



In or out?

Succeeding in the ecosystem economy

IBM Institute for Business Value

Executive Report

Strategy and innovation

How IBM can help

To succeed in today's environment, businesses need to lead through increased complexity and volatility, drive operational excellence and enable collaboration across enterprise functions, develop higher-quality leadership and talent, manage amid constant change and unlock new possibilities grounded in data. The IBM Business Analytics and Strategy practice integrates management consulting expertise with the science of analytics to enable leading organizations to succeed. For more information, please visit: ibm.com/services/us/gbs/strategy

Exploring ecosystem advantages

Executives recognize that ecosystems are reshaping enterprises, industries and economies. Not only can ecosystems redefine the way organizations manage and govern business, they facilitate access to new markets and new customer propositions. But a majority of those surveyed report that anticipated costs of engaging in ecosystems are causing them to struggle to see the full range of business advantages. Executives from those organizations that outperform their peers however, do discern significant value from ecosystem engagement. While specific benefits are partly determined by an organization's specific ecosystem role, gains are possible for all of the major ecosystem roles whenever organizational contributions are sufficiently crucial and unique.

Executive summary

Business leaders around the world see ecosystems as inevitable. Fully 49 percent of organizations surveyed globally reported that ecosystems will change their organization's primary activities or focus areas – 58 percent in Europe, 49 percent in South America, 48 percent in North America, as many as 36 percent in China and 43 percent in Japan.¹

Examples of the impact of ecosystems on industries and organizations are manifest. In retail, pervasive business models encompassing both physical and virtual stores, supply chain optimization and customer relationship models have been rapidly transitioning to technology-enabled platforms that provide customers with virtually limitless choices about how to engage, interact and consume. Within these platforms, traditional customer paradigms have shifted from passive consumption to active participation, in terms of co-design, alternative fulfillment, new store concepts and ownership models.

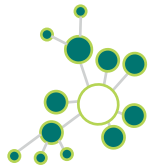
In automotive, traditional operating models are being shattered by the shift to anywhere, anytime mobility. In this environment, an increasing number of customers are less willing to embrace vehicle ownership where they lock significant capital in an irregularly utilized asset. Instead, they are rethinking their reasons for car ownership. In doing so, many customers are shifting toward fundamental need realization – which at its core means how to get from one place to another in the most convenient, comfortable, cost-effective and environmentally sensitive way.



56% of surveyed executives told us engaging in ecosystems is the most effective way to access new markets and geographies



55% of surveyed executives consider the capabilities garnered within new partnering arrangements to be crucial



49% of surveyed executives said that ecosystems will change their organizations' primary activities or focus areas

And in banking, traditional branch and online banking arrangements are ceding to development of broader, more diverse banking ecosystems. Banks within this new context act more like orchestrators and relationship managers, facilitating for their customers, access to the most innovative and useful services available, irrespective of whether the bank provides the services directly or indirectly through fintech² or other partner organizations.

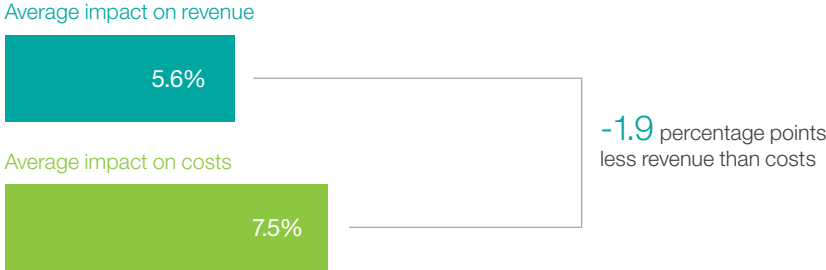
Common features across these disparate examples are threefold. Customer preferences are changing, industries are being redefined, and new and different types of competitors are emerging. Indeed, our 2016 IBM Institute for Business Value global ecosystem survey in collaboration with the Economist Intelligence Unit reveals that 54 percent of executives globally said that customer buying behavior is shifting from product or service to an experience orientation. Fifty-one percent said that boundaries between industries are blurring and being reshaped. And 55 percent said that competition is coming from new and unexpected sources.³

Not me, not now

The ecosystems rapidly emerging across industries and geographies produce multiple benefits. Fifty-six percent of executives indicated that engaging in ecosystems is the most effective way to access new markets and new geographies. And 55 percent reported that that new capabilities garnered within new partnering arrangements are essential to build new capabilities.⁴

But despite the inevitability and clear business benefits inherent in ecosystem expansion, a significant majority of business leaders remain unconvinced of the business case for ecosystem engagement. When we examined the full sample of surveyed organizations, we found that on average, executives expect ecosystem engagement to have a negative impact on their businesses. Specifically, executives estimated a 1.9 percentage point negative delta when comparing the percentage growth in revenues against percentage growth in costs stemming from their involvement with ecosystems (see Figure 1).

Figure 1
The losing case for ecosystem engagement



Source: IBM Institute for Business Value Global Ecosystems Survey, 2016.

Defining ecosystems

Ecosystems comprise a complex web of interdependent enterprises and relationships aimed at creating and allocating business value. Ecosystems tend to be broad, potentially spanning multiple geographies and industries, including public and private institutions and consumers.

However, for high-performing businesses, those that significantly outperform their competitive peers in terms of revenue growth and operating efficiency, confidence in the benefits stemming from ecosystems is greater. Unlike the total sample, outperformers see a positive net benefit of 1.7 percentage points from ecosystem involvement, comparing expected percentage growth in revenue over expected growth in costs (see Figure 2).

Clearly, the data reveal significant differences in perception and outlook regarding the potential value attainable from ecosystems. So what is it that the outperforming organizations see differently about their engagement with and in ecosystems? And how can those lessons be applied to less financially advantaged organizations such that they can pursue ecosystem engagement with similar confidence?

Figure 2

Top performers see things differently: The winning case for ecosystem engagement

Average impact on revenue



Average impact on costs



1.7 percentage points
more revenue than costs

Source: IBM Institute for Business Value Global Ecosystems Survey, 2016.

Shock of the new

Executives of the most successful organizations we surveyed embrace ecosystems more comprehensively. Compared to their lower-performing peers, again based on revenue growth and operating efficiency, 54 percent more of outperforming organizations expect to pursue new and different partnering arrangements. And more than 200 percent more outperformers expect that ecosystems will help grow revenues by greater than 10 percent. Outperforming organizations are achieving something distinct from ecosystems: greater value and more innovation, be they anticipated or unexpected (see Figure 3).

Figure 3

The optimism of outperformers



Source: IBM Institute for Business Value Global Ecosystems Survey, 2016.

Compelling examples of successful ecosystems are emerging across industries from around the world. In China, Apricot Forest has created a unique ecosystem in which doctors are able to access patient records, medical journals and discussion boards through their dedicated mobile app, MedChart.⁵ Launched in 2013 and branded Evernote for Physicians, the app receives 10,000+ user uploads associated with hundreds of medical cases every day.⁶ Apricot Forest's ecosystem now comprises more than 250 million patients, 85 million doctors and almost 2 million hospitals across Asia.⁷

And bizfi.com, a financial technology (fintech) company has created an ecosystem for small businesses supporting dynamic new forms of funding. Rather than traditional lender-borrower relationships, bizfi evaluates its 35,000 current and potential borrowers based on their sales histories and forecasts, and agrees to a variable repayment schedule based on a percentage of funds flowing into lenders' merchant accounts.⁸

Expanding opportunities

Organizations can drive greater value from ecosystems in three important ways: first, increase the strategic impact of ecosystem engagement to their businesses, second, improve access and lower cost of skills and third, more effectively use ecosystems to expand the scope of strategic business opportunities and initiatives.

Organizations can tap into the deeper strategic potential of ecosystems by embracing a broader approach to what ecosystems are and how they relate to underlying strategy. Ecosystems help organizations access critical capabilities that would have otherwise been unavailable or very difficult to obtain. At the same time, they create paths to new or different growth possibilities such as new markets, geographies or segments, and new types of products which might combine unexpected or different combinations of capabilities, assets or organizations.

For example, Citykey, a U.S.-based startup, offers interactive, customizable online city guides with insights from travel writers and tourism experts. Users, which might include hotels or Airbnb hosts, obtain self-branded websites tailored to the particular interests of their clientele, comprising anything from upscale restaurant recommendations to “under-the-radar” hotspots.⁹

Second, while many of the executives surveyed are fixating on the costs of ecosystem engagement, leaders of outperforming organizations recognize the significant opportunity to improve skills cost effectively by tapping into ecosystem partners. Similarly, as many ecosystems tend to be highly dynamic, they can also promote improved agility, flexibility, innovation and collaboration across participating organizations.

Ecosystem engagement can (1) deliver value through strategic impact to businesses, (2) improve access and lower the cost of skills and (3) expand the scope of business opportunities.

For example, FirstBuild™, a collaboration platform established by General Electric connects designers, engineers and thinkers with a view to sharing new ideas and promoting co-creation. Ideas conceived in FirstBuild accelerate and improve the company's ability to create new home appliances products and solve challenging business problems.¹⁰

Third, ecosystems can drive a vastly broader range of strategic opportunities including new engagement and monetization models. They can support new types of business models and help translate existing business models into new contexts. And they can provide new opportunities for customers to engage in more compelling ways. In doing so, ecosystems can help create and reveal new ways of making money.

For example, Nest, a U.S.-based home automation company leveraged a single product based on remotely managing home heating and air conditioning systems to form a new technology platform for connected devices. It achieved this by forming partnerships with brands such as Mercedes Benz, LG and others. Nest leverages the capabilities of partners to create new experiences for home owners.¹¹

It's not what you do, it's how you do it

Engagement in ecosystems is only valuable if it supports organizations achieving business goals better than would have been possible by them operating in traditional ways. And there are different ways that organizations can engage. Specifically, we have identified four distinct ecosystem roles (see Figure 4).

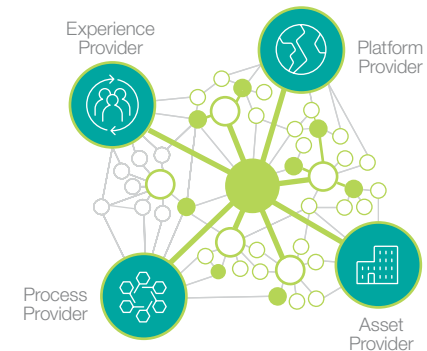
Experience Providers within ecosystems can execute a variety of differentiated and unique functions enabled by their ability to combine characteristics across multiple partner organizations. These might include managing customer relationships, developing customer-centric products and services, creating individualized marketing or sales approaches, or research and development. And the more successful Experience Providers are at building unique experience and customer “stickiness”, the more successful and valuable they are likely to be operating within and across ecosystems.

For example, Sunrun, the largest dedicated residential solar business in the United States offers “solar as a service.” By helping consumers obtain fast, personalized solar energy systems tailored to their homes, Sunrun has successfully established a central role within rapidly evolving energy and utilities ecosystems.¹²

Asset Providers provision or manage physical assets used for production either within supply chains or networks, or other critical activities within ecosystems. To that effort, Asset Providers might integrate asset usage into business planning to achieve optimal alignment across ecosystems. The most successful Asset Providers are able to field unique assets or common assets in unique ways, creating high value and because of that, high switching costs for customers or partners.

Figure 4

Delineating ecosystem roles



Source: IBM Institute for Business Value analysis.

For example, in 2015, Audi, BMW and Daimler bought the HERE mapping business from Nokia to augment their autonomous mobility offering. HERE maps and data are becoming crucial in emerging connected mobility services such as car-sharing, ride-sharing and other cross-industry applications.¹³ As mapping becomes essential for automobile companies, the three German car companies together will be able to provide a much denser and accurate source of information for maps development through the roughly 10 million cars they sell annually.¹⁴ They will not have to depend on external technology providers like Google.

Process Providers manage ecosystem processes and service-level agreements across shared services, functions and activities with the objective of optimizing process efficiency. Increasing the seamlessness and agility of processes can make the ecosystems, and the process providers that underpin them more essential and more valuable.

For example, India's Zomato has successfully established a simple, convenient and unique process-based model around a rapidly expanding network of restaurants and customers. It successfully built an information platform covering approximately 1 million restaurants in 10,000 cities across 23 countries.¹⁵ Zomato has evolved from simply providing customers with information, to helping them book tables and place orders, with more than 1 million food orders made through its platform in a typical month.¹⁶

And *Platform Providers* create integrated environments that support and enable ecosystems to operate. Specific types of platforms that might be created include market-making initiatives which match disparate buyers and sellers, or alliance management and governance systems that create overarching ground rules within which other ecosystem participants can operate. The most successful Platform Providers possess a unique ability to obtain and retain stakeholders on their platform, either through greater capability, sophistication or reach, such as better access to customers.

For example, AliveShoes provides people and companies a simple, compelling platform to design and produce their own custom shoes from scratch. Facilitating production and logistics from Italy, and serving customers around the world who want to create personalized bespoke Italian shoes, AliveShoes has created a unique platform of choice in the global high fashion arena.¹⁷

Over recent years, much has been made of owning the platform. Several leading studies such as “Pipelines, Platforms, and the New Rules of Strategy,”¹⁸ “How To Succeed With A Platform Business Model”¹⁹ and “The Age of the Platform”²⁰ posit that within ecosystems, the platform is where the real value lies. And our survey confirms this wide-ranging view with more than half of all executives surveyed saying that they want their organization to create and orchestrate ecosystem platforms. Prominent and highly successful examples reinforce this view among the global business leaders we surveyed, such as Apple with its App Store and iTunes, LinkedIn as the go-to location for employers to connect with potential employees, and Airbnb with its ability to connect property owners with guests from around the world.

However, as our analysis demonstrates, all the value is not necessarily locked within the platform. Uniqueness and essentiality across other ecosystem roles also inform the ability to create and capture new value. Experience Providers, Asset Providers and Process Providers can each reap rich rewards within ecosystems if what they provide is sufficiently valued, differentiated and difficult to replicate.

Organizations can employ a variety of tools to help determine what role they might best play within ecosystems, and where they might generate significant value for their customers and themselves. Design-thinking or solutions-based tools and approaches can help organizations scan market dynamics and with a view to anticipating and exploring new opportunities.

Uniqueness and essentiality can enable organizations to create and capture new value when performing ecosystem roles other than Platform Provider.

These disciplines can be used to not only understand ecosystems as they are today, but conceptualize how they might evolve in the future. Such insights can assist organizations in deciding what actions or roles to pursue to become essential in those future environments.

Component business model (CBM) tools employ a technique which overlays a logical representation or map of business components, functions or activities. CBM can be applied to both individual organizations, industries to identify what functions might be in high demand in the future, as well as what capabilities an organization needs to meet those demands. In doing so, CBM can help organizations think beyond traditional models by conceptualizing new and different combinations or formations of functions that, although unsuited to traditional organizational models, can be highly successful in new business ecosystem environments.

One of the central activities within ecosystems is orchestration, or providing rules, governance and facilitation around how collaboration occurs across the system. Orchestration also addresses how tensions and conflicts can and should be resolved. Much of the literature focuses on the importance of Platform Provider as orchestrator.²¹ But potentially, any organization playing any of the four primary roles could act as ecosystem orchestrator. Examples exist of each.

In the case of European travel industry leader Tui Travel, the organization develops and maintains deep customer relationships, orchestrating tailored, compelling travel and entertainment experiences across an ecosystem of associated travel and entertainment organizations.²²

And Predix, an industrial grade internet-of-things platform created by General Electric combines cutting-edge technology and industry experience in a platform-as-a-service environment that securely captures machine data at scale, analyzing it to support a range of business applications.²³

Organizations might play more than one role in ecosystems, either serially or concurrently. And to sustain a differentiated, valued and valuable role, businesses need to match their own organizational capabilities with functions, roles or activities needed in the ecosystems in which they participate.

As outlined in our earlier IBM Institute for Business Value study, “The new age of ecosystems,” analysis reveals that ecosystems are characterized by openness, mutuality, flexibility, dynamism and permeability.²⁴ And they differ in terms of their complexity and the level of formality of their orchestration. To successfully match organizational capabilities with underlying ecosystem needs, organizations can consider three specific questions:

- What key objectives does your organization have in ecosystem engagement?
- How might your organization best balance legacy businesses with embracing new ecosystems?
- In what ways can your organization exploit existing or build new capabilities fundamental to critical ecosystem roles?

To sustain a differentiated, valued and valuable role, businesses need to match their own organizational capabilities with functions, roles or activities that are needed in their ecosystems.

A foundation for digital revolution

Rapid evolution of business ecosystems is occurring contemporaneously with an accelerated impact of digital technologies on business. The two forces are not unrelated. Digital technologies provide the foundation and engine in which ecosystems emerge and evolve. And in turn, as 52 percent of global executives in our study agree that ecosystems help organizations access and employ new and emergent technologies.

As digitization is a fillip to widespread disruption and creation of new industries, two phenomena in particular are converging to advance new business paradigms. And they promise to be especially impactful within the context of emergent business ecosystems: digital intelligence and digitally reinvented organizations, otherwise known as Digital Reinvention™. Combined, digital intelligence and Digital Reinvention create a Cognitive Enterprise (see Figure 5).

Figure 5

Digital convergence



IBM Institute for Business Value analysis.

Digital intelligence refers to technologies that operate in similar ways to the human brain. It is underpinned by systems that understand information as humans do. Digitally intelligent systems grasp underlying concepts, form hypotheses, reason, and infer or extract new ideas. They learn dynamically, unbounded by their knowledge at any particular point in time. In so doing, they build new knowledge and understanding through time. And they interact with their environments by speaking, listening or engaging in other types of communication.

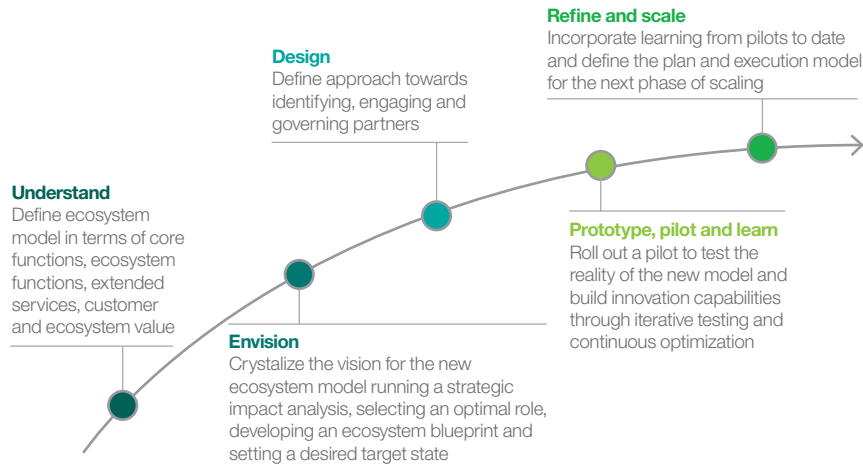
Digital Reinvention applies digital technologies to functions and processes across organizations. A digital enterprise is in a state of constant evolution, integrating across activities to produce seamless outcomes. Omni-channel experience or, more fundamentally, single view of a customer is reflective of an organization that embraces digital transformation. Beyond transformation, Digital Reinvention reflects a fundamental rethinking of the enterprise, reimagining structure, operations and governance from a customer-centric perspective.

New, compelling customer experiences, business models and monetization opportunities delivered through ecosystems are at the core of Digital Reinvention. Indeed half of all the executives we surveyed reported that the experiences customers now demand can only be delivered through business ecosystems.

For example, an Americas-based global farm equipment manufacturer is using digital technologies to help farmers dramatically improve crop yields. Combining sensor data on soil conditions, crop features and asset utilization data, along with external data such as market prices, weather and inventory levels, the organization is able to provide farmers, businesses and distributors with powerful new insights to support their strategic and operational decision making. By placing customers' needs at the center of its business model, the manufacturer provides significantly improved experiences and other business benefits.

And artificial intelligence and cognitive computing assets such as Watson are helping businesses further individualize, deepen and scale experiences.²⁵ For example, a major global coffee chain has created personalized experiences by applying cognitive analysis. External data, such as weather and news, is continuously combined with internal data from loyalty programs and its CRM platform to predict preferences and demand at an individualized level. The company now provides personalized alerts based on preferences, location and time of day by way of cognitive analytics.

For leading organizations, Digital Reinvention is already becoming the key enabler supporting rapid expansion of digital platforms. Indeed, digital strategy provides the virtual glue of new business ecosystems. Five specific steps can be pursued to expedite ecosystem engagement (see Figure 6).

Figure 6*Ecosystem accelerators*

Source: IBM Institute for Business Value analysis.

About our research

The IBM Institute for Business Value in collaboration with the Economist Intelligence Unit surveyed 2151 executives in 19 industries and 29 countries between January and May 2016. We surveyed 582 Chief Executive Officers, 243 Leaders of Partnering or Alliances, 361 Chief Marketing Officers, 360 Chief Operating Officers, 359 Chief Information Officers and 246 Chief Financial Officers.

Performance groups were based on self-reported assessments of performance relative to organizations' competitive peers. High performers rated themselves 5 on a scale of 1 to 5 for both revenue growth and operating efficiency over the past three years. Low performers rated themselves 1, 2 or 3 for both revenue growth and operating efficiency for that same period. Peer performers reflected any other combination of self-reported achievement.

Are you ready to ramp up ecosystem engagement?

- How can your organization best identify new collaboration opportunities to spur innovation?
- What types of data can your organization and ecosystem partners generate and share that might be monetized across the ecosystem?
- In what ways can your organization orient new business, operating and organizational models to address changing demands of customers?

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