Roland Berger Focus

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Business ecosystems

Partnership of equals for corporates, SMEs and startups

Institute of Technology Management

University of St.Gallen

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Management summary

Digitalization is more than just a technological revolution, it's a revolution in transaction costs within and between companies. Sharp boundaries between industries and companies are disappearing in its wake.

What are emerging are business ecosystems that can respond to customer needs in a brand new way. New customer needs are no longer satisfied by innovations from within a company's own value chain but by a network of partnerships.

Business ecosystems cut the Gordian knot that binds many a failed innovation project. They make it possible to overcome the barriers and obstacles of internally driven innovation projects by developing the value proposition for the customer not from within the supply chain alone but by establishing a partnership of equals within the framework of an ecosystem. And transforming a company's value chain into a value network of multiple partners.

In this situation it is vital to understand exactly what it is that makes a business ecosystem a success. In a bid to understand in detail (a) how a business ecosystem works and (b) what prerequisites and conditions the success of a business ecosystem depends on, Roland Berger has been working as a strategic partner to Helvetia Innovation Lab at the Institute of Technology Management at the University of St. Gallen. Their shared experience in this context forms the foundation for the arguments made in this study.

Before a business ecosystem can work successfully, three questions must be answered:

> Is there a clear value proposition or a strategic issue to serve as the basis for a future value proposition?
> Does the solution require more than two partners and what are the risks facing each of the involved partners?
> Does the expected benefit (total margin from the value proposition) justify the risk and the cost to all participants as well as the transaction costs incurred by the orchestrator, e.g. to pay for the workforce needed for orchestration and/or the IT platform required?

Business ecosystems come with a specific set of opportunities and risks. The risks that inevitably accompany a business ecosystem can be minimized with a portfolio approach: Corporates would be well advised to manage their own business ecosystem initiative as an orchestrator while at the same time acting as a complementor in the business ecosystems of other orchestrators. This increases their chances of being in a successful business ecosystem and minimizes their risk because they are then participating in several different business ecosystems.

Following the successful implementation of a business ecosystem and the clear definition of the tasks and functions of orchestrator and complementor, various scenarios for the further evolution of the ecosystem are conceivable, from the setup stage to an exit option.

Firms that refuse to get involved in business ecosystems today because they believe they will lose control over their business beyond the boundaries of their own company, or businesses that rely on models of corporate and startup cooperation without a proven track record of success, risk throwing away opportunities for growth.

Business ecosystems offer a way out of this strategic dilemma. If successful, they are a win-win for all involved. Each of the partners achieves something they could never have achieved alone.

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Companies and industries without borders

How business ecosystems are revolutionizing the economy

Everybody is talking about the digital transformation, but rarely do we hear any real news. For all the talk of digitalization, it is often little more than rhetoric, a word that means everything and nothing at the same time. One key aspect of digitalization is far too often overlooked.

Never before in the history of mankind has it been so easy to exchange information between companies. According to Moore's law, the amount of computing power in our digital world doubles every 18 months. By way of illustration, in 1990 the computers of the Munich Science Network were still working with a transmission rate of 10 megabits per second. By 2015, the transmission speed had already risen to 100 gigabits per second. That's 10,000 times faster. Extrapolating this development into the future and taking into account new possibilities such as virtual reality meeting rooms and other solutions, we can say that never will it be so easy to transfer information between companies as it will in tomorrow's world.

However, this is more than just a technological revolution. It comes with a previously unimaginable reduction in transaction costs within and between companies. Also disappearing before our eyes are the fixed and clearly defined boundaries between industries and individual companies that emerged during the Industrial Revolution of the 19th century.

BUSINESS BEYOND TRADITIONAL BORDERS

In that kind of traditional setting, an industry was delineated by a clearly defined number of players who were roughly similar in their products and processes, each operating in firmly established value chains and competing in the same markets for customers and business. In this "old" world, innovation was based on a company's internal resources and capabilities. The core competencies of a business formed the nucleus of its innovation activities. And the industry boundaries formed the natural barriers around all innovation projects.

In this "old" world, the core competencies of a business formed the nucleus of its innovation activities. And the industry boundaries formed the natural barriers around all innovation projects. The future will be different.

The future will be different. It will be characterized by fluid and varying cooperation between companies of different sizes and different natures. The era of the business ecosystem has begun. The customer and their needs are still the starting point in this new world. But in contrast to the old logic, the question that follows the identification of customer needs is not which of these needs correspond to the capabilities and resources of your company and can therefore be met by you. The question is rather, which aspects your company can address autonomously and which require you to partner with others to meet the customer's needs to the fullest degree.

This new business ecosystem approach opens up completely new evolutionary paths and possibilities for innovation beyond the old industries and company borders and unlocks brand new possibilities for growth and differentiation. The technological advances alluded to above make it possible, for the first time in history, for a new form of cooperation between companies to succeed on an equal footing and to be efficient, since the achievable margins are not eaten up by the transaction costs of the collaboration. The CEO of Swiss company Helvetia, Philipp Gmür, sums it up nicely: "Value creation in tomorrow's world will take place in ecosystems. Because they enable us to accompany the customer throughout the entire customer journey, and that represents significant competitive edge."

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The logic behind the business ecosystem as outlined here has far-reaching consequences. It means that large corporates are no longer automatically destined to be the dominant players in the business world. SMEs and startups who build a business ecosystem can gain access to resources and expertise with which they will before long be able to face large companies as equal partners. This raises the question for all companies of how to respond to the fast growing digital players of this world. How should firms cooperate with startups and innovative players? And especially for startups and digital players the question is, what types of partnerships are most suited to long-term collaboration with corporates?

Answering these questions is essential because there is no way around the following two observations:

IN SEARCH OF NEW GROWTH OPPORTUNITIES

FIRST: Opportunities for corporates to achieve intrinsic growth have been exhausted. Whether we're talking about improving sales structures, entering new markets or engaging in business development more intensely, all of these possibilities are already well known and thoroughly exploited by companies today. Nor is it any good trying to shore up or establish market power through mergers and acquisitions alone. In many cases, the value achieved through a corporate transaction does not meet the expectations given that it is no easy task to integrate previously disparate corporate cultures. But where, then, can we find the opportunities for growth if both the internal options and the chances offered by M&As have been exhausted?

SECOND: In this situation many corporates view incubators and accelerators as an opportunity to achieve growth beyond their own capacity and in collaboration with startups.

A survey of 500 startups found that 92% of corporates are already working with startups (as of 2017). Since the study polled the views of global companies, it may well be that the corresponding figure is lower in the German-speaking countries. The figure is also likely to be lower for SMEs.

A Roland Berger poll comes to a very similar conclusion: Only 15 percent of companies do not collaborate with startups today. And 15 percent of companies have even worked with more than 40 startups in the last 12 months.

Yet when it comes to the actual collaboration with startups, there is still a great deal of variation. In terms of the success rate, a rather gloomy picture emerges. We estimate that less than half of the activities initiated by large corporates in recent years can be deemed a success. The main thing, however, is that the existing accelerators and incubators usually follow the "old" industry logic. The only difference lies in the implementation model: Instead of realizing innovations internally in the corporate setting, their implementation is forced to happen externally in the incubator or accelerator. In no way does this break out of the fundamental constraints of the established industry logic.

From the perspective of a business ecosystem, however, constructs such as incubators and accelerators offer brand new opportunities for innovation and growth: Why not build business ecosystems together with startups from the accelerator or establish business ecosystems in the incubator with startups as potential partners? Doing so would enable the benefits of existing startup initiatives to be used in a completely different way.

In a bid to understand in detail (a) how a business ecosystem works and (b) what prerequisites and conditions the success of a business ecosystem depends on, Roland Berger has been working as a strategic partner to Helvetia Innovation Lab at the University of St. Gallen. The lab supports companies, Swiss insurer Helvetia in particular, with the strategic and operational aspects of developing business ecosystems, develops appropriate management strategies and undertakes academic research and teaching on the subject. Within this joint perspective of strategy consulting and academic/applied research, theoretical work and practical observations go hand in hand and provide insight into the factors that drive the success of business ecosystems.

The observations and experiences of Helvetia Innovation Lab in this context – 18 months of research, more than 40 case studies, in excess of 200 interviews with orchestrators and complementors, several C-level consulting projects on business ecosystems – coupled with the accompanying strategic support from Roland Berger, form the basis for the arguments and assertions made in this study. A series of workshops held by Helvetia Innovation Lab with the support of Roland Berger were particularly valuable in this context, involving companies such as Helvetia, Bayer, Siemens and Microsoft as well as a large number of startups and SMEs.

Chapter 2:

What is a business ecosystem?

And how does it work?

The basic idea behind a business ecosystem is a partnership between three or more companies that results in a service offering that none of the parties would be able to offer alone. Based on the research by Helvetia Innovation Lab, three elements are constitutive of a business ecosystem (BES):

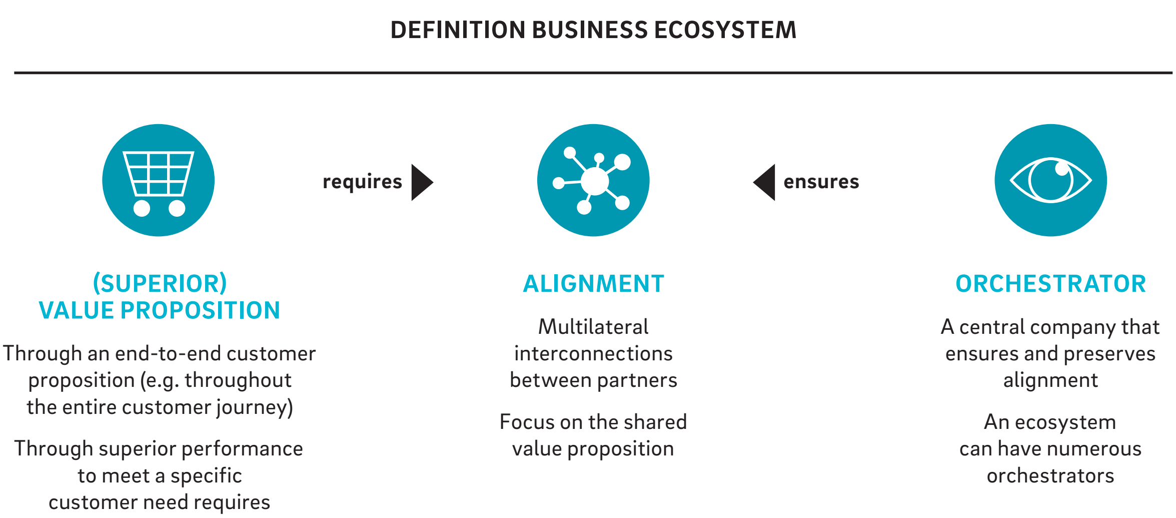
FIRST: The shared value proposition is the foundation on which all other projects and forms of cooperation are built.

SECOND: The fulfillment of this value proposition is based on modules that do not exist prior to the start of the project and must be provided by numerous partners.

THIRD: A so-called orchestrator ensures that the integration of the partners is promoted and the desired value proposition achieved. → A

These abstract features of a business ecosystem are best illustrated with an example: Say an automotive manufacturer wants to break into the growing business of autnomous mobility. The OEM teams up with an existing and successful online platform as well as an insurance company to create and implement new business opportunities. Here we see three partners linking up who would never have had anything to do with each other in a business context in which the "traditional" boundaries between industries and companies still existed. But

A: What is a business ecosystem?
The value proposition is central and secured by alignment and the orchestrator



now it is possible to develop shared products and services that each would not have been able to develop on their own.

The special thing about a business ecosystem compared to other approaches is this: The three players are interacting as equals. It's the existence of an orchestrator that ensures collaboration takes place on an equal footing. Previously, if the three players had worked together, one of them would have dictated the direction of travel to the other two. Of course, the orchestrator in a business ecosystem does have a certain "executive authority". But the orchestrator is by no means a dictator and must always take into account the fact that there is dependency between the partners.

Consider this real-life example: The startup Tailored Fits managed within 18 months to develop individually 3D printed insoles by acting as an open and impartial orchestrator for international partners. Using cutting-edge 3D Printing Technology (supplied by Materialise N.V., Belgium), the customer's foot is scanned with an iPad (body scanning solution from Techmed 3D, Canada) at the retailer's store and the order to print the insole is issued via a platform. Upon delivery, the customer receives a custom-made insole offering ultimate comfort and added value. Adidas has been trying to bring a similar product to market for five years – in vain. The Tailored Fits product range has since been extended to cover ski boots (Scott, Italy; development, coordination of injection mold sourcing) and other products. This case illustrates how a small startup with limited resources can threaten even the biggest players in the market.

Things are different in a business ecosystem. A business ecosystem is based on a shared commitment between corporates and startups to dedicate themselves to a precisely defined and delimited topic in order to achieve the kind of success together that one could not achieve without the others.

OPPORTUNITIES AND RISKS OF BUSINESS ECOSYSTEMS

This completely new form of cooperation comes with the specific opportunities and risks inherent in business ecosystems, as the case studies examined by Helvetia Innovation Lab demonstrate.

The opportunities are: the ability to increase sales, enforce higher prices, achieve competitive edge, penetrate new markets, access critical resources through shared use of the resources of partners.

The specific risks of a business ecosystem lie in the not inconsiderable effort involved in coordinating the partners. A further risk comes from the mutual dependency of the cooperating partners, which entails certain risks if one of the partners decides to leave the BES. As already mentioned, business ecosystems are built on the idea that the value proposition can only be achieved in conjunction with all partners. None of the partners has control over the others.

Setting up a business ecosystem is always associated with some level of entrepreneurial risk. That is because all partners are required to give a certain amount of upfront input in order to achieve the shared value proposition. But what comes first at the beginning of a business ecosystem? The chicken or the egg, the shared project or the advance input of the individual firm? This dilemma can be resolved from the outset by creating a unifying and shared sense of identity.

Every business ecosystem therefore requires some form of risk management. Frank Schumacher, Senior Partner at Microsoft, sums up his experience with business ecosystems as follows: "A business ecosystem enables a company to expand their value chain fast and with the minimum level of risk."

MANAGING RISK WITH A PORTFOLIO APPROACH

From the perspective of Roland Berger and Helvetia Innovation Lab, the specific risks that inevitably accompany a business ecosystem can be minimized with a portfolio approach.

Corporates would be well advised to manage their own business ecosystem initiative as an orchestrator while at the same time acting as a complementor in the business ecosystems of other orchestrators. This increases their chances of being in a successful business ecosystem and minimizes their risk because they are then participating in several different business ecosystems.

Being a complementor involves less effort, since all of the orchestration work is done by the orchestrator. Nevertheless, the complementor benefits from a business ecosystem's potential, especially with regard to generating new growth opportunities and participating in trends, which could not be realized from within the company's own enterprise boundaries. In that sense, corporates can even exercise the role of several complementors at once.

The upshot? The weaknesses and the strengths of corporates and startups are interlinked in a business ecosystem in such a way as to produce synergies. If a corporate participates in a business ecosystem orchestrated by a startup, the larger player benefits from the speed and innovative power of the smaller. If the corporate itself is the orchestrator, then it can contribute its financial resources, reputation and network to provide business ecosystem startups with access to customers and funding. The business ecosystem is thus likely to endure longer and can, if necessary, engage in prolonged research and development.

Beat Sidler, Head of the V-Zug Lab, describes the win-win situation that business ecosystems offer for SMEs as follows: "Through the collaboration of partners in business ecosystems, value chains become value networks. This offers the opportunity to create a consistent customer experience along the entire customer journey that extends far beyond a single industry's boundaries."

DISTINGUISHING BETWEEN BUSINESS ECOSYSTEMS AND DIGITAL PLATFORMS

The terms and concepts of business ecosystems and digital platforms are often conflated. However, academic studies conducted by Helvetia Innovation Lab demonstrate the need to make a clear distinction between technological factors and cooperation models. Technological platforms are mostly used to reduce transaction costs between ecosystem partners. Thus, the platform is only a means to the end of efficiently orchestrating a business ecosystem. This is how it differs from a platform ecosystem. The core function of a platform ecosystem is to produce network effects: As the number of providers (on the platform) increases, so the benefits for the customers increase. More customers will use the platform as a result, which in turn attracts more providers. A virtuous cycle develops, known as the network effect. Uber is an example.

However, this is only quantitatively driven: It is not the individual provider or user that counts, but the masses, because they are what drive the network effect. That is how it differs from a business ecosystem, in which each partner is individually dependent on the others and must be individually orchestrated.

Chapter 3:

What are the conditions for a successful business ecosystem?

What are the first concrete steps to take to achieve success?

Under what conditions and prerequisites will a business ecosystem be successful? What are the obstacles and difficulties that stand in the way of the success of business ecosystems and must therefore be avoided?

The case studies examined by Helvetia Innovation Lab show that the idea of business ecosystems stems from the fact that the partners involved work together differently than in traditional innovation projects. The following basic questions must therefore be answered before the partners start to create a business ecosystem:

> Is there a clear value proposition or a strategic issue to serve as the basis for a future value proposition?
> Does the solution require more than two partners and what are the risks facing each of the involved partners?
> Does the expected benefit (total margin from the value proposition) justify the risk and the cost to all participants as well as the transaction costs incurred by the orchestrator, e.g. to pay for the workforce needed for orchestration and/or the IT platform required?

B: Balanced scorecard ensures that success is measurable
Output, process and input as measurement criteria

VISION: INNOVATION LEADERSHIP

	1	2	3	4	5
OUTPUT CRITERIA:	**Economic success:** Cumulative incremental profit of all BES participants	**Market relevance:** Number of customers for BES solutions	**Appeal:** External investment in the BES (from non-participants)	**Implementation:** Number of successfully completed initiatives	**Awareness:** Number of publications or relevant mentions of the BES
PROCESS CRITERIA:	**Future orientation:** Quality of the pipeline for BES initiatives	**Collaboration:** Satisfaction with the sharing and exchange within the BES	**Reliability of timescales:** Adherence to originally planned milestones	**Satisfaction:** Average satisfaction level of participants and the least satisfied member	**Consequence:** Number of "killed" initiatives
INPUT CRITERIA:	**Scope:** Number of participants in the BES	**Costs:** Monthly transaction costs (for orchestrator, events, employee secondment, etc.)	**Resources:** Number of FTEs for orchestration	**Participation:** Number of associated partners	**Promotion:** Scope of marketing activities (e.g. measured against budget)

Once these basic questions have been answered, the business ecosystem set up and the tasks and functions of orchestrator and complementor defined, then a balanced scorecard is recommended as a means of enabling ongoing performance measurement. → B

Following the implementation of a business ecosystem, as Helvetia Innovation Lab's research shows, there are three possible paths for its further evolution. → C

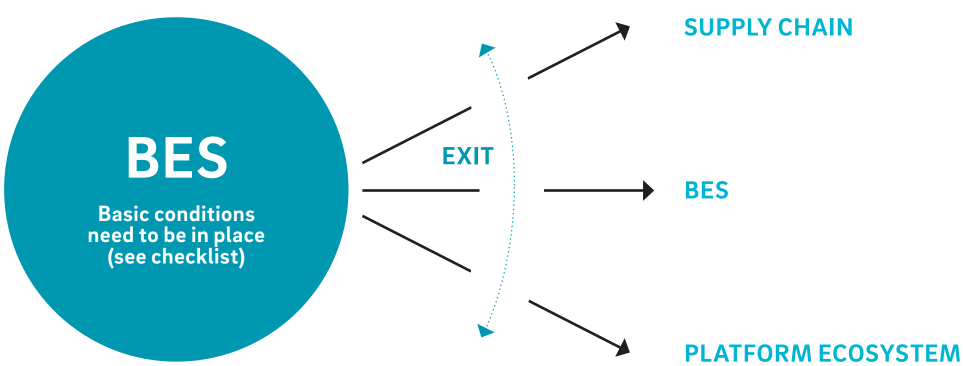
FIRST: The business ecosystem becomes a supply chain, since the only reason for building the business ecosystem was to help develop the higher-level service. Over time, however, the service offering becomes a standardized product or service within a supply chain.

SECOND: The business ecosystem continues to exist and no standardized products or services are ever created because the business ecosystem remains innovative over time.

THIRD: A digital platform is implemented in the wake of the business ecosystem, creating a platform economy. To enable this, however, the business ecosystem must have achieved a critical mass of users.

FOURTH: Applicable to all options: An exit from the business ecosystem is possible at any time. Business ecosystems, unlike traditional marriages, are not meant to last for eternity. It may "fit" in the medium term, and the BES may be able to open up new perspectives for all partners, but the cooperation may also come to an end following successful projects.

C: The implementation of a business ecosystem sets the course for the future
Four different scenarios



More than 80 years ago, economist and Nobel Prize winner Ronald Coase coined the term "transaction costs". At the time, Coase postulated that the boundaries of a company were determined on the basis of the transaction costs that a certain service or a certain process cost on the market or internally. The breathtaking reduction in transaction costs that businesses have seen in the wake of digitalization has enabled companies today to enter into completely new forms of cooperation. Business ecosystems are the way of the future.

In a world where clearly defined boundaries between companies and industries are disappearing, business ecosystem offer a fundamentally new means of business cooperation and partnership. Instead of innovations being initiated and realized from within the existing supply chain, value networks provide customers with a value proposition that could not be achieved on the basis of a company's own competencies and resources alone.

Firms that refuse to get involved in business ecosystems today because they believe they will lose control over their business beyond the boundaries of their own company, or businesses that rely on models of corporate and startup cooperation without a proven track record of success, risk throwing away opportunities for growth.

If you can afford to do that, then you are either absolutely certain of your internal growth potential or you plan to generate your growth solely through M&As. But what company can claim that? For most corporates and SMEs, there is thus no alternative to tapping new growth prospects with business ecosystems assuming internal growth options are limited and external opportunities in the form of M&As are thin on the ground.

Business ecosystems offer a way out of this strategic dilemma. If successful, they are a win-win for all involved. Each of the partners achieves something they could never have achieved alone.

In a world where clearly defined boundaries between companies and industries are disappearing, business ecosystem offer a fundamentally new means of business cooperation and partnership. Instead of innovations being initiated and realized from within the existing supply chain, value networks provide customers with a value proposition that could not be achieved on the basis of a company's own competencies and resources alone.

WE WELCOME YOUR QUESTIONS, COMMENTS AND SUGGESTIONS

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