

Managing the Dynamics of Platforms and Ecosystems: An Introduction for HICSS-56

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1. Introduction

It is well understood that in order to compete and survive, organizations must consider ecosystem-centric perspectives. Platforms play a central role in the rapid emergence of this type of organization and the proliferation of digital technologies (Gawer, 2021; de Reuver et al., 2018; van Dijck et al., 2018). As we enter a “digital first” economy (Baskerville et al. 2020), platforms collect more and more data (Aaltonen & Penttinen, 2021; Alaimo et al., 2020) and utilize it to produce superior machine learning applications, further cementing market dominance. At the same time, the introduction of “Web 3.0” promises an increasingly decentralized digital infrastructure from blockchain technologies that would affect platforms. Today, however, platform providers like Amazon, Meta, or Apple have become dominant actors in their own industry, but also influence dynamics in complementary markets (e.g., Cusumano et al. 2019). Their influence on industries and society has changed over time and so has policy makers’ attention (Khan et al. 2019) on these actors. In this environment, platform providers legitimize actions (Garud et al. 2020; Taeuscher & Rothe 2021) not only in their markets, i.e., with users and complementors but also with the broader society, including investors and regulators.

Although understanding the value and importance of platforms and ecosystems across various industries and domains has grown significantly over the years, there is still a paucity of research examining dynamic and evolutionary aspects when it comes to their management and their impact. We believe that studying management, dynamics, and impact of platforms is of tremendous societal importance and current technological developments provide a plethora of rich empirical settings. We invited authors to submit their research on the impact of actors on their ecosystem and beyond, and urged them to clearly identify the actor level, e.g., individual managers, teams, and firms.

This is the eighth installment of the minitrack. For an overview of the history of the minitrack, we refer to

Russell et al. (2021). Building on previous years’ experience, we sought contributions that focused on the “dynamic” aspects of platforms and ecosystems, in their organization, participation, and impacts. Next, we turn our attention to this year’s contributions.

2. The 2023 minitrack

We were delighted to receive sixteen (16) submissions from author groups in Asia, Australia, Europe, and North America. With the support of 43 outstanding reviewers, we finally accepted seven (7) papers for publication. We thank the reviewers for their constructive and valuable comments, which inspired all the authors, as well as the organizers.

Indicating the breadth of the investigations reported in the minitrack, all submissions varied in methodological approaches. They ranged from qualitative inquiries of interview panels or fuzzy-set qualitative comparative analysis to quantitative analysis with computational tools or action design research. This diversity of approaches might speak to the still exploratory nature of the empirical investigation into the complex phenomenon of platforms and ecosystems. The dominance of empirical investigations speaks to the origins of this minitrack, which has for a long time been particularly inviting for data-centric investigations of platforms and ecosystems.

At the same time, however, manuscripts have become less descriptive. Instead, all accepted manuscripts sought to contribute to ongoing theoretical conversations on particular actors or mechanisms within platforms and ecosystems. This speaks to a growing conceptual maturity of the field. Still, there is no harmonious use of concepts among manuscripts - as noted in last year’s minitrack already. Instead, there are multiple understandings and definitions of platforms and ecosystems — encompassing not only providers and complementors but also implementation partners. While conceptual clarity and harmonious use can help build an accumulative research tradition on platforms and ecosystems, current openness towards concepts still invites new fields of research. We were thereby

surprised and happy to see communication scholars contributing to the field by shedding light on phenomenon-specific characteristics of platform ecosystems in the media industry.

The natural progression from individual firms and platforms toward more holistic viewpoints on mechanisms within and characteristics of ecosystems are visible this year. The investigations not only turned to strategies of focal companies but explaining complementarities and relations between actors. Hereby, time has played a more important role this year. Where ecosystems are considered a dynamic phenomenon, where providers' or complementors' decisions change mechanisms within ecosystems, where conditions in the environment change or ecosystems even have characteristics that consider time, that is, the immediacy of contributions.

To structure the discussion, we analyzed the seven accepted contributions and identified two themes, strategies for balancing tensions between individual and ecosystem identities, and decision-making for value creation.

3. Thematic sessions

3.1 Strategies for balancing tensions (Session 1)

We learned from three manuscripts how actors in platform ecosystems manage tensions between providers, complementors and what is perceived as the “platform ecosystem”. Platform ecosystems have their own identity that, as we have recently learned, need to be legitimized (Thomas & Ritala 2022, Täuscher & Rothe 2021). Throughout the three manuscripts, we learn how actors within ecosystems manage their individual identities in relation to the ecosystem identity. On the one hand, companies need to position themselves in a market to prevail. On the other hand, they are part of an ecosystem that has its own rules or mechanisms. This ecosystem is perceived as related but distinct from particular complementors or providers. This speaks to the latest platform research where value creation is distributed within ecosystems but value capture becomes centralized around focal providers (Gawer 2022). It opens, however, serious tensions because overly exploiting an ecosystem might leave the provider vulnerability (Karhu & Ritala 2021).

The first manuscript, speaking to this topic is “Boundary Reinforcement in Multisided Platforms: A Configurational Analysis of External Conditions” by Akinyemi et al. (2023). Based on a fsQCA-study, the authors return to theory on boundary management in order to describe where platform ecosystems end and the environment begins. This is important because it helps them explain how interactions between

complementors and providers reinforce platform boundaries and thereby form identity and legitimacy of platforms.

The second manuscript lays out the conceptual ground of reasoning on how and why platform providers position themselves within their markets. In their work on “Optimal distinctiveness: the role of platform size and identity,” Sobota et al. (2023) return to optimal distinctiveness theory to theorize on how provider strategy shapes platform identity. They exemplify how a platform’s strategy to differentiate depends on its size.

Finally, Mujib et al. (2023) lay out how characteristics identified as being important for the news industry shaping individual behavior. The manuscript “Which tweets ‘deserve’ to be included in news stories? Chronemics of tweet embedding” investigates how journalists embed content from Twitter into their work. They lay out how industry conditions, i.e., immediacy, shape individual behavior in ecosystems and how their behavior shapes these conditions.

3.2. Decision-making for value creation (Session 2)

Managing the tension between providers and complementors sets in motion interesting dynamics within ecosystems. Providers want to attract complementors to nurture network effects and spillover effects (e.g., Lee et al., 2022). At the same time they seek to prohibit the same complementors from joining other platforms (e.g., Tian et al., 2022).

Our fourth manuscript shows how multihoming can be valuable for platform ecosystems. In “The Influence of User Feedback on Complementary Innovation in Platform Ecosystems: NLP Evidence on the Value of Multihoming,” Hoffman et al. (2023) present an approach to source and analyze user feedback data for insights on complementor behavior in the mobile ecosystem. Their results show that a large part of features implemented in apps has been previously requested by their users and that through multihoming, some of the implemented features can be traced back across platforms.

In Network Orchestration: Managing the Scaling of Platform-based Ecosystems, Svendsrud et al. (2023) engage in two case studies for B2B platforms, showing how transaction and innovation platforms are distinct in how they nurture network effects. This is important as platform providers seek to leverage these mechanisms to scale.

Ksouri-Gerwien & Vorbohle (2023) also turn to B2B ecosystems in “Supporting Business Model Decision-making in B2B Ecosystems: A Framework for Using System Dynamics”. The team takes an action design research approach to develop means to simulate

the impact of different business model designs. This simulation model takes into consideration the ecosystem around focal companies, an effort that in the B2B context is a source of major risk and very difficult to manage through experimenting. Their key contribution is design knowledge on the ways to access data, modeling principles, and directions on how to use the model to support decision-making within the complex phenomenon of ecosystems.

Finally, Ruippo, Koskinen, & Rossi (2023) introduce new ecosystem actors in their work on “Actor Positioning and Its Implications to Value Co-Creation in SaaS Ecosystems”. They lay out the roles, tasks, and targets of platform owners in contrast to the core (SaaS vendors) and platform complementors (SaaS clients) in implementation partner networks. Thereby, they are able to describe the misalignment of individual attempts to create value. Thereby, they are able to explain how such individual attempts might result in value-co-destruction.

4. Invitation to inquiry

Out of its eight years of continuous existence at HICSS, this minitrack has invited research on managing the dynamics of platforms and ecosystems for the last three years. In the previous year, manuscripts spoke particularly about the emergence of complementarities between actors in platform ecosystems and the role of digital infrastructures. This year, we learned how actors manage the tensions on what constitutes their ecosystem and how they position themselves therein. In a second theme, authors extended last year’s contributions to complementarities by focusing on how actors within ecosystems make decisions to create (or destroy) joint value.

Looking forward toward 2024, we invite authors to further engage in empirical investigation of the mechanisms that drive dynamics within platforms and ecosystems.

Considering the role of managing tensions, future manuscripts might consider the (positive and negative) consequences of individual decisions of platform providers and complementors on the sustainability of ecosystems. This would ask for research on at least two levels: research that focuses on the sustainability of ecosystems would not only ask for the impact of environments on the ecosystem but might also consider the impacts of platform ecosystems on their environment. While, for instance, Mujib et al. (2022) lay out how the immediacy of the industry influences interaction between complementors and platforms in the media industry, it is an open question how this use affects the need for immediacy in the future. Considering the dominance of platforms within and

across many industries and societies, it is an open question of how the institutionalization of rules and mechanisms within particular platform ecosystems spill out into other contexts.

Another lens on the question of sustainability in platform ecosystems speaks to its dynamic character. In the future, we might need to question assumptions on sustainable equilibrium states of ecosystems. Most empirical investigations focus on platforms and ecosystems that prevailed over the years. This might not only speak to a possible survivor bias in our investigations but also begs the question of what mechanisms would explain collapsing or replacing ecosystems. Here, the current wave of decentralization efforts, including Web 3.0, edge computing, and distributed ledger technologies, might point towards phenomena for empirical investigations. We believe that numerous research questions arise from there that will ask for the adaptation of existing and introduction of new theories.

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