part with sensitive or proprietary information relevant to the firm as well as its employees' personal and professional ambitions, the data sources contained herein are mostly anonymized (except in cases where the inclusion of personal information is trivial whether due to the person's role or the topic at hand; even then, only first names are used). These data have been compiled in a central Atlas.ti file and uploaded to the Radboud Repository, in keeping with the project's Research Data Management mandate.

1.6 Conclusion to the introduction

In summary, this dissertation is a phenomenon-driven investigation (Fisher et al., 2021) of incumbent innovation strategy as devised and enacted by MMs. The theoretical contributions, however, extend beyond MM literature: a perspective on the micro-foundations of incumbent strategic change, legitimacy action, and innovation platform development broadly integrates managerial agency as a driving force in how incumbent firms strategize and innovate in digital ecosystems (Volberda et al., 2021). These three chapters, each a single-case approach focusing on theorizing emergent processes (Ozcan et al., 2017), offer in-depth analysis of strategic and organizational

1. This is not to imply that the need for sustainable transitions has dissipated; but more that companies including Atos publicly profess devotion to momentary themes

tensions (Berends & Deken, 2021) that incumbent managers encounter when developing new ideas that diverge from old practices. Incumbent firms often have a reputation to uphold based on a stable, predictable manner of behavior; this can involve relatively static internal governance structures. Yet, these static governance structures may conflict with the dynamism of a rapidly developing nascent ecosystem; and it rests on MMs as strategic leaders to navigate this hurdle as well as several others that the following chapters will detail and analyze. Therefore, this thesis aims to address the "new ambidexterity" issue, where incumbent firms manage their internal, legacy governance structures while interacting with ecosystem actors—an area identified as important for further research (Altman et al., 2022).

While the primary charge of this volume is to advance theoretical dialogues, it is not the sole purpose. With practitioners taking a central position in this research, this dissertation intends to deliver useful insights for industry actors in return (Simsek et al., 2018; Simsek et al., 2022). The analysis and models should enrich managers' capabilities to make sense of emergent ecosystems and remain dynamic in how they respond to both internal and external factors. Many of the confounding factors addressed in the following chapters originate in the nature of the larger organization, yet the prescription for practitioners is not to embark on an attempt to rebuild their entire firms from the ground up. More humbly, this dissertation offers a way for practitioners to taxonomize their legitimacy activities, for example, and strategically deploy them in sequence to advance iterative outcomes (such as getting a novel strategic idea through the initial hurdles of securing internal support, enabling a broader search for external partnerships).

1

Chapter 2:

The collaborative innovation challenge:
How middle managers appease internal and external stakeholders in a digital ecosystem

ABSTRACT

We investigate the legitimacy challenges middle managers in incumbent firms confront when they attempt to participate in collaborative innovation initiatives in digital ecosystems. Despite their unique role and importance in pursuing digital opportunities, middle managers must appease internal and external stakeholders with divergent expectations and interests. Our longitudinal field study of Atos, a leading IT company, follows a team of middle managers seeking to implement a strategy predicated on collaborating with novel financial technology firms: so-called fintechs. We explore how they managed legitimacy issues that concerned stakeholders inside and outside the firm by deploying a changing mix of discursive and performative actions. Our findings show that despite initial effectiveness of these actions, commitments made to secure strategic resources and shifting stakeholder expectations can interact to challenge the strategy's legitimacy over time. These conclusions contribute to the literature concerning ecosystem strategy and middle managers' roles in enacting change by highlighting the importance of strategic adaptability in multi-stakeholder or collaborative initiatives.

2.1. Introduction

As digital technology continues to upend the competitive landscape, it is becoming increasingly important to understand how incumbents enter and compete in nascent digital ecosystems (Altman & Tripsas, 2015; Dattée et al., 2018; Helfat & Raubitschek, 2018). An ecosystem is essentially a collaborative arrangement among actors to realize focal value propositions around a specific technological architecture (Jacobides et al., 2018; Kapoor, 2018). These collaborative arrangements can increase the pace of innovation and facilitate developments that would not have occurred otherwise (Masucci et al., 2020; Nambisan et al., 2018). As the locus of innovation shifts from the internal organization to external complementors (Adner & Kapoor, 2010), incumbents need to develop new capabilities that are not necessarily in keeping with their core competencies (Shaikh & Levina, 2019). At the same time and to remain competitive, it is essential for incumbents to sustain and leverage their core capabilities to influence the ecosystem's development (Gawer & Phillips, 2013). However, the difference between the governance models and objectives of collaborative innovation in emergent ecosystems and incumbents' capabilities and hierarchical structure has created new issues for strategic leaders (Altman et al., 2022).

Responding to these emergent issues, recent research has explored how firms enter and compete in nascent ecosystems (Dattée et al., 2018; Daymond et al., 2022; Moeen, 2017). Although this research mainly focused on the technological and economic aspects, scholars have begun to pay attention to the socio-cognitive aspects of ecosystem strategies (Khanagha et al., 2022; Snihur et al., 2022; Thomas & Ritala, 2021). These aspects include concerns regarding legitimacy, i.e., meeting the expectations of various stakeholders by being seen as comprehensible and aligned with societal norms and regulations (Garud et al., 2022; Thomas & Ritala, 2021). Notably, initiatives by middle managers of incumbent organizations to pursue collaborative innovation in digital ecosystems are prone to legitimacy issues that are rarely studied.

Middle managers play a particularly critical role in collaborative innovation. They have knowledge of diverse opportunities throughout their ecosystems and are embedded in the organizational operations, which are both impractical for senior managers to stay abreast of (Dattée et al., 2018; Nambisan et al., 2018; Vial, 2019). Therefore, middle managers are often organizationally mandated to advance internal initiatives while assessing the business value of opportunities to collaborate with external interests (Heyden et al., 2017, 2020). However, although middle managers are expected and encouraged by senior managers to pursue innovation in digital

ecosystems (Ahmadi et al., 2017), they often face an uphill battle in legitimizing their initiatives internally and externally.

On the one hand, collaborative innovation requires middle managers to win positive evaluation of critical partners and complementors by focusing on interfirm value generation (Cennamo & Santaló, 2019), favoring openness of technical architecture over control (Dattée et al., 2018; Reypens et al., 2019). In other words, by demonstrating alignment with norms valued by the ecosystem actors (Garud et al., 2022; Taeuscher & Rothe, 2021; Thomas & Ritala, 2021), managers may garner external legitimacy. On the other hand, middle managers commonly lack the authority to mobilize internal resources (Day, 1994; Tarakci et al., 2018) and, therefore, need to secure internal legitimacy, i.e., acceptance or normative validation of the initiative among organizational members (Drori & Honig, 2013), before being able to effectively participate in digital ecosystems. However, contrary to external stakeholders, internal stakeholders tend to favor secretive, closed, proprietary, and highly bureaucratic approaches (Altman et al., 2022). Moreover, collaborative innovation may require middle managers to experiment with new business models and partnerships with various actors (Tarakci et al., 2018; Volberda et al., 2021). Such divergent behavior can violate established corporate directives and processes, exacerbating internal legitimacy issues. Hence, pursuing collaborative innovation opportunities in digital ecosystems requires appealing to internal and external stakeholders with inconsistent expectations and interests.

Despite the importance of these issues, we know little about how organizations deal with the collaborative innovation legitimacy issues that are rooted in the difference between an incumbent firm's legacy, hierarchical and closed governance models on the one hand and a digital ecosystem's open governance and distributed innovation models on the other (Altman et al., 2022). Reflecting on how middle managers can appease internal and external stakeholders to pursue collaborative innovation in digital ecosystems, we ask *how middle managers navigate internal and external legitimacy issues to effectively participate in collaborative innovation initiatives in digital ecosystems*.

To address our research question, we focus on the European financial services domain and present a longitudinal field study of an initiative within an incumbent IT service integrator firm: Atos. In our in-depth case study, we followed a unit within Atos as they dealt with pressures from internal (intrafirm units and top managers) and external (e.g., complementors, clients, regulators) stakeholders in developing a collaborative strategy with financial technology startups – hereafter *fintechs* – the outputs of which they would sell to Atos' clients. Having direct access to middle

managers' struggles and efforts when leading a collaborative initiative in a nascent ecosystem provided an appropriate ground for investigating our research question.

Our qualitative analysis develops a model showing how middle managers leverage a mix of mutually enabling discursive and performative actions that are outward-facing and inward-facing to deal with seemingly contradictory expectations of internal and external stakeholders. We explain that the nature and prevalence of such issues change over time in a way that corresponds to the developments in the broader business environment and the priorities of top managers. These insights enable us to make two contributions at the intersection of strategy and organization theory.

First, we contribute to the literature on incumbent strategies in nascent digital ecosystems (for a review, see Eggers & Park, 2018) that does not incorporate socio-cognitive legitimacy issues prevalent in digital ecosystems. Focusing our study on the nexus of the firm and its surrounding environment, we extend the recent research that acknowledges the importance of legitimacy issues in nascent ecosystems (e.g., Garud et al., 2022; Thomas & Ritala, 2021) by incorporating internal dynamics and legitimacy issues related to ecosystem strategies. Focusing on internal issues and tensions that prior research rarely studied, we illuminate strategic challenges and the mechanisms through which managers navigate such issues.

Second, we add to the literature on the strategic role of middle managers (e.g., Heyden et al., 2017; Vuori & Huy, 2016) by clarifying the unique position and challenges of middle managers in steering the strategic agenda of large organizations in the digital era. We move away from the prevalent focus of previous research that predominantly focuses on top-down, senior management-oriented drivers of digital innovation (e.g., Hess et al., 2016; Kohli & Johnson, 2011; Mann et al., 2022) and underscores the importance and challenges of initiatives emerging from middle layers of incumbents. Our theorizing illuminates how middle managers can compensate for their lack of authority by leveraging mutually enabling inward and outward-facing actions to enlist support for collaborative innovation initiatives. In doing so, we highlight the role discursive actions by middle managers play in securing support for their collaborative innovation efforts in digital ecosystems. We outline the actions and mechanisms through which middle managers reconcile seemingly contradictory internal and external expectations and explain how the developments in the ecosystem require them to adjust these strategies over time. We explain the broader implications that our findings have on understanding the tensions between internal and external legitimacy in the emergent business ecosystems.

2.2. Literature Review

2.2.1. Collaborative innovation in nascent ecosystems

Technological innovation is a constantly unfolding process involving complex constellations of actors and their outputs (Garud et al., 2017, 2018). Especially in digital realms, strategic leaders in incumbent firms are increasingly turning away from business models exclusively relying on in-house capabilities and towards collaborative innovation to harness the wide variety of new technologies novel entrants introduce (Altman et al., 2022). In doing so, decision-makers within firms have the autonomy to engage their peer organizations and exchange ideas, resources, and value to advance their intended value propositions (Chesbrough & Bogers, 2014). While collaborative innovation has been a topic of repeated inquiry (e.g., Nambisan et al., 2018; Reypens et al., 2019), an emerging field focuses on such efforts by groups of firms embedded within ecosystems.

Ecosystems can form around a central technology's value proposition (Kapoor, 2018). In these cases, collaborations focused expressly on innovation itself can unlock new potential as firms jointly explore value-capture opportunities that their combined technologies and business models create (Masucci et al., 2020). As firms seek to orchestrate and influence other firms' actions and strategies (Dhanaraj & Parkhe, 2006), the "locus of activity" is external to that firm (Altman et al., 2022, p. 79) and blurs traditional lines concerning ownership of the outputs. Unsurprisingly, a vibrant topic in this literature is value creation and capture (e.g., John & Ross, 2022), putting forward new tensions revolving around collaborative innovation, wherein firms seek to maximize their ability to capture value (e.g., through exerting control over technologies). However, they also need to encourage others to collaborate (e.g., through relinquishing control and embracing openness). Such issues and tensions become particularly prevalent when an incumbent firm attempts to transition from, but partially maintain, its legacy, hierarchical governance model (Altman et al., 2022).

A principal challenge centers on the collaborative nature of the ecosystems, demanding alignment across internal and external stakeholders. As incumbent firms seek to move from their traditional governance models to effectively participate in an ecosystem of complementors, decision-makers may face strategic tensions, for example, in aligning collaborative innovation efforts with their overall strategies (Khanagha et al., 2018). On the one hand, firms – particularly powerful ones – can motivate overall beneficial outcomes for the ecosystem by applying selective pressures in their decisions for which complementors to include in their arrangements (Cennamo & Santaló, 2019). On the other hand, large firms can have a significant influence on the total value creation

within an ecosystem depending on how they capture value from this arrangement. The potentially positive effects of value creation for the ecosystem can be jeopardized if parties internal to dominant firms seek to capture value too aggressively from the ecosystem, due to the "potentially suffocating effects" that they will have on value-capture opportunities for others (John & Ross, 2022, p. 660).

Prior research (e.g., Ahearne et al., 2014; Heyden et al., 2017) has found that navigating relational complexities (e.g., in digital ecosystems) can be challenging for top managers of incumbent firms. Particularly in a multi-industrial incumbent's case, top managers have a sufficient overview of the firm's general activities, but they typically lack technical expertise and an awareness of what occurs "on the ground" in their firms' interface with their respective ecosystems (Lee & Puranam, 2016). Thus, they may find it difficult to make sense of the complexity of collaborative arrangements, decide the ideal parameters for them, and orchestrate collaborative innovation. Nor does their holistic view of the firm necessarily correspond to the tactical and strategic steps required to most effectively manage value creation and capture in an innovation ecosystem. Research into strategic change finds instead that strategies initiated by managers at other levels of an organizational hierarchy, particularly middle managers, are typically more effective (Heyden et al., 2017).

Nonetheless, although firms are often treated as homogenous in their interests (Drori & Honig, 2013), large established firms rarely have similar interests to the many emergent players in an innovation ecosystem (Teece, 2014). Coordinated or incidental variation between different interpretations of the central vision underpinning collaborative innovation initiatives can render disagreements between different orchestrated stakeholders concerning how to actually implement (Fraser & Ansari, 2021; Khanagha et al., 2018). Therefore, what may be seen as appropriate and essential action by a unit within a firm may be seen as undesirable and inappropriate by other units within the same organization. In the context of collaborative innovation, attempts to pursue partnership and openness with external actors are likely to face criticism from other units concerned with proprietary rights and control over innovations. While senior managers are well positioned to reorient their organizations and mobilize internal resources in the face of such issues (e.g., Eggers & Kaplan, 2009; Taylor & Helfat, 2009), middle managers lack authority and resourcefulness. In other words, they face legitimacy issues, i.e., a generalized perception or assumption that their actions might be improper or inappropriate (Deephouse et al., 2017; Suchman, 1995).

To account for internal and external expectations and divergent or even conflicting concerns about collaborative innovation initiatives by middle managers, it is important to distinguish between the two key types of legitimacy that these managers need to establish with their audiences (Aldrich & Ruef, 2006). First, cognitive legitimacy is built by diffusing knowledge and creating appealing mental models to make the initiative seem comprehensible, worthwhile, and advantageous (Aldrich & Fiol, 1994; Suchman, 1995). Second, socio-political legitimacy accounts for how key internal and external stakeholders accept and endorse the collaborative initiative as appropriate in the context of their respective organization's or field's norms and regulations (Aldrich & Fiol, 1994; Scott, 2013). Implicit here is the distinction between internal and external legitimacy issues. For instance, Drori & Honig's (2013) research of a creative dot-com firm showcased how internal legitimacy assessments are responsive to external events as well as external (legitimacy) assessments of the firm; breakdowns between these can have substantive effects on organizational evolution. In a related field, Zuzul & Edmonson (2017) found that a firm focusing on external legitimacy-building can significantly jeopardize internal cognition and the ability of internal stakeholders to accept and implement new practices, in part because legitimacy-building relies on selling stakeholders a story.

2.2.2. Middle managers as operative legitimization agents

In digital ecosystems, middle managers engage with various small and large external firms that are essential for collaborative innovations (Vial, 2019). Middle managers play a central role in rounding up and convincing internal stakeholders needed to empower business model operations for their support to the various strategic and operational aspects of a foreseen interfirm collaboration (Balogun & Johnson, 2004; Jarzabkowski et al., 2007; Weiser et al., 2020). Yet, due to their position in an organization's hierarchy, they often face issues revolving around internal competition and contestation (Balogun & Johnson, 2004). Additionally, these activities may not always be sufficiently aligned with those other firms' goals to garner their support. Therefore, middle managers need to navigate a clash of ideas and interests, whereby the contestations of stakeholders both inside and outside the focal firm align and conflict in ways that can hamper the pursuit of digital opportunities (Volberda et al., 2021). Accordingly, middle management actions and interactions with supporting units are pertinent in understanding how established firms navigate tensions arising between stakeholders involved in implementing a collaborative innovation (Friesl et al., 2021).

While collaborations with new ventures may appeal to some internal stakeholders for efficiency and innovation reasons (Altman et al., 2022), such efforts often create contestations among internal parties when managerial foci and resource

flows diverge in different directions (Burgelman, 1991). In turn, middle managers may simultaneously seek to quell stakeholders' concerns and incentivize their participation by narrowly selecting collaborators, filtering out others not aligned with the incumbent's strategic interests. If externally perceived as discriminatory behavior or presenting too high of barriers for collaboration, however, this may damage the firm's standing as a potential collaborator among peer firms (Rietveld et al., 2019). Overall, it remains unclear how middle managers may pursue collaborative efforts while confronting the internal and external legitimacy issues we outlined.

2.3. Methodology

2.3.1. Research site: Atos SE

Atos, a French multinational (105,000 FTEs in 71 countries as of 2020), is an IT hardware and services firm. As of Q1 2022, Atos is a *Societas Europaea*, member of the CAC 40 ESG, and has a market capitalization of approximately $3.8B. Among other offerings, Atos provides information technology (IT) services to financial services and insurance (FSI) firms – the industry in which our focal team operates. Atos' clients – major banks, insurers, and payment service providers – are serviced by 'Alpha Team,' whose charge is to maintain and modernize Atos' portfolio of solutions it can sell to said clients. Alpha Team's composition throughout our research was six to seven mid to late-career professionals, and the leader of the group held a senior vice president position.

Traditionally, Atos would serve their clients in FSI through direct interactions. The client account executive would parse through the client's business portfolio and estimate what new services offered by Atos the client could benefit from. Alpha Team's leader devised the Fintech Engagement Program (FEP) during a training course, a collaboration-intensive strategy that sought to optimize this process and broaden Atos' FSI portfolio by inviting new complementors to jointly service client organizations. Alpha Team members would manage three capabilities of the FEP: gathering market intelligence in the FinNet about which fintechs might aid them in revamping and improving client portfolios; demo combinations of these fintechs in the FSI Sandbox; and maintaining successful combinations in the FinHub, a repository of deployable complementors. Alpha Team would link fintechs to internal and external users while capturing value from brokering and adding their own services to the arrangements. The Sandbox was where Alpha Team enmeshed screened fintechs with other complementors, and this is where users (clients) primarily interfaced with the fintech in contractual arrangements involving the FEP.

2.3.2. Data Collection

Data collection began in August 2019 and continued into early 2022. Our primary window into the firm was through Alpha Team's industry directors, whose accounts of their firm's activities and its context in the broader ecosystem formed the basis of our understanding of the phenomena at play. The directors typically have between 10 and 20 years of industry experience. Besides the industry directors, we interviewed certain account executives and employees in roughly equivalent roles in the various other Atos units supporting the focal team's initiative. We also conducted interviews with fintechs external to the firm, where a working relationship between Atos and said fintech either was ideated and scrapped or did manifest and continue with varying degrees of success. Additionally, we interviewed the founders of a fintech incubator and an external senior analyst who has focused on Atos' financial service activities for most of their tenure at their current firm. As shown in Table 2, we conducted 31 semi-structured interviews with these respondents; some were one-off interviews, and others were repeated. These interviews range from 18 to 53 minutes. We recorded and transcribed some and diligently notated others, depending on interviewee preference. These interviews are further bolstered by extensive notes from several informal chats during an 18-month period in which the first author worked aboard Alpha Team.

Table 2. Chapter 2's data sources.

Data Types	Details	Use in the analysis
Semi-structured interviews	32 interviews 24 Atos (AT & non-AT) 2 fintech accelerator 5 fintech 1 analyst	Established fundamental understanding of practitioners' main challenges, questions, and interests; provided insights that guided further investigation among other interviewee groups Corroborated or dispelled emergent conclusions and ties between disparate themes, providing a workable ground layer of correlation between events to motivate processual understanding
Field observations	18 months' digital ethnography; first author shadowed Alpha Team Notes from 64 weekly strategy meetings (AT + invited guests) Notes from *ad hoc* calls, meetings, informal chats/ lunches	Grounded themes emerging from interview data in practitioners' real, day-to-day activity Acclimatized research team to organizational dynamics, allowing for more focused initial and follow-up interviews Peripheral documents that corroborated or challenged emergent understandings of events and correlations
Internal archives	150 intranet files (pitch decks, governance structures, internal-use reports, etc.)	Provided a chronology of background and foreground events, hierarchies, and narratives

Once we attained a basic idea of the significant events by which relevant actors partitioned sequences of events in their accounts (Van de Ven & Poole, 2005), we conducted the remaining interviews and data collection to attune our phasic categorization on the one hand and to achieve theoretical saturation on the other. Augmenting interview data are notes from sitting in approximately 61 weekly

strategy meetings that Alpha Team curated. Additionally, we used various internal documents the first author gained access to during fieldwork, as well as reports and regulatory documents from European institutions engaged in and overseeing the financial services ecosystem.

2.3.3. Data Analysis

This research began inductively: the first 11 interviews helped build the context for our emergent narrative (Langley, 1999). As we began coding these interview transcripts for grounded concepts (Gioia et al., 2012), we sharpened our focus on the present research question. We switched to abductive analysis of past and future interviews, internal documents, public press releases, and further content analysis (Duriau et al., 2007). We initially transcribed interviews and coded them in the qualitative analysis software Nvivo and later Atlas.ti. We coded initial interviews thematically, whereas we coded later interviews along the lines of incidents and events (Poole et al., 2016) when it became clear that ours was an emergent study of process (Garud et al., 2017).

As we built a temporally bracketed understanding of events (Langley, 1999), initial interviews and the thematic codes elicited from them were useful in providing cultural insights and corroborating discordant accounts from informal chats of firm priorities at various stages of the investigation. Recounting our conclusions in episodes to close collaborators on Alpha Team provided further precision, direction, factors, or conclusions. These collaborators, in turn, facilitated sharing our conclusions with embedded organizations of broad scientific interest in Atos, which provided further perspective on how actors within the firm consider the firm's own activities from non-Alpha Team angles. As our investigation neared its present form, we began examining our understanding in line with extant literature on ecosystem strategy and the roles of managers in motivating collaborative innovation. This step allowed us to review our work deductively, examining what we could add to our chosen literature streams and aligning our coding structure with the field's understanding, which emerges in Figure 1.

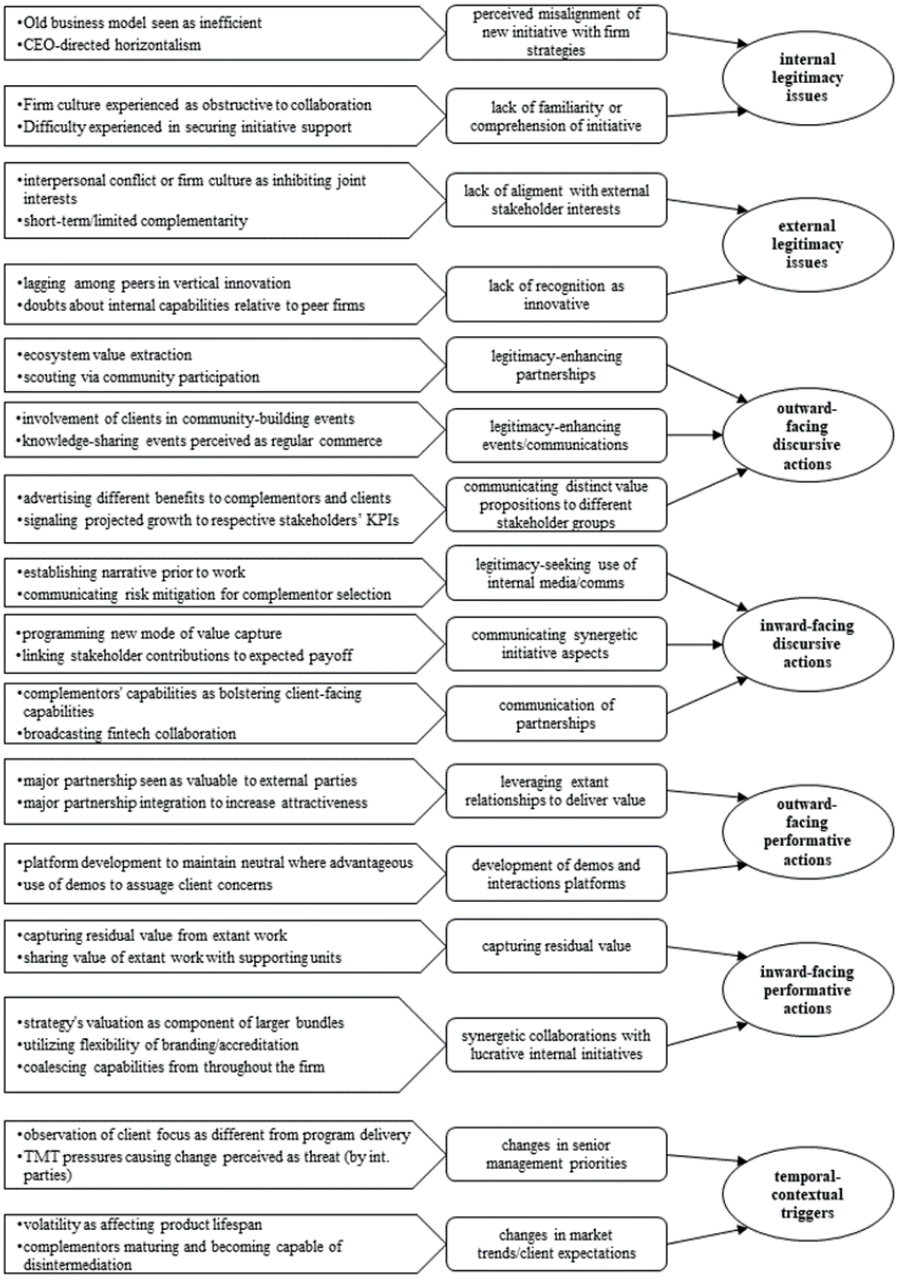

Figure 1. Coding structure depicting the progression from raw data to aggregate dimensions advising this chapter's analysis.

2.4. Findings

In this section, we describe the three themes that emerged from our data analysis: (1) The plurality of interests and expectations among internal and external stakeholder groups that middle managers at Alpha Team had to manage and deconflict in order to incorporate their program, (2) the performative and discursive legitimacy management actions that they undertook to shape these stakeholders' evaluations, and (3) the need for adaptation of theses discursive and performative actions over time. Finally, we introduce a process model that coalesces these findings to show sequences of triggers, legitimacy actions, and outcomes; which we then distill into a table qualifying the types of legitimacy work towards internal and external stakeholder groups in two phases.

2.4.1. Theme 1: Legitimacy issues concerning internal and external stakeholders

Our findings revealed that the middle managers of the unit, seeking to orchestrate fintechs within the collaborative initiative, needed to secure positive appraisals from multiple other organizations (e.g., fintech startups and scale-ups, clients, partners), as well as key decision-making parties within the firm (e.g., upper management, software engineers, marketing personnel). In what follows, we present the nature and dimensions of these expectations among internal and external stakeholders.

2.4.1.1. External legitimacy issues

Our investigation revealed that in connection with external stakeholders, Alpha Team managers had to deal with two categories of problems that we label as *Lack of recognition as innovative* and *Lack of alignment with interests of external stakeholders.*

Lack of recognition as innovative. The traditional business model of Atos did not put it in a natural position to be seen and recognized by innovative fintech ventures as a natural choice for collaborative innovation. The firm's history of acquiring innovative capability is primarily through large acquisitions, and as it relates to the financial industry, these acquisitions were typically concentrated on hardware firms. Atos "bought a large amount of customers" with its acquisition of Bull Hardware, for instance, including

> *"employees that have been working around these banks and other institutions that use the Bull [mainframe] hardware. And they know the people there, they know the institutional culture there, they know the software landscape there, they know the footprint of the institution"*
>
> *(Interview, senior external analyst, 2021)*

This focus on hardware implied that Atos was not considered a key innovator in the fintech ecosystem, as this ecosystem is primarily software oriented. One Alpha Team member succinctly described Atos as a "conservative innovator," inclined to avoid more risk in innovative exploration than counterpart firms by relying more on extant knowledge and capabilities than developing or seeking new ones in practice. External stakeholders mirrored this sentiment; two separate fintech founders we interviewed described Atos as more useful for its sales and consultancy capabilities than for its innovative capability. Further, an external analyst specializing in Atos' digital activities described the firm as a 'laggard' in competitive innovation.

As a measure to quicken Atos' financial software innovation capability without expensive acquisitions, Alpha Team sought to partner with an emerging class of startup accelerators focused on fintech around Europe.

Lack of alignment with interests of external stakeholders. Though the opportunity to establish continued business with incumbent firms was valuable in concept to many fintechs, they nonetheless expressed reservations about entering an arrangement with Atos. A fintech founder expressed their disapproval of (non-Alpha Team) Atos managers' predisposition to reject ideas that originate from outside. We observed similar sentiments from other fintech founders and informal discussions with Alpha Team members as well.

Interviewees from the fintech side recurrently referred to their perceptions of Atos relative to its peer organizations or inconsistencies arising between Atos' internal decision-making parties during initial dialogues. For example, one fintech founder commented that Atos was a good partner to evaluate their startup's solution with a medium-sized industry partner, only to move away from Atos and pursue more lucrative partnerships with better-performing firms. While Alpha Team sought enduring complementor partnerships, this fintech reciprocated with a time-boxed commitment and saw Atos' middle-stance performance as a negative feature for their fintech's continued growth past this development phase.

For client organizations, Atos' historical focus on long-lasting hardware and infrastructural systems lent trust in these categories. However, this did not inherently transfer to trust in introducing new technologies. Alpha Team needed to shed certain aspects of the firm's reputation to be seen as legitimately able to deliver new capabilities. As one former account executive who supervised a large national bank's account within Atos and who consulted with Alpha Team to service them explained:

> *Our key selling point is that we understand their infrastructure better than our competitors… For new work [however], particularly in digital topics - AI topics, security topics - we have never done historically [well] in those areas. Or very, very small [amounts of work for them]… But not significant and not in the leadership role. And so, we've been on the journey to try and convince them of our credentials to start including us in some of those processes… it's a long journey.*
>
> *(Interview, 2020)*

Such issues underscore a misalignment with external firms' interests that sought these innovations, yet not from Atos. Conversely, another Alpha Team interviewee told us that a potential collaborator was reluctant to work with Atos because it was moving towards Cloud infrastructure around this time, and the firm in question was still resisting Cloud due to security concerns.

To summarize, Alpha Team had to deal with issues of not being perceived as innovative or its interests appearing misaligned with those of external firms. External organizations' perceptions of Atos would be crucial for the strategy's continued success. Thus, Alpha Team had to take actions to shed (aspects of) the firm's reputation since internal stakeholders considered client interest as a direct measurement of how much they should commit to a collaborative initiative.

2.4.1.2. Internal legitimacy issues

Our observations identified two internal tensions that similarly obstructed Alpha Team's efforts. We categorize these issues as *Lack of comprehension of the initiative* and *Perceived misalignment with firm strategies*.

Lack of comprehension of the initiative. Throughout our investigation, we noticed that the FEP was unique within Atos' Financial Services & Insurance arm for being pointedly reliant on other firms' services. The strategy was distinct enough to get internal stakeholders' attention, but it was also inherently unfamiliar to them. Examined another way, TMTs were ambivalent but allowing for externally sourced innovation; Alpha Team saw in this an opportunity to establish their strategy, yet they needed to entice internal stakeholders beyond ambivalence and towards active support. To do this, they needed to distinguish the strategy from others competing for stakeholders' resources and attention, and furthermore make it comprehensible to stakeholders in a way that would suggest it should take primacy over other project ideas competing for the same resources and attention.

Our findings show a lack of willingness from key decision-makers in upper management teams to put their weight behind the program. Alpha Team had to address this tension early on since internal support was crucial in unlocking necessary resources. Multiple interviews with Alpha Team managers concurred that Atos TMTs strongly preferred to sell a capability first and develop it later. In contrast, Alpha Team's approach laid the groundwork to develop a capability using available collaborations before introducing it to the market. The practical implication of this managerial preference for demand-pull over supply-push is that the FEP required capital investment upfront, which ran counter to internal stakeholders' expectations, and they exhibited resultant uncertainty towards the expected value of this initiative.

Perceived misalignment with firm strategies. The FEP proposed a fundamentally distinct way of working compared to extant routines for capturing value. The precursor to the FEP was tailor-made deals, each of which Alpha Team constructed through careful liaison with account managers, software developers, and other similar parties within Atos alongside conversations with various parties within the client organization. Per Alpha Team's leader, these

> *[took] a long time to bring the stakeholders on both sides together, because they're big [firms] and by the time you get into something that gets real, … it takes you a year to one and a half years.*
>
> *(Interview, 2019)*

Alpha Team's initiative, in contrast, was poised to move faster by relying more on trust-based relationships, which was primarily enabled by that it would seek smaller increments of value from a larger quantity of deals based on somewhat replicable, modular models. One example would be cloning a web bank built for one client to sell, with some changes to its modular components and an overall rebranding, to a future one with similar demands). As each deal was envisioned to require less in-house work to construct, certain internal parties, such as software development cells, initially viewed this strategy as a threat to their *raison d'être*. Thus, part of the distinguishing work of Alpha Team aimed at aligning the strategy to fit stakeholders' scrutiny and to prove that it would not compete with their interests.

2.4.2. Theme 2: Discursive & performative legitimacy-seeking actions

Our analysis uncovered two sets of actions - performative and discursive - that Alpha Team took to address legitimacy issues that we outlined in the previous theme.

2.4.2.1. Legitimacy-seeking discursive actions

Discursive actions refer to Alpha Team's actions to build, maintain, and adjust discourse concerning Atos' and Alpha Team's activities in the ecosystems they sought to engage. Alpha Team took discursive actions towards external and internal stakeholders with different ends but using some of the same means.

Outward-facing discursive actions. We identify *legitimacy-enhancing partnerships, legitimacy-enhancing events,* and *communicating distinct value propositions to different stakeholder groups* as categorical actions with important discursive aspects for Alpha Team.

Legitimacy-enhancing partnerships. Working with new venture accelerators and strategic collaboration with these organizations was a prime means for Alpha Team to find and approach fintechs. Establishing employee presence in a fintech accelerator was meant to signal to fintechs that Atos could be a go-to for questions, information, and coaching relevant to the position Alpha Team sought to establish for Atos in the space. To banks, the partnership intended to show that Atos was finely tuned into hotbeds of fintech innovation; however, this usually did not lead the conversation. Instead, Alpha Team highlighted to banks that they would competently vet the most promising among these. The accelerator as a source was secondhand information in these discussions as far as we know.

Legitimacy-enhancing events. Alpha Team's managers leveraged opportunities to send signals that resonated with the target audience and that conveyed Alpha Team to be sufficiently knowledgeable to aid fintechs on their scaling journeys. Further, they wanted to establish that Atos was interested in making this knowledge available to start-ups in ways that led to collaborations and even those that did not. Hosting events seemed to bridge these interests, as well as to simultaneously merge and address the interests of different stakeholder groups at one time. Respective example events were the Female Fintech Competition, where a chosen batch of women-led fintechs were competitively assessed in a semi-public forum for business utility and viability; and the Compliance Navigator, a workshop for fintechs to develop the regulatory compliance aspect of their ventures.

These events were free for the fintechs to participate in. The fintech-facing intent was to assist fintech founders in their entrepreneurial journeys; to internal stakeholders, the events were implicitly a mechanism to bring promising fintechs closer to Atos' innovative capability; to clients, it was to make public Atos' involvement in the coaching and scaling of promising fintechs. One Alpha Team member stated that

"this is in conjunction with Deutsche Bank, and the Female Fintech event is to foster that relationship," whereafter Alpha Team's leader added that "this is exactly what we want to do: involve customers." Building a track record of organizational legitimacy for these stakeholder groups would help Alpha Team establish positive traction in negotiations with new complementors, clients, etc.

Communicating distinct value propositions to different stakeholder groups: From the beginning, Alpha Team pitched the FEP towards different stakeholders in ways that would resonate with their respective aims. To client organizations and per the FEP's dedicated website[1], the strategy promised to filter through non-viable and high-risk entrants to the fintech ecosystem, vet promising complementors, and seamlessly integrate them into a constantly updating client portfolio. Opposite this, the strategy promised exposure to some of the industry's biggest clients for fintechs. Atos would work alongside the fintechs to develop their solutions towards the clients' needs and offer expert services and resources to facilitate continued development for as long as the clients' service contract necessitated their joint work.

Inward-facing discursive actions. We identify *Legitimacy seeking use of internal media and communications, Communication of synergetic aspects of the initiative*, and *Communication of partnerships* as three categories of actions with important discursive aspects for Alpha Team's internal stakeholders.

Legitimacy-seeking use of internal media and communications. The dedicated website for the FEP was used to convince internal parties that the program was operational prior to its actual operation (Interview, Alpha Team leader, 2019). The intuition in Alpha Team was that such posturing would increase the likelihood that internal stakeholders would throw their weight behind a program that already had momentum. Other media included brochures, internal-use reports curated by the team's dedicated market researcher, and pitch decks. Furthermore, Alpha Team sought active participation in Atos' Scientific Community, a body of Atos employees who collect and publish written works ideating how Atos can create and engage with novel technology topics. We observed that Scientific Community involvement with Alpha Team's FEP-related media seems to have carried significant weight, especially in legitimizing the initiative to upper managerial parties. Their involvement with the Scientific Community seemed primarily aimed at aligning the FEP with firmwide technology-oriented ambitions and distinguishing the program as an innovative solution to harnessing ecosystem capabilities.

1. www.atos.net/fintech

Communication of synergetic aspects of the initiative. To internal stakeholders, the strategy promised incremental but steady revenue – so long as clients bought it and fintechs participated in the joint endeavor. We analyzed intranet documents Alpha Team used to pitch the FEP near its inception, which showed attempts to convince internal stakeholders that Atos could stay abreast of the latest available finance technologies in an adaptive way. This was presented as a sustainable path towards portfolio innovation minus enormous R&D investments typical of the previous way. Furthermore, Alpha Team cited lighthouse use cases: reports of successful client deals that explored the use of new technologies or resources – ostensibly to build the basis for this program becoming the go-to method of actualizing financial innovation.

Communication of partnerships. Finally, Alpha Team also touted new and extant partnerships with organizations that seemed to grant associative legitimacy in the eyes of respective stakeholder groups. For instance, they promoted specific university collaborations to appeal to key stakeholders in Atos' Scientific Community. Informal discussions with Alpha Team members revealed that positive appraisal from this group on a unit's strategy insinuated a heightened degree of managerial attention, which could speed up various processes and grant additional resources to the strategy's coffers.

2.4.2.2. Legitimacy-seeking performative actions

Performative actions were taken to prove that the strategy could meet stakeholders' performance expectations as understood by Alpha Team. Performative actions were taken toward both internal and external stakeholders.

Outward-facing performative actions. We identify *Development of demos and interactions platforms* and *Leveraging extant relationships to deliver value* as two categories of actions with important performative aspects for Alpha Team's external stakeholders.

Development of demos and interaction platforms. Alpha Team built client involvement into the infrastructure of the FEP through the Sandbox platform, where Atos and its clients could mix and match fintech software and capabilities with each other. The Sandbox allowed Alpha Team to use client data in demos to symbolize the efficacy of solutions in real time. The valuable aspect of this demo space was that not only could client organizations view their requested services in action, but Alpha Team could introduce entirely new technologies into proposed demo solutions, using novel partnerships and own services. The ability to modularly reconfigure services allowed

for opportunities to extract more value if the demo sufficiently impressed the client and they requested additional services on top of the original ask.

Leveraging extant relationships to deliver value. In addition to creating a platform, Alpha Team mobilized Atos's relationships and resources to enable value creation for its fintech partners. A former Atos account executive discussed this as follows:

> *Demos are useful… What is even better is if you have done that solution with someone else before… Now, the issue with a demo or a [proof of concept] with a client is that it requires their data, which means it requires their support, right? Now, that requires them to get on board with your idea. Where we are in a really unique position with [bank name] is that we are actually a client of [theirs]. And so, what we can be doing is developing POCs and demos using our data as a client… and demonstrating to them how this would work.*
>
> *(Interview, 2020)*

The client organizations did not make any direct, contractual agreements regarding data protection protocols with the FEP's complementor firms – Alpha Team's screening protocols sufficed. Informal discussions concerning this client implied that such reticence is not unique to this bank. Data such as consumer spending data or borrowing risk indicators are highly valued resources that banks do not and cannot typically disclose freely. In this case, Alpha Team's advantage was that the client organization already dealt with Atos' data, and it therefore was easy to deploy; in other cases, the Team could use spoofed data to demonstrate the same viability.

Inward-facing performative actions. We identify *Capturing residual value* and *Synergetic collaborations with internal lucrative initiatives* as two categories of actions with important performative aspects for Alpha Team's internal stakeholders.

Capturing residual value. Alpha Team struggled to translate non-financial gains, such as 'coopetitive' collaborations arising from the incubator partnership to financial or performative outcomes that were meaningful to their respective stakeholders. However, one Alpha Team member who played a central role in the FEP explained how they leveraged their engagement program to address internal stakeholders' financial expectations:

> *The first [stream of possible revenue] was direct revenue, cloning the fintech engagement program or cloning the sandbox. We did several proposals to a customer to set up their own Sandbox and Fintech Engagement Program based*

> *on our solution… I guess, six or seven opportunities to clone our program and then to provide services to [the] customer and make direct money on that.*
>
> *(Interview, 2021)*

Alpha Team could deliver these solutions with or without help from other units. In some cases, Alpha Team was not the primarily responsible unit and was more visibly subordinate to internal stakeholders' demands. In one case, a client pulled out of a potentially lucrative deal when the leading internal team sought to add their consultants into the arrangement to implement Alpha Team's Sandbox, ramping up the cost significantly.

Synergetic collaborations with internal lucrative initiatives. Positive performance outcomes also emerged from the collaborative innovation program, albeit only in collaboration with ongoing initiatives. As an Alpha Team member explained:

> *The second revenue and order entry that we could justify was thanks to the innovation tracks and the innovation supported by the Fintech Engagement Program. We were able to sign… or to renew a bigger contract for Application Management, Infrastructure Management with a big bank because each time you sign a managed services contract, you have to show innovation to the market up to the business [Atos]. And the Fintech Engagement Program is really a way to demonstrate innovation in the market. And so, we could say that showing the Fintech Innovation Program to a customer presents an innovative face of Atos in the financial services market.*
>
> *(Interview, 2021)*

Thus, Alpha Team was able to address internal concerns with easy wins where residual value could be captured, such as by leveraging extant partnerships or demos. To assuage stakeholders for whom this was not enough, Alpha Team's former leader shed light on how they achieved value-realizing actions to lay the FEP's groundwork:

> *in codifying industry solutions,… [the] first thing you have to do is look where you might be doing it kind of by accident… It could be that in addition to infrastructure services, you might be doing application development for somebody around the mobile phone, and on that app you might be putting together the mobile app for retail banking in a bank… You unearth those scenes of [what is accidentally] happening, codify them, and then make them replicable or build them into a portfolio in which you can then begin to scale.*
>
> *(Interview, 2021)*

2.4.3. Theme 3: Temporality and the shifting of stakeholders' evaluative baselines

Our findings show that the initial steps that Alpha Team took to secure positive evaluations of their strategy's legitimacy did not endure. Interrelated changes in *Market trends and client expectations* and *Senior managers' priorities* are two categories we identified as triggers to changing stakeholder evaluations and hence, inward and outward-facing legitimacy-seeking actions by Alpha Team's managers.

2.4.3.1. Changes in Market trends and client expectations.

As the fintech sector evolved, client expectations shifted according to larger market trends. The expectations from Atos' major clients (banks) shifted from exploring possible options to ways to monetize their investments. An external senior analyst who has covered Atos' activities in the financial industry summarized:

> *The bottom line is that there is extreme margin compression. [The banks have] got to find something that can replace [high-cost services]. That's number one. Number two: you've got the issue of volatility or agility, which is when banks used to set up a value chain, an operation, a line of business, it was 'I expect to originate a hundred mortgages a month from now until infinity.' And now you can't expect that to happen. Now it's 'I expect to originate a thousand mortgages a month for the next twelve months, and then that product will go away.'*
>
> *(Interview, 2020)*

This links to the FEP's intended value for clients: to provide a constantly updating pool of fintech services at a lower cost than if they or their IT integrators would construct said services themselves. However, our respondent also hints at the acceleration of demand that would ultimately jeopardize the original innovation strategy of the FEP:

> *The fintechs do not come in and deliver anything that's necessary, if you will, or deliver anything that's comprehensive. They are sort of unique add-ons. So the way… you should think about them is: the bank wants to get a customer… and the only way they can do it is [to] say 'this is why you should come to me because I offer something different than the next bank down the road.'*
>
> *(Interview, 2020)*

This highlights the market-driven need for the answering strategy to inherently be flexible, agile, and dynamic. Atos, of course, was not the only firm that needed to heed these patterns: fintechs and clients also had a vested interest in speeding up their operations, which in turn shaped the expectations of Atos as the intermediating party.

> *The idea was to bridge the gap between big banks and small fintechs who did not have the capacity to reach these big banks. And what I see is that [the] fintech movement is really, well, you know, mature and so on. … The fintech has their own capacity to discuss with Deutsche Bank or JP Morgan, and so on. It's easier now for them; they do not have to go through a system integrator [anymore].*
>
> *(Interview, Alpha Team member, 2021)*

2.4.3.2. Changes in senior management priorities.

Changes in the market and client trends link to stakeholders' perceptions of the FEP's actual performance over time. Further, where TMTs were allowing for externally sourced, divergent innovation before, they shifted priorities in the later stage, and prioritized internal alignment when there was a mismatch in the externally oriented activities. The top manager taking over a role supervising Alpha Team's operations reflected on whether to continue supporting the strategy:

> *"part of the shift we need to make is to become a lot more client-centric… When people come from the portfolio team, saying they have a great new thing going on with a fintech startup… [I] had a conversation with [a client organization's] CIO to ask about [the value of it, to which they responded]… 'well, it's interesting, but it's not really gonna help us.'*
>
> *(Interview, 2021)*

Moreover, reflecting other market trends, Atos leadership adjusted priorities away from providing IT solutions and towards providing vertical, or all-encompassing, solutions. Accordingly, new personnel entered roles higher than Alpha Team in the organizational hierarchy to acquire knowledge and talent around verticalization and enacted changes to fit these aims.

2.4.3.3. Adjustments in discursive and performative actions.

The initial structure of the FEP Program's reflected stakeholders' initial expectations. Over time, the changes in expectations necessitated adaptations in the program structure.

> *At the beginning, the [fintechs] were not very industrial, and each time we wanted to run a fintech on their environment, the environment was not available. And so we [had to] plan with the fact that we are going to present the fintech to a customer at this date… [and] we set up also our own fintech [Sandbox] to be sure that it could run when we wanted to, to present it to*

> *a customer. But now the fintechs are much more mature, and they do have a consistent and productive and useful sandbox for [their solutions].*
>
> *(Alpha Team member, December 2021).*

The FEP's successor explained shortly after this period that the program and its strategy saw subsequent reshaping and redirection:

> *In the past, we saw fintechs as just singular innovation sources… and we just [tried to] get a deal with a client based on that. The model [the new top manager] is proposing is much more proactive but also much more customer-focused. So rather than finding a fintech and then finding a client that matches that, you have a client, and you try to find a fintech that matches the need of the client. So the ask directions reversed.*
>
> *(Interview, 2021)*

Adjustments in outward-facing actions. The initial performative and discursive actions intended to amalgamate the offerings of many fintechs. The shift in focus prompted Alpha Team managers to adjust their outward-facing discursive strategies in line with the internal expectations and interests. The focus appeared to be less on organizing events or other activities meant to appeal to a large group of fintech firms. Moreover, outward-facing performative actions evolved, notably by dropping the Sandbox. At this stage and in late 2021, the new top manager preserved the FinNet (knowledge database) and the FinHub (repository of existing fintech relationships) but discontinued funding for the Sandbox given its cost-to-revenue ratio and a shift in focus to demand-side production rather than supply-side exploration.

Adjustments in inward-facing actions. Internally, the discursive strategies were modified considering new developments. As the FEP's new lead continued, its utility became minimal:

> *So once you get the first MVP [to] the client, the program is itself no longer really that involved anymore because that means all of the legal documents have been signed, and there's a plan, there's an engagement, and there's other people running it. So then the program is no longer involved. So, you're only there for the initial MVP.*

Despite the high degree of stakeholder familiarity that Alpha Team had cultivated to secure their support from the beginning, the initially envisioned broad FEP initiative was no longer deemed necessary. Instead, the fintech innovation activities were

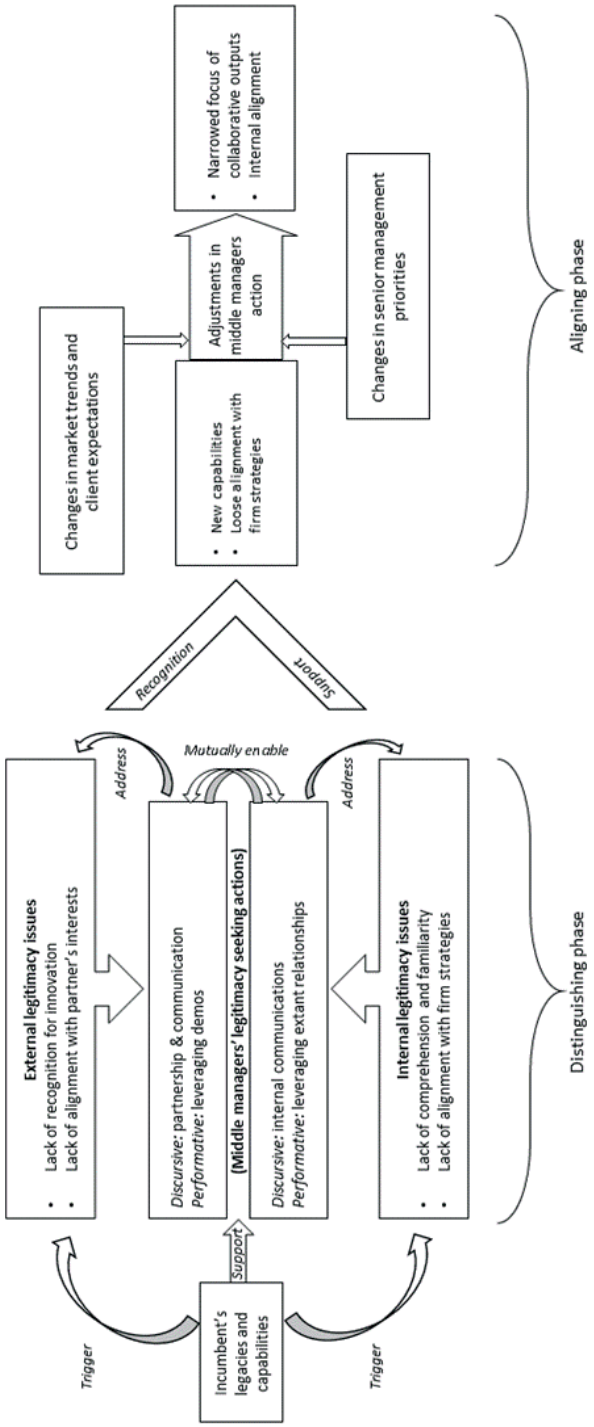

Figure 2. Process model depicting how middle managers appease stakeholders over time.

reorganized into the firm's new organizational structure for the financial services industry. Some components of the FEP remained, but the capacity to build exploratory demos for clients was no longer in the interests of the demand-pull managerial focus. Collaborative innovation with fintechs instead occurred to service specific requests that clients approached their servicing portfolio managers in Atos with.

2.5. A model of middle managers' legitimation of collaborative innovation in digital ecosystems

Figure 2 depicts the process by which Alpha Team navigated issues related to their incumbent firms' extant legacy and internal routines, enacted a collaborative innovation effort with existing and new entrants to their ecosystem, and negotiated ongoing changes inside their firm as well as in the overall market environment. We show a biphasic process. During the initial phase, incumbent legacies and capabilities served as a basis for Alpha Team to distinguish their work, hence the "distinguishing phase." In the second phase, Alpha Team's strategy achieved adequate evaluation as novel and interesting, but then needed to align the strategy with stakeholder and environmental interests, hence the "aligning phase." By incumbent legacies and capabilities, we refer to those generally seeking to preserve the focal firm's IP and strategic position amid peer organizations in its ecosystem. Incumbent firms, especially those capable of developing their in-house products and services with minimal complementor involvement, often have rigid systems in place to keep innovation processes closed. These can manifest as non-disclosure agreements, information sensitivity hierarchies, or 'black boxing' of software, for instance. When middle managers begin enacting a strategy that implicitly seeks to bring external firms into these processes, on the one hand, this implicitly subverts these routines and, on the other, triggers legitimacy issues with internal as well as external parties.

To address these and given the common root concern – extant legacies and capabilities - middle managers may engage in a mutually enabling set of discursive and performative actions to adjust those routines or to adjust stakeholder expectations away from them and towards accepting new routines. In our case, these concerned the deployment of strategic communications to advocate for openly collaborating with novel firms; the leveraging of key, extant partnerships to bolster the nascent strategy's legitimacy; and the use of demos to show the strategy's viability. These address stakeholders' respective legitimacy issues, all of which are commonly concerned with the strategy's viability on the market and towards stakeholders' respective aims.

As internal and external audiences recognize the strategy as legitimate and viable, they begin to contribute efforts and co-develop new capabilities alongside the orchestrating party. For internal parties, as one example, this can manifest as additional technological features beyond the scope of the original ask that technical stakeholders bring in to maximize the initiative's performance. For external parties, this can mean the discretionary contribution of new or not-yet-released services to trial and fine-tune those services or as part of an emergent exclusivity arrangement that the orchestrating firm would otherwise not have had access to without the collaboration.

Insights rendered across the themes regarding the various legitimacy-building and -maintaining actions and their target outcomes at play are summarized in Table 3. In terms of internal orientation, our findings suggest that the initial work to establish the collaborative innovation initiative as cognitively legitimate to internal stakeholders evolved towards work intended to bolster the strategy's socio-political legitimacy (its alignment with managerial objectives, ability to meet their expectations, etc.). The inverse is necessary for external stakeholders: middle management is initially concerned with building socio-political legitimacy by shedding a reputation incompatible with the ecosystem's forward-looking value proposition. Only after that do middle managers open up to external stakeholders for the sake of cognitive legitimacy across the entire ecosystem.

Table 3. Categories of legitimacy-building and -maintaining actions and their target outcomes.

Internal stakeholders	Distinguishing (for cognitive legitimacy)	Aligning (for socio-political legitimacy)
External stakeholders	Reputation-shedding (for socio-political legitimacy)	Becoming the go-to (for cognitive legitimacy)

The shift in legitimacy work that Alpha Team needed to perform towards internal stakeholders, from cognitive to socio-political, is likely also tied to external market conditions and firm performance. Where TMTs were initially open or ambivalent to collaborative innovation that somewhat prioritized external interests, their later reprioritization of internal interests and the subordination of external ones meant that the strategy needed to align with this direction by mandate. For external stakeholders and the shift from socio-political to cognitive legitimacy work, it seems likely that Atos' multiple attempts to establish its name as a viable partner for fintechs reached a ceiling of effectiveness, especially when fintechs became capable of disintermediating their relationship with Atos' clients. At this stage, working to go

beyond socio-political effectiveness and seek infrastructural embeddedness seems to have been a best-effort approach given the drawdown in internal support.

2.6. Discussion and conclusion

Collaborative innovation is a key feature of digital ecosystems. However, the open and distributed nature of governance in such ecosystems is often at odds with the internally focused and closed approaches that incumbents traditionally rely on. Therefore, to collaborate effectively, these organizations need to reconsider their internal and external stakeholder involvement. To better understand how incumbents enter and compete in nascent digital ecosystems, we draw on legitimacy theory to develop Figure 2, a model showing how middle managers exert a combination of mutually enabling discursive and performative actions to deal with seemingly contradictory expectations from internal and external stakeholders. Specifically, our process model highlights how middle managers' outward-facing and inward-facing actions to appease different stakeholders generate the legitimacy dynamics and cross-level interactions that determine incumbents' responses to emerging digital opportunities. Our theorizing extends our understanding of the legitimacy challenges middle managers face in their attempts to fulfill this role. We explain that despite the seemingly contradictory expectations from internal and external stakeholders, middle managers can skillfully leverage temporally changing and mutually enabling discursive and performative actions to enlist support for their initiatives.

Prior research assumes that innovation in digital ecosystems is predominantly steered by senior managers capable of ensuring internal alignment and homogeneity in their ecosystem strategies (Khanagha et al., 2018; Teece, 2014). Nuancing this view, our findings underscore the importance of middle managers as strategic leaders of digital innovation and clarify the dynamic and heterogeneous nature of legitimacy issues faced by middle managers. Connecting to the literature on legitimacy-seeking in ecosystems (e.g., Thomas & Ritala, 2021), our findings explain how middle-managers' orientation of legitimacy efforts shifts between stakeholder groups over time. These findings echo insights of prior research concerning the need for dynamic and potentially inconsistent strategies over time (e.g., Ansari et al., 2016; Dattée et al., 2018; Hannah & Eisenhardt, 2018). In other words, it is not sufficient for collaborative innovation efforts to align resources and knowledge only at the outset, but these alignments must be recreated over time in accordance with evolving stakeholder expectations. Accordingly, middle managers adjust their appeasement or

legitimization tactics depending on the nature and prevalence of stakeholders at any phase of the initiative.

By focusing on issues and tensions underlying the emergent, multi-stakeholder demands in digital ecosystems, we illuminate strategic challenges and roles of middle managers that help organizations to navigate such issues. Our phased model rests upon two central mechanisms middle managers may use to address conflicting legitimacy issues. First, by temporary *subordination* (Pant & Ramachandran, 2017) of one group of stakeholders over the other (e.g., privileging external stakeholders when firms' senior managers are more lenient), middle managers can progress with developments to achieve milestones that enable them to switch the focus, privileging the other side (e.g., increasing alignment with internal stakeholders when firms' senior managers impose more restrictions). The second mechanism, which is complementary to the first, is *bridging* by effecting a Janusian integration of internal and external expectations (Pratt & Foreman, 2000). Bridging entails identifying overlapping issues that matter for both groups of stakeholders, attempting to appease them simultaneously. Together, the employment of bridging and temporary subordination in their discursive and performative actions, over time, enables middle managers to dynamically balance internal and external legitimacy issues of their collaborative innovation efforts.

2.6.1. Contributions

Our first contribution is to the literature on incumbent strategies in digital ecosystems. Incumbent strategies and responses to technological change have been a topic of repeated scholarly inquiry (Eggers & Park, 2018), but this line of research has seldom paid attention to legitimacy issues that may arise when managers attempt to formulate a response strategy. Recent research has underscored the importance of legitimacy issues in nascent ecosystems (e.g., Garud et al., 2022; Khanagha et al., 2022), but this research has only focused on external legitimacy issues. By considering internal dynamics along with external collaborations and actions, our study contributes to discussions around incumbent strategies in digital ecosystems (e.g., Dattée et al., 2018). Namely, our process model unravels the nature of cross-level interactions between ecosystem actors, senior managers, and middle managers that jointly determine incumbent's responses to emergent digital opportunities.

Second, we contribute to the recent literature that emphasizes the strategic role of middle managers in pursuing new initiatives (Heyden et al., 2017; Tarakci et al., 2018; Vuori & Huy, 2016). Most strategy research considers strategic, collaborative initiatives to be within the realm of top managers. Consequently, middle managers

are often seen as passive actors implementing innovation within the boundaries that senior managers define (e.g., Taylor & Helfat, 2009). Our research is among the first that attempts to theorize strategic leadership from middle management layers of large organizations. Strategic leadership is defined here as the role of the CEO, top management team, board of directors, and other executives tasked with guiding the long-term strategic course of the organization (Hambrick, 1989). Middle managers, at the intersection of their organization and its environment, face legitimacy issues, which prompt them to undertake actions (e.g., to show compliance) in order to mobilize internal and external resources. Moreover, we explain how middle managers are positioned to induce adaptations in their organization in line with the expectations of ecosystem actors while at the same time searching for opportunities to influence the ecosystem in line with core competencies of their respective organizations. These bidirectional and temporally shifting roles of middle managers deviate from the passive or reactive roles played by middle management that are often assumed by prior strategy research.

While we acknowledge that this study has some limitations, we believe it opens some promising avenues for future research. First, we only studied ecosystem strategies in a large, incumbent, high-tech firm. While a single case study was appropriate for addressing our specific research question, future studies may use a larger number of cases to examine the boundary conditions for dealing with internal and external legitimacy issues of managers and the actions that helped them to navigate these issues. The role of organizational culture, formalization, and centralization are among the factors that may influence legitimacy issues and the strategies of middle managers to tackle them. Second, even though our research focuses on legitimacy issues in the context of a large incumbent firm, where middle managers tend to have a high degree of autonomy, it is important to understand how middle managers may deal with such issues in smaller firms or those where the middle managers are mostly internally oriented or restricted in initiating collaborative innovation with ecosystem partners.

Our study also offers various insights for practitioners. Senior managers benefit from comprehending their middle managers' challenges when trying to steer collaborative innovation initiatives and relaxing internal, inertial pressures when a new initiative appears promising. Nonetheless, in the face of competing internal initiatives, it might be helpful to have a systematic, merit-based approach for evaluating and prioritizing the initiatives to ensure that the prevailing ones are not just a product of solid impression management skills by their leaders. For middle managers, it is essential to develop ways to showcase progress and demonstrate alignment with

contradictory expectations across stakeholder groups. Otherwise, their initiatives may fall victim to their inability to frame or employ creative means for showcasing the performance and viability of their initiatives.

Table 4. Chapter 2's representative empirical data.

Empirical evidence
The rationale there is basically it takes a long time to bring the stakeholders on both sides together, because they're big elephants and by the time that you get into what is something that gets real, and mostly that's a lighthouse customer, so the first shared customer on a particular domain, in banking or insurance, it takes you a year to one and a half years. (Interview, Alpha Team leader, 2019)
"The role we are playing, as Thierry Breton said recently, is we want to encompass great tech with fintechs to support our customers to provide the best service… [they] still see the company as a tech company, not a service company" (Interview, Alpha Team member, 2019)
".. the French management culture is very, very strong and doesn't actually allow for much flexibility in how to operate… and this French company happens to be extraordinarily hierarchical." (Interview, former Alpha Team leader, 2020)
"in the past I used to get this budget from… the internal managed services provider entity. And this entity was restructured, you know, and now the power is in the market [division]. So I have to pass the budget to the [financial services market division], which of course, is [very] concerned by this program, [and] the market [doesn't] want to pay [for it] anymore. I think for the reason that there was a change of the management. Yeah, this new management did not take time to learn about the technology." (Interview, Alpha Team member [charged with FEP budget], 2021)
"we were also selected last year for [the] Scaler Program. But that was an early termination, OK? And it's predominantly because there's one guy in the [Atos] Scientific Community who's basically suffering from the not-invented-here syndrome." (Interview, fintech founder, 2021)
"Tier 2 market players [like Atos] tend to be more inventive […] because [they're] not the first choice, so… it creates a space for people like us to say 'are you interested in us because we're not yet on Accenture or Microsoft's radar'" (Interview, fintech founder, 2021) (Context: this fintech founder indicates that Tier 2 firms such as Atos are good for short-term functions as a means to achieve their primary target partnerships: Accenture, Microsoft, etc.; thus, this is aligned with momentary but not enduring external stakeholder interests; for the purposes of this longitudinal investigation, we do not consider momentary alignment as longitudinally in alignment)
"Atos has been somewhat lagging. So most of their competitors have verticalized in the past and continue to be so today. So in that sense, Atos is a follower, not a leader in that." (Interview, senior level analyst, 2020)
"'Partnership innovation is a good strategy for [Atos], because unfortunately for them they're a Tier 2 consulting company'… Accenture recently had a trend to buy small to medium bespoke businesses… 'Atos [is] always playing catch-up to someone like that" (Interview, fintech founder, 2020)
[field notes from ad hoc strategy meeting with 3x AT & 2x non-AT members, 2019] Deutsche Bank is regularly present at TQ, [AT member who regularly visits] has established a good relationship with a person in DB who is in charge of (?) and who reports to a board member at DB; they've established such a good relationship that they talk offline; want to establish good relationships and build credibility; he's also met the director of analytics, he's leveraged this relationship to bring AI as a capability from Atos to Deutsche Bank; [AT leader:] "With baby steps, you establish a new line to the customer"…
[field notes from ad hoc strategy meeting with 3x AT & 2x non-AT members, 2019] "We want to have [a] sales (person) one time per week at TQ, networking to learn about customers and TQ"
[field notes from ad hoc strategy meeting with 3x AT & 2x non-AT members, 2019] AT leader: the purpose of this call is to look forward to TQ; understands that [AT member who regularly visits TQ] has taken [other Atos employee] into TQ; good thing for [them] to see what they do; Tuesday is a fintech event that [AT leader] will be a part of: female tech event… [AT member who visits]: "to add, this is in conjunction with Deutsche Bank, and the female fintech event is to foster that relationship"; DB global account is involved; [AT leader]: "this is exactly what we want to do, involve customers"
"Other partners currently want cutting edge technologies and to sell consulting services within the [startup incubators'] geographic space; Atos' example of selling services is its Compliance Navigator." (Interview, incubator co-founder, 2019)

First Order Codes	Second Order Codes	Aggregate Dimensions
old business model as inefficient	perceived misalignment of new initiative with firm strategies	internal legitimacy issues
CEO-directed horizontalism		
firm culture as obstructive to collaboration	lack of familiarity/comprehension of initiative	
difficulty in securing support for initiative		
interpersonal conflict or firm culture as inhibiting joint interests	lack of alignment with external stakeholder interests	external legitimacy issues
short-term complementarity		
lagging among peers in vertical innovation	lack of recognition as innovative	
doubts about internal capabilities relative to peer firms		
ecosystem value extraction	legitimacy-enhancing partnerships	outward-facing discursive actions
scouting via community participation		
involvement of clients in community-building events	legitimacy-enhancing events/ communications	
knowledge-sharing events perceived as regular commerce		
advertising different benefits to complementors and clients	communicating distinct value propositions to different stakeholder groups	
signaling projected growth to respective stakeholder groups' KPIs		

Table 4. Continued

Empirical evidence
"yeah, that's correct, and I always start outside-in, right, so brochures, website, the whole thing and then I build all the internal stuff because you need to create a kind of perception in order to make them believe that it's there." (Interview, Alpha Team leader, 2019)
"I realized that if we wanted to be very serious about [collaborating with fintechs], that this could actually become a program. So, what I did, I went to my manager at the time.. and I told [them] "look, I have an idea, and it's called the Fintech Engagement Program, and it's a special concept that I think we can deliver 300 to 400 million [euros] of incremental revenues and work transversal of the Atos group…" (Interview, Alpha Team leader, 2019)
[press release covering Atos/Circeo(fintech) partnership to dev Cloud-based loan mgmt service] "This solution demonstrates the unique value we deliver to our customers thanks to our ambitious Fintech Engagement program which aims to bridge the gap between banks and Fintech.' says Wim Los, SVP, global Head of Atos and Google Cloud enhanced Alliance at Atos"
"The thing is the company, if we go back to 2015, really didn't have a major focus on solutions. When I joined, I championed that effort, because I felt it would be an important thing for us to be able to do… But as you know, in codifying industry solutions it takes time. First thing you have to do is look where you might be doing it kind of by accident. Codify those solutions and then begin to make them replicable. And that's how you start that… you have to say, 'well okay, what am I already doing that's contributing to that, what's being done by stealth and maybe locked up within accounts that maybe nobody else knows about?' (Interview, former AT leader, 2020)
"I managed to get (the Sandbox's infrastructure and operations costs) funded by the [Atos] Cloud division, who endorsed it in their global R&D budget because they wanted to onboard workloads on the Cloud." (Interview, Alpha Team member, 2022)
The second revenue and order entry that we could justify was thanks to the innovation tracks and the innovation supported by the Fintech Engagement Program; we were able to sign a bigger contract or to renew a bigger contract for Application Management, Infrastructure Management with a big bank because each time you sign a managed services contract, you have to show innovation… And the Fintech Engagement Program… is really a way to demonstrate innovation in the market." (Interview, Alpha Team member, 2021)

First Order Codes	Second Order Codes	Aggregate Dimensions
establishing narrative prior to work	legitimacy-seeking use of internal media/comms	inward-facing discursive actions
communicated risk mitigation protocol for complementor selection		
programming new mode of value capture	communicating synergetic initiative aspects	
linking stakeholder contributions to expected payoff		
complementors' capabilities as bolstering client-facing capabilities	communication of partnerships	
broadcasting fintech collaboration		
capturing residual value from extant work	capturing residual value	inward-facing performative actions
sharing value of extant work with supporting units		
strategy's valuation as component of larger bundles	synergetic collaborations with lucrative internal initiatives	
utilizing flexibility of branding/ accreditation		
coalescing capabilities from throughout the firm		

Table 4. Continued

Empirical evidence
Interviewer: "it sounds like in this continued relationship, there's a bit of an imbalance, so you bring opportunities to Atos and […] it sounds like they only sometimes return the favor, so to speak" Fintech founder: "Yeah. Well, then it's that it goes a little bit deeper. Atos has got a global alignment with Google and the Google Cloud environment. And basically what they do is they take they train a couple of guys on the Google solution set and they start building solutions."(Interview, 2020)
"after 2, 3 years with the Fintech Engagement Program, it's time for an overhaul, right? So there's little things: […] the FinLab, we've moved it from an internal cloud platform to a Google Cloud platform, so that is one of the strategic partners of choice of the Atos Group, and it allows us also to play with the Google technology in combination with fintechs, so that is a positive thing." (Interview, Alpha Team lead, 2019)
"Making [… proprietary sustainability] data available in the platform [that Atos was developing] would likely attract the [sustainability] rating agencies to the platform. We cannot compete with rating agencies as we don't have a differentiator… We can work with the regulator/exchanges as a neutral party not to define the aspects to be covered but be the IT partner.
Demos are useful. You've got to invest in them, right, but if you've got a demo… that's terrific. What is even better is if you've done that solution with [another client] before, so you're not building a new demo… Now, the issue with a demo or a [Proof of Concept, or POC] with a client is that it requires their data, which means it requires their support, right. Now, that requires them to get on board with your idea. Where we're in a really unique position with Deutsche Bank is that we're actually a client of Deutsche Bank. And so what we can be doing is developing POCs and demos using our data as a client of Deutsche Bank, right, and demonstrating to them how this would work. Now this is… super exciting as far as I'm concerned because you can take to them the solution that, as a client, you know works, right. It does require investment by Atos to do that, but you know, it removes a lot of the GDPR issues, it removes a lot of […] hierarchical and bureaucratic [processes], so it removes the need to be socialized all the way to the top of Deutsche Bank. You can actually just go and do it." (Interview, former Atos account executive, 2020)
In the past we saw fintechs as just singular innovation sources… and we just [tried to] get a deal with a client based on that. The model [the new top manager] is proposing is much more proactive, but also much more customer focused. So rather than finding a fintech and then finding a client that matches that, you have a client, and you try to find fintech that matches the need of the client. So the ask directions reversed. (Interview, Alpha Team member who took over FEP, 2021)
So once you get the first MVP [to] the client, the program is itself no longer really that involved anymore, because that means all of the legal documents have been signed and there's a plan, there's an engagement and there's other people running it. So then the program is no longer involved. So you're only there for the initial MVP. (Interview, Alpha Team member who took over FEP, 2021)
"part of the shift we need to make is to become a lot more client-centric… When people come from the portfolio team, saying they have a great new thing going on with a fintech startup… [I] had a conversation with [a client organization's] CIO to ask about [the value of it, to which they responded]… 'well it's interesting, but it's not really gonna help us.' (Interview, new top manager overseeing AT, 2021)
In a discussion about the overall pressures that are now being exerted on them by [TMT:AT+2] via [TMT:AT+1], [AT member] mentions that [they] and [other AT member] are dealing with the same thing: client execs who see them (and their business development initiatives) as threats. These are client executives in Atos whose client org counterparts, from [AT member]'s point of view, need digital transformation work done, yet these client orgs still see Atos as a (traditional) IT services provider. (Nov 2021 Vignette)
The bottom line is there's extreme margin compression. [The banks have] got to find something that can replace [high-cost services]. That's number one. Number two: you've got the issue of volatility or agility, which is when banks used to set up a value chain, an operation, a line of business, it was 'I expect to originate a hundred mortgages a month from now until infinity.' And now you can't expect that to happen. Now it's 'I expect to originate a thousand mortgages a month for the next twelve months, and then that product will go away.' (Interview, senior external analyst, 2020)
At the beginning, the fintechs were not very industrial, and each time we wanted to run a fintech on their environment, the environment was not available. And so we have to plan with the fact that we are going to present the fintech to a customer at this date…That said,[…] we set up also our own fintech [Sandbox] to be sure that it could run when we wanted to present it to a customer. But now the fintechs are much more mature and they do have a consistent and productive and useful sandbox for that solution. (Interview, Alpha Team member, 2021)

First Order Codes	Second Order Codes	Aggregate Dimensions
major partnership seen as valuable to external parties	leveraging extant relationships to deliver value	outward-facing performative actions
major partnership integration to increase attractiveness		
platform development to maintain neutral where advantageous	development of demos and interactions platforms	
use of demos to assuage client concerns		
shifting exploration/exploitation focus to fit managerial interests	adjustments to discursive & performative actions	temporal-contextual triggers
initiative as laying groundwork for continued business		
observation of client focus as different from program delivery	changes in senior mgmt priorities	
TMT pressures causing change perceived as threat (by int. parties)		
volatility as affecting product lifespan	changes in market trends/client expectations	
complementors maturing and becoming capable of disintermediation		

Chapter 3

Platform-based incumbent entry into a nascent ecosystem: Disentangling signaling from network effects

ABSTRACT

Platform-based innovation is an appealing approach for established firms entering nascent ecosystems, yet its interplay with internal dynamics remains understudied. Our qualitative analysis of IT integrator Atos' entry into the fintech ecosystem uncovers advantages in this approach; but also identifies obstacles due to internal conflicts and evolving ecosystem conditions that stifle its economic value. The platform-based approach also serves as a strong signaling mechanism, showcasing the firm's commitment to collaboration and its strategic direction. These signaling effects hold particular weight before network effects solidify and the platform scales. Our research highlights the often-overlooked significance of signaling in incumbent entry and factors shaping managers' decisions within the digital landscape.

3.1. Introduction

Platform-based business models are heralded due to their generative potential and innate scalability (Cennamo & Santaló, 2013). A platform is a novel form of organizing, where a sponsoring firm orchestrates value exchanges between two sides (Kretschmer et al., 2022). Platforms function as pivotal connectors, facilitating diverse stakeholders in pursuing innovation and collaboration (Srinivasan & Venkatraman, 2018) while enabling exponential growth for their sponsors. This can be especially valuable for incumbent firms, which seek to gain a competitive advantage among peer organizations through rapid access to innovative technology that often require collaboration to bring to market viability (Altman et al., 2022). As the previous chapter highlights, institutional complexity within and around these incumbent firms can present difficulties. Though not exclusively capable, the previous chapter argues that MMs nevertheless play an important role in navigating these challenges through their strategic leadership.

Successful examples of platform-based innovation abound, such as gaming platforms that seamlessly link developers to global audiences (Cennamo et al., 2018; Ozalp & Kretschmer, 2019) or streaming platforms connecting music or entertainment to users (Giustiziero et al., 2023). However, despite the rise of platform-based business models as a central consideration for entrepreneurial decisions to enter nascent digital ecosystems (Cennamo, 2021; Zhu & Iansiti, 2012), the current literature often focuses on platforms founded with platform or ecosystem-oriented structures (Altman et al., 2022). This focus can overshadow the distinct challenges traditional incumbent firms face when deciding to transition to these ecosystems (Khanagha et al., 2022).

Nascent digital ecosystems, driven by technological advances such as blockchain, Cloud computing, AI, and changes in regulations and consumer preferences, have become increasingly prominent for organizations (Dattée et al., 2018; Jacobides et al., 2019). Characterized by factors like uncertainty, rapid changes, and ambiguous roles of participants (Autio et al., 2018), these ecosystems offer vast potential for innovation and growth. However, they also introduce unique challenges for well-established firms (Ozalp et al., 2018). Digital ecosystems, characterized by enhanced accessibility, rapid scalability, emphasis on seamless interoperability, and modular design, inherently promote a broader focus on collaboration and co-creation with complementors (Sturgeon, 2021). As the previous chapter as well as various studies (e.g., Fraser & Ansari, 2021; Volberda et al., 2021) highlight, this inclusion of a broader stakeholder set may run afoul of existing routines, causing internal tensions among necessary supporting parties.

In nascent ecosystems, a platform-based approach promoting openness and collaboration is nevertheless crucial for growth. It can position platform sponsors at the ecosystem's heart, attracting complementors (Dattée et al., 2018; Jacobides, 2019; Jacobides et al., 2019). Yet, incumbents face challenges in adopting such models. Recent work highlights the intricate balance required to integrate the established governance structures of these traditional firms with the distinct demands of platforms, especially when envisioning partnerships with complementors (see Altman et al., 2022 for a review). Combined with the swift pace of innovation and amplified reliance on complementors, incumbent firms are increasingly urged to reconsider their longstanding business models and strategies to a mode that embraces constant openness (Volberda et al., 2021).

The shift towards such collaborative openness requires a departure from traditional proprietary beliefs and ways of working (Agarwal & Shah, 2014). The blurred lines in digital ecosystems—where roles as complementors, competitors, users, or innovators overlap—lead to enhanced sensitivity to the external environment but also intricate governance complexities (Casadesus-Masanell & Zhu, 2010). With that, operational success increasingly hinges on the entire ecosystem's vitality, diverging from past standalone tactics (Bonaccorsi et al., 2006). This poses a dilemma for incumbents: platform strategies can offer centrality and influence but may threaten stability and internal backing. While literature highlights the tensions in platform governance, comprehensive studies on its impact on incumbents are scant. Thus, our inquiry is: *How do incumbent leaders navigate entry into emerging digital ecosystems, balancing between platform-driven models and their existing governance?*

To address this question, we leveraged unique access to the case of Atos as an established global IT services provider. The French company offers services to clients in multiple industries alongside extant and newcomer competitors and collaborators. Atos presents an illustrative case as its leaders adopted a noteworthy strategy for entering the emerging fintech market facilitated by digital technologies. The adoption and subsequent reconsideration of a platform-based entry to the ecosystem provides a rich context to understand the motivations for and benefits of this strategy, as well as the challenges and struggles that prompted managers to reverse their initiative. Given its industry positioning and unique strategic approach, we believe the case of Atos can provide valuable insights into the broader challenges incumbent firms face.

In terms of our methodological approach, we used data from a series of on-site observations, interviews with managers, and archival records collected over several

years to identify key elements and derive comparisons between internal and external factors related to platform strategies. From our analysis, we introduce a process model that delves into prevalent economic perspectives on platforms, supplementing this view by considering the signaling value of platforms as a strategic entry choice. While we emphasize that a platform's economic advantages might be limited or even negated as it grows—particularly when there is a misalignment with an organization not inclined towards platform strategies—a signaling perspective offers a silver lining. Our model suggests that an early-stage platform can effectively communicate its intention to play a constructive yet significant role to other ecosystem participants. Thus, even if the platform proves unsustainable in the long run, its signaling impact could create avenues for the incumbent to solidify its position within the ecosystem. Drawing upon ecological studies, we put forth the concept of "symbiotic signaling" to illuminate a relatively uncharted dimension of decision-making in emerging ecosystems.

Our findings contribute to research at the nexus of industry emergence and entrepreneurship (Agarwal et al., 2017; Autio et al., 2018; Shah & Tripsas, 2007) by focusing on how managers of established firms choose to enter a nascent ecosystem. Based on our findings, we theorize that the entry of an ecosystem is not a singular event but may follow a pathway that starts with establishing a platform and evolves into a non-platform approach. We explain the triggers for developing choices and the inter-temporal complementarity between them. Our research highlights that platform-based entry can be a viable and advantageous choice for establishing a foothold. However, it also introduces the notion that changing internal and external conditions may lead to a reversal towards traditional approaches for restricted collaboration and co-creation.

Second, we contribute to the platform strategy research by challenging the prevailing notion that the primary benefit of a platform is derived from scaling it. Grounded in the idea that a platform becomes more valuable to its users as it attracts more complementors (Boudreau & Jeppesen, 2014), much of the existing literature identifies network effects as the key determinant of success in platform-based markets (Rietveld & Schilling, 2021). However, we highlight tensions that emerge for established firms when platforms expand, leading to potential decreases in value for the sponsoring firm as network effects become more pronounced. To augment traditional economic views on platforms, we introduce a signaling perspective (Chen et al., 2022; Payne et al., 2013) to promote the idea that the entry approach of an incumbent firm can serve as a potent signal. We argue that early-stage platform development can be crucial for gaining recognition, forming partnerships, and

showcasing an organization's innovative prowess. We discuss how our findings impact broader research on entrepreneurial signaling.

Third, our study explores the unique ambidexterity challenges incumbents face within ecosystems (Altman et al., 2022; Foss et al., 2023), focusing on the tensions between internal and external governance structures. Our temporal model delineates the evolving nature and intensity of these tensions as they emerge between incumbent organizational practices and nascent platform governance models. We probe into the potential implications of these tensions for the economic viability of platforms and the resultant managerial responses, which may entail opting for and against platform-centric strategies at different points in time. Importantly, by clarifying the triggers prompting firms to shift from platform-based to alternative strategies, our research not only deepens the understanding of the strategic decision-making processes of established firms in the context of digital ecosystems but also addresses the survivor and success biases evident in previous platform research that may imply platform-based approaches are universally desirable or feasible for firms.

3.2. Theoretical motivation

3.2.1. Entrepreneurial decisions to enter nascent ecosystems

Nascent ecosystems, emerging from innovative technologies and shifting market demands, grow into networks rich with interdependencies and value propositions (Dattée et al., 2018). Researchers diving into this realm have shed light on various facets. Some have illuminated the antecedents of entry, emphasizing that a firm's capabilities, both innate and those needed for the new environment, play a pivotal role in decision-making (see Eggers & Moeen, 2021 for a review). These include a company's technical strengths and valuable lessons from past R&D endeavors (Helfat, 1997; Helfat & Lieberman, 2002; Klepper & Simons, 2000; Lavie, 2006). Others have turned their attention to the timing of entry, presenting arguments on both sides. The proponents of early entry underscore the potential benefits, such as solidifying customer loyalty (Lieberman & Montgomery, 1998); whereas advocates for a more cautious approach emphasize the wisdom of observation to mitigate unforeseen challenges (Folta & O'Brien, 2004). Lee (2008) adds a nuanced layer, highlighting the importance of ensuring a firm's capabilities align seamlessly with the industry's demands.

When it comes to incumbents entering these ecosystems, they navigate a multitude of internal and external tensions. On the inside, they grapple with the challenge

of evaluating and possibly reconfiguring their existing capabilities for the new initiative (Cattani, 2005; Lavie, 2006; Moeen & Agarwal, 2017). MMs lead or enable strategic change by competently navigating the incumbent's internal institutions (Heyden et al., 2017; Putra et al., 2023), which allows for the participation of external complementors. On the outside however, the evolving industry landscape presents both opportunities and pitfalls. Collaborations might be crucial, especially during the industry's formative phase, to capitalize on a fleeting window of opportunity that presents itself just before a dominant design or category takes root (Suarez et al., 2015; Utterback & Suárez, 1993). The co-occurrence of internal readiness and external collaboration issues highlights the intricate challenges incumbents face, and it may fall on MMs' shoulders to bridge these.

When exploring entry into nascent ecosystems, firms face pivotal decisions regarding their mode of entry. Hannah and Eisenhardt (2018), for example, suggest three primary strategies: introducing a complete "system," focusing on a "bottleneck" component, or opting for other specific components. Yet, all strategies have their challenges. The bottleneck approach can become operationally complex, for example, even becoming a hindrance in complementary systems (Masucci et al., 2020). Hence, entry strategy comes with its unique set of advantages and pitfalls, and there is a potential need to reconsider strategy as the ecosystem progresses. Moreover, entrants face difficulty conveying their true intentions and capabilities (Ozcan & Santos, 2015), while complementors struggle to interpret cues within a context devoid of benchmarks (Khanagha et al., 2022). Moreover, entrants' historical performance and industry reputation shape how they are perceived, potentially clouding the strategic understanding of complementors (Gawer & Henderson, 2005). Hence, the strategies employed by firms, including their entry mode, should be assessed both in terms of their unique advantages and disadvantages, as well as how they are interpreted as signals (Bafera & Kleinert, 2022) by the ecosystem actors.

3.2.2. Platform-based entry to nascent ecosystems

Platforms emerge as powerful conduits for entry into nascent ecosystems, underscoring their role in enabling multi-sided interactions and amplifying value creation (Shi et al., 2021). The foundational design of platforms offers interoperability and modularity, which resonate with discussions on a firm's capabilities and their crucial role in ecosystem entry (Helfat & Lieberman, 2002). This design allows firms to tap into innovative technologies existing in their markets, integrate them into an organizational routine, and thereby substantially reduce R&D expenditures (Magnusson & Pasche, 2014; McIntyre et al., 2021). Furthermore, platforms, known for their openness (Boudreau, 2010), become arenas of open innovation, fostering

an environment where ecosystem participants bring about serendipitous value additions (Masucci et al., 2020; Reypens et al., 2019). A primary driver behind the growing adoption of platform organizing structures is their capability to harness the ecosystem of independent firms, promoting innovation through enhanced generativity: the system's ability to foster new outputs from diverse and wide-ranging contributors (Cennamo & Santaló, 2019).

While the benefits of platforms in enabling capability development, open innovation, and generativity seem promising, it is essential to note that prior research often assumes that the realization of these benefits is intricately linked to the activation of network effects (Rietveld & Schilling, 2021). Network effects, a concept well-established in prior platform research, describe the phenomenon where the value of a platform increases as more participants join (Katz & Shapiro, 1985). These effects result from the positive externality that each additional participant brings to the ecosystem, enhancing its overall attractiveness. While prior research suggests that network effects can contribute to the amplification of value within platforms, the extent to which these effects will be realized depends on various contextual factors such as the level of adoption, participant engagement, and the nature of interactions (Eisenmann et al., 2006).

3.2.3. Incumbent's Platform Governance Challenges

Adopting platform models presents unique challenges for established organizations (Volberda et al., 2021). In ecosystems helmed by incumbents, the focus of activity is outward, yet control often remains internal, leading to complications in obtaining internal resources for the platform (Khanagha et al., 2018). Assigning platform roles based on a single organizational context can limit actor agency (Gawer, 2014) and open sponsors to socio-political issues (Thomas & Ritala, 2021). Addressing these issues may require transitioning from closed hierarchical governance to open ecosystem structures (Altman et al., 2022). Furthermore, established organizations face unique challenges when adopting platform-based models (Volberda et al., 2021). In ecosystems overseen by incumbents, innovative activity is external to the incumbent, yet the focal incumbent seeks to retain control internally, causing complications in mobilizing internal support for the platform (Khanagha et al., 2018). Assigning roles based on one organizational context risks limiting the agency of platform actors (Gawer, 2014) and may expose sponsors to socio-political challenges (Thomas & Ritala, 2021). To mitigate these tensions, transitions from hierarchical governance to more open structures might be necessary (Altman et al., 2022), but not feasible in the short run for all established firms.

These are tensions familiar to *organizational ambidexterity*; where the firm attempts to exploit its existing capabilities which operate along extant routines and logics while exploring new opportunities which may require the development or integration of novel practices - both activities stewarded by MMs (Gibson & Birkinshaw, 2004; Taylor & Helfat, 2009). The incumbent setting often has multiple embedded organizations with different and possibly conflicting aims (Chesbrough, 2001); MMs' efforts may further be confounded by antagonistic internal actors (Taylor, 2008). Given the complexity and multifaceted challenges presented by these dynamics, further research is imperative to comprehensively understand and navigate the adoption and adaptation of platform models by established firms.

3.3. Research context and methods

3.3.1. Research site

The fintech ecosystem we refer to is the interconnected network of financial technology companies, startups, financial institutions, regulatory bodies, and other stakeholders operating in the European financial services industry. It emerged as a response to the increasing demand for innovative solutions to address inefficiencies and disruptions in traditional financial services, as well as European legislation responding to said demand which liberalized consumer financial data[1]. The fintech ecosystem's subsequent initiation saw advancements in digital technologies, such as mobile devices, cloud computing, artificial intelligence, and blockchain, which enabled the development of novel financial products and services. Startups and established financial institutions alike recognized the potential of these technologies to revolutionize the industry, leading to the rapid growth of the fintech ecosystem. This dynamic environment fosters collaboration and competition, driving continuous innovation and shaping the way financial services are delivered and consumed by consumers and businesses alike.

Among the actors who attempted to enter the ecosystem was Atos. Atos is a prominent global information technology services and consulting company established in 1997 following the merger of two French IT firms, AXIME and Sligos. Over the years, Atos has solidified a position among digital transformation companies through strategic acquisitions and partnerships. The company offers a comprehensive range of IT services, including systems integration, consulting, cybersecurity, cloud computing, and data analytics, catering to clients from diverse industries such as healthcare, finance, telecommunications, and government. A pillar of the firm's entry strategy

1. https://www.ecb.europa.eu/paym/intro/mip-online/2018/html/1803_revisedpsd.en.html

into the fintech ecosystem was Atos FinLab, an innovation platform dedicated to fostering collaboration and experimentation in the financial services sector. Atos FinLab served as a hub for startups, fintech companies, and financial institutions to collaborate and explore innovative solutions in areas such as banking, insurance, and financial technology. By leveraging emerging technologies and facilitating partnerships, Atos FinLab aimed to enable digital transformation and address the evolving challenges and opportunities in the financial industry. However, the platform was later discontinued, and its operations ceased in the format of a platform and were replaced by non-platform approaches for collaboration.

3.3.2. Data collection

To study our focal research question about incumbents' entry to nascent ecosystems, we secured direct access to the company through a long-term research collaboration arrangement. This arrangement facilitated unrestricted access to company data, including opportunities to partake in management meetings, access to internal documents and minutes of meetings, and opportunities for formal interviews and informal conversations with key decision-makers. Data collection began in August 2019 and continued into early 2022. One of our primary sources was Atos' Global Financial Services and Insurance team. This unit was composed of "industry directors," who each specialize in a particular dynamic of the financial services market and whose broad accounts of their firm's activities within its ecosystem formed the basis of our understanding. The industry directors have approximately 10 to 20 years of industry experience each; they typically manage projects and budgets, build and maintain relationships with client technical or managerial teams, and oversee service deliveries. We also interviewed employees, accessed via snowball sampling, in similar roles and in related units that worked alongside or with the platform, plus fintech founders that discussed platform partnerships with Atos. Additionally, we interviewed the founders of a fintech incubator and an external senior analyst who specializes in Atos' financial service activities.

We conducted 40 semi-structured interviews with these respondents; some were one-off interviews, and others were repeated. These interviews range from 18 to 53 minutes - the shorter ones being repeat interviews with a precise topical focus and following positive rapport. We recorded and transcribed some and notated others, depending on interviewee preference. These interviews are further bolstered several informal interviews during an 18-month period in which the first author worked aboard Alpha Team. Relatedly, the first author gained access to 164 internal documents via this fieldwork, of which we discerned 36 as being relevant and useful to our study. Finally, we reviewed reports and publicly available regulatory documents from

European institutions engaged in and overseeing the financial services ecosystem. Table 5 provides a summary of data sources and their use in this study.

Table 5. Chapter 3's data sources.

Interview data	Individual's role	Relevance	Interviews
			35
	Atos (former) FS&I Senior Vice President	- Led FS&I team prior to CDO's lead - Was CDO's manager; granted permission to initiate platform - Departed firm when platform was implemented	2
	Atos FS&I Chief Digital Officer	- Took over as FS&I team lead after SVP's departure - Managed FS&I team through implementation - Coordinated stakeholder support to launch platform	3
	Industry Director #1	- Coordinated insurance and asset management portfolio, capabilities - Initiated multiple new market products/services (thus knowledgeable in implementation) - Highly trusted member of the team, held in high regard with expansive network in Atos' home region	3
	Industry Director #2	- Coordinated anti-fraud & compliance portfolio, capabilities - Scouted for relevant fintechs in anti-fraud & compliance - Led Compliance Navigator (boot camp for fintechs providing coaching for dealing with international regulations)	3
	Atos FS&I Marketing Chief	- Supported FS&I initiatives with marketing capabilities - CDO relied on this member to assist in campaigning the platform - Has an overall picture of Atos' overall marketing/ signaling direction	2
	Industry Director #3	- Industry director for emerging tech, blockchain - Technical leader of the team, and laisse appropriately with supporting units across Atos - Advocates for FS&I's participation in Atos' Scientific Community concept, which explores and publishes new technological opportunities for the firm	2
	Former Atos executive of a large bank's account	- Responsible for intermediating between Atos and the client on new product/service development, contract maintenance and upgrading, etc. - A principal organizer of the Female Fintech Competition (meant to provide coaching opportunities for fintechs and potential access to their tech for Atos) - Left Atos early 2020	1

Table 5. Continued

Interview data	Individual's role	Relevance	Interviews
			35
	Atos manager of large bank's account	- Took over the previous informant's role upon departure - One of the principal organizers of the Female Fintech Competition	1
	Incubator co-founder #1 & #2	- Co-founders of TechQuartier, a German, fintech-focused startup incubator - Managed incubator community, including sponsors such as Atos; could speak towards the motivations and behaviors of Atos as well as other incumbent firms active in the space	2
	NelsonHall Senior Market Analyst	- Experienced/specialized in Atos' activities as well as broader market services in the financial technology domain	1
	Fintech #1 CBO	- Participated in the first Female Fintech Competition - Underwent assessment by the organizing committee (primarily led by Atos) - Vocalized interest in partnering with Atos but did not find easy access to Atos mentoring	2
	Fintech #2 Founder	- Participated in the second Female Fintech Competition - Underwent assessment by the organizing committee (which gave informant signals of Atos' intent) - Substantially experienced in the financial services/ consulting domain	1
	European Financial Reporting Advisory Group Associate Director	- Interview conducted in following participant observation R&D effort - Informant is an observing member of the European Commission's Platform for Sustainable Finance	1
	Atos Head of Fintech	- Joined FS&I in this role in 2021 - Initially sought out to reduce the platform's "bloat" while streamlining its capabilities and costs - Assisted new top manager with implementing Agile in the domain before departing the firm for another career opportunity	5
	Industry Director #4	- One of the veteran members of the platform team, seems to have almost complete autonomy - Part of the governance matrix ab initio	1
	Atos Head of Marketing & Consulting	- Hired above focal team in Q3/21, charged with implementing Agile - Dismantled the platform & team soon after joining	1

Table 5. Continued

Interview data	Individual's role	Relevance	Interviews
			35
	Atos Scaler Program, Decarbonization Lead	- Longtime veteran of Atos and its acquisitions - Member of Scaler Program (a headquarters-led incubator); has multi-industrial oversight over a program comparable to the focal platform	1
	Atos Scaler Program, Business Development Lead	- Worked in analyst relations and advisor relations in Siemens IT Services, acquisitioned by Atos - Comprehensive overview of Scaler program, shed light on focal platform-equivalents in all Atos industries	1
	Fintech founder #3	- Sustained partnership with Atos Netherlands (research funding for services, wherein Atos retains IP built upon those services) - Partnership with Atos Global fell through due to personality conflicts, incompatible targets	1
	Industry Director #4	- Coordinates Cloud & digital workplace portfolio and offerings - In charge of FinLab element since inception, remains in charge of dismantling it - Veteran of Atos/Bull merger - Facilitates showcases for client	1
Participant Observation	**Type**	**Relevance**	**Occurrences**
	Atos FS&I weekly strategy meeting	Allowed insight into weekly routines, challenges, and expressions of the team VP and members	Weekly, Aug 2019 - Feb 2021
	Atos R&D biweekly alignment meeting	Progress checks and steering of a sustainable investment platform in R&D; provided valuable insight into the challenges experienced by the team in shaping portfolio value propositions	Biweekly, Sep 2020 - Apr 2021
	Atos ad hoc strategy meetings	Gave insight into how the firm reacts to challenges encountered in the formation of fintech partnerships (e.g., failure to deliver contract items)	5
	Atos/startup incubator events	Allowed for field observations of Atos-fintech interactions around central goals/themes (e.g., coaching)	3
	Atos/university events	Showed how Atos sought to legitimize its activities through academic outreach, to its clients and peers in the ecosystem	2

3.3.3. Data analysis

This research began inductively: the first 11 interviews helped build the context for our emergent narrative (Gioia et al., 2012), notably by understanding Atos's original ambitions and constraints when attempting to enter the fintech ecosystem. As we began coding these interview transcripts thematically for grounded concepts (Gioia et al., 2012), we sharpened our focus on the decisions and interpretations of the platform-based model of engagement with the ecosystem. We switched to abductive (re)analysis of initial and subsequent interviews, internal documents, public press releases, and further content analysis (Duriau et al., 2007). At this stage, it became apparent that we were looking at a process of entry rather than entry as an event, mainly due to the pushback that the focal team encountered from internal stakeholders and governance mechanisms. In line with canonical process methods (Langley, 1999), we began coding along the lines of incidents and events (Poole et al., 2016).

We utilized a temporal bracketing approach (Langley, 1999), where we analyzed events and decisions within specific timeframes or milestones to derive the mechanisms that shifted the process from one stage to the next. This approach favors "structuring the description of events… [showcasing] a certain continuity in the activities within each period and… certain discontinuities at its frontiers (Langley & Truax, 1994)" (Langley, 1999, p. 703). We initially transcribed interviews and coded them in the qualitative analysis software Nvivo, later switching to Atlas.ti in order to ensure accessibility of the dataset between co-authors' respective institutions.

By analyzing for both theoretically informing themes as disclosed by our informants *and* for brackets within the process of platform implementation, we could better understand the evolution of Atos's engagement model with the fintech ecosystem over time, identifying critical junctures and shifts in strategies. Temporal bracketing allowed us to explore how and why the platform-based approach was devised, the outcomes that ensued, and the challenges encountered along the way. This methodological approach enabled exploration of the dynamic nature of platform-based models and their impact on the firm's interactions with partners and complementors as the ecosystem matured, primarily by examining how the focal team relayed events that occurred within their team, the governance mechanisms affecting it (such as higher-level managerial allocation of personnel, or diversion of resources away from the platform's development program later in the process).

We identified notable milestones regarding the choice of entry and analyzed triggers for making the platform-based entry choice, the consequences of this approach, and the course of events that led to the abandonment of the platform in favor of more

traditional ways of interactions with partners and complementors. This involved inferring certain decisions made by actors outside the scope of this investigation; however and due to their extensive experience within their industries and the firm, we consider the focal team members competent in identifying factors relevant to these aspects of their work and consequently the investigation. The data structure showing our first- and second-order codes as well as aggregate dimensions is presented in Table 6. Using the governance example to explain the logic behind this coding structure and the following section: we examine the decision made by a higher-level manager to exclude the platform leader from the program's new governance structure as an example of governance adjustments as a first-order code.

This, as well as the other data excerpt within this first-order code which describes how internal decision-making abandoned an early ambition of the program in following indications of market or client preference, combine to form the second-order code depicting Atos' 'capability configuration.' This formed a type of internal pressure (in this case, comprised of governance decisions and programmatic decisions in response to market preferences) that, combined with the 'ecosystem maturity' second-order code which captures changes in Atos' external environment relevant to our temporal bracketing, form the aggregate dimension called 'convergent pressures.' As Figure 3 shows later, these convergent pressures constrained managerial decisions about the platform's future and later resulted in its abandonment. The section which follows details these orders and aggregations in further detail.

Table 6. Chapter 3's coding structure with representative empirical data.

Aggregate dimensions	Second-order codes	First-order codes
platform-broadening strategy/outcome	developing new internal routines/capabilities	escrow as means of preserving partnered solutions
		industrializing fintech partnerships
	cultivating favorable recognition	networked ecosystem of fintechs with mutual willingness to commune
		bridging horizontal & vertical market interests in partnerships
		demonstrating platform business model viability
	innovation through initial users & complementors	rapidity as added value of platform
		signaling participatory innovation
		non-equity partnership formation
		providing multiple paths of partner integration into user requirement
convergent pressures	ecosystem maturity	fintech maturity as coopetitive tension
		platform as demonstrating innovative capacity at a certain time
		modularity as added value

	Raw data
	if we want to have the right fintech for a specific use case for clients, we need to have a big network. We need to have something we can scale… There's a [… need for] the industrialization of the relations with fintechs. (Platform Industry Director, Interview, 2021)
	so the fintechs have the knowledge for their platforms, but… [the ecosystem is] super networked… and not by technology but networked by people. And it's so flat in terms of the network - there's no hierarchy, everybody can speak to everybody. That, to me, makes it so easy to just speak to anybody that we want to speak to. And vice versa, right… There is always something to do. (Platform Leader, Interview, 2019)
	"when you form fintech alliances… you need to identify… horizontal versus vertical or industry-specific capabilities. So Atos is very good at infrastructure and horizontal capabilities… [but] Atos has reorganized itself with an industry-specific focus because a lot of the buyers want industry-specific capabilities… most of their competitors have verticalized in the past and continue to be so today. So in that sense, Atos is a follower, not a leader in that." (Senior market analyst, Interview, 2020)
	Demos are useful. You've got to invest in them, right, but if you've got a demo, absolutely… that's terrific… but it requires investment. My view is that you get the right people in Atos involved, Atos will support work like that, particularly with our big clients, and… we need to do more of it in my opinion. (Atos Account Executive, Interview, 2020)
	we can spin up a certain environment with [a] particular fintech for a proof of concept in a matter of hours, [a process which previously] lasted weeks, and we already have people working on that technology because they build the integration [in the FinLab] for the fintechs. (Platform Leader, Interview, 2019).
	[Excerpt from weekly meeting notes, Apr 2021] Jude Halford, procurement, presents about onboarding fintechs [this seems to actually be a presi about what the difference between procurement regions are, what the difference between partners and suppliers are, the procurement process]; [platform leader]mentions that FSI doesn't do any sort of procurement; Jude responds, interestingly, that once a partnership with a fintech happens, there still must be a defining of how business is done and the means by which means are acquired afterward; Voices a wish to get closer to FSI because of this; [Platform leader] mentions that the process is very cumbersome and involves many stakeholders[
	what I see is that […the] fintech movement is really now… mature and so on. The banks and the fintech have their own capacity to discuss with Deutsche Bank or JP Morgan and so on. It's easier now for them, they [do not have] to go through a system integrator. (Platform Architectural Lead, Interview, 2021)
	it was a success, I would say during 2016 [until] 2020 or 2019. The Fintech Engagement Program was really a way to present an… innovative color of Atos in the financial services market. (Platform Architectural Lead, Interview, 2021)
	The fintechs do not come in and deliver anything that's necessary… [or] comprehensive. They're sort of unique add-ons… And the problem with [banks] going to any outsourcer [like a fintech] is they make money by providing the same thing to everybody and hammering down the cost… But the banks still need to differentiate themselves in order to attract any customer. And that is typically what they keep in-house. But… they're widening [their] footprint to go outside the house, and their platforms, which were highly customized, are being changed to be highly modular so that you could create customization by pulling in a modules [so] you don't have an entirely monolithic, different platform.

Table 6. Continued

Aggregate dimensions	Second-order codes	First-order codes
convergent pressures	capability configuration	governance adjustments
		configuring platform to market
platform-narrowing strategy/outcome	decommissioning FinLab	managerial inattention
		fracturing of in-house knowledge following decision to rehome within the org
	reliance on traditional innovation capabilities	platform-specific knowledge dispersing throughout the firm (as a result of decision to decommission)
		lack of material commitment to structure or business model
		resource diversion following decision to defund FinLab
		lack of knowledge about complementors gained
	leveraging initial recognition and relationships	attempts to integrate platform into firm partnership arrangements
		platform capability generation
	closed (non-platform) innovation capabilities	passive support

	Raw data
	[Excerpt from weekly meeting notes, 2020] [Higher-level manager] seem to have handed down the directive to align Atos/Syntel teams in the FS&I Sandbox initiative, which FinLab has been renamed to some weeks ago due to a copyright infringement matter; [Platform leader] says he's not yet part of the governance though
	[excerpt from weekly meeting notes, 2021] J-P: "at the beginning, the sandbox was used not only to demo a solution for the customer and to train, today what we know is that we're not doing any more of this. We ask the fintech to install the solution on our sandbox and that's it, very low interest. We also planned at the beginning to have consultants from the competence center to play regularly with the fintechs, to load data, etc. And we're not doing that anymore, and so we're just using the sandbox to make demos for the customer. We're often asking the fintech to do the demo instead of Atos, so the overall goals have changed." ○ Asked why: J-P: "today, we're not speaking to the customer about bus. transformation and their needs, mainly technical stuff, so I guess we have very low opportunities to go to a customer and discuss with them new fraud mgmt system or payment solutions, and to onboard with us solutions that we do have.
	this new management did not take time to learn about the technology. I think that [the platform leader] did not have the opportunity to really explain to [… them] the value of it, even if we use this to communicate [to the] customer in thought leadership. (Platform Architectural Lead, Interview, 2021)
	[excerpt from weekly meeting notes, 2021] Frederik on FEP: Wants to find out where the FEP sits in everyone's take on the strategy going forward ○ Has spoken to Jaroslaw, who will be prime in standing up a FinLab adjacent in place of this ○ Mentions that the market knowledge of FSI is starting to fragment, identifies this as a negative
	[excerpt from weekly meeting notes, 2021] Frederik: "this [breakdown of platform effectiveness] started in 2016, when we started towards Cloud but we're still not agile, but fintechs are… they're more rapid, sandbox couldn't keep up… market capacity for consulting was ended by mgmt 2015/2016… so we lost a lot of people who could experiment with this and approach clients on this"
	"we did not invest and.. we did not do enough" (Interview, 2021)
	[excerpt from weekly meeting notes, 2021] Interestingly, J-P stated that FSI committed to paying for FinLab until EOY, but Carol has put a stop to spending for next year, thus FSI needs to figure out where to divert capital to ○ J-P notes that this is only a loss of the demo aspect of the FEP
	all [FinNet, Sandbox, FinHub tasks] were in fact performed by the fintech themselves and not by Atos, which means that Atos did not get the real competence and skills on the fintech. And so when we went to a customer to present the fintech, we were not autonomous. We are not able to present it by ourselves. (Platform Architectural Lead, Interview, 2021)
	the sandbox was [first] set up on Atos Cloud Infrastructure Solutions,… And in 2018, we migrated it to Google [… because] Atos was just announcing its partnership with Google, so it was a good opportunity to go further in this [partnership]… The second reason was that… we automatically [got] the possibility to use new services such as AI, chatbot analytics and data, or some database or Kubernetes as a service. So there is a lot of innovative managed services in the public cloud that we could not have in [our] private cloud." (Platform Architectural Lead, Interview, 2021)
	[Excerpt from weekly strategy meetings, Jan 20) Eddy presents a feasibility study presentation on G2M payments: Project Bridge; FEP highlighted here as a strong enabler of capabilities as well as strong clients: AmEx, Discover, PayPal, etc.; Weaknesses: no established partnership model, inability to package knowledge, etc.; Makes several strategic and tactical recommendations: G2M approach, sandbox approach
	"[governance] was done at the very beginning. But it was [not done anymore thereafter… and thus] we were not able to show our added value… And doing that, we are not able to… develop [a] disruptive journey based on several fintechs. Which is one part of the value of the fintech engagement program: linking [and] liaising fintechs together in order to build something new for a customer. (Platform Architectural Lead, Interview, 2021)

3.4. Findings

We structure our findings into three distinct episodes: first, we present Atos's initial platform-based entry and elucidate the motivations behind this approach. We emphasize "the good", spotlighting the advantages Atos derived, such as integrating new offerings into their portfolio and positioning themselves as a pivotal, collaborative entity in the ecosystem. This strategy enabled them to cultivate a reputation for innovation in delivering financial technology services and to establish a core set of complementors who bolstered Atos's innovation strategies, even surpassing the platform's lifespan. Next, we delve into "the bad", examining the mix of internal and external factors that either challenged or negated the platform's initial benefits, resulting in a shift away from the platform-based strategy. Lastly, we discuss "the not-so-ugly", where Atos chose to dismantle the FinLab platform, reverting to a more guarded innovation model. We present our results using a series of epithets: 'the good, the bad, and the not-so-ugly' to correlate the platform's alignment and subsequent deviation from the expected platform trajectory as advised by existing literature.

3.4.1. The “good”: Initial platform-based entry to signal innovative capacity and organize complementor ecosystem

Early in the entry process, Atos identified a need to collaborate with fintech start-ups to develop innovative services for banks and other financial services clients. The platform approach Atos set out to deploy was a “FinLab” for experimenting with their solutions in modularity; “[aimed] at designing the go-to-market with a fintech [and] supporting them [with…] commercial [affairs]” (platform architectural lead, interview, 2021). The platform was supported by due diligence practices for screening the market and identifying good fintechs to work with. Where the platform brought about a successful fintech-client match-up, this would result in the formation of a new deal or the upgrade of an existing one, with an accompanying service contract. Atos’s Global Financial Services and Insurance team outlined two main objectives in their platform approach: the first was to systematically integrate select members of the nascent ecosystem of fintechs into the novel platform for portfolio modernization - in part by implementing a platform-based business model and in part by an accompanying governance structure. The second objective was to use this platform to signal Atos’ innovative capability within the financial services industry, and thus secure a competitive advantage. In what follows, we explain these two reasons and the extent to which the platform succeeded to fulfill its objectives.

3.4.1.1. Platform structure and governance intended to address capability gaps

The first advantage of the FinLab for Atos was related to its ability to find partners, thus enhancing its innovation capacity in the emergent fintech ecosystem. Atos began efforts to verticalize its financial services portfolio in late 2019, which entailed merging its in-house capabilities with those of partner firms and selling the outputs of these as "white-labeled" services: appearing to be entirely Atos-originated. This presentation of compound solutions intended to compete with peer firms, since "Atos has been somewhat lagging… most of their competitors have verticalized in the past and continue to be so today" (senior external analyst, interview, 2020). However, the administratively complex system of integrating partners' services could take months or, in some cases, over a year to complete and go to market; this extant routine or set of routines was not sustainable for entry into a fast-paced, nascent ecosystem of fintechs.

Understanding that competitor firms also sought fintech partnerships, the focal team within Atos sought to develop a platform as an attractive option for fintechs as complementors. These fintechs would ideally join and participate in the rendering of services for Atos' clients. Not only did they need to make it attractive relative to other incumbents' systems of collaborative innovation, but also relative to the fintechs' starting their own discussions with Atos' clients - a need which did not become apparent until later.

> *So the fintechs have the knowledge for their platforms, but… [the ecosystem is] super networked… and not by technology but networked by people. And it's so flat in terms of the network - there's no hierarchy, everybody can speak to everybody. That, to me, makes it so easy to just speak to anybody that we want to speak to. And vice versa, right… There is always something to do.*
>
> *(platform leader, interview, 2019)*

Informal discussions with the platform team showed us that Atos' lucrative client base initially attracted fintechs to work aboard the platform. Accessing these large banks, insurers, and similar firms through Atos could lead to longer-lasting contracts and sustained revenues for the fintechs. Additionally, working in the Cloud environment Atos dedicated to this platform for interoperability would mean working alongside Atos' technicians and software developers; this could help the fintechs further refine their services since "not all FinTech [services] were… Cloud native and easily interchangeable" (platform architectural lead, interview, 2021). Thus, the firm sought to implement a platform structure to both attract fintechs and organize their capabilities alongside Atos' own in a way where joint solutions could be developed at a greater speed, scale, and scope than if either firm in question sought to work alone.

> *The concept is very simple: we have the scale in sales capacity, [fintechs] have the technology and are very smart and know how to do [open innovation], we can scale [the program] also on technology.*
>
> *(platform leader, interview, 2019)*

The two sides of this arrangement were fintechs, providing complementary services, and client firms which would ideally purchase the outputs of Atos' and the fintechs' combined technologies. Atos as the orchestrator brokering these two sides could offer Cloud hosting and cross-fintech orchestration as structural facilitation, but doing so would require building and maintaining a well-organized database of fintechs that could be quickly and easily redeployed for client demos and deals.

> If we want to have the right fintech for a specific use case for clients, we need to have a big network. We need to have something we can scale… There's a [… need for] the industrialization of the relations with fintechs. (platform industry director #1, interview, 2021)

Determining which would be the "right" fintech was a task jointly assigned to the program's industry experts and to the platform's governing "steering committee." The industry experts would recommend a shortlist of fintechs with specific competencies for inclusion into the platform to add demonstrative value that would ideally secure more deals. This steering committee was then supposed to choose among this shortlist which fintech or fintechs would add the greatest value to the platform in the context of adjacent organizational goals (such as incorporating specific technology types into the broader Atos portfolio or following firm'-level themes such as decarbonization).

Our continued observation of the platform and the firm's activity concerning fintechs indicated that despite the maintenance involved, this aspect of the platform was successful in laying out an organizational framework for the firm to reap the benefits of fintech innovation. It is important to note that, according to an employee who took over the program in 2020, the platform's performance was not measured in economic metrics. The platform afforded Atos certain intangible benefits: such as networking with fintech founders, or as we will detail momentarily, signaling that Atos was not only capable of high-tech innovation but systematically doing it. The platform was perceived to be successful, attracting 40 complementors (36 partners, 4 'platform enablers'[2]) at its peak.

2. https://web.archive.org/web/20200925165038/https://atos.net/fintech/home/finhub

3.4.1.2. Platform business model intended to signal innovative capacity in fintech & client ecosystem

A key problem that the FinLab platform and its supporting initiatives had to address in attracting complementors was that Atos was not initially seen as a contemporarily innovative actor in the emergent fintech ecosystem. The company was not listed in major evaluation and assessment listings before 2017. The introduction of FinLab was in part meant as a reputation-building activity. The initiative was broadly communicated through various industry news channels. The platform was a central part of coalition-building with other parties to promote Atos and its capacities, as explained in the exemplary case of the Compliance Navigator program:

> *Atos […] and PwC, one of the Big Four accounting firms and TechQuartier today announced the launch of the first global Fintech 'Compliance Navigator' program […] to support FinTechs to navigate within European banking compliancy and regulatory standards […]. Atos and equensWorldline have worked with TechQuartier since July 2017 notably on the 'Papillion' training program, in which 3 selected FinTechs were mentored by Atos experts to develop new services, with access to over 150 Financial Services clients, a global network of Atos Business Technology & Innovation Centers and Atos' FinLab, a hybrid Cloud-based platform to facilitate the creation of new services.*
>
> *[PCU, October 2018]*

These activities resulted in an increased recognition of Atos in fintech ecosystem, for example as reflect in their recognition as a global leader in digital transformation by NelsonHall, an industry research organization:

> *Atos, a global leader in digital transformation today announces that it has been identified as a 'Leader' by global research and advisory firm NelsonHall in its latest Vendor Evaluation & Assessment Tool (NEAT) for Digital Banking Services.*
>
> *[Bloomberg.com, May 2018]*

Besides building reputation, the platform helped Atos to deliver on its promise and showcase innovation capacity in the ecosystem: "[we bring] different fintechs and [integrate] them, so that we can show and tell the technology and we can use it as a sales instrument" (platform leader, interview, 2019). The firm focused on showing that integrating their services into the client's portfolio would be possible and, more importantly, would add value for that client. Atos attempted to do this by hosting demonstrations of complementors' services in a so-called FinLab; the purpose being to incentivize the services and to 'sweeten' the formulating deal:

> *if you have a deal of 100 to 150 million, we [could] include a [FinLab] in it so that we can… test drive every two to three weeks a new fintech. [If] they like it, we deploy it. They don't like it, we go test the next one. Sort of a fail fast mechanism, right?*
>
> *(platform leader, interview, 2019)*

Alternatively, they could sell 'clones' of the FinLab, which would give the client firm the capability to experiment with their own combinations and use cases:

> *cloning of the [FinLab] means that… if you have many different fintechs as part of the [FinLab], the cloned program for that client would only involve the fintechs that provide their services… or part of their portfolio, or the entire program is cloned and they have access to the entire hub*
>
> *(platform architectural lead, interview, 2021)*

> *A key aspect of the platform's FinLab that added value to the total business model was speed:*
>
> *we can spin up a certain environment with [a] particular fintech for a proof of concept in a matter of hours, [a process which previously] lasted weeks, and we already have people working on that technology because they build the integration [in the FinLab] for the fintechs.*
>
> *(platform leader, interview, 2019).*

In summary, The FinLab platform served as a signal for Atos to establish itself as a major player in the fintech ecosystem. Introduced to address this in 2016, the platform acted as a reputation-building activity, showcasing Atos' innovation capacity and enabling collaborations with other parties. Its success was evident through continued recognition and acknowledgment as a digital transformation leader by NelsonHall. As a sales instrument, the platform sought to demonstrate how fintech services could be seamlessly integrated into clients' portfolios, emphasizing the value they could add. The platform's FinLab feature allowed for rapid experimentation, streamlining proof of concepts, and significantly contributing to the overall business model. In summary, the FinLab platform's early achievements marked it as initially successful in signaling Atos' presence and capabilities in the fintech industry. As summarized by an interviewee:

> *[The platform] was a success, I would say during 2016 [until] 2020 or 2019. The… program was really a way to present an… innovative color of Atos in the financial services market.*
>
> *(platform architectural lead, interview, 2021)*

3.4.2. The "bad": Noncommittal governance and maturing ecosystem hinder platform business model viability

We found that certain endogenous and exogenous factors affected the platform's organizational context and its ability to attract complementors, respectively; overall diminishing its viability. In this section, we focus on two main mechanisms: the breakdown of governance efficacy (as part of a shifting organizational context) and the maturation of the external ecosystem of complementors (which degraded its performance or capability to meet stakeholder expectations). We qualify governance efficacy as the extent of follow-through that relevant actors gave to constitutionally agreed upon duties within the strategy, such as approving new complementors for integration. Maturation of the fintech ecosystem as it pertains to this argument means the development of complementor capabilities over our research period which eventually contested Atos' position as an intermediator between the complementor and user sides of its platform.

3.4.2.1. Non-committal governance paralyzes platform

One objective of the platform was to reduce costs of fintech innovation, which served the interests of upper management who sought improved margins on delivered services. However, and as discussed in the last section, securing early support from these upper managers was important for enabling the program. To do so, the team leading the platform added them to the program's steering committee, giving them veto authority on new complementors that the team's industrial experts would suggest for inclusion into the platform's FinLab demo environment. These industrial experts would work with Atos employees assigned to specific clients' accounts to devise user-specific needs in an exploratory mode.

> *Old Atos is primarily infrastructure focused… In general, the account executive spots a development for something 'new' before the question has been completely formulated on the client side. We'd engage with the process of defining what the client really needs.*
>
> *(follow-on platform leader, interview, 2022)*

These needs would thus be identified locally - between the industry experts and account executives. The industry experts would then use their network knowledge and strategic partnerships, such as that with a German fintech incubator, to scout for specific fintechs and devise potential solutions to add to the total Atos portfolio. The combination of the need, solution, and complementor would then be presented to the steering committee - but as far as our findings show,

> *The governance of the [platform] was not performed. And I think that if we had done that - including people from the sales entity and from the Executive Committee… - we [would] not [have stopped] the… FinLab lab.*
>
> *(platform architectural lead, interview, 2021)*

Several factors contributed to the breakdown of the platform performance. Notably, while an exploratory initiative can get away with not showing financial performance in its pilot stages, it is typical for established firms to question viability and profitability of such programs when they grow. The top managers included in the steering committee lost interest in participating. Moreover, the platform seemed to lack sufficient support to handle the time-intensive process required to scout for and prepare a new complementor for presentation to the steering committee:

> *If you look at [it from] a supply chain point of view, there's the customer and then there's Atos providing services to the customer and… we have some gaps which need to be filled from a delivery point of view… I know maybe a [few] hand-selected fintechs for my [industry], and [to maintain those relationships] I have to do a lot. If I have to talk each week with one of them, I already have five calls at half an hour [each], that's 2.5 hours.*
>
> *(platform industry director #2, interview, 2020)*

This seems to have led to a distorted set of expectations that top managers placed on the program, which became increasingly harder to meet.

> *One expectation that I often encounter is the idea that we'll always have 'a FinTech on the shelf'. It is somewhat implicitly expected that the discovery process is rather simple and straightforward. There is an expectation that a good match can easily be found… Though it is possible, it requires an investment in tooling, which we haven't made yet… In practice it is still more or less… a manual process.*
>
> *(follow-on platform leader, interview, 2022)*

Towards the end of 2020, Atos' financial services and insurance division, to which the platform belonged, was directed by TMTs to undergo Agile integration to speed up development processes by horizontally distributing work throughout the organizational hierarchy. As the platform was governed vertically to sustain control over various activities, tensions concerning the misfit between organizational practices and platform governance escalated. Multiple interviewees confided in us

that the upper echelons of Atos' management, despite objections from the industry team, did not see maintaining the platform as a priority:

> *this new management did not take time to learn about the technology. I think that [the platform leader] did not have the opportunity to really explain to [… them] the value of it, even if we use this to communicate [to the] customer in thought leadership.*
>
> *(platform architectural lead, interview, 2021)*

Overall, despite early enthusiasm and recognition within the company, the platform faced challenges in governance, lack of support, and misalignment with organizational practices. As fintechs developed self-sufficient capabilities and upper management's priorities shifted, the platform reached an inflection point.

3.4.2.2. Complementor ecosystem maturation challenges viability of business model

A key value proposition of the platform's business model was to capitalize on fintechs' inability to approach large-scale clients and competitively demo their solutions. This began to change, however, as fintechs developed the ability to approach and demo for these clients.

> *What I see is that […the] fintech movement is really now… mature and so on. The banks and the [fintechs] have their own capacity to discuss with Deutsche Bank or JP Morgan and so on. It's easier now for them; they [do not have] to go through a system integrator.*
>
> *(platform architectural lead, interview, 2021)*

This altered the platform's viability, as we see from the drawdown in its performance. Our investigation uncovered signs outside of the core platform functions that social evaluations were similarly reduced. Concerning the previous example of the Compliance Navigator program:

> *we got a very, very positive feedback [at our first one] in 2018. We gave [fintechs] really good guidance, practical insights, what they should do, and so on. From the fintechs' perspective, it's good: free of charge, they got education, that's pretty simple. This year… we realized that the fintechs, even if they sign in [to the workshop] - a few of them don't show up… We've really tried to make this interactive. [But] two to maximum three fintechs have been interactive; the others are passive or don't show up.*
>
> *(platform industry director #2, interview, 2020)*

Eventually, this reduction of external interest got to a point where the platform's successive manager felt that "it is probably better to use the FinTech partner's demonstration ecosystem" (platform architectural lead, e-mail interview, 2022).

We further inquired how this change in business model viability as an outcome occurred in relation to stakeholder perspectives. In the early phase, when Atos could rely on the complementor ecosystem of fintechs being dependent on their orchestrator role, the platform showed sufficient credibility to stakeholders to earn their support. However, once the ecosystem of fintechs matured and those wins tapered off, the platform's performance similarly suffered and caused what appears to be a negative feedback loop with stakeholders' support.

> *It was successful at [demoing applications], but the longevity of that application was only as long as that combination was pushed in sales. And to my understanding that wasn't all that long or at least widespread. This… I feel has more to do with the structure of the team at the time… than necessarily the [effectiveness] of the [FinLab]… This is likely also why [upper management] wanted to discontinue it.*
>
> *(follow-on platform leader, interview, 2022)*

In summary, the viability of the FinLab platform was influenced by two main factors: the breakdown of governance efficacy and the maturation of the external ecosystem of complementors. Initially, the platform showed promise in reducing fintech innovation costs and gaining support from upper management through its steering committee. However, as the fintech ecosystem matured, fintechs gained the ability to approach and demo to large-scale clients independently, challenging the platform's value proposition. As a result, the platform's actual and perceived outputs declined, leading to a negative feedback loop with stakeholders' support. With reduced support, the platform itself took a diminished role in Atos' innovation signaling – though the firm continued to render portfolio solutions for financial services clients outside of the platform - as we will now describe.

3.4.3. The "ugly": Return to client-centered innovation system

Our investigation disclosed that after the challenges discussed in the last section emerged, the early wins yielded to headwinds that challenged the original structure and business model. In this section, we discuss how the firm reoriented to a new direction with the business model, both as part of the shifting managerial attention that paralyzed governance and as an indirect response to a more capable ecosystem of complementors. The outcome of this was that the platform's capabilities continued

to exist - Atos continued to render innovative services to its clients partially using the modular capabilities of complementors - but in a narrower scope of its platform strategy and led by specific client demands..

3.4.3.1. Reorientation to non- platform model

A new senior manager was hired to streamline Atos' financial services division and implement Agile workflows. In an interview about their envisioned changes to the platform, they told us:

> *part of the shift we need to make is to become a lot more client-centric. […] [I had] a conversation with [a major insurance company's] CIO to ask about pulling in innovation from insurtechs [via the platform]… [they told me] 'well it's interesting, but it's not really gonna help us.'*
>
> *(interview, 2021)*

We infer from this that client firms showed less interest in the exploratory aspect of the platform - its ability to create pioneering combinations of fintech innovations - and were more interested in Atos' capability to deliver specific technologies to address specific gaps in their portfolios. This shift seemed to fit within the firm's overall orientation towards asserting a position as technological experts rather than vertical orchestrators in the fintech ecosystem:

> *Our current portfolio is business-specific. If there is a technological or functionality gap, and we can fill this up best with a partner, [and] this is where the FinTechs come about. For instance in Mainframe Modernization [portfolios] there are core banking and insurance engines.. So it amends our lack of capability when there is a desire for (quick) quality.*
>
> *(follow-on platform leader, interview, 2022)*

Thus, the new senior manager decommissioned the platform as an external innovation tool while preserving its functionality for internal purposes:

> *The functionalities of a [FinLab] are… part of [the Software Center] team and are only being used once we do get to the point where we need to experiment… The original idea of the [FinLab] to combine, experiment, and demonstrate with fintech applications wasn't used a lot, and only for demonstration.*
>
> *(follow-on platform leader, interview, 2022)*

We thus concur that the transition from a closed to open system of innovation resolved back to a closed approach. This suggests that the demonstrative value of the platform dropped to practically nil as it pertains to publicly signaling Atos' innovative capabilities.

In this new direction, the prospective economy of scale that seemed at the outset like it would dramatically decrease Atos' spending on, while increasing the outputs of, innovative services was no longer achievable. Economies of scope, on the other hand, were beneficial in cases where technologies that were previously or collaterally developed could be redeployed for different projects, but the infrequency with which the FinLab was central to new deal-making in this phase suggests that even this was not substantial enough to merit continued recognition.

3.4.3.2. Rehoming platform capabilities within incumbent organizational structure

Firm interviewees continually described the firm as traditionally hierarchical; the shift back to a closed system was motivated from the top down. We infer that some part of this was due to the costs of upkeep being higher than upper management's appetite for spending on exploratory innovation.

> *I can envision that if we need a combination of fintechs… that we'll boot up… [the FinLab]. It works really well, but only during active pushes. Since there was no active push, keeping the servers running, even on standby, was expensive.*
>
> *(follow-on platform leader, interview, 2022)*

Thus, a key benefit to moving the platform away from the financial service industry arm to Atos' dedicated software center is that maintaining it even in a storage state fell in line with the software center's core competencies; whereas it was an auxiliary task for the industry team which consumed additional resources and time.

In contrast to its original home in the financial services industry, the Software Center did not have a dedicated mission for, nor reason to actively market, the platform, and instead they had more of a custodial role. The FinLab could still be called up by industry experts to demo for clients, but it was now distributed through the firm and required more coordination than before to access. Further, the need to demonstrate exploratory technology was reduced as the firm pursued demand-specific business with clients.

The firm still sought to provide innovative services to its financial service clients, though expressly in an exploitative format; that is, sustaining existing service contracts and establishing new ones based on specific client demands.

> *So rather than finding a fintech and then finding a client that matches that, [we now] have a client and [we] try to find fintech that matches the need of the client. So the ask direction's reversed… [which] means that rather than trying to discover interesting fintechs, [we] need to find specific fintechs.*
>
> *(follow-on platform leader, interview, 2021)*

While the sum of this is harnessing less than the full potential of the fintech ecosystem, it is also a clear response to the dwindling need to do so; which is either a reflection of a muted firm performance or a sign of a larger, industry-wide turn away from the development of new, experimental constellations of complementors and towards more focused collaborations. Presciently, a senior analyst in an independent firm told us towards the beginning of our investigation that

> *if you've been in the business long enough, technology goes in cycles. And there are periods of time where nobody's innovating anything, and… then there are periods when there's… very high rates of innovation, and a company like Atos builds up an ecosystem of vendors and once that burst of creativity dies down, Atos is gonna ditch the ecosystem… We're gonna have five, maybe ten years of ecosystems and such - people trying to find out and manage the failures, perhaps even more importantly managing the successes.*
>
> *(senior external analyst, interview, 2020)*

In summary, the FinLab platform shifted from an open to a closed system of innovation due to management decisions concerned with centralizing explicit client needs, as well as industry dynamics that began to favor a disintermediated fintech-bank relationship. The platform's focus thus narrowed to meeting specific client demands and collaborating with select fintechs. This transition reflects a broader trend in the industry towards more targeted partnerships.

3.4.4. A Process Model of Incumbent Platform-Based Entry to Nascent Ecosystems

In our process model for incumbent firms entering nascent ecosystems - Figure 3 - we identify two distinct stages: the initial decision to adopt a platform-based approach (A) and the subsequent transition to a traditional, non-platform approach (B). Starting with the platform-based approach, incumbents may identify gaps in their offerings (1A) and decide to leverage their resources, client relationships, and expertise to construct a platform that appeals to startup complementors and helps overcome their lack of recognition (2A). This platform-based entry decision (3A) enables the firm to experiment within the new context, cultivate new routines, and bolster its capabilities without committing extensive resources (4A). However, this move is not solely about technology adaptation—it is also a pronounced statement to the market. It showcases the incumbent's willingness to evolve, collaborate, and innovate. In uncertain settings, this is what we term a "symbiotic signal," which can elevate an incumbent's reputation by cultivating favorable recognition (5A). From a business perspective, this tactic paves the way for market entry, revenue diversification, and tapping into the skills and services of others in the ecosystem. The platform promotes open collaboration and innovation with complementors and initial users (6A).

Yet, as the ecosystem emerges, the platform model encounters challenges. Enhanced skills and capabilities of startup complementors allow them to engage larger clients directly, potentially overshadowing the incumbent and generating coopetitive tensions (2B). The risk of disintermediation encourages the incumbent to be more judicious and deliberate in collaborations. Internally and separately from external conditions: shifting company priorities, dwindling leadership engagement, or a combination of these and other case-specific factors can lead the firm to (re)configure its capabilities to optimize for profitability and performance, leading to or resulting in governance tensions (1B).

Given these challenges, incumbents may choose to revert to a traditional, non-platform approach. This shift is a response to both internal adjustments and external market dynamics – in our case, the firm's capability (re)configuration happened alongside the maturation of the external complementor ecosystem, resembling coopetitive tensions that frequently occur in innovation ecosystems in general. As these tensions mount, the changes in market conditions and client demands can diminish the platform's value to the incumbent and other stakeholders, leading to its decommissioning or removal from the incumbent's primary innovation processes (3B).

Notably, the initial platform strategy serves as a foundation for the success of the closed approach deployed in the subsequent phase. The incumbent not only sources an initial set of innovative capabilities through the relationships and capabilities gained through the platform-based approach but also cements its status as a central, collaborative actor—a position that endures even with a shift away from the platform. As such, it returns to its traditional methods (4B) with a new outfit of complementors that it can leverage for continued work (5B). The resulting reversion to a closed, non-platform innovation system (6B) represents a counterbalance that helps incumbents navigate the tensions during entry into a nascent ecosystem.

In summary, our process model offers a deep dive into the strategic decisions incumbents make when entering new ecosystems, highlighting the necessity for adaptable strategies amid shifting challenges and opportunities.

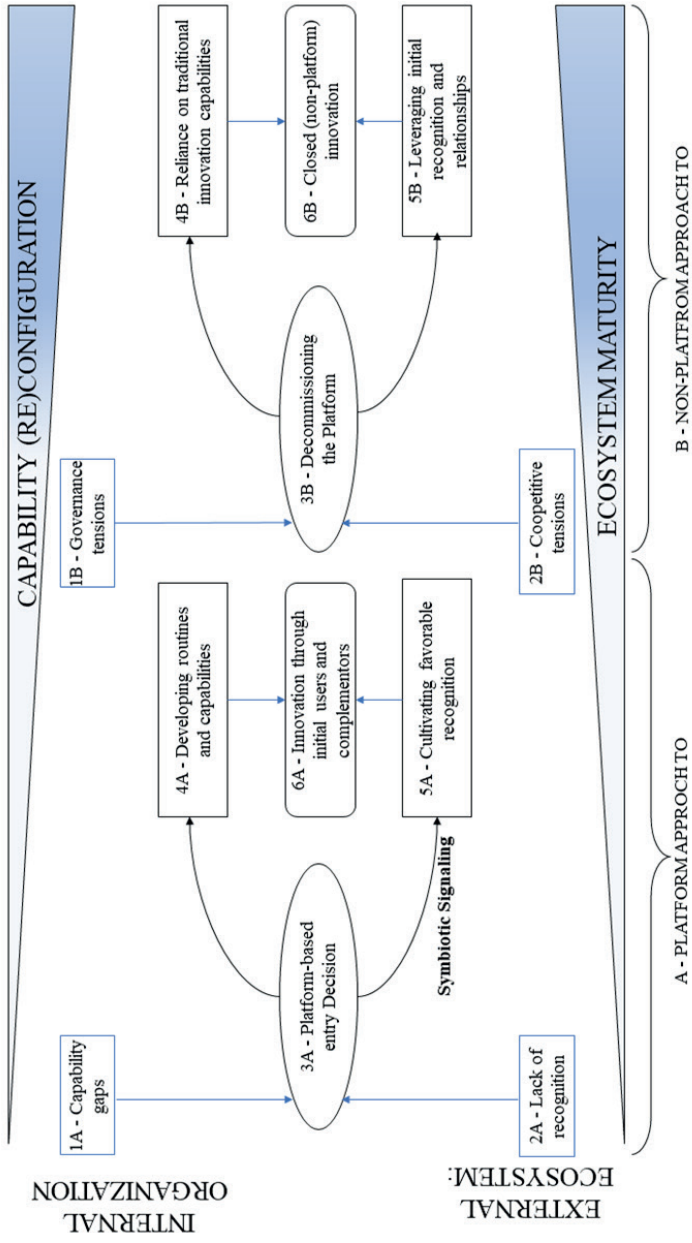

Figure 3. A process model of incumbent platform-based entry into a nascent ecosystem and eventual return to non-platform innovation.

3.5. Discussion

Our study delves into the decision-making process of incumbent firms when choosing to enter a nascent ecosystem. Specifically, we examined the merits and challenges of adopting a platform-based entry strategy. Interestingly, we found that this approach can yield advantages beyond what traditional platform literature theorizes while also revealing potential limitations to the sponsoring firm over time. One key aspect emerging from our research is the significant value of signaling within the platform-based approach. By opting for platforms, incumbent firms effectively signal their capacity to innovate and showcase their credibility to key partners and stakeholders. These platforms are powerful tools for demonstrating the firm's ability to adapt to emerging trends and foster collaborative environments, ideally building trust and reputation within the ecosystem.

In nature, the relationship between the clownfish and sea anemone exemplifies "symbiotic signaling" — cues or signals from one organism that are recognized and acted upon by another, leading to mutual benefits. Through its protective “chemical camouflage,” the clownfish signals to the sea anemone that it is friendly and not food. The clownfish, permitted to live among the anemone’s tentacles, secretes nutrients that nourish the anemone’s endosymbiotic algae and, thus, the anemone itself. Recognizing this mutualistic signal, the anemone and clownfish enter a beneficial partnership (Émie et al., 2021). Transposing this concept to emergent business ecosystems, entrants to nascent ecosystems send out signals to potential collaborators. Offering an open innovation platform is one such potent mutualistic signal, emphasizing a commitment to mutual growth and collaborative innovation. This signaling mechanism plays a pivotal role in influencing stakeholders' perceptions, shaping the firm's position and influence within the nascent ecosystem.

Our signaling perspective attempts to complement existing views towards the economics of platforms. In nascent ecosystems characterized by uncertainty and information asymmetries (Audretsch, 2012), signaling becomes vital for firms, especially incumbents. Previous studies indicate that, especially under conditions of uncertainty, organizations utilize signals such as social status (Podolny, 1994) and the prominence of their founders (Powell & Sandholtz, 2012) to foster positive perceptions among their audiences. A defining characteristic of entrepreneurial signaling is its costliness. While a platform-based approach may also be costly (Chai et al., 2012; Krishnan & Gupta, 2001), digital technologies diminish the initial development costs of the platform's technical core (Volberda et al., 2021). When paired with other signals and investments, a platform-based approach may exhibit greater

credibility, for instance, compared to the use of framing (Garud et al., 2023) or other discursive strategies (Granqvist et al., 2013; Thomas & Ritala, 2021) to showcase the incumbent's innovative intentions and underscore adaptability and responsiveness to changing market dynamics (Garud et al., 2022). Such signals can enhance an incumbent's image, improving the chances of establishing pivotal partnerships in this fluid environment. Thus, although strategic partnerships (Vasudeva et al., 2018) and substantial R&D investments (Schilling, 2003) are recognized as significant signals, our research highlights the platform-based approach as a comparatively low-cost strategy for both entrepreneurs and established firms to convey symbiotic signals to other actors.

On the contrary to signaling value, our research indicated that the economic value of a platform may be stifled over time, even after initial success and overcoming the platform's cold-start challenges. While many companies may go on to scale the platform and realize its full potential, others may face various internal and external challenges. Internally, the firm may not have the temporal, financial, or attentional resources to dedicate to the platform to overcome platform start-up dilemmas (Volberda et al., 2021). Platform governance mechanisms are likely to be misaligned with the prevalent processes and practices in the organization (Boh & Yellin, 2006; Chen et al., 2022). The combination of these factors may undermine the platform's viability compared to more focused, client-centered approaches to innovation. Externally, the complementors may also lose interest in the platform as they develop capacities to disintermediate the sponsor.

3.5.1. Contributions

Our first contribution is to the research at the nexus of ecosystem emergence and entrepreneurship (Agarwal et al., 2017; Autio et al., 2018; Shah & Tripsas, 2007). Our exploration of the entry choices to nascent digital ecosystems unpacks the dynamic nature and multiple purposes of established firms' entry strategies to nascent ecosystems. Previous research on entry decisions tends to overlook the specifics of the entry approach and seldom addresses changes in initial decisions over time (See Eggers & Moeen, 2021 for a review). In contrast, our findings underscore the importance of entry approach and suggest a more intricate that entails reversal of initial choices. Incumbents may find it appealing to commence with a platform-based strategy, leveraging its combined benefits of existing resources, expertise, and new client relationships. This aligns with the broader understanding that platforms foster integration and synergy (Aversa et al., 2021). As ecosystems mature and internal tensions rise, established firms often reach a juncture, prompting a reevaluation of their initial entry decisions. This fluidity in entry strategy, shaped by

both external ecosystem changes and internal governance adjustments, underscores the notion (Dattée et al., 2018; Hannah & Eisenhardt, 2018) that strategies in nascent ecosystems rarely remain static or uniform over time.

Our second contribution is to the platform strategy research, particularly challenging established notions of scaling platform value (Boudreau & Jeppesen, 2014; Rietveld & Schilling, 2021). Our theorization complements the prevailing scale-centric narratives by uncovering nuanced dimensions related to information asymmetry with regard to actors' attributes and intentions in nascent ecosystems (Moeen & Mitchell, 2020; Sanders & Boivie, 2004) as well as internal governance tensions and costs of platform-based models for incumbent firms (Chen et al., 2022). The mainstream discourse, heavily centered on scaling and network effects (Rietveld & Schilling, 2021), is potentially broadened by our insights, revealing the dual-edged nature of expansive platform growth for established firms that face tensions that could make expansive scaling of a platform counterproductive. A particularly noticeable insight was the signaling function of early platform adoption (Chen et al., 2022; Payne et al., 2013). Beyond operational advantages, platform strategies serve as a beacon, signaling the firm's innovative orientation, readiness for partnerships, and commitment to proactive evolution.

Our final contribution concerns the ambidexterity challenges incumbents face within ecosystems (Altman et al., 2022; Foss et al., 2023). Navigating the intricate process of engagement with a nascent ecosystem presents a complex narrative of how incumbents operate within digital ecosystems. As we delve deeper, the story unfolds of a tug-of-war between time-tested internal governance mechanisms and the adaptive, agile governance of burgeoning platforms (Putra et al., 2023). The escalation of this friction, visible in our process model, offers critical insights into how incumbents grapple with platform-centric approaches. The switch between strategies, driven by the alignment or misalignment of governance structures, emerges as a defining theme not underscored by prior research. While there are several accounts of successful platforms (Ansari et al., 2016; Garud et al., 2022; Snihur et al., 2018), our theorization provides a more nuanced perspective on the desirability and feasibility of platform-centric approaches for incumbent firms, revealing a blend of achievements and setbacks.

In terms of practical contributions, entrepreneurs and managers of incumbent firms considering entry into nascent digital ecosystems should carefully evaluate the strategic implications of adopting a platform-based approach. While platforms offer advantages in establishing a foothold and signaling innovative capacity, managers

must assess the organization's readiness and commitment to platform governance. Moreover, adapting to shifting ecosystem dynamics is crucial, as challenges may arise over time, necessitating a reevaluation of the platform-based strategy. Therefore, managers should remain vigilant, flexible, and open to alternative approaches to innovation that align with changing ecosystem dynamics. Strategically leveraging the signaling value of platforms is an opportunity for managers seeking to enhance the firm's reputation within nascent ecosystems. Managers can showcase early successes and innovative potential to position the firm as a reliable and forward-thinking player in the ecosystem. Lastly, balancing platform-based and traditional approaches is critical, as both strategies offer complementary benefits. By finding a balance which both sustains the focal platform's ability to meet initial expectations while also adapting to rigidities of the firm's internal environment, managers can effectively address challenges posed by ecosystem dynamics and ensure long-term success in the ever-evolving digital landscape.

3.6. Limitations and future research

Our research is a single-case study focused on a business-to-business platform in the fintech sector. Many complications in platform governance may be related to the particular nature of this case and context, and the fact that partners and complementors have their own strategic foci and long-term ambitions. Hence and as is always the case with single-case studies, theorization from this case alone will be limited; this research is intended to extract theorizable components so that other research may explore our conclusions in different settings and conditions; for example, where one side of the platform includes individuals and end-users.

Additionally, platform-based approaches can also be used for entry to established ecosystems; an avenue we did not have the capacity to explore in this study. In such contexts, platform approaches may signal value to internal stakeholders faster, which in turn may fuel further investments and growth of the platform. Future research can further incorporate such boundary conditions to analyze a platform-based approach as the basis of entrepreneurial decisions by established firms.

From a methodological point of view, temporal bracketing requires analytically distinguishing brackets of time for "descriptive utility" (Langley, 1999, p. 703). Consequently and in an effort to be rigorous but concise, this subdues certain aspects of the data and emphasizes others. Akin to familiar drawbacks of ethnographic research methods such as the participant observation this research entails, such

analysis will always be subject to researcher bias as a cost of decomposing complex phenomena. This trade-off is intended to provide a high-fidelity picture of a nuanced phenomenon, in the hope that these theoretical extractions may be later tested on larger datasets and thus sharpened.

3.7. Conclusion

Through an in-depth examination of an incumbent firm entering a nascent ecosystem, our study illuminates the advantages and challenges of a platform-based entry strategy. We spotlight the intricacies of digital transformation, and the adaptive strategies managers deploy to navigate these digital opportunities. As the unpredictable nature of digital landscapes unfolds, continuous evaluation and adaptability become paramount. Platforms serve as potent signaling tools, showcasing a firm's innovation and commitment to collaborative growth, going beyond mere technological structures to represent strategic tools that embody a firm's adaptability and intentions. Yet, as ecosystems mature, these platforms also introduce economic challenges for incumbents. The emerging complexities and challenges might, in some scenarios, prompt firms to reconsider or pivot away from their platform-based approach, underscoring the multifaceted decisions incumbents grapple with in dynamic digital landscapes.

Chapter 4

Incumbent innovation towards sustainability challenges: A platform response to institutional pressure

ABSTRACT

Firms seeking to capitalize on public pressure on markets, such as Europe's regulatory attention for greater transparency on the environmental, social, and governance (ESG) impacts of investable assets, face unique challenges in developing products and services towards these initiatives. This is partially because responding to this pressure requires optimizing non-financial performance. This qualitative investigation follows a unit within the multinational IT integrator Atos SE as it recognized an opportunity to build a platform interlinking the ESG ratings industry, who rate various investable assets, and institutional investors, who rely on their various methodologies to render portfolio-wide ESG reports for their respective clients. Despite wider public interest in sustainable market offerings, the team encountered significant challenges in launching their platform. This investigation finds that initial promises the team made to secure early stakeholder support were contingent on the expected benefits that the platform would yield; however, successfully manifesting these benefits would require a change in operational logics and firm traditions. As the platform took shape and developmental decisions eliminated idyllic possibilities in order to accommodate, stakeholder support recanted and was eventually withdrawn. Through a stakeholder theory lens, this investigation showcases the difficulties that units in peripheral firms may experience in adjusting traditional firm cognition towards developing novel sustainability-themed services.

4.1. Introduction

In the European finance sector, Environmental, Social, and Governance (ESG) mandates are increasingly shaping firms' strategic initiatives (Clementino & Perkins, 2021; Drempetic et al., 2020; Oliver, 1991). The institutional emphasis on sustainable finance has put pressure on market actors to redefine investment paradigms, simultaneously compelling established firms to reconsider their operational and strategic models (Pucker & King, 2022). "Core" market actors, such as banks which finance oil and gas extraction projects, directly affect and be directly affected by these pressures; for instance, by being restricted on which projects they may finance and resisting, lobbying against, or strategizing around said restrictions. A "peripheral"[1] market also emerges, where actors may indirectly affect or even capitalize on the mandates but are not central actors themselves – akin to "selling shovels in a gold rush."

Managers in peripheral market organizations must ensure their competitive advantage adapts to changes in the core market from which it is derived. An example of this fundamental problem may be seen in the ecosystem of ESG ratings agencies, which analyze (mostly publicly-traded) companies and give them a rating using proprietary methodologies (Avetisyan & Hockerts, 2017). A positive or negative assessment of a firm can have direct consequences for the firm as a whole or even for individual managers within it – as Deutsche Bank exemplified when it linked managerial compensation to aggregate ESG ratings.[2] Aggregation of the novel ESG ratings industry offerings, combined with the problem of how managers in peripheral organizations (such as IT integrators) must adapt their strategies to core industry activity (such as the sustainability pressures on the financial services industry) leads to the core question of this investigation: *how incumbent managers navigate tensions in developing new innovation platforms as responses to sustainability challenges.*

This study of Atos, an incumbent providing IT integration services to the financial services industry – thus, a peripheral member of that industry – harnesses insights from a yearlong period of participant observation as well as interviews and content analysis in order to theorize how developing a platform in response to sustainability-themed external stimuli may run into issues concerning incumbent firm traditions. Seizing on a perceived market gap, the team began to develop an innovation platform

1. Core/periphery concept borrowed from Wallerstein's (1974) seminal work in World-Systems Theory, to denote the different speeds and conditions affecting different global (or in this case, industrial) economic powers. Wallerstein's original hierarchy also includes a third group: the semi-periphery.
2. https://www.reuters.com/article/deutsche-bank-esg-idAFL8N2IN44O/

which would consolidate various ESG ratings agencies' proprietary methodologies for institutional investors, with possible channels for third-party service providers to contribute additional services to the platform.

While more of an opportunistic service than a necessary solution to any one sustainability challenge[3], the initiative had considerable potential to help standardize and simplify how institutional investors maintain an overview of their portfolio's aggregate ESG performance, which is a growing topic of interest among institutional as well as individual investors (many of whom indirectly employ institutional investors, e.g., through passive investment and retirement strategies). Seeing this opportunity, Atos' internal stakeholders initially supported the platform with relative enthusiasm, as it also espoused sustainability aspirations that Atos' corporate messaging hailed as important for several years prior. However, the focal team made concessions to secure continued stakeholder support, veering the platform away from its original scope. As a result, stakeholder enthusiasm waned as these divergences began to challenge firm traditions.

This cyclical expansion and contraction of stakeholder support is the product of continuously evolving narratives and discourses between the platform orchestrators and their environment (Garud & Gehman, 2012), and where contraction is a necessary stage in strategic development, incumbents must make dedicated efforts to ensuring that this cycle does not disrupt their collective ability to innovate towards sustainability-focused themes. While this study cannot definitively make these insights exclusive to sustainability contexts, it nevertheless asserts an importance in understanding incumbents' roles, whether at the core of periphery of a given market, in advancing sustainable market initiatives.

The sustainability context of this exploration shows how incumbents navigate the complexities of innovative exploration while constantly (re)configuring relative to their networks of core and peripheral actors. Incumbent firms can considerably improve their market position among these networks by collaborating with other firms in high-tech ecosystems, unlocking further benefits such as an accelerated pace of innovation and securing a more robust chance of weathering shocks and disruptions (Altman et al., 2022; Chen & Miller, 2015; Khanagha et al., 2018). At the micro-level, how managers in incumbent firms shape new, collaborative initiatives to secure these benefits depends on the interests of stakeholders whose support they rely on to enable

3. "Sustainability challenge" derives from works on so-called grand challenges (e.g., Ferraro et al., 2015), to denote that the central value proposition of the given initiative at least loosely relates to improving a given market sector's environmental sustainability within a given paradigm.

their initiatives, yet whose interests may conflict (Reypens et al., 2019; Splitter et al., 2021). These conflicts are necessary for the "continuously negotiated accomplishment" of sustainability journeys (Garud & Gehman, 2012, p. 984).

This study's findings contribute to two streams of literature. First, contributing to literature concerning strategic realignment towards sustainability initiatives (e.g. Gandolfo & Lupi, 2021; Santa-Maria et al., 2022), it shows that revamping incumbent business models to capitalize on institutional pressures can be a complex endeavor due to the wide array of stakeholders and their varying levels of interest in non-market or institutional objectives (Garud & Gehman, 2012; Kaipainen & Aarikka-Stenroos, 2022; Santa-Maria et al., 2022). This empirical, single-case study (Yin, 2014) shows that internal stakeholders viewed the strategic realignment addressing sustainability as an institutional or non-market pressure as risky compared to the firm's traditional methods of creating and capturing value (namely, the provision of hardware, software, and IT services, practically agnostic of industrial ideology). Despite their initial enthusiasm and commitments, these stakeholders later recanted their support when the initiative's distinctions from tradition became apparent. With this expansion-contraction cycle, the firm created the conditions for its own disorganized response, suggesting a potential pitfall for incumbents seeking to develop strategic initiatives towards sustainability challenge themes.

Secondly, this chapter adds to research on platforms and ecosystems as market strategies which incumbents may use to build competitive technology portfolios (Altman et al., 2022; Jacobides et al., 2018; Putra et al., 2023). Platforms can serve as valuable business models for orchestrators to efficiently access and align a variety of skills, knowledge, and innovation available within their technology ecosystems; usually around a central value proposition (Jacobides et al., 2018) which might intuitively link to the sustainability challenge in focus. This investigation shows how incumbent managers sought to develop firm strategies around institutional trends (namely, a sustainable finance imperative) while stakeholders internal to the firm kept to traditional evaluations in assessing the embryonic platform. As internal stakeholders control financial and human resources which enable strategic initiatives, these stakeholders and their concerns must necessarily take primacy over the sustainability challenge that the strategy seeks to address. This study extends an understanding of the tension between market-oriented strategies and sustainability-driven imperatives in the context of platform innovation (Altman et al., 2022; Santa-Maria et al., 2022).

This chapter continues with an overview of platform approaches within sustainability contexts. It then introduces the empirical setting and the methods of data collection and analysis. Following this is an exposition of the findings, with relevant analytical conclusions to support answers to the above-italicized research question.

4.2. Conceptual Background

With growing public attention on the environmental and social impacts of their operations, incumbent firms have exhibited a growing public commitment to sustainability as a grand challenge (Engert et al., 2016; Kaipainen & Aarikka-Stenroos, 2022). This research considers such public pressures as institutional pressures; that is, not directly influencing the purchase and sale of specific products and services but nevertheless affecting the context around these activities (Garud et al., 2022; Oliver, 1991). Developing market innovations can be a pragmatic approach for an incumbent firm addressing a gap related to sustainability challenges, in that they "guide action in the service of solving practical problems" which might not be a primary focus of the core market (Gross, 2009, p. 366). Additionally, the public-facing image of a firm devoting effort to innovative, sustainability-themed solutions may satisfy institutional pressures, though the firm may jeopardize its image if it does not authentically follow through (Ramus & Montiel, 2005). Additionally and due to the variety of interests and stakeholders to which incumbents are accountable, a markedly distinct departure from the firm's core market focus may disaffect stakeholders whose support is crucial for the central initiative, disabling it from reaching market viability (Martens et al., 2007; Zhao et al., 2017). This may be especially poignant if the firm does not have a prior history with dedicated sustainability efforts. A fundamental tension emerges: the incumbent's survival is contingent on sustained economic growth, but sustained economic growth is the root cause of multiple environmental and social grand challenges (Dietz & Rosa, 1997; Jorgenson & Clark, 2012; York et al., 2003).

The question of how responsible incumbent firms should be for the upkeep of planetary and social good - otherwise known as corporate-social responsibility (CSR) - is a well-established body of business research (Kolk & Van Tulder, 2010). Considerable attention goes to how and if firms publicly address grand challenges, and in incumbent cases, internal tensions may cause disjointed, ineffective, or inauthentic responses (Ramus & Montiel, 2005). There exists a small body of firm-level literature which examines the (re)establishment of corporate routines and practices to mount effective responses to sustainability-themed challenges (Gandolfo

& Lupi, 2021; Kaipainen & Aarikka-Stenroos, 2022). With market offerings as a component of corporate routines, how firms manage these tensions is a potent topic for exploration in incumbent innovation strategy literature.

4.2.1. Incumbent platform approaches to innovation

Incumbent firms that seek to branch out into new markets or to develop new capabilities often struggle to align the wide variety of resources and stakeholders which must readjust accordingly and in concert (Khanagha et al., 2018; Volberda et al., 2021). When externalities are added to the mix, such as shifting standards of performance, this can further strain an organization's ability to incrementally change operations and may necessitate a wider scale or scope of intraorganizational change than initially envisioned (Phillips & Pandza, 2023).

This is largely due to the uncertainty inherent to disruptive change, where the stability that internal processes and routines rely on must be reexamined and new ones must take their place (Kaplan, 2008). One such process is the research and development of new products and services; these may necessitate the establishment of new supply chains and network configurations which may complement or disrupt extant ones. Studies that examine incumbents undergoing periods of fundamental change, such as the digitalization of industries (Khanagha et al., 2018; Volberda et al., 2021) or when new entrants present disruptive challenges (Ansari et al., 2016; Garud et al., 2022) for instance, focus on the productive power of platforms to gain a competitive advantage amidst this uncertainty.

In circumstances where incumbents attempt to develop market offerings around sustainability themes, they must adapt internal logics and partnership formation processes to do so. The initiators of change must win the support of stakeholders inside and outside the firm – stakeholders who might not view the pursuit of sustainability themes as being worthwhile or lucrative enough to justify the effort. Consequently, how focal actors frame the initiative will have determine its outcome (Fraser & Ansari, 2021; Kaplan, 2008). Accordingly, literature concerning the development and implementation of platform approaches in incumbent firms points out that aligning supportive stakeholders is just as important as aligning a market in order to make the initiative viable (Diriker et al., 2023).

4.2.2. New platform development in sustainability contexts

Platforms can be a powerful way for firms to innovate towards sustainability themes. For instance, they can address multiple market gaps and stakeholder interests in complex settings where standards of commercialization are not yet set in; such as in

a circular economy context (Ciulli et al., 2020). If a platform aligns profit-oriented stakeholders with market gaps, then the platform itself becomes an integral tool in the legitimization of a new market. Despite platforms' potentially legitimizing role, implementing platform approaches can be an especially tricky task for the orchestrating incumbent if it is also attempting to reorient towards sustainability themes (Frishammar & Parida, 2019). Incumbents may be obligated by market or internal pressures to enact sustainability initiatives before their non-incumbent peer organizations (Kaipainen & Aarikka-Stenroos, 2022). As this can put the incumbent in the role of leading viability exploration, expectations of the firm to sustain ever-increasing revenue growth in relevant areas might conflict with relatively unprecedented initiatives (Eggers & Park, 2018). Relatedly, other organizations, such as platform complementors, could begin the collaboration with a common understanding that matures, evolves, or diminishes as the platform takes shape and each organization's interests co-evolve in(ter)dependently (Hellemans et al., 2022).

An additional complication which the sustainability context is prone to is that initial design of new market offerings may include features meant to increase customer satisfaction (or wider stakeholder approval), but these features may prove too costly to develop and implement, and they may even chip away the new product or service's economic (or environmental) viability. Gandolfo and Lupi's (2021) study of a tissue paper company's development of a new tissue product found that sacrificing the bleached white color and fragrant aroma of its standard product dismayed customers, requiring rehabilitative stakeholder management to fix. Though this is a non-platform example, it serves to underline how different evaluations between internal (product development teams) and external (customers) parties on the priority of sustainability themes may obscure a firm's approach to developing new market offerings.

Returning to platform dynamics, development teams want to forestall such hazards well before the platform reaches the market. The platform approach may be inherently advantageous here because, beyond drawing down the orchestrating firm's own financial, technological, and administrative commitments, it can also distribute this type of problem-solving workload across component organizations (Kapoor & Agarwal, 2017; Reypens et al., 2019). Yet even within the organization, contestations concerning which problems to address and how may arise; from the orchestrating firm's position, these may be especially consequential for interorganizational collaborations such as those which platforms entail. The *intra*-organizational examination therefore becomes crucial, yet it is noticeably understudied in this field which may be due to the novelty of scholarly interest in incumbents' platform-based strategies within sustainability contexts.

Nevertheless, it is an important gap to fill because new regulations as well as other market and institutional pressures continue to exert further pressure on incumbent firms, which themselves play no small part in the economic engine driving the ongoing climate crisis. Given the need to revamp business models and routines in the face of this (Chaudhuri et al., 2022; Geissdoerfer et al., 2017), investigating how incumbents navigate this change internally may help prevent future managerial failure in implementing sustainable innovation initiatives. This chapter therefore seeks to broaden the academic and practical understanding of modernizing incumbent platform portfolios in sustainability contexts.

4.3. Methods

4.3.1. Research Site

Atos SE, as covered in previous chapters, is a multinational firm based in Besons, France. The IT integrator has gained a substantial portion of its capabilities and knowledge through a history of acquisitions and mergers going back to 1919; the most recent (of sizeable magnitude) being the $3.57B acquisition of Syntel in 2018. Since its public listing in 1995[4], Atos has produced a series of annual reports indicating matters and aspirations of likely interest to its investors. Besides financial performance reporting, these reports also contained forecasts of expected developments in the technological domains that Atos was involved in or intended to enter; beginning in 2009[5], the firm started publishing separate, annual corporate-social responsibility reports which it then combined, starting in 2018, into annual Integrated Reports – each of which expressing Atos' dedication to making its own operations more environmentally sustainable. This inaugural Integrated Report also contained a section expressing the intention to build environmentally friendly practices into the services they would sell to clients – indicating at least to some extent that the headquarters envisioned sustainability as an important factor to build into client offerings.

With that context, the team this research follows began working on the focal platform in the wake of a CEO-level directive to explore where Atos could leverage data to improve its offerings in each of its seven operating industries[6]. By the beginning of this chapter's study and in line with the larger FINDER project context, I had been

4. https://atos.net/en/investors/shares
5. https://atos.net/en/investors/financial-information/financial-reports
6. Financial Services & Insurance; Healthcare & Life Sciences; Manufacturing; Public Sector & Defense; Major Events; Resources & Services; Telecommunications & Media

working on a separate team (referred to in previous chapters as FS&I) with the platform leader for approximately one year. Said platform leader received the general directive to explore data topics within the financial services industry and underwent an executive training course to develop the idea for a sustainable finance platform – pursuing a strategic position for Atos between institutional investors and data-driven providers of niche, third-party services.

4.3.2. Data Collection

Data collection for this study began in September 2020; the bulk of it ended in May 2021, with one follow-up interview occurring in 2023. Because this chapter seeks to understand key mechanisms of strategic development as an unfolding series of events – or *process* – data collection involved participant observation, internal document collection, and interviews. These are ideal when the intention is to "capture processes as they occur, rather than merely their retrospective reconstruction" (Gehman et al., 2018; p. 27). Participant observation involved working on the research and development team for the platform in the function of a market researcher and strategist; generally charged with substantiating the platform's emergent value proposition with insights from interviews we jointly conducted as well as industry white papers (which did not advise this chapter's research as data material, but which did help contextualize the total endeavor). This involved close work alongside the platform leader, an Atos employee normally in a director role but who joined the team as a strategist, as well as a cadre of developers – each of these individuals having between 10 to 20 years of industry experience.

Additionally, I took field notes during 11 team calls wherein the platform's development was the primary focus, augmented by nine semi-structured interviews dedicated to the platform endeavor with the previously mentioned team members, other Atos employees involved in the platform, as well as a member of an external regulatory committee. The team calls contained different arrangements of the team as well as employees from supporting units (such as Atos' software developers or experts in European financial markets) and, in two cases, the founder of a fintech company the team sought to integrate in the platform. I conducted semi-structured interviews because, relative to structured and unstructured interviews, semi-structured interviews maintain an appropriately general topical focus while allowing flexibility to build conversational rapport and explore topics of novel intrigue that come up within the discussion (Roulston & Choi, 2018). The documents I obtained for analysis were internal communications files primarily meant to build and develop a cohesive narrative; the platform leader would use these documents to pitch the

platform idea to various internal stakeholders in order to try and secure their support relevant to their capacity. Table 7 contains a summary of these data sources.

Table 7. Chapter 4's data sources.

Interview data	***Individual's role***	***Relevance***	***Interviews***
			9
	Platform Leader (Industry Director #1 in previous chapters)	- Led platform development; including initial executive ideation, team assembly, pitching to internal accelerator for resources, scouting external partners, and framing platform narrative within the firm's broader technological aspirations (namely, data-driven portfolio expansion)	3
	Industry Director #3	- Industry director for emerging tech, blockchain - Technical leader of the team, and laisse appropriately with supporting units across Atos - Advocates for FS&I's participation in Atos' Scientific Community concept, which explores and publishes new technological opportunities for the firm	1
	European Financial Reporting Advisory Group Associate Director	- Interview conducted in following participant observation R&D effort - Informant is an observing member of the European Commission's Platform for Sustainable Finance	1
	Member #1, Atos SCALER (accelerator program	- Assisted SCALER Program director in assessing project proposals for fit within accelerator aims - Assists project leaders in determining resource requirements and finding within-firm knowledge - Assists project leaders in finding external third-party service providers to improve the project's joint value proposition	2
	Member #2, Atos SCALER program	- Assisted SCALER Program director in assessing project proposals for fit within accelerator aims - Assists project leaders in determining resource requirements and finding within-firm knowledge	1

Table 7. Continued

Interview data	***Individual's role***	***Relevance***	***Interviews***
			9
	Member #3, Atos SCALER program	- Assisted SCALER Program director in assessing project proposals for fit within accelerator aims - Assists project leaders in determining resource requirements and finding within-firm knowledge - Had worked with SCALER Program leader prior to the Program's inception (approximately one year prior to these interviews); could therefore advise our interviews with personal context (Program aims, challenges, etc.)	1
Participant Observation	***Type***	***Relevance***	***Occurrences***
	Atos platform team calls	Took place within the ideation, definition, and development stages; primary purpose was to bring insights from interim research and discussions with internal or external stakeholders in order to shape and further define the platform's central narrative	11
	Internal documents	PowerPoint slide decks and digital brochures which captured the emergent central narrative; the platform leader primarily used these in recurring conversations with the SCALER Program decision-makers, as well as with decision-makers in third-party service providers	8

4.3.3. Data Analysis

Analytical methods in this chapter largely mirror the previous two chapters' approaches: reviewing material for themes that appear theoretically important; building a structure of first- and second-order codes to arrive at aggregate dimensions of the data; and mapping these onto a process model that underwent several iterations until theoretical saturation (Gioia et al., 2012). The seven semi-structured interviews were with the team members as well as employees responsible for Atos' internal accelerator program, through which the program competed for firm resources against other initiatives. This allowed for an analysis not only of the content within each interview but – aided by the five vignettes – background material for developing an understanding of the context around the platform discussion.

I recorded and transcribed each interview before bringing these as well as the vignettes, notes, and internal documents into Atlas.ti for analysis. Coding began abductively, searching both for themes familiar to difficulties in new platform development as well as for novel themes underrepresented in the aforementioned literature streams (Silverman, 2006). Once this first series of codes emerged, I then returned to the transcripts, documents, observations, and vignettes and coded for higher-level themes that brought emergent findings closer to the literature and novel theoretical contributions, once more aggregating them in following the Gioia methodology (Gioia et al., 2012) (see Table 8). Additionally and to aid interpretation of ongoing events pertaining to the platform's development alongside the previous data collection measures, I wrote five vignettes during this research period. These focused on the decisions being made within the team, how they were informed, my best interpretation at the time of their consequences, and the team's emergent understanding of the industry niche we were attempting to build value towards. Though an intermediary analysis tool, these vignettes aggregated various *in vivo* observational data and therefore are included in this chapter's data coding structure (Table 8) to assist the transition from observations to aggregate dimensions.

Given this study's processual nature, determining themes alone was not sufficient for an understanding of their intertemporal nature. While discerning causality would be ideal, the natural scope of a single case study is too narrow for this type of theorization (Langley, 1999); however, the thematic coding structure allowed for relationships between events to be drawn across time, leading to Figure 4. The four 'episodes' of the platform's development are derived from analyzing notes taken during calls and participant observation; evidence of transitions between them became apparent through periodic discussions (via email or call) with the platform leader, where the nature of current events became obviously different than the previous episode's (e.g., when the team discussions changed focus from developing an initial idea to pitch to the firm's internal accelerator [Project Definition] and to improving upon the idea after it had been admitted into the accelerator [Project Development]). Tying aforementioned themes to these sequences of events was fairly straightforward with the help of the vignettes – as the project leader discussed each episode's respective aims and challenges with his team, their respective path dependencies made sense only with each other. As an example, *themes* related to the challenges of project ideation were distinct only to the project ideation *episode* both *in vivo* and *ex post.*

4.4. Findings

This research uncovered three sides of the platform's development taxonomized as aggregate dimensions in Table 8: the first, where the platform team developed early ideas and communications to address ESG obligations as opportunities for value capture in conjunction with third-party service providers (aggregate dimension: "ESG as opportunity"); the second, where the formulating team sought to balance exploratory innovation interests with the exploitation-based firm traditions of innovation routine ("Platform structure/benefits"); and finally, the internal challenges that arose in the platform's creation ("Development challenges"), largely centered on how stakeholder expectations became out-of-sync with the strategic imperative. The following elaboration of each will highlight unique and dynamic issues and opportunities of incumbents embarking on platform development initiatives in nascent settings.

4.4.1. Conceptualizing the ESG platform: Aligning with market opportunities and organizational strategy

As early as 2008, Atos (then: Atos Origin) was incorporating sustainability topics in their annual performance reports, suggesting that both reducing the firm's ecological footprint and capitalizing on clients' green transition ambitions were on its radar for some time prior to this investigation. The company's annual reports continued to emphasize an importance on building sustainability-themed market offerings over the years; however, this did not seem to capture much attention in Atos' Financial Services Industry until 2018, when the European Union began launching legislative proposals to direct further standardization and transparency in the Union's financial services sector[7] - also coinciding with when the firm began releasing its previously mentioned Integrated Reports.

With this firm-level backdrop, the platform leader had a distinct personal-professional interest in sustainability. For this reason, he chose the platform topic to develop in an executive leadership training, commencing ideation in 2020. This early idea received sufficient interest from internal stakeholders, such that he was able to assemble a small team of experts with niche skills necessary for the platform's early ideation and development.

> *"So initially the idea came from an… innovation workshop internally. To see how we can apply the business platform concept to industries… So we [did] this workshop and we came [to] this idea of having a kind of a data sharing platform*

7. https://finance.ec.europa.eu/publications/commission-legislative-proposals-sustainable-finance_en

> *for asset management industries, in order to help them find sustainable investments."*
>
> *(Interview, platform leader, 2023).*

They initially pitched the strategy as a centralized infrastructure for institutional investment managers to view the sustainability ratings of their various assets under management. At the time, the sustainability ratings industry was disjointed, making the viewing of various ratings methodologies tedious for investment managers. Capitalizing on this disjointedness while seeking to leverage developing partnerships that Atos was forming with various technology startups, the focal manager incentivized stakeholder support with an open innovation approach, wherein Atos would invite these startups as complementors to provide value-added services.

When this investigation began in 2020, Atos's Scientific Community was exploring ideas to implement business platform approaches throughout Atos' various industrial portfolios. The internal body confers business and technological orientations for the firm in attempts to establish competitive strategies on mid- to long-term horizons. In its 2018 visionary document, the body described one of Atos' then-recent key achievements as "extensive contribution to pilot projects identifying and increasing the use of collaboration technologies and social community platforms."[8]

This, combined with the platform leader's personal-professional interest in sustainability as a theme, helped establish a narrative for the platform as an advancement of the firm's CSR. The platform team additionally sought to entice stakeholder support by drawing clear boundaries around Atos' involvement in the ratings themselves; early-stage discussions clearly distinguished that the platform would not try to generate or influence sustainability ratings of investable assets. By not engaging in these "core" sustainability tasks, and instead adhering only to the provision of IT services facilitating the transfer of monetizable data, the proposal would fit in line with existing Atos competencies and thus stakeholders could more easily envision the platform that they were supporting.

Still: despite over a decade's worth of sustainability signaling , the platform's full implementation was no shoe-in. Atos embarked on an ambitious restructuring initiative which coincided with the platform's development and challenged resource and attentional availability, meaning that stakeholder support was not a guarantee. In light of this, the core team developed and framed the project in ways that emphasized complementor contributions while minimizing necessary internal reorganization; in

8. https://atos.net/wp-content/uploads/2016/06/atos-ascent-journey-2018-whitepaper.pdf

doing so, they hoped to convince stakeholders of a high degree of collaborative potential with low launch costs.

4.4.1.1. Challenging firm logics to accommodate decentralized production

A platform, by nature of relying on complementor contributions, is a decentralized operation. From the orchestrator position, this does not require the entire organization to adopt a flattened structure to accommodate this type of operation, but it does require favorable managerial cognition (how stakeholders think of it, and how this materializes into operational routines). The platform team found the need to challenge certain aspects of the firm's traditional managerial logic to accommodate the new platform.

As an example of this, the platform leader contextualized the new platform within Atos' then-recent period of performance turmoil, linking it to managerial preference for slow and reactionary development of novel services. He envisioned a reorganization of operations, moving away from the firm's traditional hierarchy to more rapid, proactive operations.

> *"To be able to thrive after a crisis, you have to reinvent yourself and to reinvent yourself, you have to be very agile… You have to move from a company that is organized more in terms of command and control to a company that is decentralized in terms of decision-making."*
>
> *(Interview, platform leader, 2023)*

In an attempt to challenge these extant conditions, the platform leader sought to develop the platform towards the endpoint of this envisioned reorganization. In other words, the leader sought a platform structure that would accommodate decentralized decision-making and rely less on traditional, hierarchical logics to get things done.

> The biggest struggle is changing between the ears… That includes the ability to change leadership mindset, the ability to execute… This kind of transformation is very experiential. You can't just read a book or take a class to learn to operate in a modern way… it's an applied learning. (Interview, senior manager, 2021)

While this manager was not speaking directly to the focal platform, they are explicitly referring to the organization's institutional environment which necessitated decentralization work in order to accommodate platform viability. In other words, the platform would not be viable in the firm's traditionally hierarchical mode However, and as discussed in the next section, efforts to address this might have impeded successful execution.

4.4.1.2 Incentivizing with collaboration to clear R&D

The platform leader entered the idea into an internal development cell called the RAPID (later RISE) process, which was designed to vet internally devised strategies and connect them to necessary resources within the firm to aid in development, eventually giving the strategy necessary means to reach commercialization. The project idea had to compete with other proposals for advancement through the process, which largely entailed the creation of a realistic but competitive and attractive budget and performance plan. Conceptualizing the platform while anticipating what internal stakeholders would view as realistic involved internally negotiating where value would originate from within the platform.

One of the fundamental questions I have… is how are we planning to get the ESG data in to the platform… That could be critical in determining the cost… If we are expecting data vendors to provide the data, then this would be a non-starter as the data vendors wouldn't have an incentive to provide this info on a 3rd party platform… If we are planning to [scrape] through public records of companies, then the task by itself would be so huge that it would take significant time… to take this to the market. (Email, platform development team member, 2020)

This type of internal negotiation was necessary in sharpening the platform idea, especially as internal documents show a strong emphasis on the collaboration with third parties such as green technology startups. However, sharing this confusion with stakeholders beyond the focal team threatened to jeopardize stakeholder support, as it could convey a lack of clarity or vision. Related to this, determining how to incorporate third party services without compromising the security of the platform further slowed progress, causing some concern within the team that the firm's early lead relative to the initial market conditions was slipping from their grasp. Despite this, the project cleared the first iteration of the RAPID process; though this did not absolve the platform leader from needing to continue to sell the importance of its further development.

4.4.2. Initial development phase: Balancing expansion and firm-specific innovation traditions

2021 saw the early stages of the platform's development, where the team began to explore different potential benefits that the platform could offer but also faced internal hurdles in making it manifest. They envisioned two primary benefits that the platform would entail. Firstly, it would aggregate a disarrayed ESG ratings industry in a convenient portal for asset managers and insurance companies, which would help them deliver clear and concise sustainability information concerning their

clientele's investments. Secondly, they intended to integrate and foster an emerging ecosystem of niche technology firms. These firms – often startups - would provide value-adding financial, regulatory, and sustainability technologies, increasing the total value of the platform. However, the complexity involved in addressing these markets would mire their efforts to win over internal stakeholders, partially due to the inherent difficulties in distributing platform work across multiple parties. This caused stakeholder support to begin its cyclical contraction.

4.4.2.1. Leveraging firm's own ability to address market gap

The development team focused on a particular pain-point in selling the idea to internal and external audiences: the difficulty of ascertaining how "green" or otherwise sustainable a particular investable asset was. Asset managers and institutional investors would rely on ESG data, such as how much energy a company consumes to keep its office lights on or send its consultants to client sites; how reasonable the company's parental leave allowances are; or how democratized its governance is, as a few examples. These data would be reported by the publicly traded companies themselves, but given the conflict of interest in self-reporting, an industry of third-party ratings agencies arose. The ESG ratings industry became a field of for- and non-profit organizations (e.g., MSCII, SASB, Sustainalytics) that would develop proprietary methodologies to assess these data and rank them within or across industries according to various criteria.

There is no universal way to measure the wide variety of factors in each of the three ESG pillars, nor is there a commonly agreed upon weight assigned to each pillar. This means that investment managers have little in the way of internationally recognized standards to operate with.

> *"It's very easy to say standards, right, in a very generic sense… But you need to be very specific on where one can meaningfully craft standards that are implementable."*
>
> *(Interview, EFRAG Assistant Director, 2021)*

Given the rising importance of factoring ESG into investment decisions, Atos saw a market gap in the disarrayed state of information required to make these decisions. Atos assessed itself as not having the competencies to report or rate companies, however it could leverage its extant capabilities to address the gap with infrastructural services.

> *"I think we lack credibility as a firm to be able to market a utility as we are predominantly an IT services firm… This is why our best bet is to start by providing IT support for a regulator or an exchange… and in parallel build the utility and use the credibility of our association to feed in the data in to the utility"*
>
> *(Field notes, platform team member, 2021)*

To establish a median position, the platform sought to provide infrastructure via a portal that would, on one side, ingest public firms' ESG data (where available) and ESG ratings. In a meeting to discuss the platform's value proposition, one team member asked what are

> *"asset managers' incentive to pay for this platform if they're already paying to access ratings from other agencies?" Another responded: "there must be valuable data on the platform directly from listed companies…" we could "partner with standards-setters [like the London Stock Exchange, and] get them to pay for this platform so that we can offer these data for free."*
>
> *(Field notes, platform team member 2021)*

This quote exposes an issue detailed in the next section: pricing and from where to capture value. More generally, however, these excerpts show the difficulties in reaching a consensus on how to align a disaggregated market.

4.4.2.2. Promulgating novel ecosystem of complementors

On the other side, the platform would incorporate value-added services from fintechs, greentechs, regtechs: (usually) novel ventures which would provide niche services and raise the value of the platform in total. A key challenge of offering this space was (perceived) reliability of information, which may be ascribed to the commonality of the 'greenwashing' phenomenon, where companies would intentionally alter their ESG data to depict an altered reality. The team drew careful boundaries to limit their own liability strictly to providing infrastructure.

As an example, the team began dialogues on behalf of Atos with one particular regtech which offered ESG ratings for small and medium-sized enterprises. Small- and medium-sized ventures were not obligated to report ESG data, but voluntarily doing so could increase the attractiveness of their enterprises for present and future investors. In one call from 2020, the regtech's founder asked how the platform would assure ESG data are verified. The platform's leader described the intended information flow on the platform and that all information will come down to one

point: the platform. Atos would take responsibility for making sure the data are shown/reported, but not responsibility for the veracity of data - leaving this to independent audits (perhaps by the *n*-techs) and the companies themselves.

4.4.3. Internal alignment challenges: Navigating organizational structures and processes

Over approximately six months of observation ending in early 2021, the pace of work on shaping and reframing the platform gradually accelerated. Towards the end of this period, however, the platform started experiencing headwinds that largely generated from bureaucratic processes and an organizational preference for traditional innovation methods. I categorize these first as *putting bureaucratic process before the objective*, an *in vivo* code which the platform leader used to describe what he viewed as the primary obstacle inhibiting progress. The second category is tension between expanding capabilities through the ESG-themed platform and the resilience of traditional innovation practices. These difficulties eventually saw the platform's development stall for lack of sufficient support in mid-2021.

4.4.3.1. Prioritizing traditional firm processes

The development process that the platform leader submitted the initiative to was designed to vet new ideas and to explore, via a panel of various internal stakeholders, whether said initiative was worth devoting firm resources to. However, this process also began to obstruct the platform's continued development. This stage of the platform was:

> *"where we need really to… raise money… Today we're officially in the pipeline for [the] R&D process, but what we need to do in the coming weeks is provide the details that are required in the research and financing process."*
>
> *(Interview, platform leader, 2021)*

While any company of this size could be expected to carefully assess where it devotes resources to, the platform leader described

> *"exactly what happened with [the SIP]: [Atos] was… a company [with a history of] acquiring a lot of companies and consolidating them from a financial point of view, and [engaging in a habit of] controlling the cost"*
>
> *(Interview, platform leader, 2021)*

to a point where the company "put the process before the objective." He compared this to his previous experience pitching a project in another subsidiary within the parent company, where

> *it was very [different]. Why? Because they ask you to prepare a deck, some [performance indicators], and then you have a meeting [… with] the management. And [they] ask questions - very, very simple questions. If you are not answering, let's say, positively or in the right way to those questions, your project doesn't qualify and that's it… It was challenging, but it was very efficient.*
>
> *(Interview, platform leader, 2021)*

The platform leader, in casting this quickness relative to the current process, was expressing a frustration at how, despite firm intentions to rapidly introduce this platform to the market, bureaucratic procedures seemed to take priority over the end objective: introducing a sustainable finance market offering. In this frustration is the implication that these procedures are incompatible with rapidly developing a novel market offering.

4.4.3.2. Stakeholder expectations unmerge from platform capabilities

A related headwind that the platform development team faced concerned stakeholders' preference for these traditional innovation practices. According to multiple interviewees, including the platform leader as well as his superior, decision-makers higher in the organizational hierarchy typically endorsed new product initiatives after, and only after, a client base for the new product was secured. In many cases, early or "lighthouse" clients would subsidize the development costs of the new product, thus reducing the amount of resources they would need to release for product development. As the platform leader reflected,

> *"I think you need to make sure that you have a strong business case and… client opportunities… So without… lighthouse… clients it's very difficult to convince your management about the potential because… if they see only slides, they will maybe not be convinced… The problem with the multi sided-market and platform business [approach] is that if you have only one player on the platform, you have no value. So you have to create this kind of ecosystem and usually this kind of ecosystem is created by industry association."*
>
> *(Interview, platform leader, 2023)*

This key finding highlights an issue inherent to the combined organizational tendency to prioritize initiatives with an existing customer base and organizational aspiration to develop a platform approach.

> *"In the end what happened is that basically there was the decision by the head of the financial services market not to pursue this topic, not to invest, not to back it up… You can either decide to do business by trying to generate a demand and then doing the investment. But if you really want to disrupt the market, you have to invest beforehand before you can show something to your clients that will generate… the demand… At that time Atos was not ready for such kind of investment, [it] was not the culture. That's why it was killed."*
>
> *(Interview, platform leader, 2023)*

While having procedures to reduce risks around the introduction of new technologies is a conventional practice, the platform's departure from existing practices and its addressing a novel industry required, to some extent not met, a reconsideration of how the firm would accommodate novelty. It may be that the team's work on developing the platform did not adequately coax the frames through which stakeholders would evaluate the platform, leaving them to assess it with traditional lenses. Nevertheless, the platform failed to reach commercialization and Atos instead reoriented towards providing climate strategy consulting services via its acquisition of EcoAct in 2020.[9]

In summary, the focal team within Atos sought to capitalize on a disarrayed ESG ratings market; organizing its offerings for their clientele of institutional investors. Seizing on the firm's history of sustainability signaling as well as the Scientific Community's interest in platform business solutions, the team leader devised a platform that would align ESG ratings and value-adding third-party services on the complementor side and institutional investors on the user side. Stakeholders were initially enthused by the platform's vision, and those within Atos who had control over resources which would empower the platform – namely, RAPID/RISE program decision-makers – expanded their support to accommodate its development. Over time, the team had to narrow the platform's vision in order to accommodate what was realistically possible, given changing organizational and market conditions. This narrowing reduced stakeholder enthusiasm, causing a contraction of stakeholder support which eventually stalled the platform.

9. https://atos.net/en/2020/press-release/general-press-releases_2020_10_01/atos-completes-the-acquisition-of-ecoact

Table 9 splits this trajectory into four project stages, each with their own distinct catalyst event, response, and result of the event-response. It then describes the relationship that each stage has with stakeholder support in order to preempt the following section's analytical discussion.

Table 9. Four stages of the platform project, interlinking catalyst event-response relationships to stakeholder support.

Stage	Catalyst	Response	Result	Relationship to stakeholder support
Ideation (mid-late 2020)	Atos Scientific Community puts out tender for platform solutions	Devise platform aiming to merge Atos' CSR intentions & platform ambitions	Platform project plan drafted	Capitalizes on implicit background stakeholder support, defining a relatable vision for early stakeholder onboarding
Project definition (late 2020 - early 2021)	Development team submits platform idea to RAPID process	Platform accepted into RAPID, initial development resources unlocked	Stakeholders see platform as potentially viable	*Stakeholders expand support*; platform enters into competition with other R&D projects (for resources, attention)
Project development (early-mid 2021)	Team widens platform aims to accommodate expanding support	Widened aims subject platform to wider variety of stakeholder criteria	Vision becomes ambiguous	Ambiguous vision subject to different criteria means each stakeholder sees less of their respective interests represented in platform future; *support begins to contract*
Project stall (mid 2021)	Stakeholders begin to enforce firm innovation traditions	Platform team struggles to force-fit platform into traditional logics	Stakeholder support fully contracts; platform team abandons project	Stakeholders' contracted support frees up resources and attention for other endeavors

4.4.4. Expansion-contraction cycle of stakeholder support in platform development

These findings offer certain themes within the process of this sustainable investment platform's development. Leading up to stakeholder support theorization, it is important to first map the process of the platform's ideation, definition, development, and stall-out with themes affecting stakeholders' evaluations of the platform, as well as the expansion and contraction of their support.

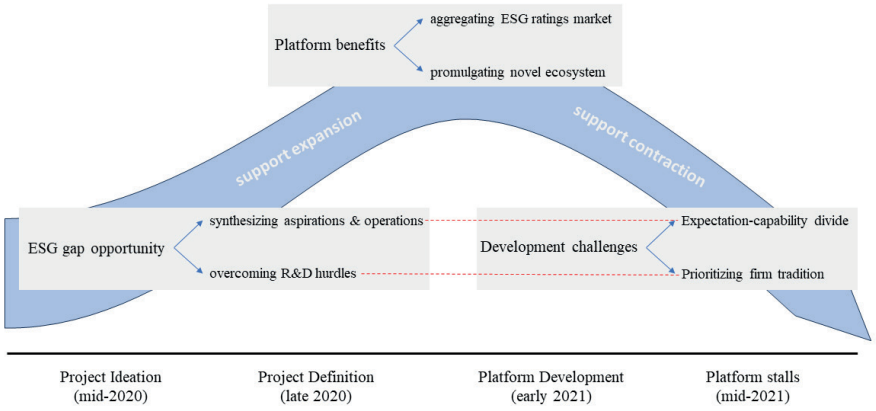

Figure 4. Illustrative model depicting stakeholder support for the sustainability-themed platform strategy.

Figure 4, derived from this chapter's previous tables, depicts the developmental process of the platform. The initial phase centered around the team's recognition of the gap between the ESG ratings industry and institutional investors requiring more insight on the ESG ratings of their assets. Convinced by their own firm's "green IT" commitment, the team began by building a narrative of where this commitment could merge with the firm's extant IT capabilities – such as in platform development. This narrative won sufficient stakeholder support, such that the project (as it was at that stage; only later becoming a platform) was admitted into the RAPID program. This allowed the team to overcome regular R&D hurdles (namely: bootstrapping firm resources outside of any special developmental program). The platform's admission into the RAPID program catalyzed the initial allocation of resources and hence, this period is noted as one of *support expansion* in the above model.

With expanded support, the focal team could enlist further support by communicating the expected benefits of a platform, as the project was becoming. Platform development is an extant capability within Atos, and therefore this nomenclature carried a degree of familiarity to evaluating stakeholders. However, the team also had to make clear decisions concerning how they would promulgate the novel, disarrayed ecosystem of ESG ratings companies and how integral they would be to the business model. Making such developmental decisions necessarily excludes other possibilities that stakeholders might have envisioned. This risk the possibility of losing these stakeholders' support if this support was contingent on the strategy's early ambiguity or one of the strategy's now-excluded possible futures. The promulgation of an ecosystem of complementors or third-party service

providers does create new possibilities that might exceed stakeholder expectations, but integrating complementor services both 1) complicates the strategy's internal infrastructure, requiring the orchestrator to dedicate more resources and time to its upkeep as well as integration with in-house and other complementors' capabilities; and 2) displaces stakeholders who previously perceived a need within the strategy for their own technical skills and capabilities.

The result of this was a series of developmental challenges that misaligned the strategy within evaluations of critical stakeholders. While interviewees indicated bureaucratic processes and deference to tradition as the primary mechanisms that inhibited the platform, it is paradoxically outside of these processes and traditions that the platform initially won support. It therefore seems that there was a larger shift in the firm's inclination to spend on novel strategies with uncertain futures. Where the platform received early support, supposedly with the expectation to commit even more resources and time as the platform developed, the later period saw *stakeholder support contract*. While fully qualifying this shift in inclination falls outside the scope of this study, it can be examined within the context of the organization as a shift away from high-level exploratory spending. It may be against an even larger industrial shift that stakeholders began to reassess their commitment to the platform's uncertain future and, instead, defer to what was known to work in the past: traditional methods of innovation.

This contraction of support did not mean the ultimate end of Atos' efforts to establish a sustainable finance market offering. During the contraction phase, Atos rerouted the resources it had previously deployed to this particular strategy's development and pivoted towards a new response to the sustainable finance imperative, which fell more in line with their extant capabilities, and which did not involve significant platform development. In cases where the firm maintains a platform approach, the firm may reattempt to mobilize resources and orient their platform efforts in a direction more aligned with internal responses to external stimuli. However, the firm may also exit, whether due to firm-level failure or a general orientation away from platform designs. Either eventuality relies on lessons learned and capabilities gained from the previous failure. The following section seeks to derive theorizable elements from this single case concerning an incumbent platform strategy developed towards a grand challenge and how incumbent managers navigate internal complexity during said development.

4.5. Discussion

Incumbents attempting to innovate within high-tech ecosystems are increasingly turning to platforms to reduce their own workload in bringing about new iterations of technology (Volberda et al., 2021). In contexts where institutional pressures such as public scrutiny on companies' sustainability initiatives create marketable innovation opportunities, the challenges that incumbent firms nevertheless face in mounting a response are substantial (Frishammar & Parida, 2019). As developing a sustainability-themed offering presents non-traditional challenges by virtue of requiring a change to how products and services are created or commercialized, firms embarking on such a journey might need to temporarily depart from their organizational traditions. In these cases, key actors may have a difficult time securing stakeholder support (Fisher et al., 2017); a difficulty which may be exacerbated by unrelated but consequential externalities (such as the organizational restructuring in this case). This study examines the pattern of expansion and contraction that stakeholders exhibit in their support of sustainability-themed innovation initiatives within the setting of an incumbent firm going through routine change.

Despite an emergent stream of literature which asserts long-term benefits for firms that prioritize sustainable operations (e.g. Frishammar & Parida, 2019; Gandolfo & Lupi, 2021; Santa-Maria et al., 2022), incumbent managers may nevertheless have difficulties in recruiting stakeholders to support sustainability initiatives. This may make it difficult for said managers to initialize sustainability-themed market offerings. Understanding how stakeholder support may ebb and flow from within the originating firm sheds light not only on the internal factors affecting a sustainability-themed market offering's development, but more generally how decision-makers in incumbent firms weigh institutional pressures when faced with the need to adjust internal development processes and routines (Wang et al., 2020).

4.5.1. Navigating Internal Pressures in Platform Development

These findings show that the incumbent's sustainability-themed platform development is highly susceptible to internal stakeholder influence, which echoes previous work (see Wang et al., 2020 for a meta-analysis). Incentivizing internal stakeholder support entails mobilizing resources and generally facilitating platform development while imprinting a vision of the platform's long-term development in key stakeholders' minds. While typical research and development activities can and often do end in abandoned projects, it is important to understand and typify the obstacles that may stall an incumbent's ability to bring sustainability-themed market offerings to bear. In this case, the priorities that guided the platform inverted from external (capitalizing

within the context of Europe's push for sustainable finance initiatives) to internal (stakeholders' preference for traditional modes of innovation). This occurred as the platform transitioned from the idea stage to the formation stage.

As proposals become less vague and specific features begin to take shape, their advocates must make concessions which may jeopardize stakeholder support (Fisher et al., 2017; Kuratko et al., 2017). This may be particularly pronounced in sustainability-themed initiatives, where the long-term benefits and value alignment with current business practices may not be immediately evident (Frishammar & Parida, 2019; Volberda et al., 2021). In that sense, this effect may be further pronounced for peripheral industry actors, whose value propositions relative to the industry core may be proportionately less clear from the outset. In this context, accommodating the different pressures that ambidextrous explore-exploit approaches levy on focal initiatives may help the (peripheral) incumbent to better balance the drive for innovation with the realities of their target core business contexts (Luger et al., 2018).

4.5.2. The Role of Institutional Pressures in Shaping Innovation

This case highlights the impact of institutional pressures on the innovation strategies of incumbents. As mentioned previously, public calls for more transparency on environmental, social, and governance sustainability of investment assets represents an institutional pressure, in that these calls do not directly affect the buying and selling of goods or services. Instead, they influence institutional logics within which Atos and its clients operate. These institutional pressures initially made the platform idea appear lucrative and promising; yet once development began, the founding team discovered that the pressures they were responding to were incongruent with the separate pressures involved in internally developing a platform. There is a wealth of literature that concerns how institutional pressures shape market offerings (e.g. Garud & Rappa, 1994; Hargadon & Douglas, 2001; Karnøe & Garud, 2022), but works in this realm typically focus on the recursive dialogue between external actions or conditions and internal decision-making.

This study places more of a focus on dialogue (which includes actions such as strategic decision-making) primarily between internal parties. Public calls for greater ESG transparency were an external cause to Atos' internal decision-making to develop a platform, but the internal process of platform development helps to nuance literature emphasizing the increasing influence of sustainability imperatives on corporate strategy (Gandolfo & Lupi, 2021; Santa-Maria et al., 2022). How firms respond to institutional pressures is largely dependent on their social and political contexts, core technological capabilities, and how these plus other factors combine into an overall

difficulty in executing this type of change (Poisson-de Haro & Bitektine, 2015). Firms may create symbolic illusions in order to avoid making substantial changes to their core activities, but "greenwashing" (Ramus & Montiel, 2005) is a ubiquitous enough type of manipulation (Oliver, 1991) to likely backfire.

This study's unique access to the platform development team showed how the idea emerged from within the incumbent to capitalize on a sustainability-themed market gap, while also showing counterintuitively how stakeholders' preferences for traditional innovation practices hindered the platform's development. From outside the firm, this would appear as a symbolic or ineffective attempt to capitalize on the sustainable finance imperative, but the closeness of this investigation contributes a more vivid picture to firm-level strategy literature by illustrating the complexities involved in translating institutional pressures into actionable business models, especially in the context of platform strategies.

4.5.3. Stakeholder Dynamics and Innovation Management

These findings also illustrate the critical role of stakeholder dynamics in shaping innovation trajectories (Reypens et al., 2019; Splitter et al., 2021). The divergent interests and risk perceptions among Atos' internal stakeholders reflect the broader challenges of aligning diverse stakeholder groups behind strategic initiatives (e.g. Diriker et al., 2023; Garud et al., 2014; Putra et al., 2023). While researchers have previously found that the impetus of grand challenges may lend a tailwind to developing strategies (e.g. Bertello et al., 2022), this study shows that the resilience of organizational inertia may ultimately neutralize said tailwind. This adds a nuanced layer to our understanding of innovation management in incumbent firms, particularly when navigating the intersection of market demands and sustainability goals.

4.5.4. Implications for Strategy Realignment and Organizational Adaptation

The Atos case provides empirical evidence on the challenges incumbent firms face in realigning their strategies towards green transitions. Namely, public-facing media such as a firm's annual reports or its participation in climate conferences may convey a high-level intent to change its internal routines for some type of grand benefit, but stakeholder hurdles at the micro-level need to be addressed and overcome in order to empower basic action towards these goals. This investigation finds that internal stakeholders did not accept the implied prioritization of developing *any* sustainable finance initiative over their basic imperative of ensuring the lowest cost of production and concrete evidence of an early market. Though the platform sought to address a market that did not yet exist - familiar to platform literature as the "chicken-and-egg"

problem (Caillaud & Jullien, 2003), this is a counterintuitive finding because the firm sponsored the platform's development via an internal accelerator designed to address this type of issue. Despite this and the imperative of the grand challenge, stakeholders' propensity to nevertheless default to traditional methods of innovation is a finding which supports and extends the literature that emphasizes procedural complexities and resource implications of strategic shifts (Garud & Gehman, 2012; Santa-Maria et al., 2022). The cyclical model derived from these findings offers a framework for understanding how incumbents can manage these transitions, balancing innovation imperatives with organizational inertia.

4.6. Conclusion

In summary, the Atos case study enriches an understanding of the strategic, organizational, and operational dimensions of integrating sustainability-focused platform strategies in incumbent firms. In particular, it exposes the tensions and challenges that managers seeking to implement such approaches must overcome in order to successfully enable their sustainability-focused strategies. Firm-level resistance or failure to adopt novel market orientations and internal routines may confound these efforts, limiting the organization's total capability to adapt or appear adaptable in the face of grand challenges, institutional pressures, or both. The insights gleaned from this study not only contribute to the existing body of literature but also offer practical guidance for managers navigating similar landscapes.

The study opens avenues for further research, particularly in exploring how different types of incumbent firms across various sectors navigate the challenges of integrating sustainability into their innovation strategies. As this is a single-case study, there is great potential for larger *n* studies that examine this pattern of expansionary and contractionary support that novel initiatives may encounter in a wider range of industrial and organizational settings. Acknowledging that the unique access to data in this single case would be challenging to capture in similar fidelity across a large number of firms, future researchers may instead turn to other indicators of embryonic strategies. For instance, a systematic analysis of many different firms' news releases and blog archives examined relative to those firms' sustainability-themed market offerings and other endogenous or exogenous factors may yield surprising, counterintuitive, or theoretically informing conclusions that can further enable practitioners to successfully respond to grand challenges on behalf of their firms. Additionally, there is scope for examining the role of external factors, such as regulatory changes and market dynamics, in influencing the adoption and success of sustainability-themed platforms in incumbent firms.

Chapter 5

Conclusion

In sum, this dissertation has explored three levels of platform strategy implementation from a sociological perspective to broadly answer *how incumbent strategic leaders navigate challenges inherent to implementing platform strategies*. Empirically set within the incumbent firm Atos, Chapter 2 focuses on MMs' social and political activities in legitimizing their novel platform strategy towards internal and external stakeholders to win their support. Chapter 3 examines the firm-level difficulties of attempting to reap the benefits of platform innovation without accommodating internal expectations and metrics of performance which arose from traditional methods of innovation. Finally, the Chapter 4 is a multi-level examination of the incumbent's attempt to capitalize on public pressure towards more sustainable finance; one level being the focal unit's process of developing a platform, and the next level examining the firm's paradoxical internal difficulties. This chapter will briefly summarize the findings of each before reflecting how these findings add to knowledge on their relevant theoretical domains. Following this are methodological and practical implications, before discussing the limitations of this research and opportunities for future investigations.

5.1. Summary of findings

Each empirical chapter brings forth new and interesting aspects of incumbent platform strategy implementation. Chapter 2's elucidation of the internal and external performative and discursive actions that MMs must take to legitimize their collaborative innovation strategies advises platform strategy literature as much as it does incumbent digitalization strategy literature - advising that the complexities of a firm's internal environment necessitate a further focus on internal legitimacy activity in conjunction with the oft-considered external activity. Additionally, this chapter underlines MMs' roles in devising and legitimizing novel strategic initiatives, setting the analytical stage for the remaining chapters.

Chapter 3's focus on the firm-level benefits that are expected of platform strategies shows the importance of platforms as a signaling tool; that is, something the firm can show to convince external audiences that it is capable of rapid, large-scale innovation. While platform literature emphasizes the importance of network effects to empower a strategy's operations, this chapter uniquely shows how a platform can be used as a discursive tool to incentivize participation in open innovation projects. This advises literature on ecosystem emergence as well as organizational ambidexterity by showing not only the signaling value but how firms internally arrive at and alter the initial decision to launch an innovation platform.

Finally, Chapter 4's focus on the incumbent capitalizing on institutional pressures by developing a platform strategy offers insights for the unique difficulties that incumbent firm traditions may present in platform strategy literature as well as literature concerning incumbent sustainability initiatives. Incumbent firms may develop strategies towards grand challenges, but traditional methods of incumbent innovation may not easily accommodate the different logics that institutional pressures necessitate (when those institutions are undergoing fundamental changes to their own logics, as is the case when a government implements sustainability-themed regulations designed to alter market operations). In other words, incumbent firms seeking to address sustainability or other grand challenges with a "business as usual" approach may well run aground, if only because "business as usual" is (at least in part) responsible for grand challenges such as the climate crisis in the first place.

5.2. Practical implications

To briefly summarize in extension of each chapter's own discussion of their practical implications, this volume would most prominently advise strategic leaders (whether middle managers or not) in incumbent firms seeking advice on navigating the multiplicity of tensions they must wade through in aligning a diversity of stakeholders behind a given initiative. The closer a practical scenario is to the specific cases studied here, the more direct that one can extract insights. However, that is not to say that these elucidations are *solely* applicable in identical cases. In fact, the insights contained herein can also advise actors occupying other positions of the cases presented; for example, a founder or strategist in a complementor firm, such as a technology-based startup, might find such a close investigation of the internal challenges within incumbents advantageous to know prior to entering partnership or acquisition talks. Additionally, advisors, investors, higher- or lower-level managers may find it fruitful to understand how much of a strategic initiative rests on the shoulders of an experienced team of MMs, whether to better accommodate their activities or to begin their own inquiries on how to distribute responsibilities and fashion a more democratic organization.

5.3. Theoretical implications

Chapter 2 has implications for platform theory and legitimacy theory (e.g., Aldrich & Ruef, 2006; Deephouse et al., 2017; Jacobides et al., 2018), concerning MMs' roles in legitimizing incumbent strategic initiatives (Eggers & Park, 2018; Heyden et al., 2017). Namely, this chapter examines incumbent firms as highly complex organizations with many subdivided units vying for resources, managerial attention, and different strategic directions. Agents operating at the intersection of these challenges (in this case, MMs acting as strategic leaders advancing their high-tech firm's innovation platform) must nuance their legitimization activities in both performative and discursive formats; paying mind to how these different channels affect each other over time as well.

This flows into Chapter 3's implications for platform theory (e.g., Gawer, 2014; Rietveld & Schilling, 2021), which center on the signaling value of platforms as an *ex ante* benefit. This is important for settings where there is an ecosystem-level 'cold start' or 'chicken and egg' problem; i.e., where the capabilities of each participant are not yet known, and where adopting a platform may be useful for showing the innovative capabilities of the focal firm. Additionally, this chapter advises ambidexterity

literature in showing how the fundamentally different mode of governance required for innovation platforms - that is, contingent on rapid integration of distributed, decentralized capabilities and most probably favoring a loose hand of authority in orchestration - may challenge traditional governance mechanisms of incumbent firms. The potential for this friction is seldom addressed in these or platform strategy fields, marking the importance of this investigation for each.

Finally, Chapter 4's theoretical implications concern stakeholder support within an incumbent firm attempting to capitalize on a sustainability-themed gap. Given the firm's publicly stated intentions to develop sustainability-themed offerings, this investigation found that initial stakeholder enthusiasm for the sustainable finance platform initiative waned when its development began to diverge from the firm's traditional methods of value creation and capture. This offers the understudied intersection of incumbent platform strategies and sustainability strategies (e.g., Kaipainen & Aarikka-Stenroos, 2022) insight towards the notion that incumbent firms need to fundamentally shift their internal cognition in order to successfully implement sustainability-themed strategies - though this chapter stops short of claiming the organization will existentially suffer for doing so.

5.4. Methodological Reflections

Each chapter is an interpretivist analysis of a single-case advantaged by ethnographic access to a team of highly experienced industry professionals. Interpretivist research gathers its conclusions from the rigorous analysis of accounts told by actors relevant to the phenomenon under examination; as such, it embraces the biases and subjectivity that informants retell their lived experiences through. In doing so, it dispels with the myth of true objectivity and instead leans into the idiosyncrasies that informants offer, whether directly (in interviews with the investigator) or indirectly (in emails or presentations they author for a different audience, or ways of using language in a call which the investigator observes and notates). This unobtrusive observation offers the ability to pore over speech for evidence of socio-cognitive themes like power structures, shifts in organizational thinking, hidden political agendas, and the like. To ensure that conclusions herein are of sound ethical substance, this research involved several conversations about emergent findings with the interviewees themselves, who had the opportunity to affirm or reject and thus bring these conclusions in line with their lived experiences.

With that framework set, it is worth reflecting on a major event which overlapped this investigation: the COVID-19 pandemic. The original intention of this research was to conduct an ethnographic investigation on-premises, but the pandemic necessitated an almost purely digital approach. While this entailed some challenges, it also provided clear benefits which may make future qualitative research easier to manage: firstly, organizing an interview over digital means is much less time consuming and intrusive for informants than organizing an interview even in their place of work; the requirement to find an empty office space or a quiet corner of a cafe is mitigated by the virtual environment and the multiple advantages that technology affords in capturing isolated sound and video. Furthermore and while this research did not necessitate such methods, the ability to record video as well as audio in a virtual environment could yield insights for future research aided by artificial intelligence and machine learning, without the intrusive presence of a separate video camera as would be needed in an in-person interview.

5.6. Limitations and Future Research Directions

Single-case studies by nature do not seek to cast wide nets of theory (Ozcan et al., 2017). By nature, they are intensely close-up examinations of particular phenomena, whether to make some point about a bizarre or unique phenomenon or to uncover nuance in a more mundane case, which higher-level or larger-*n* analyses might miss. This investigation concerns the latter. The most primary limitation, beyond what each study discusses within its own chapter, is the narrow ontological scope.

Though afforded by unique access to a highly professional team which was eager to share knowledge and help advance this research's understanding of what it set out to discover, this investigation nevertheless suffers from limited access to company communications, strategy meetings, and conversations among higher-level managers which would have allowed for bolder theoretical claims. Each chapter delves further into its own empirical limitations, but this section will instead focus on what this overall limitation promises for future research.

While taking these theoretical insights and applying them to larger-*n* datasets will certainly yield interesting insights and better precision for the modest claims contained herein, an equally if not more compelling method of investigating socially complex initiatives within and on the borders of a single firm may be to deploy several researchers into different managerial tiers within that firm. Such an investigation would be able to capture contexts that fell beyond the scope of this research, which

could in turn advise these theoretical implications with viewpoints that this research missed (such as personal reasons that specific, higher-level managers recanted support for the platforms they initially seemed enthusiastic about; or even a more accurate picture into whether the initial support was enthusiastic or perfunctory).

Additionally, the high-tech ecosystem context has the limitation of being reliant upon a unique point in history, when market conditions in Europe and the US - two highly entangled geographies in this sense - favored large-scale investment into technological developments following the market recovery from the 2008 Global Financial Crisis. The onset of the COVID-19 pandemic unleashed an unprecedented amount of government spending to prop up the markets in both geographies, which subsequently cooled off. This cooling off more or less overlapped with - but was not squarely responsible for - Atos' withering market performance. These factors are not necessarily relevant to the nuanced scope of the investigations introduced previously, but they do serve to show that exogenous factors were nevertheless swirling around the investigation, yet the investigation did not have the scope to measure the full gravity of their effects. A promising direction for future methodological research, then, would be to integrate exogenous conditions in these highly precise, single-case studies - perhaps again through the use of artificial intelligence or machine learning.

5.7. Concluding Remarks

This dissertation is the culmination of four years of research aboard the FINDER project, which has received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement No 813095. The project was led by Prof. Dr. Rick Aalbers, and co-supervised by Dr. Saeed Khanagha and Dr. Philipp Tuertscher. The interdisciplinary expertise of this team was aided by the professional enthusiasm to see it through; without which, this research would not have been possible. It is therefore my hope that the information and analyses presented in this volume are not only informative to our respective fields, but something each participant can be proud of as well.

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Chapter 1

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