Ecosystems Inc.

Understanding, harnessing and developing organizational ecosystems

in partnership with

ECSI Consulting HMI

Curated by **Stuart Crainer**

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www.thinkers50.com

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Published by Thinkers50 Limited

The Studio, Highfield Lane, Wargrave RG10 8PZ United Kingdom

First published in Great Britain 2020

ISBN: PDF edition 9781999315764

ISBN: ePub edition 9781999315771

ISBN: Mobi edition 9781999315788

Design by www.jebensdesign.co.uk

> *A business ecosystem, like its biological counterpart, gradually moves from a random collection of elements to a more structured community. Think of a prairie grassland that is succeeded by stands of conifers, which in turn evolve into a more complex forest dominated by hardwoods. Business ecosystems condense out of the original swirl of capital, customer interest, and talent generated by a new innovation, just as successful species spring from the natural resources of sunlight, water, and soil nutrients.*

James F. Moore, 'Predators and prey: a new ecology of competition', *Harvard Business Review*

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Introduction

Stuart Crainer

In 1911 if you had wanted to seek out the future at work, you would have boarded a Detroit-bound train. Once in Detroit, you would have made your way to one of its suburbs, Highland Park, Michigan.There you would have seen one of the wonders of the industrial world, and the first great management wonder of the twentieth century: the Ford factory. The company's Highland Park plant was opened in January 1910, covered 63 acres, and produced 15 million Model Ts between then and 1927. More than 700,000 were built in 1917 alone. It was the industrial triumph of its time.

The moving assembly line was tried out at Highland Park in April 1913. It worked. Labour productivity at Ford increased tenfold according to one estimate. The assembly line reduced the time taken to build a motor from nine hours and 54 minutes of labour to five hours and 56 minutes. Previously it had taken 728 minutes for Ford to make a chassis – this method involved parts being carried to a stationary assembly point. The assembly line (actually a non-too-technical rope pulling the chassis past stockpiles of components) reduced the time to a mere 93 minutes.

In 1914 the Ford Motor Company with 13,000 employees produced 267,720 cars; the other 299 American auto companies with 66,350 workers produced only 286,770 cars. Ford had 48 percent of the American car market, with $100 million in annual sales. Four years later, at the end of World War I, almost half the cars on earth were Model Ts.

After the success of Highland Park came Ford's "industrial masterpiece" at River Rouge, Michigan. River Rouge opened in 1918 and reached full capacity by the mid-1920s – in 1923 Ford's Model T production peaked at two million. River Rouge was two kilometers long and one kilometer wide. At capacity it employed 81,000 people, covered nearly seven million square feet and cost the company $267 million to construct. It made Highland Park look positively small. Its creation marked a shift in emphasis. Ford's desire for cost reduction gradually became subsumed under a desire for control.

During the First World War, Ford, like other manufacturers, had had to cope with the rationing and control of raw materials. Henry Ford grew increasingly impatient with his suppliers. Most of Ford's suppliers of tyres, upholstery fabric and the like, were situated in and around Detroit. The trouble was that Ford's increased demands for materials meant that arranging supplies and making deals with suppliers was becoming ever more time-consuming. Coordination was a nightmare so Ford started stockpiling raw materials and other supplies. This went against the founder's instinct to control costs.

The result was that self-sufficiency became Ford's new mantra. River Rouge was a hungry monster. Raw materials were poured in at one end and, just over a day later, emerged at the other end as Ford cars. It was ambitiously integrated. With a huge pile of cash, Henry Ford could cut out the middlemen. He bought a railroad, 16 coal mines, about 700,000 acres (285,000 hectares) of timberland, built a sawmill, acquired a fleet of Great Lakes freighters to bring ore from his Lake Superior mines, and even bought a glassworks. Ford's power and influence was such that a string of companies lay under his command – from the iron mines of northern Michigan to the jungles of Brazil. And the only gearing was in the cars. Not a cent was borrowed.

Ford became the ultimate in vertical integration. Every day one of the company's freighters would arrive with the day's supply of iron ore that had been extracted from the company's mines. The ore was heated with fuel from the company's coal mines. Then there was wood from the company's forests, rubber from its plantations, and so on.

Fast forward

Even now, there is something deeply impressive about what Ford achieved. It is not so much the number of cars he manufactured nor the society-changing impact of those automobiles, but the feeling of control. The linear model pursued so brilliantly by Ford suggested that a corporation could control all aspects of its business. It could eliminate uncertainty among suppliers by taking their businesses over. It could dominate all aspects of production.

Few organizations could contemplate such levels of market dominance and control over their supply chain as Ford managed. But modern-day corporations exert control in other ways. I was looking recently at the number of start-up companies purchased by one of the Silicon Valley tech giants. It makes sense. A corporate behemoth often struggles to come up with new technologies and bright entrepreneurial ideas. Why not allow others to take the risk and then acquire them and their technology at a time that is convenient to you? But, looking at the companies absorbed by the giant, I was struck by how few of the start-up founders actually hung around. They

tended to take the money, look around at their new corporate home and head to the nearest exit. Many of the companies were absorbed and then seemed to become forgotten – their brands consumed and their tech seamlessly incorporated or simply left to languish on the corporate periphery.

Companies can't help seeing the world as a place to be controlled. The mass-producing organizations of the twentieth-century thrived on control. That was what they were designed to take advantage of. In the twenty-first century, the organizational dynamics are radically different. The new reality is messy and uncertain. Organizations sprawl globally. They compete in fast changing markets against equally fast changing competitors. They compete for people. They compete for customers. And their suppliers are dispersed worldwide.

Any feeling of control is illusory. Think of the impact of COVID-19 on the world.

At the heart of understanding this new reality is the concept of ecosystems. The *Oxford English Dictionary* defines an ecosystem as "a biological system composed of all the organisms found in a particular physical environment, interacting with it and with each other. Also in extended use: a complex system resembling this."

The key words are interaction, complex, and system. Viewing the organizational world as an endless array of often interlocking ecosystems and to see an individual corporation as an ecosystem of stakeholders in various locations provides a challenging change in perspective. Henry Ford would likely have shaken his head.

In *Ecosystems Inc.*, Thinkers50 gathers together some of the world's leading thinkers on ecosystems to garner their insights and to shed light on the new reality and how best to utilize and take advantage of ecosystems.

The future is complex. We hope *Ecosystems Inc.* will help you embrace it.

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Turnstile logic: the new rules of strategy in an ecosystem world

Julian Birkinshaw

1

The term ecosystem has been used in a business context for 20 years. Companies like Volkswagen and Toyota have been orchestrating huge networks of suppliers and distributors for more than 50 years. Lloyd's of London, the insurance marketplace, is a classic ecosystem and was founded way back in the seventeenth century. What has changed is that most of today's fastest growing companies – from Amazon and Google to Alibaba and Tencent to Uber and WeWork – are explicitly positioning themselves as ecosystem players; as hubs within networks of customers, suppliers, and producers of complementary services. Industry observers and regulators are looking on with interest and concern. They want to understand if these companies have developed a new secret sauce, a new way of competing that might challenge the conventional view of how businesses create and capture value.

Of course, the jury is still out on whether these ecosystem players have an enduring advantage. For every Google or Tencent that is hugely profitable, there is a WeWork or an Uber that continues to lose money. It's important to understand how these firms plan to succeed with their ecosystem strategy – but only time will tell if they are able to realize their ambitions.

The old and new rules of competitive advantage

Warren Buffett is famous for investing in businesses with deep moats. The moat is what protects the business from attackers – sometimes it is based on access to a scarce resource or ownership of a patent, sometimes it is based on customer loyalty and a strong brand, sometimes the moat is an artifact of government regulation.

How do you build a moat? One approach is to position your business skillfully, by finding an industry with high entry barriers and then differentiating your product to keep customers hooked in. The other is to focus on your underlying assets and capabilities: to invest in those assets that are rare, valuable and hard-to-imitate, in ways that competitors cannot match. These two worldviews – the market positioning and the resource-based view – have dominated how we think about competitive advantage for 40 years.

But the rapid growth of business ecosystems in recent years challenges this thinking. Most of these ecosystem "orchestrators" like Google, Alibaba and Uber don't make and sell things, they exist to link others together; and this makes the old positioning-based logic less relevant. And, of course, they don't have many assets either, they create value in relationships and networks, not in physical goods or infrastructure; so arguments built around asset ownership are equally challenging. These firms are also looking to grow the market – by increasing the flow of people and goods – rather than capturing as much of the existing market as possible.

In other words, they don't care much for the moat-based logic of competitive advantage. A more apt metaphor for these firms may be the logic of the turnstile – they want to get as many other players involved in their ecosystem as possible, and to get them interacting according to rules they have shaped. Of course, there are many ways these companies make money – committees, membership fees, advertising sales, and so on – but the key point with all these business models is that they work better when the ecosystem is larger. That's why the turnstile metaphor is useful.

This shift from moats to turnstiles is challenging to get your head around. For most business strategists, it is second nature to protect their existing assets and to keep competition at bay. But a pure play orchestrator is happy to open up to competition and to share its intellectual property, as long as it keeps the ecosystem growing. Its aim is to maximize the number of people coming through the turnstile, rather than increase the height of the fence or the width of the moat. Let's consider some examples of how the turnstile logic works in practice.

1. Keep customers flowing in

Most sectors have competing ecosystems – think Android versus iOS – so you need to give people a reason to participate in your ecosystem. Consider WeChat, China's dominant lifestyle and social networking app. For its first few years, WeChat was all about coming up with novel offerings, such as its Moments and Red Packets features, that drew people in. Once it was established, it could have chosen to monetize its user base through advertising, as Facebook did. But it chose not to: even today, users see only two ads a day, and WeChat makes its money in other ways, primarily commissions on transactions. WeChat prefers to keep the turnstiles moving by emphasizing the quality of its user experience.

2. Give people a reason to stick around

A vibrant ecosystem is one where participants gain value in multiple different ways. WeWork rents out office space to corporations, startups and individuals in prime city locations. It could use moat-based thinking to enforce tight contracts that lock its tenants in. But it prefers to create more flexible contracts that give people the option to leave, and it provides a raft of ancillary services – networking events, advice for startups, lifestyle services – that makes the environment one where people want to stick around.

3. Don't steal their business

Amazon sells its own products and it also sells third-party products through its marketplace. There is a delicate balance here – and if Amazon pushes its own products too hard, it runs the risk of scaring its third-party vendors away. Consider the alternative case of Alibaba, China's answer to Amazon as a one-stop shopping destination. Unlike Amazon, Alibaba doesn't make its own products, and therefore it doesn't compete with its own suppliers. As its website says, "we operate an ecosystem where all participants have an opportunity to prosper." Alibaba deliberately passes up some short-term money-making opportunities to help its pursuit of longer-term growth.

4. Keep evolving

One huge benefit of being an ecosystem orchestrator is your privileged access to information about the entire ecosystem. You see what's selling well, and you see how the market is evolving, before others. While it might be tempting, again, to use this information to make more money in the short term, the smarter approach is to keep things moving – to open up new markets, and to do this quicker than your competitors. Alibaba illustrates this point as well – it keeps coming up with new services, such as Taobao Ke, a traffic aggregation platform, to help it stay ahead. WeWork isn't standing still either – in recent years it has created WeGrow, WeLive and WeWork Labs.

Ecosystem challenges

This ecosystem-based approach to strategy isn't for everyone. As a way of working, it is inherently more stressful and chaotic than the more traditional moat-based approach. And it attracts a lot of challenge. For example, critics have suggested that WeWork's business model is a house of cards. Amazon has fallen foul of regulators for abusing its dominant position. It seems unlikely that Warren Buffett will be putting money into ecosystem businesses any time soon.

And to further complicate things, the split between the worlds of moats and turnstiles isn't absolute. For example, Amazon isn't just building an ecosystem – it is also operating in the bricks and mortar world of logistics and retail. Alibaba is explicitly pushing its ecosystem strategy while also building a strong proprietary capability in artificial intelligence. The rules of competitive strategy are not getting any easier. But a good first step is to understand the new turnstile-based logic, and how it differs from the traditional moat-based logic that has been dominating the conversation for the last 40 years.

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Ecosystemic evolutions: organizing beyond boundaries

Simone Cicero

2

As we enter the third decade of the twenty-first century, organizations face stunning challenges. New risk factors are rising and unpredictability in our societies and economies is becoming constant – as the Word Economic Forum anticipated in its Global Risk Report 2020, "turbulence is the new normal." And that was before the 2020 COVID-19 pandemic.

Business ecosystems – with their capacity to quickly reorganize in networked fashion and to leverage an emerging niche speciality – offer new organizational perspectives and, at the same time, are truly changing the nature of the corporate organization to an extent that is hard to yet quantify. It is increasingly clear that the profound need to move away from the linearity of twentieth-century business lines and value chains will require a structural reinvention of the theory of the firm and, to some extent, of its raison d'etre.

Two powerful trends are at work. On one hand, there's the radical re-prioritization of user perception of value as we saw in early 2020 with the coronavirus outbreak; on the other, rising unpredictability. What will be the impact of such trends on the optimal shape of the organization?

Adopting a Conway's Law lens

Conway's Law says: "any organization that designs a system (defined broadly) will produce a design whose structure is a copy of the organization's communication structure." It is something I often refer to when describing the evolution of platforms and organizations. To be able to thrive in a truly post-industrial, networked ecosystem-led world, an organization needs to mold a new design.

Being able to look through the Conway's Law lens will take on a new level of importance as two major trends emerge. First, working practices evolve towards much more distributed patterns of work. (As Mary Meeker noted in her early reflections on the pandemic, most companies believe that "after the experience of forced remote work – they will shift to more distributed work.")[1] Second, value chains will need to be reorganized to work differently across regional geographies, to ensure better resilience and less dependence on supply chains that in the mind of policymakers and national leaders have "gone too far."[2] New organizational players and entrepreneurial opportunities will rise to play a fundamental role in the creation of a somewhat less "efficient" and "just in time" economic paradigm. This new paradigm will favour value chain elements that, on the one hand are more directly bounded regionally and, on the other, feature alternative routes for the sourcing of needed components and contributions to key processes. In the transformation, multinational organizations will need to rethink their organizational structures and brands will need to adapt to play a role.

If we focus on the remote work dimension, for many types of companies – such as startups and software development firms – widespread lockdown and "shelter-in-place" orders did not constitute a big break in terms of workflow and organization. A great deal was already done remotely and asynchronously. For many more traditional players, this new situation radically changes the way work is organized. Clear and well-structured communication becomes essential to allow teams to carry out their work efficiently. This may result in increased autonomy and distributed work. As organizations go fully online and remote this may end up reshaping them beyond simply a matter of on- or offline work.

Consider Amazon, which is often depicted as "probably the best-known case of a divisional organization" and "one of the clearest case manifestations of Conway's Law."[3] Besides its well-known divisional model – with divisions looking after specific product offerings such as AWS or Kindle, or macro-parts of the business such as publishing – the main advantage of Amazon resides in its radical policies in new business creation and its internal communication structure.

As depicted by Benedict Evans, Amazon has two main platforms – an e-commerce one and a logistics one – and on top of those, a radically decentralized machine: atomized teams sitting on a standardized common internal system.[4] This loosely coupled structure comes from a now iconic choice that Bezos and the company leadership enforced in the early days: they broke down functional hierarchies and restructured into small, autonomous teams, small enough that they could be fed with only two pizzas. This gave them extreme autonomy and the obligation to operate and communicate with each other in an asynchronous mediated API.[5] In the words of Evans, this structural decision on organizational architecture produced three main effects: virtually infinite scalability, a tendency to reach the lowest common denominator in the product buying experience, and the substantial equivalence of internal and external units with regards to the contribution to the business model. In Evans' words, "the constraint to the model's growth is how fast you can hire product teams and sign supplier agreements, letting other people do it for you and charging them a margin (and of course the internal teams also have margin targets too) lets you scale faster and with less risk."

Mass collaboration, loosely coupled

Allowing mass collaboration to happen at scale between loosely coupled units emerges as a pattern in modern competitive organizing, not only in terms of internal communication but also in the massive transition we have seen emerging for almost a decade. There is a continuity between the adoption of platform business models that secured the success of companies such as Airbnb or Shopify and the reinvention of the organization through

pervasive P&L and radical divisionality. The common denominator of this transition is the acknowledgement of the plummeting of transaction and coordination costs and of the possibility to substitute complicated business processes – typically managed through bureaucracy – into software as a service.[6]

A good example of this may be found in the health and social care company Buurtzorg. Dutch entrepreneur and Buurtzorg CEO Jos De Blok has explained how the company effectively "transformed bureaucracy into software" and in this way empowered a network of nurses. This helped create a holistic healthcare context around the patients by leveraging collaboration with surrounding networks. Buurtzorg professionals "attune to the client and their context, taking into account the living environment, the people around them, like a partner or relative at home, and on into the client's informal network; their friends, family, neighbours and clubs as well as professionals already known to the client in their formal network." This is supported by a set of software and coordination tools that the company built to let the work being organized at the edge, beyond control and micro-management, move towards full independence and self-organization.

In the application of such an outside-in pattern of organizing, defining the boundaries of the organization becomes a complex and, to some extent, unhelpful task. Allowing outsiders to get involved, becoming insiders – as transaction costs plummet due to technology – becomes of paramount importance to the creation of an organization that can facilitate patterns of networked collaboration, self-organization and the blurring of boundaries. To allow external contributions to the business model, and the innovation process, becomes a key competitive edge: as Ulrich Pidun, Martin Reeves, and Maximilian Schüssler of BCG have noted: "Ecosystems compete on their degree of openness."[7]

The case of China's Haier Group is emblematic: not only are employees incentivized to start their micro-enterprises (adding a node in the internal network) as a way to facilitate fast and frequent interactions with consumers, but also companies outside the group are allowed into the competition for providing services to the micro-enterprises. The company has also created a new organizational artefact called the Ecosystem Micro Community (EMC). The EMC is a self-organized and self-led coalition of enterprises coordinated by the emergent leadership of one micro-enterprise. This is powered by an EMC contract based on a smart contract allowing the fast implementation of rules of collaboration based on shared objectives (smart goals), creatively taking the added value of the user experience as the goal and driving force of the contract, and committing resources for the achievement of them. In a sort of fractal platformization pattern, the very business model of the most of the innovative micro-enterprises also leverages independent producers and professionals. A good example is the online logistics marketplace Goodaymart (that attracted investments from other groups such as Alibaba), where

many independent logistic providers are organized through a technological coordination platform.

Ecosystem enabling

Despite fragmenting an organization into small nodes, molding it with its broader ecosystem and facilitating the creation of means of communication through software interfaces – rather than a bureaucratic process – is the core of the role of organizational leaders in an ecosystemic organization (epitomized by Jeff Bezos and Haier CEO Zhang Ruimin.) Ecosystems become, in the words of Simon Wardley, "future sensing engines."[8] As Wardley explains, the organization not only needs to enable coordination between the nodes of the ecosystem but also needs to create tools to allow the players in the ecosystem to innovate with a lower risk of failure. These tools – in the form of enabling blocks and services – will be used to create new value propositions, sitting on top of the enabling ones in the value chain. As a key and complementary responsibility, eventually, the ecosystem-enabling organization must act to standardize the novel value propositions emerging from the periphery, institutionalizing innovations for broader adoption, pushing the ecosystem entities to develop new propositions, on top of the newly standardized ones. The organization's reference ecosystem appears to be the most effective means for an organization to move – as in Lisa Gansky's words, from the "no more" to the "not yet."

In the continuous Innovate-Leverage-Componentize cycle that will result from this virtuous circle, the organization will transform emerging innovations into: either modular elements for the rest of the ecosystem to start again to build upon or, will take over the complexity of vertical integration and create the strictly necessary functional organizational structures for the production of more "industrialized" or "curated" experiences that may need management cultures, processes and infrastructures that don't necessarily overlap with a loosely coupled marketplace-based structure.

The application of such a mechanism of unbundling and rebundling is not new and has been thoroughly explained – for example by Ben Thompson. He explains the pattern as follows: "breaking up a formerly integrated system – by commoditizing and modularizing it – destroys incumbent value while simultaneously allowing a new entrant to integrate a different part of the value chain and thus capture new value."

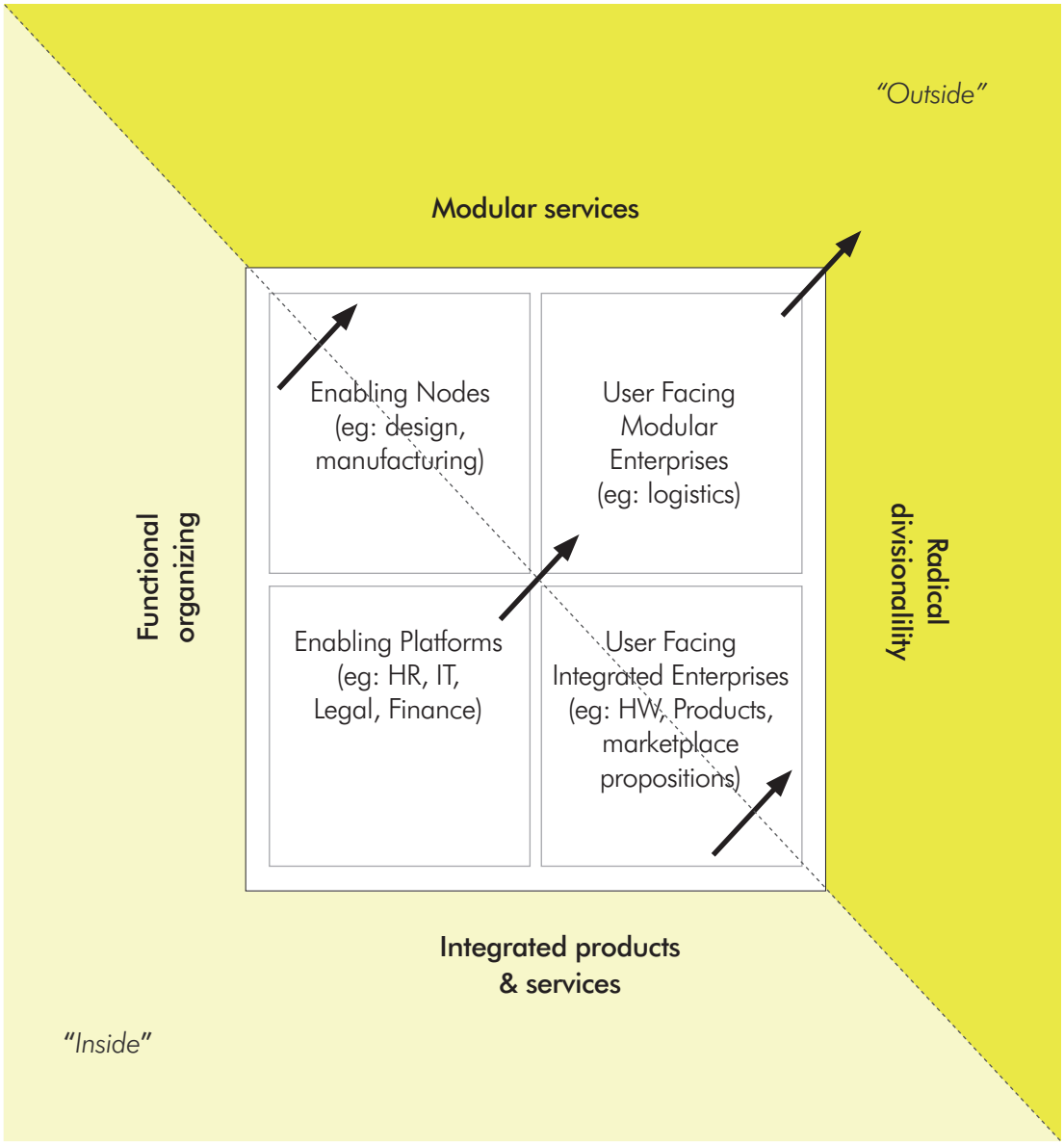
In many examples, organizations modularize a basic element of the value chain that was previously integrated, then reintegrate an upper layer of the value chain by controlling it, often favouring aggregation through the attraction of now modularized parts of the value chain, often in the form of independent ecosystem players (such as property owners in Airbnb or content producers in the case of Netflix). Such ecosystem players will effectively

reshape to optimize their interaction within the interface that the organization provides. As an example, Rent the Runway and other clothing rental services are contributing to reshaping the ecosystem around fashion design, as designers become less focused on getting their clothes into department stores than to distribute them through rental and subscription-based platforms.

In this recurring pattern, organizations first modularize a specific part of the value chain (inventory in the case of direct to customer marketplaces, teams able to produce entrepreneurial ideas for market-facing innovations in the case of Haier's or Amazon's organizational structure), providing clear rules and interfaces for engagement. Later, as the "disobedient" and independent ecosystem players create something radically new that attracts customers and needs to be scaled-up, these innovative propositions are integrated vertically into the platform's core set of services – or practices.

As an example, Airbnb captured an emergent behaviour of co-hosting among its users (third parties managing properties in the place of busy hosts) and successfully vertically integrated a set of tools for co-hosting in the platform. This provided a more consistent experience, and further modularized the co-host role for better scalability. Similarly, Haier micro-enterprises sometimes scale so quickly that they take on the role of platforms, taking over responsibility for integrating parts of the services, enabling further their reference ecosystem of third parties, including other micro-enterprises that are still in earlier stages of maturity.

It appears then that a modern ecosystemic organization needs to be able to play on the full spectrum of management and organizational models from customer focus to ecosystem services, from modularized to integrated products, from radical divisionality (such as with Haier's micro-enterprises and Amazon's two-pizza teams) to functional integration in the form of supporting platforms providing basic services such as scalable manufacturing or HR, as in Haier's case.


"Outside"
Modular services
Enabling Nodes
(eg: design,
manufacturing)
User Facing
Modular
Enterprises
(eg: logistics)
Functional
organizing
Radical
divisionalility
Enabling Platforms
(eg: HR, IT,
Legal, Finance)
User Facing
Integrated Enterprises
(eg: HW, Products,
marketplace
propositions)
Integrated products
& services
"Inside"

What's next?

The impacts of such a transition towards divisional organizations and more modular products (and services) may be far-reaching. The COVID-19 outbreak seems to have exacerbated the speed of change but needs to be framed as a harbinger of times to come, with unpredictability becoming a structural aspect of our economies. This growing unpredictability seems increasingly hard to manage by traditionally functional organizations.

Functional organizations (where profit and loss are centralized and units are distributed according to key support functions such as marketing and HR) are great at producing "integrated" product experiences. These companies evolved in the industrial age and can ensure coherence more easily when needed, thanks to vertical chains of command. When product management nails it, functional organizations can bring innovations to the market not only quickly but also with a relevant quality of *experience*. By doing so they often achieve network effects, economies of scale, and strong advantage positions that allow them to capture a somewhat unfair value over the long term. But, their success often protects pockets of inefficiency. The vertical integration of products and services effectively impedes competition from happening at any of the product layers.[9]

Functional organizations and integrated products might be – in light of this – more fragile to rapid and continuous change, due to unpredictable phenomena that may cause supply chain or value chain disruptions or even just deep – sometimes unexpected – behavioural changes. To build more antifragile capabilities in society, economic paradigms appear to be shifting back towards more locally-redundant and unbundled business processes where pieces and players are more interchangeable and continuity of service can be ensured more easily during disruptions. Functional organizations, with their need to vertically integrate, protect, and control the whole chain may fail to maintain their organizational structure in such a context, due to the constraints and rigidities they accumulate.

Despite proving to be more adaptive to local and contextual conditions, more flexible and more organic, even organizations that are divisional but with substantially large and bureaucratic "divisions" may end up suffering the same adaptability issues. Emerging trends of organizing have pushed organizing towards more networked structures with smaller, networked divisions whose interactions are mediated through different types of artefacts, normally providing enabling services (platforms). To some extent, such a direction of organizational evolution can be seen through the lenses of David Ronfeldt's seminal work on the TIMN (Tribes, Institutions, Markets, Networks) framework as these four stages are mirrored in the theory of the firm.[10] As society transcends markets and networks take hold as the main creation, production and governance means – a manifestation of the maturation of the information age – that human organizing, in interplay with its changing context, is embracing the network structure.

The trend that brought us individuals and then teams networked through emerging organizational artefacts (such as Haier's platforms) inside the same firm, is starting to move in a new direction that goes beyond the single organization towards a widespread collaboration between organizations. At societal level, Haier's Enterprise Micro Community, by including organizations inside and outside of the group, is a signpost in this evolution. As John Hagel explains, evolutionary pressure will push an organization's customer (or more broadly, a user) to look for flows of value creation that go beyond a specific vendor, beyond a specific organization, and reach the possibility to create value with **anyone, everywhere.**[11] This will also, in turn, push the entities connected to the ecosystem on the production side to *shapeshift*, to remain able to produce value in exceptional times when markets are reshaped in an unpredictable way. The case of the dark kitchens emerging to serve customers without a publicly open shop during the COVID-19 pandemic seems iconic of the change.[12]

The markets of the age of networks may end up being made by a plethora of smaller, more independent, small scale organizations, all interconnected through new means of communication that are also quicker to reconfigure. Organizational nodes become smaller while at the same time more powerful and more specialized in their niche, more transient and more adapted to the dynamics of a "fluid" society, the society of the information age. In this context, a new theory of the firm might be emerging to confront the crisis of capitalist governance as the "limits of using enclosure as a tool of capitalist accumulation" become clear in a *small world* where externalities are quickly exacerbated and globalized.

As a result, an effective organizational theory – and praxis – for the post-industrial and perhaps post-capitalistic age, may need to be heavily based on relationships and systems thinking, and feature an unbounded way of relating to the commons that don't separate between in-groups and out-groups.

More than thinking about the evolution of a single organization in an ecosystem, it appears that – accelerated by the pandemic, and more generally by the resurgence of unpredictability in our economies – we may be witnessing the dawn of a **new age of organizing**. The developments of this new wave will happen within a firm but also in the space between them, from individuals to communities to bioregional playgrounds, states, and civilization, and in the realm of fluid cooperation for a world in constant flux more than at the scale of single market opportunities and in the groove of competition.

Zhang Ruimin said: "Companies are going to disappear, while organizations won't." We can probably generalize this thought more clearly by saying: "companies will disappear, while *organizations* won't (and the new organizations will be self-driven)." More research is needed. We do not yet know what the future of *organizing* will look like, but this future is approaching faster and faster each day. As my friend Tomas Diez once said: "*Future* is a word of the past."

Simone Cicero is creator of the Platform Design Toolkit (platformdesigntoolkit.com). He is a member of the 2020 Thinkers50 Radar listing.

Special thanks to Stina Heikkila for the editorial review and strong contributions to the text.

FOOTNOTES:

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How do digital ecosystems defend their business?

Özlem Bedre-Defolie

3

Many of the most valuable public companies, like Google, Alibaba, and Amazon, are digital platforms. Valuable startups, such as Airbnb, Spotify, and Uber, are also digital platforms. Some less-known names, like Raisin and SoundCloud, are among the fastest-growing startups, thanks to their business model that embraces a multisided platform (MSP). MSPs rely on attracting different user groups between which there are cross-group network effects. More buyers on Alibaba or on Amazon attract more sellers, and vice versa. More guests on Airbnb attract more hosts (listings), and vice versa. Sometimes these cross-group network effects can be negative from one side to the other. For example, more searchers on Google attract more advertisers, whereas if Google places too many sponsored search results, users who dislike ads might find Google search less valuable.

While enticing, launching an MSP is challenging as any new player needs to attract different user groups simultaneously. These user groups usually cannot coordinate their adoption decisions, resulting in the well-known coordination, or chicken-and-egg, problem.[13] If the coordination problem erodes the number of users on one side, it reduces the number of users on the other side, and this spiral effect leads to loss of market share. This might potentially knock the entrant out of the market. As a result, network effects raise barriers to entry for platforms and might enable incumbents to protect their market even if the new platform offers better quality products/services. However, if the quality advantage of the entrant is sufficiently high, the incumbent might lose its users on one side, which would induce more losses on the other side. Thus, the incumbent might be quickly kicked out of the market due to network effects. For instance, Facebook's entry pushed MySpace and others out of the market. IBM and Linux could not survive against Windows.

After a successful launch, MSPs look for ways to make network effects count. Incumbent platforms mostly try to protect their market power or become dominant by raising switching costs endogenously.

Increasing dominance of digital ecosystems

Most MSPs prefer to become digital ecosystems by acquiring or investing in complementary segments. For instance, Apple launched as a hardware firm and then became a two-sided platform when it started allowing third-party apps on its app store, where Apple enables interactions between third-party app providers and users of Apple products. Recently, Apple has moved towards providing additional services to its main products, such as Apple Music and Apple Card (in cooperation with Goldman Sachs).

Google started as an engineering firm focused on good quality internet search. Google then became a two-sided platform by adding advertisers and enabling interactions between advertisers and searchers. Thereafter, Google started to offer an advertising platform (formerly Google AdWords, now Google Ads) that connects

third-party websites to Google advertising. Google also added other services including Gmail, Google Maps, YouTube, Google Cloud Platform, Google News, Google Calendar, and Google Nest.

Facebook was launched as a social media platform connecting students to their peers in university dorms. It then became an MSP by adding advertisers, app developers, and third-party websites. Facebook now offers other services via WhatsApp, Instagram, and Facebook Marketplace.

Amazon moved from a book retailer model to a marketplace model enabling buyers and third-party sellers to interact. Amazon now offers its Prime Video streaming services, Amazon Web Services, and more. Combining a variety of services within the ecosystem attracts more users (searchers/buyers) on one side and this attracts more users (advertisers/sellers) on the other side via positive cross-group network effects, increasing the revenue generated by the ecosystem.

These digital ecosystems offer many benefits to consumers, mostly at zero or subsidized prices (prices below cost). Consumers usually use one platform (single-homing) for a variety of services and enjoy the benefits of network effects. The Cournot effect says that a monopoly of complementary goods sets lower prices than competitive supply. This suggests the ecosystem owner (the platform) charges lower prices for each service than where each service is offered by independent competing firms.

This logic is not as simple as it sounds, since these are not standard firms; they are MSPs balancing the participation of different user groups when pricing them and with cross-group network effects between these groups. Besides, personalized data improves the quality of services/products offered by these ecosystems (search, recommendation systems, matching, etc). Consequently, digital ecosystems become more valuable as they lock in more users. As a result of these positive economies of scale on the demand side, we now have few dominant platforms – Google, Amazon, Facebook, Apple, and Microsoft, also known as GAFAM – controlling the options for nearly everything we do.

Increasing antitrust concerns and interventions

Digital platforms' innovative business models have enabled them to offer many valuable services to users, but have challenged policy makers.[14] This has led to significant antitrust and regulatory scrutiny and interventions, both in the EU and in the US. For instance, in digital markets the transparency of price and product information has enabled competing firms to use this information to shape their strategies. This has raised antitrust concerns, such as potential collusive behaviour via easy price monitoring, price and other forms of restrictions used by online trade platforms in their seller contracts, potential market sharing in e-commerce, and the possibility of an

anticompetitive information exchange via online marketplaces.[15] There are also significant quality concerns in online markets and in sharing economies. Think of Uber. Platforms such as Amazon and Airbnb have already implemented reputation and trust mechanisms to increase quality. Some platforms, like Zalando, try to select their suppliers to ensure a minimum quality. However, the access rules of platforms might limit variety and raise anticompetitive concerns, in particular, if those platforms have significant dominance in the market. The European Commission's 2019 expert report states: "dominant platforms have regulatory power and have a responsibility to use that power in a pro-competitive manner."[16] In June 2019, US lawmakers started investigating GAFAM's potential abuse of their dominance.[17]

Abuse of dominant power might lower quality, variety, and innovation.

A dominant platform might find it profitable to impede an entry by a more innovative, better quality, or more efficient rival platform. For instance, when a dominant platform offers a variety of complementary products/services or loyalty discounts, it endogenously increases switching costs for its users and hence lowers the chances of a new entrant challenging its incumbency position. Exclusive dealing provisions with high quality providers might also raise entry barriers by giving competitive advantage to the incumbent firm[18], but entrants might also benefit from exclusive dealing provisions. By locking sellers of high quality content/products into an exclusive dealing contract, an entrant might be able to overcome the chicken-and-egg problem. Research by Robin Lee found that banning exclusive dealing contracts hurts entrant video game platforms and benefits incumbents.[19]

Hybrid digital platforms, like Apple, Amazon and Zalando, are online marketplaces enabling transactions between buyers and sellers (app developers and users), and at the same time they are sellers of their own products – as with Amazon/Zalando selling their own products as retailers or Apple selling its own services in its App Store. One way an incumbent platform could generate competitive advantage against its downstream third-party provider is by favouring its own downstream business. In 2017, the EU fined Google $2.7 billion for favouring its shopping service in search results. Amazon might produce its version of successful third-party products and set higher commissions/exclude sellers of these products (also the subject of an ongoing investigation). An investigation found that Amazon uses third party sellers' product information when developing its own products.[20] Apple's entry into music services might imply higher commissions or worse terms for high quality service providers. In March 2019, Spotify, a music streaming platform, filed an EU antitrust complaint against Apple due to "unfair terms" that Apple tried to impose on Spotify's premium subscription sales via Apple's App Store.[21]

In the future, more dominance will bring more regulation if it is abused. All these developments and the evolution of digital markets suggest that we will see more powerful digital ecosystems that will try to protect their dominance by raising users' switching costs via different mechanisms. If dominant ecosystems focus on quality, variety, and innovation they can sustain their dominance in the long run without hitting regulatory hurdles, costly antitrust interventions, or loss of reputation among their loyal users. However, if they play dirty by using their dominance to hinder a more innovative, efficient, and better-quality rival from the market, they will sooner or later face more regulation and more antitrust scrutiny. Their loyal customers might also find these tactics unfair and switch to an alternative platform/ecosystem that cares more about offering the highest quality with the best user conditions. If there is no available alternative, the business strategies of dominant digital platforms might give rise to more dramatic regulations, including breaking their business units into independent companies.

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FOOTNOTES:

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14 See the European Commission's 2017 e-commerce report, The Federal Trade Commission's 2016 report on the sharing economy and the OECD's 2018 note on e-commerce.

15 Some platforms, like Amazon and Zalando, have hybrid business models, that is, they are marketplaces connecting sellers and buyers, and at the same time retailers of products. Germany's competition authority, Bundeskartellamt, is currently investigating whether information sharing between these two functions might be anticompetitive; http://www.faz.net/aktuell/wirtschaft/andreas-mundt-endspiel-um-die-telekommunikation-15725311.html.

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Ecosystems: the how factor

Alessandro Di Fiore
& Elisa Farri

4

Ecosystems are the flavour of the organizational month. But, amid the hype and hyperbole, there is often a dearth of real-life organizational experience and wisdom. In the end, all that matters to executives is whether ecosystems could benefit their organization and, if so, how best they can make those benefits a reality.

There is an urgent need to cut through the theories and examine what actually makes ecosystems work and why some work better than others. In our consulting work, we have witnessed a gulf between theory and practice. Executives understand the opportunities that ecosystems offer, yet they need guidance on the *How*.

The start of this process must be a realization about what an ecosystem actually is – and isn't. The most common misconception is that an ecosystem is simply a bundle of integrated products and/or services that can be sold or cross-sold. In this view, an ecosystem is made up of a set of products and/or services that have been selected by the company in its core market or industry. An ecosystem is simply more of the same, an accidental confluence of products and/or services.

The reality is – and has to be – different. As defined by London Business School's Michael Jacobides (see his piece later in the book), an ecosystem is a basket of multiple options of services and products across several markets or industries and offered by multiple entities. In ecosystems, firms collaborate – to a greater or lesser extent – so that they can together offer greater choice and value to end-users. From the multiple options on offer, customers can make better choices. Most of the time, though not always, an ecosystem comes with a digital platform.

The attraction of ecosystems is that they deliver value in two ways. First, **they make competition less relevant**. Typically, ecosystems beat products because they create more value for customers by offering a greater variety of goods and services, while reducing the associated transaction costs. They are, as a result, a powerful means of escaping the process of commoditization that inevitably happens in product and service competition over time.

When Tencent launched WeChat in 2011, the idea was to offer a mobile messaging application. As WeChat's user base grew exponentially, Tencent benefitted from powerful network effects and gradually added complementary services to generate more valuable customer interactions. The keystone was the launch of WeChat Pay in 2013. Thanks to the fast adoption rate of the new payment service, Tencent was able to attract partners and integrate new services: from ride-hailing app Didi Chuxing, to Tencent Music, food delivery platform Dianping, and bike-sharing service Mobike. But the complementor that is revolutionizing the WeChat ecosystem is WeChat Mini-Programmes, allowing a range of new services from over 200 industries. WeChat users can now buy products and perform many other tasks without ever leaving the app. With an all-in-one click, Tencent has expanded the WeChat basket of products and services exponentially.

Second, **ecosystems create customer stickiness by design**. Usually, when you enter an ecosystem as a customer there is a friction or value loss in leaving the ecosystem. By taking advantage of customer information flows and data, more value can be created thanks to more customization and modularization.

Amazon has used this strategy very effectively. Its Prime Membership offering has a 93 percent retention rate after the first year and 98 percent after two years. The secret sauce of Amazon's ability to break the code of customer retention is its ongoing effort to raise customer expectations of personalized experiences. Customers are attracted by more convenience and personalized experiences, and the more personalization succeeds, the more precise the data Amazon has at its disposal.

In our work with companies throughout the world, as they seek to maximize the value from the ecosystems they are involved in or develop new ecosystems to grow their business, we have identified the following elements that need to be properly designed and executed to make the ecosystem strategy work:

1. Starter questions

The fundamental questions that have to be answered are: Who is the ecosystem's target customer? What is the core offering of the firm on which the ecosystem development strategy must be built? And, what is the existing or planned digital platform that could eventually evolve and support the envisioned ecosystem interactions?

The ongoing challenge is to focus on the core starting point on which to build the future ecosystem strategy, rather than on everything that could be integrated or connected. Drifting away from a simple and very focused core starting point is a common trap into which executives tend to fall when they start formulating their ecosystem strategy.

An agrochemical company we worked with defined its target customer as what it described as the "modern farmer segment." Its core offering covered crop protection products and its digital platform had been developed with a farm management online service. By leveraging its existing core and developing it more accurately to reflect the new strategy, the company was able to create a powerful ecosystem.

2. Shared functionality

To borrow from the late Clay Christensen: What is the ecosystem's job to be done? What does the customer wish to accomplish through their interaction with the ecosystem? There is a hidden danger here that a too narrow job to be done is identified. This might focus only on a single product or service of the firm with the aim to be the

orchestrator. To combine successfully with other goods and services, the job to be done must be wide enough to create value for the customer by providing access to an ecosystem's basket of products and services.

Often, a narrow job to be done is widely understood in the organization. This is the problem the company solves for customers with their existing products or services. Widening the aspiration involves a holistic analysis of the customer's experience cycle. Once the customer's interactions with the organization are more thoroughly understood, the assumed job to be done of the envisioned ecosystem can be visualized.

For our agrochemical client the process of looking at the job to be done proved a real eye-opener. Its fundamental belief was that farmers were focused on protecting their crops from insects, diseases, and so on. The job it was doing was helping farmers achieve this objective. Talking with farmers it became clear that this was way too focused and actually missed the big issues on the farmer's agenda. The agrochemical company recalibrated its job to be done, built on the realization that farmers want to maximize crop yields and profits while protecting themselves from risks.

At an early stage, it is critical to be customer-centered in building a compelling case for the job to be done. Only after you excel in providing an exceptional customer experience can you seek to broaden your ecosystem to include other third-party complementors.

3. Complementors

Are the ecosystem's products and/or services complementary to each other? Are they characterized by compatibility and non-replicability of links between them? One approach to this is to first compile a long list of potential high value complementors. Look at the value they provide for customers and the ease by which they could be integrated. Next, test how the complementors could multiply (not simply add) value. Ask whether a complementor leads to additional customer value? Does it significantly increase customer interactions and engagement? And what else could be added?

For the agrochemical company this meant looking further afield than simply providing chemicals to customers. It moved into agronomic services, such as soil data and mapping tools, as well as risk management services including insurance and risk protection. In the process of adding these new services, the agrochemical company expanded the scope of its business and brought new complementary products and services into its ecosystem.

Consider how Apple's iPhone has successfully kept its leadership position through maximizing a set of key complementors that make it harder for end-users to switch to another smart phone. With thousands of geographically distributed developers, Apple users have access to a wide array of complementary services on

Apple Store and iTunes, such as apps and podcasts. This triggers a virtuous cycle: as variety expands demand for the product (the iPhone), it also prompts an increase in the use and supply of other complementors. Similarly, Amazon keeps adding new complementors to the Prime Membership basket to strengthen its competitive advantage.

4. Firm's role

There are two main roles a firm can play in an ecosystem. They can be an orchestrator or a partner.

An **orchestrator** needs organizational, managerial, and cultural capabilities to align the various parts of an ecosystem while ensuring superior customer experience. Seven of the ten largest companies by market capitalization are all ecosystem orchestrators: Amazon, Apple, Alibaba, Alphabet, Facebook, Microsoft and Tencent.

While there are firms globally that can afford the required capital expenditure to build and develop an ecosystem, only a few have the appropriate capabilities and mindset to do so. The main challenges arise when the firm has to open to potential complementors – who might be long-time rivals or players in relatively unknown industries. When this happens, or when a company is too late to the game, a firm might consider playing in an ecosystem as a partner rather than an orchestrator.

A **partner** plays a more strategic role compared to a mere contributor, who has transactional relationships (typical of suppliers) with one or more of the ecosystem's parties. As a partner, a firm can leverage complementarities in terms of the ecosystem's products or services production, consumption, data, or a mix of all. Depending on the ability to position the firm as a unique and differentiating partner, the value that the firm can extract from the ecosystem may significantly increase.

Insurance companies are forging key strategic partnerships with multiple ecosystems. For example, there is a global strategic partnership between Alibaba, AXA, and Ant Financial Services. AXA provides customized insurance products for Alibaba's retail and commercial customers, and travel insurance for Ant Financial Services' customers traveling outside of China.

5. Ecosystem architecture

What are the connections and relationships with other parties necessary to make the ecosystem work? These should cover customers, partners, and other players, such as contributors and suppliers. No party should be left out of the ecosystem's architecture.

Having identified its role as an orchestrator in a semi-closed ecosystem, our agrochemical client looked at the ecosystem architecture. It describes its role as providing an offering that customers can partly customize by choosing from a range of products and services. This is supported by its digital platform, which engages with farmers and collects data for further experience personalization.

An important element of an ecosystem's architecture is the governance mechanism. The less complementarities, the more traditional the hierarchy, and therefore decisions are unilateral (made solely by the orchestrator). Similarly, the more complementarities there are, the stronger and more urgent the need for a set of standards and rules to govern the ecosystem's complexity.

6. Partnering model

Who are the partners involved in the ecosystem? What are the terms of the partnerships? There might, for example, be a shared set of standards. A company must understand the motivations of its partners in order to build and manage a superior partner network. Competition for partners is high, and orchestrators need to have a compelling value proposition to attract the best partners. Our agrochemical client has built a differentiated partnering model. With most of its strategic partners, it has entered product codevelopment partnerships. With new players, such as developers of its digital app store platform, it has defined standard agreements and rules.

7. Customer relationship models

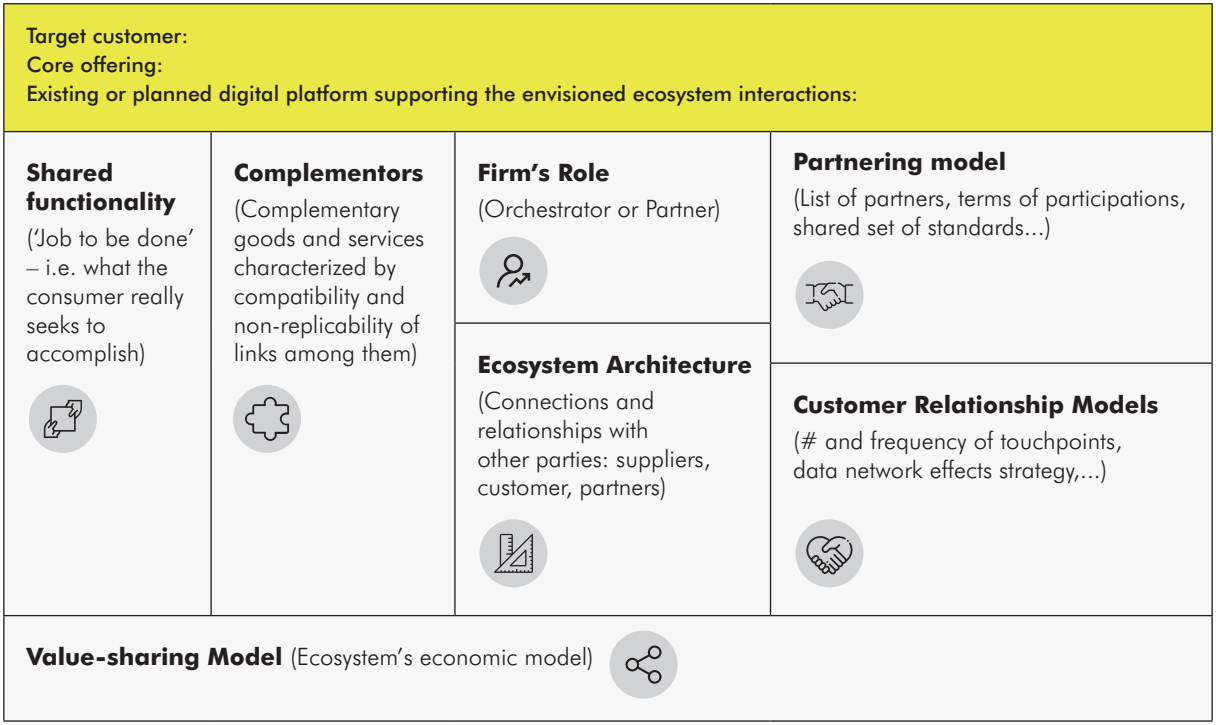
What are the information flows that will form the central nervous system of the ecosystem? Where will the touchpoints with customers be? How will we manage them and what are the potential network effects that might result?

The POSB Smart Buddy launched in 2017 by DBS, a leading financial services group headquartered in Singapore, is a case in point. Worn by primary school children as a smartwatch with contactless payment functions, the POSB Smart Buddy has offered a powerful gateway to radically increase the number of touchpoints and frequency of interactions. Along the student's journey, DBS has developed an ecosystem of services that goes beyond pure payments. POSB Smart Buddy complements other parties' services (such as bookstores, nearby school merchants, and the local transportation system) and key partners' offerings (mainly education providers) to provide a more holistic experience for children. As the programme evolves, DBS continues to iterate and improve on POSB Smart Buddy's features by leveraging the richness and depth of information flows across the various parties in the ecosystem.

8. Value-sharing model

What is the economic model for the ecosystem? Compared to the profit formulas of a traditional business model, ecosystems have a higher degree of complexity. As multiple parties are involved – including strategic partners with whom to share value – the orchestrator needs to balance the revenues and costs of the ecosystem's players with surgical precision.

For the agrochemical company the model brings increased and stabilized revenues through subscriptions and customer insights for product innovation. For the farmers there are improved crop yields thanks to customized support and decision-making – and, thereby, reduced risks. And for the insurance companies and other commercial partners there is access to a large customer base and its data. All are beneficiaries.



All of these elements can be summarized into what we call an ecosystem canvas, a one-page tool to capture an ecosystem strategy. We have used this canvas with companies across different industries worldwide. It allows them to interrogate the reality of ecosystems, it raises the key questions that require answers if their company is to turn the concept of ecosystems into profitable reality. It aims to close the gap on the how to design and execute an effective ecosystem strategy.

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Ecosystems as an engine for innovation and learning

Bill Fischer

5

The acceleration of industry change, as measured in shorter S-curve periods, and the profound changes that are taking place in industry definitions as well, are sure signs that the possession of knowledge stocks is not likely to be as beneficial to an organization in the future as it was to prior generations. *Knowing things* will be less valuable than *knowing how to learn* and transforming learning into responses will quickly become the complementary part of a new formula for organizational success: rapid and experimental learning and responding. Most contemporary organizations are not well set-up for either learning or quick response. All too often, they have been built for the quieter, mid-section of longer S-curves, where the game is all about the elimination of variance through greater efficiencies.

Over the past year, working with ecosystem development in diverse industries – laundry (Haier's Internet of Clothing), food (Haier's Internet of Food), hospital functions (Haier's Smart Hospital Internet), recreational vehicles (Haier's RV ecosystem), and ESports (Copenhagen's ESports Ecosystem[22]) – has led to a number of insights into the role of ecosystems as an engine for innovation and learning and the managerial choices that might be necessary to do this in an effective manner. The purpose of this paper is to present several of these insights and discuss them in a way that moves ecosystem engagement from the abstract into a more tangible form.

A key element is the belief that as we move more into the unknown (as opposed to the uncertain[23]), we need to be able to learn better and more effectively than in the past, and to be able to do this at scale. John Hagel has spoken about the move from mastering "scalable efficiency" to mastering "scalable learning."[24] My conclusion from the work described below is that ecosystems can be a source of abundant innovative ideas and scalable learning, but they are not necessarily easy to see by experienced managers, and once they are identified they need to be engaged with in a manner different from how value chains of the past were managed. Finally, engaging with ecosystems in a serious manner inevitably involves profound changes in your existing organization architecture and management style.

Ecosystems are not mere super-charged, muscular value chains.

As is so often the case, the present heightened increase in interest in ecosystems is occurring under the watch of a corporate leadership generation that was born and bred in a prior era that prized value chain ascendancy. While value chains have been extraordinarily useful as a recognized strategic concept for several decades, they are not ecosystems and, more dangerously, a familiarity with value chains can suggest conceptual limitations that could be constraining as we move into a less predictable future. Understanding the difference between value chains and ecosystems is vitally important if we are to be able to fully appreciate the opportunities inherent in

ecosystems, especially as a means of achieving more powerful learning.

Michael Porter first introduced the concept of value chains as part of his approach to industry analysis. The linearity and sequentiality of Porter's value chains are well represented in the horizontal axis that links Supplier Power to Customer Power in his five forces framework. More than a map, this axis is a mindset that all too often holds value chain partners frozen in place regarding present skill sets and future possibilities. Linear and sequential also inevitably imposes a "convoy reality" on its members; you move at the speed and imagination of the slowest member. Learning and sharing of ideas and insights, fast response and adaptability, are rendered irrelevant by the convoy mentality, which prefers reliability over innovation and prejudges all contributions by the position in the chain that the member presently maintains.

Ecosystems, on the other hand, are anything but linear or sequential and as a result can offer the energy and surprise of non-linearity; done right, they have the power to liberate their members from stereotyping based on chain-rigidity. This is no longer about the regularity of convoys as much as it is about spontaneity and daring. No one link in the chain is necessarily locked into place, nor is it dependent upon the multiple approvals of other, often uninformed and disinterested fellow chain members. Ecosystems offer surprise over reliance. I have repeatedly marveled that the very first microenterprise to be born out of Haier's Internet of Clothing was neither an extension, nor an adjacency of present offerings or markets, but a rather unlikely venture into the laundering of exotic fabrics, such as scarves and high-end bags. No value chain-dominated management team would ever have made such a strategic arabesque, but fast-moving ecosystem partnerships sensed the opportunity and made it a natural choice for an experiment.

Value chains and ecosystems are completely different. They require different approaches to engage, and different roles to play. Power, be it commercial, technical or financial, dominates value chains; nothing could be less desirable in ecosystems if we are to entertain the abundant possibilities that are inherent in surprise relationships. Value chains prize efficiency and reliability; ecosystems flourish on serendipity and offer spontaneity. Value chains fulfill promises; ecosystems flirt with possibilities. Value chains are about delivery and performance; ecosystems are about dreams and the unthinkable.

For me, one of the early key lessons of the ecosystem era is that for innovation and learning, value chains suffer from being legacy constructs that tend to constrain rather than liberate the firm, while ecosystems celebrate spontaneity and responsiveness and ultimately have the power to take the firm in directions it would have never thought about on its own.

Ecosystems often exist in plain view but are difficult to see.

Many of the ecosystems we are working with were already in place for some time without being recognized for the potential that they offered to generate ideas. The basic foundational elements of the Copenhagen ESports ecosystem existed in the same small part of Skåne, Sweden and Denmark for many years without feeling or acting like an ecosystem. They already had in place major players in game design and ESports was well represented by Astralis, the world champion Counterstrike team. What was missing was a catalytic event or actor that could give this community of fellow travelers a real identity. Ultimately, it was a common problem of talent attraction to the region, which resonated with the Copenhagen municipality's desire to build strength in coding and software design, that led to an intervention by Louise Juhl, director of marketing and communication at Copenhagen Capacity, whose mission is for the greater Copenhagen region to "become a leading international hub for talents, investments and knowledge capable of competing with the most successful metropolises in Europe." The efforts of her and her team succeeded in encouraging the disparate members of what would eventually become an ecosystem, to think of themselves as a group defined by more than simply geographic proximity. This being said, it should also be acknowledged that maximum fulfillment of an ecosystem's promise is the acceptance that no one player can ever be allowed to dominate an ecosystem; to do so is the first step on the slippery slope to transforming an ecosystem into a value chain.

In 2004, Marco Iansiti and Roy Levien wrote a path-breaking book entitled *The Keystone Advantage: What the New Dynamics of Business Ecosystems Mean for Strategy, Innovation, and Sustainability.*[25] They proclaimed: "Strategy is becoming, to an increasing extent, the art of managing assets that one does not own," and argued that every value chain/ecosystem has roles that need to be played, including that of the keystone, who "shape and coordinate the ecosystem, largely by the dissemination of platforms that form a foundation for ecosystem innovation and operations (such as eBay, IBM and Microsoft)." What we have seen in our research with ecosystems is that "managing assets that one does not own" is probably too strong a sentiment, and that, instead, ecosystems respond best to light touches. Having a keystone might well be an advantage, but only if they don't use it to dominate their partners. An ecosystem's members are engaged rather than conscripted or contracted, and they would probably object to the notion of someone else managing their assets; in fact, we think that ecosystems work best the closer they get to "centerless." In this regard, Iansiti and Levien recognized that "the health of an ecosystem is appraised by the extent to which the ecosystem as a whole is durably creating opportunities for each of its domains." This implies a lot of self-determination among members, each of which we find characterized by a unique objective function that is normally oblique to all others. One way to think of successful ecosystems is as a

collection of independent, and often ornery partners, occasionally working in concert for the benefit of some, or even all, while always in pursuit of their own individually selfish objectives.

With centerless ecosystems as the goal, it is not far-fetched to describe ecosystems as galaxies of networks,[26] where each member sees itself in a relationship web with a unique set of fellow actors. As a result, centerless ecosystems lead to an infinite number of polycentric ecosystems, existing in parallel and each defined, or imagined, by one or more actors, without the others even recognizing these different expressions of potential; there is never just one ecosystem in play at one time. As a result, the role of an ecosystem *animateur*, such as Louise Juhl, who could see what others could not, and encourage even a slight bit of coordination, becomes extremely important in the recognizing, legitimizing and orchestration of what could ultimately lead to durable, yet fragile partnerships.

What does it take to make spontaneity a competitive differentiator?

The potential magic of ecosystems is realized in the relationships between organizations, not necessarily forever, but for the moment at hand. Spontaneity, the ability to seize a passing collision of new ideas and turn it into a customer experience that has never been thought of before, is something that has traditionally never occurred to managers, either because they have not been pursuing unique customer experiences or because their organizations have prevented them from acting on such a notion, had it ever occurred. Such relationships are profoundly different from what is found in the middle of an industry S-curve where commoditization is first appearing, where everything is familiar, where costs and efficiency are the only objectives, and where repetition rules supreme.

But, times are changing. Zhang Ruimin, the CEO of Haier, speaks about the company formerly being a "solutions" provider, selling products to fulfill customer needs; solving their problems. Today, however, Haier offers those solutions as part of a more complex set of unique customer experiences. The solutions (washing machines, refrigerators, etc.) alone are no longer enough; refrigerators without the ability to search recipes, or track food provenance, for each and every customer, are merely "dumb" solutions. To remain relevant in the lives of sophisticated customers, Haier needs the capacity to enter into any conversation, at any time, and this is something that most traditional organizations are not prepared for; Haier needs spontaneity in the way in which it engages with customers and learns with any ecosystem partner, and this means a new type of organization.

One of the most interesting outcomes of Haier's latest organizational transformation[27] is how Haier has made it easier to rapidly adjust to the situation at hand, to be spontaneous. This is the outcome of several managerial choices, none of which are intuitively obvious in a world that has long been concerned with predictable mass production, price competition driving efficiency as the competitive differentiator, and variance reduction as the overall objective. These new managerial choices include:

Betting on many unknowns, rather than predicting the right one

Haier believes that it will remain relevant in the future, which is unknown (because it has never had to serve smart homes before), not because it will be better at predicting likely outcomes, but because it will have placed more bets on possible outcomes than anyone else; its secret to success will be that it winds up being at the right place, at the right time, because it took more chances. Yes, this puts Darwin in the Chief Strategy Officer's seat, but what more could strategy really be when you can't predict, extrapolate, or assume?

Haier has made it easier for its employees to place bets on the future

Who best to trust regarding an unknown future: veteran employees who have grown up with their market's transformation journey, and who are close to the customer, or C-suite strategists, fresh out of business school who have good models? For more than 35 years, Haier has consistently trusted the knowledge of its employees to move the organization forward. At this point, when the advent of the smart home threatens to change much about what we know about home appliances, who better to steer the company into the future than the very employees who have established "zero-distance" between themselves and their customers? They may not have all the right answers, but they are so close to the market that they more than likely have the right questions.

Haier has also made it easy for those same employees to launch new ideas. Only three colleagues are required to endorse a new idea, and invest their own money, in order to propose a possible new start-up (microenterprise). If the logic of the proposal makes sense, they are off and running, and these new founders of the microenterprise are given responsibility for hiring, big decisions, and distributing rewards. Along with the "zero distance to the customer," there is also "zero approvals" in operating decisions, and so there should be "zero delays" in responsiveness.

Bet on advantages of smallness

Microenterprises are essentially startups on the interface between the unknown and Haier's traditional large organizational advantages. Typically, no more than ten people in size, they are able to adjust quickly to changes in the world around them, act in an end to end manner with everyone involved, and are too small to ever believe that they can do everything themselves, especially when there is an admittedly high mortality rate. One way to think of them is as provocations of an unknown future, trying something, many things, and seeing what works; they are always "— on the edge — in between the known and the unknown and you have to keep pushing it towards the unknown otherwise it and you die."[28] The words are those of Steve Lacy, a jazz musician, who knew quite a bit about improvisation, but the spirit is very much that of the microenterprises we have watched.

Redesign the mother ship so that scalable learning takes place

What really drives Haier's ecosystem-enabling organization[29], however, is neither the microenterprises, which move fast across an ecosystem to suggest relationships that might lead to novel and delightful customer experiences, nor the platforms upon which these microenterprises rest. Instead, it is what Marshall Meyer calls a symbiotic relationship that creates an essential dynamic between these two key architectural elements, so imperative if an ecosystem engagement is to work. Part of this, Art Kleiner has suggested, is that the platforms, which provide launching pads for microenterprises that share a common affinity characteristic (mostly markets such as hospitals, clothing, or food), can act as mediators between the chaotic Brownian motion of the outside ecosystem, and the more regulated cadence of life within a much larger, complex organization. It would be difficult, if not impossible, for conversations to move from the wild frontier of Haier's ecosystem partners directly into the organization's conference rooms. At the same time, platforms can also serve as energy absorbers, so that the rough edges in ecosystem relationships are less stressful. Finally, having such platforms that are constantly in touch with a wide range of microenterprise ecosystem interactions across an industry should provide an excellent opportunity for "scalable learning."

So, in conclusion, here are three simple thoughts regarding ecosystems and their potential:

1. They are so much more than value chains;
2. They are already more or less in place, needing a catalytic agent to animate them; and
3. Engaging with an ecosystem requires speed and experimentation. This, in turn, needs management to apply a light touch, reassess the suitability of its architecture, and be prepared to lose control.

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This paper is the result of a multi-year consulting relationship with the Haier Culture Platform, Haier's Rendanheyi Model Research Institute, and a research partnership with Simone Cicero. It has also benefited from case research with Anouk Lavoie on Copenhagen's Esports ecosystem. I am indebted to all for any insights I may have gained, and I accept all errors as my own.

FOOTNOTES:

22 Anouk Lavoie and Bill Fischer, "How Copenhagen launched an Esports ecosystem," IMD Case IMD-7-2102.

23 Bill Fischer, "The unknown is not uncertain," forbes.com, May 5, 2016: https://www.forbes.com/sites/billfischer/2016/05/05/the-unknown-is-not-uncertain/

24 John Hagel, "Scalable learning in an exponential world," *Edge Perspectives*, October 4, 2016: https://edgeperspectives.typepad.com/edge_perspectives/2016/10/scaling-learning-in-an-exponential-world.html

25 Marco Iansiti and Roy Levien, *The Keystone Advantage: What the New Dynamics of Business Ecosystems Mean for Strategy, Innovation, and Sustainability*, Harvard Business School Press, 2004.

26 Greg Satell has used the term "networks of networks," in "How to build an ecosystem strategy," medium.com, August 3, 2019. https://medium.com/swlh/how-to-build-an-ecosystem-strategy-86d0e73c9acf.

27 More than three decades of prior transformations are addressed in Bill Fischer, Umberto Lago and Fang Liu, *Reinventing Giants*, Jossey-Bass, 2013.

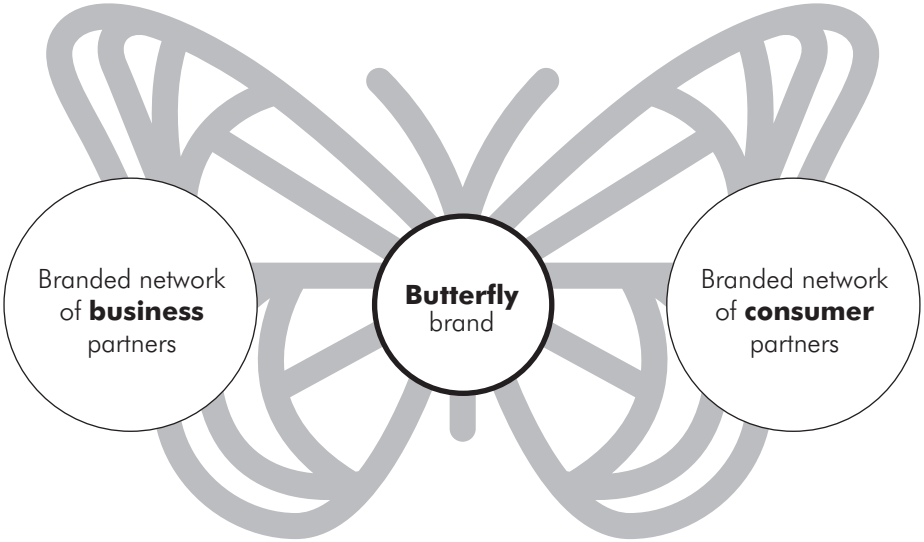
28 American soprano saxophonist Steve Lacy, quoted in Derek Bailey, *Improvisation*, Da Capo, 1992, p. 54.

29 This is Simone Cicero's term and I am continually impressed by its aptness.

Building a butterfly brand

Peter Fisk

6



Mikkel Bjergso loves beer. So much so that the tattooed Dane, who was previously a physics teacher, has become the global leader of the craft beer market. "Forget all this technology," he tells me while sitting in his Copenhagen bar, "in today's world people want to have time to be human, to be individual, to discover simple pleasures in life."

Bjergso used to choose the cheapest, blandest beer, until one day he tasted Hoegaarden beers from Belgium, which changed his life. In 2006 he started home brewing in his kitchen to create his first craft beer, while still teaching by day. His breakthrough came when he started to experiment with additional ingredients, adding French coffee to oatmeal stout, creating what he labelled "Beer Geek Breakfast."

His Copenhagen-based business, Mikkeller, has launched a staggering 1680 types of beer over the last five years, and created its own branded bars in over 45 cities from San Francisco to Seoul, Tokyo to Torshavn, capital of the Faroe Islands.

Yet Bjergso never wanted to create a business, with all the costs of infrastructure, people, and production. Instead, the business is largely virtual, each of the beers is made by independent brewers around the world, and the bars are run by local partners. Mikkeler is essentially a platform business, albeit more physical than digital.

He became known as "the gypsy brewer," travelling the world in search of the best craft beers, and then linking the local microbrewery to his growing network.

He sees Mikkeller as a lifestyle brand, creating a range of branded hoodies and beanies plus beer festivals and a running club. The Mikkeller Running Club is a big passion of Bjergso, with over 250 chapters around the world, and was voted the world's best running community by *Runner's World* magazine.

Bjergso, an enthusiastic runner himself, says: "The aim of the Mikkeller Running Club is simple: stay fit through running and drink loads of beers. On the first Saturday of every month, members of the various chapters gather to run together and then enjoy a free beer at a clubhouse bar. Some people are more serious about the running, others are more interested in the beer."

Ecosystems from beer to beauty

Emily Weiss is intent on disrupting the $250 billion cosmetics industry, which is still dominated by traditional brand owners like L'Oreal and Estee Lauder. "Women today have different needs than we had in the past, but beauty companies haven't responded to that," she says.

Her journey started when she was a 25-year-old fashion assistant at *Vogue* and started writing her own blog in the evenings, "Into the Gloss." She wanted to connect with real people like her, and rapidly built up a following by taking her followers into the bathroom cabinets of women she met, a popular feature of her blogs.

An early adopter of Instagram, she focused on photos that were rapidly shared by her community. Her blog soon became far more significant than *Vogue* to her audience. It became the must-read for beauty fans, with over 10 million page views a month, and she realized she needed to focus on it full time.

She launched Glossier in 2014 as a socially driven online cosmetics business that grew rapidly with the help of $2 million venture funding. She focused on creating content and cosmetics products for women like herself, "useful and affordable, for girls who work hard but want to have fun."

Glossier became the cult beauty brand for the Instagram generation.

Products were cocreated – driven directly out of discussion forums, sales multiplied through peer-to-peer recommendations, and the brand spread rapidly through social media. The pink and white branding rapidly spread across a range of products from cleaners and moisturizers, to skin tints and eyeliners, caps and sweatshirts too.

The combination of content, editorials and forums, and cocreated products drove rapid growth. To the millennial audience, the brand became far more relevant than traditional retail-based cosmetics brands with scientific formulae and Hollywood endorsees.

Emily Weiss has worked with distribution partners around the world, including online retailer Net-a-Porter and pop-up stores in major cities, to bring the online community together in physical places, creating party nights for her local community, talking about the latest skin care products and eyeliner, with added cupcakes and prosecco.

An ecosystem built around a community of consumers, Glossier is now the fastest growing beauty brand in the world. "Our message has always transcended borders and cultures and is central to who we are as a brand" says Weiss.

How brands became ecosystems

The old idea of brands was that they were marks of ownership. Brand names and identities reflected where they came from, as indicated by the Germanic origins of the word *brandt*, as farmers burnt their distinctive markings onto their livestock. Most brands initially reflected family names and the activities of those owners.

Over time, consumers became less engaged by origins of ownership, and responded much better to brands that reflected their own lives and aspirations. Names became more abstract, as the concept became more important than the name, and the logo acted as a shorthand for distinctive attitudes and values. Concepts reflecting people, not products, could rise above functionality, and enable brands to move beyond categories.

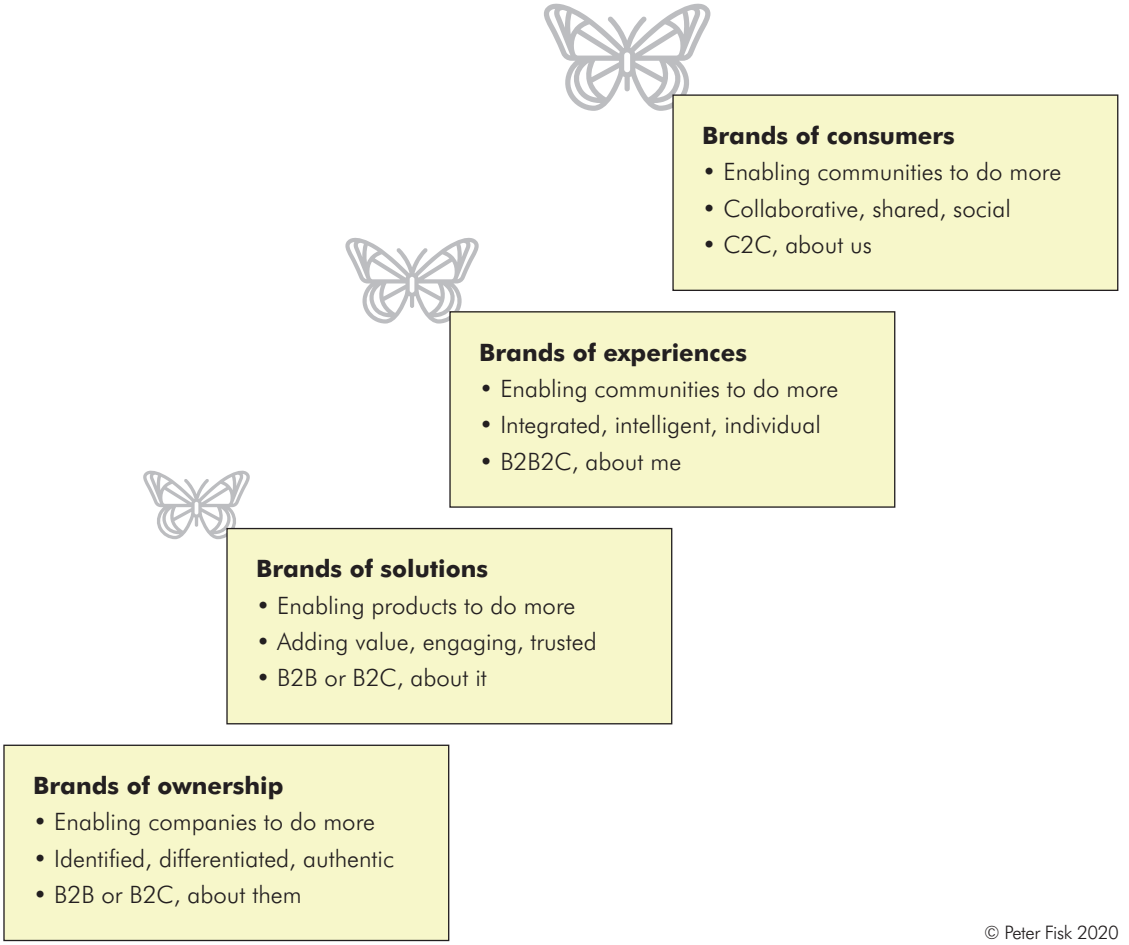
Digital media further changed the ways in which brands engaged with consumers, ultimately connecting consumers with each other. While greater access to information drove scrutiny and demand for authenticity, consumers responded by trusting brands less. They switched off from listening to overtly commercial advertising, and turned instead to trusting and engaging with friends and others like themselves.

A brand's story, and ultimately its reputation, became much less driven by what the business said about itself and much more by what people said to each other. In today's world, brand owners seek to nurture and curate what real people say to each other – tweets and posts, word of mouth, click to click – embracing it as an ongoing narrative that they cannot control but which they still seek to influence and enable. Coca-Cola calls this "liquid and linked" story curation.

Brands today are about communities of consumers who share a common aspiration. The brand doesn't own the community, but it can be an effective and respected enabler, connecting people, not to buy products per se but to share passions. Products and services then follow, as the brand becomes trusted and aligned to the activity that

it enables. A brand purpose is the shared motivation of the community, and its enabler.

Brands are therefore defined more by what they enable people to do, rather than what they do themselves. Brands are more structures of collaboration to deliver this enablement and ongoing relationship, rather than the wrappers of products and transactions. Branded ecosystems provide an effective infrastructure to support this, and ultimately consumers are part of the system too, potentially contributing more to their collective success.



While ecosystems are most often thought of as large virtual networks of supply, they have much more impact when considered from the perspective of demand, how they bring together richer experiences, and reach and connect many more consumers.

The evolution of brands shows how they became ecosystems. The shift from brands of ownership to brands of solutions reflected the shift from brands as a simple device of distinction, of identity and communication, to richer concepts, with added value. Then came the shift to brands of experiences where companies worked together, instead of as "B2B" and "B2C", to address consumers more collaboratively in a "B2B2C", or more profoundly as a "C2B2B" relationship, with the consumer in control.

The fourth step, to brands of consumers, is where brands really become ecosystems, leveraging full network effects through collaboration and community, and the predominant relationship is between members, or "C2C." Glossier demonstrates this dynamic, as does Rapha, the cycling brand founded by Simon Mottram in London's Covent Garden in 2004 that has spread to over 20 countries. While Rapha has stores where you can buy its premium cyclewear and buy or fix your bike, it is no coincidence that the stores are called Cycle Clubs. There is a membership fee, a coffee shop, showers, and a bike store. They have become the meeting places for people who share a passion.

Ecosystems of technology and healthcare

ARM Holdings started out as a joint venture between Apple, a small British company – Acorn Computers, and VLSI Technology, seeking to build more affordable semiconductors.

One hundred and sixty billion chips later, ARM is owned by Softbank and its Vision Fund, and employs 6,000 people in 45 countries. It provides the technology for 99 percent of the world's smartphones and tablets, and a multitude of other connected devices.

While Intel used to be the undisputed leader of the market, it ran into problems a decade ago as its sophisticated, but standardised, products couldn't meet the exacting needs of a fast changing market, where every device manufacturer wanted something different, and quickly. ARM realized that device manufacturers wanted many more custom solutions, responsive to a market that was growing exponentially.

ARM chose a radical business model – not to make any products. Instead it focused on design. And then built an ecosystem of over 1000 business partners around the world who could manufacture its licensed designs fast and responsively to meet the diverse needs of customers and their ever-changing products. ARM's ecosystem strategy fundamentally differentiated it from Intel, with significantly greater revenues and profitability.

Softbank's Masayoshi Son acquired ARM for $32 billion in 2016, believing that as the demand for connected technologies continued to multiply, ARM's ecosystem would enable it "one day to become larger, and more valuable than Apple."

Similarly, many Chinese companies have grown rapidly by developing ecosystem-based business models – from Alibaba and Baidu, to Tencent and Xiaomi.

These organizations have thrived as ecosystems because they operate in a youthful and flexible environment, young people are willing to rapidly adopt new digital approaches to any kind of activity, and the markets themselves lack structure and convention. WeChat, for example, is the glue that brings Tencent's ecosystem together. With 1 billion active users, WeChat uses social influence and gaming, to act like a navigation hub for consumers to explore the many dimensions of Tencent's sprawling virtual architecture.

At the same time, most Chinese ecosystems are privately owned, allowing them to make more strategic investments without having to deliver short-term returns. There are fewer regulatory hurdles – for example, in using customer data and in entering a new market.

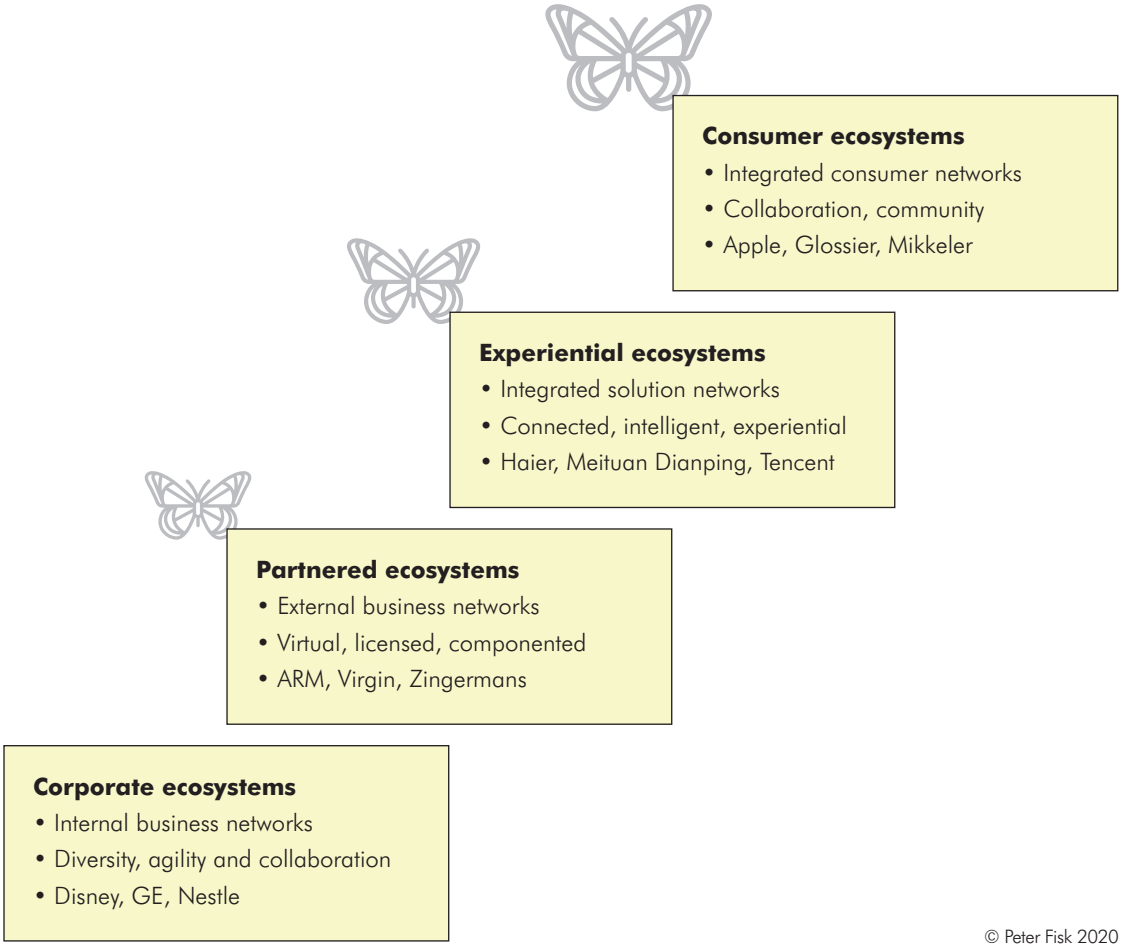
PingAn is a great example of taking the ecosystem model further. Whilst it started out as an insurance company, founded in 1990 and now completely publicly owned, it has used this financial underpinning to support its growth into many other sectors. A little like Warren Buffett's Berkshire Hathaway, it has built on its financial powerhouse, but in its case by using new technology platform thinking. With a market value of over $200 billion, it is already one of the world's top 10 largest companies.

Good Doctor is PingAn's digital healthcare business, established in 2015, and now the world's largest healthcare platform with 300 million users. It describes its service model as "Internet + AI + physicians," which translates as an online app through which a patient will initially evaluate their health or specific condition using an AI-enabled diagnostic. If required they will then be connected by video call, typically within an hour, to a real doctor, most likely one of 10,000 employed by PingAn who sit in its service hubs.

The doctor can then refer their patient for further diagnosis, treatment, or medication. This is when the ecosystem of partners becomes invaluable with its nationwide network of clinicians, hospitals and pharmacies, and even a home delivery service for prescriptions. The platform also offers wellbeing advice for health and wellbeing – for example, supporting new mothers and the elderly. A monthly subscription embraces an insurance fee to cover some costs, whilst a premium service called Private Doctor offers additional services and all-inclusive fees.

How ecosystems became brands

Ecosystems have evolved in a similar way to brands, and there is an interesting correlation between the four phases of each evolution.



GE has long been an ecosystem of many partners, however, Jack Welch's mindset was to keep as many of these under his corporate umbrella as possible. As organizations took a largely capability-driven and efficiency-minded approach to success, they tried to build increasingly diverse networks and collaboration between areas, but largely in-house.

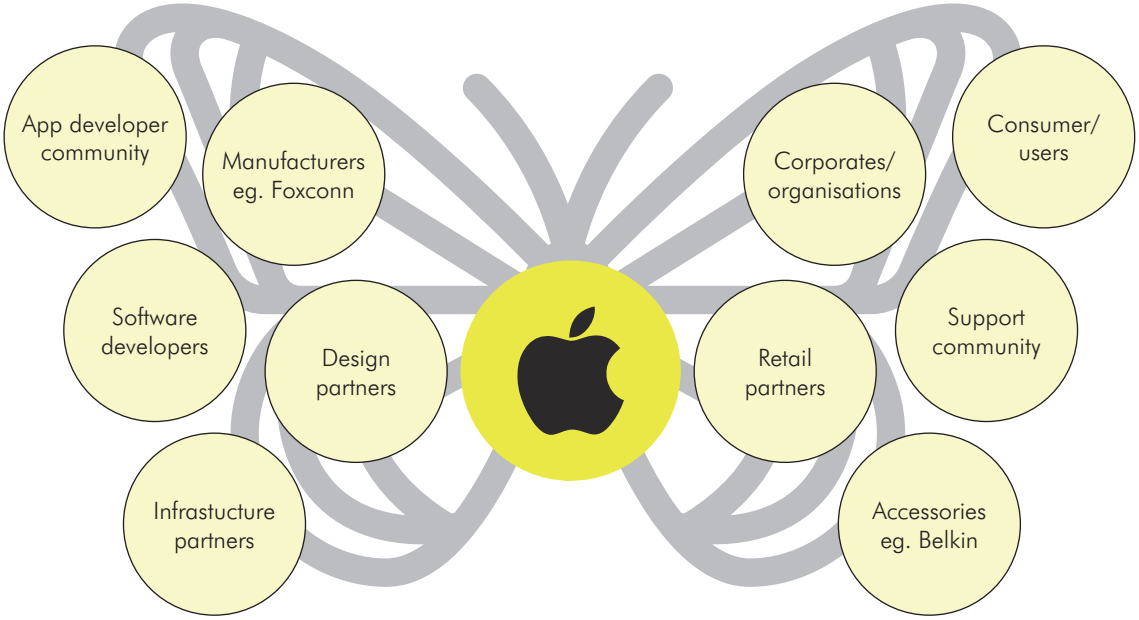
That changed with the technology revolution, with companies like ARM recognising that the accelerating speed of progress required more agility, but also that risk could be shared, and that capabilities were no longer the foundation for growth. They looked beyond their organizations for support, and became partnered ecosystems.

Virgin is a great example here. I remember founder Richard Branson telling me that one of the so-called "truths" of business that he disliked most was the convention to focus on what you've always done. He of course had little idea how to run an airline, a bank, a media business, or a spacecraft when he launched each of them, but always with a partner who knew what they were doing.

Indeed, Virgin's approach is not so dissimilar from Mikkel Bjergso's. Branson's company is essentially a venture capital business that gets involved in many new businesses, usually with only a small investment. Part of the deal, however, is that the new business licenses the Virgin brand – Virgin Media, for example – from which Branson gains a royalties stream. This has proved massively lucrative for him.

The most dramatic evolution comes with the shift to experiential ecosystems, where the dynamic flips from partners driving efficiency to serving customers in better ways.

Haier, the Qingdao-based home appliances manufacturer, is a great example here, recognizing that it needed to think in consumer-based categories, rather than technology-driven product categories. Haier's distinctive *Rendanheyi* operating model, built up of thousands of entrepreneurial micro-businesses, enables it to work with partners and consumers much more easily. A focus on connected devices, or Internet of Things (IoT), drives it to reimagine how entire activities can be innovated – shopping, clothing, driving, and entertainment. Haier's clothing ecosystem, for example, reimagines how people can buy, clean, wear, store, and even recycle their clothing in radically better ways.



The final step is to build the ecosystem not around the business, the product, or even the category, but around the consumer. Mikkeler and Glossier are good examples, as is Apple.

The most important shift in Apple's thinking under Tim Cook has been towards a much more consumer-centric approach to the role of devices, how they work together, and more importantly the content that they support, and activities that they enable.

Apple's business model today is brand-centric, creating integrated experiences for consumers that enable them to connect with each other and their wider worlds. The synchronicity of Apple devices has become a joyful simplicity, and the wonders of its app store, created by millions of partners, has made the experience far richer.

Building a butterfly brand

A "butterfly brand" is a relatively small business with a big imagination, which succeeds by bringing together a distinctive ecosystem of partners, enhanced by a powerful and engaging brand reputation.

The butterfly brand can achieve dreams whilst staying small and highly agile, using its partners with complementary skills, shared risk and reward, to add reach and richness, to have more influence and impact. Indeed, you could add many other examples, from Airbnb to Uber, of asset-light companies succeeding through ecosystems.

What makes butterfly brands special is when they go beyond the conventional thinking of ecosystems.

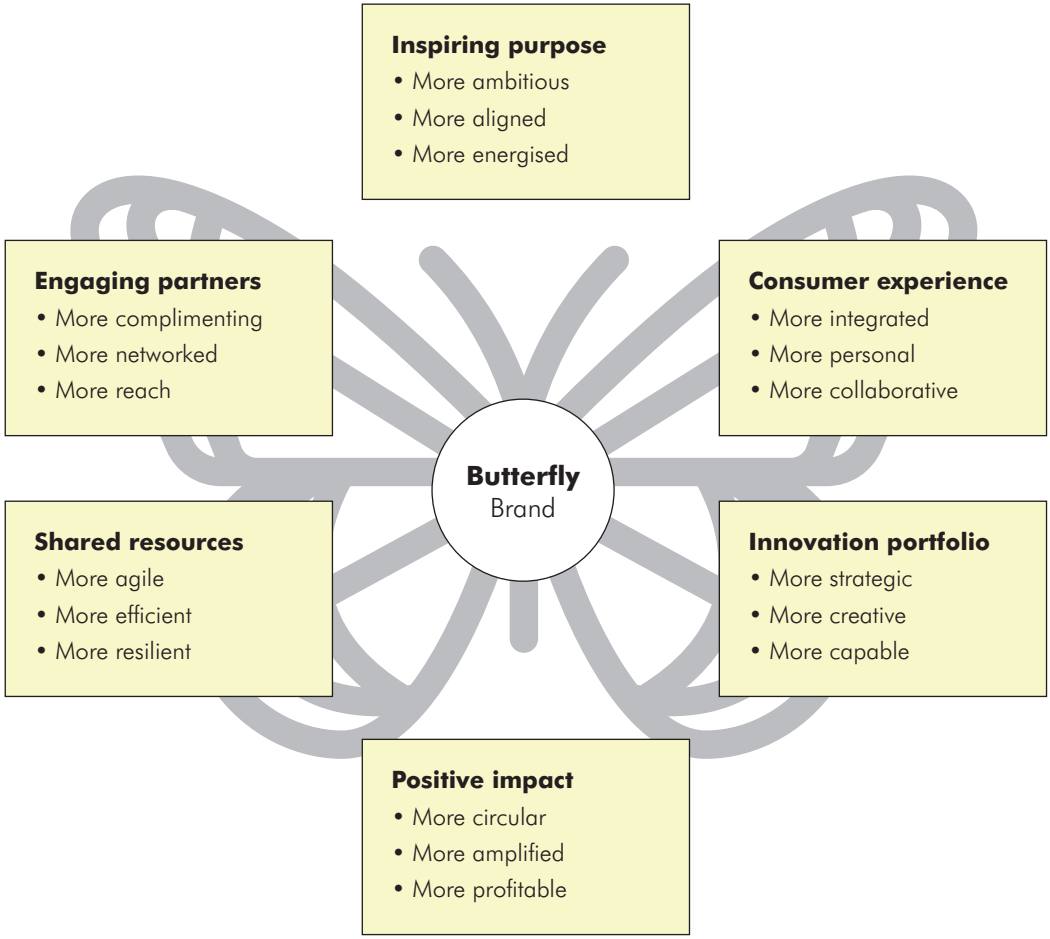
In *Business Recoded* I evaluate the 49 new codes required for business to succeed in today's rapidly changing world: to explore changing markets, embrace new disruptive technologies, address the most urgent environmental issues, and resolve the fractures between business and society; to embrace purpose beyond profit, stakeholders beyond shareholders, and futures beyond those imaginable today.

Applying these codes to the butterfly brand, we start to map out a simple but better checklist for the ecosystems of the future.

The butterfly brand, which could be a start-up or an established business, comes together with its partners not simply in pursuit of financial gain, but with a shared purpose – an inspiring collective ambition, by which all the partners together can contribute towards a bigger goal, and potentially a better world.

A strong common purpose creates shared direction, and an aligned culture.

The butterfly brand operates together with its partners much more closely, in a shared business model, one which efficiently utilises shared resources, while also having the agility to morph over time. It delivers a better



experience for consumers, working together to design and develop innovative solution-based experiences, and then delivers them in a seamless, more personal, more responsive manner.

And most of all, the butterfly has a more positive impact, financially and beyond.

Driven by its purpose it seeks to achieve more than profitable gain. Through a coordinated and "circular" approach, it brings together a system-based approach to resources that deliver zero net waste. Or even better, achieve positive net impact.

Finally, we should remember "the butterfly effect," famously coined 50 years ago by Edward Lorenz, a nature-loving meteorology professor at MIT.

While seeking to simulate weather patterns using a computer model based on 12 environmental variables, Lorenz entered some numbers. He realized that the smallest of differences in numbers, going down to many decimal places, could make a huge difference to the weather prediction.

Likewise, the business leader of the butterfly brand can make huge differences to the positive experiences of consumers, the mutual success of every partner, and to the continued evolution of the branded ecosystem.

Peter Fisk's career was forged in a superconductivity lab, accelerated by managing supersonic travel, shaped in corporate development, evolved in a digital start-up, and formalized as CEO of the world's largest marketing network. He leads GeniusWorks (www.theGeniusWorks.com), a strategic innovation accelerator based in London, and is a professor of leadership, strategy and innovation at IE Business School in Madrid, where he directs its flagship executive programme. He is the author of *Gamechangers* and *Business Recoded*.

Transformation towards an ecosystem: how to establish an ecosystem business while sustaining success in the core business

Karolin Frankenberger, Hannah Mayer, Andreas Reiter & Markus Schmidt

7

Can you think of a mobile operating system that does not rely on various players coming together, aligning structurally and managing their mutual interdependence for value to be created? Or a smart home system? Your go-to ride-hailing service? Or even your favourite coffee (assuming you're siding with George Clooney on that one)?

Ecosystems abound, with digital platforms (such as those organized around iOS, Nest and Uber) as their most common manifestation. But make no mistake, ecosystems of all shapes and sizes, including the non-digital and non-platform ones (such as Nespresso), are fast superseding traditional firm structures.

While the digital pure players and startups of this world tend to be free of historical organizational baggage, most traditional firms need to find a way to establish an ecosystem business while maintaining success in their core business. That's not to say that Apple, Google, and Uber didn't need to overcome significant obstacles on the way to becoming leaders in mobile, smart home, and ride hailing; that's only to say that Nespresso's journey within incumbent Nestlé followed a different path. That's because it had to address one main dilemma the others didn't face: how could they maintain profitability in their legacy-based, traditional business activities (what we call the 1st S-curve) while reaping the full potential in a new ecosystem-based business (which we call the 2nd S-curve)? This dilemma of two S-curves is something that all incumbents face, and most of them fail and end up wasting money and time. At the same time, the management community (and frankly scholars) have been too concerned with defining and delineating ecosystems instead of helping practitioners get ecosystem strategy – and implementation – right. But there is light at the end of the tunnel.

Consider, for instance, Austrian waste management company Saubermacher. Founded in the 1970s and meanwhile earning 300 million euros in yearly turnover from waste management operations, Saubermacher is neither a tech behemoth nor a start-up. Instead, it is one of the many organizations with a traditional background (1st S-curve), looking to innovate towards the future (2nd S-curve). And that they did. They established "Wastebox" – a platform-based waste disposal solution, connecting construction companies with waste disposal firms via an app much more conveniently, transparently, and more user-friendly than before. Only two years after inception, Wastebox had garnered a significant valuation and Saubermacher was wooed by the global industry leader, Veolia of France, to engage in a partnership with them.

So, what did Saubermacher – and other successful transformers – do to nail what can only be described as a transformation rollercoaster? We conducted interviews with CEOs and other top executives at more than 100 globally leading companies to distill the textbook recipe for transforming towards an ecosystem. We found it takes five elements to master the transformation, and ecosystem thought leaders answer the following related five questions affirmatively.

Do you understand there's a pressing need to act and transform?

The first step toward change is self-awareness, an old saying goes. So, the first step toward an ecosystem business is the realization there is a need to act and transform to begin with.

Ecosystems tear down traditional industry boundaries that have long served as barriers of competition. They redefine value creation and value appropriation mechanisms, and redraw the historically established lines between cooperation and competition. Industry dynamics are thus shifting in response to the introduction of digitally enabled ecosystems that span sectors. Ecosystems disrupt established industries, connect previously unrelated businesses, and give rise to novel value propositions and modular product-service bundles.

Many traditional businesses we spoke with feel threatened by newly emerging competition from tech players or startups, who appear to seamlessly build and integrate such ecosystem-based business models. Others observe trends in customer preferences that force them to transform as they become increasingly reliant on partners to bring about value propositions that satisfy customer needs.

The list of reasons to need to transform is long. Companies need to figure out which motives apply to them specifically and internalize the urgency to act upon them.

Do you have a comprehensive strategy – and supporting business models – in place to address both S-curves?

Once organizations have realized the need to transform, they will have to define a comprehensive strategy and the right supporting business models. Organizations need a sound strategy addressing how to safeguard and increase the competitiveness of their core business in light of newly emerging ecosystems. At the same time, they need to consider how ecosystem participation can help them expand their value network and generate additional growth, based on new ecosystem-oriented business models. They must also consider how to best manage interactions between the core and the new ecosystem business.

Most existing strategy tools are ill-fitted to this exercise. The majority of them focus on within-industry competition and are thus of little help when organizations must wrap their heads around ecosystem strategies and business models involving multiple players and industries. What is needed are new ways of thinking and perspectives on strategic portfolio management and digital initiatives that span beyond organizational boundaries.

When considering the expansion of product or service portfolios, incumbents need to make strategic decisions around when to set up collaborative ties with external players to bring about new offerings, or when to go it alone. Involving others in this process can give the incumbent access to new value pools. In return, they must give up

some territory and think of new business models from the perspective of the whole ecosystem rather than that of just their single firm. This means, to make such ecosystem-based business models work, incumbents need to consider the contribution and needs of all players in the ecosystem, including partnering firms, competitors, and customers.

Do you have the right talent and mindset (i.e., the "soft factors")?

The "soft side" of a transformation towards an ecosystem starts with sourcing the right staff and leaders. Across both S-curves, the most important lever in this respect are retraining and hiring. For instance, a steel company we spoke with built a dedicated digital academy to upskill employees in digital proficiency, thus investing in their employees' long-term development. As far as leaders are concerned, the major challenge resides in reconciling two leadership approaches in one organization. While some traditional leadership qualities will continue to be important in select areas of the 1st S-curve (e.g., a zero-failure tolerance in production), it will become increasingly important on the 2nd S-curve to employ a transformational leadership style rather than an authoritarian-directive one. In fact, the CEO of a pharma company's ecosystem venture told us, "Classic leadership models are outdated. We see leaders as servants who create a safe space for employees to perform at their best."

On top of leaders and staff, a fundamental shift towards a modern, change-embracing corporate culture is needed if the transformation is to succeed and yield reputational spill-over effects. As incumbents need to quickly react to needs of customers and ecosystem partners, promoting a culture of customer-centricity and radical experimentation will be indispensable. Successful incumbents empower their employees to pursue new ideas independently and without unnecessary red tape.

Do you have the right (infra-) structure in place (i.e., the "hard factors")?

The "hard side" of digital transformation relates to the structure, processes, and technology it takes to make the transformation work. The structural design of combining the ecosystem business and the core business in one organization will be a key consideration early on as incumbents need to set up an organizational design conducive to working with and learning from others, rather than in a silo.

Because organizations can no longer deliver value propositions independently but instead rely on collaboration partners, it is vital for them to open up and think strategically about a network of ties beyond firm boundaries early on. These ties can be manifold and include links to startups, company builders, and venture capital organizations but also to universities, thought leaders, tech hubs, players from other industries, and even industry competitors. For some topics that are hard to figure out single-handedly, an alliance with other players in the industry might make sense.

As far as processes and technology are concerned, managers should make sure that they let go of traditional approaches and switch to a set-up that allows efficient and flexible collaboration with other ecosystem players. In most cases, this will require an investment into a more open, adaptable IT infrastructure and agile development process to realize new requirements faster. Particularly when operating a digital platform ecosystem, such approaches are indispensable.

Do you know how to measure progress and results?

Let's assume companies have tackled all the above. They are expecting bottom-line effects or else the whole ecosystem transformation would be futile. Where and how exactly the transformation has effects will differ across the two S-curves, so KPIs need to be determined specific to the respective S-curve (core business vs. ecosystem business) and the relevant stage (ask yourself: is my ecosystem business in its incubation phase, or have I started to scale and commercialize already?)

The KPIs should reflect a healthy mix of quantitative and qualitative measures, whereby qualitative KPIs can initially prevail in the new ecosystem business (during the incubation phase) and later (when scaling and commercializing) be displaced by quantitative ones. Setting objectives, assigning accountability, and ensuring transparency vis-à-vis the relevant stakeholders is almost as important as the KPIs themselves. This stresses yet again the crucial role of measuring impact because the age-old saying also holds in a digital transformation: only what gets measured gets done. But then, luckily – as waste manager Saubermacher experienced – what goes around does come around.

If companies have mastered all elements and survived the rollercoaster ride, ideally coming out of it all hyped on adrenaline and endorphins – this is not the end. Eventually their 2nd S-curve will become a 1st S-curve again as the original 1st S-curve ceases to represent any value to customers. And then the whole cycle starts anew. So, as you sit tight in your seat just as your rollercoaster car is about to embark on its next trip along the tracks, just remember Ginni Rometty, former CEO of IBM, who correctly pointed out: "The only way to survive is to continuously transform."[30]

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This article is adapted from the authors' book The Digital Transformer's Dilemma: How to Energize Your Core Business While Building Disruptive Products and Services (Wiley, 2020). It is an extended version of the authors' Harvard Business Review article "The transformer's dilemma".

FOOTNOTES:

30 http://fortune.com/2013/05/17/ginni-rometty-reveals-the-future-of-watson/

A playbook for creating adaptive ecosystems

Nathan Furr &
Andrew Shipilov

8

Ecosystems have become a critical part of how industry leaders create new growth and capture competitive advantage. But how we think about creating ecosystems has fundamentally changed in the last few decades. Whereas in the past it was sufficient to play the role of broker at the middle of a centralized ecosystem (e.g., think how IBM used to sit at the center of an ecosystem of software, periphery, and service suppliers), today, smart leaders are adopting a more dynamic strategy: what we call an "adaptive ecosystem" strategy.

In an adaptive ecosystem, industry leaders cocreate new products, services, and platforms with a bevy of partners – often uncommon partners – working in more flexible and adaptive arrangements. These adaptive ecosystems can lower the cost and risk of creating new markets while increasing the likelihood of winning, as illustrated by the way that Didi and Tencent worked together to beat Uber or how Samsung is working with uncommon partners to create breakthrough products.

Adaptive ecosystems are not limited to private companies. Private-public partnerships can be at the core of an adaptive ecosystem as well. Philips built such an ecosystem when it joined forces with Salesforce.com and Radbaud University Medical Center in the Netherlands to create a platform for monitoring health and treatment compliance of chronically ill patients outside of the hospital environment. Salesforce provided data handling and analytics capability, Philips provided expertise in manufacturing medical equipment, while Radbaud provided both medical expertise and a pool of patients who were willing to enrol in the trials of the wearables.

But while we all understand the importance of ecosystems, the critical unanswered question is how to get them to work? For example, how do you identify the right partners, how do you get them to work together, how do you contract with them, and how can you get value out of the relationship?

Together, we have researched how to build ecosystems. This chapter is both a summary and an extension of our thinking on this critical question: the "how to" of orchestrating successful ecosystems.

Ecosystem foundations: back to the basics

The core of ecosystem strategy is the recognition that end customers prefer solutions, not products. For example, Apple did so well entering the crowded MP3 player market because it recognized that customers didn't want an MP3 player, they wanted a solution for acquiring, managing, and listening to music. The ecosystem it brought together to perform these functions, combined with good design to make it easy to use, led to the dominance of the iPod. In essence, ecosystems are about bringing together all the parts and pieces (i.e., components and complements) for customers to capture value. Moreover, firms with strong ecosystems often beat out their competitors.

But how do you decide when and where to build ecosystems? The answer comes back to the most fundamental principle of innovation: what is the customer problem you are trying to solve? Ecosystems built on problems that customers aren't willing to pay to solve (with time or money) in a differentiated manner will fail. For example, Blackberry and Nokia fell from glory not because their phones were technologically inferior to Apple's iPhone, but because their phones did not provide differentiated propositions compared to the Apple's ecosystem, which was centered on a full user experience in acquiring, storing, and managing a blend of information, communication, and entertainment services.

By contrast, the successful firms we studied spent time in advance to ensure they were solving a worthwhile problem. For example, Cisco's Hyper Innovation Living Lab (CHILL), which focused on creating new growth areas by bringing together five to six partners (both corporates and startups), always began with a multi-month problem discovery phase. Specifically, after framing a hypothesis about a value creation opportunity, team members at the ecosystem orchestrator interviewed multiple leaders at each potential partner to validate and understand the problem to be solved. This is essential because like any business, unless you are solving a valuable problem (it's a significant problem that customers can and will pay for), there is no business opportunity and no ecosystem.

Likewise, Mastercard's International Development group and Mastercard Labs for Financial Inclusion worked with non-governmental organizations in developing markets to create Mastercard Aid Network. This digital platform for humanitarian response is built to provide financial services to displaced populations. The technology can be deployed in remote environments that don't have access to the Internet (e.g. refugee camps), enable disbursement of cash safely to the affected populations, and enables people to send money literally anywhere in the world.

Ecosystem partners: sending out the bat signal and sorting your heroes

For an ecosystem strategy, the orchestrator of the ecosystem – the one who pulls all the different players together like an orchestra conductor – needs to identify, attract, and qualify the ecosystem participants. To identify partners, it can be useful to ask: what are all the parts of the ecosystem that need to come together to create value for the end user? It's useful to distinguish between the ideal ecosystem of the future and what Ron Adner calls the "minimum viable ecosystem" necessary just to get started. At the start of an ecosystem, you are more likely to succeed if you focus on the minimum necessary to create value because you can create proof points earlier and with less money than if you try to assemble the ideal ecosystem from the start.

As you think about the necessary ecosystem, separate out which 1) parts are readily available for purchase, 2) those parts that might emerge on their own but require encouragement, and 3) those parts that won't emerge on

their own and thus need to be created. Typically you would use a buy strategy for the first, a partner strategy for the second, and a build strategy for the third. However, even though you might need to build some components, consider doing so with partners rather than doing it alone. As you do so, look beyond the radius of regular partners that you normally work with to consider uncommon partners: firms outside your normal scope, for example, in other industries or startups, to help you execute your strategy. For example, when Lowes, the hardware retailer, broke new ground using augmented reality to sell products, created exosuits for workers, and developed robots to do inventory in stores, it did not build these itself. Lowes also did not build 3D scanners to digitize all of the household furniture that it sold (which was needed for developing augmented reality apps). Instead it found uncommon partners –frequently startups – that could help it nimbly build new solutions.

Once you identify your partner needs, you need to attract them to you. Just as the fictional Gotham City used a "bat signal" to call for help from the superhero Batman, so ecosystem orchestrators call for partners using some kind of signal. Sometimes the signals are public and visible. For example, Lowes would sometimes post videos about projects online to attract partners. Alternatively, the ecosystem building unit at Sopra Steria, the global IT firm, openly communicates client challenges to attract uncommon partners. By contrast, other firms choose to be more conservative in broadcasting their plans. For example, Samsung often puts together a conference around a potential development area without announcing its intentions publicly. It then invites potential partners and then during the conference evaluates those potential partners to see if it should explore further cooperation. Whichever path you choose, you need some mechanism to get to know the uncommon partners, and the common partners, necessary to develop a successful ecosystem strategy.

Finally, you need to evaluate your partners to make sure they can work together. For starters, you need to ensure that partners are ready to collaborate. If you have experience creating collaborations between corporates and startups you probably already know that there are massive cultural and operational differences between the two types of companies. These differences can be so severe that working together is not only difficult, but often described in terms such as "they don't even speak the same language." But this gap can be addressed and prepared for. For example, Sopra Steria's ecosystem collaboration group begins with a brief assessment to see if the corporate is "start-up ready" and if the start-up is "corporate ready." The assessment poses questions to understand the corporate's prior experience working with startups, the structural elements to work with a start-up (such as an innovation unit or budget to pursue innovation), and the ease of working with a start-up.

In addition to overall readiness, we have found that adaptive ecosystem success is founded as much upon finding the partner as upon finding the right people within the right partner. The "right people" are typically

described as someone who "gets it" (meaning they understand the ecosystem is an experimental innovation effort to see if value can be created), they have some level of budget control, and they are ready to take action (as opposed to waiting a year or two). Finding this person inside the partner organization can be the keystone to success and for a partner who is absolutely critical, it may be worth thinking through redundancy at multiple layers of the organization (i.e., there is a mirror-image tie between top, middle, and operational people at each organization).

Governing the ecosystem: incentives and contracts

One of the biggest challenges creating an innovation ecosystem is governance, particularly contracts. Because most corporates have experience contracting for more formal, centralized ecosystem strategies, they get stuck trying to create a massive contract with performances, penalties, and clear delineation of value capture. While these contracts make sense for more known and predictable projects, most adaptive ecosystems are built to explore and innovate and so it isn't clear at all who will do what and how to slice up the pie. Sadly, many ecosystem efforts die trying to decide how to slice up a pie that doesn't even exist yet.

Instead, in adaptive ecosystems we see short, multistage contracts focused on high-level guidance around value creation and capture. So for example, typical contracts acknowledge that partners are in an exploratory phase to determine if there is value to be captured. Furthermore, contracts specify that partners retain IP created before the partnership, that IP and value created during the partnership will be shared based on the contribution of a partner to the effort, and that future value created can be negotiated according to the level of investment partners are willing to bring to the partnership. To accomplish this it often helps to acknowledge a multistage contract: phase 1 is the exploratory phase and if we discover there is a something of value we will renegotiate in phase two. Furthermore, for the first phase, partners agree on what constitutes a contribution (e.g., cash investment, hours investment) that is fair and representative.

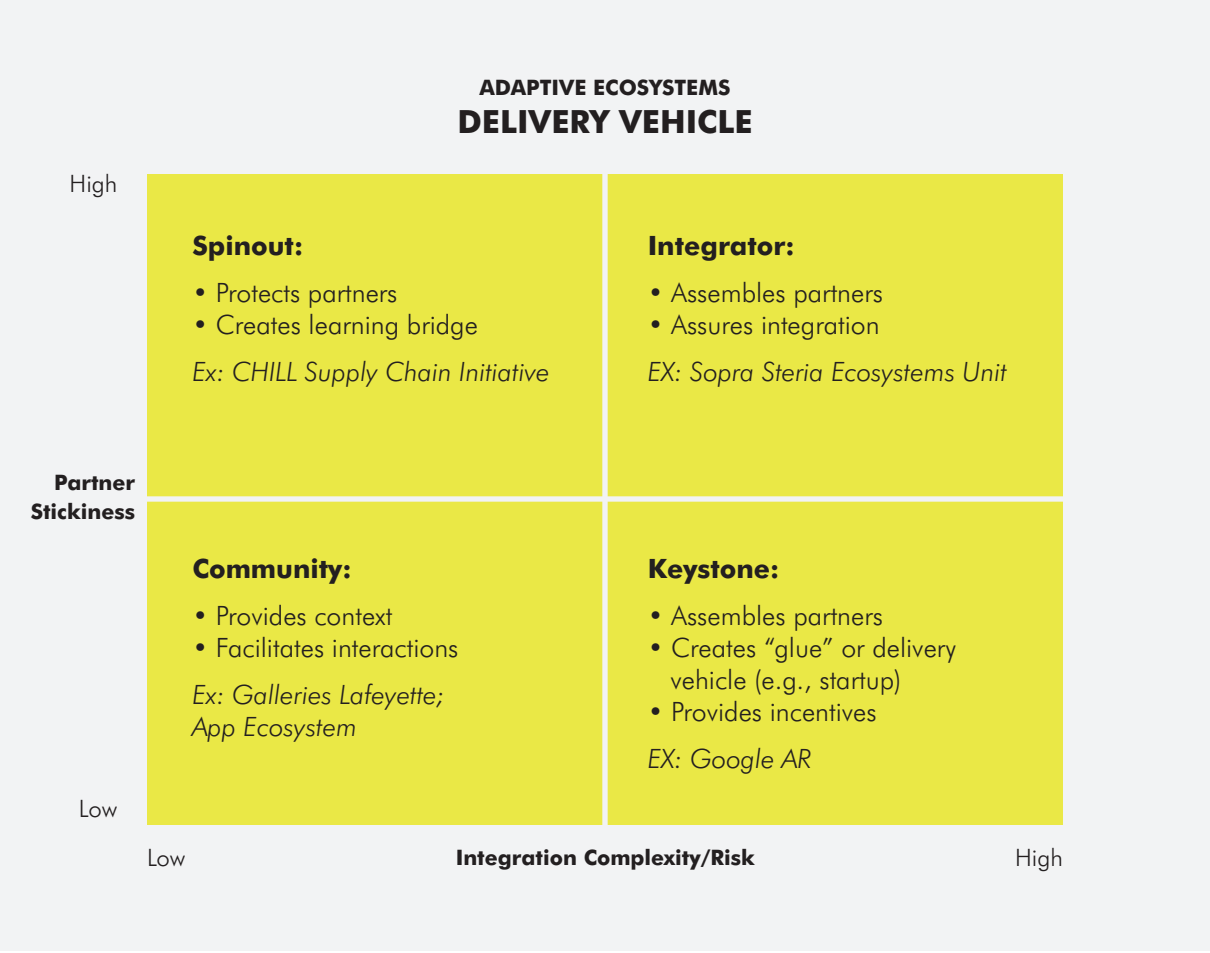
These contracts tend to be short – between three and six pages – and capture the spirit of the agreement. In these contracts, it is important to clarify who contributes what and gets what payoff, but not to get too stuck on it. For example, when Sopra Steria works with a hospital and a start-up to develop and commercialize a solution that could be sold to other hospitals, the parties agree to contribute 1/3 of the costs each while also agreeing to receive 1/3 of the revenues. Given that neither partner can go it alone, it makes no sense arguing whether one partner is entitled to 45 percent of the revenues whereas the other two are entitled to 27.5 percent. But that doesn't mean everything is equal in every way because Sopra Steria has an eye on the long-term value creation while the startups need cash right away. Working out these different needs can be an important part of the contract.

In addition to the contract, there needs to be a "glue" that connects partners so they keep working together. The "glue" could be a set of incentives partners receive, such as a revenue share. Alternatively, the glue could be a technical platform or resource that all partners benefit from. Samsung used this strategy when creating new devices – partners collaborated around the technical platform. For Philips HealthSuite, this glue comprised the common learnings from patient data that it collected by working with Radbaud Hospital and Salesforce. But even with a well-designed glue, it is important to recognize that partners have different kinds of needs, and some partners may require extra support. To illustrate, for startups cash flow is king and they need revenue with an urgency that is different from a corporate with many revenue streams. As a result, the orchestrator may need to support some players over the short term, recognizing how they might capture value in the long term. For example, as Google developed its AR Core with a bevy of uncommon partners, it explicitly set aside funds to sustain critical start-up partners that might struggle with cash flow.

Finally, orchestrators should think through a delivery vehicle for the ecosystem effort itself. Ecosystems rarely organize themselves: they need focused effort and the orchestrator may want to consider what is the best vehicle to deliver the solution created by the ecosystem. Who should own it and in what format? One way to think about it is to determine the complexity of the integration of the ecosystem to deliver value and the stickiness of the partners. In other words, how easy is it to swap out one partner for another?

Table 1 provides one view of different strategies for delivery vehicles. This table is organized along two dimensions: partner stickiness and integration complexity. High partner stickiness reflects the extent to which an ecosystem needs a set of specific partners to create value, while low partner stickiness means that value can still be created when different partners can come and go. Integration complexity refers to the coordination necessary to deliver a solution. If high coordination between partners is needed then complexity is high and if it is more plug and play, then integration complexity is low. Thus, when partner stickiness is high as well as integration complexity, the orchestrator needs to have a heavy hand in bringing all the pieces of the ecosystem together and so probably must play more of an integrator role, like Sopra Steria does, by providing the final step of integrating the contributions of the different partners into a workable solution. By contrast, when integration complexity is high but partners may need to be swapped in and out, like Google did in the development of the AR Core, the orchestrator plays the central role of a keystone, around which all the other partners build. As partners come and go from the ecosystem (because stickiness is low), the one factor that holds the ecosystem together is the keystone, often in the form of a platform. When partner stickiness is high but integration complexity is low, the challenge is keeping critical partners working together (which brings up incentive conflicts if one partner takes too heavy a hand), so it

might be good to spinout the ownership of the ecosystem into a separate entity. Finally, if both partner stickiness and integration complexity are low, then a loosely confederated community around some interaction point, such as an incubator or consortium, can work well.



Making the partnership work: barriers and facilitators

In addition to structuring the ecosystem for success there are a group of common barriers and facilitators we have observed. Typical barriers are challenges contracting, fear of sharing secrets/IP, or losing control. There are some remedies for these, or facilitators, and they can be grouped roughly into mindset and roles. In terms of mindset, it's important to set expectations that the ecosystem is focused on creating value through rapid experimentation and that ideas are a dime a dozen. Therefore, don't be so afraid to share ideas that you remain silent when discussing with your partners: remember that execution of the idea is all that matters.

In terms of roles, we have talked briefly about the role of orchestrator: a firm or individual who takes the role of bringing the different ecosystem players together like a conductor. This is a critical role without which many ecosystems fail or are inefficient. Sometimes this role is played by a single firm or, when there are incentive conflicts, by a consortium of firms. Failure to define the right orchestrator can lead to struggles in the ecosystem, like we have seen in GE's struggles to create the Predix industry platform: each competitor vied to set up their own platform, creating ecosystem conflict in place of the needed coordination to get an ecosystem started. In this case, creating a third-party consortium between all the competitors may have been more effective. Whichever the right format for the situation, it's important that the orchestrator has ownership, like an entrepreneur. In other words, if a corporate executive is given charge of orchestrating, in addition to a dozen other responsibilities, they will fail in the role. Usually it is better to give someone the motivation and responsibility of a founder to pull it all together.

Another critical role is that of the angel. This is the person who serves as the go-between, or bridge, between two partners, particularly startups and corporates. In this latter case, for example, the angel plays the critical role of protecting the start-up from the bureaucratic nonsense of the big company (for which they are often called the "crap umbrella") and keeping the start-up doing its best work while also ensuring that the corporate is able to extract knowledge, lessons, and value from the start-up. For example, Avnet's vice president for emerging business, Dayna Badhorn, works to protect acquired companies from the large organization's inefficiencies while helping Avnet to learn how to be agile and run experiments with startups.

In conclusion, these are some ground rules – a playbook – for creating ecosystems that we have seen work well in the ecosystems we studied. They may need to be adapted for your situation, but what is clear is the value of an ecosystem strategy in helping defer the risk and increase the potential of creating new value.

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You can read more about Nathan and Andrew's work on ecosystems here:

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The COVID-19 test: is your company perfect for its business ecosystem?

Isaac Getz &
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9

When on March 3, 2020, we asked how he was dealing with the COVID-19 crisis the manufacturing director of a large multinational recounted to us that he gathered his suppliers and told them: "We'll face this together. We share everything!" In fact, this executive could have put the whole burden of the sudden 15 percent drop in his company's sales on the shoulders of his suppliers. Half of his ingredients being produced externally and the other half internally, he could have easily lowered his orders to suppliers by 30 percent and maintained the full capacity in his own plants. But he preferred to share the burden of the crisis equally by lowering his external orders and his own production by the same percentage.

Take another COVID-19 example: on March 24, 2020, Laurent Cavard, the CEO of Altho, a leading potato chips maker, sent a letter to its carriers. It announced a 9 percent increase in Altho's payments to them. Yes, this company – strained by the coronavirus crisis like the whole economy – decided not to underpay its suppliers, but to reward them for their extraordinary efforts in keeping the logistics running, despite the lockdown-provoked drop in two-way hauling. In addition, Altho applied the raise retrospectively and also pledged to pay the invoices on reception.

The suppliers of both of these companies – a key to their business ecosystem – will not forget it. In Altho's case, the CEO of its key carrier texted this message to Cavard: "In the storm, there are different types of beings: tall, average, and very small. You are in the category of tall. Bravo and thank you."

It might be that these two examples do not apply directly to you. But how did you act with your own suppliers? Did you gather them to explain that you will not be respecting your purchasing contracts and that they just need to get over it? Or did you show them – as these two companies did – that instead of considering them as a mere variable in your business, you treat them as real partners whom you will not be giving up on when times get hard? As Toyota executive Didier Leroy says, "The supplier's problem is not his problem: it's ours." In fact, it might happen that your suppliers who – thanks to your unconditional past actions – have already become your genuine partners help you solve your crisis-related problems unconditionally, without asking for something in return, just as you did for them. The last big crisis provides an example. In 2009, it strongly hit hotels and cruise ships, key clients of Finnish company SOL, number two in the country for cleaning services. From the very first signs of economic slowdown, SOL offered to lower its prices by 10 percent to these clients – even though these prices were fixed by contract. It allowed them breathing space in the context of rapidly diminishing cash reserves.

It might be that your main concern is not your suppliers but your clients – another key element of your business ecosystem. They might be leaving in spades and cannot help you in any way. But maybe *you* could do something for them? EnergyVision is a Belgian SME providing energy transition solutions. On March 24, 2020, its CEO

Maarten Michielssens wrote to all its clients telling them that it would not charge them for the energy they get from EnergyVision installations for the following two months, roughly the lockdown period in many countries. Already, before the crisis, the company was not charging its clients either for the initial study of their energy infrastructure, needs, and expenses, or for the costs of transforming their infrastructure into a more efficient and greener solution. EnergyVision just charged the client for energy consumption of its transitioned infrastructure and at a price much lower than the one they paid before. Now, this price became zero for two months – a helping hand that their clients are not going to forget.

And could a company act for society as a whole, for the common good? As we write in the midst of the COVID-19 pandemic, many countries are experiencing a dramatic shortage of protective masks. As a result, many healthcare professionals, retail employees and others are falling ill. To help solve this problem, one French SME specializing in high-end apparel textiles, Les Tissages de Charlieu (LTC), decided to act. At the first signs of the pandemic, it developed in 24 hours a professional reusable mask in washable fabric and put the offer on its website. The next day it received close to one million visits and thousands of calls begging to buy the mask.

LTC took the decision to pivot. The company contacted all its current clients, asking them to postpone their planned orders for several weeks: though some were not pleased, all agreed. In the next 48 hours, LTC transformed *all* its manufacturing and supply chain and launched the non-stop 24x7 production of 150,000 masks per day, delivered to hospitals and other organizations. The company also decided to charge a price just covering the costs of supplies and production. Finally, LTC shared all the information on its mask model publicly so that other manufacturers, including competitors, could produce it themselves. Several quickly did. LTC's ecosystem legacy clients, the new protective mask clients, and even the company's competitors, will remember the company's actions for the common good.

LTC's contribution to the common good was significant, but your company could face an even bigger case: an entire country's population lacking an essential service. This is what happened in 2009 in Sweden – and everywhere else – with the financial crisis. Banks turned off the tap for their small business and private customers who found themselves short of cash to meet their financial obligations. All, except one: Handelsbanken, which did the contrary. Rather than restricting its loans to businesses and families when they needed it most, this bank increased them.

Handelsbanken was able to do this because, for five decades, it has thought that its banking advisers must act like good family doctors or nurses, except that they do not care for the physical health but for the financial health of their clients. Handelsbanken was also the only bank that did not use the bailout money offered by the Swedish

government during this crisis. The bank didn't even ask its shareholders to shore up its capital. Its CEO at the time, Anders Bouvin, explained to us that when "all the banks find themselves in the intensive care unit [in the hands of] shareholders or the government – we want to be a good for society not a burden."

During the COVID-19 crisis, Handelsbanken advisors proactively contacted their local customers to ask after their situations, and to offer them guidance and financial support. They came up with creative fixes as issues arose and spontaneously covered for each other, working through evenings and weekends if required. The Swedes will not forget what Handelsbanken did for them in 2009 and in 2020.

Last point: the employees. During a crisis, companies might consider them as (human) resources, a variable to be adjusted, or, on the contrary, as human beings to be respected. In 2009, like all manufacturers in the region, Usocome, the French subsidiary of the large German manufacturer SEW, suffered a drastic drop in orders: 10 percent in September 2008, which stabilized to around 30 percent in May 2009. But Usocome was the only manufacturer in its region that did not lay off anybody, nor did it use furloughs. On the contrary, its executives took a certain number of pledges, like using furloughs as the ultimate option that they would resort to only if the drop in orders exceeded 30 percent, and that any reduction in salaries – if such a measure was needed – should start with executives, managers, and salespeople. Large electronic billboards were set up in the workshops that showed the order level compared to the preceding year. The CEO at the time, Michel Munzenhutter, promised that everything would take place in a spirit of solidarity. Hence, he asked for a savings plan of 14 million euros, and that the company should live on essentials. Thanks to many employee initiatives, the goal was met. In July 2009 the company came out of the red and at the end of January 2010 every employee received a bonus, even though orders were still down 28 percent on the year before. The employees never forgot how they were treated at the heart of the crisis; as trusted and responsible adults.

To take another example, once LTC had transformed its plant to manufacture protective masks there was still one unknown – the employees. On March 15, 2020, the French government announced the lockdown, which allowed employees to excuse themselves from coming to work either for health reasons or to care for not-in-school children. If they did, the employer, helped by the government, would still pay them. That's exactly what LTC's CEO Eric Boël told employees on March 16: "During this weekend, we took the decision to transform our plant in order to manufacture protective masks beginning Monday. That said, those who believe they need to stay at home should definitely not come. They will be paid." On Monday, when the CEO started his shop floor tour, he found that 90 percent of employees – all but those with chronic diseases – had shown up. Overwhelmed with emotion he could not finish the tour. Treated as trusted and responsible adults, the employees responded in kind.

All these examples from the COVID-19 and 2009 crises may appear philanthropic, but they are not. These companies are not engaged in charity. They are acting unconditionally for their business ecosystem and employees through their core business processes, which they transformed to serve others rather than themselves. Surprisingly – as a consequence – these companies did better during the crises than their competition. Or rather naturally, since their business ecosystem – clients, suppliers, communities – and their employees responded to their acts and remembered them. As a consequence too, after the crisis these companies are surrounded by real partners ready to help them, instead of being alone and on their knees. Contrast this with the companies who survive a crisis but are unable to meet demand when it picks up, because many of their suppliers are gone and part or all of the employees have been laid off. After 2009, SOL grew dramatically from €160 million to €285 million in seven years; Usocome recorded six percent annual growth, year after year; and Handelsbanken has been the most admired bank in Sweden for seven years and the country's most profitable bank for 48 years in a row and counting. And as far as LTC is concerned, at the time of writing, the manufacturer is running at full capacity and without losing money. It also means that in a matter of 48 hours the company will be able to shift a part or all of its production back to its legacy products.

As amazing as these examples may appear, these companies are not the only cases we know. They are what we describe as *altruistic corporations*. We have studied several dozen of them on three continents, large and small, listed and private, and in diverse industries. At some point, led by their CEOs, they decided to transform their core business activities to serve their business ecosystem – their customers, their suppliers, and the communities they operate in – as well as their employees, *unconditionally*. As a result – and not as a purpose – all these companies have enjoyed an outstanding economic performance in comparison to their competition.

All crises end – that is what crises do. Facing the storm, will your company be the oak that breaks or the reed that bends but doesn't break, as in Aesop's fable? The 17th-century French philosopher Blaise Pascal said human beings are thinking reeds – thinking and remembering. Instead of dodging a crisis, does your company take it as an opportunity to transform its core business processes in order to act unconditionally for your business ecosystem counterparts and your employees? If that's the case, they will remember it and they will be there for you during every crisis and the day after.

Isaac Getz and **Laurent Marbacher** are the authors of *L'entreprise Altruiste* (The Altruistic Corporation). Getz is also the coauthor of *Freedom, Inc.*.

This chapter is partially based on the authors' article "Creating successful companies that care", published June 10, 2020 on https://www.strategy-business.com/article/A-lesson-in-creating-successful-companies-that-care.

The end of strategy in business ecosystems?

Mark Greeven

10

There has finally been a consensus among strategy scholars that a new era demands a new way of organizing business: that is the business ecosystem.

Business ecosystems are boundaryless organizations of interdependent businesses with customer-centric offerings across industries. The idea is that each entity in the ecosystem affects and is affected by the others, creating a constantly evolving relationship in which each entity must be flexible and adaptable to survive as in a biological ecosystem. Rather than following strict and deliberate top-down strategic directives, business ecosystems are managed by heuristic principles and data-driven insights. They are never-ending reorganizations of business.

Considering the emergent nature of business ecosystems and increasingly short-lived competitive advantages, what is the role of strategy as we know it? To what extent can we develop and execute a strategy across a multitude of loosely coupled organizations? How desirable is it to do so? It is one thing to realize the changing origins of competitive advantage of business ecosystems, it is a whole other thing to discover if and how strategy is to be designed and executed in such an emergent organization. The challenge of strategizing in business ecosystems is to unite deliberate with emergent strategy processes that are no longer in the hands of an executive team.

How did we get here?

At the end of the 1970s, Tom Peters announced that we should move beyond the matrix organization to match accelerating business environments. More recently, James Moore discussed the death of competition by emerging ecosystems. Gary Hamel declared we should bust bureaucracy for more agile ways of organizing. Michael Jacobides showed why business ecosystems would make industry analysis obsolete. And then McKinsey estimated in 2018 that just twelve ecosystems will account for 30 percent of global revenues by 2025.

Ecosystems are quickly emerging as a way for businesses to organize themselves. Fundamentally, business ecosystems consist of an *orchestrator*, a set of complementing businesses, or *complementors*, and a system – usually a digital coordination mechanism – that holds everything together, making the sum of the parts greater than the whole. Or, in business terms, the offerings of business ecosystems better meet the needs and wants of the customer than individual offerings. Organizations are increasingly moving away from rigid pyramids of organizational roles and responsibilities, towards hybrid forms of organization with increased autonomy and resilience.

Most companies are not business ecosystems. Why does it matter for everyone's strategy?

Which companies organize themselves as business ecosystems? Are these not just a handful of American tech giants? Often, we hear these questions in executive exchanges and indeed, the usual suspects are Google, Microsoft, Amazon, Facebook, and Apple. But, a business ecosystem as an innovative way of organizing is not only found in pioneering tech giants from the USA. In fact, we find great examples of business ecosystems on the other side of the world. Think about Alibaba, Tencent, Baidu, and more recently Xiaomi and Ping An from China. In fact, the list is getting longer, quicker. In our research we have identified around 40 companies that meet a relatively strict definition of a business ecosystem. These companies range from digital technology, automotive, healthcare, entertainment, to consumer appliances, manufacturing, and even steel. Business ecosystems are no longer the exclusive domain of big tech.

Even if these emerging organizations are showing relevance across the board, 40 companies are just a fraction of the landscape. Although some claim that these few organizations are going to capture a (very) large part of value added to the economy, for many executives the question remains to what extent business ecosystems are relevant for them. Typically, executives ask if they are part of someone else's business ecosystem and if so, how that would matter. A good tool to identify a company's position in business ecosystems is the ecosystem map. Such a tool allows an organization to figure out the possible ecosystem membership(s) – are you in or out of how many ecosystems? – and the respective role – are you de facto orchestrating an ecosystem or playing a complementing role?

But in all cases, regardless of whether your company is orchestrating a business ecosystem, just contributing to one or relatively distant from any business ecosystem, the way you develop and execute strategy to create a competitive advantage in this new reality, is changing in two ways:

- First, the source of competitive advantage in times of business ecosystems is changing. From cost and differentiation to network effects and complementarities; from sustainable advantages to temporary advantages. In other words, the "what" of strategy has changed for business ecosystems.

- Second, the way strategy is developed and executed is changing. From top-down prescriptive strategy to balancing deliberate and emergent strategy processes in real time; from executive team strategy design to co-dependent strategizing with ecosystem partners. The "how" of strategy has changed for business ecosystems.

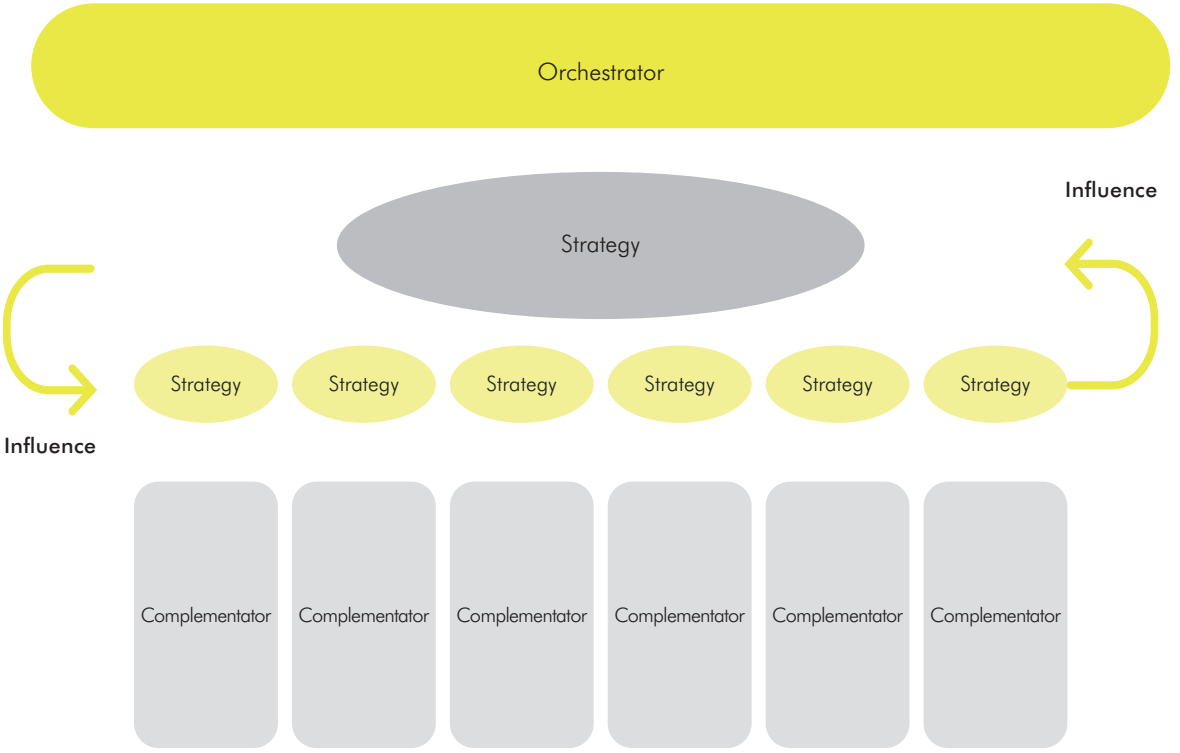
Consequences of these emerging organizations for competitive advantage

The source of competitive advantage in the business ecosystem age is changing. Julian Birkinshaw highlights the decreasing importance of resource – and positioning advantages. He calls this the "moat" advantage. Instead, he argues that companies should focus on ensuring a continuous and sticky flow of users in a network of ecosystem partners. Or what he calls the "turnstile" advantage. Similarly, Marco Iansiti and Karim Lakhani have highlighted the role of being positioned as a node, creating strategic bottlenecks, in capturing more value than others. Rita Gunther McGrath made a powerful case several years ago that companies may better create a continuous flow of transient competitive advantages, competitive advantages that come and go as conditions change. Rather than to be in search of the one sustainable competitive advantage based on an asset or position, McGrath suggests there is no longer such a thing.

And, in a broader context of digital technology, Sunil Gupta explains how cost and differentiation are no longer sufficient sources of competitive advantage. Rather, he claims that companies that create network effects and complementarities for other companies, are more likely to win in digital times. Fundamentally it appears that ownership of assets – in the widest definition of the word – is being trumped by ownership of user – or better, the user touchpoints. In designing relevant strategies for the ecosystem era, executives must reconsider on what basis their competitive advantage rests. The *what* of strategy is challenged. What about the *how* of strategy?

Strategizing in business ecosystems: the codependence of strategies

Strategizing refers to the process of designing and executing a strategy. And this process is challenged in the context of a business ecosystem. In our research with leading business ecosystems around the world, we find a specific challenge of strategizing in business ecosystems: the codependence of strategies. The figure below illustrates this challenge.


Orchestrator
Influence
Strategy
Influence
Strategy
Strategy
Strategy
Strategy
Strategy
Strategy
Complementator
Complementator
Complementator
Complementator
Complementator
Complementator

Any business ecosystem will face the same situation: the strategy of the orchestrator will influence the strategic options that the complementors in the business ecosystem have and vice versa. This is not a problem of governance or alignment; it is a problem of codependence. Codependence of strategizing here refers to how the design and execution of a strategy by an ecosystem actor affects and is affected by the other ecosystem's actors.

The direct consequence is that the executive team of a company is no longer the only strategic decision maker. Moreover, this is not a one-off challenge, as business ecosystems continuously change membership and each member faces ongoing changes in their respective sectors and related strategies. However smart the internal process of a given company in a business ecosystem is, it will not be possible for any executive team to have enough and timely insight to deal with the complexity of dozens or hundreds of strategies across the business ecosystem. Especially as this requires not only strategies but also feedback on their execution, which necessitates operational level data. How to go about this?

Digital exchange mechanism for strategizing: the cases of Alibaba and Ping An

Think about Alibaba, one of China's leading business ecosystems. The orchestrator is Alibaba Group, in particular the ecommerce trading platforms, and there are hundreds of complementors in over 20 different sectors. For instance, AliHealth, a digital healthcare platform, Ele.me, a food delivery service, or InTime, a brick and mortar retail mall chain. Any of these complementors have their own strategies to grow and none of these complementors are business units of Alibaba. They are autonomous businesses with a management team and strategizing executives. After all, ecommerce is rather different from digital healthcare, fintech, or operating shopping malls. As members of the business ecosystem they have access to certain resources, for instance payment solutions, management systems in the cloud, and logistics, but also limitations. For instance, it would not be possible for Ele.me to block Alipay as a payment service, or to partner up with another ecommerce platform that competes directly with Alibaba's ecommerce platforms. These resources and limitations affect the strategic options of the complementor, even though they are independent and autonomous businesses.

This also works the other way around. Alibaba Group as an orchestrator benefits from the collective offering of their complementors. In other words, customers of Alibaba will be increasingly locked-in to the ecosystem as the offering of the whole business ecosystem becomes more relevant. But, the orchestrator can only deliver on its promise as long as the complementors offer what is expected. If, for instance, Ele.me changes strategic direction and moves out of their delivery business, Alibaba has to adjust their strategy by, for example, divesting Ele.me if the new strategy is creating competition, or by investing in another company to be able to keep up the delivery

business. So, the orchestrator's strategy is codependent with the complementors'.

How did Alibaba solve this challenge? Think about how Alibaba's business ecosystem is effectively managing over 2 million merchants across hundreds of businesses and dozens of "industries." Alibaba has managed to develop an exchange mechanism that captures real time insights of the complementors: third party payment (Alipay), cloud service (AliCloud), logistics (Cainiao), and communication (DingTalk) among others. This collection of shared digital services is de facto representing a mechanism of digital exchange with limited transaction costs. The latter is crucial because if the transaction cost of such exchange is too high, ecosystem members will not participate. Alibaba's business ecosystem has become a data-driven, well-oiled machine of transactions and information: a "smart business" as coined by Ming Zeng, former chief strategy officer of Alibaba Group.

In fact, we see a similar pattern of strategizing with Ping An, the world's second largest insurance company. Ping An Group is an orchestrator of about five main complementing businesses with hundreds, if not thousands, of partners. While Ping An is focused on insurance, banking, and investment, the complementors are in digital healthcare (Ping An Good Doctor), wealth management (Lufax), smart city solutions (Ping An Smart City), second-hand cars (Ping An Good Car), and real estate (Ping An Good Home). None of the complementors are business units and they operate with strong autonomy of the Group. And they face the same codependence of strategizing as the complementors in Alibaba's ecosystem. In contrast to Alibaba, Ping An does not have a set of digital shared services that enable low cost digital exchange. Instead, Ping An's business ecosystem has one specific company, Ping An Tech, that fulfils this role in the ecosystem. Ping An Tech was established in 2008 in response to an ongoing large scale digital transformation of the insurance business. Its original aim was to support existing businesses with technology services. But by 2015 the role of Ping An Tech had transformed into the guardian of data flowing throughout Ping An business ecosystems and across the complementors. In our conversation with the former chief strategy officer of Ping An Tech it became clear that the primary responsibility was indeed data governance, while also initiating, managing, and monitoring strategic growth initiatives from both the orchestrator – the Group, in insurance, banking, investment – and from the complementors – in the diverse areas of healthcare and smart city development among others.

The digital exchange mechanisms, such as Alibaba's Alipay and AliCloud, or Ping An's Technology business, may appear to be mainly focused on building massive data lakes. While this is certainly true, there is an equally important role of real time capturing, transmitting, and analysing of operational data of each ecosystem member for drawing business insights for strategizing in the ecosystem.

Strategizing as a self-tuning process in a business ecosystem

Interestingly, in both cases the digital exchange mechanism not only solves the challenge of codependent strategizing. It also provides a specific ecosystem advantage for strategizing. The process of exchanging not only information but also market feedback data of the design and execution of strategies by both the orchestrator and the many complementors is automated. In the above figure, that means the middle layer of the business ecosystem is deeply automated, thereby increasing responsiveness to changes in the complementors' businesses and resilience as a system due to continuous feedback loops into the strategies. By automating the middle layer through a digital coordination mechanism – albeit Alipay or Ping An Tech – strategizing transforms into a real time, iterated process across the business ecosystem.

A closer look at the strategy processes in business ecosystems reveals the challenge of codependence but also hints at an ecosystem's unique advantage. There's no doubt that business ecosystems will pose a challenge to executive decision makers: strategy is going to move away from the executive team to the business ecosystem.

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This chapter is a long form extension of https://www.imd.org/research-knowledge/articles/Is-it-the-end-of-strategy-in-business-ecosystems/

What if management models ate ecosystem strategies for breakfast?

Raymond Hofmann

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> *Get the assumptions wrong and everything that follows from them is wrong*
>
> **Peter Drucker**

In a recent article, Scott D. Anthony and Michael Putz examined an interesting question.[31] How can it be that so many companies still allow themselves to be vulnerable to disruption? It's been more than two decades since Clayton Christensen published his *theory of disruptive innovation*. We understand the causal mechanisms, including why incumbents typically mess up when faced with a disruptive threat. Yet the dilemma persists. Why?

The authors give a compelling answer: leaders delude themselves. They downplay the threat or overestimate the difficulty to respond. In the theory we have a technical solution, but we've failed to develop a *human* solution: how leaders avoid delusion. Ideally, we would also develop an *organizational* solution. Organizational solutions hardwire certain principles into an organization's systems. In this case, the principles would encompass our knowledge of how companies avoid disruption. And so the systems would guide leaders in responding well.

Organizational solutions are also very relevant for our discussion of ecosystems. Similar to disruption, our understanding of ecosystems is fairly advanced at a technical level. We understand the economic dynamics and have an analytical grasp of ecosystem strategies, but have not developed the organizational solutions. It's thus easy to predict that many ecosystem strategies, while looking great on paper, will fail to materialize in practical reality.

In this essay, I show that the core problem is a general one: we have lots of technical solutions in management but fail to use them in practice for lack of human and organizational solutions. I'll suggest that the root causes reside in our management models. From there, I show how this applies to ecosystem strategies and what leaders should do in response. I close with a call for what I believe is a broader need for management reformation and how ecosystems might help start it.

My research led me to many papers and articles freely using the word "ecosystem" without ever defining it. A notable exception is an article by Jack Fuller, Michael G. Jacobides, and Martin Reeves.[32] They simply and beautifully define ecosystems as "dynamic multicompany systems as a new way of organizing economic activity." In what follows, I'll go with that.

The general problem: dismal performance of organizations

We're all familiar with the numbers. Only 15 percent of employees worldwide are engaged at work (Gallup). Seventy-five percent of new products and services fail to be commercially successful (Christensen). Seventy percent of change and transformation programmes fail to achieve their objectives (McKinsey). The RoA of US public companies has been on a steady decline and is down to 25 percent of what it was in 1965 (Deloitte). In plain English: organizations make people miserable, they can't innovate, they can't change and as a result performance suffers.

Does it have to be that way? Don't we know what drives engagement? How innovation works? How organizations change successfully? How short-term, quarterly financial management actually hurts performance? The answer is "yes" to all of the above. And yet organizations invest billions of dollars in engagement programmes, innovation hubs, large-scale transformation, and leadership programmes aimed at developing the leaders who will save our organizations. All to no avail. The numbers have not improved for decades. Why?

Enter the management model

Scholars and practitioners have worked hard to reverse these numbers. Indeed, much progress has been made in our understanding of strategy, culture, innovation, and more. Yet our attempts to systematically integrate and use this knowledge show few results. We have the technical, but not the organizational solutions. Yes, there are exceptions. The wonderful organizations we all read about in case studies. But they are just that: exceptions. And the rest of us seem unable to learn from them.

I believe the missing link is the management model as a unit of analysis. It's the key to turn technical solutions into organizational solutions. Management models are at least as important as business models.

Business models are well understood as a unit of analysis and as a source of competitive advantage. Organizations put in significant and rigorous efforts to design and continuously improve their business models. But business models are themselves technical solutions. They don't deliver results. People and organizations do. Business models need organizations to deliver on their promises. And here's where management comes in. Peter Drucker defined management as the social function charged with "making people capable of joint performance." In other words: it's management's job to create organizational solutions.

But how does management get this job done? How does management work? That's what's described in the management model. Most executive teams can explain their business model. But they cannot explain their management model.

The management model captures how management makes an organization function. In essence, it answers five questions. How the organization...

- ...executes its current business model
- ...innovates products, services, and future business models
- ...builds bridges to connect execution and innovation
- ...learns, improves, and changes over time
- ...enables people to perform, both as individuals and as teams

To accomplish these things, organizations put in place a set of systems, tools and practices. All of which are shaped by the theories managers choose to guide their thinking. If leaders choose well, the management model provides a coherent explanation for how and why their organization works.

Every organization has a management model. But in most organizations it is not explicitly designed. These implicit management models tend to suffer from a number of dysfunctions, the most important of which are inconsistencies, not being fit for purpose, and relying on bad theory. These are the root causes for our organizations' dismal performance. We build organizations with fatal flaws, incapable of doing what we earnestly want them to do. And we're not even aware of it, because we don't make our management models explicit. Gary Hamel was right: "Management is likely the least efficient activity in your organization."

How management models eat business models for breakfast

In their book about jobs theory, Clayton Christensen and his team give many examples of how implicit, invisible management models cause real harm in organizations.[33] Jobs theory states that customers don't just buy products. They "hire" them to get a job done. The lesson for companies is clear: understand your customers' "job to be done" and then create a solution that's better than any alternative. The job is the causal mechanism behind buying decisions.

Most startups have a clear understanding of the job they help their customers get done. But once a product is successfully introduced to the market, something changes. Under the pressures to run and grow their business, companies lose sight of the job. They begin to collect all sorts of data about products (sales, profitability), customers (demographics, channels), operations (productivity, earnings per share), and competitors (benchmarks). And before they know it, they let this data drive their decision-making, even though none of it has anything to do with the customer's job to be done.

Managers begin to manage the numbers. And the (implicit) management model creates an organizational solution for a very different job: the manager's job of making the numbers. This may not even be a deliberate choice of greedy, self-centered managers. Rather, it's a consequence of implicitly substituting jobs theory with a set of unchallenged and unhelpful theories about how to run and grow a business. It won't be long before the business suffers.

Ecosystems: what we know

Now, we are finally ready to turn our attention to ecosystems. We start with a brief overview of things we know. Note how these all reside in the technical realm.

1. **Firm and industry are no longer relevant units of analysis.** The value of a firm is no longer found in its own assets, but in a network of relationships. These networks often transcend industry boundaries. Traditional strategy frameworks are becoming less useful. Strategic thinking requires a new perspective: more dynamic, collaborative, and emergent.
2. **Ecosystems are more about learning than they are about execution.** The focus shifts from the linear dynamics of scale and scope (execution) to the complex dynamics of evolution and emergence (learning). By definition, ecosystems are not stable. They constantly change as individual members change and engage in weaving their networks of relationships. Learning may well become the objective function of management.
3. **Creating value for customers becomes the governing principle.** In theory, firms always existed to create value for customers, but in practice many followed a different path. Ecosystems, however, can only work in pursuit of a common objective that is bigger than any one firm's narrow self-interests. That common objective can only be found in customer value. It's what unites and inspires collaboration. Ecosystems thrive when its members help each other create value for customers.
4. **Relationships among ecosystem members combine aspects of competition and collaboration.** These relationships involve different but complementary products and capabilities. Ecosystem members coevolve over time as they strengthen or redefine their distinct capabilities (competition) and reconfigure their complementarity (collaboration).

5. **Ecosystems require systemic and critical thinking.** Ecosystems are not the solution to every business problem. Neither are they just a new term for supply chains. They don't always involve a digital platform and are not always maximally open. The complex nature of ecosystems requires deeper, more critical thinking. Also, leaders will have to accept that ecosystems can neither be managed nor controlled, but can only be understood through systems thinking.

We know a lot more about ecosystems than what is presented in the short summaries above. But they are sufficient to demonstrate the main point of this essay: that many organizations' implicit management models will get in the way of becoming a successful ecosystem player.

Ecosystems: what is likely to get in the way

Looking at common traits of many implicit management models, it is easy to see how they are in direct conflict with what ecosystems require.

1. **Wrong purpose.** Most organizations still operate on the basis that their main purpose is to make money and please investors. Just look at how they measure performance and make decisions almost exclusively based on financial data. Shareholder value theory and agency theory are alive and kicking in these organizations. Meanwhile, customer value is seen as a means to an end at best.
2. **Dysfunctional view of strategy.** The primary goal of strategy is often value appropriation as opposed to value creation. Strategy is reduced to an analytical exercise based on past data when in reality strategy is a creative process about shaping the future. Porter's static view of industries, the logic of erecting barriers to entry and "capturing" value, still shines through. Collaboration, innovation, and customer value lose out.
3. **Too much command and control.** Bureaucracy is still the dominant model of organising work. Hierarchy, targets, and budgets exert dominating influence. Strategy is seen as separate from execution. People are mere resources. The organization is understood as a machine that can and must be controlled. But such organizations are too slow, too rigid, and lack the positive energy of people demanded by the rapidly evolving ecosystem world around them.
4. **Management is about operational execution.** In many organizations, operational execution still dominates. The main goal is efficiency. Functional specialization is seen as useful. Managers, trained to "manage" in this way, extend this view beyond the boundaries of their organizations and try to "manage" ecosystems as well. All of this hinders learning, entrepreneurial thinking, and collaboration.

5. **Organizations are self-centered.** Too many organizations still consider themselves the center of the universe. They organize around products and services instead of customer needs. And they measure their own activities instead of outcomes for customers and partners. The underlying assumption is that organizations exist for themselves, not as important organs of society who carry a great deal of responsibility for others.

Most organizations and their senior leaders deny that they operate on this basis. They see themselves as agile, customer-centric, purpose-driven, and responsible. And that's part of the problem. These leaders may even believe what they say, yet examining the operational reality of their organizations often reveals a different truth.

What leaders can do

Leaders must look beyond technical solutions and understand their most important job is to build organizational capabilities supported by a sound management model. To many of the most successful players in the ecosystems space this seems to come naturally. Most companies, however, have not yet built this systemic perspective into their DNA. To get started, leaders should follow three steps.

First, you need to make your management model explicit. It's very hard to understand the effects of something that's invisible. And even harder to make purposeful changes. When mapping your management model, identify management practices (i.e., *how* management work gets done) and also the assumptions and theories on which these practices rest (i.e., *why* you chose these practices over others). Without questioning our theories in use we are unlikely to make the best possible choices for improvement later, as both Clayton Christensen and Sumantra Ghoshal have taught us.[34]

So, how to start? We don't have any robust tools yet, however, an early version of a management model canvas can be found at my *Management Model Design* project website.[35] You can use it for free and, if you like, also become involved in helping to make it better. Alternatively, answer the five management model questions outlined earlier in this essay and identify the practices and theories you use in your answers.

Next, identify mismatches between the organizational capabilities you need and what your management model actually supports. That's no easy thing to do. You have to think this through in your specific context. And it requires a great deal of honesty.

A helpful starting point may be the generic summaries above of what we know and what will likely get in the way.

Here are some examples that may also be helpful, each relating to a different aspect.

1. **Purpose.** Greyston Bakery's purpose is to create thriving communities by giving everybody who wants to work an opportunity. Their hiring process follows up on that promise: all you have to do is to show up. No questions asked. No interviews, no background checks. Your previous life, perhaps with drugs or time in jail, doesn't matter. Is your purpose as powerful? And are your practices so consistently aligned with the purpose?
2. **Customer focus.** Haier's more than 80,000 people are organized as a network of thousands of micro-enterprises who can only survive if they serve customers well. Everyone behaves like an entrepreneur and is totally committed to satisfying user needs. To get there, among other things, they had to slash a layer of 12,000 middle managers. Are you prepared to really make the customer the center of attention and eliminate whatever gets in the way?
3. **Collaboration.** Apple is committed to winning through collaboration. They work with suppliers to help them develop manufacturing capabilities instead of trying to squeeze them on price. Similarly, Apple invests in their developer community with some of the best development tools and regularly gives developers a stage to shine and showcase their work. What are you doing to make collaboration more than a business transaction?
4. **External orientation.** Haier takes this thinking to its logical conclusion. They run their own organization like an ecosystem and are now even blurring the boundaries between inside and outside.[36] Non-Haier entities operate within its network of micro-enterprises. This enables initiatives such as the *Internet of Food*, allowing Haier to think about customer value in much broader terms than if they were limiting themselves to their own capabilities. How far are you willing to go?

Once you've identified mismatches, it's time to make changes to your management model. The most progressive organizations actually make this a habit. They continuously learn and adapt. Haier did not start with ecosystems within.[37] This concept was only proposed in 2019, as the latest in a series of transformational steps that took Haier from a hierarchical organization to a thriving ecosystem of entrepreneurs. It arose out of a growing understanding that micro-enterprises alone were great for strategic agility and innovation, but that they tended to solve far too narrow a set of customer problems.

On the brink of a business and management reformation?

The importance of rethinking our management models is not limited to a discussion of business ecosystems. It's the same management models that not only eat ecosystem strategies for breakfast, but also attempts to boost engagement, innovation, and the very attempts of organizations to transform themselves.

In his closing address at the 2017 Global Peter Drucker Forum, the great Charles Handy called for a business reformation: "We need to rethink how organizations, particularly businesses, are actually run, why they are run and what their purpose and role are in society." [38]

It's easy to think that the reformation is already well under way. Think of all the wonderful organizations, large and small, successfully experimenting with new ways of working and organizing. They inspire us and we rightfully celebrate them in books and at conferences. It seems as if they're winning. But they're not. The opposite is true, as Gary Hamel and Michele Zanini demonstrate in their aptly titled article *More of us are working in big bureaucratic organizations than ever before*.[39]

Nevertheless, I'm optimistic. Ecosystems might just be what we needed to unleash the reformation. Many leaders intuitively understand that ecosystems are systems, not machines they can manage and control. And so out of sheer necessity they may be more willing to experiment with different management models. And if this is not enough, ecosystems allow smaller, nimbler players to unite, attract large amounts of resources, and take the big risks necessary to attack the dinosaurs head on. And win.

A focal point of the reformation must be that we invest as much in human and organizational solutions as we do in technical solutions. Or, as Jason Fried put it: "Your company better be your best product since it's the product you use to make everything else you do."

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FOOTNOTES:

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Harnessing the rising power of ecosystems: how to win in a post-COVID-19 world

Michael G. Jacobides

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"There are decades", the Russian revolutionary Vladimir Lenin noted, "where nothing happens, and there are weeks where decades happen." We are in just such a fast-forward period with the COVID-19 crisis, a natural experiment in the making, where the very foundation of businesses is put into question, combining with the emergence of ecosystems as a dynamic new way to organize economic activity.[40]

Setting the stage for change

As with tectonic change, what seems sudden and abrupt is actually the result of structural, gradual shifts happening in the background. For a while now, significant forces have been transforming the way businesses organize.

The development of railways and the telegraph, and the growth of the stock market underlaid the growth of the modern industrial corporations at the turn of the 19th century, catalyzed by crises such as wars and pandemics. Likewise, rapid changes in Information Technology (IT), the rise of globalization and, crucially, changes in regulation, underpinned the dissolution of firm and industry boundaries in the last quarter of the 20th century. Outsourcing, hollowing out, and industry convergence reshaped the competitive landscape, opening the way to the corporate giants of the 2000s.

From the beginning of the 21st century, another structural force was added to the list – digital platforms, which rose to prominence just as the Global Financial Crisis was brewing. Around these platforms, key orchestrators have built ecosystems of collaborators, reshaping the nature of competition.

Big Tech, used by all, feared by many, has founded much of its success not on technology alone, but rather on being able to *transform existing sectors, and expanding their reach through the use of business (digital) ecosystems*.[41] Indeed, one of the key features of the early 21st century has been the growth of a genuinely new organizational form. Standalone companies are increasingly yielding pride of place to ecosystems, fluid networks of organizations combining to deliver bundles of products and services in new and unfamiliar ways. And just like the step from single- to multicell organisms in nature, they represent a profound evolutionary shift.

Ecosystems, both enabled by and resulting from big changes in the ways we consume and produce, are developing at remarkable speed.[42] A McKinsey[43] report suggests that by 2025, today's 100-plus industries and value chains will have collapsed into a dozen or so multitrillion-dollar ecosystems accounting for some $60 trillion in revenues – one third of the global total. It adds that new configurations will feature "a few large orchestrators, big winners, and a huge shift of wealth and value creation." Boston Consulting Group (BCG) found that the use of the word "ecosystem" in large companies' annual reports had grown 13-fold over the last decade and that

those that used it grew much faster than those that didn't.[44] Firms like Haier, the innovative Chinese white goods group, are changing their business model to harness the power and flexibility that ecosystems can afford them. The most recent articulation of Haier's managerial philosophy, named RenDanHeyi, aims to transform the firm into one based on "Ecosystem Microenterprise Communities" (EMC).

Enter COVID-19

COVID-19 has sped up these changes: with the forced acceleration of digitization, Big Tech power and the transformative role of platforms and ecosystems have received a boost. Apple, Google, Facebook, Microsoft, Amazon in the West, and Tencent and AliBaba in China have become stronger than ever, as confinement at home has made us more dependent on digital devices. As solutions to get out of the crisis require us to use digital technology, clouds of tech regulation seem to be dispersing.

New ways to collaborate and compete seem to be emerging. Firms like luxury purveyors LVMH and Burberry have converted perfume and clothing lines to turn out hand sanitizers and medical gowns, while Dyson is redeploying vacuum-cleaner-design skills to ventilators. More relevant yet, competition does not happen *between* firms, but rather through a web of interconnected organizations. Pharma giants GSK and Sanofi are pooling immunity knowhow and sharing with researchers worldwide to fast-forward promising new vaccines. A wider consortium embracing 17 firms stretching over pharma, biotech, and venture capital is evolving at top speed to share data, identify the most promising molecules, and speed them into trials, with priority focus on treatments not already being tested elsewhere.[45] The crisis is leading to the creation of new webs of relationships – ecosystems that are responding creatively and cooperatively to a societal threat, with innovations happening in all directions. Companies are looking beyond organization, industry, and sector boundaries to see opportunities for contribution that didn't exist even two months ago.

At the same time, the circumstances are bringing up a host of new questions that we have to address, as societies. A new way of organizing also means a new way to regulate. Technology and entrepreneurial drive that underpin ecosystems can bring us important new solutions, as long as we find the right way to connect players and leverage data (both corporate and consumer). In healthcare, for instance, what role should healthcare providers and insurers play? And what about telco giants like Vodafone and T-Mobile, handset makers like Samsung and Huawei, or the providers of mobile OS like Android (i.e., Google) and Apple? How do we feel about the service-ization of data, and the generation of advertising revenues? The point of regulation is not to protect outdated incumbents, but to facilitate dynamism while addressing the real risk of excessively powerful firms – an agenda we're ill-prepared to serve.[46]

Finally, what link should there be between the private and public spheres? The Chinese government has long fostered collaboration with tech companies, but Western societies have different views on the sharing and use of data. In China, social apps are permitted to track current and former COVID-19 patients, working with municipalities. How can we protect consumers, ensure competition, preserve privacy, and keep the innovative momentum in a world of ecosystems? The current pandemic has given us much to consider.

Adapting to a new world order

Ecosystems are temporary organizations that create thick but impermanent webs of relationships, all geared to addressing particular business issues or opportunities.[47] As the current crisis shows, systemic issues can require quick redeployments that can happen when entrepreneurial drive allows, or circumstance obliges, people to look both inside and outside their own boundaries. So, while the pandemic is obviously a special case, it represents in extreme form the new demands placed on organizations and those who manage them in this unfamiliar new world.

What is certain is that in many areas, change will be permanent: there have been too many dislocations for any easy "return to normal." Like any crisis, COVID-19 will create winners as well as losers.[48]

By the end of it, old habits will have been broken, new ones formed. "WFH" is already an accepted abbreviation, and the benefits of home working (for those that can) in terms of time, convenience, and urban congestion, not to mention savings in office rents, are probably too great to permit an easy return to the arrangements of the past. Restaurant chains and owners worry that fear of infection, together with the convenience of home delivery, will mean that eating out will never resume its previous popularity. University teaching and doctors' visits will increasingly be conducted online. Many of the changes are not temporary blips: they will transform how business is done, even if they don't suppress demand. As companies look to boost the resilience of supply chains through on- and near-sourcing, automation will very likely increase.

And these are only the obvious examples. When clear-cut industries and categories ruled, companies competed to deliver the same mass-produced product – but not in how the underlying service was delivered. You could have any means of mobility, as long as you bought your own car; any way of talking to people far away, as long as it was on a phone. To that extent, customers were captive and the winners were those who upset their customers least (in retrospect, not such a big ask to make of managers).

As we have been seeing over the last few years, however, offerings can be sliced, diced, orchestrated, and bundled for delivery in myriad new ways. The fast-evolving mobility ecosystem is a good example.[49] No longer just about car ownership, it is now coming to look like a growing sheaf of user-centric services for integrating other

parts of passengers' lives. Just as you can already ask Google maps for directions from London to Paris, or Norwich to Nantes, it will be possible in the future to order the complete journey with a single click or phone call. Or you could sign up for a monthly "take-what-you-want" mobility subscription service – a blend of public transport, private car, taxis, and car- and ride-sharing services to suit the particular circumstance. This will create new opportunities to mine supplementary sources of value. One example is entertainment for a captive passenger audience – raising the intriguing possibility that eventually these secondary sources of value become so lucrative that mobility comes free in return for our personal data, as with online search and social media. In turn, these changes will affect the value of other services from insurance and healthcare, to the need and value of parking.

As the scope broadens, it becomes ever more important to understand, and understand deeply, the "jobs to be done." What demands emerge from how customers actually live their new lives? The pandemic poses the question with added urgency. To stick with mobility, consider for example Hyundai's artificial intelligence (AI)-based Blue Link app, which can track your vehicle, monitor and report on driving behaviour, and perform various remote actions on the car. One of these is a one-time-only door lock and unlock. So, in combination with car-wash app WashOS, you could – from your office – ask someone to locate your parked car, valet it, and return it ready for collection after work.

More to the point in these troubled times, you could have a grocery order or medical supplies delivered into the boot. Hyundai touted the app as "enhancement of the connected driving experience"; you might call it mobility, retail, convenience, or even emergency. The more critical the job, the greater the opportunity.

How old management reflexes can lead you astray

What goes for what we used to think of as the auto industry also goes for the economy as a whole, where a wholesale reorganization of sectors across business and society is taking place before our eyes. While rear-guard battles for hierarchical control of sectors continue to rage, smarter firms and leaders are experimenting with the new ways of organizing that opportunities emerging in these wider ecosystems demand. Software may be not so much eating as modularizing the world, making the boundaries between sectors and technologies more porous, and at the same time increasing the need for close coordination. Add to that the advent of the full Internet of Things and 5G, and the range of technological capabilities will only expand, along with the roster of potential partners able to offer them. A BCG study recently reported that more than 50 percent of ecosystems involve partners from five different industries and 90 percent involve participants from five or more countries.[50]

As technology allows us to redesign our world, this kind of choice makes two things all but certain. First, offerings won't be delivered in the way they are now. Second, your company is most unlikely to play the central role.

For many CEOs, this may be hard to accept. They assume that their job is to create their own ecosystem. But as COVID underlines, this is a *folie de grandeur*. The reality is that few companies have the exceptional brand, data, platform-shaping skills, scale, or financial assets to become the "orchestrator" of an entire ecosystem, particularly under today's pressures. And even firms with significant muscle might want to think twice before grabbing the lead role. We're talking ecosystems – not ego-systems.

Leaders must be prepared to nudge or influence their ecosystems, not control them. Letting go of control is tough – even for some of today's celebrated ecosystem orchestrators. Apple's iPhone only took off when Steve Jobs reluctantly opened up the App Store to outside developers, launching an ecosystem that now numbers more than two million apps and 500,000 publishers.

In the new world, value obeys a different gravity. Above all, it flows to where the information is. Consider the rise of the tech titans. In striking contrast to even the recent past, the chief asset of the most valuable companies in the world – Apple, Alphabet, Amazon, Microsoft, and Facebook – is data. By comparison, their tangible assets are meagre. Not coincidentally, each is at the center of several overlapping ecosystems and also participates in others. (Once again, the pandemic is a sharp illustration of the general principle. Understanding and dealing with the outbreak is all about data, whether demographic, medical, or epidemiological, and many of the emerging networks have as their explicit object its generation as raw material for or guidance for decision-making closer to the front line.)

Don't be surprised then if it's one of these data giants – or another outsider like Uber – that ends up as orchestrator of the emerging mobility ecosystems, rather than a traditional carmaker. Despite a common misapprehension, ecosystems are not supply chains. And there's no guarantee that even very large companies that sat at the top of their supply chain will go on to play the lead role in an ecosystem.

The implication of all this? Most firms will participate in ecosystems not as orchestrators but as "complementors" – suppliers of supplementary technologies, brands, or capabilities. But even this will be less straightforward than it might appear – and again, not amenable to "ego-system" tactics.

The new structures needed to win in a world of ecosystems

Even if the direction of travel is clear, we also need to revisit our organizational structures, and decide who will be managing this complex web of relationships. Ecosystems, by construction, require firms to be "extrovert" and focus

not only on the needs of their clients but also the needs of their complementors and partners. This means we need to have the internal flexibility to find ways to identify the right ecosystem structures, broker arrangements, and shepherd a vast array of participants well outside an organization's formal boundaries. How can we make this happen?

The answer may need to be to do more than create new job labels. While new roles like "ecosystem manager," "platform developer," and "evangelist" are becoming increasingly widespread, we are now witnessing the early stages of the significant organizational transformation that will be required. In Haier, for instance, the shift towards becoming the "ecosystem brand" has been accompanied by an acceleration of the radical decentralization programme advocated by its charismatic CEO, Zhang Ruimin.[51] His managerial philosophy (Rendanheyi, from Ren meaning "employees," dan "user value," and heyi "alignment" which refers to the alignment of the wealth generated by employees autonomously and the shared value) was shifted to support alignment in the creation of *ecosystem* value. Haier, which envisaged its fridges sitting at the center of a wider "Internet of Food" and its washer dryers interconnected with an "Internet of Clothes,a decided to delegate responsibility to its employees, making them owners of "Ecosystem Micro-enterprise Communities" (EMCs) tasked to contract internally within Haier but also externally, and linking with those well outside the organization. Ecosystem revenues are monitored and recognized, and sought by the organization.

Other competitors tend to be more centralized, and do not delegate decision-making authority and responsibility to the same extent. Xiaomi, which has invested in one of Haier's competitors, Midea, seems to be more centralized, but still wants to draw on its front-line employees to help support its ecosystem reach. Western Big Tech appears to favour a mix between centralization and decentralization, and traditional industrial firms that take innovation seriously are trying to find new ways to empower their staff to drive new ecosystems. Often, these efforts to create ecosystems need to involve the firms' leadership not only to ensure some consistency (and coordination of efforts) but also because the quest for an ecosystem strategy often requires regulatory buy-in, as firms like Philips are discovering in their effort to transform (digital) healthcare.

How to resolve the issues of authority and entrepreneurship, "pulling one's weight" and nimbleness, drive and initiative in ecosystems is at the cutting edge of our understanding. While some skills (like empathy, negotiating ability, and the creativity to design collaborative structures with payoffs for a host of participants over time) will become more important for sure, we are still on the lookout for the right structures and the right tools to help organizations adapt. Research on these topics and engagement with firms is ongoing, so – watch this space.

Success requires a rigorous reality check

For companies that can learn to navigate the post-COVID-19 landscape, there will be substantial growth opportunities on offer. Fresh cross-boundary collaboration can give firms access to new intellectual property, help firms merge physical and digital channels, and advance new technologies. In short, ecosystems offer participants a way of developing new revenue streams from products and services that they could not have brought to market by themselves.

To make the most of these opportunities companies will need to link their survival strategies with a ruthless strategic rethink.[52] By using its lessons, this crisis can be the foundation of an important rebound. Ventures founded in times of downturn have the greatest chances of success. There are more good people and more reasonably priced opportunities in dislocated markets, competitors may be distracted, and this time around, governments are keen to provide liquidity. The debris from the COVID-19-induced recession will dot the landscape with fresh opportunities.

Answering the questions asked by the new circumstances will be challenging. So will the organizational change that stems from them. But think of today's crisis as providing a high-pressure test bed for the ways of thinking and organising that all companies will have to get used to as a "new normal" emerges – an immunization against the future, if you like. After all, what are companies responding to today's emergency actually doing? They are contributing their best knowhow or facilities to pop-up ecosystems geared to solving an urgent global problem for the common good. They are improvising at speed, innovating as they go, without certain knowledge of where the initiative will take them. Circumstances in the shape of covid-19 dictate the purpose. As the projects evolve, they will almost certainly spin off into other opportunities. Even if they don't, the learning from this existential experience will stand them in good stead in the shape of resources that up till now have evoked more talk than action: resilience and agility.

Most ecosystems are driven by data. But nothing could illustrate better that thriving in them will depend less on technological expertise than on the irreducibly human qualities of intuition, the ability to improvise, and the empathy to put yourself in someone else's shoes, plus the creativity to turn whatever you find out into a strategy. Forget ego – it's all about eco.

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The growth ecosystem

Whitney Johnson

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As the weeks went by during the COVID-19 pandemic, and most countries were shutdown to at least some degree – industry shuttered, entertainment canceled, citizens mostly confined to home – the absence of human activity had one beneficial effect. The ecosystems we live in started to repair themselves. Water was cleaner, fish and aquatic mammals more readily seen, air pollution declined, and light pollution as well; there were more stars visible in the night sky. Wildlife reinhabited parks and natural places where sightseers usually push animals to the margins.

Ecosystems are fragile, but when at their healthy best they nurture life and growth in amazing, almost miraculous ways. Workplace ecosystems are similar. Healthy ones foster growth, both individual and organizational. Toxic ones, polluted by poor strategy and leadership, or no strategy and leadership, are growth stranglers. High growth organizations require high growth individuals and demand an ecosystem that fosters proactive people development.

Businesses can't be disruptive unless the individuals within them are. Workplace ecosystems are an example of this; a single leader or two providing learning opportunities for their team members, coupled with contributors who want to learn, can be enough to disrupt a stagnant situation, stir it up and create growth possibilities. There can be a healthy micro-ecosystem within a larger one that isn't as productive. Each of us can initiate an ecosystem overhaul with the potential to change the organization. Our contributors do want to learn; one of the critical data points gathered by Gallup's annual survey demonstrates that pathways to learning and growth are at least as important as compensation in job decision-making for a majority of respondents. My own research sustains this data. Here are a few examples:

Erik Bursch was good at his job and his team was delivering, but he was ready to learn something new. He was running a cloud platform within the Technology division of Gannett and he believed that if he could put himself in a new environment, the organization could learn and grow along with him. Bursch could have looked outside Gannett for a new opportunity – many people do – but he liked Gannett, had been with them for over a decade, and had relationships throughout the company. He decided to reach out to Jason Jedlinski, SVP Consumer Products, and proposed combining their engineering teams.

Jedlinski was receptive and helped facilitate Bursch's shift to a new role as one of his direct reports. Bursch was able to bring his deep domain expertise in the full software development cycle and learned how to freshly apply it in Product. As Bursch said, "I was really seeking the challenge of aligning technology advancement to support a product vision. Being able to have a larger impact on our business gave me and my team the thrill and excitement that comes with a brand new job, without losing momentum and expertise."

The organization benefited too. As Jedlinski told me, "The skills and innovative mindset Erik brought to our product team have resulted in better architecture, cost management, operational discipline, incident response, quality control, and career paths for developers."

Bursch's experience exemplifies the symbiotic learning relationship between an employee and an organization. High-growth individuals who embrace new learning make the organization smarter and contribute to its growth, but they can't do it alone. They need their managers to have a reciprocal interest in individual growth and create a learning ecosystem to foster it. Jedlinski was key in opening doors to both Bursch's learning and his own. He drew on an interesting and disparate educational and career background to be open-minded to change and growth. "I always loved being in environments where I was not the smartest person in the room. I did not have all the answers and I could pick up and soak up as much as I could like a sponge," he told me.

Like a biological ecosystem, organizations are either growing or they're dying. And organizations grow when their employees are learning. If you want a high-growth organization, you need to create a learning ecosystem to support high-growth individuals – to expose them to new and challenging opportunities before their roles become stale.

People may stay in one place indefinitely, but, in most cases, they can't keep growing there forever. When they're no longer stimulated and engaged by their work, their benefit to the organization is diminished. At that point, an employee may be left to languish in place or forced to leave. Their accumulated expertise and institutional memory are lost in the process. Worse, they may take their learning to a competitor – a potentially exponential loss.

Companies need to see that a high-growth employee who loves to learn is a very valuable asset and a resource worthy of investment. Redeploying them on a new learning curve within the organization keeps their expertise in-house and allows them to share and build on it – a potentially exponential gain.

This doesn't mean every employee has to stay, and of course, not everyone will. But it's worth trying to retain promising, curious people by allowing them to move to a new role when they start becoming disengaged – just like Bursch's manager did when he was agitating for a new opportunity.

Diane Dietz, CEO of Rodan + Fields, has been creating learning ecosystems throughout her career. She says, "I do think it's important to balance your desire to keep someone versus what their desire is and if you do have someone that wants to go do something else, I've always tried to be really supportive, but also ask, 'Is there anything I can do personally to keep you? A different job? A different role?'" Dietz herself had evolved from sales to marketing in her early roles at Proctor & Gamble and was running the Oral Care Division, a multibillion-dollar business, while still quite young. She credits Susan Arnold to whom she reported, and P&G CEO at the time, John

Pepper, with being great leaders who created a lively, vital ecosystem for employee progress within the organization. She aspired to become that kind of leader.

As a leader Dietz says she tries "not to look at cookie cutter backgrounds." She famously arranged for Jocelyn Wong, educated as an engineer and working in R&D at P&G, to move to marketing, as unconventional a leap from one learning curve to another as I can imagine. Wong didn't enjoy engineering – it was more a parental dream than her own – and, unhappy in her role, was considering leaving the organization. Dietz saw latent creative talent that was not being tapped and helped broker Wong's move to her own team. Wong later followed Dietz to Safeway and has since been the chief marketing officer at Family Dollar (now Dollar General) and is currently CMO at Lowes. What a loss to Dietz, Wong, P&G, Safeway, Family Dollar, and Lowes if Wong had been forever trapped in an environment that didn't promote her growth and nourish her personal ambitions.

Wong pays the benefits of positive management ecosystems forward. She mentored Matt Martin at P&G when he made an unusual career move and later brought him over to her team when she was with Family Dollar. When she eventually moved on to Lowes, Martin replaced her as the CMO of Dollar General. A heathy ecosystem is regenerative.

Biological ecosystems have the concept of carrying capacity, which refers to the number of people, other living organisms, and/or crops that an area can support without environmental degradation. Growth occurs until the limit of resources is reached.

People can also grow in a workplace until they reach the limit on their resources for new learning. At the beginning, or the low-end of what I call the S-Curve of Learning, there's a lot of room for growth; but as we master our role and ultimately reach the top of that learning curve, we begin to flatline. There's less "food and water" for our brain as we reach the carrying capacity of that curve. Growth slows then stops and we get bored. And if this is common in the organization, it will begin to flatline too.

Managers can also orchestrate new learning by pushing employees – even reluctant ones – onto new curves. During her tenure at Rovi, a 2,500-employee digital media software company, Chief Human Resources Officer Eileen Schloss realized that two of her HR teams were locked in conflict. "The HR business partners tended to complain that jobs weren't getting filled fast enough for their client managers," said Schloss. "The talent people felt the HR business partners didn't adequately convey what it took to fill a role."

She asked the heads of each team to trade places. "This forced switch in perspective made a huge difference. Neither of them had the experience initially to perform the new job, but they had enough knowledge of the business generally, and they had people working for them who understood the specifics," she said. "This

purposeful shakeup improved understanding within each function, as well as capabilities."

Deliberate disruption of employees who had mastered their own role, but knew little about their colleague's responsibilities, developed a more robust understanding of the holistic functioning of HR, and how to improve it.

Job swapping is only one strategy to put employees on new learning curves, help break down silos, and maximize shared organizational learning. Ongoing training and educational opportunities, job sharing, mentoring, and outreach programmes are a few other examples. You can get creative in how you mix things up, move people around, and offer employees new opportunities.

By creating an ecosystem that fuels continued learning, an organization builds capacity *ahead* of the competition. And research indicates that the companies that survive are those that develop capacity – new technical skills and domain expertise, greater adaptability, and ways of leveraging institutional memory – before they need it.[53] This capacity weakens when too many good people leave for greener pastures.

A lively ecosystem – where different parts interact with one another – helps people grow, generates capacity, and keeps the ecosystem flourishing. An early 20th-century scholar, Thomas Troward, wrote, "Life ultimately consists in circulation, whether within the physical body of the individual or on the scale of the entire solar system; and circulation means a continual flowing around, and the spirit of opulence is no different … If we choke the outlet the current must slacken, and a full and free flow can be obtained only by keeping it open."

Most people live in multiple ecosystems, sometimes, but not always consecutively and in their personal lives as well as at work. One of my podcast guests was Dr. Gregory Haile, president of Broward College in Florida, one of the 10 largest community colleges in the United States. He has moved through radically different ecosystems with tremendous growth entailed. He grew up in Queens, New York in the historically troubled neighbourhood of South Jamaica. His childhood was in the height of the crack cocaine epidemic, and the area was drug- and crime-riddled and extremely dangerous. His home was made more secure by barred windows. Neighbours were victims of sometimes fatal violent crimes and on one occasion a bullet came through his living room window, following a shooting right in front of his house.

To him, this was normal but to his mother it was not. She wanted her son in a different ecosystem and that required becoming a change agent herself and enlisting him in the effort at an early age. They couldn't move, so, he recounts, "My mother made what I thought was a really powerful decision and that was to essentially lie about my address, to send me to school in a better neighbourhood." This was about third grade. "She decided to send me to a school in an area called Kew Gardens in Queens … and as I continue to reflect on the change that she created, just by frankly lying about my address, it really did have a significant impact on the rest of my life."

It was in the environment of this more prosperous school that Haile was first introduced to the concept of higher education. He heard the word college from a classmate in sixth grade, a "conversation that would prove to be incredibly potent." It needed to be potent, to have staying power, because by high school, the address fiction couldn't be sustained. Haile was forced to attend the high school in his home neighbourhood, an institution with some of the highest rates of HIV and teen pregnancy in New York and one of the first to have metal detectors installed at its entrance. "My mother told me: 'You're going to go to this high school and you're going to make it, and I promise you that if you can make it there, there won't be any place where you can't make it' … she spoke with nothing but confidence about that."

Haile comes from a very large extended family – well over 100 cousins – but it was a loving family, much of it located in South Carolina where his mother and her 12 siblings were raised. The neighbourhood ecosystem was one factor in his life, but the family ecosystem was a different, redeeming element. Haile was the first in his extended family to graduate from college, Arizona State University, his college choice because it was geographically distant from Queens. "I had a tremendous sense of discomfort as soon as I arrived. And the reason for that discomfort was because I realized immediately that there were no metal detectors to get into the building … How could this possibly be safe?" He also discovered he wasn't college ready. He was mentored by professors, one of whom told Haile he might be the best student he'd ever had. A game and life changer. Ultimately the ASU Dean of Students steered him toward pursuing a JD, and college was followed by law school at Columbia University.

Haile shared an insight gained when he returned to his high school alma mater, "Think about all the kids who went through my high school or the many high schools in America where there are multiple layers of metal detection between the inside of the school and the outside, and the need for people to come back and say, 'On the other side of these metals detectors is success, is the potential for opportunity.'"

He practiced law in Florida for a time, but education is his calling and the students at Broward are his passion. They are, he says, like he was. The majority are first generation college students, many require remedial education, and most are financially deprived. They represent over 150 countries of origin. Some are homeless. There are transportation challenges and single parents working full time who do their homework in the middle of the night. "When those are the folks who are serving themselves and you get the pleasure and gift of serving, how do you not want to do that for as long as you possibly can?" he asks.

Regenerating the ecosystem

If individuals aren't learning, neither is the organization, neither is society. It becomes like stagnant water with the outlet choked off: unmoving, increasingly algae ridden, and surfaced with scum. It's the opposite of a flowing river or the power of the ocean tides. The good news is that an ecosystem can be disrupted by a handful of people who want to learn and foster learning. Change doesn't have to be imposed from the top or include a whole organization to start. When individuals disrupt themselves, institutions become disruptive. When we facilitate learning, even require it of individuals, we create new carrying capacity for growth throughout our ecosystem. If we don't … well, we live or die by the growth of people.

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Ecosystem maturity and the stepping stone strategy

Rita McGrath

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One of the great puzzles in business is why some entrepreneurs benefit tremendously from the unfolding of a strategic inflection point, while others who "saw" it equally clearly disappeared into the mists of forgotten business lore. One explanation is that introducing even prescient innovations into an unripe ecosystem is as much a recipe for disaster as failing to innovate in the face of a pending inflection point. Being ahead of one's time is as miserable as being too late.

James Moore, in a 1993 article, is often credited with popularizing the concept of a business ecosystem. Like a natural ecosystem, he suggested, businesses coevolve, with the actions of one influencing others, just as the change in one species affects the habitat and can provoke changes in other species. For our purposes, a business ecosystem can be defined as having a number of definable components.

There must be a source of energy and resources. Natural ecosystems are fueled by energy from the sun. Business ecosystems are fueled by flows of money and other resources. In a natural ecosystem, natural selection has led to differently abled creatures occupying them. In business, path-dependent learning and investment processes lead to firms with differential capabilities. There must also be a form of connective tissue between players in a business ecosystem. Unlike ecosystems in nature, however, connections between business entities have an element of sentience to them – human actions and decisions determine flows of communication and commitment. This in turn creates interdependencies – the actions of one connected party affects others. Finally, business ecosystems must have regimes for regulating access and ownership of resources. Depending upon the extent that each of these components functions effectively, a business ecosystem can be said to be more or less mature.

A strategic inflection point consists of what Andy Grove called a 10X shift in the forces that affect a business. As he pointed out, such a change represents a technological transition in which an older regime is in the process of being replaced by a newer one. If a business is prepared to navigate such a transition, by retiring older technologies, embracing newer ones, and transitioning their activities, an inflection point can represent a valuable opportunity for growth. It can also presage a decline in business as older ways of doing things are replaced with new ones and revenues erode accordingly.

Phase changes

There are four states with respect to the emergence of a strategic inflection point, with differing ecosystem implications. These are consistent with Gartner's hype cycle. This order is typical: hype, dismissal, emergence, and post-inflection maturity. Each phase has ecosystem implications depending on the incentives and motivations of the various participants in it.

The recognition that an inflection point is underway is often accompanied with a fair amount of hype, particularly if early participants fuel interest in future riches to be had. Entrepreneurs start businesses, investors put in money, and journalists enthuse about the thing that is going to transform economic life as we know it for all time. Speculators often cause the value of underlying assets to inflate wildly, creating a modern-day version of Dutch tulip mania. The fanfare surrounding bitcoins in the mid-teens is a classic example of the excesses of this stage.

Like a Greek tragedy, the hype stage almost always ends in a bust – sometimes dramatically. This brings us to the *dismissive stage* in the lifecycle, in which those who sat out the hype take an "I told you so" perspective, saying "that's never going to happen." This stage, however, is often where the real opportunities lie. In the dismissive stage, a few of the initial entrants will have survived the shakeout and begun to set the foundation for major growth. They will be building viable business models, finding new customer needs to address and potentially even begun making money. This is the point at which toehold investments might make sense, seeding the emergence of a more "real" ecosystem than existed in the hype stage. Thus, with respect to bitcoin, establishment players such as JP Morgan, by 2019, were in trials to solve real business problems at scale for corporate clients.

Dismissal is often followed by a much quieter but more "real" *emergent stage*. At this point, those who are paying attention can clearly see how the inflection might change things. During this stage, critical decisions about infrastructure, ecosystem relationships, business models, and asset ownership are being made. This is the stage at which an organization should be taking out options, investing in ecosystem partnerships, and keeping on top of what the emerging business could be.

Finally, the inflection point comes into its own at the *maturity stage*, in which it is now obvious to everyone how it will change the world. Those who were not prepared see their businesses go into decline. Post-inflection, the change is incorporated into everyday life assumptions. By this point there are plenty of people who have completely forgotten what things were like before the inflection took place. Most players in an ecosystem have worked out relations among them, transactions are well understood, and business models are well in place.

Competing in arenas

Although strategic management theory for many years has embraced the idea that an "industry" represents the most important unit of analysis for strategic thinking, ecosystems as described above are blissfully unconcerned with industry boundaries. Indeed, recent developments have demonstrated that the most significant competition in many categories emerges from players from different industries. For instance, consider the woes of the dairy

industry, which has seen a steady drop in the demand for cow's milk, while makers of plant-based "milk" have seen skyrocketing demand. In theory, these are different industries. In reality, they compete.

Instead, we can use the concept of a competitive arena. An arena, like a natural ecosystem, consists of an environment in which resources are present. In business, this means a market, with customers who have money to spend. How customers spend their money will depend on what Clayton Christensen famously called their "jobs to be done." Customers buy products and services to get jobs done in their lives. Different jobs compete with one another for urgency and salience, and different providers compete with one another for the total resource pool available. Thus, customers that value connectivity over, say, eating out at restaurants, will put their resources into buying cell phone minutes and not into fine dining. The restaurant and the cellular provider are actually competing with one another.

A strategic inflection point can change what is possible in the service of customers getting the jobs they would like to get done in their lives done. This is often what fuels the initial hype cycle. And yet, what many early entrants into a new ecosystem fail to realize is that brand-new ecosystems are often missing some component that would allow a complete job to be done. Until the ecosystem is mature enough, even though customers may be intrigued, ecosystem weaknesses stop them from making a consumption choice.

Perhaps a concrete example would be helpful. In 1964, AT&T unveiled the world's first phone that combined voice and video. Called the AT&T Picturephone, it was shown at the company's exhibit at Disneyland in California. The first attempt to sell the product commercially was in 1970, in Pittsburgh. It was hailed as a great advance that would revolutionize how we communicate. While people were intrigued at the concept, it was a hard sell. For starters, the company wanted to charge consumers $160 / month for phone rental (about $1,000 in today's dollars). And for businesses, who might have been willing to swallow that kind of money, the phone's features for things like document sharing and replacing face-to-face meetings were too limited to offer real benefits. After a $500 million investment in the project, it was discontinued in 1978.

Part of AT&T's dilemma was that they were inhibited from investing to create an ecosystem around the phone – fear of having their monopoly broken up meant they didn't cross-subsidize the technology with profits from elsewhere in the business. Without widespread adoption, they were unable to take advantage of network effects (I mean, if you're the only person with a picturephone and there is no one else with one, it isn't worth much). Today of course, we think nothing of video chatting and in a post-COVID-19 world have actually become dependent on the technology.

The lesson here is that it isn't enough to invent great technology if the technology by itself can't break through to become a customer's preferred way of getting critical jobs done in their lives. And often, it is the absence of critical ecosystem players that prevent a satisfying conclusion to a job.

Ecosystem evolution: the stepping stone strategy

Missing an inflection point can be devastating. But moving too soon can leave a company stranded. As an alternative, consider an approach called the "stepping stone" strategy. In this strategy, right about the time an inflection point has passed through the hype stage, it makes sense to both take out some strategic options and look for a stepping stone opportunity. A strategic option is a small commitment made today to create the opportunity to make a future choice. Simply investing in the option does not commit one to following through on the entire commitment – it merely provides information and degrees of freedom about what is really going on.

Stepping stone options have several properties that are important from an ecosystem point of view. First, they represent a really important job to be done from the point of view of the customer. Second, the job is either not being done very well, or not being done at all. Third, the customer has resources to spend to get that job done or will divert resources from other demands to do so. Fourth, and most importantly, the complete job can be done with the technology as it is, with whatever rudimentary ecosystem exists at the time. This implies that a stepping stone option is designed to serve a niche market. While the markets may be small at the outset, they should support high margins – after all, if the job to be done is important enough, the customer should be willing to pay.

Let's take the concrete example of autonomous vehicles. While the technology for autonomous driving is extraordinary, and very nearly good enough for drivers to trust it in many situations, other ecosystem elements are not yet mature. Consider our definition of an ecosystem as applied to this arena.

Given the gap between what a more mature ecosystem would look like and the present state of the art in autonomous vehicles, one might well question whether the massive investments made in the technology so far are likely to benefit the early movers.

Source of resources	End users cannot buy a self-driving car today; the ownership regime is not well understood; the business model is unclear; the value of data generated by an autonomous system is not understood yet.
Firms with idiosyncratic combinations of resources and capabilities	There are many players who have invested billions in this area, but the standards are interoperability regimes are still not clear.
Connective tissue	It is still unclear whatt the relationship between rider, owner, and operator of autonomous vehicles will be; therefore the linkages are not yet well understood.
Regimes of access and ownership	Not yet developed; unclear who will own vehicles; who will bear the risk; where they might be deployed or under what conditions would end users pay for them.

And yet, there are fascinating examples of stepping stone strategies in this space. One involves the use of autonomous capabilities in military applications. An arena ripe for adoption is in the case of vehicles used in its resupply programme. Called the "Expedient Leader-Follower" programme, it consists of semi-autonomous functionality that nonetheless offers real benefits. Rather than, say, seven trucks in a convoy with the mission of supplying front-line troops, the technology is good enough for six trucks to play follow-the-leader while human beings in the lead vehicle make the kind of in-the-moment judgment calls that are difficult to pre-programme in an algorithm. The technology is already deployed in this manner, the developers are being paid and the military customers can put a real value on the benefit of keeping troops out of harm's way while being able to use them for more productive activities.

Of course, this application is not large enough to justify the billions that have been spent on developing autonomous technology. It is, however, indicative of the kind of seed crystal that prompts the initial emergence of an ecosystem. Gradually, the applications served by the technology will expand as firms learn and the technology continues to improve. As it does, ecosystem leaders can use their vantage point to create a clearer roadmap for commercial applications. Eventually, such stepping stones can evolve into platforms to which others can link their capabilities to create even greater value for end users.

Ecosystem ripeness – a critical concept for strategy

This article has encouraged would-be innovators to proceed with caution when facing an abundance of enthusiasm at the growth prospects created by a strategic inflection point. While there is no harm in participating as an inflection point creates new possibilities, doing so in an early, complete-enough ecosystem is often more fruitful than rushing headlong into what could turn out to be an unrealized prize.

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The age of community capitalism

Joost Minnaar

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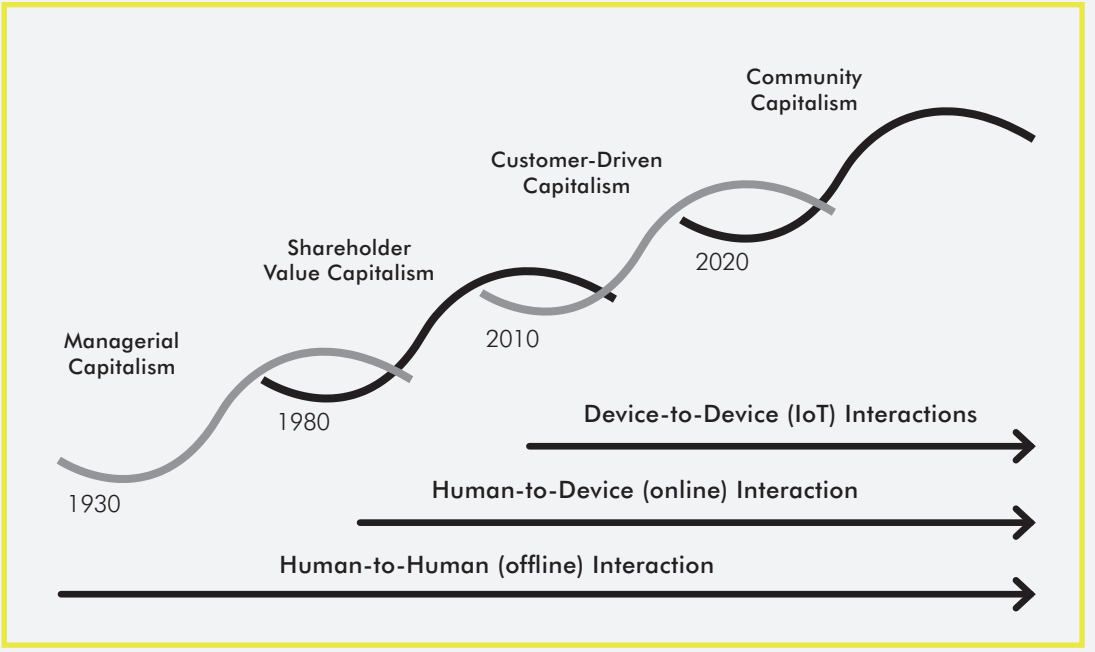


We first visited Haier headquarters in Qingdao, China in 2017 and enjoyed an extended conversation with Haier CEO Zhang Ruimin. He told us "there is no such thing as a successful company. There are only companies that move with the times." Those words intrigued me. In hindsight, I never truly understood them. Now I think I do. Let me explain.

It started with a more recent trip to Haier HQ in January 2020. We learned about Haier's new "Ecosystem Micro Communities (EMC) model." It made me think of a classic 2010 *Harvard Business Review article*, "The age of customer capitalism" by Roger Martin. It also prompted thoughts about a TED talk by Chobani's founder Hamdi Ulukaya, the "Onion Model" of the Dutch organization Buurtzorg, and the "NER model" of the Spanish NER Group. But more on Chobani, Buurtzorg, and NER Group later.

Roger Martin suggests that, "modern capitalism can be broken down into two major eras. The first, managerial capitalism, began in 1932 and was defined by the then radical notion that firms ought to have professional management. The second, shareholder value capitalism, began in 1976." Martin then argues it is time to move on again: to abandon the concept of "shareholder value capitalism" and shift to an era of "customer-driven capitalism."

Three concepts, four features

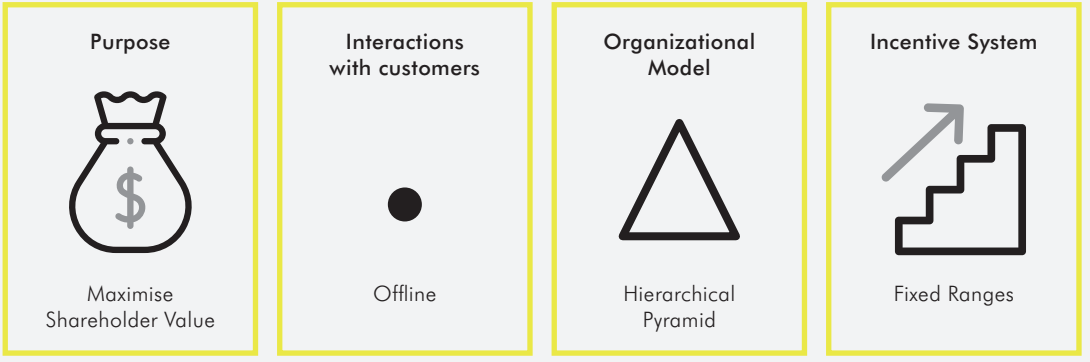
In this piece I explain both shareholder value capitalism and customer-driven capitalism in more detail. Then I introduce the idea of "community capitalism." I will try to explain all three by how they differ in four ways:

- The purpose of firms.
- The interaction between firms and their customers for each.
- The desired organizational models.
- The desired incentive systems for firms in each stage.

And I will illustrate customer-driven capitalism and community capitalism using the examples of Haier, NER Group, Buurtzorg, and Chobani. Haier is the largest white goods manufacturer in the world with 70,000+ staff. NER is a group of 20+ Spanish companies near Bilbao with 1,300+ staff. Buurtzorg is a Dutch healthcare organization with 15,000+ nurses in the Netherlands. Chobani is an American yogurt manufacturer founded in 2005 by Hamdi Ulukaya. He bought an 85-year-old yoghurt plant in upstate New York which had been closed by Kraft Foods. It is now a billion-dollar business with 2,000+ staff.

Let's start with the first concept – shareholder value capitalism.

1980-2010 Shareholder value capitalism



Shareholder value capitalism is what we are most familiar with. It has ruled most of the business world since the 1980s. Most businesses around the globe remain guided by Milton Friedman's doctrine that a firm's main responsibility is to its shareholders. This approach views shareholders as the economic engine of the organization, and the group to which it is socially responsible. The goal is to maximize returns to shareholders.

In his *HBR* article, Roger Martin says that the governing premise of shareholder value capitalism is that every corporation should maximize shareholder wealth. If firms pursue this goal, the thinking goes, both shareholders and society will benefit.

In this view, the shareholder is king.

During the age of shareholder value capitalism, interaction between firms and customers was mostly human-to-human: think shops and showrooms. Customers bought (mostly) from brick and mortar shops and expected to buy a product or service. For example, if you wanted to buy a new fridge you would go to your local white goods shop. Customer contact was face-to-face, and of high quality. But it was irregular. How often do you buy a new fridge? And how often does it need fixing? Not often, right?

This meant that the number of interactions during which firms could collect feedback, get customer data, and hear dreams were limited. But most companies did not mind. They organized for efficiency and the sale of mass-produced products and services. Many still do. These companies assume they know what customers want (perhaps after some market research) and then mass produce to provide it. Or, as Henry Ford is supposed to have said: "You can have your car in any colour, as long as it's black."

Because contact between firms and customers was sporadic, only a small proportion of employees were in customer-facing roles. In fact, the only people who talked to customers were sales sharks, marketers, and the occasional person from R&D.

Companies of this era were typically pyramidal. This structure is a spike, with shareholders at the top, above layers of management and, at the bottom of the heap, the people who carry out the real work in functions like sales, finance, R&D, HR, marketing, and production. These functions ran in departments, all perfecting their own performance and efficiency.

This is a recipe for disaster. All departments were inclined to defend their fiefdoms. That is understandable. Each was judged on its own performance. Sales made a deal, tossed it to production, who tried to run with the ball but, in doing so, might clash with marketing – who had their own battles with finance, and finance fought everyone. This cold warfare often took precedence over pleasing customers – which did no one any favours.

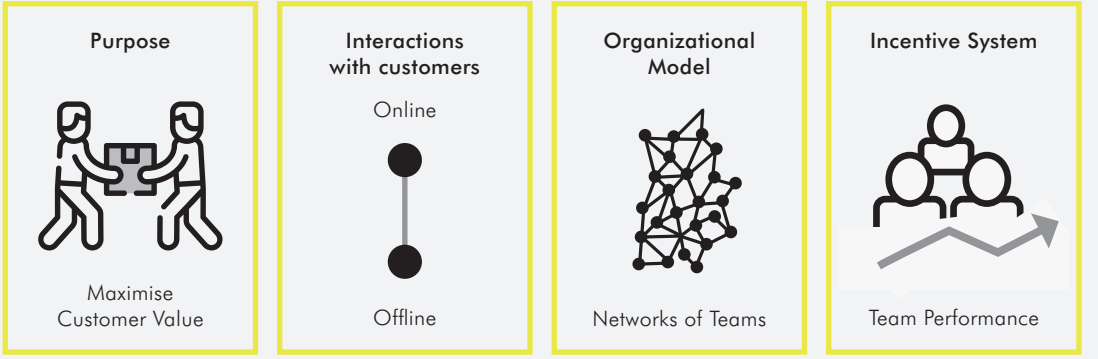
In the age of shareholder value capitalism and hierarchical structures, monetary rewards were commonly tied to one's position in the hierarchy. That is, not necessarily to the performance of the firm, let alone any added value to customers. The incentive system was bolstered via a promotion system in which employees were ranked in hierarchies and paid according to rank. Positions were revised every now and then to reward performance and loyalty.

In these systems, those who were higher on the pyramid earned more, with a small group at the top receiving the highest incomes and most recognition. For some, there might be stock-based compensation. Unfortunately, short-term rewards encouraged short-term expectations.

Note, we are talking about the short-term expectations of shareholders here – not the expectations of staff, customers, and other stakeholders. As Martin writes, "increases in shareholder value had very little to do with genuine business performance and a lot to do with the fertile imaginations of shareholders, who were speculating what the company's future might hold."

From a customer perspective, this is problematic – the business model rewards top management for increasing shareholder value. Top-management is tempted to maximize their own compensation by manipulating shareholder expectations in unhealthy ways, and at the cost of the other stakeholders – including customers.

2010-2020 Customer-driven capitalism



Customer-driven capitalism argues that firms should not be organized around shareholders, but around customers. They should, therefore, build trusting relationships with them.

Now, the customer is king. Customers create long- and short-term value for businesses. Rather than maximizing shareholder value, Martin argues, "companies should seek to maximize customer satisfaction while ensuring that shareholders earn an acceptable risk-adjusted return on their equity." He says that no company can serve two masters (in this case, shareholders and customers): "I firmly believe that if more companies made customers the top priority, the quality of corporate decision-making would improve because thinking about the customer forces you to focus on improving your operations and the products and services you provide, rather than on spinning lines to shareholders."

The rapid rise of digital technologies in the last decade drastically changes the way firms and customers can interact. These interactions are no longer restricted to single, offline, human-to-human channels. They now include online human-to-device channels like e-commerce websites and apps. This creates multiple channels of interaction. Customers now buy products and services not only in brick and mortar shops, but also online.

For example, if you want to buy a new fridge you might still go to your local white goods shop. However, you could equally buy one on an e-commerce site and then have it delivered to your house. Or, you might first browse online to study the product, and then buy at a brick and mortar shop. The choice is yours.

In the age of customer-driven capitalism, consumers are often still seen as buyers of a certain product or service. And firms can still interact through offline human-to-human channels with customers. Now, online human-to-device channels create other ways for firms to interact with customers. Digital interaction, however, is more easily accessed than face-to-face interaction in stores. Note, digital interaction is typically also of lesser quality.

Because of advances in computer technology and digital analytics, firms can now use all kinds of sources to gather fast and cheap input from customers. These help them understand what factors improve satisfaction, and the likelihood of buying or recommending a product or service. This means a huge increase in the number of interactions firms can use to gather data about customer wishes.

With intensified contact with customers, firms should operate better with a model built around them, rather than shareholders. A customer-centric doctrine, however, seems at odds with the hierarchical organization models most of us are familiar with from the shareholder value capitalism age.

This is because most traditional models do not track customer satisfaction as a leading performance metric. In the shareholder value capitalism age, firms rarely linked performance directly to the value delivered to customers. They measured things like the number of products moved around, profits per quarter and new contracts signed.

In the customer-driven capitalism age it is argued that organizational models should shift focus from shareholder value to customer value. Chinese firm Haier solved this puzzle by reorganizing into a "network of teams." Haier broke the hierarchical pyramid down to organize 70,000 staff into 4,000 microenterprises. These are small, autonomous companies run by the staff. This allows a larger proportion of the workforce to be in contact with customers.

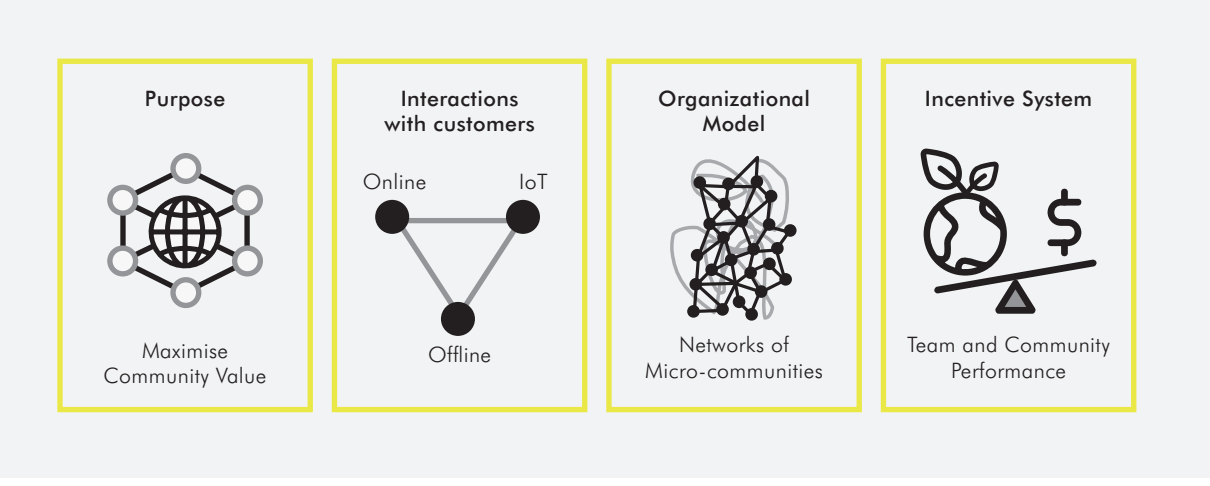
In fact, the staff – or entrepreneurs, as they are referred to – are solely responsible for the provision of products and services. That is, they must keep their microenterprises afloat and ensure best customer care. Customers may be internal (delivering to others in the firm), or external (delivering direct to customers who buy products of the firm). The microenterprises connect directly with each other and their suppliers.

In this way, Haier managed to make customer satisfaction a leading performance metric. Teams manage performance of the microenterprise, and are the point of contact for customers. They must ensure all issues are resolved. This not only helps the client, but also increases engagement and motivation. Although this may sound utopian, it does result in pressure. When shit hits the fan, the team must resolve the problems themselves.

One result of a network of teams structure is that monetary rewards are not necessarily tied to fixed salary ranges, but to the short- and long-term performance of the team (or microenterprise). These are based on the value they deliver to internal and external customers. Thus, staff report to the consumer, not to corporate boards and shareholders. In addition, Haier is experimenting with shared ownership. Staff can be shareholders of the microenterprises. The incentive to perform is, typically, a profit-sharing system. They are compensated according to the performance of their microenterprise. People in a microenterprise that delivers high value to their internal and external customers are well rewarded. And people in an underperforming microenterprise are poorly rewarded.

From a customer perspective, focusing too much on the performance of the microenterprise can be problematic. An unhealthy focus on internal competition can lead to a narrow scope of behaviour. That is, staff can try to maximize results for their microenterprise, and their direct customers, and ignore the collaboration needs of other stakeholders. The overall performance of the firm, and value to the consumer can, thereby, suffer.

2020-.... Community capitalism



Community capitalism argues that firms should not focus solely on their customers, but on communities, so that all members of the community succeed and all stakeholders benefit, over time.

In this model, the community is king. It places a priority on the wellbeing and sustainability of the community. This can include all kinds of communities. It can be the "real" community, like a town, a metropolitan area, or an entire region (like at Chobani and Buurtzorg). But it can also be a community of businesses acting as an ecosystem (like Haier). Or a hybrid of both (like the NER Group).

This approach to capitalism departs further from the shareholder value capitalism version. It recognizes that communities create both short- and long-term value for firms – and not just one, homogeneous group, like staff, shareholders, or customers.

The founding story of the American yoghurt factory Chobani is a telling example. Ulukaya bought the factory from Kraft Foods. He says the old factory could have been closed by a "CEO far away, in a tower somewhere, after looking at the spreadsheets." But "spreadsheets are lazy," he says. "They don't tell you about people. They don't tell you about communities."

Look beyond profits: "Today's business book says: businesses exist to maximize profit for the shareholders. I think that is the dumbest idea I have ever heard in my life. In reality, businesses should take care of their employees first. In the new way of business, it is your employees you take care of first. Not the profits. It's all about communities," says Ulukaya. "Businesses should go to struggling communities and ask, 'how can I help you?' The new way of business is communities. Go search for communities that you can be part of. Ask for permission. And be with them. Open the walls and succeed together."

On my last visit to Haier in China, I became aware of the rise of a new channel that enables interaction between firms and consumers. This channel is made possible by the introduction of the Internet of Things (IoT) and connected devices into our daily lives. They are better known as smart devices. They can be all kinds of electronic devices that connect through networks with other smart devices. Think about products like smart thermostats, smart doorbells, smart refrigerators, smart speakers, etc.

These devices regularly gather data about consumer demands and wishes. This interaction between firms and consumers is largely hidden from consumers. The devices can gather data without human intervention. This means much richer, more frequent feedback. In fact, IoT-connected devices refers to the ability of devices to transfer data over a network without human-to-human or human-to-device interaction. This means there are now three channels through which firms can interact with consumers: offline human-to-human channels like brick and mortar shops; online human-to-device channels like e-commerce websites; and IoT device-to-device channels.

Haier gave us a tour of a "smart home with a smart kitchen." It showed the results of these smart technological developments in the interaction between firms and their consumers. Imagine this: you walk into your smart kitchen in your smart house. In the smart kitchen is a smart fridge, connected to other smart devices in your house, plus other internet-enabled devices (like your smart phone). Via an app on your phone you can select what you would like to eat and drink this week. Your phone connects to your smart fridge. It can determine what products are currently in your fridge, and their expiry dates. Your app then checks what ingredients need to be ordered online and will do so without your intervention.

This is just a simple application of what this technology can bring to our lives. You can imagine how this smart technology might change the way we consume products and services. And what new possibilities this creates for firms to gather feedback about consumers.

So, if you want to buy a fridge in the next decade you might still go to your local white goods shop (or e-commerce website) to select one. But your new smart fridge will not be a standalone product. It can be an integrated part of your smart kitchen. The level of integration of your smart fridge into your smart kitchen will become more important than the functionality of the product itself.

The business models of manufacturing firms will thus turn towards what we are already used to with producers of movies and music. We purchase fewer products (e.g. videotapes, CDs), but purchase access to services that supply temporary use products (like Netflix, Spotify). So, for manufacturing companies like Haier, the emphasis will no longer be on selling products, but selling access to services.

What doesn't change is that consumers will generate current-period revenue, or short-term value. But every experience consumers enjoy via a product or brand can create long-term value for the firm. Every experience can impact consumer attitudes to firms in positive or negative ways. In turn, this will build or destroy consumer loyalty. And those experiences will only increase with the development of smart technology. Indeed, the development of smart technology will fundamentally change our view of consumers. In the ages of shareholder value capitalism and customer-driven capitalism, consumers were buyers of a product or service. This changes rapidly with smart devices. Increasingly, consumers will be users of services, not one-time consumers of products. Or as Zhang Ruimin told us: "Customers are just one-time buyers. We want to turn one-time buyers into long-life users."

The introduction of smart technologies will lead to at least two changes in how firms interact with consumers. And these will affect how organizations structure themselves in an age of community capitalism.

First, firms will handle massive amounts of consumer data. This will increase the complexity they must deal with. Second, consumers will be long-life users rather than one-time buyers.

These changes mean it will not be enough for firms to structure themselves solely around teams (or microenterprises) focused on a product or service. There will be more need for teams in the same area to collaborate with other stakeholders – to deliver the best "experiences" to the client. To encourage this, teams will form communities, or ecosystems, with relevant stakeholders to perfect collaborative effort.

Over the years we have seen a few approaches to this community approach. First, Haier's EMC model. As noted, implementing a free internal market mechanism via a network of teams can be counterproductive. Haier realized that, to maximize the performance of the entire firm, and therefore add value for users, it had to introduce incentives for collaboration between microenterprises. And it needed an incentive to do this without jeopardizing the healthy competition between them.

Haier solved this by introducing the EMC Model. In the past, all 4000+ microenterprises in Haier could deliver products/services in isolation. Now, with smart technologies, they need to collaborate with other microenterprises. For example, in the smart kitchen scenario, they need to deliver the best experience to users. All microenterprises in the same area will form an EMC and will align collective goals to satisfy common end-users as best they can. This creates a strong incentive to collaborate and receive collective incentives as a result. There are even EMC contracts signed, tied to the performance of the microcommunity.

Second, Buurtzorg's "Onion Model." Buurtzorg is structured around 1,000+ small, self-organizing teams to deliver home nursing care all over the Netherlands. These teams operate with high autonomy in their dedicated region. They are deeply rooted in local communities. They use the Onion Model to leverage all resources available to serve their local clients as best they can. This means nurses in Buurtzorg try to leverage all formal sources (e.g. other Buurtzorg teams, hospitals, GPs), and informal ones (e.g. family, friends, neighbours, communities, and networks), to provide clients with the best possible care.

As Alieke van Dijken, a Buurtzorg nurse, explains: "Maybe this is not what you might think nurses do. You might think home nurses are only occupied with tasks like treating wounds and so on. You might not directly link them to tasks like chatting with a neighbour about concerns you might have, like having a cup of coffee with friends and family of their clients. But at Buurtzorg that is exactly what the nurses do." In fact, at Buurtzorg it is important to leverage and strengthen the community around the client, so the need for formal care can be reduced.

Van Dijken says: "Though the system is not constructed to pay for all this preventive care, we choose to do that, and the figures prove there are less admissions to hospital, more happy nurses and more happy clients. It's all about relationships. If you focus on this, and you create an organization focused on relationships, and everything supports this – well, everyone gets happy, everyone gets motivated, and you get good results."

Last, consider the NER model of Bilbao's NER Group. NER stands for the Spanish *Nuevo Estilo de Relaciones* – roughly translated as "New Style Relationships." The NER group is structured around 20+ companies that voluntarily form a "community of businesses" in and around the Basque country. The group has members across industries as diverse as engineering, manufacturing, law, cybersecurity, and education.

The businesses in the community operate as autonomous companies. But the key to their success lies in the awareness of the group to leverage each other's strengths when needed. They even share and relocate staff when others in the community are in need. This implies a solidarity agreement between the companies to voluntarily relocate staff to other firms in the group for the time the crisis lasts, and to guarantee job security for staff. More than 100 such relocations have already taken place. The result? No one has ever been fired from the NER Group for economic reasons. This is remarkable for a group of companies in a region plagued by economic hardship and high unemployment.

Moreover, companies in the NER Group have a strong social commitment to their own staff and the community. The group has a fund to help staff who find themselves in critical economic situations. The group even founded a bank to provide favourable mortgages to staff. Furthermore, firms in the community donate 2.5 percent of profits, and 2 percent of staff time, to community projects. Over 15 years they have developed 150+ initiatives with partners to develop and strengthen local communities: from education programmes to the production, distribution and commercialization of organic food. So, the people from NER not only take care of themselves, and other business in their community, but also the region in which they are firmly rooted.

Organizational models are becoming a blend between the network of teams structure and the community approach. In an age of community capitalism, monetary rewards for staff should no longer be tied only to the performance of their team or microenterprise. In fact, incentives in the age of community capitalism should also account for the value a team brings to the wider community.

The monetary rewards of staff at Haier, for example, are based partly on the performance of their own microenterprise, and partly on the performance of all the microcommunities they are part of. Indeed, EMC contracts between microenterprises make sure these incentives are tied to the performance of the microcommunity. These encourage in-community prioritization.

Ulukaya of Chobani also talks about the rebirth of the local community when they revived the Kraft factory. For every person Chobani hired, 10 local jobs were created, he says. The town came back to life. From the first money the factory made, Chobani built baseball fields for local children. Five years later, Chobani became the number one Greek yogurt brand in America. "Businesses should take care of their employees first," Ulukaya insists. "If you

are right with your people, if you are right with your community, if you are right with your product, you will be more profitable, you will be more innovative, you will have more passionate people working for you, and a community that supports you."

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Project-based ecosystems

Antonio Nieto-Rodriguez

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7th February 2014, 20:14, Fisht Olympic Stadium, Sochi, Russia: 2.1 billion people are watching Vladislav Tretiak, an all star ice hockey player, taking the Olympic flame from Maria Sharapova, and lighting the Olympic torch at the newly built stadium. The 2014 Winter Olympics Games are officially open. The state-of-the-art stadium is jam-packed with 40,000 sports enthusiasts. Sochi was selected as the host city in July 2007, during the 119th IOC Session held in Guatemala City. After seven years of work, Sochi is the capital of the world for the coming weeks.

Records have already been set. The stats are eye-watering:[54]

- Total budget: $2.5 billion
- Over 400 projects delivered with more than 28,000 milestones
- Nearly 9,500 purchase orders placed with contractors/suppliers
- More than 50,000 employees, volunteers and contractors
- 2,859 athletes from 87 countries
- 5,000 artists from 70 Russian regions
- 14 new modern venues (including 10 sport venues) and infrastructure built from scratch featuring a barrier-free environment for people with physical disabilities
- formation of a volunteer movement in Russia.

The Summer and Winter Olympic Games are among the largest transient ecosystems. Right after the hosting city is selected by the powerful International Olympic Committee, a colossal international multiskilled temporary and agile ecosystem is set up for the next seven years.

The Olympics is a project-based ecosystem. There are many others – think of putting a man on the moon in 1969, the creation of the double-deck Airbus A380, the introduction of the euro in 2001, and the rescue of the Chilean miners in 2010.

In this chapter we will explore the concept of mega projects as transient ecosystems, the benefits of these and how any organization can establish one. But before that, I will briefly set the context of what I call the Project Economy.

The rise of the project economy

We all have heard about the disruptions that are impacting our society and the business world: robotics, artificial intelligence, shared economy, blockchain, big data, and so on. But, there is one extreme disruption affecting our world that the media and academia have completely missed. For over 100 years, organizations have been run and structured in a very similar hierarchical way with power, budgets, and resources divided between departments, the so-called "silos." Management and management theory was focused on how to run and optimize the business in the most efficient way. Projects were an addition, but hardly ever a priority.

Today, due to the speed of change witnessed in the past decade, this model has become obsolete. The day-to-day running of a business will soon be carried out through automation and robots – and is already done so in many instances. Projects have become the essential part of any organization.

The quiet emergence of projects as an economic engine has been powerfully disruptive. Projects have become the essential model for delivering change and creating value. In Germany, for example, approximately 40 percent of the revenue generated by the nation's companies can be attributed to projects.

McKinsey estimates that the world needs to spend about $57 trillion on infrastructure projects by 2030 to enable the anticipated levels of GDP growth globally.[55] Of that, about two-thirds will be required in developing markets, where there are rising middle classes, population growth, urbanization, and increased economic growth. These countries need infrastructure, but all too often many years will pass and the promised road, bridge, and metro projects still will not have materialized. Most of this $57 trillion will be spent and delivered as mega projects.

In most circumstances, a mega project can be seen as a temporary ecosystem: a composition of individuals, departments, organizations, companies, contractors, vendors, etc., that work together towards a common objective. Learning from each other, understanding the purpose of the project, working on the technical details, and finding solutions requires a steep learning curve and an ecosystem that holds all the knowledge together.

But let's look at the definitions.

Project-based ecosystems. The concept of business ecosystems is not new, it has been a model embedded in our economic history. The large fairs in many medieval cities at which merchants came together and exchanged goods for a given period of time each year could be regarded as early forms of ecosystems. However, it is only in the past decade that the term "ecosystem" has established itself in the business world.

Traditional views on ecosystems refer to established and permanent bonds between companies and industries. In most instances, this model is only accessible to large corporations who decide to establish an ecosystem that they largely or completely own most of the control of and in which they choose the partners.

But how about the small and medium enterprises, or the less glamorous corporations, or the temporary endeavours that our society needs to keep developing? How can they benefit from the positive aspects of ecosystems despite their size, resources, or brand limitations?

My proposal to them is to consider establishing a joint project. A project is a proven method of bringing ideas into reality. It has a purpose, aiming at solving a problem or creating something new. It is unique by nature – even if it has been done before, some elements will be different. A project requires a team of mixed skills and expertise and demands a project leader to drive the team. It is constrained by time (has an end date or finish line), budget (funds and resources), and design (ambition and quality). A project must address – often through intensive communication – individual, collective, and cultural behaviours (stakeholders).

According to BCG, a business ecosystem is a dynamic group of largely independent economic players that create products or services that together constitute a coherent solution, which applies precisely to large projects.[56] A business ecosystem has the following four characteristics, which can be validated from a project perspective:

Modularity. In contrast to vertically integrated models or hierarchical supply chains, in business ecosystems the components of the offering are designed independently yet function as an integrated whole. In many cases, the customer can choose from the components and/or how they are combined.

Projects have very little hierarchy – mostly two to three levels – which allows for quicker decision-making. They are composed of modules and phases which can be easily moved around according to the needs of the project and/or management.

Customization. In contrast to an open-market model, the contributions of the ecosystem participants tend to be customized to the ecosystem and made mutually compatible. This implies that participation in the ecosystem requires some ecosystem-specific investments.

Projects focus and build the implementation plans on the needs of the end customers; everyone working on that initiative will dedicate resources and competencies to addressing those needs.

Multilateralism. In contrast to open-market models, ecosystems consist of a set of relationships that are not decomposable to an aggregation of bilateral interactions. This means that a successful contract between A and B (such as phone maker and app developer) can be undermined by the failure of the contract between A and C (phone maker and telecom provider).

As we saw in the example of the Sochi Olympics, in a mega project there can be hundreds, or even thousands of partners involved. There is no room for individualism, people have to work together towards the common goal of the project.

Coordination. In contrast to vertically integrated models or supply chains, business ecosystems are not fully hierarchically controlled, but there is some mechanism of coordination – for example, through standards, rules, or processes – beyond a simple open-market mechanism.

Projects span years and decades – but there is always an end; they involve hundreds of companies – private, public, and non-profit – engaging thousands of individuals and often millions of individuals are impacted. Clear governance and coordination is the essence of projects and project management.

The benefits of projects as transient ecosystems

Besides the three main benefits of ecosystems – access to a broad range of capabilities, the ability to scale quickly, and flexibility and resilience – projects bring additional ones:

Common purpose and a clear deadline – increases focus and pressure. First, projects need to have a purpose shared by all the parties involved. In the case of the Olympic Games, for example, it is usually around demonstrating to the world that one's city can host the greatest games ever. The purpose is shared, understood, and endorsed by most of the stakeholders. In addition, projects need a clear deadline, which will help increase the focus and the pressure to deliver on time There is no room for dragging on forever.

Cheaper to access – anyone that shares the purpose adds value. Project-based ecosystems are cheaper to access, and don't require huge investment of capital or resources. As long as your organization can add value to the project and share the purpose, it is easy to start contributing.

More equal – doesn't need to have a big corporation behind it.

Project-based ecosystems don't need a big corporation behind them that drives the project. They are more equal. A project can be led by a small entity, or a joint consortium of small or medium size companies.

Easier to build trust – it's easier to build trust in project-based ecosystems when the purpose is clear and shared, the benefits have been defined, and the contribution of each party has been defined.

Organizational learning is essential – one of the success factors of projects, and mega projects in particular, is learning and competencies building. The establishment of an efficient learning ecosystem is essential for the success of these gigantic projects.

Project Canvas for project-based ecosystems

The Project Canvas is a well-known framework based on research carried out on hundreds of successful and failed projects ranging from small individual to large-scale ones, and it can also be applied to transient ecosystems.

The framework can be used by leaders and organizations at the beginning of a project-based ecosystem to assess how well it has been defined and whether it is worth starting right away or needs further refinement. It is composed of 14 dimensions grouped into four major domains:

Rationale & Business Case "Why" are we doing the project? What are the expected benefits?	**Executive Sponsor** Who is accountable for the successof the project?	**Governance** Who is responsible for what?
Purpose & Passion Is the project inspirational?		
Scope What will the project produce and deliver?	**Risk Management** Have the key risks been identified? Do we have a plan B?	**Human Resources** What skills do we need? How are we going to keep the team motivated?
Time When will the project be completed?		
Cost How much will the project cost? How many resources (int/ext) do we need to dedicate?	**Procurement** How are we going to manage the external contributors?	**Stakeholders** Are key and impacted parties supporting the project?
Quality How to we ensure the outcome will meet the quality standards?		**Change Management** How are we going to engage the stakeholders and remove barriers to change?
Project driven Has our organization and culture adapted to succeed in a project driven world?		

Why Who What, How & When When

Domain 1: Why

The Why dimension covers the triggers and actual meaning of an ecosystem (the rationale and business case, and the purpose and passion), which will become the drivers once the project gets underway.

Rationale and business case: All ecosystems demand that projects always have a well-defined business case. Experience shows, however, that business cases have biases and subjective assumptions, especially concerning the financial benefits from the ecosystems, which often get inflated in order to make the endeavour seem more attractive to decision-makers. The business case has to be complemented with a clear purpose.

Purpose and passion: Besides having a rationale, a project should be linked to a higher purpose. Jim Collins and Jerry Poras, authors of *Built to Last: Successful Habits of Visionary Companies*, provide a useful definition of "purpose," which we can adapt as follows: "An ecosystem's purpose is its fundamental reason for being. An effective purpose reflects the importance people attach to the project's work – it taps their idealistic motivations – and gets at the deeper reasons for a project's existence beyond just making money."

Domain 2: Who

The Who domain relates to the executive sponsor and governance, and it addresses the elements of accountability and allocation of responsibilities.

Executive sponsor: Many ecosystems start without it being decided who is ultimately accountable for their successful delivery. As project-based ecosystems tend to have several leading executives involved, they are often prone to "shared accountability and collective sponsorship." As a result, many executives feel responsible, yet no one is really accountable for driving the project to completion.

Governance: The executive sponsor, together with the project coordinator, should define and establish the ecosystem governance. The governance in a project is represented by a project chart in which the various contributing roles and decision-making bodies are defined.

Domain 3: What, How & When

The What, How & When domain covers the fundamental elements that constitute the project-based ecosystem. They can be split into technical areas and people-related elements.

Scope: Understanding and agreeing what the ecosystem will consist of and deliver – the scope – is one of the *raisons d'être* of projects. Other terms for scope include specifications, detailed requirements, design, and functionality. The scope is the most important element in making an accurate estimation of the cost, duration, plan, and benefits of the project-based ecosystem.

Time: Time is one of the major characteristics of project-based ecosystems in that, unless there is an articulated, compelling, official, and publicly announced deadline, there is a good chance that the project will be delivered later than originally planned. Delays in projects mean, besides extra costs, a loss of benefits and expected revenues, both having a tremendous negative impact on the business case of the initiative.

Cost: Budget in project-based ecosystems is composed mostly of the time dedicated by the project resources. These mainly include the people working on the project plus all other investments (consultants, material, software, hardware, etc.) required to develop the scope of the project.

Quality: Ensuring that the outcome of the project-based ecosystem meets the quality expectations is an integral part of projects, yet it is often overlooked or not a priority. Often teams focus on doing the work and leave the quality and testing part to the end of the project, when adjustments are most expensive.

Risk Management: Risk management is one of the most important techniques in project-based ecosystems. Bluntly, if a project fails, it is because the risks that caused the failure were either not identified or not mitigated on time by the project team.

Procurement: Project-based ecosystems require resources, input, and material from hundreds of different parties. Establishing and respecting procurement processes is essential to the success of these kinds of projects.

Human Resources: Project-based ecosystems require pulling and leading resources across different organizations often across different regions. It is critical to create high performing teams, where everyone has a role to contribute and is recognized for that.

Stakeholders: Project-based ecosystems have hundreds of stakeholders, who are individuals and groups (entities, organizations, etc.) that are impacted by, or who impact, the project. The more stakeholders, the more efforts required in terms of communication and change management activities.

Change Management: Aim to communicate what needs to be done clearly and accurately, ensuring that everyone involved is ready to embrace the changes introduced by the project-based ecosystem.

Domain 4: Where

The Where domain covers the external elements that can have a positive or negative impact on the ecosystem.

Project-Driven Organization: It is important the project-based ecosystem is a priority for the environment for which it will be implemented. For example, the Olympic Games is a top priority for the country and government that hosts it. This priority allows the allocation of sufficient resources, competencies, and attention that leads to the success of the project.

If we look at projects and mega projects as agile ecosystems, and learn from them, we will understand that there is a new way of improving the efficiency and impact of this model.

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FOOTNOTES:

54 Innovative application of project management methodologies on Sochi 2014, Russia's first ever Olympic and Paralympic Winter Games, PwC Case Study.

55 https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/megaprojects-the-good-the-bad-and-the-better

56 https://www.bcg.com/publications/2019/do-you-need-business-ecosystem.aspx

Gorillas can dance: partnering effectively with innovative small firms in ecosystems

Shameen Prashantham

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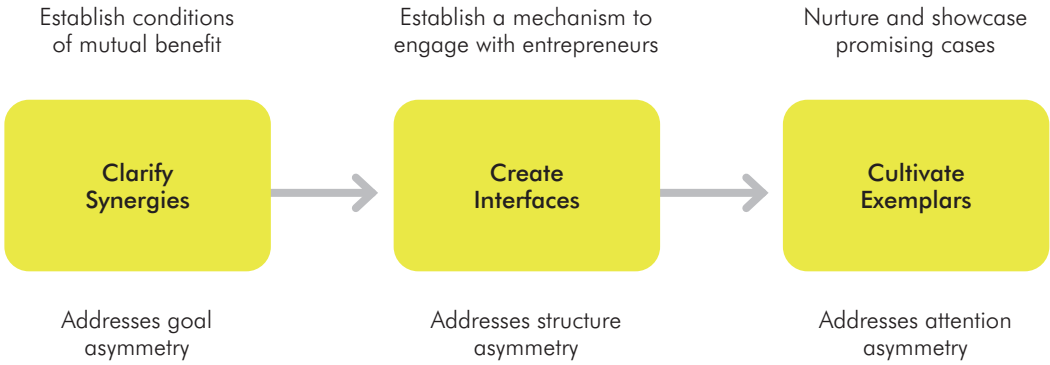
Over a decade ago, I wrote an article titled "Dancing with gorillas" with Julian Birkinshaw about how small firms, in particular startups, could partner effectively with large corporations. We recognized that this required a combination of optimism and realism – after all, small firms can get trampled by gorillas. In the years since then, it would appear that more and more large corporations are taking seriously the prospect of incorporating small companies as participants in their ecosystems. Gorillas – some of them at least – appear to have been learning to dance.

However, despite the rise of corporation-start-up partnering, there are many, on both sides, that continue to find this *difficult* to pull off. There is dissatisfaction with the process and outcomes of partnering with each other. On the face of it, the combination of large corporations' resources, legitimacy and scale, and startups' agility, creativity and novel ideas, should be a match made in heaven. However, there is a paradox that makes it desirable yet difficult for large corporations and small startups to work together: *the very differences that make it attractive for these companies to work together also result in barriers to collaboration*.

The crux of the problem is the sheer asymmetry between large corporations and startups. First, there is *goal asymmetry*. Large corporations and startups typically have differing planning horizons; large corporations are typically slower in decision-making and build on capabilities that gave them their past successes whereas startups make rapid decisions in order to survive and develop new capabilities. Second, there is *structure asymmetry*. Corporations are normally rigid and organized in silos whereas startups tend to be flat and more multifunctional. Third, large corporations and startups face an *attention asymmetry* in that corporate managers are not sure how to allocate their scarce managerial attention to startups – which ones are reliable enough to work with and which aren't? For their part, start-up entrepreneurs struggle to attract the attention of the relevant managers within a large corporation.

Having studied a range of initiatives, my research suggests that there are three critically important partnering practices – which are common elements across multiple initiatives I have studied – in the partnering process, which lead to mutually beneficial outcomes for both parties.



1. Clarify synergies

Clarifying synergies is about specifying the nature of the win-win. The term "win-win" is bandied about all the time – but upon closer scrutiny, it oftentimes turns out to be a vague notion. Having clarity about what can be (potentially) accomplished between corporations and startups helps to crystallize what a "win-win" collaboration might look like in practice. Synergy stems from complementarity between the partners. There are two types of synergy, broadly speaking: *building block- and pain point*-based synergies.

Building block-based synergy. The rationale of the building block is relatively straightforward: when other companies build their technological products on its building blocks, the company providing the building blocks gains revenue every time the other company's product is sold. Large IT corporations that started engaging seriously with *software-related startups* had a straightforward agenda – to "evangelize" the adoption of their platform technologies. In the past decade, there has been a growing focus on startups as a distinct constituent of that community – to be wooed to become users of the corporation's building blocks. That is, every time a software product license of the partner company is sold, a license for the underlying technology is bundled with it. While this has been a well-worn strategy for companies like Microsoft – now updated for cloud-based technologies like

Azure – who have long developed relationships with independent software vendors (ISVs) that build technology offerings on top of its own technological building blocks, for some others it's more recent. When SAP launched its HANA platform technology, this represented a considerable departure in strategy for the company that was famed for serving Fortune 500 companies with its ERP technology. The HANA platform made it imperative for SAP to attract ISVs to work with it – and this included startups. Other technology companies, such as Intel, have also promoted building blocks such as the so-called Ninja Developer Platform based on the Intel Xeon Phi Processor that other companies, including startups, could utilize in developing their own solutions in areas such as the Internet of Things.

Pain point-based synergy. By contrast, another form of synergy could be that the start-up essentially solves the *pain points* of the large corporation, notably in the digital realm. These pain points might pertain to the here and now – for instance, when Unilever works with a digital start-up to develop a solution that gives customers recipe ideas that use its Knorr brand of food products. Or, these may relate to the next horizon of offerings that a company is working on – as in the case of BMW working with startups that have expertise in cybersecurity or autonomous driving technologies. What is common to both examples is the impact of digital disruption. Automotive companies are seeing massive disruption in their industry with the rise of connectivity, autonomy, sharing behaviours, and electrification. Fast-moving consumer goods (FMCG) companies have identified several opportunities to engage with consumers in more direct ways than was possible before, through the use of digital technologies. Banking is another industry experiencing serious digital disruption. A whole range of pain points have emerged including how to deal with online payments in the face of disruption from fintech startups. Healthcare is yet another industry that is recognizing considerable opportunities and challenges as people increasingly rely on the Internet and their mobile phones to access goods and services. Healthcare companies see an opportunity to diagnose, monitor, and treat patients using digital technologies.

While currently there is a noticeable industry-based distinction in terms of the synergy sought – building blocks for IT corporations and pain points for traditional (non-IT) ones – it is likely that this distinction will blur over time as *all* firms become software companies – as Microsoft CEO Satya Nadella puts it – in a world marked by digital transformation, and IT companies also work increasingly with startups to solve their own pain points in emergent niche areas of expertise.

2. Create interfaces

Establishing a synergy is only the starting point. There also has to be greater accessibility to the corporation. In the past, it was not uncommon to come across startups running from pillar to post in a bid to find the right unit within a corporation to engage with and, within it, the right individual. Part of the reason was that even managers within large corporations often don't know a great deal about what is happening in other parts of the corporation – it's just the way things are. (I have lost count of the number of times I have ended up educating corporate managers, during field interviews, about initiatives in other parts of their own organization.)

To their credit, however, many corporations have by now put in place various types of interfaces. Broadly, they fall into two categories:

- *Cohorts* in which startups are typically colocated and have peer interactions
- *Funnels* in which startups are progressively screened out in a series of stage-gates; typically, the startups have no awareness of or interaction with other startups taking part in the same process.

Cohort-based interface. In a cohort, a set of startups participates in a programmatic initiative, such as an accelerator, over a prespecified period, usually a few months. In the accelerator format, around 8–12 startups are brought together as a colocated batch for a 3–6 month period and receive inputs based on a curriculum, and internal and external networking and mentoring opportunities, culminating with a demo day when startups pitch to prospective investors/partners and "graduate." Peer engagement among the startups is often a key part of the process. While gaining entry into a cohort may be competitive, once in, participating startups generally complete the process. Cohorts may help corporations pursue either synergy. As an example of a *building block cohort*, Microsoft Accelerators – now subsumed within the broader Microsoft for Startups programme, and informally referred to as "Scalerators" – have been introduced in multiple locations such as Bangalore, Beijing, Berlin, London, Paris, Seattle, Shanghai, and Tel Aviv. Cohorts of about a dozen or so startups enter the accelerators for four-month periods during which time they work through a curriculum of entrepreneurship input, discuss their plans with mentors, and interact with the corporation's managers. An example of a *pain point cohort*, is Bayer's Grants4Apps – now simply the G4A – programme to engage with digital startups developing healthcare-related technologies. Every year a small cohort of startups is invited to Berlin to spend 100 days at the G4A team's facilities. Over the past three years this has included startups from South Korea, Russia, and Ghana. SwissRe's

InsurTech accelerator, launched first in Bangalore, is another example.

Funnel-based interface. By contrast, in a funnel, many fewer startups complete the process than begin it. Startups get screened out as the process unfolds, often not being aware of other startups that are participating. A funnel essentially has a built-in contest for a limited set of collaborative opportunities between startups and a corporation with little or no co-mingling among the contestants, often culminating in a pilot project or go-to-market activity. An example of a *building block funnel* is SAP's Startup Focus, which was established to work with promising startups developing new applications on the corporation's HANA platform and to help accelerate their market traction with its enterprise customers. It was led by a SAP Vice President in Palo Alto, California. Selected startups (15 percent) would be provided with technical assistance to build enterprise-centric solutions, with a further subset that successfully validated their solutions then receiving go-to-market support. The BMW Startup Garage is an example of a *pain point funnel*. This programme offers startups the opportunity to work with it as a "venture client" on an innovation project after screening them for technical quality, strategic fit, and the potential to become a market leader through a stage-gate process. A small set of startups then ends up working as a supplier to BMW on a specified project. Also operating as a pain point funnel is Unilever's Foundry programme, which provides a way for that company's brand managers to post requests that digital startups can then pitch for. For instance, a pain point was experienced by Knorr's South Africa brand manager who sought a mobile digital solution that would give customers recipe ideas for using Knorr products – a pain point that was eventually solved by the start-up that successfully pitched its solution through Unilever Foundry.

Although neither interface is inherently superior, they are qualitatively distinctive. While both interfaces can be beneficial they have differing strengths: funnels help increase the predictability of achieving desirable outcomes whereas cohorts create the possibility of serendipity or unanticipated outcomes. That is, funnels can be especially effective at delivering tangible outcomes based on perceived pain points because of the process of elimination leading to joint activity with a start-up that is tightly aligned with the corporation's agenda. By contrast, while cohorts have the advantage of being able to, potentially, give rise to previously unconsidered opportunities through brainstorming, peer learning, and experimentation, the odds of serendipity may be increased. Thus one factor in choosing between a cohort and funnel might be how diffuse or specific the underlying partnering goals are. Also, hybrid interfaces may evolve – for instance, an accelerator programme (cohort) may add a grand channel competition for participants in parallel (funnel) or a competitive process (funnel) may incorporate elements of a cohort, such as a weekend bootcamp.

By providing startups with a clearly identifiable first port of call – for instance, programmatic initiatives such as Unilever Foundry or BMW Startup Garage that are run by a designated team – corporations help save both parties a lot of time and energy in establishing initial contact.

3. Cultivate exemplars

One of the consistent features I have noticed during my research is how corporations that take start-up partnering seriously have nurtured – and then talked about at great length – success stories. What is the rationale for corporations showcasing (early) success stories vis-à-vis start-up partnering? There are at least two important aspects to this: cultivating success stories shows that the partnering process works, and can help win over both external and internal audiences. Corporates get a better idea of what type of start-up to be allocating their scarce managerial attention to, while startups get a better idea of which gorillas are looking for what they are best-placed to offer and, with respect to those corporations, how to gain corporate managers' attention better by positioning themselves as potential partners in line with previous exemplars.

External validation. Showcasing success stories can be beneficial in attracting more high-quality startups – it is the equivalent of a business school showcasing its successful alumni in a bid to attract (new) high-quality applicants. The ability to show a clear success story is useful in that corporations are competing with each other to attract startups to work with them – seeing what others have achieved can motivate startups to gravitate towards a particular corporation. A prominent example of a start-up that benefited tremendously from a corporate accelerator is Sphero, which worked closely with Disney. Sphero wanted to learn how to build a portfolio of products while Disney was interested in the start-up's spherical robotics expertise – and the speed with which it could operate. The result: the now iconic BB-8 droid featured in the blockbuster, *Star Wars: The Force Awakens*. BB-8 merchandising was sold out within two weeks, and 14 factories were needed to cope with the demand. The value of showcasing exemplars to the start-up ecosystem is especially useful for corporations that are new to the game, and are still seeking to establish their "street cred" as a partner to startups. Some corporations – especially very traditional ones not associated with entrepreneurship – may have to work hard, initially, to impress upon startups their genuine intent to foster collaboration.

Internal validation. Also, perhaps more importantly, it can help persuade internal audiences that are sceptical about the benefits of engaging with external startups. Indeed, at present, the imperative for showcasing exemplars has probably more to do with impressing internal audiences in a large corporation, in particular persuading sceptical BU managers of the utility of partnering with startups. When BU leaders witness what's possible through corporation-start-up collaboration they are more likely to be open to this possibility. An exemplar can be useful fodder for managers operating within designated start-up interfaces to persuade their colleagues with P&L responsibilities – and thus the budgets to work with startups on an area of mutual interest – to give this a try. Moreover, a major pressure that managers at the interface between startups and the wider corporation face is to show a reasonable return on investment (ROI) on the start-up partnering activities. Achieving this is inherently tricky. One way to deal with this challenge is to be able showcase big success stories.

In either case – signaling interest in external startups or convincing internal managers – showcasing successful start-up partners is something that corporations need to become skilled at. Successful case studies may be featured in media reports, corporate newsletters, YouTube channels, industry event keynotes, and presentations to top executives of the corporation. As it becomes increasingly apparent that win-win partnerships are genuinely plausible, scepticism on both sides will begin to fade away.

The bigger picture: need for a collaborative mindset in ecosystems

The broader lesson here is about developing a collaborative mindset within ecosystems. Common to all of the companies I've studied that have taken start-up partnering seriously is a *collaborative mindset*. When a company is oriented towards collaboration then it is likely to seek ways to overcome asymmetries with startups rather than walk away from the exciting but challenging prospect of partnering with these very different organizations.

Managers with a collaborative mindset do three important things: they leverage networks actively, discerningly, and reflectively.

Leveraging networks *actively* means that they take the initiative to get connected with others. Managers who are proactive with respect to the network relationships are unlikely to be frightened away from engaging with startups on account of the asymmetries. Furthermore, leveraging networks *discerningly* indicates the ability to distinguish between the distinctive benefits that can be derived from different network partners. Notably, other entities that are different from us can potentially be a source of *novel* information, ideas and opportunities – but building trust can be hard work. Managers with a collaborative mindset recognize that it cannot be business as usual with startups

and understand the need for a distinctive partnering process with startups. Finally, leveraging networks *reflectively* is the recognition that learning through collaborators is incredibly important. As already noted, startups' novel innovations and business models can be a valuable source of learning for large corporations. Conversely, the small companies can learn how to standardize and professionalize their operations from large firms.

Of course, in the end, partnering with startups and small companies isn't necessarily for everyone, and it isn't a panacea for all of the innovation needs of large corporations. However, what is becoming equally clear is that in a world of digital disruption, corporate executives ignore the prospect of engaging with startups at their peril. Doing so requires a lot of hard work to avoid the trap of accomplishing little other than theatre innovation – and for those who can pull it off, a rewarding journey awaits.

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This chapter is based on case-based research spanning over a decade across a range of geographic locations, both advanced and emerging economies, including China, Germany, India, Israel, Kenya, South Africa, UK, and the US. An important company that I have studied in terms of start-up partnering since 2004 across multiple locations is Microsoft. Other companies that have been studied over the years include Bayer, BMW, IBM, Intel, Infiniti (Nissan), SAP, SwissRe, Unilever, and Walmart. Furthermore, I have interviewed key people in leading organizations that help to bridge corporations and startups such as Plug and Play and Techstars, as well as boutique consultancies in corporate innovation founded by individuals who had previously headed up start-up engagement in leading corporations. In total, I have conducted over 250 interviews.

Managing the excess of ecosystems

Alf Rehn

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In 2013, game developers Ziba Scott and Alex Schwartz set out to create a very bad game. This might seem an odd thing to want to do and has to be understood in context. Both were frustrated with the ecosystem for games, where masses of sub-par games often crowd out good independent games, such as the one they'd been trying to create. Lacking the funds to do a premium game and market the same, they took part in a hack event and set out to create a terrible game quickly. In fact, their plan was not to create just one bad game, but lots of them – in an automated fashion. They went to an asset store for game developers, bought a functioning slot machine game template for 15 dollars (!), and started customizing it.

Each new, free (ad-sponsored) slot machine they put on the Google Play store had a theme, even a theme song, yet almost the entire process was automated. The enterprising game developers had created scripts that could take a theme based on a word (such as "cantaloupe") and put in relevant images (automatically scraped from Bing), some text into an about page, and a jingle with the theme word spoken by a robot voice. The scripts could also upload 15 of these generated slot machine games a day to the app store (as this was the limit in place at the time). All the developers had to do was pick a word, such as "ponytail," and their automated system would create a slot machine with ponytail images, a little ponytail jingle, and an about page with text about ponytails. Granted, the games were awful, but that was pretty much the point.

This peculiar little experiment, which Scott and Schwartz stopped supporting in March 2017, generated more than 1500 games, with a total of 1.6 million downloads. It also generated a modest but fully automated income stream (a small trickle of which is still being generated) for the two developers. It may have started out as something akin to a joke or performance art, but it ended up highlighting both the power of and the problem with ecosystems. An ecosystem can make the impossible possible, like making money from utterly terrible "games." An ecosystem can also be a space with tremendous amounts of waste and garbage. Learning to balance these tendencies, innate to the notion of an ecosystem, is key to successfully managing the same.

The key issue here is one of excess. Ecosystems, be they in nature or in mobile phone games, cannot exist without a certain amount of waste and excess. A good app store has lots of variety, and many apps that would be of little interest to but a very few customers. A natural ecosystem requires a degree of decay and surplus to feed the system. Another way to put this is to say that without enough diversity, any ecosystem will wither and die. We don't tend to talk about this as excess, but technically that is exactly what it is. An ecosystem becomes an ecosystem due to an abundance – of species, of suppliers, of slot machines – but stays an ecosystem only if this abundance stays in balance. As our peculiar little case shows, this means that ecosystems can be "hacked." In nature, this happens for instance if a non-native predator (or nasty virus) is introduced, one that the system isn't

prepared for. In the introductory case, something similar was achieved by leveraging weaknesses in the system. For leaders and managers, this means that the excess of ecosystems isn't just something to expect to be there, but a resource to be managed.

The excess problem in management thinking

In management thinking, we've adopted a mode of thinking that often strives to minimize excess. We have been taught to keep inventory low, to hire when needed, and to stay frugal when we can. We've been taught to fear overruns and despise padded budgets. This is problematic for a number of reasons. As seen in, for example, the case of the pandemic of 2020, and the aftermath thereof, keeping processes lean is good when things are rolling smoothly but can be disastrous if there's a shock to the system. Even though we've come to see them as a problem, buffers and backups can be critical in a system, even though they are a form of excess. Contingency plans are always useless until you desperately need them…

What this also has meant is that we have had problems developing cutting-edge thinking in fields where excess is absolutely critical. Take innovation, for instance. If you only invest in innovation projects that have a guaranteed, 100 percent rate of success, you will never innovate. Why? Because the very nature of innovation is such that you need to try out one hundred things to find one that might work. Without the "excess" of failed innovation projects, we would not have any successful ones. This, however, hasn't always meant that innovation thinkers have had much to say about the great number of ideas and projects that never come to fruition. They are accepted, if somewhat grudgingly, as the cost of doing business. Yet they are rarely theorized, except in the sense that one tries to find ways to salvage more of them or to learn when the right time to pivot from one experiment to another might be. In other words, even in a field that is dependent on excess, we try to lessen it rather than understand it.

The same goes double for ecosystems. The very notion of an ecosystem is that it is an interconnected, self-supporting system. As such, it is dependent on there being a surfeit of resources, the kind of surfeit where the failure of some leads to the success of both others and the system. Management thinking around ecosystems has, however, been slow to discuss how we are to think about this excess in the kind of systems we create ourselves. How can we encourage the good kind of excess, such as people trying out innovative new things, without falling into the trap of bad excess, such as people flooding a marketplace with sub-par offerings?

More is riding on this issue than one might think at first glance. Consider for instance an entrepreneurship ecosystem that actively encourages startups to create copycat offerings, rather than innovation. Such an ecosystem would see the establishment of many quite similar companies, fighting for their individual relevance in an often

over-served market, as has, for instance, been the case with e-scooter ride-sharing services. In Copenhagen, which certainly isn't the biggest of cities, some seven such companies at one point existed side-by-side. Did Copenhagen need this many? No. Did this glut make it difficult for anyone to succeed? Yes. You might say that this is something that the market will take care of over time (bankruptcy being a key form of economic excess management in entrepreneurship), but this ignores the biases existing within the ecosystem itself. Rather than supporting innovative companies, doing new things (which very well may have failed), the start-up ecosystem in at least this instance rewarded the wrong kind of excess.

Thinking smarter about excess in ecosystems

So, what is to be done? In short, we need to develop our thinking around excess, and start to think about balance rather than austerity, and quality rather than blind competition. This is not an easy thing to do, as it requires something more than the usual corporate tools and metrics. The kind of balance we're discussing here doesn't fit easy calculations of ROI, and it is difficult to put a KPI on the quality of your ecosystem's excess. That, however, doesn't mean that one cannot think in productive ways about these issues. In fact, one could argue that it is precisely the obsession with saving and austerity that has made such metrics the *lingua franca* of much of the corporate world. What thinking about excess requires is a kind of excessive thinking, the kind of thinking that goes beyond simple optimizations. This will at times demand that the person engaging in such (management) thinking follows the adage of F. Scott Fitzgerald, namely that "the test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function."

Thinking about balance and excess in ecosystems is precisely this – the balance of allowing whilst limiting. Here, remembering the natural roots of the notion of ecosystems can be quite helpful. Natural systems are the way they are because they have developed over very long periods of time, complete with feedback-loops that ensure self-regulation. Natural selection has led to there being a balance between predators and prey, and between all the interrelated systems. The genius here lies in the feedback-loops. Excessive growth in one category was countered with limiting measures in another, and an abundance in one resource attracted those who could utilize it effectively.

It should be noted, however, that such delicate balances were not established in a matter of months or years, or even decennia. True, balanced ecosystems can take centuries to establish themselves. For people who think about business ecosystems, this is of course an unfathomably long time. At the same time, it goes to show that a balanced ecosystem isn't something that you can just wish into being. Instead, it is something that requires curation and care.

The care and feeding of ecosystems

When thinking about a properly functioning ecosystem, there are at least three key issues that a leader must continuously consider:

1. Does the ecosystem contain enough excess to allow for "mutations"?
2. Is there a function in place to cull localized overdevelopment?
3. Is there a function in place to cure localized underdevelopment?

We shall in what follows go through each of these points separately, but they are presented together above to emphasize that these are elements that should be considered as one holistic issue – managing necessary excess in ecosystems.

Does the ecosystem contain enough excess to allow for "mutations"?

The power of ecosystems derives at least in part from the way in which they can generate novel solutions. Consider a start-up ecosystem. It is only because it allows for many experiments, most of which fail (and are thus a form of excess), that it can generate a few successful cases. In other words, for an ecosystem to be powerful, there needs to be room to fail and space to test things out. In nature, ecosystems developed out of ample resources (and as we humans tend to either consume or poison these, the ecosystems struggle), and in the start-up scene they developed out of the riches in, for example, Palo Alto. Attempts to create business ecosystems on a shoestring, in contexts where there was little room for failure and a continuous battle for scant resources, have similarly often failed. To manage an ecosystem, then, you need to ensure excess and ample resources, often for an uncomfortably long time. We might call this "feeding" the ecosystem, and the important thing to understand here is that this entails ensuring that some resources will be wasted in this process. Yes, wasted.

Is there a function in place to cull localized overdevelopment?

In issue 1, we had to ensure the existence of waste and excess in the system. However, such excess can create localized overdevelopment. In our introductory case, this meant that the ecosystem around Google Play allowed for some absolutely lousy slot machines to proliferate. Managing an ecosystem thus also means that while you are feeding the system with some excessive resources, you need to pay attention to this kind of "mushrooming" behaviour. In nature, this is often visible, but in more digital environments (which in contemporary business tends to

be *all* environments) this requires to pay attention not just to KPIs but to data-points all over the system. If you do not have processes in place to detect overdevelopment in one part, you are inviting people to hack your ecosystem.

Is there a function in place to cure localized underdevelopment?

Mushrooming isn't the only problem you have to worry about. In a natural ecosystem, we often think that the rule is "eat or be eaten." However, in a balanced system there needs to be space for everyone, and if one part shrivels and dies, that can cause cascading problems. Think about it, is the solution to lousy slot machine games to have no slot machine games? Of course not. There are people who enjoy them, and there might even be some who enjoy more obscure ones. Like ones about ponytails or cantaloupes. By creating a drought of such more marginal commodities, you may well be driving people away from the ecosystem you're there to build. So, the same attention that you pay to data that can indicate excessive growth you need to pay to dearth and lack of diversity. As difficult as it is, and as much wisdom as it requires, you need to be able to find just the right amount of excess, heeding the genius of Oscar Wilde – "Everything in moderation, including moderation."

The never-ending story

Ecosystems demand excess, yet excess can kill an ecosystem. This is the paradox the business leaders who wish to excel in a world of ecosystems need to deal with. There are no KPIs for just enough excess and balance in all things, yet these are critical for business success in the world of Ecosystems Inc. What leaders need to embrace in this strange, interconnected world is the paradox of both going all in with experiments and judiciously fertilizing and starving sectors as the data comes in.

Nature does ecosystems well, but nature can afford the endless deaths and the decay that comes with this. Business ecosystems can't, at least not at scale, so percipience and judiciousness have to be our new lodestars. We won't learn these without experience, though. We need to think and talk about excess, and learn when this tips over and when it feeds the system. All this will require a revolution of management thinking, which has for such a long time been staring blindly at efficiencies and prudence, to the point of becoming highly fragile to surprising external shocks. The next business world we build needs to be more resilient, more capable of self-regulation. Here ecosystems are a wonderful notion, if we can take in the fact that excess is neither our enemy nor our friend. It is a resource, just like so many others in an ecosystem, and it too needs to be managed. The leaders of the world of Ecosystems Inc. will be the ones who can master this most dynamic and most volatile of energies.

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A step-by-step approach to experiment with ecosystems

Gabriele Rosani & Elisa Farri

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In the earlier article, "Ecosystems: the how factor," we shared concrete, how-to guidelines to help executives design an ecosystem strategy that can be summarized in a simple one-page tool, the Ecosystem Canvas. Why a one-page tool? Because too often, in our consulting work, we have come across ambitious executives with bold strategy plans in which they aspire to become the Amazon, Google, or Netflix of their industry. Thick slide decks depict them at the center of hyper-complex ecosystems, spanning a multitude of sectors. Not surprisingly, most plans have vanished as soon as they are tested by reality. Delusions of grandeur associated with "can do it all and at once" thinking are a recipe for failure in building successful ecosystems.

Navigating the complexity – and uncertainty – of business ecosystems requires focus on the core starting point and a trial and error mindset to experiment, change modularly, and ruthlessly prioritize.

Design thinking and lean start-up theory have emphasized the importance of testing assumptions on Minimum Viable Products (MVP) when developing new product and business solutions.[57] Some of their principles can be extended to business ecosystems, but with caveats. In fact, experimenting with ecosystems is more complex than experimenting with products.

Who to target: When testing a new product, we engage with our target customers (B2C or B2B), while in the case of ecosystems we have to consider heterogeneous agents along a complex B2B2C chain playing different roles, interacting with one another, and making decisions that evolve over time. Moreover, in some circumstances, those agents are typically multilayered organizations with different decision-makers and influencers worth targeting.

The Nespresso system, built around Nestlé's single-use espresso capsule concept, illustrates the duality of experimentation targets. In addition to traditional customers (in this case, consumers of coffee pods), Nespresso initially explored potential coffee machine manufacturers, to ultimately decide which ones could have the permission to make Nespresso-compatible machines.

What to test: In the case of a new product or business solution, the test centers on its unique value proposition: from the benefits that it can bring to the customers, to the monetization approach. In the case of ecosystems, there are multiple value propositions to test, one for each main complementor; same for the potential partnering models and related value-sharing mechanisms.

A key step of Nespresso's experimentation journey was testing different value propositions and monetization strategies: from capsule sale price to machine producers' royalties. To create strong links among the various ecosystem actors and to make it complex for outsiders to break in, Nespresso defined a shared set of rules and standards for firms to make their products and services compatible.

Governance is another key element worth experimenting with. While for products rules and conditions are set by the firm that fully controls the offering, in the case of an ecosystem, there is a wide spectrum of governance mechanisms among the various actors. Apple is a case in point. It took years to learn how to best govern the long tail of app developers for the iPhone ecosystem.

Experimentation		**Products**	**Ecosystems**
Who to target	Actors	Customers	Customers, Complementors, Partners, Government/Regulators
	Type	B2C, B2B	B2B2C, B2G2C
What to test	Value & Monetization	Single value proposition	Multiple value propositions
		Pricing model	Partnering models, vlaue sharing schemes
	Governance	N.A.	Control rules/standards

Starting from our one-page ecosystem canvas tool (see page 36) and drawing on key principles of design thinking and lean start-up, we have developed a three-step approach to experiment with ecosystems that we have applied with our clients in both B2B and B2C sectors.

1. Spread your experimental eggs across several baskets: Do not limit to one canvas. Rather than putting all your bets on one ecosystem canvas, develop two or three ecosystem scenarios addressing a key market friction or customer pain-point. Detail the strategic options in separate ecosystem canvas tools. In the initial stages, it's important to focus on the big picture, rather than going into the details and pretending to complete all the boxes of each canvas tool. The main goal is to help you manage the risks you might encounter down the experimentation road, while providing guidance in terms of the most critical assumptions that if not tested might kill the related scenario early.

For a large German chemical company, we filled canvases for three different hypotheses of future ecosystems: the first aimed at solving supply chain frictions, the second at recommending suitable formulations for customers from multiple providers of chemical ingredients, the third at disintermediating the chain to reach the final consumers. All scenarios were driven by very relevant pain-points in the industry that only an ecosystem, not a single company alone, could solve.

2. Test key assumptions of your canvases: Make it real. For each canvas, list the key assumptions to test. Typically, key assumptions relate to the shared functionality and the few selected complementors representing the core of the ecosystem strategy. *Why focus on the core?* Because it allows you to move faster and more effectively: if the core proves unfeasible or unattractive, you can redirect your efforts to the other scenarios. During exploratory discussions with target stakeholders, the canvas can be a powerful tool to guide the discussion and collect input and feedback in a structured way. Other tools, such as situational mock-up videos can help interviewees better visualize the ecosystem strategy.

During the experimentation phase for our German client, we coupled in-depth customer interviews with half-day stakeholder workshops. To make the tests as real as possible, we showed a video with a lab technician interacting with an AI-powered device to search and order samples of ingredients based on very specific functional needs. The video proved effective both when talking with customers (Lab technicians) as well as with complementors (providers of other ingredients necessary for the formulation).

3. Capture learnings: Be ready to pivot several times. Most of the companies that today orchestrate successful ecosystems have been through (painful) experimentation journeys. Learning is a key element of every ecosystem experimentation. Run frequent internal review sessions on the key assumptions – at least every two or

three weeks. Do not wait for all experiments to be completed, especially when early signals show that some assumptions are not valid. Recently, one of our clients in the energy sector discovered that the underlying assumptions for two of the three ecosystems proved not valid: one was promptly stopped even before completing the cycle of interviews, while the most valuable elements of the second were partly embedded into the most promising third ecosystem. While some of your initial concepts are likely to be dropped due to unforeseeable concerns or objections, others might spin in unpredictable ways or may benefit from an acceleration because the partner is eager to take part.

Companies that applied this step-by step experimental approach had two main benefits. First, they escaped the trap of unrealistic grandeur: rather than investing a lot of time on picturing a full-fledged Amazon-like vision, executives could focus on a small set of clearly scoped scenarios and options built around a relevant friction or pain-point. Second, they learned how to make choices based on reality checks, without worrying about killing some of their initial ideas. Having other eggs spread across multiple baskets (i.e. canvases) allowed them to save time and money and find unexpected new paths.

Business ecosystems may have become the new buzzwords in strategy discussions. Many companies are fascinated about new growth strategies spanning sectors and try elaborating bold visions. But very few walk the talk and even fewer turn out to be successful. We believe that by taking an experimental approach, companies can lay more sound foundations for a future business ecosystem strategy that works for the bottom line.

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FOOTNOTES:

57 Gabriele Rosani, "How large companies can adapt lean thinking in research and development," *LSE Business Review*, https://blogs.lse.ac.uk/businessreview/2017/11/06/how-large-companies-can-adopt-lean-thinking-in-research-and-development/

From vertical to horizontal: unleashing change through ecosystems

Deborah Rowland

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In my *Still Moving: How to Lead Mindful Change*, I write of the changing context for change in today's world: the collapse of the vertical – the crumbling faith in our institutions, the establishment, and their leaders; the power of the ground – an increased trust in devolved, lateral networks (compelled by digital technology and social media); and a distracted and divided attention – not just the frightening lowering of our present-moment attention spans that mobile devices bring, but also the countervailing (to joined up globalism) geopolitical force towards nationalism, self-identity, and a reassertion of local rights and independence.

Since I wrote *Still Moving*, these two polarizing forces – towards joining up and dividing up – have been played out vividly in bold national disruptions such as Brexit, and global anthropological crises such as the COVID-19 pandemic. In the latter, we witness the contrasting approaches from the world's political leaders – reach out to others for a coordinated scientific and humanitarian response to the virus, or do one's own thing, even projecting blame on to "the other." How to know which is the more appropriate response, eco-system or ego-system?

Pioneering research with my colleagues over the past two decades into the nature of high magnitude change and its leadership, has thrown up a repeated finding: in contexts of high complexity, uncertainty and volatility, an ecosystem approach to change is the one most strongly correlated with success – and indeed can result in greater speed and agility. In this article, I will set out some key parameters for this change approach.

But first, the story of how I became an advocate.

The nature of leading change through ecosystems

I have spent my life fascinated by systems, especially human ones. While studying anthropology at university my emerging mind was influenced by the ecology of culture – how early human societies and their beliefs and traditions were shaped by their natural environment (the weather, geography, their interaction with the living world of plants and animals), and how those shifted over time through the growth of interconnected networks and increasingly complex "civilisation."

In the late 1990s, now a change consultant advising a large multinational energy company, I was drawn to the "living systems" approach to organizational change championed by the likes of Peter Senge, Joseph Jaworski, and Meg Wheatley – an approach that invited us to see our human institutions less as programmable machines and more as complex adaptive systems, interacting in dynamic ways both within and without their environments. Peter Senge had the metaphor of a change leader as "gardener[58]," someone who continually attends to the interaction between many (at times unpredictable) variables, humbly recognizing that their role is less to control the universe, but merely create the best conditions under which landscapes and organisms can flourish.

But it was when I read Steven Johnson's *Emergence: The Connected Lives of Ants, Brains, Cities, and Software*[59], that I became hooked on how the principles of complex adaptive systems could be applied to institutional and societal change. A dizzying romp through fields as disparate as urban planning, neurology, and control theory, he wrote eloquently about how self-organising, mutually interacting, and bottom-up systems are changing the world. At the close of this book he had some concluding and intriguing what-if comments about the leadership of change: could our institutions' leaders – be they corporate, governmental, scientific – adopt this more devolved, ecosystem approach to change, and what might they have to give up in their notions of top-down centrally governed change to do so?

I put down the book determined to find out if this could be done, as I had an inkling that change could be led in far more effortless ways if approached according to ecosystem principles. Here is my take on how to do so.

Find your energy source

Ecosystems turn their faces to the sun – a life-giving force in the habitats of the living world. The human solar equivalent is *purpose* – intentions radiate energy. In our research into ecosystem change, "Attractor" leadership is omnipresent. Coined from physics ("strange attractors" are forces such as gravity and black holes that exert incredible pulling power on all matter), leaders who create compelling intent galvanise the energy of their ecosystem.

They uncover this intention by closely tuning in to their organization, detecting any exerting tugs and pulls from its wider dynamic context, and from this create a compelling narrative about what is now being called for. This intense sense-making process is neither the ego trip of launching grand vision statements from on high, nor the fixation on precise controlled outcomes – its aim is to create a loosely held intention that can contain dynamic adaptive complexity.

One client, who happened to be in the energy sector, spent a whole year tuning in to the wider market, uncovering their consumers' desire for greener, more locally controlled forms of energy, and discovering the technological advances for this kind of energy production. Based on this intense tuning into their ecosystem, they created a statement of intent: *enabling the European energy transition (a far cry from "being the best energy company in the world")*.

Furthermore, just as the sun rises each day to radiate our planet, those who master Attractor leadership continually permeate their ecosystems with purpose. Be that business performance reviews, customer conversations, daily team meetings, investment decision processes, even workplace layouts – all are infused by

stories of the system's guiding intention. One of our clients, a government benefits department, invited each member of staff across all locations to post up photos of real-life pensioners they served on every desk and office wall. As staff arrived each day, they turned their faces towards purpose.

Create definitive boundaries

Ecosystems have defined habitats. Plants and creatures learn to coexist within a territorial boundary, the over-stepping of which can be dangerous. Of course, each smaller habitat is nested within an ever-widening, joined up and interacting meta-habitat, but nonetheless, life and creativity is supported by the presence of boundary conditions.

Alongside the radiating power of intention, we have found that successful leadership of emergent, ecosystem change requires the establishment of a "few hard rules." These rules enable adaptive self-organization and lift the shackles of top-down centralized control. Complexity theorists have modeled the hard rules of how flocks of birds can fly in creative swirling formation without the need for a feathered CEO (fly in the same direction as your neighbour, fly at the same speed as your neighbour, and don't bump into anything). Wise change leaders know their task is not to call all the shots but instead build the capability of their whole ecosystem to adapt and innovate, independent of central control. By creating a set of hard rules to govern the micro-level behaviour of the system, especially rules that are culture-changing, devolved innovation becomes possible.

One leader we worked with transformed the performance of a business unit by creating the following behavioural hard rules: be pragmatic – focus on impact within your control; you are empowered to take action; create a sense of urgency – weeks not months; stop when it is good enough; be requiring of the center. In another example, concerning the COVID-19 pandemic "lockdown" requirement to stay at home, an enterprising Church of England Bishop issued the following hard rules: protect and support our neighbours; think about those suffering more than me; don't give into panic and start hoarding food; live today to the full.

Innovation within ecosystems requires the containing power of structure – without definitive boundaries on how to act, energy dissipates and any anxiety created by uncertainty becomes destabilizing.

Pay attention to place

In living systems, every element has an essential place that gives strength to the whole. Soil produces nutrients for plants. Water carries and distributes nutrients. In biology, every cell has a function, and that function supports the whole body's vitality. And each cell interacts with another – a mutation in one can quickly impact the whole

system. Healthy ecosystems comprise multiple agents interacting in balance. Wise gardeners and foresters know the risks of removing vital insects, worms, or fallen trees.

Great change leaders recognize that their primary task is to create a flourishing organization where each part is seen to be vital, is in the right place, and can interact to sustain the health of the whole. Too often, we work in isolation and cannot see the bigger picture, imagining that what we are doing is perfectly OK (if a little suboptimal at times). One newly arrived change leader, a head of a customer services division that was in dire need of performance improvement, recognized the danger in this. He invited all his division's units for the first time into one large room and asked them to stand up in a line, or chain, according to how close/distant they were from the customer, and according to the proximity of how they handed work over to each other. One by one, from their places in the system, they called out what work they did, and how their performance was rated. Each unit by and large had a performance score of 0.8, and of course, when you lined them up and multiplied each 0.8 by 0.8 by 0.8 … the poor customer at the end of the chain was not getting a great service.

This one simple intervention – of helping the parts see their places in the whole – transformed overnight the energy of this unit to serve the customer better.

Ecosystems also have levels: organism; species; community; the wider biosphere. Often, we see leaders in change wishing to overly collapse hierarchy, creating equal places for all. This is severely system-weakening, creating unnecessary ambiguity in decision-making and accountability. Even if this might feel squirmy, inviting leaders in a room to stand roughly in a line according to their hierarchy and level of system impact can enable greater leadership flow. In one organization, the hierarchy was flipped "right-side-up" and the customer was put at the top of the pyramid, with the frontline staff who served them at the next important level, and so on.

The key point here is not about command and control and status, but about helping each player in the ecosystem of your organization feel strong in their place and cognisant of how they relate to others in delivering the system's purpose. Then, and only then, can whole systems collectively adapt.

The more the merrier

Biodiversity supports life – while each species in an ecosystem has a specific niche, a role to play, the *number* of different species in any given habitat predicts its ability to adapt. A larger number of plant species means a greater variety of crops. Greater species diversity ensures natural sustainability for all life forms. A key feature therefore of a complex adaptive ecosystem that can continually innovate is diversity.

Much effort is being placed today on ensuring diversity "in the boardroom" – especially with regards to gender and ethnicity. When leading change in increasingly complex and uncertain contexts, it is diversity of thinking and perception that counts. This does not necessarily mean sending executives on creative thinking courses, or hiring people from the outside with fresh perspectives. One organization we worked with sent their senior leaders out on "foraging expeditions" to external contexts – visiting places, companies, communities that were totally different to their own ecosystem but ones that contained elements of their emerging future – be that strategy, mindset, or technology. This cultivated external networks and contacts that were going to be pivotal for future new business alliances. Pulling off their purpose was going to require multilateral alliances, ever-expanding ecosystems.

So, while ecosystems require boundary conditions, it is often at the periphery of the system where most innovation occurs – not the center. Any change effort that is run through hierarchical layers, or vertical silos, will lose out. Instead, implement change via a "whole system approach." This means gathering a representative sample of the whole ecosystem in your change effort. I once worked with four separate hospitals in the UK's National Health Service who were being merged into one acute trust. The enlightened CEO realized that getting the same old same old change project team together was not going to pull this off. Instead, each last Friday of the month, she would open the space for anyone across the hospital system to come join her at a 2-hour gathering to plan and guide the merger. All kinds of people came out of the woodwork to input to what mattered deeply to them – so much so that she had to keep booking larger and larger meeting rooms!

And one of the most pivotal moments in the change process came when one of the hospital porters spoke up from the patient perspective. This individual knew far more about how to provide optimal patient care than anyone else present. It can be surprising where intelligence can come from when you fully engage with the rich diversity of an ecosystem.

Cultivate rabbit warrens

Ecosystems are joined-up places with rich lateral networks that can spread spores, vital intelligence, nutrients. Networks also serve to protect, they provide spaces to meet and greet and reproduce in safety. Likewise, in organizational ecosystems, we have found change spreads most rapidly through devolved, horizontal networks – it's debilitating, humiliating, and time-consuming to go up and down long vertical chains of command.

One organization we worked with, whose entity was facing massive market disruption, realized that they had to uproot their traditional vertical stovepipes culture if they were to survive and thrive. Their change required a rapid, joined-up, systemic approach. They tried many top-down (expensive) change programmes and initiatives within

separate divisions, but the one they say had the most power to deliver rapid change was the simple setting up of "peer groups" across their organization. First, they took their 360-strong senior leadership population and divided them up into ten waves of 36 leaders – each a cross-section of department, geography, and level. These waves experienced an enriching and intense collective leadership experience. The waves were then further split into small groups of 6-7 leaders, again representing a fractal of the whole organization – that periodically met to sustain their learning and application from the leadership programme. These peer groups became little life rafts for the organization in the choppy seas of high magnitude change.

The enriching human contact that these lateral waves and peer groups created across the enterprise built trust, open-mindedness, collective (less wasteful) solutions, and empowered decision-making. I wouldn't hesitate, if options were limited, to design an entire change process solely based on the establishment and cultivation of lateral organizational networks – it shifted the discourse, and produced cultural change that enabled their organization to launch the fastest-ever IPO in their nation's history.

Life is tough

Ecosystems can be harsh. They contain seemingly random yet certainly uncontrollable events. Predators lurk. Weather conditions produce extreme events that can devastate life on earth. There will be natural cycles of birth, growth, death, and decay. Yet such natural cycles result in regeneration and new life forms. Our ancestors might have tried to beat ecological fate by offering sacrifices to the Gods, but I speculate that they were more able to face – if not agree to – difficulty as a part of the natural rhythm of life.

Successful change leaders today understand that all big change comes with an accompanying cost – there is always a price, not just a prize, in change. Very often, activities need to be discarded, old loyalties to certain behaviours broken. We define change as "the disturbance of repeating patterns" and this means people being able to be comfortable with discomfort. We have found that the leadership practice most associated with successful change is what we call "Edge and Tension" – the capacity to openly and cleanly talk about (difficult) reality. While we are neurologically wired to repeat past coping patterns and be wary of change, not going towards discomfort can be far less safe. Change flows when tough truths are named.

One organization we worked with, going through significant change, created a "scare-o-meter" device. At the start of every leadership meeting they would invite people to write up on a post-it note what was most concerning them right now, and which felt very difficult to voice. In silence, they each individually posted up their notes onto one large board. We then invited the leaders to rank them according to the level of "scariness" of the topic. Once

that was done, and they stood back and fully took in what most needed to be faced in their change process, all the anxiety associated with the difficulty of the topics lost its hold on people.

Great change leaders don't give out false hopes; they calmly face the truth of a situation. And at times, this might mean hardship, getting smaller/poorer, and even facing the eventual shut-down of activities that no longer serve.

Waste not, want not

In thriving ecosystems, nothing goes to waste. While producers such as plants convert energy from the sun into nutrients, which consumers such as the animal kingdom and ourselves gratefully receive, eventually we decay and die. In then come the decomposers such as earthworms and fungi that break down dead plants and animals, returning vital nutrients to the soil.

Successful change leaders too are mulchers. We have found another stand-out skill to be what we call, "Acknowledge the Whole." This is the capacity to give everything that happens – and especially difficult experiences – a place and a purpose. I still vividly recall working with the head of a bank and his leadership team who requested a "cathartic" session to get out all the niggles and difficult emotions that were seeping through their company (they were the target for an acquisition). On one large wall, we created a systems map of the difficult events they had recently experienced and what lay beneath these events in terms of patterns, structures, and mental models. They thought they were done when this had been completed. There was more to come. I labelled this large map "trash" – items they wished to get rid of, and then on the wall next to it, wrote up a new label, "compost." I invited them to spend the next hour deeply honouring what had been put into the trash, and to answer the question, "in what way has all of this been helpful?". This led to a deeply respectful acknowledgement of the value of the difficulty – they had become more resilient, it had taught them what really matters, it had brought them closer, it had revealed the organizational assumptions that needed addressing.

From that moment on, they led their organization from a wiser, more compassionate place, calming down the corporate amygdala so that people became less anxious, and more curious, about what the future might hold.

Our mission at Still Moving is to engender the more responsible leadership of change. If leaders could lead their systems from an ecosystem perspective, change might become more effortless, humane, and in tune with the natural order of the world.

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The philosophy and ecosystem of Hidden Champions

Hermann Simon

21

In 1987, the Harvard professor Theodore Levitt invited me to a conversation in Düsseldorf. Interested in the topic of international competitiveness, he had made the term "globalization" popular through a seminal article in the *Harvard Business Review*. That day he asked me a simple question: "Why is Germany so successful in exports?"[60]

Germany had become the world's export leader for the first time in 1986, and held that spot until China surpassed it in 2009. Since that time, German and US exports have been virtually equal, although Germany is only one quarter the size of the US in terms of population and gross domestic product.

Levitt's question gnawed at me. Why is Germany so successful in exports? I thought first of large companies. Volkswagen, Bayer, Siemens, Bosch, and the like were all very strong exporters at the time. But this couldn't be the explanation, because the United States, Japan, and even France had more Fortune Global 500 companies than Germany.

Little by little, I found out that there are a lot of medium-sized world market leaders in Germany whom nobody knows. Buried deep below the headlines of spectacular business successes and breakthroughs lies a largely ignored source not only of exports, but of management wisdom. I began to research these special companies and named them "Hidden Champions" for the first time in a 1990 article. Five years later, Harvard Business School Press published my first *Hidden Champions* book. Several editions followed, and the books have been translated into 25 languages. In China alone, more than one million copies have been sold.[61]

I define a Hidden Champion by three criteria: one of the top three in its world market, or number one on its continent; less than $5 billion in revenue; and hardly known to the general public.

I have discovered 3,000 Hidden Champions around the world. About 40 percent of them are from Germany. This category of companies seems unique to German-speaking countries, but hardly exists elsewhere.[62]

The more I dug into the Hidden Champions, the more fascinated I became by their ecosystems. A whole category of truly global competitors had remained hidden under a layer of invisibility, even secrecy. Few practitioners, journalists, or academics know the names of these companies or are aware of the products and services they offer, let alone the way they conduct their business in Globalia (the term I coined to describe the globalized world). Many of them enjoy world market shares of over 50 percent, numbers that few giant multinationals can match. And this hasn't changed much since Levitt posed his question.

I did numerous surveys on the Hidden Champions to better understand their common philosophy and ecosystem. But much more impressive were my hundreds of visits to their sites, and especially the personal encounters with their founders, owners, and CEOs. If I had to choose one common root of the successes of the Hidden Champions, it would be their leaders. At first glance they are as diverse as people in general, but as I

explored further I could distill several common traits, which deserve to be called "philosophical." Their leadership and the cultures they create are very different from what large corporations typically do. Many of these traits have their own roots in the work of famous philosophers, both Eastern and Western.

Willpower

Having an idea and realizing it are two different things. If your idea or vision is to become the global market leader – the best in your market worldwide – you have a long and torturous road ahead of you. The Hidden Champions are proof that you have a chance to reach that goal only if you possess the combination of outstanding willpower and relentless ambition.

The definition of "will" or "willpower" leads us to the philosophers Arthur Schopenhauer (1788-1860) and Friedrich Nietzsche (1844-1900). Schopenhauer says: "A man can do what he wants, but not want what he wants." In Nietzsche's philosophy, the "will to power" is a central concept, understood as an irrational force that can be channeled to different ends.[63] This concept hardly ever appears in management literature. One exception is the work of Marvin Bower, the cofounder of McKinsey, who published books with the titles *The Will to Manage* and *The Will to Lead*.[64]

I found that willpower, combined with the relentless ambition to become the global market leader, are defining characteristics of the leaders of Hidden Champions. These traits forge a profound unity of person and purpose. The person and the company are indivisible. "His person and his company have always been one entity" is a common description of the late Hans Riegel of Haribo, world market leader in gummi bears. Heinz-Horst Deichmann, who founded the eponymous European market leader for shoes, said, "I savoured the smell of leather from my infancy. I love people and I love shoes." Jake Burton, the founder of Burton Snowboards, advises: "Live your work." These remarks reminded me of a finding about artists and scientists. In their collection of 12 case studies of famous creative people, Wallace and Gruber concluded that "[f]or many creative people the life is the work. They integrate rather than separate their personal life and their work."[65]

As genuine people who identify completely with their companies, the leaders of the Hidden Champions have charisma and persuasive power. Their attitude toward work implies that money is not their primary driving force. Motivation derives primarily from these leaders' identification and satisfaction with their work. Economic success is secondary. Their willpower and their absolute commitment and responsibility give such leaders tremendous credibility. They have no reservations about their work and assume full responsibility. True leadership can never be play-acted; it must reside in the leader's core.

Focus

If you have the willpower to strive incessantly to become the best and the leader in your market, how do you pursue this goal? The answer is clear and simple. You have a chance only if you focus on the one thing you want to achieve. Only focus leads to world class. The literature on this subject is overwhelming and ranges from philosophical to trivial sources.[66]

Peter Drucker labels this trait "single-mindedness." He knew the physicist Buckminster Fuller and the communication expert Marshall McLuhan personally, and said they "exemplify to me the importance of being single-minded. The Fullers and the McLuhans carry out a 'mission'; the rest of us have interests. Whenever anything is being accomplished, it is being done by a monomaniac with a mission."[67] Bill Gates, the founder of Microsoft, echoed this, saying that "my success is that I have focused in on a few things." These quotes fully capture the essence of Hidden Champion leaders: they are monomaniacs with a mission.

Manfred Bogdahn, the founder of Flexi, says: "We only focus on one thing, but we do it better than anyone else." Flexi is the market leader in retractable dog leashes, with a global share of 70 percent. Beware of these monomaniacs as competitors! I have met them. They may be no smarter than you or I, but they are more obsessed with their ideas. Their absolute focus on their missions makes them unbeatable.

Self-reliance

Wilhelm Tell, the Swiss national hero, says in Friedrich von Schiller's namesake play: "The strong one is most powerful alone."[68] In the essay "Self-Reliance," American philosopher Ralph Waldo Emerson recommends that all individuals avoid conformity and false consistency, and instead follow their own instincts and ideas.[69]

Many modern management fashions reject the relevance of self-reliance by insisting that managers seek their salvation outside the company. Two such popular tactics are outsourcing and strategic alliances. Outsourcing delegates to others everything that those others can produce more cheaply. Strategic alliances create the hope – often in vain – that cooperation with other companies makes one stronger.

The actions of Hidden Champions follow the classic tenets of Tell and Emerson, not the management fashions. They rely on their own strengths and prefer to go it alone. Two cases illustrate this "antiquated" attitude. Wanzl, the global leader in airport luggage carts, says: "We produce all parts ourselves, based on the quality standards we define." You will find Wanzl carts in airports all over the world, even in Tokyo-Narita, in Beijing, and in Shanghai.

Faber-Castell, the global leader in pencils, states: "We grow our own wood in our own plantations." When I challenged the late Count Faber-Castell by suggesting he ought to purchase his wood on the market instead,

he responded: "Yes, when I took over from my father in 1978 we actually bought the wood. But I found that we never got the same consistent quality year after year. Therefore, I decided to grow our own wood." Today, Faber-Castell runs its own plantation of 100 square kilometers in Brazil, where they grow the wood to make 2.3 billion pencils per year.

Many Hidden Champions even build the machines they use to make their end products. When I asked for an explanation, they said: "In order to achieve the superiority and uniqueness of our end product, we have to go several steps deeper in our value chain. There we create the unique processes, machines, and features which lead to the superiority in the end product." This reveals a much more general and deeper lesson: You can never buy uniqueness and superiority on the market; you can only create it internally. Self-reliance may sound old-fashioned, but it is one foundation of the Hidden Champions' successes.

Fearlessness

Fear is a recurring theme among philosophers, with Soren Kierkegaard's "Fear and Trembling" perhaps the most prominent work. Nietzsche and Spinoza have also written about fear. Last but not least, Sigmund Freud wrote a lot about fear and anxiety. Fear protects us against all kinds of dangers, but it also contains us.[70]

The opposite of fear is courage, a trait often ascribed to entrepreneurs. Berthold Leibinger, who led Trumpf to world market leadership in laser machines, regards "courage to take a risk" as the most important entrepreneurial quality. However, I would prefer to call the Hidden Champions' entrepreneurs fearless rather than courageous. They are not people who jump from the sky. Rather they appear to have understood and embraced the Chinese philosophy that "ignorance of your freedom is your captivity."[71] The Hidden Champions' leaders do not share the same inhibitions and fears as other people, so they can deploy their skills more effectively. It is really impressive to see how many of these leaders have conquered the world's markets without higher education, foreign experience, or language skills. Interestingly, I see these traits again today in Chinese entrepreneurs who have set out to turn their companies into Hidden Champions. They may lack foreign experience and speak only rudimentary English, but they are fearless. Nowhere else in the world than in China do I encounter more entrepreneurs who raise their hands when I ask: "Who wants to become a Hidden Champion?"

Innovation

"Not to innovate is to die," writes Christopher Freeman, the doyen of innovation theorists. Few would argue this point. However, when we talk of innovation, we typically think of radically new products and processes.

Breakthrough innovators such as Apple and Google attract attention and become media darlings. But breakthrough innovations are rare in the real world. Berthold Leibinger of Trumpf observes real breakthroughs only once every 15 years in his high-tech laser sector.[72]

Hidden Champions rely on continuous improvement rather than on groundbreaking innovation. Wanzl says that their history "is a story of continual innovations" referring precisely to the goal of ongoing improvement. Breakthrough innovations in shopping or baggage carts remain the exception.

Sennheiser, one of the global market leaders in microphones and headphones, states: "Evolution, not revolution, has made the company strong." Swarovski, the global market leader for cut crystal, still propagates the slogan of its founder: "Constantly improving what is already good." For 120 years, the maxim of Miele, global market leader in premium washing machines, has been "Forever better." This simple slogan expresses the determination to deliver the absolute top product in every market in the world. In a single year, the global leader in chain saws, Stihl, introduced 42 innovations, none spectacular.

Hidden Champions' superiority is often based on doing many small things better than their competitors. Their products and services are closer to perfection, the result of a never-ending series of improvements rather than single breakthrough innovations. All this is similar to the Japanese kaizen method, which is often labeled "the philosophy of continuous improvement."[73] Levitt also described this tenet: "Sustained success is largely a matter of focusing regularly on the right things and making a lot of uncelebrated improvements every day."[74] The gradual innovation can also be seen as a realization of Immanuel Kant's "middle way" between breakthrough innovation and zero innovation.[75]

What is the deeper meaning behind this innovation philosophy? With gradual innovation, even someone who is not an Einstein or a Steve Jobs can become world class. The Hidden Champions have proven this a thousand times over by doing something a little better every day.

Polarity

Contradictions or polarities are typical of the Hidden Champions and arise in many forms. There is simply no (mathematical) optimization for polarities like centralization versus decentralization or customer orientation versus technology orientation. Instead, the Hidden Champions have learned that it is better to permit flowing relationships or "gray areas" between these polarities, and to allow for different courses of action, depending on the situation. This thinking has deep philosophical roots.

In Western culture, we tend to distinguish right from wrong, true from false, black from white. By contrast, Eastern cultures consider the world as flowing, without strictly defined boundaries. Where people from the West see contradictions, people from the East see complementarities. Edward de Bono speaks of a Western stone culture and an Eastern water culture in this context. The philosopher Nicholas of Cusa (1401-1464) saw in all things *coincidentia oppositorum* (the opposites coincide).[76]

Lawrence and Lorsch address such contradictions in relation to centralization and decentralization in organizations.[77] The physician Barry Johnson deals with similar issues in *Polarity Management*.[78] Gore, the Hidden Champion and world market leader in Teflon-based products, includes specific polarities in its company philosophy. The principle of "freedom" applies to the extent that each employee has the freedom to do what he or she considers right. The freedom is, however, restricted by the "waterline" principle. As soon as a decision could hit the corporate ship below the waterline, a colleague must be consulted to share the responsibility for the decision. While the freedom principle encourages all employees to make use of their full potential, the waterline principle is intended to guarantee that the company does not suffer any serious damage.

The table below lists aspects in which the Hidden Champions practice such "both – and" courses of action.

Aspect	**both...**	**...and**
Market definition	Narrow: product technology	Broad: regional/world
Strategy	Internal competencies	External opportunities
Driving force for innovation	Market	Technology
Leadership	Authoritarian in fundametal values	Participative in details
Value chain	Internal for core competencies	External for non-core competencies
Time horizon	Short-term (efficiency)	Long-term (effectiveness)
Organization	Functional one-product, one market case	Divisional/decentral for soft diversification cases
Competive advantage	Product: quality, systems integration	Service: Advice/customer service
Employee turnover	High in initial phase	Low: permanent staff
Workforce	Global: employees	National: top-management

One could interpret the strategy and leadership of the Hidden Champions as contradictory in many aspects. Yet precisely these contradictions and the capacity to handle them conform to Johnson's proposals for the solution of "unsolvable problems." The study conducted by Lawrence and Lorsch points in the same direction. The most successful organizations were those that displayed a high level of integration (centralization) as well as a high level of differentiation (decentralization).

Inspiration

Artists may acquire global fame as individuals. But in an economic enterprise, nobody can single-handedly create a world market leader. He or she always needs cooperation and support from others. Augustine of Hippo, bishop and philosopher, formulated the challenge: "What you want to ignite in others, must first burn inside yourself."[79] The fire that burns in a leader alone is insufficient; he or she must ignite it in others, usually in many others.

According to Warren Bennis, we still don't know why people follow certain leaders and don't follow others. A key capacity among the leaders of the Hidden Champions is to inspire others with enthusiasm for the company's mission and encourage them to deliver the best performance they can.[80] I can only say that they are very effective and successful in this respect. Maybe the strongest proof is the extremely low employee turnover rate of 2.7 percent per year. The annual average for most countries lies between 10 and 20 percent. This cannot be attributed to superficial attributes such as style or communication, because many of the Hidden Champion leaders are not great communicators in the usual sense. I believe that the qualities discussed above — willpower, ambition, unity of person and purpose, focus, self-reliance, fearlessness, continual innovation — play a crucial role in the ability to ignite the fire in others. The last building block is continuity. The leaders of Hidden Champions stay at the helm for 20 years on average. For large corporations, the leaders' average tenure is six years. That says everything about continuity and long-term orientation.

The Hidden Champions apply their own philosophy to strategy and leadership. They neither believe in nor follow many of the modern management fashions. Most of their practices can be traced back to prominent philosophers. The Hidden Champion leaders deeply understand and live their wisdom. They go their own ways. In essence, their only secret formula for success boils down to common sense – so simple, yet so difficult to achieve. This is the ultimate lesson of the Hidden Champions philosophy.

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The first step in improving an ecosystem

Dan Toma

22

In 1878 Leo Tolstoy released what would become one of his most acclaimed works, the novel *Anna Karenina*. The book starts with a quote, that over the centuries will transcend disciplines: "Happy families are all alike; every unhappy family is unhappy in its own way."

Taken literally the quote is a good reflection on family life and family conduct. But as a metaphor the quote found applications in different fields, from anthropology to ecology and from philosophy to, now, business.

The quote became the Anna Karenina Principle with its popularization by Jared Diamond in *Guns, Germs and Steel*. In the book the principle is used to illustrate why – throughout human history – so few wild animals have been successfully domesticated. A deficiency in any one of a great number of factors can render a species undomesticable. Therefore, all successfully domesticated species are not so because of a particular positive trait, but because of a lack of any number of possible negative traits. Therefore, the Anna Karenina Principle can be summed up as: a deficiency in any one of a number of factors dooms an endeavour to failure – consequently, a successful endeavour (subject to this principle) is one where every possible deficiency has been avoided or overcome.

With more and more businesses understanding the importance of building innovation ecosystems in order to ensure sustainable future growth, the Anna Karenina Principle comes to the forefront again when it comes to improving or changing these ecosystems.

An innovation ecosystem consists of many elements, and these need to work in sync for growth to happen. By clustering the many ecosystem elements we end up with five pillars: strategy, leadership, process, culture, and management. Understanding what is hindering the progress and outcome of the ecosystem becomes paramount when it comes to deploying improvements or making changes. Think of the ecosystem improvement strategy in terms of a satnav system in a car. Satnav systems are great when they work but there are times when the link is down, the signal fails, or the reading is off and the journey can turn into a random game of mystery road pinball. Or to put it another way, you know where you want to get to but unless your starting point is clear then any proposed route and any stops along the way are simply guesswork or, in innovation parlance, unproven assumptions!

The same applies when it comes to innovation improving an ecosystem. Unless you are clear on your current starting point then your roadmap to developing the ecosystem's maturity within an organization will at best be packed with assumptions and, at worst, will actively prevent further development.

To illustrate this point imagine an ecosystem where individual entrepreneurs are too afraid to propose a new idea for fear of being punished by senior leaders. Then there is a direct limit to the number of ideas submitted, which will in turn impact the company's growth in the years to come. This is a clear cultural blocker that needs to

be addressed before any further investments are made. If this blocker is not flagged early on, any investment in capability development, for example, will be money poured down the drain. Or another example: if the C-level can't agree on a clear strategy, the investments will be done randomly – again, this strategy blocker will have dire implications for the company's future. Therefore creating, for example, a Corporate Venture Capital fund before a clear innovation strategy is defined will not be a good idea because investments will not be a deliberate act.

Another important aspect to understand when it comes to improving an ecosystem is that just doubling down on something that's already working will not result in an increase of the outcomes – the contrary might actually happen. Hence all elements of the ecosystem need to be not just in sync, but also equally mature. For example, simply increasing the R&D budget won't pay off if another factor holds this variable back. "*There is no statistically significant relationship between how much a company spends on its innovation efforts and its sustained financial performance*," states a Price Waterhouse Cooper research paper. Testament to which is the discrepancy that can be clearly seen when the Boston Consulting Group's Top 50 Most Innovative Companies in the World is put next to the Statista's Top 20 R&D Spenders in the World – only three of the top ten spenders are top ten innovators.

To understand the maturity of each element making up an ecosystem, one first needs to understand the difference between attributes and outputs. For analogy: should a person be considered mature because they brush their teeth and look smart at work, or because they are emotionally well-developed and bring thoughtful and reasoned arguments to the benefit of the organization, its people, and customers? Outward appearances don't always reveal what is going on inside, so measuring "things" rather than attributes won't help you to unpack and define what is truly going on. When you take away the "things" then what you are left with is a complex interaction between the five pillars of the ecosystem. Drawing those strands together produces an innovation maturity dashboard that, used correctly, informs and guides an aligned roadmap of required interventions and hence, the progress of the organization.

The maturity of an ecosystem can be divided into many levels but from experience we've seen that four levels work best. With that in mind let's take a look at the **innovation novice**, the first level. Now just because an organization is at the novice end of the spectrum, it doesn't mean that there is no innovation activity. On the contrary, there might be little spurts of ad hoc activity in one or more departments and innovation may even be occasionally discussed amongst the leadership team. But discussion is as far as the leadership gets and with no leadership sponsorship and no innovation strategy, any positive outcomes are likely to be accidental rather than designed.

Attaining **innovation competency** not only requires cultural change, but also a sea change in the leadership approach. At the second level, leaders now recognize the need for innovation as a driver of outcomes. To this end they have developed a basic innovation strategy and are prepared to sponsor innovation, albeit at a limited level. Some innovation training may have taken place and the organization may have looked to incorporate basic innovation tools into the mix. However, by and large the focus is still on short-term outcomes and there is a fair chance that the innovation strategy is not aligned with that of the organization.

That's certainly not the case for **innovation experts**. Attaining this new level of maturity – the third level – sees a cultural and leadership shift from seeing innovation as an add-on to recognising it as an intrinsic driver across the organization. There is still some way to go but at least innovation is now aligned to the core strategy, with visible leadership sponsorship of innovation activity.

At this level innovation ideas are starting to spread across the organization, becoming embedded in product and process design as well as influencing and informing the way in which teams and projects are managed. Admittedly the focus is still on mid-term goals; but on the positive side a suite of innovation tools alongside defined metrics and KPIs is starting to enable activity across the innovation mix.

Innovation leadership is when preparation ends and the full innovation journey begins – the fourth level. Innovation is no longer just aligned to the strategy. Rather it is an intrinsic part of the strategy and is fully integrated into the culture. There are fully integrated metrics and KPIs delivering a realistic and rounded picture of organizational capability, thereby enabling product and process development to be focused on delivering innovative outcomes.

There is also full leadership sponsorship alongside the development of a core innovation team. Together these help to transform business management, building innovation engagement and enabling people to innovate without fear of failure. This in turn moves the organization's viewpoint away from short-termism and towards the attainment of long-term goals.

The best way to gauge an ecosystem's maturity and its needs is to use a company-wide survey asking multiple-choice questions about every sub-element of each of the five pillars. The survey will have to be distributed both vertically and horizontally in the organization. For example, questions around the ecosystem's leadership can be something along the lines of:

- Our leadership team provides the right support and resources to deliver on our company's innovation goals and ambitions
- Our leadership team is consistent in putting words into action around innovation
- There is a clear and visible leadership ownership and sponsorship for innovation

Note that in order to get a statistically accurate (within an agreed margin) high-resolution picture of what the ecosystem needs, the survey doesn't need to be taken by everyone in the company. As long as it gets to a cross section of people both horizontally and vertically there is no need to get it to more than 10 percent of the ecosystem.

For increased accuracy you can combine the survey data with an analysis of the ecosystem's outcomes. If the shortcomings in the outcomes can be explained by the findings from the survey, the ecosystem's needs are now clear.

In a nutshell, if one wants to improve an existing ecosystem a perpetual improvement process is made up of the following five steps:

1. Assess the current state of the ecosystem using both the survey method and analysis of its outcomes.
2. Understand the limiting factors or blockers of the ecosystem – the things that hinder the ecosystem's maturation and its outcomes.
3. Tackle the blockers with fitting actions (e.g., leadership development programmes, process improvement initiatives, cultural transformations, etc.)
4. Measure again the ecosystem once the actions have been deployed to make sure they had the expected impact.
5. Redo the loop every time the ecosystem needs improvement.

Successful innovation requires more than just process transformation, it calls for the entire ecosystem to have an innovative ethos and be equipped to tackle the challenges of tomorrow. This includes the need to have an appropriate HR strategy, an appropriate structure, demonstrable executive level support, and a culture built around innovation. Action to improve an ecosystem should be taken after the current situation is fully understood. A full analysis of the ecosystem needs to have the full support of the executive suit if it is to uncover ecosystem blockers that prevent the company from achieving its growth goals.

Making sure your family is a happy one is not so much a matter of luck or will, as it is a matter of understanding the particular needs of your family. Assessing your ecosystem should be the first step before any improvement measures are taken as they need to speak to your ecosystem and your ecosystem alone.

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The sea star syndrome: on the strategic choices of ecosystem participation

Geoff Tuff & Steven Goldbach

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As two career consultants, it's safe to say that we tend to get grouped with folk accused of promulgating buzzwords. So, we may be playing against type as we try to prevent another word from slipping into the realm of the meta-cliché. One of the great ironies in business is that we frequently take normal words and burden them with ever-deeper meaning, rendering them meaningless instead. In the recent past we smoothed away the edges of words like "innovation" and "digital" such that they more frequently elicit smirks than clarity or understanding. We appear to be dead set on doing the same to "ecosystems."

Admittedly, not everything has to have a singular, shared, sharp definition to be valuable. Perhaps ecosystems can be treated as a broad-based concept that is applied uniquely within different organizations. But if that's going to be the case, leaders can't allow slop into their specific conception of what an ecosystem is or isn't. If they do, it will increasingly lead to murky strategy choices. When sweeping generalizations like "we'll win by being part of a technology ecosystem(!)" are substituted for genuine strategic choices, things eventually go badly.

Most of us first hear the word in primary school science class. According to a revered authority on the natural world – *National Geographic* – an ecosystem is "a geographic area where plants, animals, and other organisms, as well as weather and landscape, work together to form a bubble of life … Every factor in an ecosystem depends on every other factor, either directly or indirectly." James Moore is widely credited with expanding the concept to the business world in a 1993 *Harvard Business Review* piece in which he wrote: "In a business ecosystem, companies coevolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations."

Moore focused on innovation as the core objective within his initial definition of an ecosystem, but conceptually you can apply the notion of coevolving capabilities towards any business objective. When considered as a choice on the Strategy Choice Cascade, (first developed by our mentor and friend Roger Martin when he was a partner of ours at Monitor Group), participating in ecosystems can mostly be categorized as a way to build capabilities in support of your organization's "Where to Play" and "How to Win" choices. That is the critical difference between ecosystems used for business and natural ones. Sea stars don't get to pick which pool they will coexist in with others when the tide recedes. Businesses get to *choose* how and with whom they participate (or not) in ecosystems. This existence of choice means we are in the domain of strategy; unless you have explicitly declared the shape and make-up of the ecosystems you will play in (and those that you will not), then you don't have a strategy. Yet many executives seem to act as if statements like "we will play as part of an ecosystem" are enough. As Roger taught us: if the opposite of your "choice" is simply a ridiculous statement, then you don't have a strategy; you're in the realm of business platitude.

You are already part of an ecosystem

Try as we might, we can't think of a business that could credibly say it doesn't participate in any ecosystem as part of its business model. Any company with a value chain – even if the outsiders comprise just suppliers, customers, and competitors – is technically part of an ecosystem. But even though they have existed forever in business history, ecosystems suddenly seem to be the hot new thing in management thinking. Creating porous organizational boundaries to access outside talent that might create some strategic advantage is not a new idea. "Joy's Law" – the, perhaps apocryphal, observation by Sun Microsystems' Bill Joy that, "no matter who you are, most of the smartest people work for someone else," – has been kicking around for over two decades.

What is new is the urgency to access the best possible capabilities as quickly as possible just to survive, let alone be competitive. Digital giants are working hard to discover ways to leverage their platforms to expand into traditionally well-insulated industries. Smaller upstarts are using technology-driven business models to quickly unseat longstanding incumbents; think how quickly people are substituting in-home connected exercise equipment (e.g., Peloton) for gym memberships, a gradual trend that dramatically accelerated due to COVID-19. Increasingly, if an organization wants to remain competitive, it can't rely on the capabilities it can conceivably create within its four walls. Further, because of technology, it's becoming easier and easier to access the capabilities of outside organizations. So perhaps it's no surprise that the topic of ecosystems is rising quickly on the strategy agendas.

Ecosystems are not new, but in the face of this new optionality, it is newly important that leaders need to make very clear ecosystem choices. Specifically, we believe leaders need to wrestle with two broad choices in particular:

1. Where to Play (in ecosystems): For which business objectives should we leverage ecosystem partners (versus developing all the necessary capabilities ourselves) and therefore which other organizations should we work with towards our objectives?
2. How to Win (in ecosystems): What form should our ecosystem take and how can we ensure that it results in our fair share of competitive advantage? How will we differentiate our ecosystem from others attempting to pursue the same objectives?

Where to Play: For what should we use ecosystems and who should be involved?

The most foundational choice that organizations need to make as it relates to ecosystems is what to use them for. While on the surface one could label this a simple choice, it isn't in the least. There are several factors that need to be considered when evaluating whether to do something solely in-house or with one or multiple outside parties. They include:

- How much better (or cheaper) could we deliver against the business objective by working with outside parties?
- How quickly can we build the capability with others versus doing it ourselves?
- If we build the capability with others can our competition access similar (or even the same partners) to build the same capability?

Ultimately, each choice needs to be examined on its own merit and sadly, there is not a simple formula. One rule of thumb that we turn to is: if the capability is a critical part of delivering your organization's overall differentiation, then it's more important that that capability be proprietary in nature. If you can't build the capability internally then you need to at least take steps to ensure the ecosystem you involve is somehow proprietary to your organization. If neither are true, your organization probably can't be different.

If, on the other hand, the capability is not critically important to your overall differentiation, you should look for the most cost-effective way of delivering the required quality of the capability. This might mean outsourcing, building through an ecosystem, or building it yourself. But it's not important to be proprietary if it's not a component of your differentiation. It's more important to be cost-effective.

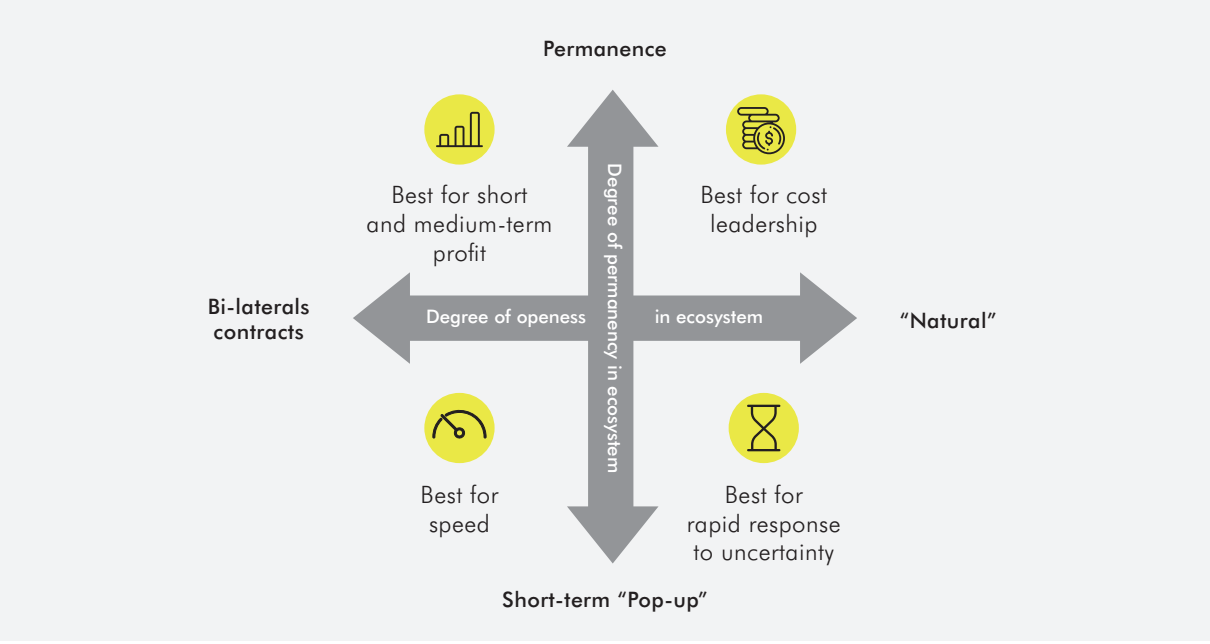
If the "how to build it" resolves as a choice to build an ecosystem, then the question becomes "with whom?" If it needs to be proprietary, you need to seek out partners who are not your competition and will agree to play in this way. For instance, when Amazon, Berkshire Hathaway, and JP Morgan sought a better healthcare solution, they formed an ecosystem to pursue it; healthcare was a critical component of their talent strategy, so they did not include competitive organizations initially. If the capability does not need to be proprietary, it might be advantageous to include your competition in the venture – such "co-opetition" shows up all the time in the automotive, technology, and pharmaceutical industries.

How to Win: How can our ecosystem be configured for advantage?

As the concept of business ecosystems ages, their types and specificity of purpose have blossomed. What used to be blurrily conceived of as some form of working collaboratively with others now has a range of increasingly specific nomenclature and business models. A transaction ecosystem like eBay is fundamentally different from an API ecosystem that enables the seamless service of Uber, even though both are focused on matching supply with demand. Supply chains are "the OG" ecosystems. Platforms have existed in tech for decades and they are now one of the de rigueur promises of would-be unicorns seeking funding. Multi-entity partnerships have long supported complex assembly processes such as automotive or aerospace manufacturing. And the more natural definition of self-sufficient interrelationships with built-in redundancy have helped collaborative efforts such as Mozilla or Wikipedia operate at massive scales. The trick for executives these days is to consider the ecosystem options in front of them in a way that allows them to make a choice that leads to advantage from participation.

We use two dimensions to frame the options and, ultimately, the choice. The first dimension is around **the degree to which the ecosystem is proprietary or open**. The extreme end of the proprietary spectrum is the bilateral contract, and as you add parties but keep the system closed, you get the multi-nodal partnership, where there are a small number of players in the ecosystem, each uniquely contributing a specific capability that is unduplicated by the others. At the "open" extreme of the spectrum is what looks more like the "natural" ecosystem from science class. In it, there is likely to be a large number of varied participants, all working together as a system in which the whole is supported, as is each of the individual players. Importantly, there is room for capability overlap amongst the players and therefore some systemic redundancy. While participants have varying objectives, no one entity is so critical that the system fails if that entity dies or decides to leave.

The second dimension is the **degree to which the ecosystem is intended to be short-term or permanent**. Generally, most business structures of the past have relied on the presumption (or illusion) of permanence. With the accelerating rate of change in business models everywhere, however, that is no longer a given. In the very recent past we have seen something new: the emergence of "pop-up ecosystems." As we struggled to contain and then respond to the dual health and economic emergencies of COVID-19, we saw largely self-organizing partnerships form for short-term needs. Erstwhile savage competitors in technology and retail worked together towards a common purpose. Traditional supply chain barriers were broken down in favour of achieving systemic efficiency. Most of these were ecosystems of convenience. No one expected these collaborations to exist forever, but for a period of time a number of businesses acted as if it was the new norm.



Bilateral and multi-nodal partnerships have long been an effective way for a small set of companies to come together with the primary purpose of maximizing profit. Typically, profits end up being distributed in rough correlation with the scarcity of the capabilities that are contributed, with the more important or more scarce contribution earning the higher profit. They benefit from being reasonably easy to set up as long as, a) a clear and shared objective exists, and, b) strict contracts and operating agreements prevent players from infringing on others' turf. Because these ecosystems are contractual by nature, they require higher coordination and administrative costs, but for many players that may be worth the clear line-of-sight they have to making money in the short term. In the past, long-term deals between participants, each with durable individual competitive advantage, allowed this model to continue undisturbed. But because these are relatively "closed" ecosystems, with accelerating change the advantage they create has a decreasing shelf life. That is either because competition can, increasingly, quickly emerge from other consortia that have similar shared objectives (for example, the SkyTeam Alliance vs. the OneTeam alliance vs. the Star Alliance in the airline world) or because the rules and regulations needed to manage the partnership are not nimble enough to absorb changes in the business landscape.

Natural ecosystems, with many participants of each kind, tend to be more *resilient* than multi-nodal partnerships. These are self-organizing with no "loudest voice" and with some built-in overlap in roles. In these types of ecosystems, the redundancy means that no one can count definitively on their "fair share" but the long-term viability of the entity is higher: when one part of the system fails, the backups kick in. It's harder for any individual player to make short-to-medium term profit in a natural ecosystem because their unique contribution is lower. But in the face of increasing uncertainty, many companies are willing to hand over some short-term gains in hope that they thrive for longer – the multiplayer ecosystem that is defined as "Hollywood" (think studios, talent agencies, production lots, writers, directors, actors, etc.) is a prime example of that.

As we consider this model and the examples above, it does make us wonder whether we are seeing a natural migration from the "top left" to the "bottom right." We certainly see a migration from left to right on the chart, largely driven by COVID-19. Organizations will value the redundancy and resilience inherent in natural ecosystems that have multiple players of the same type. We may even see a migration from permanent structures to more semi-permanent structures as problems in business evolve at a faster rate. We think the shift from left to right is more certain than the shift from top to bottom. We would love to hear what others' view on this shift might be.

Ecosystem participation is one of the few genuinely recursive strategic choices, requiring not just close attention but near-continuous monitoring and revisiting. Every time you make a shift in both your Where to Play and How to Win choices as relates to ecosystems, there will be a ripple effect through every other aspect of your strategy. And we are increasingly finding that no company should rest on its business model laurels in the face of uncertainty. Many learned this the hard way during the COVID-19 pandemic: who could have imagined that so many entrenched ways of doing business could be so fundamentally undermined in a mere matter of weeks?

As with any trend in management science, there will be leaders and laggards when it comes to exerting choice around ecosystem strategy. And the winners will almost surely be those who take a proactive stance, avoiding the fate of the wave-whipped sea star pulled by the nature's forces from one tidal pool to another, never in control of its destiny.

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They are authors of Detonate: *Why – and How – Corporations need to Blow up Best Practices (and Bring a Beginner's Mind) to Survive* (Wiley, 2018).

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