



Digital Platforms

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Leveraging Platforms in Business

Digital platforms are hot and here to stay. Tech companies have successfully exploited the platform phenomenon, but what does it mean for a traditional company? Where are the opportunities to leverage platform features and capabilities, and what does it mean for how you do business? In this piece, we examine some key questions about digital platforms that every business leader should be thinking about.

Ask anyone “What are the most exciting companies today?” and the answer is likely to include names such as Airbnb, Alphabet (Google), Apple, Meta (Facebook)¹, Netflix, and Uber. What is common among these companies? They all operate one or more digital platforms and use them to power their growth and market dominance. And the platform structure has enabled these companies to grow and achieve market dominance at a rate that is almost impossible with traditional approaches.

However, platforms are not just for greenfield digital native companies and tech startups. In recent years, digital platforms have attracted the attention of a wide variety of established companies in different sectors, as well as stock market investors and policy makers.

Some interesting numbers that provide perspective on why platforms are important²:

- Today, 60% to 70% of unicorns (ventures that are valued at least 1 billion USD in private capital markets) are building digital platforms.
- Public companies that have digital platforms enjoy over 50% higher profitability and up to 100% greater growth rates than traditional companies. In addition, their P/E ratios exceed those of most other companies, indicating that financial markets have greater expectations of their growth and future success.

So, it behoves all business leaders to think about platforms and their possible role in the future of their companies. We present six key questions that can help.

¹ A possible driver of both the name changes may be the separation of the identities of the companies and their dominant digital platforms.

² Cusumano, Michael A., Gawer, Annabelle, Yoffie, David B. 2019. *The Business of Platforms. Strategy in the Age of Digital Competition, Innovation and Power.* HarperCollins Publishers.

1. What is a Digital Platform?

Digital platforms have some distinctive features and capabilities, and understanding and appreciating them is important to fully recognize the power and potential value of this model. Not surprisingly, as with much of the technology space, there is a lot of confusion about what IS a digital platform, so a clear definition is a good place to start:

A digital platform is an intermediary that facilitates interactions between and among stakeholders such as consumers, application providers and partners.

Viewed in this light, platforms themselves are not new. However, the unique and novel reach and scalability of digital technologies have turbo-charged the basic concept in a number of important ways that make them very compelling today. And a subtle but powerful element of the model is the facilitation of interactions among peer participants from the same stakeholder set, something that has largely been absent in traditional models of intermediaries. These interactions form the basis of important “same-side” network effects that can dramatically increase the value proposition of digital platforms.

There are **four key features** that a firm has to support to fully exploit the power of digital platforms:

1. A digital platform provides a combination of rules, processes, and an open architecture that make it relatively easy to connect external participants to each other. Depending on the specific type of platform, it has built-in mechanisms – based on data and algorithms – that enable users in these groups to find each other, interact, collaborate and/or transact easier on the platform than outside of it.
2. A platform can be one-sided, serving a single community of participants, or multi-sided, where its market is not just downstream customers but also upstream providers, and possibly even horizontal ones. Furthermore, the platform can derive revenues from any or even all of the sides (pay to play).
3. Some of the key value proposition elements are now outside the company, shifting the focus to what external producers and consumers can do. The functionality of the platform may be defined more by the activities and capabilities of one or more sets of participants, than by the capabilities of the platform operator itself.
4. The platform creates and facilitates both same-side and cross-side network effects. The power of a digital platform is the maximization of these network effects.

2. What are the different types of Digital Platforms?

Digital platforms can be categorized in several ways. We briefly examine two ways: the number of sides, and the scope.

The sides of a platform

A company could operate a digital platform even with just one type of participant. Two striking examples are data/tech platforms such as cloud service providers and social media service providers. A cloud service platform such as Amazon Web Services (AWS) can support an array of technology services involving computation, data storage and communications for a potentially large customer base. On the other hand, a social network platform such as Facebook, LinkedIn and Twitter can enable a community of individuals to interact with one another. Such one-sided platforms can still create positive network effects by facilitating user generated content from the community of participants.

Multisided platforms support multiple types of participants. Typical categories of participants in such platforms are developers, sellers, advertisers and consumers/users. The business value and potential of a platform can be increased exponentially when it supports multiple sides. For instance, AWS has started offering capabilities developed by companies within its ecosystem. The power of multisided platforms was also recognized by all three of the above- mentioned social media platforms. They made huge strides towards generating revenues and even profits once they allowed companies that provided products or services and advertisers to participate as well as individuals and consumers.

The scope of a platform

Digital platforms can be created for a variety of purposes, which define the scope and capabilities that need to be supported. In general, there are three canonical types of platforms:

- **Transaction Platforms:** This is a platform that brings together producers/sellers of goods and services and consumers interested in those goods and services. They are the platform equivalent of a digital marketplace or mall.
- **Innovation Platforms:** This type of platform can activate the “wisdom of crowds”. In other words, they facilitate intellectual input on problems and issues from potentially large numbers of interested participants, as well as collaboration among those participants that yield valuable synergies. They are the platform equivalent of an online bulletin board for a community with common interests.
- **Engagement Platforms:** These are platforms that enable potentially large numbers of people to communicate with each other and share common interests. They are the platform equivalent of a social network.

In practice, any platform could have features and capabilities of more than one of these canonical types. However, understanding the priorities and goals of each type can help a firm focus on the right structure and development plan for a prospective platform. Let us illustrate this through some examples.

A good example of a transaction platform is Amazon Marketplaces. When Amazon.com first started its online retail business, it quickly became a highly successful transactional intermediary. However, it quickly developed key features of a platform, such as:

- It started enabling third party sellers to set up shop and collaborate with other merchants and technology providers
- It enabled consumers to interact with each other through features such as online reviews, Q&A/FAQ Lists and peer validation through opinions of reviews, and
- It expanded its portfolio of core services to not only facilitating online stores, but also digital payments, digitally enhanced fulfilment and reverse logistics and even business intelligence services.

These innovations enabled Amazon Marketplaces to progressively become more of a transactional digital platform, and one that has quickly achieved market dominance. In the Netherlands, a similar approach was used by bol.com.

An example of an engagement platform is Twitter. The company clearly recognizes itself as an aspirational platform for social engagement, and has consistently focused on features that facilitate participation by influential people and their followers. In doing so, it has stayed away from transactional features, as well as staying within the short messaging format rather than the richer content that is essential for driving innovation. This has created interesting challenges for the company with respect to revenue and profit generation, but at the same time, has enabled it to defend its market against a variety of competing platforms.

Finally, Kaggle is an example of a company that could become a powerful innovation platform. Much of its initial efforts have been to bring together companies that have analytics problems and match them with individuals who take on those problems as intellectual challenges through contests. It can quickly expand beyond this basic intermediary role, by facilitating same-side interactions of different types. For instance, it could facilitate collaboration among contest participants and peer learning, while also facilitating learning among participating firms, who can learn from each other's challenges and experiences.

Note that a platform can be characterized in both the above ways. For instance, a technology platform can be a multisided innovation platform (e.g., Adobe Creative Cloud), and as mentioned above, a social media platform like Twitter can be a multisided engagement platform. In fact, a platform can also have broader scope that spans multiple categories (e.g., Facebook, which now allows merchants to set up online stores).

3. Why should you consider a Digital Platform approach?

Not surprisingly, most of the examples we have mentioned so far are technology companies without significant legacy businesses and/or assets. However, platform opportunities are not limited to such companies. Any company seeking to leverage platform opportunities needs to consider two key factors:

1. The potential to add substantial value to participants on multiple sides of a platform; and
2. The potential to create substantial network effects on multiple sides.

In a traditional company, customers value the company primarily based on its products and don't really see or interact with other sides of the company. Similarly, suppliers value the company as a customer, and may not see or interact with any of the company's customers.

The value of the company as a platform **shifts the value proposition of the company from the inside to the outside**. In other words, the value proposition of the company to each side is a combination of what it offers by itself and what it enables the other sides to provide. In the extreme case, the company's value proposition shifts entirely to the latter component.

So rather than focusing on the value proposition of its products for downstream customers, the business must provide value in terms of the resources and capabilities of its participants. Furthermore, the assets of the company should be complementary to the assets of the providers it supports, rather than competitors or substitutes.

> The Marriott hotel group may strongly resist connecting its customers with hotels owned by competing chains. On the other hand, the Booking.com platform actively promotes such interactions. This exemplifies some of the challenges in transitioning to a platform model.

> When American Airlines created its flight reservation system Sabre, which also enabled reservations at competing airlines, it found that for Sabre to succeed, it had to operate as an independent entity.

Due to different network effects, the value proposition of a digital platform can also evolve much faster than that of a traditional business. Rather than being late to market with an offering that no longer matches customers' evolving preferences, the platform can constantly update and upgrade its value propositions with new elements from and for each side.

To operate a digital platform model, the core activity of the company can be communication (e.g., telco networks or payment infrastructure), software or hardware, and can shift over time.

> When it introduced the iPhone, Apple positioned this hardware product at the core of its digital platform, and soon after launched the App Store as a resource that broadened the platform, generating strong, positive cross-side network effects between app developers and iPhone users. However, when Apple introduced other devices, such as the iPad and Watch³, it shifted the core of the platform to software, namely the operating system iOS. Down the road, it could be expected that Apple will integrate iOS with the operating systems of its Mac computers (e.g., macOS Big Sur).

> In contrast, while Google came in with the operating system (cf. its acquisition of Android) as the basis of its platform to create cross-side network effects between app developers and users of Android operated handsets, it is now moving in the opposite direction, putting smart devices (e.g., its Nest and FitBit acquisitions, or its Pixel smartphone with Chrome OS) at the centre of the network.

While Apple and Google have been very successful in developing and monetising their digital platform models, they still have ample opportunity to leverage cross-side network effects.

³ iPadOS and watchOS, the operating systems of the Apple iPad and Apple Watch, respectively, are based on iOS.

4. Where can my company find Platform opportunities?

The settings in which platforms are most promising are characterized by what we call the three 'Ns' – Numbers, Networks and Needs:

- **Numbers** – The greater the number of current and potential participants on each side of the platform, the more promising is a platform. For instance, a transaction platform can be successful in a market consisting of a relatively large number of customers, a large set of suppliers, a large number of technology providers and/or a large number of advertisers. In other words, the more fragmented each side is, the greater the potential value of a platform-type intermediary. And it is even greater when the players are all (or mostly) relatively small, with limited resources to do everything themselves.
- **Networks** – Market processes and information flows in traditional businesses are mostly vertical through the linear value system. Suppliers interact with producers, who interact with consumers. However, when there is potential value in facilitating network interactions on each side of an intermediary, platforms become more attractive.
- **Needs** – A defining feature of a platform is the set of core capabilities it offers to each side. The larger this set of core capabilities for each side, the greater is the potential for the platform to attract participation from that side. So if a firm is operating in a sector where the needs of different customers/consumers are very different, building a platform that can serve the entire set of customers/consumers can become difficult. Similarly, if different suppliers and other partners require very different mechanisms and processes to integrate with the platform, it can be difficult to define the core functionality and capabilities needed by the platform to succeed. This does not mean that the platform cannot provide personalized services, just that it helps if the services offered across each market are based on a substantial common core. In addition, it helps to be digital. So the greater the quantity, complexity and richness of data that has to be exchanged between participants, the greater is the potential value of a digital intermediary such as a platform.

Consider GE's approach to leveraging IoT and sensor-based systems. As GE was seeking to innovate with these technologies within its diversified product line, a traditional linear value chain model was certainly a possibility. However, GE's businesses have large **numbers** of customers and suppliers, and both constituencies could benefit from IoT capabilities. Furthermore, IoT not only enabled rich interactions between GE and its customers and suppliers, but also within the **network** of customers and suppliers to serve **needs** such as product support for suppliers and enhanced product features for customers. By building the Predix platform, GE was able to not only stimulate IoT-based innovation among both its customers and suppliers, but also bring other companies in different sectors that could leverage the platform to either add IoT to their products or leverage IoT capabilities in the products they used.



5. What is the right Platform development approach?

As with many strategic initiatives, there are many ways to work towards successful platforms. Unlike many other initiatives however, platforms involve juggling multiple balls at once. For instance, there is a fundamental chicken-and-egg problem when developing a platform – the value proposition for each side of a multisided platform depends on the presence and participation of the other side. Consumers are attracted to platforms that support many providers, and providers are attracted to platforms that offer access to large numbers of consumers.

One way to solve this problem is to build a strong value-added network in at least one side, which would benefit from same-side network effects. For instance, you could start by leveraging your brand, technology, etc. to build a strong community of participants on one side who value some product(s) or services that your firm can provide or facilitate. This includes services that motivate interactions among the community. Then build the capabilities to invite providers to join in. In order to do that, build upstream capabilities to onboard suppliers, and over time create a basis to generate same-side network effects on that side.

For instance, Facebook started as a social media site (a one-sided platform). Once it had a large user community with strong same-side network effects, it started to build its other sides, including advertisers, developers and merchants. Similarly, Apple first built a large consumer customer base for its iPhone and then developed the AppStore to attract developers. On the other hand, Google started by building a community of developers and then provided a broad array of services to consumers.

Another approach is to start essentially as a digital intermediary that brings together buyers and sellers. The initial value of this intermediary would be to enable and maximize cross-side network effects to build both sides. Once established, it can then enhance its platform capabilities by introducing features that motivate same-side interactions. For instance, a healthcare portal can introduce patient community features such as special interest forums on the consumer side and tools to facilitate regulatory compliance for healthcare providers to participate, such as HIPAA-compliance support and electronic patient record protocols and systems.

There are also a variety of choices with regard to the business scope of platform initiatives. At one extreme, you could completely restructure your firm as a platform company. And at the other extreme, you can participate in an existing platform on one or more sides, for instance by becoming a technology partner, a supplier, a customer or an advertiser. Chances are, if you are running an established enterprise in one or more industry sectors, you are not doing the former, and already doing the latter. And there are many options in between.

6. What are some key challenges to consider?

When building a digital platform business, it is key to anticipate what could go wrong.

A first challenge that a platform has to face is the management of the **growth of the community on each side**. Here, authentication of participants, which includes both identity and quality verification, is very important but often overlooked. For instance, MySpace, an early social media platform, failed to recognize the importance of user authentication features that are needed to sustain the community it was trying to build. As a growing number of undesirable and potentially malicious participants joined the one-sided platform and alienated users, it did not manage to build a community, let alone attract new sides.

A second challenge facing a platform is management of the **growth of content**. Platform operators can lose control of core features when the community on one or more sides grows very quickly. Striking examples of this are Facebook's inability to control fake news due to the participation of unprincipled and malicious providers, and Amazon Marketplace's issues in dealing with counterfeit and/or dangerous products bolstered by manipulated fake reviews and even fake transactions.

A third challenge facing platforms is the management of its **reputation and liability**. It is key to really think through the core functionality of the platform in terms of what it is offering and what it is responsible for versus what upstream providers and developers are doing. For instance, Uber riders can perceive the drivers to be part of Uber, such that what they do impacts Uber's reputation. Likewise, the regulator can classify the drivers as employees rather than contractors, and force Uber to treat them as such and pay out a minimum wage and sick days. The European Commission is currently working on a proposal for a Directive, which aims to improve working conditions in platform work⁴. Another regulatory development with respect to liability is the introduction of the Digital Services Act (DSA) and the Digital Markets Act (DMA) by the European Commission.

A fourth challenge for any platform is to motivate **continued engagement and participation on all sides**. Since, as in traditional markets, customer

acquisition is more expensive than customer retention, relational engagement of participants can lead to more successful platforms. If a platform has low repeat business and the benefits are transactional, a relationship-oriented platform can enter and sway the participant base. For example, Monster was successful as an online job search intermediary but largely ignored mechanisms for same-side interactions among job-seekers, or among firms seeking employees. As a result, individuals (and many firms) used the site transactionally. On the other hand, LinkedIn not only filled vacancies but also engaged applicants to update their LinkedIn profiles and share their new positions, thus maintaining long-term relationships on the platform.

A fifth challenge for a multi-sided platform is to **evolve without alienating incumbent participants**. For instance, social media platforms such as Facebook and Twitter that offered individuals the ability to communicate within their social networks have to be careful when they introduce other players such as merchants and advertisers. In other words, as you build out your platform, you have to do it in a way that does not diminish value for the users on existing sides. This is particularly challenging when the platform operator offers products or services that directly compete with those provided by external producers. For instance, Amazon and Netflix are increasingly facing this challenge as they have introduced their own content on their media platforms.

Finally, **monetization is no easy feat**. The race for winner-take all-or-most markets can be long and full of obstacles, and may necessitate postponement of monetization and profitability. This is compounded by the fact that premature attempts to monetize a platform can suppress critical positive network effects and stymie growth, as in the case of WhatsApp when it merely proposed the initiation of modest user fees. The long gestation of digital native platforms such as Amazon, Facebook and Twitter before they achieved profitability is worth noting for established companies considering platforms. It underscores the importance of patience and the likely need for sustained investment for some time before seeing significant returns. In other words, platforms should be viewed as strategic investments, rather than tactical opportunities.

⁴ European Commission proposals to improve the working conditions of people working through digital labor forms. Press release dd. 9-12-2021 (https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6605)

Conclusion

In summary, in order to become a digital platform, a business has to:

1. View itself as a digital intermediary (e.g., market maker, facilitator, regulator) that enables interactions in a network of participants using complementary assets
2. Develop multiple sides to stimulate positive network effects across and within each side
3. Develop sets of core capabilities that provide significant value to the community on each side
4. Develop standardized interfaces for each side to expand the user base
5. Identify potential revenue opportunities from one or more sides

Value creation in a platform is not limited by internal assets and brain trust, as in a traditional enterprise. Rather, the core capabilities of the platform operator are significantly complemented by input from participants on one or more sides. As a result, network size and engagement become key in driving growth and superior performance. As positive network effects amplify on different sides, the value and market power of a digital platform can grow exponentially, creating significant and sustainable competitive advantages for the platform business.

This article addresses the high-level dynamics of platforms, to help those (thinking of) getting involved in the platform economy. While the core dynamics of platforms remain the same in all contexts, different sectors and ecosystems will see different types of platforms and different challenges. Also, different aspects will become the key focus of public debate. For a better understanding of what platforms can mean for your organization, KPMG has published various articles on the impact of platforms for specific sectors. Some useful links about our view and activities on platforms:

Regulatory:

[Understanding the Digital Services Act package](#)

Finance:

[Who is entering the European payments landscape?](#)

Health:

[2020 Platformgiganten in zicht](#)

Manufacturing:

[Smart manufacturing](#)

About the authors

Vlerick Business School is the oldest business and management school in Europe. Founded in 1953 by the renowned academic, entrepreneur and politician, Professor André Vlerick. Vlerick Business School has been leading innovation in business for well over half a century. As the management school of Belgium's two largest universities - Ghent University and KU Leuven - the School has built a solid, worldwide reputation as a leading, independent institution with a strong international focus and close ties to both the academic and corporate worlds. Visit us at www.vlerick.com

The Cox School was founded in 1920 as the Department of Commerce at SMU, at the request of the Dallas business community. Today, the school's undergraduate, graduate and executive education programs are ranked nationally and internationally by leading publications, including BusinessWeek, Financial Times, Forbes, The Economist, The Wall Street Journal and U.S. News & World Report. Visit us at www.smu.edu/cox

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About the Research Partnership

KPMG in Belgium, Vlerick Business School, and Cox School of Business, SMU, have joined forces to conduct research on digital platforms to help firms experiment with, and successfully expand their platform initiatives. The partnership allows KPMG to support its professional services and entrepreneurial approach with robust academic research. Through the development of frameworks and instruments in close collaboration with industry leaders and practitioners, new insights are generated, and best practices shared with a variety of digital platform stakeholders for maximum impact.

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