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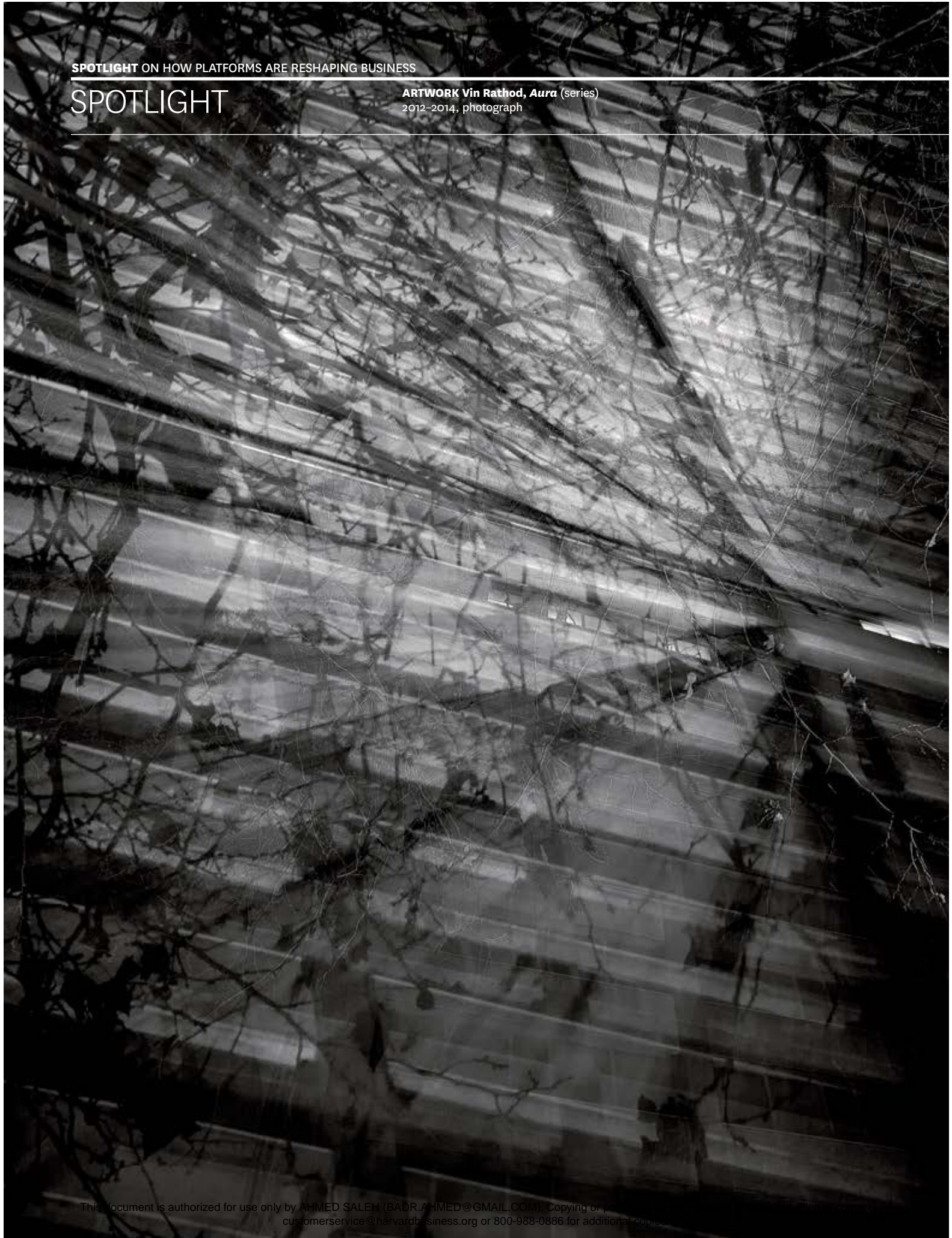
Products to Platforms: Making the Leap

by Feng Zhu and Nathan Furr

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SPOTLIGHT

ARTWORK Vin Rathod, *Aura* (series)
2012–2014, photograph





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Products to Platforms: Making the Leap

BY FENG ZHU AND NATHAN FURR

For years, Microsoft's Outlook has been losing ground to Google's Gmail and to the e-mail apps integrated into iPhones and other mobile devices. But now the company is trying to inject new life into Outlook, attempting to transform it from a simple e-mail product into a platform that connects users to a multitude of third-party services such as Uber, Yelp, and Evernote. Whether or not the leap from product to platform works is an immensely important question—not just for Microsoft but also for a growing number of businesses built around products or services.

The appeal of such a move is understandable. Products produce a single revenue stream, while platforms—which we define as intermediaries that connect two or more distinct groups of users and enable their direct interaction—can generate many. Indeed, a large number of the world's most valuable companies by market capitalization in 2015 were platform companies, including five of the top 10 (Apple, Microsoft, Google, Amazon, and Facebook). Although some of those companies started with platforms, many started with products: Amazon launched as a retailer in 1994 and six years later introduced Amazon Marketplace; Google began with a search engine in the mid-1990s and then introduced search advertising in 2000; and Apple created the iPod in 2001 but didn't move toward a platform until it developed the iTunes Store in 2003 and the App Store in 2008.

Not every company, however, makes the leap successfully. To understand why some enterprises

pull it off and others don't, we studied more than 20 firms that have tried to become platform providers. On the basis of that work, we have identified four steps that can make the difference between effective transformations and failure.

1 Start with a Defensible Product and a Critical Mass of Users

Too many companies believe that a platform move will somehow revive a struggling product. That's a mistake. A great platform starts with a great product—one that claims a critical mass of customers and provides enough value to keep them from defecting to competitors (in other words, is defensible). The product must also attract enough frequent users to make the potential platform appealing to third parties. After all, no platform can thrive unless it creates value for those third parties.

Consider the case of Qihoo 360 Technology, one of the largest internet firms in China. It started out in 2006 by selling 360 Safe Guard, a security software product. Then Qihoo began giving the product away free—an unusual move at the time—both to build its user base and to capitalize on a unique feature: the antivirus software's ability to learn and improve. Qihoo's servers, unlike those of its competitors, not only kept a "blacklist" of malware that 360 Safe Guard had detected, but also compiled a "whitelist" of the safe programs most frequently found on users' computers. The more users who installed 360 Safe Guard, the more information Qihoo could gather for both lists, and the faster the software could identify viruses and suspicious files when it conducted a scan. The positive feedback loop improved the product with every new user, which in turn attracted more new users.

The broad user base for Qihoo's core security product proved an immensely valuable asset in creating a new platform. Third-party software firms were eager to make Qihoo a channel for reaching customers, and Qihoo generated profits from connecting them. Qihoo itself also tapped into its user base to introduce and market its own new products. For example, the company used its security software to cross-promote its web browser, and it used its browser to promote its search engine, both of which quickly gained significant market share. Qihoo then created an advertising platform on top of its browser and search engine. Because the company so effectively transformed its early

Idea in Brief**THE CHALLENGE**

Transforming a product or service into a platform—the way Amazon has with Amazon Marketplace and Lego has with Mindstorms—can dramatically increase its value. But the path can be treacherous, and many attempts have failed.

THE BEST PRACTICES

Four practices can help ensure success:

- 1** Start with a defensible product and a critical mass of users.
- 2** Apply a hybrid business model focused on creating and sharing new value.
- 3** Drive rapid conversion to the new platform.
- 4** Identify and act on opportunities to deter competitive imitation.

product successes into platforms, competitors had difficulty catching up.

Note that Qihoo's product defensibility was rooted in a core competency: its ability to leverage strong learning effects. Companies can, of course, take advantage of other core competencies in building defensible products. Apple, for instance, capitalizes on its design capability; Amazon leverages its strength in logistics.

But note, too, that popularity doesn't necessarily make a product defensible. For example, in 2014 Qihoo introduced the 360 Android Smart Key, a device that plugged into the earphone jack of Android phones, allowing users to control the phone's flashlight, camera, and other functions by pressing a single button. Qihoo distributed one million Smart Keys free of charge to college students in hopes of building a critical mass of users and converting the device into a platform. Users loved it, but it was not defensible: Competitors such as Xiaomi built similar products, and Google later incorporated similar features into its Android operating system. Qihoo never managed to turn the Smart Key into a platform.

2 Apply a Hybrid Business Model Focused on Creating and Sharing New Value

It has long been assumed that leaders must commit to either a product-based or a platform-based

business model, because each demands a particular approach to resource allocation and operations. But we found that firms making successful transitions from product to platform often employ a hybrid model.

In a product business model, firms create value by developing differentiated products for specific customer needs, and they capture value by charging money for those items. In a platform business model, firms create value primarily by connecting users and third parties, and they capture value by charging fees for access to the platform. Platform models bring a shift in emphasis—from meeting specific customer needs to encouraging mass-market adoption in order to maximize the number of interactions, or from product-related sources of competitive advantage (such as product differentiation) to network-related sources of competitive advantage (the network effects of connecting many users and third parties).

A hybrid of the two business models is valuable in part because during the product-to-platform transition, although customers start to derive benefits from the use of third-party products, a firm's own products often remain the primary attraction. We observed, for example, that users of 360 Safe Guard benefit from the access to many safe third-party software products, but the main draw for them is still 360 Safe Guard. Likewise, Amazon users derive significant value from third-party sellers, but what

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they prize most is being able to obtain products directly from Amazon. Thus successful product-to-platform transitions require firms to engage in activities to increase the value of the product while also trying to attract third parties. Indeed, Qihoo continued to improve the quality of 360 Safe Guard, even as it gave away free copies and sacrificed millions of dollars in revenue in order to grow the user base.

Hybrids in general can be useful adaptation tools, and hybrid models can be especially useful for transitioning to a platform-based business because they enable firms to identify new opportunities to create and capture value without abandoning their core customers. The stumbling block for most firms attempting the leap from product to platform is a “product mindset” that views the value pie as comparatively fixed and thus leads to a focus on claiming as much of that pie as possible. But if companies instead follow a hybrid model, applying a “platform mindset” on top of a product mindset, they are likely to discover ways to create new value for existing users or nonusers that might not otherwise have been visible.

A case in point. Consider the computer-game developer Valve, founded in 1996. Valve’s first product, a video game called Half-Life, proved very successful—so much so that external hackers started developing their own modifications to change the game play. These unauthorized “mods” often made the game unstable and created barriers between users who wanted to connect and play against one another. Rather than fight the trend, Valve recognized that there was an unmet demand for an alternative to Half-Life—and thus the potential to create new value. Consequently, the company hired the hackers who had created the most popular mod and encouraged them to turn it into a second game, dubbed Counter-Strike. Still, a growing number of mods continued to create serious problems for Valve users. To fix those, the company distributed patches through an online software channel it created in 2003 called Steam.

Initially Valve included Steam in all the games it sold, but as the number of users swelled, company leaders realized that Steam could be transformed into an online platform to solve a major challenge for all PC game developers: distribution. At the time, most game developers had to ship physical boxes of software to retailers, which was costly and slow. Steam, by contrast, allowed developers to distribute their software titles instantly and at no marginal cost—a value proposition attractive to both gamers and game producers, particularly those producers who did not have access to big-box retailers.

Valve discovered new sources of value by capitalizing on independent developers’ interest in using Steam to distribute their own games. The availability of more and more games drew more and more customers to the platform, including many who had not previously purchased Valve products but who were now downloading Steam and buying various games. Although Valve continues to sell its own software to users, today it makes much more money by taking a small percentage of every sale by other developers.

Turning threats into opportunities. Shifting from a product mindset to a platform mindset can be downright counterintuitive—indeed, several of the firms we studied discovered new platform opportunities almost by accident and in spite of their own missteps. For example, Lego Mindstorms (the entry-level robotics toy) emerged as a platform only after a Stanford graduate student hacked the robotic-controller code. Lego’s leaders initially had a product-mindset reaction: They sent a cease-and-desist letter to protect the “fixed” value pie. But after some reflection, they saw the hacking as a sign of untapped value on the demand side. If Lego turned the Mindstorms software into a platform, then it could be used as an education or experimentation tool, not just a toy, and the company would sell many more units and bring many more users into the ecosystem. So Lego switched course—and mindset—to embrace a hybrid business model.

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Similarly, the first iPhone was a closed-system product with a handful of apps produced by Apple. As it became more popular, hackers began to “jailbreak” the phone so that they could install their own apps. Steve Jobs was initially determined to protect his integrated product ecosystem, and he vigorously opposed opening it to third-party apps. So, like Lego, Apple first reacted to the hacking by going on the defensive: It made the phone’s operating software more secure and threatened to void the warranty if a jailbreak had been applied. Eventually, though, Jobs saw the wisdom in creating a more open platform, and a year after launching the iPhone, Apple opened the App Store. Today the company captures immense value from its hybrid business model, selling its own products and taking a 30% cut of platform sales. The latter amounts to considerable revenue, given that 75 billion apps were downloaded in 2014.

3 Drive Rapid Conversion to the New Platform

A viable product and business model won’t guarantee success. It’s also important to convert users of your products into users of your platform. Three elements are key.

Provide adequate value. The proposed platform needs to create sufficient new value for customers to start using it. Valve’s Steam and Qihoo’s 360 Safe Guard both accomplished this. SF Express, one of China’s leading parcel delivery services, has not. Facing intense pressure from lower-cost rivals, SF Express in 2014 launched an e-commerce platform connecting its large customer base to third-party merchants. It also opened hundreds of brick-and-mortar stores where shoppers could use tablets to order products from the affiliated merchants. SF Express would then deliver the products to the stores, where consumers could try them and return them immediately if they wished. But people did not flock to the stores; they didn’t see much value in the “try and buy” concept because Chinese retailers already let customers return most merchandise purchased online within seven days.

Stay consistent with your brand. Companies can accelerate conversion to the new platform by carefully adding new products and services that are consistent with their brands. Qihoo opened an app store to third-party software developers and used its technology to ensure that the apps sold there

were free from viruses and malware. This occurred in 2007, when viruses were rampant in the Chinese software market. Many users became more willing to use Qihoo’s security product because it allowed them to download third-party apps virus-free. A positive feedback loop arose: More users attracted more third-party developers to the platform, which in turn attracted more users. Likewise, when Qihoo offered its own browser and search engine to its users, safety was positioned as the core feature of these products. These connected products took advantage of the company’s core capability in security and helped enhance Qihoo’s brand image.

Involve users in improvements. Firms can actively open pathways for people inside and outside the firm to enhance both the product and the platform. Minecraft launched in 2009 as a stand-alone building-block game, but it’s now a wildly popular platform (which Microsoft acquired in 2014 for \$2.5 billion). In addition to releasing a series of updates to increase the product’s appeal (by allowing players to compete against one another, for example, and offering a “survival mode” to make the game more dangerous), the maker of Minecraft also created channels for third parties to contribute their own improvements. For example, it allows third-party developers to create and sell modifications to the game, and in 2012 it even hired some of the most prominent Minecraft modifiers to work with and support other third-party developers in the Minecraft community. In a similar fashion, when Valve noticed that many customers wanted to trade items related to a video game (such as objects discovered as part of a game quest), it added a marketplace within the Steam platform where users could trade and interact, which provided yet another source of revenue.

4 Identify and Act on Opportunities to Deter Competitive Imitation

The product-to-platform transition, like any business model innovation, will invite imitation when it succeeds. One effective way to fend off copycat competitors is to identify and control the openings for value creation.

The case of MakerBot offers a cautionary tale. The company created the first widely adopted desktop 3-D printers and then built on its popular products by introducing a platform called Thingiverse, which allowed users to share or sell designs to be printed. The platform accelerated the adoption of



FURTHER READING

For more insights into changing business models, see the following:

“The Prius Approach”

Nathan Furr and Daniel Snow
HBR, November 2015

“Why There Are No Bosses at Valve”

Claire Suddath
Bloomberg Business
April 27, 2012

“A Billion Dollar Company with No Bosses? Yes, It Exists”

Samuel Wagreich
Inc., March 4, 2013

“Business Model Innovation and Competitive Imitation: The Case of Sponsor-Based Business Models”

Ramon Casadesu-Masanell and Feng Zhu
Strategic Management Journal
April 2013

“Microsoft’s Bid to Make Outlook More Than Email”

Feng Zhu
HBR.org, August 18, 2015

“Qihoo”

Feng Zhu
HBS Case Study 615-017

“SF Express: From Delivery to E-Commerce”

Feng Zhu and David Lane
HBS Case Study 616-003

When competitors can quickly imitate a platform, firms should consider which aspects of their ecosystems to own and control themselves.

MakerBot's printers and helped the firm establish itself as the dominant brand in consumer 3-D printing. But MakerBot had used open-source designs to build its original models, and new competitors were able to leverage the same designs to enter the market. Similarly, many of the object designs created for MakerBot use the industry's standard file format and are compatible with competitors' 3-D printers. While the company continues to explore opportunities for capturing value from the platform, such as allowing designers to charge fees to those who download their designs, it faces intense competition because it failed to develop proprietary design specs.

Thus when there are opportunities for competitors to quickly imitate a product-to-platform transition, firms should consider which aspects of their platform ecosystems to own and control themselves and which should be offered by third parties. Firms might want to create proprietary standards or direct their equity investment and acquisition activities so as to erect barriers to competitive imitation. They might also consider exclusivity contracts with partners that are in a position to choke competitors' growth. For example, a platform owner's exclusive agreement with, say, PayPal, the runaway leader in peer-to-peer payments, could thwart would-be competitors using less popular payment mechanisms.

Finally, because the digital world evolves quickly, platform owners should always be on the lookout for new growth points, and they should be thoughtful about controlling them. Qihoo, for example, gave third-party software developers opportunities to distribute all kinds of applications to users of its security products, but it developed its own web browser and used its default home page to capture value from advertisers. Developing its own search engine and promoting that through its web browser

also allowed the company to capture value through search advertising.

The Outlook for Outlook

Let's get back to Microsoft's attempt to transform Outlook into a platform. Outlook e-mail clearly has a critical mass of users and some defensibility, thanks to its being bundled with Office Suite and Microsoft Exchange. And Microsoft has had both a product mindset and a platform mindset for years.

Where the transformation may stall is in the third and fourth steps: converting users and cutting off competition. Although Microsoft has added new services to Outlook—PayPal, Uber, Yelp, Evernote, and others—it is not clear that the integrations create enough value to drive rapid user adoption of these services, because they're all also available as stand-alone apps—and popular ones at that.

Even if Microsoft can drive rapid conversion, it also has to erect barriers to imitation. If the new Outlook platform catches on, what's to keep Apple and Google from following suit with their e-mail clients? Third parties will want to partner with Apple and Google to attract more users, particularly on mobile devices—an area where Outlook is weak. And although Microsoft has already purchased a few third-party apps (such as Wunderlist, a popular mobile to-do list and task management program) to prevent them from partnering with its competitors, those acquisitions are probably not enough to keep other companies from imitating its strategy successfully. Indeed, Microsoft's business model innovation could end up benefiting its competitors. Moving from product to platform is treacherous, and how Microsoft—and many others contemplating similar moves—handle the challenges we've described will determine their success. ▾

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