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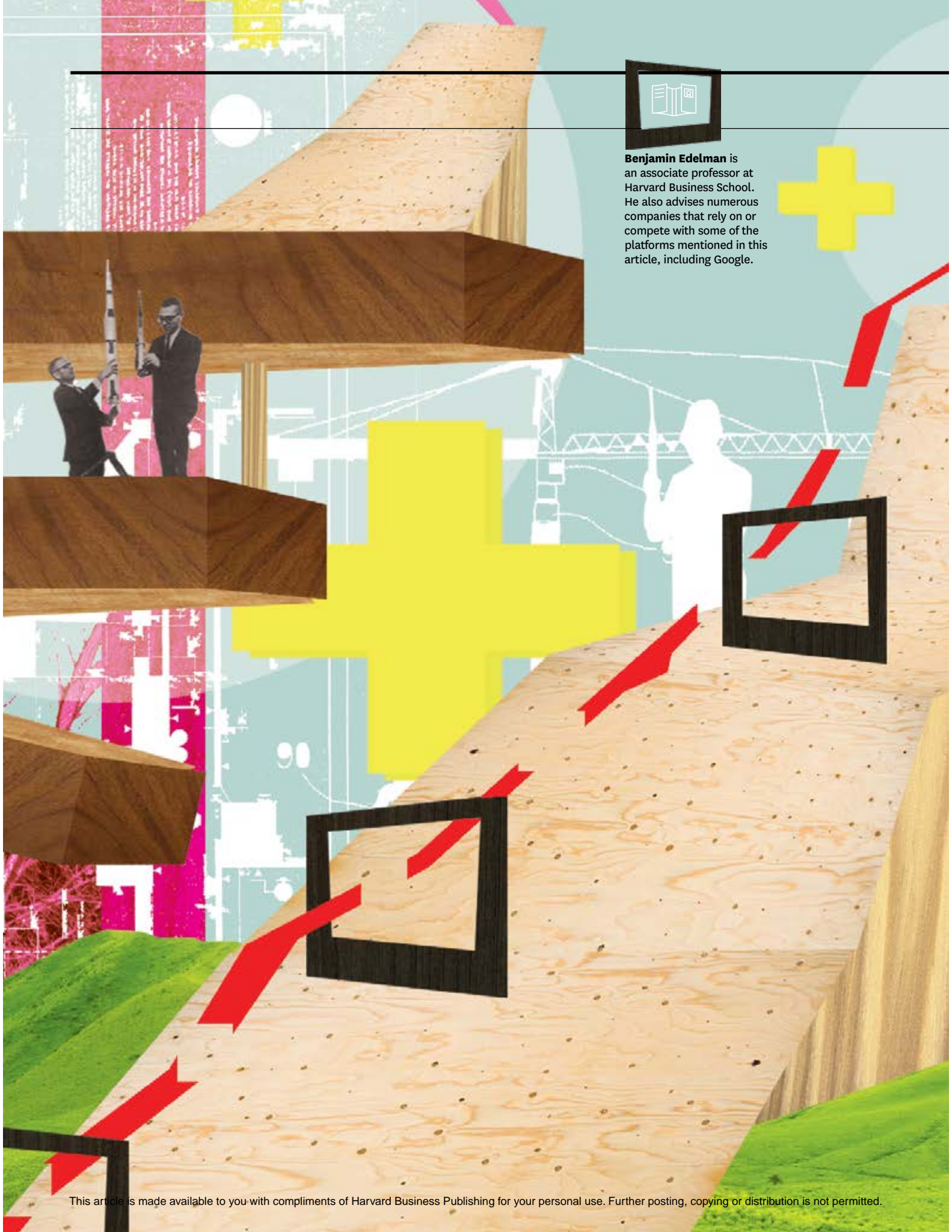
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How to Launch Your Digital Platform

A playbook for strategists by *Benjamin Edelman*



Benjamin Edelman is an associate professor at Harvard Business School. He also advises numerous companies that rely on or compete with some of the platforms mentioned in this article, including Google.



How to Launch Your Digital Platform

ADRIAN KOLERIC

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For online platform businesses, customer mobilization challenges loom large. The most successful platforms connect two or more types of users—buyers and sellers on a shopping portal, travelers and hotel operators on a booking service—and a strong launch usually requires convincing early users to join even before the platform reaches scale.

Customers find Skype worth installing only if there are people on the platform to talk to. Who would join PayPal if there were no one to pay? Every platform starts out empty, making these worries particularly acute. For multisided platforms, which need not only many users, but many users of different types, the risk is even greater. It's not enough for a ride-sharing platform to have a large base of customers who want to book taxis by smartphone. It also needs drivers willing to accept those bookings.

Despite these challenges, the number of online platforms has spiked in recent years. It's not hard to see why entrepreneurs are drawn to these businesses: They create significant value by enabling communication and commerce that might not otherwise occur. They have modest operating costs because they don't usually manufacture tangible goods or hold inventory. And network effects protect their position once established; users rarely leave a vibrant platform.

I have been studying the dynamics of platform businesses for 10 years, and, with colleagues including Peter Coles, Chris Dixon, Tom Eisenmann, and Andrei Hagiu, I have documented and analyzed case studies on dozens of platform sites and products. In

the following pages, I draw from this research to offer a framework to help aspiring entrepreneurs make the right strategic decisions as they build their own platforms. The framework involves asking five basic questions:

Can I Attract a Large Group of Users at Once?

The first question entrepreneurs should ask is whether they can quickly attract a large group of users. Getting a mass sign-up at the outset can almost eliminate uncertainty about a platform's prospects because it effectively builds critical scale into the platform's network from day one. But in my experience, a new platform can do this only if at least one of two conditions is true:

The company already has the users it needs on another platform. Consider Google's 2003 launch of the AdSense contextual advertising service, the now-ubiquitous "Ads by Google" that appear on myriad websites. At the start, advertisers were hesitant to buy these placements. They worried that website publishers might click ads on their own sites (increasing the site's revenue but depleting advertisers' budgets) and that their ads might be placed on inappropriate sites (such as those with adult content).

But advertisers had already joined Google's popular AdWords platform, providing advertisement text and payment details in order to obtain search engine advertising. By enrolling these advertisers in AdSense, Google set the platform up for a successful launch. With many advertisers, Google had relevant ads to place on most publishers' sites, ensuring high revenue to publishers. Of course, this approach raised legal questions: Could Google provide advertisers with a new service they hadn't asked for? The company had written its contract to retain great discretion over where ads could be shown, and to date advertisers have not succeeded in challenging unwanted Google ad placements.

User data is publicly available. Consider Zillow's early efforts to present profile pages for most houses in the United States, including "Zestimate" prices, information about neighborhoods and school districts, and more. Zillow was able to gather this information from government records, circumventing the impossible task of soliciting information from property owners for a site that was, at the start, unproven. Zillow's initial

Idea in Brief

THE CHALLENGE

Digital platforms are attractive businesses because they create significant value and network effects protect competitive advantage. But they face considerable start-up challenges.

WHY IT HAPPENS

Every platform is empty at the outset. And most require multiple types of users. It's not enough that many people want to book taxis by smartphone, for instance. Drivers must also be willing to accept smartphone bookings.

THE SOLUTION

To launch a platform successfully, consider quickly attracting a large group of users, offering features that provide value even if few users sign up, establishing credibility, and ensuring that the platform works with legacy systems.

information was good enough to attract consumer interest, at which point property owners happily contributed corrections, photos, and other information. Indeed, real estate agents were soon willing to pay to show their advertisements in and around Zillow's property listings.

Zillow's approach typifies a three-step process for launching an advertising-supported platform: (1) Collect data from public sources, and organize it to create a useful service that attracts consumers. (2) Encourage users to submit improved data directly to the platform. (3) Charge companies for preferred ad placement. Even Google's widely used search engine is grounded in this approach. Initially, the company collected page contents by scraper; then it accepted structured data feeds from sites; and now it charges advertisers billions of dollars to appear adjacent to search results. It's a proven path to success—one that overcomes the mobilization barriers that initially challenge so many platforms.

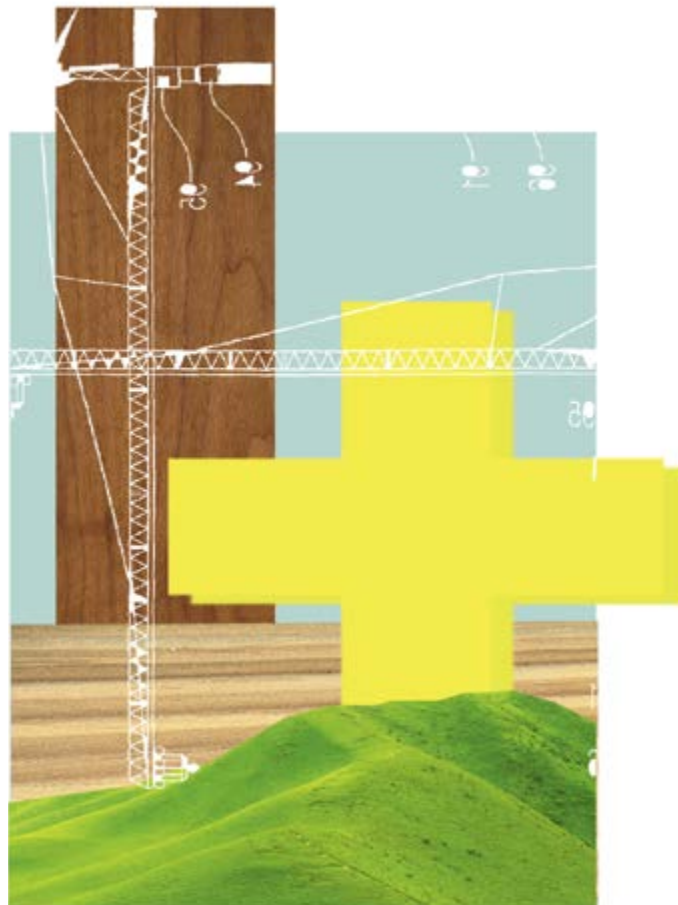
Can I Offer Stand-Alone Value?

If signing up large numbers of users is not feasible, platform businesses should look for ways of providing value to individual users even if no one else is on the platform. Consider the VCR in the 1980s. The challenge was that owning a VCR was useful to viewers only if they could get enough videocassettes to watch—and content owners would bother to make the tapes only if enough people had VCRs to watch them on. The problem was exacerbated by competition among incompatible formats.

The VCR could have been a flop, but its recording capability came to the rescue. The device could tape television broadcasts—and this benefit didn't require that anyone else own a VCR or that any studio offer content on videocassette. Thanks to the wide popularity of the recording function (its legality

was confirmed in a 1984 Supreme Court decision), VCRs avoided the mobilization problems that hinder many multisided platforms.

Creating stand-alone value can present difficulties, of course, especially when extra features require costly hardware. But it's easy to add functionality to a software program or an app. Suppose you find that your taxi-booking app is unpopular with



passengers because few drivers accept bookings through it. Perhaps the app can provide train and bus schedules too, or give phone numbers for traditional taxi dispatchers. With the right additional content, the app could attract enough passengers to make the platform appealing to drivers, who would then pay to be included.

As you try to figure out what kind of stand-alone value to offer and which customers you should be offering it to, consider two strategies:

Start with an industry niche. A good approach for many platforms is to target customers in a relatively narrow market where the platform can more readily gain traction. The Yelp review site now evaluates almost every small business in the U.S. (and many international businesses too), but initially it focused on a much smaller sector: ethnic food in San

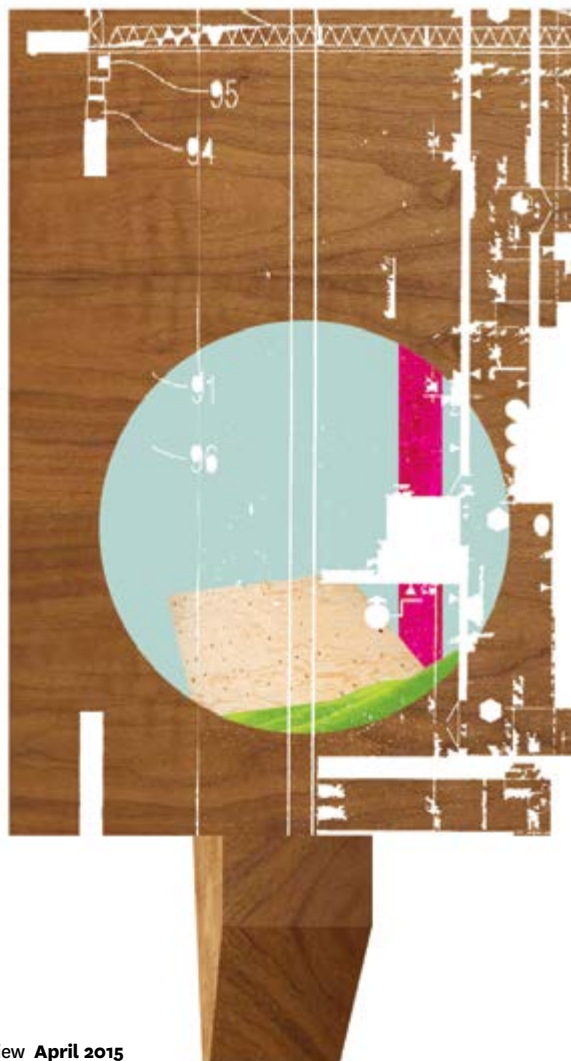
Francisco. With that base, the company attracted dedicated reviewers and interested readers. Word of mouth and participants' travel facilitated growth—first to covering other cities and then to reviewing sectors other than restaurants. As it grew, Yelp naturally expanded from reviews to other functions, such as accepting reservations, forwarding online orders, and offering discounts.

In a world focused on getting big fast, it's all too easy to overreach. Having built a general-purpose review platform, Yelp could have tried publishing reviews of all businesses everywhere from the outset. Instead, it stayed focused on a narrow sector until it had attracted devoted fans and higher-quality content, which paved the way for subsequent success.

Find or build small social groups. For some platforms, success comes through identifying and serving the social needs of small groups. Two people can use Skype and immediately enjoy its free, high-quality calls; they get these benefits even if no one else ever joins. Skype spread exactly this way—a student calling parents, far-flung friends staying in touch—with users often joining in pairs who call only each other. Of course, Skype becomes even better when most people have accounts.

Skype expanded naturally because users were motivated to spread the word and encourage others to join in order to get the most out of the platform. But not all platforms are inherently social, so businesses may need to build that capability into the value proposition. Computer and video games, for example, are not necessarily a social activity; historically, gamers have played alone. Zynga reimagined online games as “games with friends.” In running an imaginary farm on Zynga, a player might run out of key supplies and need to borrow from a real-life acquaintance playing the same game. Social features like this accelerated Zynga's spread; having friends to call on helped people perform better, giving them an incentive to recruit more friends to the platform. Another approach to building in sociability is discounter LivingSocial's offering of a free restaurant meal, spa visit, or other local service if a customer can find three friends who will buy the same thing. The approach has helped expand the service while reducing the high marketing expenses that have strained competitors.

These strategic choices are all largely within the control of a platform designer. As first envisioned, a platform might require thousands of diverse



users—hundreds of taxi drivers in every city, or a full suite of movies playable on a new device. But the right adjustment can make it attractive when used by just a few people—or even by a single person.

How Will I Build Credibility with Customers?

When there are competing platforms in your space, users need some reason to believe that your platform will be worth joining, especially if doing so involves a significant investment, as is the case with game consoles. To attract initial users, a new platform must satisfy those concerns by building credible expectations for its future success.

The basic strategy for credibility building is to attract a marquee platform contributor. Gaming console makers, for example, need to demonstrate that highly sought-after games will be available, so they often pay a well-known game developer to provide a given game on the console. In some cases, console makers have bought the developer outright: Once Microsoft acquired Halo, for example, there was no doubt that its eponymous game would be available on Xbox. For the greatest effect, the marquee contributor's participation should be exclusive. That's why Microsoft pays some game developers a premium to provide their content on Xbox only. If devoted gamers want those games, they have to buy an Xbox console.

Exclusivity with a marquee user can drive growth; however, a platform must compensate that user for the profit it could have made by joining other platforms. The costs can be prohibitive, giving incumbents a big advantage.

While the high costs of attracting such users may tempt platform businesses to build their own capabilities, there are downsides to relying too much on in-house development: Prospective users may see it as competition. For example, starting in 1984, Apple's hardware lineup included printers. Suddenly other printer manufacturers thought twice about making them for Macs, figuring (not unjustifiably) that Apple was bound to give its own devices some advantages. After weighing the modest printer profits against the risk of losing key partners, Apple exited the printer business in 1997.

How Should I Charge Users?

Building a vibrant network has always required making choices about how to charge users and

The Platform Builder's Checklist

AMASS A LARGE USER BASE

- Leverage existing user groups
- Use publicly available data as a substitute for one user group

OFFER STAND-ALONE VALUE

- Add a service that is useful even if few others join the platform

RECRUIT MARQUEE USERS

- Pay them to join
- Buy the marquee brand

REDUCE USERS' RISKS

- Offer pay-as-you-go pricing
- Subsidize early users

ENSURE COMPATIBILITY WITH LEGACY SYSTEMS

- Offer just enough compatibility to attract new users
- Anticipate resistance from legacy systems

which users to charge. But the functionality of digital platforms offers increased flexibility in making these choices, and platform entrepreneurs have more scope to challenge industry norms. Let's look at how successful platforms have worked two important pricing levers:

Pay-as-you-go. Offering pay-as-you-go pricing is a powerful way to reduce the risks of a platform for some types of users. Groupon, for example, could have sold advertising to restaurants on a flat-fee basis, letting them reach all Groupon consumers in a city at one low price. Like the familiar print-advertising model, this would have yielded simple, predictable pricing. But it would also have created significant risks for restaurants—that Groupon's consumer sign-ups would fall short of expectations and that those who did sign up would be uninterested in a given restaurant's offer. Instead, Groupon charged restaurants only when a consumer bought a voucher. This approach raised other problems but protected restaurants against the risks of low user counts and limited interest.

As the Groupon case illustrates, pay-as-you-go pricing is a feasible option in more and more cases because technology can easily capture and record individual transactions automatically. It would not

have been feasible to equip an early fax machine with a counter that recorded how many pages were sent and received. Anyone renting a device with a by-the-page fee would have had a strong incentive to turn back the dial to reduce fees, and a tamper-proof counter would have added to the cost of an already-expensive device. But today, platform operators have many ways to let users try the service before committing in full, making pay-as-you-go a viable option for most platforms.

User subsidies. Whether it's launching a cereal brand or opening a restaurant, marketers widely use discounts and promotions to encourage consumers to try new offerings. For platform businesses, subsidies play an even more important role, because low usage at the outset often means that a platform's early benefits are not great enough to outweigh the cost or hassle of joining.

Lyft, the ride-sharing service, is a case in point. To attract drivers, Lyft could have offered them a higher fee per minute and per mile, but they probably would have been reluctant; with few early passengers, drivers would have worried that even at a higher rate, zero customers still equals zero dollars. Instead, Lyft restructured compensation to early drivers: Rather than paying them for minutes worked and miles driven, it sometimes paid them simply to be on call in case passengers sought rides.

At the same time, Lyft stimulated passenger interest through generous promotions—in some cities, it offered five free rides to anyone who joined early. Notably, the two promotions reinforced each other: Having already paid drivers to be on call, Lyft could provide free rides to promote the service at no additional cost. Subsidizing both sides of a platform like this implies significant expenditures, which consume a platform's capital. But once a platform gains scale, users' desire to connect to others (for example, drivers' interest in reaching riders) should reduce the need for subsidies.

Even when they have scaled up, however, platforms often continue to subsidize one type of user in order to attract more of that type, because the platform can then charge higher fees to other, more lucrative types. Google, for example, provides free services including search, e-mail, and maps in order to attract more consumers, allowing it to charge higher fees for ad placements to another side of the market: advertisers. (For details on perpetual one-sided subsidies, see Thomas Eisenmann, Geoffrey Parker,

and Marshall Van Alstyne, "Strategies for Two-Sided Markets," HBR, October 2006.)

Can I Make My Platform Compatible with Legacy Systems?

Few platforms create entirely new networks. Typically, users migrate to a new platform from some prior system. Building in compatibility with legacy systems is often key to a successful launch, though it may involve marrying yourself to outdated technology.

Consider the launch of Paytrust, the online bill-payment service, in 1998. Paytrust sought to let customers log on to a secure site, see their bills, and click to authorize payment, thereby avoiding the need for paper, envelopes, or stamps. As initially envisioned, Paytrust's strategy involved recruiting major billers to send bills and receive payments electronically. This approach would obviously have reduced billers' costs for paper and postage, but it was unrealistic to ask, say, Comcast or Verizon to connect its systems to an unproven start-up that at the outset had no users.

Instead, Paytrust encouraged customers to update their billing addresses so that their bills would be sent directly to Paytrust, which scanned each bill and posted it to the corresponding person's account. Meanwhile, with information about a customer's bank account, Paytrust could write checks on the customer's behalf. Thus, Paytrust made itself compatible with billers' legacy systems, so the service was useful to consumers even before billers "signed up." With a viable product to attract consumers, Paytrust's pitch to billers was much more appealing, and billers were soon able to justify digital data transfers that eliminated paper and scanning.

Today, platforms typically rely on interoperability, data conversions, and information synchronization to reduce the costs of switching. For example, a new Gmail user often has an existing e-mail account that will continue to receive messages. Google's MailFetcher feature pulls those messages into Gmail, thereby reducing the barrier to switching.

Compatibility doesn't have to be perfect—just good enough. Consider smartphone apps. At its launch, in 2007, Apple's category-defining iPhone had no capacity for users to install apps from third parties. (Apple added the App Store and third-party apps more than a year later.) The company provided selected tools through preinstalled apps, but initially users could not add programs from anyone else.

However, the iPhone's web browser allowed users to access web-based applications. Although those apps, designed for use on a desktop, did not fully exploit the iPhone's capabilities, there was enough user interest to demonstrate an opportunity. Rapid iPhone adoption soon motivated developers to write native apps that took advantage of the device's full capabilities.

Many platforms now offer this kind of imperfect compatibility: It attracts new users and then gives them an incentive to switch more fully to the platform. Users can run DOS apps on Windows, but they lose key Windows benefits (such as shared clipboard and device drivers). Blu-ray devices can play standard-quality DVDs, but without the improved quality that is Blu-ray's main selling point. It's a delicate balance: Platforms must offer enough compatibility to showcase potential benefits, yet not so much that users delay switching to reap those benefits.

Of course, not every business welcomes compatibility. If the owners of incumbent systems feel threatened by a new entrant, they will attempt to block compatibility. Consider RealNetworks' 2004 launch of Harmony, a digital music subscription service and player that would compete with Apple iTunes. As an incentive to customers who had already bought iTunes files, Real provided a converter that let iTunes files play on Real devices. It was a clever hack and positioned Harmony to take off. But Apple quickly changed its file formats to block Real's converter. Facing ongoing format changes and the threat of litigation, Real was forced to withdraw efforts at compatibility. For this and other reasons, Harmony ultimately flopped. (Antitrust litigation that challenges Apple's tactics as unlawfully extending its dominance from devices to media sales is ongoing.)

Google similarly sought to block data synchronization for its AdWords platform. From 2006 to 2013, Google banned the creation of tools to help advertisers copy their campaigns from AdWords into competing search engines like Microsoft Bing and Yahoo. Only when competition regulators challenged the practice (after I flagged it in 2008 testimony) did Google lift the restriction—a move that now enables one-click copying to other ad platforms.

FOR NUMEROUS online services and other platforms, launch is both the most exciting moment and the most difficult. Platforms usually provide



AMERICA'S FIRST E-BILLING SYSTEM An Interview with Paytrust Cofounder Ed McLaughlin

HBR: WHAT WAS PAYTRUST OFFERING?

McLaughlin: We enabled customers to receive and pay household bills online—quite a thing in 1998. Customers would tell companies to send their bills to Paytrust. We'd convert the paper bills to genuine electronic bills—not simple PDFs—and then alert the customers by e-mail that they had a bill, which they could view on our site and pay from anywhere. We also offered other functionality, like custom alerts, automatic payment rules, and payment history. Essentially, we did away with the old process of receiving a bill by mail, tearing off a stub, attaching a check, and mailing it to the biller, who would then need to get the check converted into electronic money.

WHO WERE YOUR FIRST CUSTOMERS?

Back then, many people were uncomfortable with the internet, let alone using it to pay bills. In fact, when people started using Paytrust, they'd make payments to themselves first to see if it worked. So we focused our marketing on frequent e-mail users and people with at least one e-commerce transaction to their name. We also looked for people who traveled a lot, or who had second homes, because they risked not receiving paper bills on time. We focused on urban areas, where many people pay the same companies, which made bill conversion easier. We soon saw customer groups forming by themselves. Parents, for

instance, would use Paytrust to pay their college kids' bills.

WHAT WAS YOUR VALUE PROPOSITION TO BILLING COMPANIES?

We offered a way to move to a completely paper-free billing process, connect with their customers online, and dramatically reduce their costs of billing and collection. An e-bill is a lot better as a customer touch point than a paper document. You can better understand your customers and easily offer additional products and services.

WHAT WAS YOUR REVENUE MODEL?

We offered free trials. Once people got used to the system, they converted to paying a monthly subscription fee of \$7.95 pretty willingly. When we raised the price to \$10.95, we didn't lose many customers. As we built up our payer base, more companies wanted to partner with us in a complete e-billing and e-payment system, which attracted yet more payers. Banks began licensing our technology for their own bill-payment services. We sold the company to a bank and payment processor, which licenses the consumer service to Intuit. The service is flourishing, and I still use it to pay my own bills.

Ed McLaughlin, a cofounder and the former CEO of Paytrust, is currently the chief emerging payments officer at MasterCard.

exceptional value to multiple types of users—if the platforms are widely adopted. Yet at the outset they are not used at all, and every prospective user reasonably fears wasting time and resources signing up for a service that may fail to gain traction. At first the problem may seem as insurmountable as solving the chicken and the egg puzzle. But by using these strategies, entrepreneurs can improve their odds of a successful launch. ♥

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