

# Ecosystem dynamics: Understanding dominance and centrality in innovative ecosystems

S. James Ellis, PhD Candidate, Radboud University  
Ivo Luijendijk, Industry Director FS&I, Atos

Thought  
Leadership **Atos**

# Content

<a href="#"><u>Executive Summary</u></a>	3
<a href="#"><u>1. Introduction</u></a>	4
<a href="#"><u>2. The Incumbent Viewpoint</u></a>	7
<a href="#"><u>3. The Orchestrator Viewpoint</u></a>	8
<a href="#"><u>4. The Academic Viewpoint</u></a>	10
<a href="#"><u>5. Conclusion and Recommendations</u></a>	13
<a href="#"><u>Acknowledgements</u></a>	15

# Executive Summary

Cooperation between fintechs and incumbent financial institutions has become a main – if not the default – innovation strategy for the financial services industry. Pushed by developments in **technology** (data, digital), **society** (rise of the digital native generations) and **regulations** (PSD2/Open Finance, GDPR/data and privacy protection), banks and insurers needed to rethink the way they handle their client expectations, their workforce and the data they have available. As a result, innovation in isolation is hardly a viable model any longer, yet working with partners causes challenges of its own regarding information access, business model alignment and the general direction of the change in question. In fact, the central question behind these challenges emerges to be: **What are the ecosystem dynamics, in terms of dominance and centrality?**

This paper explores this question in three viewpoints, related to three strategies to follow for inclusive innovation in business ecosystems. First is the incumbent viewpoint, which is built around the notion that ownership of the customer relationship determines the dominance in the relationships. This manifests as the **customer access** strategy. Second is the orchestrator viewpoint, where contribution to the mix of essential resources (data, talent and capital) can shift this dominance. This is linked to the **resource focus** strategy. Finally, the academic viewpoint explores the desirability of being at the very center of the ecosystem, which allows for more and more meaningful interactions with suppliers and partners. In short, a fringe player (i.e., one that is less inclined to work with others) runs the risk of stunting its growth due to their relative isolation, as compared to more centralized entities. This leads to **strategic centrality**.

For all three strategies, we conclude this opinion paper with some recommendations on which strategies can best be applied to certain situations, fully appreciating that all three viewpoints can come into play at any business ecosystem at different times of their lifecycles. In order to test the theory of these viewpoints, the authors have conducted interviews with industry participants from all sides of the ecosystem: incumbent banks, fintechs and ecosystem orchestrators. The incumbent and orchestrator viewpoints are covered as separate chapters, with the academic viewpoint added as an alternative, fresh take on the question. The fintech viewpoint was added throughout the paper in the form of quotes from one of our interviews with Sean Hunter, a fintech expert that has successfully progressed a neo-bank through its development in innovation ecosystems as described in this paper.

# 1. Introduction

As award-winning author and business strategist Robert Greene stated, “*An ecosystem that has the maximum amount of diversity is the richest.*” Through this great quote, he puts into words what many have noticed in modern business: true innovation is seldom achieved in isolated effort. Rather, in the current digital environment, the main forces of change are often found in a myriad of companies ranging from major corporations to small start-ups and everything in between. In such a divergent spread of talent, funding and other necessary assets, the ability to work together becomes paramount in order to be successful. But that conclusion raises yet another question: how does such collaboration work? As no relationship can be truly neutral, which participant is dominant and under what circumstances?

This topic (or parts of it) has been explored to some extent in a few previous Atos publications. In the recent Atos Scientific Community publication *Journey 2026 Unlocking Virtual Dimensions*,<sup>1</sup> two chapters explore the inner mechanics of collective and collaborative business models. These chapters, “Business Ecosystem Platforms” and “Moment Centric Markets,” explore how ecosystem partners can (or should) cooperate to optimally serve the end client. Exemplary instances of these can

be seen in phenomena like coopetition between peers and ownership (where competitors cooperate and compete), interoperability and interlinking of information amongst partners. This view of inclusive innovation is a continuation of the Atos Scientific Community’s research for Journey 2024.<sup>2</sup> (Redefining Enterprise Purpose), where the chapter “Ubiquitous Knowledge” explores modes of cooperation that support optimal sharing of data among ecosystem partners.

Both publications support the notion that digital ecosystems benefit from the cooperation models outlined above, namely coopetition between peers and ownership, and interoperability and interlinking of information amongst partners. In fact, they assert that siloed digital ecosystems are unable to build true digital transformation, since each data owner or caretaker hoards its treasures — out of fear of missing out on potential future business value that the data could bring. Paradoxically, this actually hampers the creation of added value, because it has been established that more value is actually created by sharing data with partners.<sup>3</sup>

Inspired by the visions of these publications, the authors decided to

explore in greater detail exactly how partners in a digital ecosystem cooperate and — more specifically — how these relationships are either structured around a dominant player in that ecosystem, or a more round-table approach of equal partners. We recognize that the topic of business ecosystems is a very broad topic, with many angles that offer equal value insights to the inner workings of these business ecosystems. In this opinion paper, we do not aim to confirm or challenge the many existing academic research already established, but instead offer our experience and insights as practitioners in business ecosystems.

As a case study, the digital innovation ecosystem in financial services was chosen. In a drive for a more seamless payment experience and improved related services, data-sharing regulation<sup>4</sup> has forced the incumbent service providers (banks) to allow third parties (fintechs) to innovate on top of the existing interbank infrastructure. As such, banks and fintechs have entered a relationship that can fluctuate between cooperative, parasitic or even symbiotic, depending on who you ask.

In this opinion paper, we will explore three different viewpoints on ecosystem

relationships, which are laid out in Chapters 2 through 4, which we then develop into general recommendations for a firm’s positioning strategy. The recommendations per chapter relate to firms in certain situations or with certain aspirations, respectively: a firm countering an immediate competitive threat; a firm seeking to cover ground and market capabilities before other ecosystem members do; and a firm in the underdog position, aiming to slingshot upward after a catalyst event. These three profiles could happen in quick or long-term succession, or they may even happen simultaneously. However, elements of each can be interchanged to fit the reader’s localized situation.

First, we discuss the viewpoint of an incumbent bank, which focuses on the deciding factor of access to the targeted customers. Next, we introduce the viewpoint of an orchestrator, where the emphasis lies on building the ecosystem partnerships based on availability of scarce resources. We conclude with the academic viewpoint, stating that systematically, establishing network connections with as many ecosystem participants as possible, guarantees insulation from shocks that might wipe out weaker, less connected firms. To further our understanding of

1 <https://atos.net/en/lp/unlocking-virtual-dimensions-report>

2 <https://atos.net/en/lp/journey-2024>

3 Chen, Ming-Jer, and Danny Miller. “Reconceptualizing Competitive Dynamics: A Multidimensional Framework.” *Strategic Management Journal* 36, no. 5 (May 1, 2015): 758–75. <https://doi.org/10.1002/smj.2245>.

4 [https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366\\_en](https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366_en)



the topic, we interviewed Sean Hunter, a fintech subject matter expert that has experienced first hand how the relationship between incumbent banks and fintechs works and what the deciding factors for this cooperation can be. We intersperse excerpts from this interview throughout before adding final thoughts and recommendations in Chapter 5, based on the sum of the theoretical and empirical discussion.

### Ecosystems explained

In this paper, we explore ecosystems and seek to provide a foundational understanding of potentially ambiguous terms like *ecosystems*, *dominance*, *resources* and *scarcity* as we use them hereafter. In support, we offer a comparison between biological and market ecosystems, which we then put into the context of the digital innovation ecosystem of financial services.

### Ecosystems: Biological context to collaborative digital innovation

Ecosystems are vibrant natural settings populated by diverse collections of different organisms. Over time, these organisms create relationships with each other (or are evolved from relationships)

and, as in any situation of resource scarcity, strive to exert resource dominance over competitors. Just as they exist in nature, ecosystems exist among human organizations. The parallel dynamics become particularly interesting among business ecosystems, and strategic thinking can be advised by replicating how some of these dynamics occur in the natural world.

To begin with parallels to business ecosystems in general, consider the concept of coexistence among species. For example, figs are exclusively pollinated and used as egg-laying chambers by a highly specialized wasp; neither can reproduce without the other. Likewise, *highly specialized mutualism* exists between companies that use niche knowledge to construct specialized components of a whole system. In cases such as the Philips Hue smart lighting system and the collective of developers who created complementary apps that make it usable across a variety of media<sup>5</sup>, the system could not proliferate (and therefore survive) without the individual components and the components could not exist without the system.

Of course, other types of coexistence exist. Parasitism, predation and coadaptation can be seen in instances of:

- Companies closely mimicking and profiting off of another company's product design without paying into its R&D
- Large companies using their capital and influence to "embrace, extend, and extinguish"<sup>6</sup> competitors, sometimes in the process seizing their IPR<sup>7</sup>
- Companies existing peacefully alongside each other while each weathering a disruption in their own, non-competitive ways (co-adaptation)

These examples from the fields of biology and business indicate that within ecosystems some form of dominance or hierarchy is established based on the mutual dependencies and individual interests / strategies of the ecosystem participants.

An organizational ecosystem is defined as a "group of interacting firms that depend on each other's activities."<sup>8</sup> Companies with horizontal histories typically become entangled in several ecosystems at a time, which can provide potential pathways to lucrative, cross-industry offering portfolios.



<sup>5</sup> Hilbolling, S., Berends, H., Deken, F., & Tuertscher, P. (2020). Complementors as connectors: Managing open innovation around digital product platforms R&D Management, 50(1), 18–30. <https://doi.org/10.1111/radm.12371>

<sup>6</sup> US Department of Justice. (1999). US v. Microsoft: Proposed Findings of Fact—Revised. <https://www.justice.gov/sites/default/files/atr/legacy/2006/06/01/V-A.pdf>

<sup>7</sup> Intellectual Property Rights

<sup>8</sup> Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. Strategic Management Journal, 39(8), 2255–2276. <https://doi.org/10.1002/smj.2904>

However, this is a high maintenance *modus operandi* that leaves managers without clear answers on where they should focus their strategic energy. In this opinion paper, we will focus on the fintech ecosystem in order to explore what ecosystem dominance means, what it looks like in an increasingly data-driven world, and how decision makers can adjust their strategies accordingly to seize it.

### Fintech: An ever-changing stage

Defining the term “fintech” is approximately as difficult as delineating the boundaries of the fintech ecosystem altogether. Where does the population of fintechs stop, for instance, and the population of insuretechs begin? Bypassing such muddled questions in favor of a portable definition, we use the term in this paper to mean “an organization using 21st-century technology... to provide, ease, and automate financial... services of any kind.”<sup>9</sup> The fintech ecosystem in this paper then, applies to firms that interact non-hierarchically and create interdependencies linked to fintech ventures’ offerings and not to a persistent socio-political structure.

This ecosystem is perhaps most notable for the rapid developments following the implementation of the European Union’s Payment Services Directive (PSD 2). The fintech ventures that sprung up in its wake are captained by inventive minds that have had no problem keeping the ecosystem’s pace of innovation at an all-time high. Often, it is the small startups, free from the heavy chains of corporate stakeholders and therefore much more agile than large-scale competitors, that are doing the heavy lifting in terms of breaking technological and innovative barriers. Even more impressive is that this phenomenon exists despite the financial sector’s comparatively heavy regulation and scrutiny by external stakeholders that, in other sectors, would preclude the broad existence — not to mention flourishing — of small startups.<sup>10</sup>

Faced with their small-scale competitors’ unmatched speed and subsequently an unpredictable ecosystemic future, legacy banks, insurance providers, and the like run the extreme risk of falling behind and into irrelevancy. However, it

is also not enough to simply catch up. While being a technological pioneer is not always ideal in terms of enduring success,<sup>11</sup> being towards the leading edge of ecosystem innovation is probably the most advantageous spot for any legacy firm that wants to have a foreseeable future in this digital age.

Likewise, effective innovation does not happen in silos. It is an uninterrupted process that constantly occurs<sup>12</sup> among

many different actors and under an impossibly diverse set of terms. Though legacy corporations hold most of the ecosystem’s capital and data, they do not hold a majority of its knowledge. Capital and data are useless without knowledge that can competently leverage both. Dominance in any of these categories means control over a significant portion of the ecosystem, which leads to a standoff here between the different parties. Which is in control?



The thing that fintechs in particular bring to a partnership with a bank is the ability to innovate, to move fast, to experiment. Some of that is, I think, due to regulation, but I think also some of that is just due to the fact that when an organization gets large, it builds up a kind of internal inertia that prevents it from innovating or makes it challenging to innovate - because large organizations aren’t so tolerant of internal disruption.

- Sean Hunter



<sup>9</sup> Ellis, S. J., Völkl, B., & Röttger, J. (2019, October 18). Fintech: Defining a Constantly Evolving Term. The FINDER Project. <https://thefinderproject.eu/2019/10/18/fintech-defining-a-constantly-evolving-term/>

<sup>10</sup> Eberhart, R. N., Eesley, C. E., & Eisenhardt, K. M. (2017). Failure is an Option: Institutional Change, Entrepreneurial Risk, and New Firm Growth. *Organization Science*, 28(1), 93–112. <https://doi.org/10.1287/orsc.2017.1110>

<sup>11</sup> Khanagha, S., Ansari, S. (Shaz), Paroutis, S., & Oviedo, L. (2019). Drafting-off a platform ecosystem to create a new one: A study of Cisco and fog computing. DRAFT.

<sup>12</sup> Garud, R., Berends, H., & Tuertscher, P. (2017). Qualitative Approaches for Studying Innovation as Process. In *The Routledge Companion to Qualitative Research in Organization Studies*. Routledge.

## 2. The Incumbent Viewpoint

Fundamentally, and for this section's purposes, there are direct and indirect players involved in the financial services ecosystem. Direct players are actively involved in day-to-day activities that have measurable effects on the ecosystem, whereas indirect players fall in the former group's sphere of influence. These two types of players interact within their groups, between their groups, and alongside several other factors to leverage scale and customer access as a key control mechanism in the ecosystem.

Let us dive into further detail on direct players, namely fintechs and financial service providers. Fintechs offer competing alternative technology-based services. For the purposes of this discussion, their key resources are technological and analytical capabilities such as artificial intelligence and algorithms, as well as the ability to provide solutions for niche problems. Financial services providers adopt fintechs' solutions and occasionally develop their own similar solutions — whether to compete, because of an acquisition, or within a strategic partnership matrix. Their key resources are a broad range of financial products that meet the basic needs of their large customer bases. Fintechs and financial services firms have the common goal of realizing a better, improved product offering and experience for financial services customers.

Indirect players are not as involved in the day-to-day activities of the ecosystem's main drivers, but they are its engine and power-steering: financial services customers and regulators, respectively. Financial services customers are the end users of a solution. These can be individuals or other businesses (in B2C and B2B transactions, respectively), and the adoption curves differ among them. Regulators look to promote competition and innovation with fintech solutions, while safeguarding the interests of local society and specific customer groups, as well as promoting transparency and prudence among players in the financial services industry.

These players interact within the fintech ecosystem, which is an area of overlap between the innovation ecosystem and the financial services ecosystem. This overlap is characterized by multiple components. On one hand, an evolution, revolution, or constant state of flux is often initiated by fintechs, their investors, and increasingly financial services providers. These stakeholders embrace and apply technology to improve processes and products in terms of quality, efficiency and/or costs, which changes business models and improves competitive positioning, among other impacts. On the other hand, one should also consider that the adoption of change is directly and indirectly determined by regulatory constraints and the end customer.

Regulatory constraints imposed on incumbent financial services providers strongly influence the change and strategic calendars of these firms. Regional differences among them do exist, even within the EU. As such, this does not influence the *will* to adopt innovations as much as the ability and capacity to implement innovations within the ecosystem in the context of limited resources.



B2B and B2C end customers are a very heterogeneous group with different adoption patterns when it comes to innovation. End customers are key to both the financial attractiveness and viability of the innovations, since most thrive on scale. However, both fintechs and financial services providers have a common goal: helping these end customers while using them as a key resource and success factor for financial innovations. With their large market share, financial services firms mostly control this resource, although differences occur across user groups. They use this to shape the cooperation with fintechs.

Although in a constant state of flux, this ecosystem is moving towards an equilibrium that will be beneficial for most players — if they take into account the customers and the regulatory constraints in place to protect them.

In an ideal situation for financial services firms, there is some degree of coexistence and cooperation where they work together — albeit in the form of a partnership or sourcing relationship such as procurement, partial ownership or full ownership. Working together enables financial services firms to spend sufficient time on the mandatory regulatory changes while simultaneously adopting innovations in a timely fashion.

### 3. The Orchestrator Viewpoint

The financial services industry has completely changed the way it works for and with its clients. The perfect storm that has come together with regulation (PSD2), demographic change (rise of the Millennials), and technology (maturing AI, IoT/edge, blockchain, etc.) is forcing banks to up their innovation game and reconsider their data strategy.

The key word here is **data**. Digital banking began in the early 1960s with the rise of the first mainframe computers and the start of automated payment processing. Through its 60-year monopoly on digital banking services, the financial services industry has accumulated a vast amount of data on a large segment (if not all) of society. With every digital milestone — in-home banking in the 1980s, online banking in the late 1990s, and mobile banking in the 2000s — the adoption of the digital banking services grew.<sup>13</sup> With it, grew the amount of data available for customer analysis. But how should banks handle all this data? What can they do with it?

By nature, most banks are slow to innovate and laggards with regards to adapting to change, and for good reason. Early innovation involves risk, risk can lead to

financial or reputational damage, these damages could lead to a loss of trust, and a loss of trust could lead to clients moving their hard-earned capital to a different bank. Then, there are overseers that expressly forbid certain innovations for the systemically important banks. Despite all this, banks will need to innovate in order to remain relevant during these times of change. Without leveraging the wealth of financial data at their disposal, facing all the challenges mentioned earlier seems impossible to achieve.

That's where fintechs come into play. Small, agile organizations that typically focus on niche services without the watchful eye of regulators and public opinion, fintechs can offer quick financial services innovations with minimal time between conception and market deployment. Their services may be niche, but they will most likely be well developed and easy to adopt.

Their most valuable resource isn't money — since venture capitalists are relatively generous to this field in general. Instead, their most valuable resource is talent. The ideas and technological skills that their personnel offer is essential to them, much

more than they are to large companies with star power. However, because fintechs lack brand awareness and reputation, they must aggressively hunt for clients and exposure, as well as ensure they meet all regulatory compliance requirements.

Of course, banks sit in the other camp. They offer large stores of data about their clients and account holders, as well as money and pre-existing compliance as major resources to barter with. Without the unique sets of client data, any fintech would find it difficult to build any appeal for their services, no matter how advanced their technology. Additionally, banks have significant experience in ecosystem innovation to offer. The *coopetition* business model<sup>14</sup> is a long-standing tradition — enabling banks to tackle the regulatory-driven innovation (SEPA, PSD2, eIDAS, real-time payments, etc.) that has dominated their change agendas for the last decade or so.

Because they have a reputation to uphold and stakeholders to satisfy, banks must safeguard their assets and carefully select the right partners and the methods for finding them. The ecosystem of fintechs can be overwhelming both

in size and volatility, which has given rise to orchestrator functions (like the Atos Fintech Engagement Program<sup>15</sup>) and fintech hubs (like TechQuartier<sup>16</sup> in Frankfurt, Germany).



<sup>13</sup> Barnes, S.J.; Corbitt, B. (2003) Mobile Banking: Concept and Potential, International Journal of Mobile Communications, vol.1, pp.273-288

<sup>14</sup> Bengtson, M.; Kck, S. (2000) "Coopetition in Business Networks – to Cooperate and Compete Simultaneously. Industrial Marketing Management, 29(5), 411-42. <https://www.sciencedirect.com/science/article/pii/S001985019900067X>

<sup>15</sup> <https://atos.net/fintech/home>

<sup>16</sup> <https://techquartier.com/>



These quick profiles show the very different natures of these ecosystem partners. Banks are financially stable, enjoy lifelong relationships with their clients, and are relatively slow to change. Fintechs, on the other hand, are organizationally agile and focused on applying emerging tech to bring new levels of service to their clients. As a result, the three major resources that this digital innovation ecosystem competes for — data, talent and capital — are shared unequally between both partners, which gives rise to the question of ecosystem dominance. Who needs the other's resources more?

The three main resources at play in the relationship between fintechs and banks are data, talent and capital.

In this context, data represents the available information about individual account holders as potential customers for both banks and fintechs. This data includes not just financial information, but also knowledge about their income, spending habits, interests and activities. Talent stands for the availability of trained workers with the technological and business skills required to build digital innovations. This includes data scientists, blockchain developers, customer experience specialists and others. Finally, capital is the funding required to build, market and maintain these digital services.

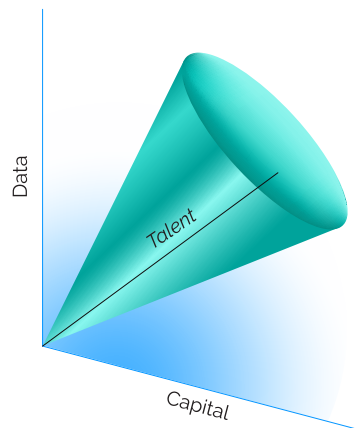


Figure 1. The cone of optimum firm resource balance between data, talent and capital.

The three-dimensional space between these resources depicts how the resources are spread between partners in any given relationship. The cone illustrated in Figure 1 shows the ideal equal spread and availability of the resources, which forms the sweet spot where there is no limiting factor in the relationship, thereby allowing for an effective partnership. This model can help banks and fintechs alike, as they attempt to identify the right partners to supply whatever resource is currently lacking to effectively build digital innovation.

### Reflections on Dominance

Due to the longstanding order of things, dominance logically favors banks due to their size and market position. Resource competition can change that. If the availability of talent overtakes money or customer access as the most valuable resource, perhaps fintechs will gain an advantage over banks. Money is usually not a differentiator either way. Banks typically have sufficient funds, whereas fintechs tend to attract investors to fill this need. However, because banks can also act as investors, banks can reaffirm their potential dominance over this axis as well.

An interesting parallel is dominance within banking associations. Big banks often dictate the *modus operandi* for all banks, mostly because smaller banks are happy to take a back seat and wait to see how the big players handle the challenge at hand before choosing their own strategy. How then does this play out with fintechs?

As central players, the dominance in this relationship is difficult to assess, especially if a middleman is introduced — like system integrators (on behalf of the bank) or fintech hubs (on behalf of the fintech). These parties may (or will) introduce additional factors into the relationship in the form of partner preferences or bundled offerings.



There's definitely a disparity of economic power... the bank is much larger and they're writing the checks. but I think that that's not necessarily a bad relationship for the fintech either, because you've got a captive customer who really wants you to succeed... assuming you have a customer-one relationship. As a fintech, that's incredibly valuable because... they're going to give you direct access to the right stakeholders... they're going to try to hold your hand and help you when things go wrong, they're going to give you direct, honest feedback about your product. All those things are incalculably invaluable for a startup company.

- Sean Hunter



## 4. The Academic Viewpoint

Control over a market population, as far as it is required to dominate or exert dominance over any subset of that population, is a tricky thing to obtain. Does holding a critical share of the ecosystem's valuable resources (such as data or, more importantly, access to data) equal control, or is that simply a means to control?

The same question applies to any instance where a firm seeks to pull institutional levers in its favor, such as influencing high-level decisions made by regulatory bodies or campaigning to become a primary organizer of some powerful industrial association. These are effective ways to adjust the constraints that all ecosystem participants must abide by, but do they mean the firm in question is dominant among its peers? To answer this question, we must look beyond the definition of dominance as an organization's ability to exert its own will on others. Rather, we suggest that for a firm to be truly dominant, it also needs robust insulation from ecosystem shocks that periodically and necessarily wipe out ecosystem participants. In other words, *defense is just as important as offense*.

Moment-centric markets, or MCMs,<sup>17</sup> are a suitable example of this concept. A moment-centric market is an emerging concept of economic operation, wherein supply chains of goods create and add value to those goods if and only if there is a current market demand for them. The MCM concept stands in opposition to current models, where resources are refined and goods are manufactured at rates determined by the supply end of the chain. The current system is attractive because it does not require as much expensive infrastructure oversight, but also creates wasteful surpluses and consequentially, disproportionate environmental degradation.

Consider this: If MCMs were born of necessity (such as constraint-driven supply chain streamlining or societal pressure to create ethical value chains), *establishing redundant partnerships to establish a central position in the ecosystem is a low-cost way for firms to preemptively mitigate unforeseeable shocks* — such as the next COVID-19 or a catastrophic failure of the orbital satellite network.<sup>18</sup>

However, an important corollary is that through the process of periodic shocks and recoveries — or “booms and busts” to borrow from Keynesian economics — the center point of any given ecosystem will shift over time, and the firm at that focal point must move accordingly.

To explain what we mean, let's look at an analog from a natural ecosystem before getting to the technical explanation of how to do it. Consider the polar bear, the dominant species of the polar ice cap. While polar bears occasionally prey on other mammals, birds and fish, their primary prey are blubbery, calorically dense seals, which they hunt by stalking the breathing holes they make in surface ice or by ambushing them as they rest atop the ice. These stalking and ambushing skills must be maintained, and time spent hunting other prey (which requires different skillsets) is time not spent honing seal-hunting skills. During booms, where habitats are static and the ecosystem is flush with nutrients that allow the seals to fatten and reproduce, the polar bear (which represents a dominant firm) will likely focus only on hunting seals as a means to survive. They are calorie- and nutrient-rich and it might not make sense to focus on less dense prey in such times.



<sup>17</sup> As described in Journey 2026: Unlocking Virtual Dimensions

<sup>18</sup> An often overlooked but increasingly likely scenario that will have devastating, far-reaching consequences on global maritime and air shipping and travel as well as aerospace and defense. For more, see <https://www.orbitaldebris.jsc.nasa.gov/remediation/>

However, during ecosystem busts when nutrients are scarce or climate disruption melts the ice upon which they hunt, polar bears are forced to rely on other animals as prey. Seals are more agile in water and therefore much more difficult for bears to hunt. If the polar bears did not have the skills required to hunt birds and fish, they would be at extreme risk of being starved out of the ecosystem during busts.

While the environmental disaster happening at our polar ice caps is an urgent issue that we cannot ignore, at least

in this opinion paper we can take solace that — in business ecosystems — these decisions are not typically a matter of life or death. Yet, the risks are the same. Centralizing partnerships on only a few necessary ecosystem contacts puts a business at unnecessary risk that can be easily mitigated by establishing redundant partnerships, even if they remain dormant until an emergency arises.

Our argument here is not so lofty as to assert that individual companies should be concerned with making the ecosystems

in which they operate more egalitarian; we mention that only as a beneficial side effect. Still, just as in socioeconomic development studies, there is philosophical merit backed by clear evidence<sup>19</sup> that *in business ecosystems, dense networks of collaborative ties have a positive effect on the health and wealth of the entire ecosystem*.

Perhaps most importantly, if the focal firm finds a way to position its narrative as being the ecosystem's pioneer of altruism, positive assessments of the firm's

contributions will yield significant soft power benefits down the line.

This is not to say that every ecosystem participant will follow a linear trajectory of growth, nor that every firm in the ecosystem will survive. As business leaders, analysts and researchers understand almost as well as ecologists, the death of some ecosystem participants is necessary for the good of the entire ecosystem. It is, however, this very death that systematic centralization aims to prevent.



I think there's definitely a philosophical difference between people who are looking to increase their size of the pie versus people who are trying to sort of grow the pie for everyone... I think growing the pie as a [small company] has to be your focus, trying to make things better for your direct customer and also for their end customer. For us, for example, if we go to a customer and they say 'hey we need a CRM system,' I go 'hey, I'll introduce you to our contacts at Salesforce, we know that they can get you sorted out.' I get dollar zero from that obviously, but in actual practice, my motivation entirely is to make the whole package work for the customer, because if I do that, then we are an integral part of an ecosystem that works well for them and is successful and ultimately we're going to be successful that way."

- Sean Hunter



<sup>19</sup> E.g. Chen, M.-J., & Miller, D. (2015). Reconceptualizing competitive dynamics: A multidimensional framework. *Strategic Management Journal*, 36(5), 758–775. <https://doi.org/10.1002/smj.2245013.02.033>

## Strategically Centralizing

Centrality is distinctly agnostic of resource ownership or authorship of industry standards. Here it simply means having a dense series of connections to other densely connected entities within the ecosystem.

Figure 2 represents a hypothetical emergent ecosystem over time. On the left is a sparsely populated ecosystem, the inhabitants of which are small, perhaps new companies with comparatively little market strength. On the right is that same ecosystem after it has matured and captured more of its local market share. Some of the initial entrants depart the ecosystem or fail. In any case, their gaps are filled in by extant or new ecosystem members that mature and form new bonds over time.

As firm boundaries move closer and closer together, so do their connections with supply and production partners. However, fringe members (shaded in red) see a proportional relationship between their growth in the market and their level of dependence on comparatively few market partners.

In other words, *if fringe companies stay at the fringe, their growth becomes a liability, as the survival of their now-larger business becomes reliant on individual*

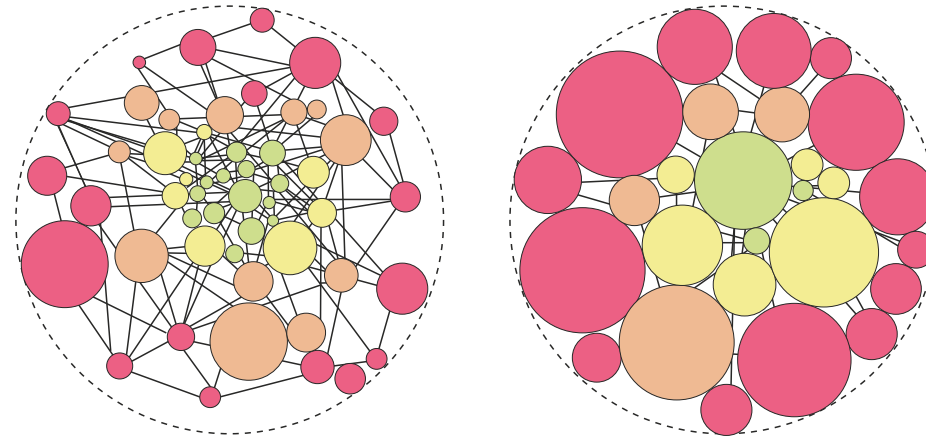


Figure 2. An ecosystem map over time, where highly connected firms centralize and loosely connected firms get pushed outwards.

*relationships*, which are potential single points of failure. This is unwise strategic positioning, of course, and the more favorable angle is that of the centralized companies (shaded in green).

These companies are insulated from their own failure despite the potential failure of complementary firms in the ecosystem, due to the backup and redundant supply and production partnerships they have formed. You can see this in other

ecosystems and ask yourself a simple hypothetical question to test the veracity of this argument: *Which is more likely to fail: Toyota, or one of its many parts suppliers?*<sup>20</sup>

Another key benefit to strategically centralizing the firm is the ability to leverage network effects to broker and orchestrate connections among these entities.

Suppose Company A requires Component  $\Theta$  for a new, experimental go-to-market offering. It could very well manufacture Component  $\Theta$  itself, but if this is not within its range of existing competencies, spinning up the R&D will take more time than outsourcing half of the production to Company B and half to Company C (companies with the competencies to produce instantly). This way, Company A can still protect its IP by disaggregating and possibly encrypting its production, and it is also enlisting two other firms as stakeholders now invested in Company A's success. Getting to or achieving this position may not come with grandeur and flair. Instead, it likely involves overwhelming conformity to ecosystem norms while eking out a modest, yet optimal firm distinctiveness.<sup>21</sup>

Of course, the digital nature of a data-based ecosystem effectively eliminates geographic limitations on achieving this position in most cases. Geography is a factor to consider in cross-firm partnerships, but close is not always best.<sup>22</sup> Additionally, regulatory steps such as PSD2 are intended to make previously elusive datasets more widely available — to the point where fringe members of an ecosystem could, in many ways, leverage proximal data stores with significant success.

<sup>20</sup> Aoki, Katsuki, and Miriam Wilhelm. "The Role of Ambidexterity in Managing Buyer-Supplier Relationships: The Toyota Case." *Organization Science* 28, no. 6 (December 2017): 1080–97. <https://doi.org/10.1287/orsc.2017.1156>.

<sup>21</sup> Zhao, E. Y., Fisher, G., Lounsbury, M., & Miller, D. (2017). Optimal distinctiveness: Broadening the interface between institutional theory and strategic management. *Strategic Management Journal*, 38(1), 93–113. <https://doi.org/10.1002/smj.2589>

<sup>22</sup> Ben Letaifa, S., & Rabeau, Y. (2013). Too close to collaborate? How geographic proximity could impede entrepreneurship and innovation. *Strategic Thinking in Marketing*, 66(10), 2071–2078. <https://doi.org/10.1016/j.jbusres.2013.02.033>



## 5. Conclusion and Recommendations

In summary, this opinion paper concerns positioning strategies that business leaders can deploy in ecosystems to secure an advantageous dominance among their peers. While our arguments are primarily geared towards businesses whose activities take place in existing ecosystems, it is also worth mentioning that ecosystems can certainly be created around almost any product or service with multiple moving parts. In advanced cases where business leaders form ecosystems around their products or services, the benefits of our strategies are compounded by the architect's advantage. Examples of this include Ingenico's open development environment<sup>23</sup> for building third-party apps that can enrich the payment experience for both the shop and shopper. Though the app builder certainly benefits from the use of its app, Ingenico arguably benefits most through the growing appeal of its product.

Each strategy boils down to leveraging a focus. In the first strategy, which we label **customer access**, focus is on who brings the most relevant access to a customer base, which a focal firm can disintermediate and subsequently leverage to create its own value-added services. The primary difficulty faced by firms employing this strategy is that the consumer is an indirect market participant and, in that sense, is not as invested in

the market as the direct players — like financial services providers and fintechs. Thus, the business leader pursuing this strategy must devote considerably more time and energy on a largely disinterested market body to achieve ecosystem dominance, which is related to the concept of customer centrality. However, this focus views the turbulence of ecosystem disruption (such as in the wake of a game-changing technological innovation) as momentary, and ecosystem equilibrium as the end goal. Therefore, if we consider ecosystems to be in constant flux with intermediate periods of stability, we surmise that *this strategy is best suited as a near- to mid-term tool for business leaders needing to react to and overcome some kind of threatening externality such as an encroaching competitor*.

Our second strategy, called **resource focus**, begins with an emphasis on data, talent and capital as distinct but interrelated and interoperable resources. While this focus emphasizes the importance of *having* these resources, we would argue that *striking a strategic balance between* these resources is more crucial for incumbent firms to establish leading positions within an emergent ecosystem. To clarify, this does not refer to the total assets held by a firm, but only those that it dedicates to ecosystem

development activities. Thus, this focus suggests that if a firm successfully secures *X* amount of internal funding to begin deploying its strategy, the strategy must also make up for the proportionate differences in missing talent and data. As such, an orchestrator can reach its innovation ambition by bringing partners into the ecosystem to fill the existing resource gaps. The wealth of funding opportunities available for smaller fintechs demonstrates that capital is no longer the sole resource that firms require to rise to the top of their ecosystems. Firms flush with data and talent must similarly find funding to further develop and scale their services, likewise with the other permutations of this triad of resources. One point of attention here is that a resource focus will often be the result of an internal ambition, rather than a more dynamic co-innovation situation. As such, resource focus is often applied to execute on a plan. At the core of this strategy is the idea that *these differences can be compensated for by strategic partnerships with other firms, making this an internally-focused strategy for firms seeking to explore available or emerging market gaps in their immediate vicinity*.

The third and last strategy, called **strategic centrality**, is defensive in nature and agnostic of the material or circumstantial

assets of the firm. It argues that, regardless of size or stage, a firm can methodically establish more and more partnerships in its ecosystem. After enough of this work is completed — which can be as simple as a handshake or as complex as integrating a partner's services into your portfolio — the firm will have inextricably linked itself to nearly every other player in the ecosystem. Granted, such a strategy requires a strong commitment and constant upkeep of the network, but beyond the simple benefits of networking, businesses that deftly maneuver in this way will find themselves bound to other strong players in the ecosystem and thus insulated from ecosystem shocks that wipe out weaker, less interconnected participants. When mapped as we have in Figure 2, this scenario may look like the bunching up defensive behavior that animal herds deploy when fending off predators. However, the key idea about dominance is that weathering difficult times is just as important for ecosystem members as it is to be punchy and innovative during easy times. Thus, *we recommend this strategy for businesses that are not presently positioned to overtake competitors in the near-term, but that also forecast a set of circumstances in the near- to mid-term that might drastically change the competitive landscape and open opportunities for them to emerge on top*.

<sup>23</sup> <https://developer.ingenico.com/>

In conclusion, we want to make clear that none of these strategies are mutually exclusive. It is generally understood that the winning arsenal for business leaders consists of adaptive combinations of strategies that change according to what is presently available, what is presently concerning, and what is presently demanded of them by their stakeholders. Consider the recommendations we have made for each strategy: a firm countering an immediate competitive threat; a firm seeking to cover ground and market capabilities before other ecosystem members do; and a firm in the underdog position, aiming to slingshot upward after a catalyst event. These three profiles could happen in quick or long-term succession, or they may even happen simultaneously and to different arms of a single company.

What emerges as most important for business leaders is to make a sober analysis of their firm's position minus the high-gloss varnish and pumped-up self-appraisals that managers often find themselves surrounded by. They must be acutely aware of what awaits them in the near-term future and prepare accordingly, with the innovation ecosystem of their choosing.

Strategy	Focus	Key Drivers	Points of Attention
<b>Customer Access</b>	Access to (potential) customers, direct participant in their day-to-day economic activity	Ecosystem equilibrium, handling temporary intrusions	Requires more energy and attention to get the indirect participants (customers) invested
<b>Resource Focus</b>	Orchestrate a balanced availability of resources: data, talent, capital across the innovation ecosystem	Exploring available or emerging market gaps	Internal focus on a pre-defined innovation
<b>Centrality Strategy</b>	Central and well-connected position in the ecosystem	Preparing to benefit from changing circumstances	Very labor-intensive, requires constant attention

Table 1: summary of the ecosystem dominance strategies

# Acknowledgements

The authors wish to express their distinct gratitude to the people below, who have been instrumental in the creation of this opinion paper. Without their invaluable support, this document could not have been made.

First and foremost, thank you to **George Dermowidjojo** for sharing your vast knowledge and experience in banking strategy. We are equally grateful for all your hands-on contributions, which strongly defined the direction the paper moved into.

**Sean Hunter**, thank you for taking the time to share your insights into the challenges of the fintech domain and the wisdom you have gained from your impressive career. An opinion paper like this would be merely theoretical without insight that experienced practitioners like you can provide.

**Remco Neuteboom** and **Rick Aalbers**, thank you for bringing your wisdom, experience and network to our disposal, and for jump-starting this collaboration between Atos and Radboud University in the first place.

Big thanks also to the full **FINDER team** for your continued support and reflection. Many of your comments and ideas have inspired us to continue to improve, and the final result is much better for it.

Another big thanks as well to the **Atos Scientific Community** for helping us improve this paper through your collective revisions and comments. We are especially grateful to the following members for their detailed expert review: **Manish Saxena**, **Frederik Kerling**, **Joshua Williams**, **Ramon van Knippenberg**, **Eltina Ouwehand**, **Thierry Caminel**, **Carrie Chow**, **Thomas Höllweger**, **Patrice Aubinaud** and **Jan Krans**.

And finally thank you deeply, **Francisco Pinheiro**, for your unwavering support in progressing this paper from rough draft to polished publication. Muito obrigado meu amigo!



This opinion paper has been created in collaboration with the FINDER program. This project has received funding from the European Union's Horizon 2020 research and innovation program under the Marie Skłodowska-Curie grant agreement No 813095. The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

# About Atos

Atos is a global leader in digital transformation with 112,000 employees and annual revenue of c. € 11 billion. European number one in cybersecurity, cloud and high performance computing, the Group provides tailored end-to-end solutions for all industries in 71 countries. A pioneer in decarbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos is a SE (Societas Europaea) and listed on Euronext Paris.

The [purpose of Atos](#) is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

[Find out more about us](#)  
[atos.net](#)  
[atos.net/career](#)

Let's start a discussion together



Atos is a registered trademark of Atos SE. December 2022. © Copyright 2022, Atos SE. Confidential Information owned by Atos group, to be used by the recipient only. This document, or any part of it, may not be reproduced, copied, circulated and/or distributed nor quoted without prior written approval of Atos.