How Business Ecosystems Rise (and Often Fall)

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Ecosystems are increasingly popular, fueled by the success of iconic examples such as Google, Apple, Facebook, and Amazon. Yet confusion about them abounds, and many commonly held beliefs about ecosystems simply aren’t true. To objectively analyze several key details about ecosystems—such as how often they succeed, how important it is to be first, and how long they take to pay off—we conducted a quantitative study of ecosystems over the past four decades. The results show that ecosystems tend to follow one of four paths during their life cycle. Moreover, there are three critical windows during which actions by management can have a disproportionate effect on long-term success.

About the Analysis

There is no measurable, standard definition of an ecosystem. We focused on multicompany systems cited by at least one academic paper as an ecosystem and then confirmed that they showed several defining characteristics: (1) a large number of partners, (2) diversity across industries, (3) relationships based on collaboration rather than ownership, and (4) the ability for partners to join with limited friction. We then analyzed market share data from IHS, Statista, and other sources to examine ecosystems’ life cycles. Because we covered several decades of performance, it is virtually impossible to avoid some survivor bias. As such, our failure rates are, if anything, conservative.

Ecosystems are tough to analyze due to, among other reasons, a lack of structured data. With so little quantitative analysis, it can be tempting to look at the most conspicuous current examples and believe that ecosystems are wildly successful—but that would be overlooking the much larger number of entrants that failed to take hold. We analyzed the performance of 57 ecosystems in 11 sectors across geographic markets (see “About the Analysis”) and found that fewer than 15% of the ecosystems studied were sustainable in the long run.

In addition, our research shows how ecosystems rise and fall. According to the findings, even successful ecosystems often do not last, given their highly dynamic nature. Therefore, management must continuously reevaluate strategy and adapt it as an ecosystem evolves.

Specifically, our research identifies four typical paths for ecosystems. (See “Four Trajectories for Business Ecosystems”):

- Never took off. The first, and most common, group includes ecosystems that simply failed to get off the ground (which we define as achieving at least 50% market share). About half of the groups we analyzed followed this path—for example, Microsoft’s Windows Phone and BlackBerry’s operating system—and most fell far short of the 50% threshold, instead peaking at roughly 15% market share, on average.
• **Won it all — temporarily.** The second group includes ecosystems that won significant market share (peaking at an average market share of 80%) but then fell to half that share or less within seven years. This group represented about one-fourth of the ecosystems in our analysis, including Netscape’s web browser and Symbian’s operating system for mobile devices, among others. Some ultimately exited the market; those that remain have a market share of about only 10% on average.

• **Fork in the road.** In the third trajectory, some ecosystems won it all but have started to lose market share in recent years. This could be a temporary dip or the beginning of a permanent decline. One in 10 ecosystems in our analysis has followed this path, including Uber and Seamless/GrubHub. They peaked on average at roughly 80% market share and subsequently fell to approximately 60% on average in 2018. They still maintain a significant share of their market but need to take critical actions to ensure they hold on to it.

• **Became sustainable.** Finally, the fourth path includes ecosystems that won it all and have sustained their position to date, such as Microsoft Windows and Amazon. This group retained a dominant share of the market for 23 years on average. Critically, this group represented fewer than 15% of the ecosystems in our analysis. There are clear financial rewards for getting to this point, higher profitability levels chief among them. In 2018 sustained ecosystems generated profit margins of 29% on average, while those with an uncertain future are fighting to break even, with profit margins of 1% on average.

To put these numbers into perspective, consider that 35% of the ecosystems we examined had already ceased to exist, and an additional 40% had either lost at least half their peak market share or never took off. That total — three-quarters of the ecosystems in our study — is about the same as the failure rate for small businesses in their first 15 years. So, while the most successful ecosystems can “win it all” — and earn generous financial rewards — the odds of succeeding with ecosystems are not unequivocally better than for traditional businesses, and the gains for those that initially succeed are often temporary.

### Critical Windows for Success

By studying the differences among these four groups, we identified three critical windows that make or break ecosystems across their life cycle — and corresponding keys to success for each.

During the first window, companies need to seize the opportunity to capture a large proportion of the market. In the second crucial phase, they need to evolve the model to avoid losing momentum in the face of market saturation and competition. Finally, in the third window, companies must lock in market leadership to maintain their position over the longer term. Each stage requires different actions, underscoring the dynamic nature of ecosystems and the need to evolve strategies over time. This temporal ambidexterity can be tough to master, which explains the relatively low long-term success rate of ecosystems. (See “Critical Windows in the Ecosystem Life Cycle Require Specific Leadership Actions.”)

1. **Seize the opportunity.** Fewer than half of the ecosystems made it through the first critical window to capture at least half of a given market. Contrary to conventional wisdom, these were not all first movers. By definition, all first movers control the entire market they create, yet almost 50% of the ecosystems that seized the opportunity were disruptive new entrants that came later and overtook the pioneer.

For example, Atari pioneered the video game console industry in the late 1970s, but Nintendo redefined video games in the mid-1980s. It gave users a better experience with higher-quality games — in particular, through better in-game stories, more refined graphics, and better game play — both by developing in-house games like Super Mario Bros. and by requiring its third-party developers to meet the same quality standards. As a result, Nintendo overtook Atari and established a dominant position in the industry, with 68% of the market in 1985. In other words, being first does not guarantee long-term success, and entering the market later does not preclude it.
Whether first movers or disruptors, successful ecosystems gained scale fast; roughly 80% garnered more than 50% market share in their first five years. And among those that made it through this first window, the average market share peaked at 80% within seven years. By contrast, those that did not take off earned only 8% market share within five years, and 13% at peak. If scale doesn’t come fast, it’s very likely not coming at all.

Developing a rapidly scalable model requires attracting users and ecosystem partners simultaneously to capitalize on the network effect: More users attract more partners, who are keen to develop more features to offer to a growing number of users, and so on. For example, IBM’s success with the PC in 1981 was driven by drawing interest simultaneously from both users and third-party developers. Users were attracted by IBM’s reputation for quality (and reduced prices for PCs), and third-party developers were attracted by IBM’s open architecture.

Winning ecosystems are willing to delay profitability to expand quickly. The ecosystems that reached a market share of at least 50% required three years on average to turn profitable, and most of them gained at least 30% market share before turning a profit — reflecting an initial emphasis on growth rather than profitability. These first few years were characterized by a negative profit margin of ~60% on average, highlighting the significant risk involved in scaling up an ecosystem. Although generating a return on the initial investment is far from guaranteed, a willingness to accept significant losses early on appears to be necessary. On average, ecosystems that took off accumulated 130% more in earnings within five years of first turning a profit compared with ecosystems that did not take off.

For example, Amazon has long prioritized growth over profits, accumulating more than $3 billion in losses during its first eight years of operations. But thanks to ongoing investments in its platform and processes, it became the clear leader in e-commerce, controlling 52% of U.S. online sales in 2018 — and it continues to gain market share. Now that it has established a strong market position, while constantly evolving its model (as we discuss in the next section), Amazon has improved its operating margin from less than 1% in 2013 to 9% in 2018.

So while timing is important, and first movers can gain an edge, there are no hard rules. Some early movers never reach a dominant position, and others may incur steep losses for a long period before getting there.

2. Evolve the model. The second critical window occurs once ecosystems have seized the opportunity and captured a substantial share of the market. Only half of the companies to reach this point in our analysis were able to retain their dominant share. Those that did so repeatedly evolved their model in two ways: expanding the scope of the platform and increasing engagement with platform participants.

As initial offerings are often imitated and markets become saturated, ecosystems need to broaden their scope either functionally (by addressing additional customer needs) or organically (by moving into other markets or through acquisitions and strategic partnerships). In fact, our research shows that winning ecosystems implemented these measures more frequently and more quickly than those that ended up failing; they took twice as many actions to broaden their scope, and the vast majority implemented at least one major move every three years on average. Even more than traditional business models, ecosystems must constantly evolve and grow to succeed.

For example, Uber has continuously expanded its offering, from the core UberX service in 2012 to successive services such as UberPool and Uber Eats (in 2014 and 2015, respectively), as well as other market-specific services such as UberMOTO (which allows users in India to book a ride on a motorcycle). And it maintains its forward-looking growth orientation by investing in disruptive technologies such as self-driving cars. By doing so, Uber has been able to protect its leading market position in the United States despite aggressive competition from Lyft and others. Of course, evolving the offering is necessary but not sufficient for long-term, sustainable success, again underlining the challenges and risks of developing ecosystems.

In addition to expanded offerings and markets, winning ecosystems also constantly seek to boost engagement with platform partners through better communication and collaboration. Increased engagement deepens relationships, reducing the chances that partners will jump to the competition. Such measures need to align the ambitions of
the ecosystem with those of third-party participants, rather than putting them at cross-purposes — ensuring the ecosystem's continued evolution.

Ecosystems can boost partner engagement and foster greater collaboration in several ways. Netflix, for example, created a program to organize and connect its community of media production service companies. Others facilitated greater flows of information between partners and the ecosystem orchestrator. Google developed communities for its partners to get relevant product and program updates. Google partners can find examples of how to grow their business, get advice on Google products, and communicate with Google specialists and thought leaders.

Finally, some orchestrator companies adapt their internal structure to streamline their interactions with partners. In the 1990s, Intel separated the departments that cooperated with hardware PC providers from those that competed with those companies. It also developed new processes to head off potential internal conflicts this approach could lead to, thereby boosting partner engagement.

Our research shows that all these approaches are common among sustainably successful ecosystems, and the majority apply more than one method.

3. Lock in leadership. Of the companies in our sample that successfully passed the first two stages — one-fourth of the starting sample — only about 60% were able to sustain their success over the longer term, the third critical window in the growth cycle of an ecosystem. A common theme among those that succeeded is the ability to manage vested interests, not only among partners but also with stakeholders such as regulators and customers. Often this entails building communication channels to allow stakeholders to air out issues. For example, Amazon's cloud-computing platform, Amazon Web Services, convenes its third-party developers at free periodic summits in cities around the world where participants can voice concerns and propose solutions. The recent rise of antitrust and privacy concerns in relation to big-tech ecosystems suggests that stakeholder management will be increasingly important in the future.

At the same time, successful ecosystems locked in their market leadership by actively maintaining their differentiation and taking steps to make it hard for competitors to replicate their business models. Some cultivated their unique internal strengths by building a walled garden for partners. For example, Facebook built an end-to-end suite of tools for advertisers to distribute their content on the platform, effectively requiring them to use it quite separately from competitors' solutions.

Other ecosystems offer dedicated services to partners to help them do business with the platform. For example, Didi Chuxing Technology, the China-based mobility service (similar to Uber), provides its drivers with a range of car-related services, from cheaper gas to car rentals. And some ecosystems have developed industry standards that reinforce the advantages of working within the platform. For example, Intel created standards for the PC hardware architecture that PC hardware manufacturers produce, making it easier to coordinate across the value chain.

Perhaps most important, sustainable ecosystems continuously renew the platforms on which they’re based. In today's business environment, competitive disruption is virtually inevitable, and all the ecosystems in our sample started to lose ground to a growing competitor at some point. Yet winners responded with platform redesign — often based on new technology — to regain leadership. Some orchestrator companies developed the new platform in-house; for example, Microsoft redefined its platform based on cloud services under CEO Satya Nadella's leadership. Others acquired business units with the new expertise they needed. When Facebook's initial PC-based service was threatened by mobile-based social networks, it acquired Instagram and WhatsApp. Facebook has thus built a family of apps with a breadth of formats and reach that appeal to marketers, while also streamlining processes and enhancing the customer experience.

Although successful ecosystems can capture and sustain significant market share and generate sizable profits, they are also highly dynamic and require constant renewal. Furthermore, the requirements for renewal are different at each stage of development, requiring ecosystem leaders to be temporally ambidextrous.

The need for a dynamic approach to ecosystem strategy will most likely grow due to the maturation and evolution of the
ecosystem space overall. What was once a novel structure is now widespread. Simple two-sided marketplaces are being replaced by nested ecosystems. And the predominantly B2C ecosystems of today will probably soon be supplemented by B2B ecosystems, which may operate on a different logic.

By embracing the dynamic nature of ecosystem strategy and adjusting their approach on the basis of each life cycle stage's requirements, ecosystem leaders can increase their odds of long-term success.

About The Authors

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References


Four Trajectories for Business Ecosystems

The conventional wisdom holds that ecosystems are stable and enduring, yet they are actually highly dynamic, typically following one of four trajectories in terms of their ability to capture and retain market share.
Critical Windows in the Ecosystem Life Cycle Require Specific Leadership Actions

Successful measures in the early stages of an ecosystem will be far different from those required in later stages, requiring that management teams continuously reassess and adapt their strategy.

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<thead>
<tr>
<th>Window</th>
<th>Actions implemented</th>
<th>Success rate</th>
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<tbody>
<tr>
<td>Seize the opportunity</td>
<td>• Be the first or radically disrupt</td>
<td>50%*  50%</td>
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<tr>
<td></td>
<td>• Scale fast</td>
<td></td>
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<tr>
<td></td>
<td>• Invest persistently and sufficiently</td>
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<tr>
<td>Evolve the model</td>
<td>• Broaden ecosystem scope</td>
<td>50%  25%</td>
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<tr>
<td></td>
<td>• Increase engagement</td>
<td></td>
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<tr>
<td>Lock in leadership</td>
<td>• Manage vested interests</td>
<td>60%  15%</td>
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<tr>
<td></td>
<td>• Maintain differentiation</td>
<td></td>
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<tr>
<td></td>
<td>• Renew the platform</td>
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*Note: This number is most likely an upper limit: While we aimed to be as exhaustive as possible in our ecosystem screening — covering 11 countries and 15 sectors over the past 4 decades, and including dozens of ecosystems that ceased to exist — we still cannot have fully escaped survival bias. We may not have captured some ventures that tried to create ecosystems but failed so early that no data was available.

Source: BHI Analysis
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