

# Toward an Integrative Framework of Industry Platform Management: A Systematic Literature Review and Agenda for Future Research

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## Abstract

The advent of industry platforms, with some rising to become among the most valuable companies by market capitalization, has attracted significant attention from both practitioners and academics. While various firms have sought to embrace industry platforms, many have struggled with their management. Although prior research has provided valuable insights into how platform owners manage their industry platforms, the literature remains fragmented across disciplines, narrowly focused on specific topics, and underexplores diverse aspects of platform management. Therefore, a comprehensive understanding of industry platform management remains lacking despite substantial research efforts. In response, we conducted a systematic literature review of 359 articles spanning a range of disciplines that focus on industry platforms. This research contributes to the platform literature by conceptualizing industry platform management as the dynamic interplay of interrelated, iterative, and simultaneous processes—creation, integration, orchestration, navigation, and evolution—that collectively shape the emergence, configuration, and advancement of industry platforms. This conceptualization is embodied in an integrative framework that captures the five processes, their underlying approaches, and their inter- and intra-process dynamics. Building on the framework, this research proposes a future research agenda that addresses the key gaps in the platform literature through research directions at the process, intra-process, and inter-process levels.

## INTRODUCTION

From the evolution of dating agencies into online match-making to the rise of ride-sharing applications (Caillaud & Jullien, 2003; Garud et al., 2022), industry platforms have fundamentally changed how value is created (Cecca-

gnoli et al., 2012), ultimately reshaping both traditional and emerging industries (Gawer, 2021). Inspired by firms that adopted industry platforms and became some of the most valuable companies in terms of market capitalization, such as Apple and Alphabet (Parker & Van Alstyne, 2018), incumbent firms, startups, and entrepreneurs have been

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considering this blockbuster business model in hopes of achieving similar success (Teece et al., 2022). Industry platforms are defined as ‘products, services, or technologies developed by one or more firms, serving as foundations upon which a larger number of firms can build further complementary innovations, potentially generating network effects’ (Gawer & Cusumano, 2014, p. 420). Network effects, which are the primary characteristic that distinguishes industry platforms from other types of platforms (Gawer, 2014), arise when the participation of additional actors enhances the value perceived by each actor (Katz & Shapiro, 1994).

While industry platforms have produced some of the most prominent success stories in the business world (Hagiu & Wright, 2015), a significant number of firms have failed to achieve similar results (Hagiu, 2014). Some firms were unable to create a solution to a fundamental business or technical problem (Gawer & Cusumano, 2008; Lerch et al., 2024); others struggled to set the right price to overcome the chicken-and-egg dilemma (Rochet & Tirole, 2003; Tavalaei et al., 2025); some could not effectively orchestrate interactions among ecosystem actors (Ghazawneh & Henfridsson, 2013; Leong et al., 2024); others failed to navigate the complexities of external environmental dynamics (Cozzolino et al., 2021; Tiwana et al., 2010); and some were unable to adapt and transform their platforms over time (Thomas et al., 2014; Varga et al., 2023).

Despite growing interest in industry platforms among both practitioners and academics (Rietveld & Schilling, 2020; Teece et al., 2022), the literature has not yet provided a unified understanding of industry platform management, or, in other words, how platform owners manage their industry platforms. This absence of a unified understanding stems from the fact that research on industry platforms has emerged across multiple academic disciplines (Gawer, 2014), each focusing on different aspects of the phenomenon (Baldwin & Woodard, 2009; Rochet & Tirole, 2003). As a result, insights are fragmented, and discussions remain dispersed. For example, some scholars view industry platforms as black boxes and focus on competition between these black boxes (Eisenmann et al., 2006), while others focus on the internal structure and functioning of the black box itself (Eaton et al., 2015). However, the interactions between black boxes affect the internal dynamics of each, while changes within a single black box can also influence how it interacts with others (Karhu et al., 2018; Tan et al., 2020). In addition, the broader external environment shapes both the dynamics between black boxes and the internal dynamics within each one (Tiwana et al., 2010).

Without synthesizing existing perspectives and establishing clear future directions, knowledge of industry

platforms will likely remain fragmented, overlook the potential interplay among valuable insights, and continue to lack a comprehensive understanding of industry platform management. Therefore, this paper addresses the following research question: How can diverse discussions on industry platforms be integrated to develop a comprehensive understanding of industry platform management and outline a future research agenda? To achieve the objectives of this research, we conducted a systematic literature review of 359 articles from top-tier journals (Breslin & Gatrell, 2023; Kohtamäki et al., 2018; Spanuth & Urbano, 2023), covering a diverse range of topics related to industry platforms. Specifically, this research contributes to the industry platform literature by (1) synthesizing fragmented research from diverse disciplines to provide a comprehensive understanding of industry platform management; (2) developing an integrative framework that not only captures the core processes, approaches, and dynamic interactions, but also highlights the defining characteristics of industry platform management; and (3) presenting a structured research agenda that guides future research and addresses three foundational gaps by proposing research directions at three main levels.

Before pursuing this endeavour, we conducted a thorough examination of existing literature reviews to avoid overlapping with previous work and to ensure the novelty of the research question we address. While previous literature reviews have provided valuable insights into the field, none have comprehensively integrated the diverse perspectives on industry platforms or focused on developing a comprehensive understanding of industry platform management. Instead, the existing literature reviews, highlighted in Appendix A (Table A1), are inherently limited to specific perspectives or bodies of literature, focusing on disciplines such as strategy (McIntyre & Srinivasan, 2017; McIntyre & Subramaniam, 2009), information systems (Constantinides et al., 2018; de Reuver et al., 2018; Kapoor et al., 2021), and economics (Rietveld & Schilling, 2020; Roson, 2005).

The remainder of this paper is structured as follows. Section Theoretical Background introduces the phenomenon of industry platforms, positions it within the broader literature, traces its intellectual evolution, and identifies three foundational gaps in the existing literature. Section Methodology outlines the methodology, specifically the systematic literature review, and highlights the systematic approach used in both the search and analysis processes. Section Findings presents the main contributions of this research, the integrative framework for industry platform management, and the future research agenda. This section provides a systematic examination of the framework’s core components, specifically the key processes, various

approaches, inter- and intra-process dynamics, and related antecedents and outcomes. The paper concludes with Section Conclusion, which begins by acknowledging the research's main limitations, proceeds to discuss its practical implications, and ends with the theoretical contributions and concluding insights.

## THEORETICAL BACKGROUND

### Conceptual framing of industry platforms

Gawer and Cusumano (2014) distinguished between three types of technological platforms: (1) internal, company, or product platforms, (2) supply-chain platforms, and (3) industry or external platforms. This paper focuses specifically on the third type, namely industry platforms, which differ from the former two in their potential to generate network effects (Katz & Shapiro, 1985). The literature on industry platforms emerged after Gawer (2014) bridged two distinct bodies of literature: economics, which focuses on competition, and engineering, which focuses on innovation (Baldwin & Woodard, 2009; Rochet & Tirole, 2003). However, 'industry platforms', which is defined in the first paragraph of the Introduction, is not the only term used to refer to the phenomenon of technological platforms associated with network effects (Gawer & Cusumano, 2014, p. 420), as various scholars adopt different terms, such as two-sided markets (Rochet & Tirole, 2003), multi-sided platforms (Hagiu & Wright, 2015), and digital platforms (de Reuver et al., 2018), among others.

Throughout this paper, we adopt the terminology, definitions, and classifications introduced by Gawer (2014), Gawer and Cusumano (2014), and Cusumano et al. (2019), as they not only provide a clear differentiation between industry platforms and other types of technological platforms but also offer a precise distinction among the various types of industry platforms. More specifically, industry platforms can be categorized into two main types based on their primary function (Cusumano et al., 2019): (1) transaction platforms, which facilitate transactions between different actors, for example, Apple App Store; and (2) innovation platforms, which facilitate complementary innovations on top of the platform, for example, Apple iOS. Additionally, hybrid platforms lie between the two and share functions of both main categories, for example, Apple (Cusumano et al., 2019). Besides, when mentioning 'ecosystem', we adopt Adner's (2017, p. 40) definition of ecosystem as 'the alignment structure of the multilateral set of partners that need to interact in order for a focal value proposition to materialize'.

### The intellectual trajectory of industry platform research

Initial discussions on industry platforms emerged from the economics literature and focused on overcoming the chicken-and-egg dilemma, that is, resolving the question of whom to attract first to the platform (Caillaud & Jullien, 2003; Rochet & Tirole, 2003, 2006). Pricing emerged as a key approach to overcoming this dilemma and attracting different actors to the platform (Armstrong, 2006; Kaiser & Wright, 2006; Rochet & Tirole, 2003). However, as platform owners compete to attract actors to their ecosystems, subsequent discussions have expanded to encompass a range of competition-related topics, such as winner-take-all (Eisenmann et al., 2006), multihoming (Doganoglu & Wright, 2006), and platform envelopment (Eisenmann et al., 2006, 2011). Subsequently, the discourse diverged from these initial discussions as studies began to question the role of pricing, suggesting it may be both costly and risky (Eisenmann & Hagiu, 2007). Consequently, this paved the way for novel discussions, mainly focusing on non-pricing approaches to overcome the chicken-and-egg dilemma (Dou & Wu, 2021; Hagiu & Spulber, 2013). Simultaneously, competition-related discussions began to broaden from focusing only on the competitive environment to navigating macro-environmental factors that are either unrelated or not directly related to competition (Miric & Jeppesen, 2020; Sen et al., 2020).

Other scholars have drawn on the engineering literature, which conceptualizes industry platforms as core-periphery structures with interfaces between the core and the periphery (de Reuver et al., 2018; Modol & Eaton, 2021; Wareham et al., 2014). This body of work focused on the phase following the attraction and integration of actors into the platform ecosystem, particularly the orchestration of onboarded actors. More specifically, information systems scholars have examined governance approaches that influence and/or control the behaviour of actors, either through control exertion or resource provision (Ghazwneh & Henfridsson, 2013; Parker & Van Alstyne, 2018). Simultaneously, due to the close intertwining of platform governance and architecture on one end and platform evolution on the other (Tiwana et al., 2010), scholars have increasingly addressed platform evolution as part of broader discussions on governance. The divergence from these initial discussions emerged from studies arguing that ecosystem orchestration is achievable not only through control exertion and resource provision but also through non-control and non-monetary means (Foerderer et al., 2021), thereby paralleling the emergence of non-pricing approaches discussed earlier. However, unlike the initially examined governance approaches, more recent

discussions have not (yet) linked non-control and non-monetary approaches to platform evolution (Chan et al., 2022; Reuber & Fischer, 2022).

## Consequences of disciplinary divergence

While the divergence in scholarly discussions has been instrumental in broadening the scope of the field, it has also introduced significant gaps that constrain both its breadth and depth. First, different bodies of literature examine distinct aspects of industry platforms in a fragmented manner. For instance, economics scholars examine pricing and competition in isolation from information systems scholars who focus on governance (Eisenmann et al., 2006; Wareham et al., 2014), despite the potential interplay between pricing and governance (Engert et al., 2022; Tan et al., 2020). This might be attributed to the fact that economics scholars view industry platforms as black boxes and focus on the competition between the diverse black boxes, while information systems scholars focus on examining the black box itself, that is, the platform and its ecosystem (de Reuver et al., 2018; Gawer, 2021).

Second, within these fragmented streams, scholars have tended to adopt a narrow focus, often exploring certain topics in depth while addressing others in a more limited manner. For instance, pricing is not the only approach to attracting and integrating diverse ecosystem actors (Eisenmann & Hagi, 2007), as non-pricing approaches are also viable (Adam et al., 2022). However, compared with the depth of pricing discussions, non-pricing approaches have received limited attention due to the extensive focus on the former (Dou & Wu, 2021). In practice, platform owners rely on both pricing and non-pricing approaches to engage ecosystem actors (Dou & Wu, 2021); nevertheless, due to the limited attention given to non-pricing, the interplay between the two distinct approaches remains underexplored. The same holds for platform orchestration, which can be achieved through hard or soft governance approaches (Foerderer et al., 2021); however, the latter has been underexamined compared with the former, leading to insufficient exploration of the interplay between the two. Consequently, the topics that challenged or deviated from the initial discussions, specifically those related to non-pricing, non-control and non-monetary governance approaches, and the broader macro-environmental factors, have received limited attention compared with the initially discussed topics (Adam et al., 2022; Foerderer et al., 2021; Sen et al., 2020). This imbalance primarily stems from the field's continued emphasis on pricing, governance approaches based on control exertion and resource provision, and competitive dynamics.

In addition to the two previously mentioned gaps, a third concerns the underexploration of specific aspects of industry platforms, particularly when compared with the mainstream focus on topics such as pricing, hard governance, and competition. These underexplored topics primarily concern the creation and evolution of industry platforms (de Reuver et al., 2018; Gawer & Cusumano, 2014; Shi et al., 2021; Tan et al., 2015). Upon approaching the industry platform literature, it is evident that the initial step in creating an industry platform involves overcoming the chicken-and-egg dilemma (Caillaud & Jullien, 2003; Rochet & Tirole, 2003). Yet, this assumption is not entirely accurate. Indeed, this dilemma is a significant strategic challenge for platform owners; however, before considering whom to attract first, should not the primary question be: What are they being attracted to? Perhaps, since initial discussions extensively focused on pricing as an approach to attract diverse actors to the platform ecosystem (Armstrong, 2006; Kaiser & Wright, 2006; Rochet & Tirole, 2003), the presence of the platform has been taken for granted in subsequent discussions, leading to an oversight of the creation topic, with a few exceptions, for example, Teece et al. (2022) and Trabucchi and Buganza (2022). Furthermore, the evolution of industry platforms has received limited direct attention and is often addressed indirectly in the existing literature. Mostly, information systems scholars have explored this topic due to the intricate relationship between platform architecture and governance on one end, and platform evolution on the other (Tiwana et al., 2010). However, several studies have shown that platform evolution is also shaped by factors beyond architecture and governance (Muzellec et al., 2015; Thomas et al., 2014).

## METHODOLOGY

This systematic literature review follows the widely recognized guidelines of Tranfield et al. (2003), which involve defining search terms, establishing selection criteria, and identifying target journals. These steps constitute the initial phase, Phase 1, of our comprehensive search process (Spanuth & Urbano, 2023). Our primary aim was to identify articles containing specific keywords in their titles, abstracts, or keywords (Newbert, 2007); that is, the first search string. These keywords included a wide range of terms related to industry platforms (Gawer, 2014), as shown in Figure 1. However, to focus only on industry platforms, which are distinguished by their potential to generate network effects (Gawer & Cusumano, 2014), we included a second search string. Specifically, we required that selected articles include the term, 'network e\*', which

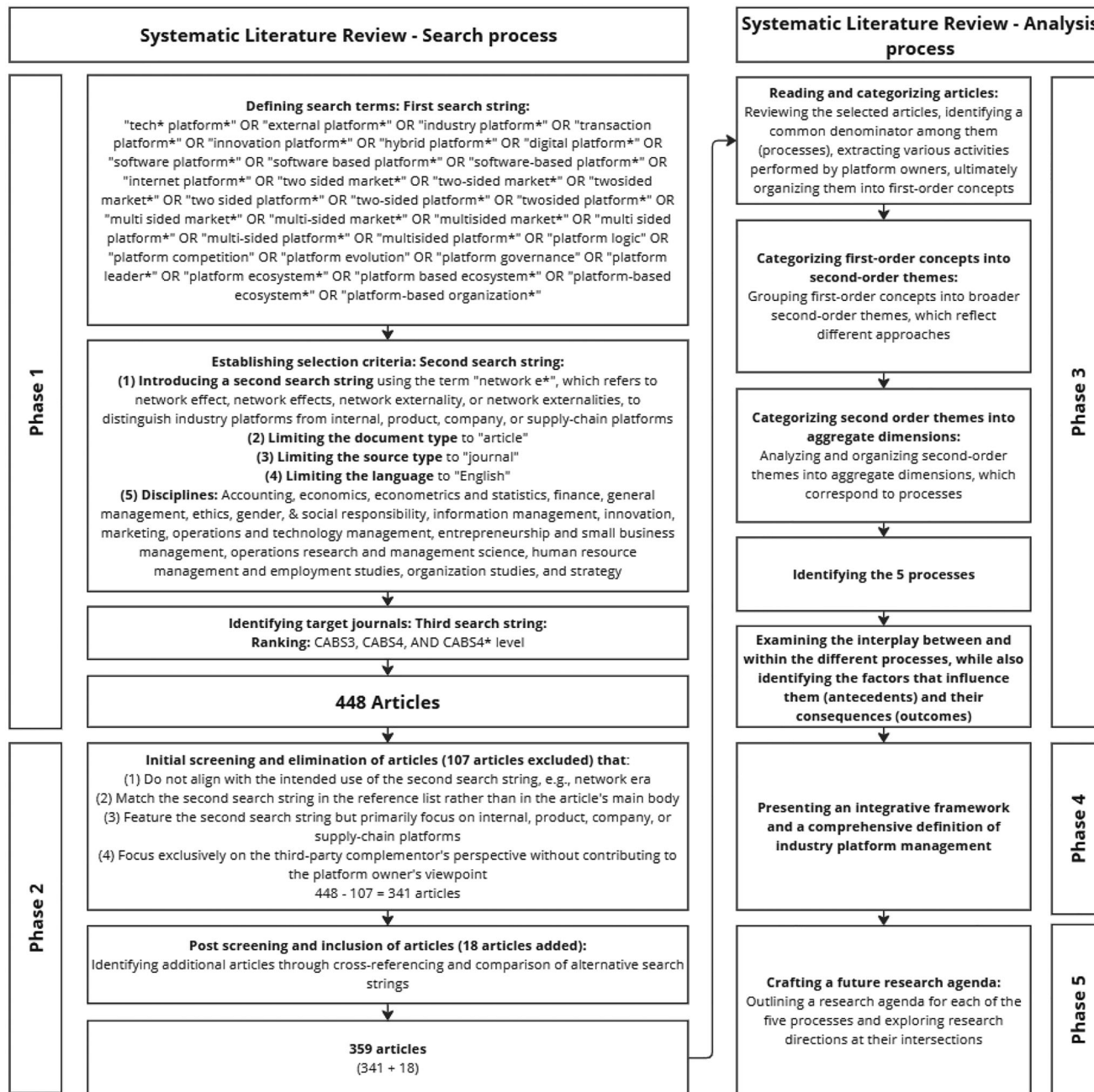


FIGURE 1 Search and analysis processes.

refers to 'network effect', 'network effects', 'network externality', or 'network externalities', within their full text. We focused our search on academic journal articles, which undergo peer review and are published in English. Furthermore, we restricted the scope of articles to specific disciplines, as depicted in Figure 1. Lastly, we aimed to focus exclusively on top-ranking journals, particularly those classified as CABS3, CABS4, and CABS4\* level. To fulfil this objective, we introduced a third search string that included the names of these top-ranking journals. We utilized Elsevier's Scopus, which is widely regarded as the premier tool for conducting literature searches (Fala-

gas et al., 2008), to identify and search for the selected keywords. Consequently, the initial phase of the search process yielded 448 articles.

After the initial screening of the selected articles, that is, Phase 2, we realized that some articles should be excluded, as they (1) did not align with the intended use of the second search string, for example, 'network era', (2) matched the second search string in the reference list rather than in the main body of the article, (3) featured the second search string but primarily focused on internal or supply-chain platforms, or (4) focused exclusively on the third-party complementor's perspective without

contributing to the perspective of platform owners. As a result, 107 articles were eliminated. To further ensure the accuracy of this elimination process, criteria 3 and 4 were independently double-checked by the co-authors of this paper. Subsequently, after screening the remaining 341 articles (448–107), we identified 18 additional articles through cross-referencing and the comparison of alternative search strings, which will be further elaborated in the following paragraph.

Eleven of these 18 articles were frequently cited seminal works, such as Katz and Shapiro (1985) and Caillaud and Jullien (2001, 2003), that did not match our first search string due to variations in terminology. The remaining seven articles were not captured using the ‘network e\*’ search string, which served as our second search string, but were successfully identified when the explicit terms ‘network effect’, ‘network effects’, ‘network externality’, and ‘network externalities’ were used. While only seven relevant articles were not captured by ‘network e\*’, the number of relevant articles missed by the explicit keyword approach was substantially higher. Therefore, after testing both versions of the second search string, ‘network e\*’ versus the four explicit keywords, we found that ‘network e\*’ produced a more comprehensive and reliable dataset, and we chose to proceed with it. Besides, it is worth noting that all 18 added articles are published in journals included in the third search string, ultimately ensuring alignment with our overall inclusion criteria. As a result, we ended up with 359 articles (341 + 18) as the final output of the search process, including both Phase 1 and Phase 2.

Our current review is systematic not only in the search process but also in the analysis (Kohtamäki et al., 2018; Spanuth & Urbano, 2023). In the initial phase of the analysis process, that is, Phase 3, where we employed an inductive approach (Gioia et al., 2013), we examined the articles to identify a common denominator among them, which we determined to be ‘processes’ (Kohtamäki et al., 2018). Consequently, we began the coding process by extracting various activities performed by platform owners, representing the first-order concepts. We then worked collaboratively to categorize these activities into second-order themes, which reflect different approaches. Finally, we organized these approaches into aggregate dimensions, which correspond to processes (Nag et al., 2007), ultimately uncovering five distinct processes, as shown in Figure 2. Furthermore, to better understand the dynamics of these processes, we examined (1) the interplay occurring both between and within the different processes, (2) the factors influencing them, namely the antecedents, and (3) their consequences, referred to as outcomes. Consequently, we systematically develop an integrative

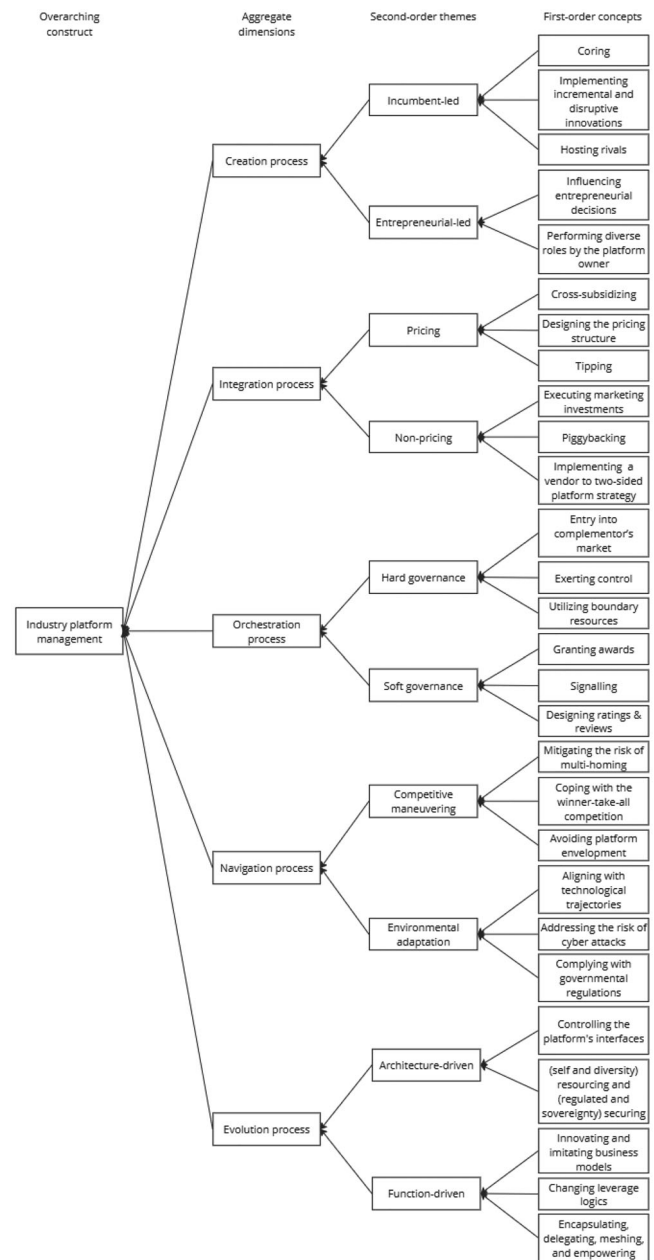


FIGURE 2 The five processes of industry platform management.

framework and a comprehensive definition of industry platform management, specifically in Phase 4. Ultimately, we present a research agenda encompassing the five processes and their interconnections, particularly in Phase 5. In brief, several steps have been taken to ensure the systematic nature of this review, in both the search and analysis processes, with the final aim of making this research transparent and replicable (Spanuth & Urbano, 2023). Figure 1 illustrates the systematic approach employed in both the search and analysis processes, highlighting the various phases involved in each.

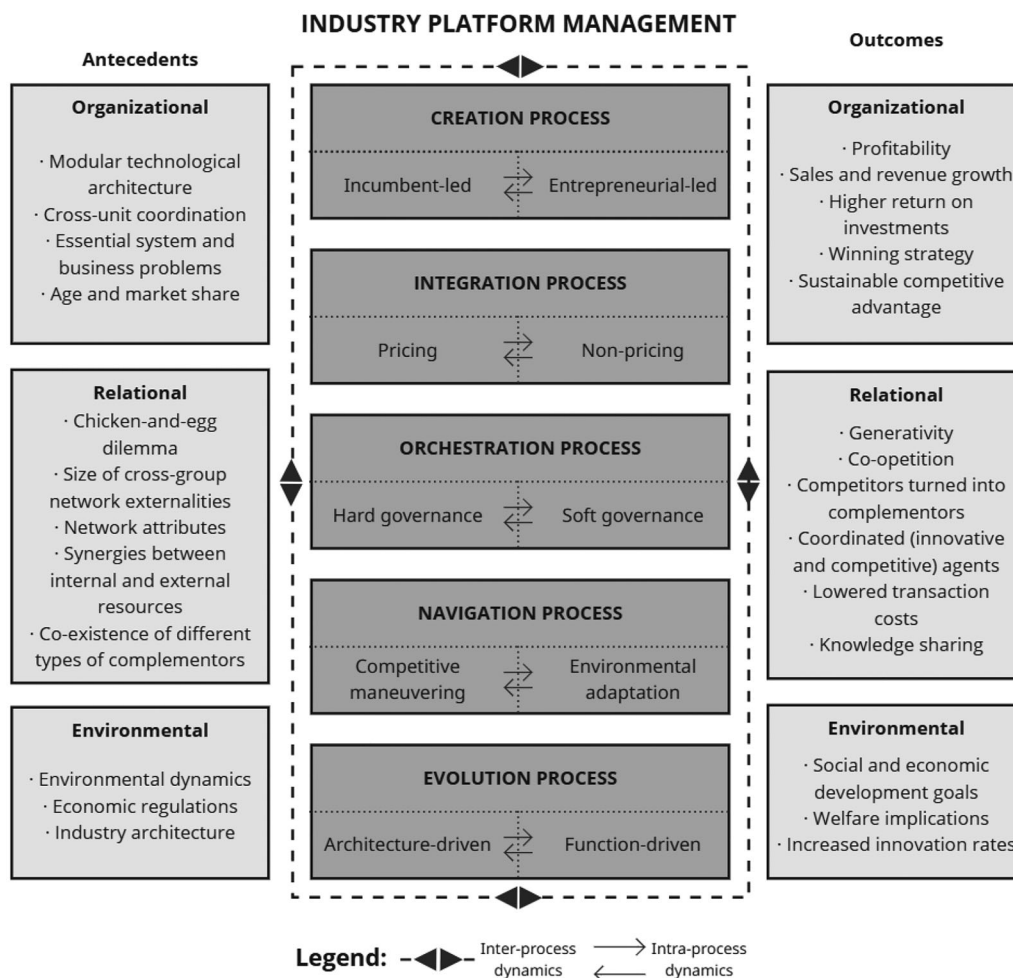


FIGURE 3 Industry platform management: An integrative framework.

## FINDINGS

### An integrative framework of industry platform management

Building on the insights derived from the systematic literature review, we present an integrative framework of industry platform management that marks the central contribution of this paper. This framework, presented in Figure 3, synthesizes fragmented discussions on industry platforms across various disciplines, ultimately identifying five distinct yet correlated processes: creation, integration, orchestration, navigation, and evolution. Each process comprises a set of distinct approaches to achieve its overarching objective. Further, the framework highlights two forms of interplay. The first is the interplay between the processes themselves, referred to as inter-process dynamics, and the second is the interplay between the diverse approaches within each process, referred to as intra-process dynamics. In light of this, we define industry platform management as the dynamic inter-

play of interrelated, iterative, and simultaneous processes that collectively shape the emergence, configuration, and advancement of industry platforms.

Figure 3 provides a concise overview of the core processes that constitute industry platform management, along with their inter- and intra-process dynamics, as well as the associated antecedents and outcomes. The framework is grounded in our observation that although the literature addresses a broad spectrum of topics and disciplinary perspectives, it ultimately converges on a shared set of underlying processes in industry platform management. We define a process as a set of activities structured into distinct approaches, all directed toward achieving the same overarching objective (Langley, 1999; Mintzberg et al., 1976; Porter, 1998).

### The five foundational processes

Each of the five identified processes focuses on a distinct aspect of industry platform management and pertains to a

specific level. At the core of managing industry platforms is the creation process, which focuses on establishing an industry platform (Gawer & Cusumano, 2008), specifically pertaining to the platform owner's level, or the micro-level. Furthermore, the integration process entails attracting and integrating diverse actors into the platform ecosystem (Armstrong, 2006; Eisenmann et al., 2006; Rochet & Tirole, 2003; Rysman, 2009), while the orchestration process centres on governing the behaviour and interactions of the various ecosystem actors (Baldwin & Woodard, 2009; Constantinides et al., 2018; Tiwana et al., 2010). Both processes, integration and orchestration, pertain to the ecosystem level, or the meso-level.

The navigation process involves strategically manoeuvring through external environmental dynamics that are exogenous to the ecosystem (Eisenmann et al., 2006), extending beyond the boundaries of the platform ecosystem to operate at the external level, or the macro-level. Lastly, the evolution process involves the adaptation and transformation of the platform and its ecosystem over time (Helfat & Raubitschek, 2018; Modol & Eaton, 2021; Thomas et al., 2022), shaped by the dynamics of the other processes and not confined to any specific level. The five distinct processes are examined independently in the following five subsections.

## Creation process

The topic of platform emergence, or the process of creating industry platforms, has been understudied in the academic literature (de Reuver et al., 2018; Gawer & Cusumano, 2014; Shi et al., 2021; Tan et al., 2015). This oversight may stem from the initial focus on determining whom to attract first to an already established platform (Rochet & Tirole, 2003), with subsequent discussions building heavily on this foundation and taking the platform's presence for granted (de Reuver et al., 2018). Industry platforms are created by either incumbents or entrepreneurs and can target existing or new customer bases, utilizing either novel or established technological capabilities (Teece et al., 2022). Consequently, the creation process focuses on establishing an industry platform and unfolds through two distinct approaches: incumbent-led and entrepreneurial-led.

The incumbent-led approach refers to platforms that originate from incumbent firms and target existing customer bases by relying on new technological capabilities. Any incumbent, regardless of its size, can create an industry platform by addressing specific business and technological challenges (Gawer & Cusumano, 2008). However, what is evident is that there is no one-size-fits-all approach to creating incumbent-led industry platforms, as various studies have explored diverse approaches. For

instance, hosting competing firms is one approach for a multi-product company aiming to transition into a thriving industry platform (Hagiu et al., 2020). Additionally, incremental innovations can shift vertically integrated networks into loosely coupled ones, while disruptive innovations across industry boundaries can transform these networks into industry platforms (Pagani, 2013). A significant drawback of these discussions is that they are often conducted in isolation, which restricts the broad theoretical and practical implications of existing studies. To enhance our understanding of the incumbent-led approach, the literature requires more interconnected studies, exemplified by the works of Gawer (2014) and Thomas et al. (2014). Thomas et al. (2014) argue that the evolution of an internal platform to an industry platform is influenced not only by platform openness, as argued by Gawer (2014), but also by various leverage logics, namely transaction, innovation, and production. Accordingly, as some research on this approach already exists, it is timely to build upon, develop, or even critically examine the existing understanding of the incumbent-led approach to drive further advancements in the field.

The entrepreneurial-led approach refers to platforms created either by start-ups and entrepreneurs that target new customer bases through leveraging new technological capabilities, or by incumbent firms that target new customer bases through relying on existing technological capabilities. Limited attention has been given to this approach, particularly in comparison to the former, possibly due to the high level of uncertainty and the challenges in tracking platform creation by emerging ventures. Most studies on this topic are based on empirical examinations of single case studies, with a few exceptions, such as Zhou and Wan (2022). For instance, Cennamo et al. (2022) examined Patient Innovation, a prominent European platform in the healthcare industry, and identified three roles that a platform owner should play in creating an industry platform. In a similar vein, Trabucchi and Buganza (2022) conducted a 5-year longitudinal case study of Friendz, an Italian two-sided platform, and outlined a four-step progression demonstrating how entrepreneurs can create industry platforms. Indeed, the literature requires further empirical insights from diverse markets and industries to better understand the entrepreneurial-led approach (Teece et al., 2022). Specifically, there is a need for more longitudinal case studies, akin to that by Trabucchi and Buganza (2022), as the dynamics of the creation process are less likely to be captured within static timeframes. Equally important is the need to eventually synthesize these studies to derive broader abstractions that can provide more comprehensive theoretical and practical insights, ultimately contributing to a unified framework for platform creation.

## Integration process

The integration process has received significant attention, most likely because this process represents one of the main pillars of the literature on industry platforms, the economics literature (Gawer, 2014; Rochet & Tirole, 2003). Attracting and integrating different actors into the platform ecosystem represents one of the strategic challenges that platform owners face in managing their industry platforms, that is, overcoming the chicken-and-egg dilemma (Caillaud & Jullien, 2003). Since the seminal work of Rochet and Tirole (2003), the topic of pricing has emerged as the optimal approach to overcoming the previously mentioned dilemma (Armstrong, 2006; Economides & Katsamakas, 2006; Eisenmann et al., 2006; Kaiser & Wright, 2006). Later on, scholars questioned the role of pricing, particularly due to the inherent risks and heightened costs associated with it (Eisenmann & Hagiu, 2007), and began examining non-pricing approaches. Therefore, the integration process involves attracting and integrating diverse actors into the platform ecosystem and manifests through two distinct approaches, pricing and non-pricing.

The pricing approach involves the platform owner treating one side as a 'profit centre' and the other as a 'loss leader', or in the best-case scenario, as 'financially neutral' (Rochet & Tirole, 2003, p. 991). Put simply, this approach involves lowering the price for one side, for example, Facebook users, while charging the other side, for example, advertisers, where the subsidized side is the one more valued by the opposite side of the platform (Economides & Katsamakas, 2006). This act of cross-subsidization enables the platform owner to attract one side into the platform ecosystem first, thereby making the platform and its corresponding ecosystem more appealing to the other side (Caillaud & Jullien, 2001). However, it is not only the value of the price that matters, but also how this price is structured (Rochet & Tirole, 2006). Therefore, the structure of the pricing is significant (Armstrong, 2006; Kaiser & Wright, 2006), and platform owners should set the right prices to incentivize engagement (Eisenmann et al., 2006). Most studies examining pricing have focused on industry platforms with two sides, particularly using stylized analytic models (Sriram et al., 2015). Indeed, due to the complexity of industry platforms (Hanseth & Lyytinen, 2010), it is often easier to assume the presence of only two sides for 'expositional simplicity' (Rochet & Tirole, 2004, p. 2); however, this approach may serve only as a starting point for understanding pricing in multi-sided industry platforms. Furthermore, there is a need to examine pricing not only from a nomothetic approach, as prevalent in two-sided platforms' contexts, but also from an idiographic one, especially since many platforms are multi-sided (Hagiu & Wright, 2015; Rochet & Tirole, 2004).

The non-pricing approach refers to any strategy used by platform owners that is either indirectly related or unrelated to pricing, aimed at attracting and integrating diverse actors into the ecosystem. For instance, marketing efforts represent one approach that can influence the decision of various actors to join a platform (Sridhar et al., 2011). Also, first-party content, such as content produced by the platform owner rather than third-party complementors, can serve as a non-pricing approach (Hagiu & Spulber, 2013). Other examples include temporary gatherings organized by platform owners (Fang et al., 2021), piggybacking (Dou & Wu, 2021), and signalling input control (Adam et al., 2022), among others. One of the major gaps in the non-pricing discussions is the neglect of the interplay between its different approaches, which is particularly relevant as platform owners do not rely on a single non-pricing approach. Therefore, our understanding of how these various non-pricing approaches interact remains limited due to the absence of studies on this topic. Further, despite the examination of diverse non-pricing approaches, this area remains not only understudied compared with the pricing one but has also evolved separately, thereby overlooking the interplay between pricing and non-pricing approaches. This holds significant relevance as platform owners rely on both pricing and non-pricing approaches simultaneously (Dou & Wu, 2021). As a result, the discussions on the integration process, including both pricing and non-pricing approaches, remain somewhat distant from practical application.

## Orchestration process

Discussions on the orchestration process emerged after information systems scholars highlighted that the phenomenon of industry platforms is understudied and requires further attention (Tilson et al., 2010; Tiwana et al., 2010; Yoo et al., 2010). Consequently, scholars shifted their attention to examining ecosystem governance, which concerns the actors' behavioural intricacies, building mainly on previous studies that explored platform architecture, which concerns the platform's structural intricacies (Constantinides et al., 2018). The architecture of the platform consists of three main elements (Baldwin & Woodard, 2009): (1) a stable core with limited variety, (2) a variable periphery with high variety, and (3) interfaces, defined as 'specifications and design rules that describe how the platform and modules interact and exchange information' (Tiwana et al., 2010, p. 676). Accordingly, the orchestration process involves governing the behaviour and interactions of the diverse ecosystem actors to achieve desired outcomes and optimize the ecosystem's performance. This process can be approached through either

hard or soft governance approaches (Foerderer et al., 2021).

Early discussions on orchestration focused mainly on approaches that influence the actors' behaviour through resource provision and control exertion, that is, the hard governance approach (Foerderer et al., 2021). As value in the industry platform ecosystem is co-created with various actors (Ceccagnoli et al., 2012), the platform owner must orchestrate their behaviour, regardless of the platform type (Cusumano et al., 2019). However, most discussions on hard governance have concentrated on innovation platforms and have focused on a single actor within the ecosystem, specifically third-party complementors. For instance, platform owners utilize boundary resources, such as standardized development tools (Miric et al., 2022), software libraries (Fink et al., 2020), and application programming interfaces (Ghazawneh & Henfridsson, 2013), to influence the behaviour of third-party complementors and establish an arms-length relationship with them. Other hard governance approaches include knowledge boundary resources (Foerderer et al., 2019), control (Parker & Van Alstyne, 2018), and the entry of platforms into complementary markets (Foerderer et al., 2018; Young Kang & Suarez, 2022), among others. Despite being mainly discussed in the context of innovation platforms, governance is equally significant in transaction platforms, yet has received limited attention. For instance, in the context of e-commerce content platforms, monetary rewards and punishments are one example of hard governance (Lin et al., 2022), while in social media platforms, the regulation of user behaviour, including user identification and status, represents another (Reuber & Fischer, 2022). Regardless of the platform type, whether innovation or transaction, focusing on third-party complementors or users highlights only one category of actors within a broader platform ecosystem, which typically includes a variety of stakeholders (Van Alstyne et al., 2016). Thus, while focusing on the orchestration of one category of actors is valuable, platform owners must simultaneously orchestrate the entire ecosystem, ultimately demonstrating ambidexterity (Tushman & O'Reilly, 1996), an issue that remains largely underexplored in literature.

While most of the literature has focused on hard governance, soft governance, which influences complementors' behaviour through non-monetary and non-control means (Foerderer et al., 2021), has received limited attention. To address this gap, Foerderer et al. (2021) examined the use of non-monetary awards as a soft governance approach that can effectively influence the behaviour of third-party software developers. Furthermore, soft governance approaches have been examined in the context of transaction platforms, including those that structure user relationships, such as likes or endorsements, and

those that direct user attention, like hashtags on social media platforms (Reuber & Fischer, 2022). Other examples include ratings and reviews (Chan et al., 2022), as well as signalling mechanisms, such as opportunity and endorsement signals (Hukal et al., 2020). However, similar to the gap identified in the integration process, discussions on the orchestration process remain somewhat distant from practical application. In practice, platform owners often rely on a combination of hard and soft governance approaches; however, this interplay has not been thoroughly examined in the literature.

## Navigation process

As previously mentioned, pricing emerged as an optimal approach to overcome the chicken-and-egg dilemma (Armstrong, 2006; Rochet & Tirole, 2003, 2006); however, platform owners do not set prices in a vacuum. This paved the way for further discussions on competition between platforms (Eisenmann et al., 2006). Therefore, a distinct process arises from pricing discussions, akin to the emergence of the integration process; nevertheless, unlike integration, navigation pertains not to the ecosystem but to the external level, which is exogenous to the platform's ecosystem. Furthermore, the external level extends beyond competition, as platform owners must also navigate challenges that emerge within the broader macro-environment (Tiwana et al., 2010). Accordingly, the navigation process centres around strategically responding to external environmental dynamics that are exogenous to the ecosystem. It unfolds through two distinct approaches, competitive manoeuvring and environmental adaptation.

The competitive manoeuvring approach addresses challenges directly related to competition, such as winner-takes-all scenarios, multihoming, and envelopment (Eisenmann et al., 2006). The platform owner should determine whether the market can be served by a single platform and decide whether to maintain proprietary rights or share the platform to achieve a winner-take-all position (Eisenmann et al., 2006). Despite the support for the winner-take-all scenario in the literature (Belleflamme & Peitz, 2019; Cennamo & Santalo, 2013; Wiegand et al., 2022), it does not necessarily hold true (E. G. Anderson et al., 2014), as it might be that the 'winner does not take all' (Huotari et al., 2017, p. 313). One of the conditions that gives rise to the winner-takes-all scenario is the magnitude of the multihoming costs (Eisenmann et al., 2006). Accordingly, discussions about winner-take-all began to be associated with examinations of multihoming (Armstrong, 2006; Caillaud & Jullien, 2003; Doganoglu & Wright, 2006; Rochet & Tirole, 2003), mainly in the absence of exclusive contracts. However, the introduction

of such contracts could significantly prevent multihoming on the seller's side of the platform (Armstrong & Wright, 2007), a point that was later challenged by Doganoglu and Wright (2010), ultimately supporting earlier discussions. In brief, discussions within this approach are tightly interwoven, likely because it is closely tied to the integration process, particularly the pricing approach, which has been steadily evolving. In essence, this approach has evolved in depth, as discussed previously, where scholars have extensively built on each other's work, and in breadth, as a wide range of competitive dynamics has been examined beyond the initially explored topics. These dynamics include avoiding envelopment (Eisenmann et al., 2011), managing disruptive innovation (Ansari et al., 2016), mitigating the risk of market entries (Cozzolino et al., 2021), and implementing effective market entry strategies (Barile et al., 2022), among others.

The environmental adaptation approach addresses a wide range of issues related to the broader macro-environment, including technological advancements, government regulations, and cyberattacks, among others. Compared with competitive manoeuvring, environmental adaptation has expanded primarily in breadth rather than depth, focusing more on examining diverse dynamics within the broader macro-environment, rather than building on previous research. For instance, scholars have highlighted the importance of paying closer attention to technological trajectories, as the emergence of complementary and substitutive technologies is occurring rapidly and broadly, ultimately posing significant challenges for platform owners (Tiwana et al., 2010). Other scholars have examined additional factors in the macro-environment, such as the influence of government regulations (S. Wang et al., 2019), the impact of the European Union's new Directive on Copyright in the Digital Single Market (Stähler & Stähler, 2022), the role of policy and antitrust law (Spinello, 2005; H. Wang, 2022), and the implications of digitalization (Frishammar et al., 2018). In terms of depth, few studies have built on each other's findings, such as in the examination of digital piracy. Many scholars argue that digital piracy poses a challenge due to its potential negative impact on innovation (Miric & Jeppesen, 2020); however, this view may not hold true, as the presence of malicious hackers can foster a more competitive market, which may stimulate innovation, while their absence may lead to monopolistic outcomes (Sen et al., 2020). This not only challenges previous findings but also links this approach to that of competitive manoeuvring, ultimately highlighting a distinguishing characteristic that sets discussions on the navigation process apart from those on other processes. Specifically, most discussions of this process emphasize the interplay between its distinct approaches.

## Evolution process

In a similar vein to how discussions on the integration process, particularly pricing approaches, paved the way for discussions on the navigation one, discussions on the orchestration process, specifically the hard governance approach, paved the way for discussions on the evolution process. Initial architecture and governance decisions of a platform owner significantly impact the evolutionary trajectory of the platform and its ecosystems (Modol & Eaton, 2021; Thomas et al., 2022). Controlling interfaces, such as through boundary resources (Ghazawneh & Henfridsson, 2013), equates to controlling the platform itself (Baldwin & Woodard, 2009). However, the evolution of platforms extends beyond architecture and governance dimensions (Helfat & Raubitschek, 2018), requiring platform owners to continuously innovate and adapt to sustain their ongoing development (Gawer & Cusumano, 2014). Accordingly, the evolution process centres on adapting and transforming the platform over time. This process can be realized through two distinct approaches, architecture-driven and function-driven.

The architecture-driven approach relates to the evolution driven by changes in platform architecture, governance, and control mechanisms. Scholars view architectural control as significant because it enables platform owners to shape the platform's evolution and direction (Baldwin & Woodard, 2009). This architectural control can be used to maintain or increase competition among third-party complementors, ultimately driving the platform's evolution toward a leadership position (Gawer & Cusumano, 2014). However, platform evolution is not only influenced by its architecture but also by the coevolution of architecture and governance (Tiwana et al., 2010). Simultaneously, the evolution of platforms also entails changes in the governance mechanisms themselves. As the platform matures, platform owners shift from applying broad (hard) governance approaches across all complementors to forming targeted partnerships with key ones (Ghazawneh & Henfridsson, 2013; Huber et al., 2017). In essence, most discussions that have addressed the architecture-driven approach have specifically linked the evolution of industry platforms to the utilization of hard governance, thereby resulting in two major gaps. First, since the hard governance approach is primarily examined in innovation platforms, our understanding of the evolution of transaction platforms remains somewhat limited. Second, hard governance is just one of the two approaches in the orchestration process, alongside soft governance (Foerderer et al., 2021); thus, our knowledge remains limited regarding how soft governance impacts the architecture-driven approach. This may be because the soft governance approach itself is

underexamined compared with that of hard governance, a point that was previously highlighted in discussions of the orchestration process.

The function-driven approach relates to the evolution driven by changes in the platform's functionality and underlying business model logic. Coring and tipping, which pertain to the creation and integration processes (Gawer & Cusumano, 2008), respectively, are relevant only during the nascent stage of platform development (Tan et al., 2015). Other approaches are required for subsequent phases, specifically the formative and mature stages; these include encapsulating and delegating, which are relevant during the formative stage, and meshing and empowering, which are applicable during the mature stage (Tan et al., 2015). Other scholars have identified various approaches for the evolution of industry platforms, such as business model innovation and imitation to transform from a two-sided to a multi-sided platform (Zhao et al., 2020); the sequential evolution of the platform by focusing on the development of specific actors at different stages of evolution, as seen in peer-to-peer lending platforms (Au et al., 2020); and the ongoing innovation and redesign of the business model to secure a leadership position (Helfat & Raubitschek, 2018), which offers an alternative to architectural control as a pathway to platform leadership (Gawer & Cusumano, 2014). Similar to the gap highlighted in previous processes, the interplay between architecture-driven and function-driven approaches remains underexplored. In other words, how changes in platform architecture and governance mechanisms impact the configuration of the industry platform's business model is not yet fully understood. Besides, the inconsistency in terminologies used when examining platform evolution hinders the development of the field, particularly as various scholars adopt not only different but also contradictory terminologies when referring to platforms associated with network effects (de Reuver et al., 2018; Gawer, 2021).

## Inter- and intra-process dynamics

Although the five processes of industry platform management can be conceptually distinguished, they are deeply interconnected. Each process functions as a distinct puzzle piece that is unique in its role, yet essential to forming a complete picture of industry platform management. As discussed in Section The Five Foundational Processes, the interplay between approaches within individual processes is critical to understanding how platforms function in real-world settings. Yet, as illustrated in the Industry Platform Management Framework, Figure 3, the interplay occurs not only within processes, that is, intra-process dynamics, but also across them, that is, inter-process dynamics.

In what follows, we examine how inter- and intra-process dynamics reflect the three defining characteristics of industry platform management: interrelatedness, iteration, and simultaneity.

The first characteristic, interrelatedness, refers to the way the five processes of industry platform management are connected and influence one another. At the inter-process level, decisions and configurations in one process often shape the dynamics of others. For example, orchestration, particularly architecture and governance choices (Tiwana et al., 2010), directly influences integration, specifically the onboarding of third-party complementors (Eisenmann et al., 2006). To elaborate, different platform configurations, such as vertical, horizontal, and modular, result in varying levels of complementor engagement (Saadatmand et al., 2019). Furthermore, orchestration-related investments, such as application programming interface development (Ghazawneh & Henfridsson, 2013), affect the feasibility of integration approaches, particularly pricing (Kaiser & Wright, 2006). When such investments are made, conventional pricing approaches, that is, lowering prices for one side while raising them for the other (Caillaud & Jullien, 2001), may no longer be viable (Tan et al., 2020). Besides, interrelatedness also manifests within individual processes, where distinct approaches, such as pricing and non-pricing in integration (Dushnitsky et al., 2022), are inherently connected and influence one another. For instance, the effectiveness of piggybacking, which is a non-pricing approach, is influenced by the platform's broader pricing strategy (Dou & Wu, 2021).

The second characteristic, iteration, refers to the recursive nature of the five processes as they unfold over time. Industry platform management is inherently dynamic, with processes, such as creation and evolution, often overlapping or recurring throughout a platform's development (Tece et al., 2022). Ozalp et al. (2022, p. 78) illustrate how incumbent firms such as Google, Amazon, Facebook, Apple, and Microsoft (GAFAM) engage in what they coin 'digital colonization', that is, leveraging their existing digital capabilities and infrastructures to enter new markets, ultimately reinitiating the creation process. Iteration also appears across other processes, where platform owners revisit prior decisions based on new developments. For instance, insights from navigation may lead to revised orchestration approaches (Karhu et al., 2018), while governance choices in orchestration may prompt adjustments to earlier integration decisions (Foerderer et al., 2018). This iterative logic also extends to the level of individual processes. As platforms evolve, the approaches adopted within a given process must be reassessed and adjusted to meet shifting objectives, stakeholder needs, and external conditions. For instance, in the early stages, platform owners often adopt an arm's-length approach toward ecosystem

actors, typically granting access through APIs (Eaton et al., 2015; Ghazawneh & Henfridsson, 2013). However, as the platform matures, platform owners shift from ecosystem-wide governance to dyadic governance with selected actors (Huber et al., 2017). Similarly, in integration, distinct approaches are refined over time to achieve onboarding outcomes (Dushnitsky et al., 2022), while in navigation, strategic responses are constantly adapted to evolving competitive and external environments (Eisenmann et al., 2006, 2011).

The third characteristic, simultaneity, refers to the parallel unfolding of the five processes of industry platform management. Although one might assume sequential progression from creation to integration, orchestration, navigation, and ultimately evolution, in practice, these processes operate concurrently. To elaborate, coring and tipping (Gawer & Cusumano, 2008), which relate to creation and integration, respectively, take place simultaneously during the early stages of platform development (Tan et al., 2015). At the same time, platform owners orchestrate the behaviour of onboarded actors (orchestration) while continuing to integrate new ones to reinforce network effects (integration) (Tan et al., 2020). This simultaneity extends beyond the ecosystem level. While pricing approaches are adopted to attract and integrate actors into the platform ecosystem (integration), they also serve as competitive tools in the broader platform market (navigation) (Armstrong, 2006; Rochet & Tirole, 2003, 2006). Likewise, architecture and governance choices are used simultaneously to influence actor behaviour (orchestration) and contribute to the platform's evolutionary trajectory (evolution) (Jovanovic et al., 2021; Tiwana et al., 2010). Besides, within individual processes, diverse approaches unfold in parallel rather than in a predetermined sequence. Platform owners often combine pricing and non-pricing approaches to attract and integrate actors (Kaiser & Wright, 2006; Sridhar et al., 2011), rely on both hard and soft governance approaches to influence actors' behaviour (Foerderer et al., 2019, 2021), and draw on architecture choices, governance approaches, business model innovation, and imitation simultaneously to shape the platform's ongoing trajectory (Thomas et al., 2014; Zhao et al., 2020).

Each of the three characteristics reflects a distinct logic: interrelatedness refers to how processes and approaches influence one another; iteration captures how they are revisited and refined over time; and simultaneity highlights how they unfold in parallel. Together, these characteristics highlight the complex and multifaceted nature of managing industry platforms. This complexity is embodied in an overarching process, industry platform management, shaped by the dynamic interplay of processes that are closely intertwined, continuously revisited, and concurrently unfolding.

## Antecedents and outcomes of the five processes

To enrich the understanding of the dynamics of industry platform management, the antecedents and outcomes of each of the five processes were coded separately, yet simultaneously, while coding the processes. Table 1 presents a comprehensive summary of these dynamics, with the middle column demonstrating the diverse approaches that fall under each of the five processes, the left column showcasing their antecedents, and the right column presenting their respective outcomes. It is worth noting that while Table 1 adopts the same approach as Figure 3 in presenting the processes, it diverges in its representation of the antecedents and outcomes. Table 1 demonstrates the antecedents and outcomes for each of the five processes; however, Figure 3 aggregates the antecedents and outcomes of industry platform management across three different levels: environmental, relational, and organizational, primarily derived from coding the diverse antecedents and outcomes presented in Table 1.

If we consider the antecedents of the creation process, one of the key factors that incentivize platform owners to create an industry platform is the existence of essential system and business problems that can be effectively addressed by establishing such a platform (Gawer & Cusumano, 2008). Other antecedents include the layered modular architecture (Gawer, 2014), information systems capabilities (Tan et al., 2015), dynamic capabilities, such as the ability to sense the internal environment, capture value, orchestrate silos, and transform the boundaries of the organization (Pundziene et al., 2022), as well as other capabilities, including innovation leverage, market exploration, quality control, and appropriation (Shi et al., 2021). These factors, among others, provide a compelling basis for platform owners to create an industry platform, whether through an incumbent-led approach or an entrepreneurial-led one.

As for the outcomes, creating an industry platform paves the way for platform owners to coordinate innovative and competitive stakeholders, exploit demand and/or supply economies of scope, and ultimately create value (Gawer, 2014). As a result, firms can achieve economies of scope not only in production but also in innovation (Gawer, 2014). For instance, the creation of industry platforms in the healthcare sector has proven to boost innovation significantly (Cennamo et al., 2022). Furthermore, creating an industry platform can address unfulfilled needs (Tan et al., 2015), align a firm's objectives with those of its customers (Wichmann et al., 2022), and transform competitors into complementors (Hagiu et al., 2020). This narrative, which is discussed here with a focus on the creation process, can also be applied to the other processes by relying on

TABLE 1 Industry platform management: Antecedents, processes, and outcomes.

| <b>Creation process</b>  |  |
|--|--|
| <b>Antecedents of the creation process</b>   | <b>Outcomes of the creation process</b>  |
| <ul style="list-style-type: none"> <li>Essential system and business problems (Gawer &amp; Cusumano, 2008)</li> <li>Modular technological architecture (Gawer, 2014)</li> <li>IS Capabilities (Tan et al., 2015)</li> <li>Modularity (Jacobides et al., 2018)</li> <li>Co-existence of different types of complementors (Jacobides et al., 2018)</li> <li>Vertically integrated network (Pagani, 2013); internal and/or supply-chain platforms (Gawer, 2014); multiproduct firm (Hagiu et al., 2020); product brands (Wichmann et al., 2022)</li> </ul>  | <ul style="list-style-type: none"> <li>Solved essential system and business problems (Gawer &amp; Cusumano, 2008)</li> <li>Coordinated innovative and competitive agents, economies of scope in supply and/or demand, and value creation (Gawer, 2014)</li> <li>Economies of scope in innovation (Gawer, 2014)</li> <li>Competitors turned into complementors (Hagiu et al., 2020)</li> <li>Addressed unfulfilled needs (Tan et al., 2015)</li> <li>Profitability (Hagiu et al., 2020)</li> <li>Boosted innovation (Cennamo et al., 2022)</li> </ul>   |
| <b>Incumbent-led</b>   | <b>Outcomes of the integration process</b>   |
| <ul style="list-style-type: none"> <li>Coring (Gawer &amp; Cusumano, 2008)</li> <li>Implementing incremental and disruptive innovations (Pagani, 2013)</li> <li>Increasing the level of openness (Gawer, 2014)</li> <li>Changing the logics of leverage (Thomas et al., 2014)</li> <li>Hosting rivals (Hagiu et al., 2020)</li> </ul>  | <ul style="list-style-type: none"> <li>Different actors attracted to the platform (Armstrong, 2006; Caillaud &amp; Jullien, 2001; Caillaud &amp; Jullien, 2003; Dou &amp; Wu, 2021; Economides &amp; Katsamakas, 2006; Eisenmann et al., 2006; Parker &amp; Van Alstyne, 2005; Rochet &amp; Tirole, 2003; Rochet &amp; Tirole, 2006; Rysman, 2009)</li> <li>Consumer welfare (Amelio &amp; Jullien, 2012; Parker &amp; Van Alstyne, 2005)</li> <li>Profitability and volume of transactions (Rochet &amp; Tirole, 2003)</li> <li>Asymmetric market structure (Ambrus &amp; Argenziano, 2009)</li> <li>Profitability and welfare implications (Choi &amp; Jeon, 2021)</li> <li>Improved platform performance, higher return on investments, and extraction of surplus from buyers and sellers (Hagiu &amp; Spulber, 2013)</li> <li>Lowered users' transaction costs (Cong et al., 2021)</li> <li>Prisoner's dilemma (Dou &amp; Wu, 2021)</li> <li>Better performance and effort expectancy (Adam et al., 2022)</li> </ul> |
| <b>Entrepreneurial-led</b>   | <b>Non-pricing</b>   |
| <ul style="list-style-type: none"> <li>Influencing entrepreneurial decisions (Trabucchi &amp; Buganza, 2022)</li> <li>Performing diverse roles by the platform owner (Cennamo et al., 2022)</li> </ul>   | <ul style="list-style-type: none"> <li>Implementing a vendor-to-two-sided platform strategy (Eisenmann &amp; Hagiu, 2007)</li> <li>Providing services (J. Wang et al., 2016)</li> <li>Executing marketing investments (Sridhar et al., 2011)</li> <li>Introducing tokens (Cong et al., 2021)</li> <li>Utilizing first-party content (Hagiu &amp; Spulber, 2013)</li> <li>Piggybacking (Dou &amp; Wu, 2021)</li> <li>Signalling input control (Adam et al., 2022)</li> </ul>  |
| <b>Integration process</b>   | <b>Pricing</b>   |
| <b>Antecedents of the integration process</b>  | <b>Outcomes of the integration process</b>   |
| <ul style="list-style-type: none"> <li>Indirect network externalities (Armstrong, 2006; Caillaud &amp; Jullien, 2001; Caillaud &amp; Jullien, 2003; Dou &amp; Wu, 2021; Economides &amp; Katsamakas, 2006; Eisenmann et al., 2006; Parker &amp; Van Alstyne, 2005; Rochet &amp; Tirole, 2003; Rochet &amp; Tirole, 2006; Rysman, 2009)</li> <li>Chicken-and-egg dilemma (Caillaud &amp; Jullien, 2003)</li> <li>Size of the cross-group network externalities (Armstrong, 2006)</li> <li>Transaction costs among users, constraints on pricing, and membership fixed costs (Rochet &amp; Tirole, 2006)</li> <li>Elasticity of the demand (Bolt &amp; Tieman, 2008)</li> <li>Expectations of the different market actors (Hagiu &amp; Spulber, 2013)</li> <li>Legitimacy (Ingram Bogusz et al., 2019)</li> <li>Non-competitive and exclusive access to external users (Dou &amp; Wu, 2021)</li> </ul> | <ul style="list-style-type: none"> <li>Cross-subsidizing (Caillaud &amp; Jullien, 2001)</li> <li>Designing the pricing structure (Armstrong, 2006; Kaiser &amp; Wright, 2006; Rochet &amp; Tirole, 2003; Rochet &amp; Tirole, 2006)</li> <li>Developing pricing strategies (Economides &amp; Katsamakas, 2006)</li> <li>Setting the right prices (Eisenmann et al., 2006)</li> <li>Applying skewed pricing (Bolt &amp; Tieman, 2008)</li> <li>Tipping (Gawer &amp; Cusumano, 2008)</li> </ul>  |

(Continues)

TABLE 1 (Continued)

| Orchestration process   |   |
|---|---|
| <p><b>Antecedents of the orchestration process</b></p> <ul style="list-style-type: none"> <li>• Modularity (Baldwin &amp; Woodard, 2009)</li> <li>• Layered modular architecture (Yoo et al., 2010)</li> <li>• Digital infrastructures (Tilson et al., 2010)</li> <li>• IT capabilities (Hanseth &amp; Lyytinen, 2010)</li> <li>• Information infrastructures (Hanseth &amp; Lyytinen, 2010)</li> <li>• Intensity of network effects (Niculescu et al., 2018)</li> <li>• Entrant's absorptive capacity (Niculescu et al., 2018)</li> <li>• App market conditions (Xue et al., 2019)</li> <li>• Sellers' local environment (Koo &amp; Eesley, 2021)</li> </ul>   | <p><b>Outcomes of the orchestration process</b></p> <ul style="list-style-type: none"> <li>• Generativity (Tilson et al., 2010)</li> <li>• Increased innovation rates (Boudreau, 2010)</li> <li>• Control over the platform (Ghazawneh &amp; Henfridsson, 2013)</li> <li>• Enhanced platform scope and diversity (Ghazawneh &amp; Henfridsson, 2013)</li> <li>• Intraplatform competition (Tiwana, 2015)</li> <li>• Revenue growth (Wessel et al., 2017)</li> <li>• Destabilization of the ecosystem (Wessel et al., 2017)</li> <li>• Enhanced competitiveness (Kazan et al., 2018)</li> <li>• Co-opetition (Niculescu et al., 2018)</li> <li>• Improved complements' quality (Foerderer et al., 2021)</li> <li>• Platform forking (Karhu et al., 2018)</li> <li>• Sales volume (Inoue, 2021)</li> <li>• Better complementor dedication (Hurni et al., 2021)</li> <li>• Novelty of complementary products (Miric et al., 2022)</li> <li>• Shared knowledge (Zhang et al., 2022)</li> <li>• A trade-off between product novelty and commercial success (Miric et al., 2022)</li> </ul> |
| <p><b>Hard governance</b></p> <ul style="list-style-type: none"> <li>• Utilizing boundary resources (Eaton et al., 2015; Ghazawneh &amp; Henfridsson, 2013)</li> <li>• Entry into complementor's market (Foerderer et al., 2018; Young Kang &amp; Suarez, 2022)</li> <li>• Utilizing knowledge boundary resources (Foerderer et al., 2019)</li> <li>• Exerting control vs. fostering autonomy (Wareham et al., 2014)</li> <li>• Exerting control (Parker &amp; Van Alstyne, 2018)</li> <li>• Gatekeeping (Zhang et al., 2022)</li> <li>• Exercising output control through performance-based rewards and punishments (Lin et al., 2022)</li> </ul> <p><b>Soft governance</b></p> <ul style="list-style-type: none"> <li>• Granting awards (Foerderer et al., 2021)</li> <li>• Signalling: opportunity and endorsement signals (Hukal et al., 2020)</li> <li>• Designing ratings and reviews (Chan et al., 2022)</li> <li>• Implementing mechanisms that structure user relationships, e.g., likes or endorsements, and those that direct user attention, e.g., hashtags (Reuber &amp; Fischer, 2022)</li> </ul> | <p>(Continues)</p>  |

TABLE 1 (Continued)

| Navigation process  |   |
|---|---|
| <b>Antecedents of the navigation process</b>  | <b>Outcomes of the navigation process</b>   |
| <ul style="list-style-type: none"> <li>Strength of network effects (Eisenmann et al., 2006, 2011)</li> <li>Vertical and horizontal differentiation (Hossain et al., 2011; Hossain &amp; Morgan, 2013)</li> <li>Differences in technologies (Mantena &amp; Saha, 2012)</li> <li>Age and market share (Landsman &amp; Stremersch, 2011)</li> <li>Industry architecture (Tee &amp; Gawer, 2009)</li> <li>Switching costs (Eisenmann et al., 2011; Basaure et al., 2020)</li> <li>Overlapping user bases (Eisenmann et al., 2011)</li> <li>Cross-unit coordination (Eisenmann et al., 2011)</li> <li>Adopted technologies (Mantena &amp; Saha, 2012)</li> <li>Geographic scope of network externalities (Stallkamp &amp; Schotter, 2021)</li> <li>Information transparency (H. Li &amp; Zhu, 2021)</li> <li>User privacy concerns (Gal-Or et al., 2018)</li> <li>Network interconnectivity (Zhu et al., 2021)</li> <li>Language (Jeon et al., 2021)</li> <li>Taste preferences (Chellappa &amp; Mukherjee, 2021)</li> <li>Economic regulations (Paolo &amp; Roberts, 2022)</li> </ul> | <ul style="list-style-type: none"> <li>Profit and market share (Y. Chen &amp; Xie, 2007)</li> <li>First-mover advantage or disadvantage (Y. Chen &amp; Xie, 2007)</li> <li>Sales volume (Landsman &amp; Stremersch, 2011)</li> <li>Winning strategy (E. G. Anderson et al., 2014)</li> <li>Innovation (Sedera et al., 2016; Miric &amp; Jeppesen, 2020)</li> <li>Profitability (Mantena &amp; Saha, 2012)</li> <li>Performance of the platform (Cennamo &amp; Santalo, 2013)</li> <li>Winner does not take all (Huotari et al., 2017)</li> <li>Welfare implications (Spinello, 2005; Van Cayseele &amp; Vanormelingen, 2019; S. Wang et al., 2019; Basaure et al., 2020; Chellappa &amp; Mukherjee, 2021; Nguyen &amp; Kannan, 2021; Stähler &amp; Stähler, 2022)</li> <li>Brand equity and consumer loyalty (Gong et al., 2020)</li> <li>Development goals (Bonina et al., 2021)</li> <li>Subscription prices, circulation levels, and advertising rates (Parker et al., 2021)</li> <li>Sustainable competitive advantage (F. Li, 2021)</li> <li>Reduced outsourcing and limited software variety (Ishihara &amp; Muller, 2020)</li> <li>Cooperation (Zhu et al., 2021)</li> </ul> |
| <b>Competitive manoeuvring</b>  |   |
| <ul style="list-style-type: none"> <li>Coping with the winner-take-all competition (Eisenmann et al., 2006; Cennamo &amp; Santalo, 2013)</li> <li>Mitigating the risk of multihoming (Doganoglu &amp; Wright, 2006; Eisenmann et al., 2006; Armstrong &amp; Wright, 2007; Doganoglu &amp; Wright, 2010; Belleflamme &amp; Peitz, 2019; Bakos &amp; Halaburda, 2020; Jeitschko &amp; Tremblay, 2020; Wiegand et al., 2022)</li> <li>Responding to and/or initiating new market entries (Cozzolino et al., 2021; Karhu &amp; Ritala, 2021; Wu &amp; Channisaipan, 2021)</li> <li>Avoiding and/or executing platform envelopment (Eisenmann et al., 2006, 2011)</li> <li>Executing internationalization strategies (Stallkamp &amp; Schotter, 2021)</li> <li>'Digital colonization' (Ozalp et al., 2022, p. 78)</li> <li>Responding to disruptive innovations (Ansari et al., 2016)</li> </ul>   |   |
| <b>Environmental adaptation</b>   |   |
| <ul style="list-style-type: none"> <li>Adhering to policies and antitrust laws (Spinello, 2005; McCalman, 2022; H. Wang, 2022)</li> <li>Aligning with technological trajectories (Tiwana et al., 2010)</li> <li>Complying with governmental regulations (S. Wang et al., 2019)</li> <li>Addressing the risk of cyberattacks (Sen et al., 2020)</li> <li>Reducing the risk of piracy (Ishihara &amp; Muller, 2020; Miric &amp; Jeppesen, 2020)</li> </ul>  |   |

(Continues)

TABLE 1 (Continued)

| Evolution process  |   |  |
|--|---|--|
| <b>Antecedents of the evolution process</b>  | <b>Architecture-driven</b>  | <b>Outcomes of the evolution process</b>   |
| <ul style="list-style-type: none"> <li>Platform architecture (Baldwin &amp; Woodard, 2009; Tiwana et al., 2010; Huber et al., 2017)</li> <li>Modularity (Baldwin &amp; Woodard, 2009)</li> <li>Environmental dynamics (Tiwana et al., 2010)</li> <li>Economies of innovation and complementarity (Thomas et al., 2014)</li> <li>IS capabilities (Tan et al., 2015)</li> <li>Economies of transaction and search (Thomas et al., 2014)</li> <li>'Innovative capabilities, environmental scanning and sensing capabilities, and integrative capabilities for ecosystem orchestration' (Helfat &amp; Raubitschek, 2018, p. 1391)</li> <li>Information communication technologies (Leong et al., 2019)</li> <li>Data types, technological operations, and actor configurations (Alaimo et al., 2020)</li> <li>Early governance decisions (Thomas et al., 2022)</li> <li>Network attributes, platform attributes, and complementor attributes (McIntyre et al., 2021)</li> <li>Synergies between internal and external resources (Zeng et al., 2022)</li> </ul> | <ul style="list-style-type: none"> <li>Controlling the interfaces (Gawer &amp; Cusumano, 2014)</li> <li>Resourcing and securing, 'Self-resourcing, regulation-based securing, diversity resourcing, and sovereignty securing' (Ghazawneh &amp; Henfridsson, 2013, p. 173)</li> <li>Executing architectural openness (Thomas et al., 2014)</li> <li>Coevolution of governance, environmental dynamics, and architecture (Tiwana et al., 2010)</li> </ul> <p><b>Function-driven</b></p> <ul style="list-style-type: none"> <li>Developing new business models (Gawer &amp; Cusumano, 2014; Muzellec et al., 2015)</li> <li>Changing leverage logics: (1) production, (2) innovation, and (3) transaction (Thomas et al., 2014)</li> <li>Implementing development strategies: (1) encapsulating, (2) delegating, (3) meshing, (4) empowering (Tan et al., 2015)</li> <li>Utilizing boundary management mechanisms (Leong et al., 2019)</li> <li>Innovating and imitating business models (Zhao et al., 2020)</li> <li>Progressively developing actors (Au et al., 2020)</li> </ul> | <ul style="list-style-type: none"> <li>Platform leadership (Gawer &amp; Cusumano, 2014; Leong et al., 2019)</li> <li>Complex business model designs (Zhao et al., 2020)</li> <li>Market leadership (Zhao et al., 2020)</li> <li>Acquisition of fundamental resources and capabilities, and the establishment of legitimacy (Au et al., 2020)</li> <li>A shift from reliance on business actors to leveraging ecosystem actors (Au et al., 2020)</li> <li>Platform balance and business sustainability (Au et al., 2020)</li> <li>Platform dominance (McIntyre et al., 2021)</li> </ul> |

Table 1. More specifically, Table 1 facilitates a comprehensive understanding of the dynamics of industry platform management, particularly the antecedents and outcomes associated with its various processes.

## A future research agenda for industry platform management

In response to the three foundational gaps identified in Section Consequences of Disciplinary Divergence, namely, the fragmented discussions of processes, the narrow focus on certain approaches within individual processes, and the underexploration of specific processes, this section outlines a future research agenda to address these gaps. More specifically, drawing on the industry platform management framework, the agenda proposes future research directions at three main levels: (1) processes, (2) intra-processes, and (3) inter-processes, with each level corresponding to one of the previously mentioned gaps. At the process level, the aim is to direct scholarly focus toward specific processes that have been somewhat underexamined in the literature, thereby addressing the previously discussed gap of underexploration. At the intra-process level, the aim is to shift scholarly focus from mainstream topics to the intricacies that have received less attention, thereby addressing the previously discussed issue of narrow focus on specific approaches within individual processes. Lastly, at the inter-process level, the aim is to encourage collaboration among the various bodies of literature that have examined industry platforms, thereby addressing the previously discussed gap of fragmented discussions.

The following paragraphs present future research directions across the three previously mentioned levels: processes, intra-processes, and inter-processes. While formulating these directions, we have consistently considered the latest research developments in the field. Notably, although research on industry platforms continues to accelerate, recent studies mainly build on existing discussions within the diverse processes, and approaches, identified in the industry platform management framework, namely, creation (Lerch et al., 2024; Recker et al., 2024), integration (De Cornière et al., 2025; Tavalaei et al., 2025), orchestration (Kapacinskaite & Mostajabi, 2024; Leong et al., 2024), navigation (S. Anderson & Bedre Defolie, 2024; Atad & Yehezkel, 2024), and evolution (Varga et al., 2023; Thornton, 2024), rather than introducing fundamentally new elements. The most significant change we have observed concerns the emergence of new empirical contexts, particularly the B2B context (Abed Alghani et al., 2026; Madanaguli et al., 2023; Ritala &

Jovanovic, 2024; Filosa et al., 2025), which is discussed in the last two paragraphs of this section.

At the process level, as we argued in Section Creation Process, it is evident that the creation process has received significantly less attention (Gawer & Cusumano, 2014; Tan et al., 2015; de Reuver et al., 2018; Shi et al., 2021), especially when compared with the other processes. Similarly, the evolution process has primarily been explored in connection with the orchestration process, with specific emphasis on architecture-driven evolution (Tiwana et al., 2010). Thus, the comprehension of the creation and evolution processes remains limited in comparison to other processes, as the majority of discussions have extensively focused on integration (Caillaud & Jullien, 2001), orchestration (Eaton et al., 2015), and navigation processes (Eisenmann et al., 2006). Despite the extensive discussions, these processes were examined with a narrow focus on specific approaches within each, which brings the second level, intra-process, to the forefront. Within the three previously mentioned processes, integration, orchestration, and navigation, mainstream discussions have primarily focused on pricing (Rochet & Tirole, 2003), hard governance (Ghazawneh & Henfridsson, 2013), and competitive manoeuvring (Cennamo & Santalo, 2013), respectively. However, it is crucial to shift the focus toward underexplored approaches, namely, non-pricing in the integration process (Eisenmann & Hagi, 2007), soft governance in the orchestration process (Foerderer et al., 2021), and environmental adaptation in the navigation process (Sen et al., 2020), which have received less attention compared with the mainstream discussions. Broadening the currently narrow focus from extensively discussed approaches to those that are less explored paves the way for a deeper understanding of the interplay between diverse approaches within individual processes, ultimately aligning scholarly discussions more closely with real-world practice.

At the intra-process level, in addition to the underexplored areas mentioned previously, we identify several research directions that warrant further attention within each of the five processes. These intra-process research directions are synthesized and illustrated in Figure 4. Concerning the creation process, the absence of the appropriate hardware infrastructure in certain industries poses a considerable barrier for companies seeking to create an industry platform. Thus, it is essential to examine strategies through which firms can identify and develop the optimal infrastructure required for successful platform creation (Gawer & Cusumano, 2008). Further, by integrating the resource-based view with that of dynamic capabilities (Barney, 1991; Teece et al., 1997), scholars can explore the critical resources and capabilities required for



FIGURE 4 Intra-process research directions.

incumbents, or entrepreneurs, to initiate the creation process. Other topics that can be examined within this process are the strategies that incumbent firms employ to manage organizational change during their transition to a platform business model (Menter et al., 2022), as well as the strategies that entrepreneurs, startups, or even incumbents targeting new customer bases utilize to navigate and overcome the liabilities of newness and smallness when creating industry platforms (Freeman & Engel, 2007; Teece et al., 2022).

As for the integration process, it is vital to identify the methods and metrics that can be utilized to assess the effectiveness of pricing and non-pricing approaches (Nair, 2019). Moreover, many platforms, if not all, employ a combination of pricing and non-pricing approaches to attract various actors to their ecosystem (Dou & Wu, 2021); nevertheless, there remains a gap in understanding the optimal balance between pricing and non-pricing, as well as the means to measure this balance. The integration and orchestration processes share some research questions that revolve around similar conceptual themes, though customized for each respective process. These questions include topics such as the interactions and complementarity among the diverse approaches, the optimal balance between them, methods for their measurement, and the applicability of the diverse approaches across various platform types, namely transaction, innovation, and hybrid platforms (Cusumano et al., 2019; Gawer, 2021).

Existing research on orchestration has predominantly emphasized the interaction between the platform owner and one specific actor within the ecosystem, specifically, third-party complementors, also referred to as producers (Ghazawneh & Henfridsson, 2013; Van Alstyne et al., 2016). Consequently, this emphasis has led to other critical relationships being underexplored, such as those between the platform owner and platform provider, or between the platform provider and the consumer (Van Alstyne et al., 2016). Therefore, future research should pay greater attention to examining the relationships between the platform owner and other actors within the ecosystem, beyond just the complementors. Besides, with the widespread adoption of artificial intelligence, it is imperative to explore how AI-driven governance approaches may reshape the orchestration process by providing real-time data-driven insights that enhance decision-making for platform owners (Kiron & Schrage, 2019). In a similar vein, AI-driven technologies can be explored to understand how they can be utilized for anticipating and responding to changes in the competitive and macro-environments within the navigation process (Kiron & Schrage, 2019). Additional areas for future research in the navigation process include examining the strategies that platform owners can implement to foster adaptability and resilience within their

organizations (Tushman & O'Reilly, 1996), which would enable them to respond effectively to both competitive and external environmental dynamics.

The evolution process represents a promising area for future research, as deeper examination can provide valuable insights into the evolutionary trajectory of industry platforms. Such research could help identify the common phases of platform evolution and the effective strategies for managing each. However, the diverse terminologies and classifications used to refer to these platforms (Abed Alghani et al., 2024), for example, digital platforms (de Reuver et al., 2018, p. 124), two-sided markets (Rochet & Tirole, 2003, p. 990), and multi-sided platforms (Hagiu & Wright, 2015, p. 162), pose challenges in identifying the different stages of platform evolution. For instance, while some scholars have examined the development of a two-sided platform into a multi-sided one (Zhao et al., 2020), others have examined the evolution of a hub-and-spoke multi-sided platform into a networked one and ultimately to a symbiotic multi-sided platform (Tan et al., 2015), to mention a few. Therefore, as scholars persist in using diverse terminologies and classifications, research on platform evolution is more likely to remain fragmented. Besides, the majority of studies on industry platforms are conducted through conceptual and stylized analytic models (Sriram et al., 2015); however, there is a need for more empirical research, particularly longitudinal studies, such as those by Varga et al. (2023) and Thornton (2024), to deepen our understanding of the different processes, particularly evolution.

Concerning the inter-process level, upon completing the coding process, we identified a handful of interdisciplinary studies that have examined the interplay both across and within different processes, as discussed in Section Inter- and Intra-Process Dynamics. Such studies remain relatively scarce, and progress in this area has been slow. This limited attention may be due to the fact that examining the interplay between different processes often requires researchers to step out of their comfort zones, either by engaging in cross-disciplinary collaboration or by bridging diverse theoretical perspectives that are not directly related to their primary research focus. Interestingly, a common denominator among the limited studies that examine the interplay between diverse processes is that most are published in top-ranking journals, particularly those classified as CABS4\*, such as Bakos and Halaburda (2020), L. Chen et al. (2022), and Loh and Kretschmer (2022). Perhaps this is not by coincidence, as it indicates that examining the interplay between diverse processes, or, more specifically, the interplay between different approaches across processes, is a captivating research area with the potential to advance a deeper understanding of the complex phenomenon of industry platform management.

The purpose of this research agenda is not only to outline future research directions within each process but also to highlight the potential for generating novel research questions across the different processes. To elaborate, a deep understanding of Section Inter- and Intra-Process Dynamics, combined with a detailed examination of Figure 2 and Table 1, has the potential to inspire researchers in crafting novel research questions that arise from the interrelated nature of the various processes. For instance, spanning the orchestration and navigation processes may lead to questions such as: How can platform owners align their orchestration approaches while effectively navigating complex external environmental dynamics? Narrowing further, how can the use of soft governance approaches assist platform owners in addressing regulatory pressures? Narrowing even further, how might signalling, which is a soft governance approach within the orchestration process (Hukal et al., 2020), help platform owners mitigate challenges arising from antitrust laws, which are discussed as part of the environmental adaptation within the navigation process (H. Wang, 2022)? Thus, the previously mentioned resources, namely Section Inter- and Intra-Process Dynamics, Figure 2, and Table 1, can serve as a valuable toolkit for scholars by inspiring innovative research questions that span diverse processes, thereby opening new avenues of knowledge in the literature on industry platforms.

The majority of studies examining industry platforms have focused on B2C and C2C contexts, leaving our understanding of the dynamics of industry platforms in B2B contexts relatively underexplored (Ritala & Jovanovic, 2024). In recent years, platforms in B2B contexts have started to gain traction, with scholars from various research communities, such as servitization, shifting their attention toward industry platforms and often referring to them as 'industrial digital platforms' (Jovanovic et al., 2021, p. 1; Madanaguli et al., 2023, p. 1). Research in this new context adds another layer of complexity to understanding industry platforms, particularly because network effects, which are the main distinguishing feature of these platforms (Katz & Shapiro, 1985, 1994; Karhu et al., 2024), exhibit different dynamics in B2B contexts compared with B2C or C2C settings. More specifically, network effects are generally weaker in B2B contexts (Filosa et al., 2025), perhaps due to the unique characteristics of B2B relationships when compared with those in B2C and C2C settings (Blackburn et al., 2023). Consequently, many of the conventional assumptions that apply to industry platforms in B2C and C2C contexts may not hold for platforms operating in B2B settings (Loux et al., 2020).

Besides, while most literature has focused on industry platforms in digital B2C contexts, recent studies have highlighted that certain industries are subject to higher

levels of regulation, for example, healthcare and education (Cennamo et al., 2022; Ozalp et al., 2022; Teece et al., 2022; Zhou & Wan, 2022), or are embedded with physical assets that play a major role in the platform's value proposition, for example, the electric vehicle industry (E. G. Anderson et al., 2022). Consequently, this sets them apart from other industries that were examined in early discussions of industry platforms, such as mobile phones and game consoles (Gretz, 2010; Ghazawneh & Henfridsson, 2013). These emerging contexts call for a reevaluation of the dynamics of industry platforms in general, and of industry platform management in particular, as there is a need to explore how context-specific factors, such as B2B relationships or higher levels of regulation, reshape management processes and approaches. This, in turn, can lead to new theoretical insights and a deeper understanding of industry platforms and their management.

The preceding discussion synthesized the fragmented literature on industry platforms into an integrative framework of industry platform management. This framework outlines the diverse processes that constitute industry platform management, along with their inter- and intra-process dynamics, defining characteristics, and underlying antecedents and outcomes. Building on this integrative foundation, the proposed research agenda extends these insights by outlining future research directions across three main levels, process, intra-process, and inter-process, each addressing a distinct gap identified in the literature. To further enrich and contextualize this understanding, the agenda highlights the importance of examining the phenomenon across diverse empirical and industrial contexts. Together, the framework and research agenda lay the groundwork for a more comprehensive and theoretically grounded understanding of industry platform management.

## CONCLUSION

While this research provides substantial practical and theoretical contributions, as discussed in the following paragraphs, two main limitations should be acknowledged. The first concerns the perspective adopted in this work, specifically that of the platform owner. Future studies could enrich the literature by exploring management issues from the perspectives of various actors within the platform ecosystem, particularly given the co-created nature of value in industry platforms (Ceccagnoli et al., 2012; Van Alstyne et al., 2016). The second limitation concerns the database, as we relied only on Scopus to compile the final list of articles. Future studies could broaden their scope by incorporating additional databases or even drawing on non-academic sources, such as annual

reports, to enhance the understanding of industry platform management.

The practical implications of our research are substantial for entrepreneurs, startups, and incumbents alike. By systematically examining the diverse processes of industry platform management, their respective approaches, and the interplay across and within these processes, this research offers a comprehensive and nuanced understanding of how platforms are managed and evolve over time. Our framework emphasizes that these processes are interconnected, iterative, and operate simultaneously rather than in isolation, ultimately equipping practitioners with valuable insights to address the complexities of managing industry platforms. Furthermore, although our research agenda is primarily intended to guide future academic work, many of the proposed questions have clear practical relevance. By drawing on this agenda, practitioners can broaden their perspective, identify overlooked areas, and address emerging challenges in platform management.


At the theoretical level, this research traces the cross-disciplinary foundations of the industry platform literature to develop a unified conceptual understanding of industry platform management. Cross-disciplinarity is a fundamental characteristic of the industry platform literature, as the field itself has emerged by bridging discussions from distinct domains (Gawer, 2014), namely, economics and engineering. While this disciplinary grounding has broadened the field's scope, it has also led to divergent insights dispersed across various bodies of literature. This divergence is particularly evident in understanding how platform owners manage their industry platforms, a phenomenon we refer to as industry platform management. By identifying processes as a common denominator, we synthesize these scattered discussions and introduce a conceptual framework for industry platform management that is structured around five distinct processes. In addition, we propose a future research agenda that aims to generate new research directions and foster discussion across and within the five processes. Accordingly, the central contribution of this research lies in developing an integrative framework that bridges diverse bodies of literature and lays the groundwork for future theoretical development on industry platform management.

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## SUPPORTING INFORMATION

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