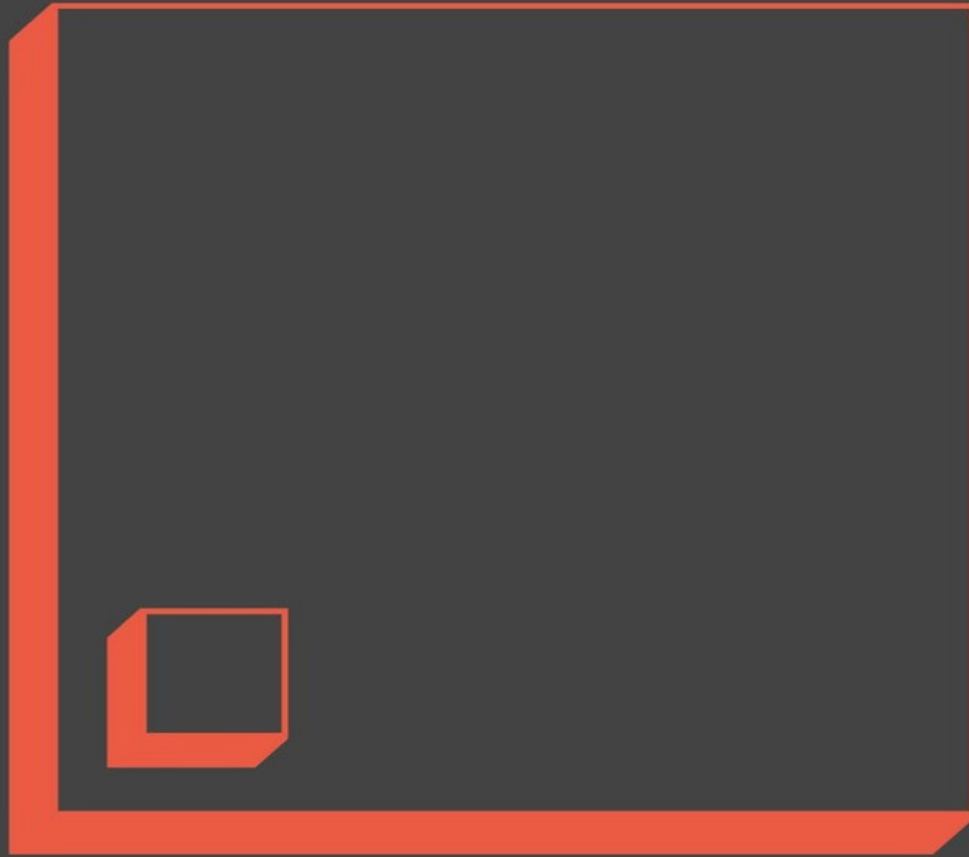


*"A compelling framework for building platforms, networks and marketplaces.  
Essential reading for every entrepreneur and innovator."*

– Jon Oringer, Founder and CEO, Shutterstock



# PLATFORM SCALE

How an emerging business  
model helps startups  
build large empires with  
minimum investment

Sangeet Paul Choudary

*Platform Scale* explains the design of a family of emerging digital business models that enables today's startups to achieve rapid scale: the platform business model. The many manifestations of the platform business model - social media, the peer economy, cryptocurrencies, APIs and developer ecosystems, the Internet of things, crowdsourcing models, and many others - are becoming increasingly relevant. Yet, most new platform ideas fail because the business design and growth strategies involved in building platforms are not well understood.

Platform Scale is a builder's manual for anyone building a platform business today. It lays out a structured approach to designing and growing a platform business model and addresses the key factors that lead to the success and failure of these businesses.

*"The leading resource for understanding business models for the networked age."*

— PATRICK VLASKOVITS,

New York Times Bestselling Author of *The Lean Entrepreneur*

*"Many understand the power of platforms. Few understand how they work. Only Sangeet tells you how to build them."*

— NIR EYAL,

Wall Street Journal Bestselling author of *Hooked*

*"Sangeet's work brings science and structure to a host of emerging digital business models."*

— MICHAEL KARNJANAPRAKORN,

Founder and CEO, SkillShare

*"The go-to person when it comes to understanding digital economics."*

— ABC MORNINGS RADIO TALK SHOW,

G20 World Summit 2014

## AUTHOR

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Sangeet, Geoffrey, and Marshall are also the co-authors of the book *Platform Revolution* and the co-chairs of the MIT Platform Strategy Summit held annually at the MIT Media Labs.

This book is designed by Ideactio.

*“Today, we all understand the Internet business is not the software business. We strive to build networks and platforms.”*

— Evan Williams,  
Founder of Twitter, Medium and Blogger,  
“Medium is not a publishing tool”

**PLATFORM SCALE**  
**Sangeet Paul Choudary**

How an emerging business model helps startups build large empires with  
minimum investment

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Platform Thinking Labs Pte. Ltd.

For Devika

## PRAISE

*“A compelling framework for building platforms, networks and marketplaces. Essential reading for every entrepreneur and innovator.”*

— JON ORINGER,  
Founder and CEO, Shutterstock

*“The leading resource for understanding business models for the networked age. Highly recommended for entrepreneurs and innovation professionals looking to build new platforms and networked businesses.”*

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*“Sangeet’s work brings science and structure to a host of emerging digital business models. A must read for every serious entrepreneur and innovator building marketplaces or platforms.”*

— MICHAEL KARNJANAPRAKORN,  
Founder and CEO, SkillShare

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Managing Director, South Asia, Adobe

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— ANDREW GUNSBERG,  
Television Host of *Australian Idol*, *The Bachelor*, *Live To Dance*, *The Hot Hits*  
Live from LA



*“The go-to person when it comes to understanding digital economics.”*

— ABC MORNINGS RADIO TALK SHOW,  
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*“An excellent source for managers to develop platform thinking and stay up-to-date on the dynamics of platform-based markets.”*

— PROF. FENG ZHU, Professor,  
Harvard Business School

*“A forefront researcher into how businesses can better use metadata and current technology.”*

— 4BC 1116 NEWS TALK,  
Australian Radio, at the G20 World Summit 2014

*“Sangeet is one of the deepest thinkers I know. He has helped countless startups understand and unlock their core value as platform businesses. His work sits next to Clayton Christensen and Geoffrey Moore.”*

— MENG WONG,  
Co-founder, JFDI

*“One of the best innovation strategists in the world and an expert on building platforms. His work is a must-read for entrepreneurs, investors, and innovators worldwide.”*

— KEVIN DEWALT,  
Former EIR at NSF and Founder, SoHelpful.Me

*“Sangeet’s work provides amazing insight into the success and failure of today’s business models, a resource that entrepreneurs and innovators cannot afford to ignore.”*

— FANG SOONG CHOU,  
General Partner, Pix Vine Capital

*“Sangeet’s platform analysis covers the topic with a depth that’s unique and desperately needed. It’s forced me to rethink how I would structure digital business models to leverage the gains from being a platform v product.”*

— GEORGE BABU,  
Founder of Rypple, acquired by Salesforce

*“Sangeet’s insights reflect his wisdom across not only platform economics but wider digital disruption issues.”*

— CAT MATSON,  
Panel Moderator, G20 Summit Global Cafe, Chief Digital Officer, City of

Brisbane

*“Should be part of the curriculum of every business school throughout the world.”*

— KJETIL OLSEN,

Vice President - International, UpWork

*“I’ve assigned this as mandatory reading for my C-team.”*

— GARY FORNI,

CEO, TuffWerx and former Global Director of Marketing, Intel

*“A must-read for anyone in the ‘platform’ business.*

— AVROM GILBERT,

COO of Seeking Alpha

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Sangeet Paul Choudary is a widely published researcher and advisor to C-level executives globally, best known for his work on platform business models and multi-sided network effects. He is the co-chair of the MIT Platform Strategy Summit, held annually at the MIT Media Labs in Boston. Sangeet also acts as an industry advisor to the Global Platform Data Project at Stanford University and is an advisor at 500Startups in Silicon Valley. He is an Entrepreneur-in-Residence at INSEAD Business School and a Global Fellow at the Centre for Global Enterprise in New York.

Sangeet is an advisor to C-level executives globally and has advised CXOs and board members in multiple industries across Europe, North & South America, Asia and Australia, on the design and implementation of platform business models and network effects.

Sangeet is a regular keynote speaker at leading industry conferences globally (represented by Celebrity Speakers Ltd.) and was invited to speak at the G20 World Summit 2014 events in Brisbane. He has lectured at leading universities in the US, including Harvard Business School, Carnegie Mellon University and the MIT Media Labs. He is a board member (advisory) of CoFounders Lab, the world's largest community of technology entrepreneurs.

At the G20 World Summit 2014 in Brisbane, he was hailed by the Australian media as 'a forefront researcher into how businesses can use metadata and technology' and 'the go-to person when it comes to understanding digital economics'.

Sangeet's work has been featured and recommended on leading publications, including the Wall Street Journal, Harvard Business Review, MarketWatch, Forbes, WIRED Magazine and Fast Company. In the April 2015 issue of Thinkers magazine on 'Redefining Capitalism', he was featured alongside globally leading thinkers like Michael Porter and Don Tapscott. Sangeet is also a contributing author to the book *Managing Startups* (O'Reilly Media), Inc and the co-author of the upcoming book *Platform Revolution* (W.W. Norton & Company, Inc).

For more details, please visit <http://platformthinkinglabs.com/about/sangeet-choudary/>

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**Platform Scale (n):** Business scale powered by the ability to leverage and orchestrate a global connected ecosystem of producers and consumers toward efficient value creation and exchange.

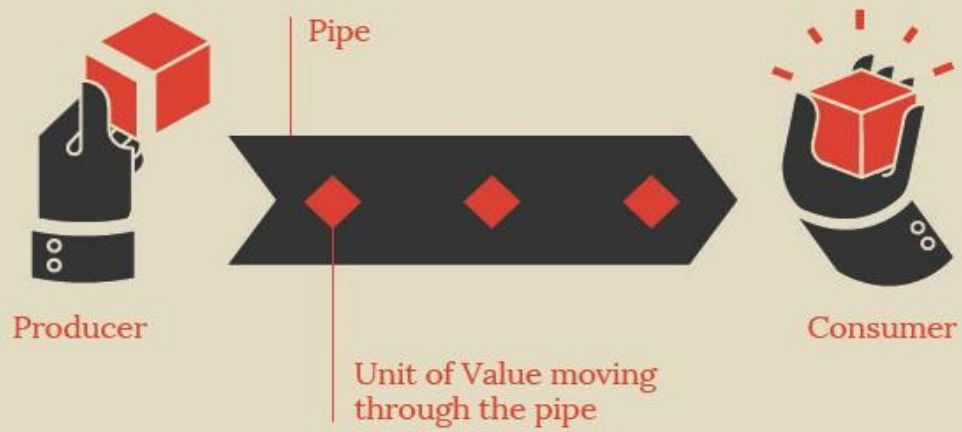
## Section 1

# **AN INTRODUCTION TO INTERACTION-FIRST BUSINESSES**

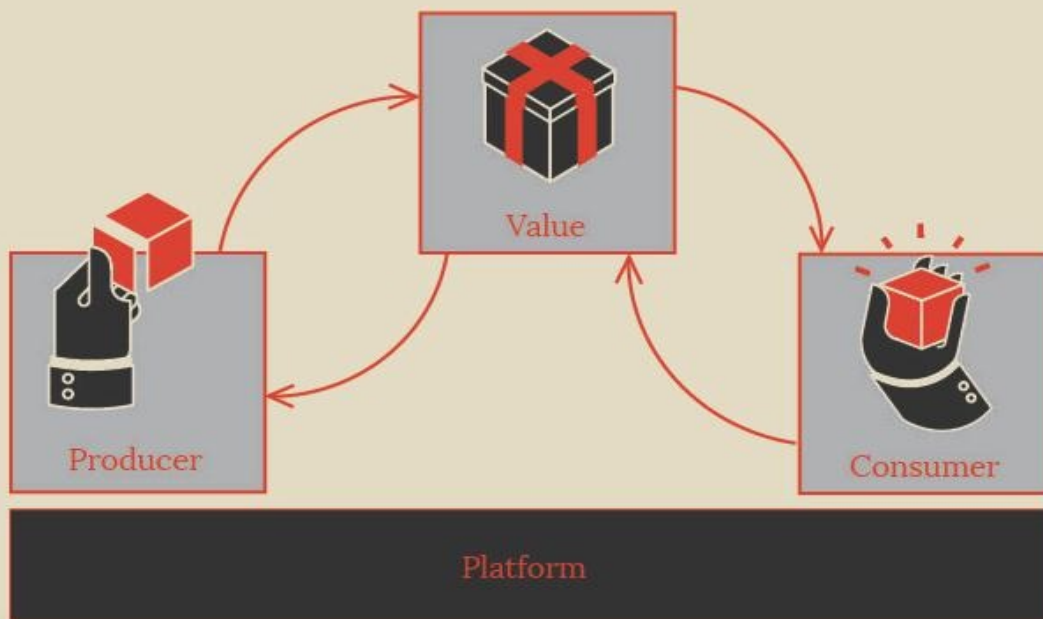
*We are not in the business of building software,  
We are in the business of enabling interactions.*



**Pipe**  
Figure 1



**Platform**  
Figure 2



# The Platform Manifesto

- 1. The ecosystem is the new warehouse*
- 2. The ecosystem is also the new supply chain*
- 3. The network effect is the new driver for scale*
- 4. Data is the new dollar*
- 5. Community management is the new human resources management*
- 6. Liquidity management is the new inventory control*
- 7. Curation and reputation are the new quality control*
- 8. User journeys are the new sales funnels*
- 9. Distribution is the new destination*
- 10. Behavior design is the new loyalty program*
- 11. Data science is the new business process optimization*
- 12. Social feedback is the new sales commission*
- 13. Algorithms are the new decision makers*
- 14. Real-time customization is the new market research*
- 15. Plug-and-play is the new business development*
- 16. The invisible hand is the new iron fist*

## 1.3

# THE RISE OF THE INTERACTION-FIRST BUSINESS

## A Fundamental Redesign Of Business Logic

Platforms compete with each other on the basis of their ability to enable interactions sustainably. Platforms do not compete merely on the strength of better features or larger user bases. They build sustainable businesses when producers and consumers participate regularly in interactions. Uber repeatedly enables interactions between drivers and travelers, resulting in rides being exchanged for money. Facebook and Twitter repeatedly enable interactions between content creators and content consumers. Amazon scales by enabling economic interactions amongst its ecosystem of merchants and buyers.

The importance of understanding the platform business, as an *enabler* of interactions, cannot be overstated. In a connected world, businesses will increasingly focus on enabling interactions between users.

*The goal of the platform is to enable these interactions between producers and consumers – repeatedly and efficiently.*

This chapter explains how interaction-first thinking will increasingly drive business design and lays a foundation for the key ideas explored throughout the book.

### UNDERSTANDING INTERACTIONS

An interaction involves an exchange of value for some form of social or economic currency. A producer of value may create and deliver value to a consumer who is willing to offer the relevant social or economic currency in exchange.

#### *Producers and Consumers*

Every interaction involves two participating roles.

The **producer** creates supply or responds to demand on the platform. The video creator is a producer on YouTube. A freelancer is a producer on Upwork. The **consumer** generates demand or consumes supply on the platform. The video

viewer on YouTube and the client requesting work on Upwork perform the consumer roles on each platform, respectively.

These terms refer to *roles*, not user segments. On eBay, the same user may perform the buyer and seller roles in different interactions. Every user tweeting on Twitter acts as a producer, while the same user performs the consumption role while reading a tweet stream.

Understanding the producer and consumer roles separately informs the design of incentives and the creation of tools that encourage active participation on the platform for the respective roles.

### *Value and currency*

The concepts of value and currency apply to all social and economic interactions. Producers create value in the form of goods or services. The exchange of value may involve the exchange of physical goods (e.g., eBay and Etsy), virtual goods (e.g., Medium, YouTube, and Facebook), standardized services (e.g., Uber and Airbnb), non-standardized services (e.g., TaskRabbit and Upwork), or data (e.g., Waze and Nest).

Consumers may offer economic currencies like money or some other tradable item in exchange. In social interactions, consumers may offer social currencies like attention, reputation, influence, or goodwill.

### *The platform as an enabler of interactions*

**Platforms enable interactions when they enable the exchange of value and currency between producers and consumers.**

A platform offers an underlying infrastructure on top of which producers may create value. Google's Android platform allows app developers to build apps on top of it. Medium allows the creation of value in the form of articles. Airbnb allows anyone with a spare home to publicize its availability. Uber allows drivers to signal that they are available to offer a ride. Every platform allows producers to create and/or signal value in a much more efficient manner than they would have in the past. In this manner, platforms aggregate supply.

Platforms also aggregate demand and allow consumers to "pay" for value through some form of currency. This may involve the exchange of money in some cases. In others, the platform works on communicating the exchange of social currency in one or more forms back to the producer. Medium helps writers gain exposure to an audience, while Yelp helps restaurants build a reputation. Twitter allows users to build a following and gain influence, while Facebook enables users to connect and strengthen relationships with every status update or

shared content. These platforms transfer social currency from consumers to producers, which encourages producers to participate further and create value repeatedly.

## THE DESIGN OF PLATFORMS AS INTERACTION ENGINES

**The interaction-first view posits that the interaction between producers and consumers is the core mechanism of value creation and exchange on platforms.**

Linear pipe businesses are built around a core value-creation process. These businesses scale by increasing the repeatability and efficiency of this value-creation and delivery process. Pipes focus on optimizing process flow.

*In contrast, platforms must focus on optimizing the flow of value and currency in the ecosystem of producers and consumers.* Platforms are interaction engines that scale when they optimize the interaction flow. A platform's goal is to maximize the repeatability and efficiency of the core interaction. Implementing strategic choices that improve a platform's ability to enable interactions is an imperative priority. Every choice that reduces its ability to enable the core interaction must be avoided.

The interaction-first view has important implications for the design and management of platforms. Below, we explore seven specific principles that guide the design of interaction-first businesses.

### **1. Plug-and-play business design**

Platforms must create a plug-and-play infrastructure to encourage interactions. Producers and consumers should be able to plug in to the infrastructure and interact with each other.

*Platforms should be built to encourage open participation.* Removing barriers to production and consumption helps the platform to scale interactions. To enable open participation, platforms need to remove friction in access and usage. Incentives must be architected into the platform to attract producers and consumers repeatedly. Platforms must also invest in behavior design to create new habits that repeatedly bring producers and consumers back to the platform.

However, open participation leads to the creation of noise. This makes the platform ineffective at enabling interactions. First, open participation may encourage undesirable behaviors by allowing access to all kinds of users. Hence, platforms must architect some form of access control, especially for producers who create value on the platform. Second, open participation leads to an abundance of content, which could increase the efforts required by consumers to

find the most relevant items. Hence, platforms need to implement and strengthen consumption filters that determine which items should be served to which consumers. *The design of access control and consumption filters helps with the governance of interactions.*

The two conflicting priorities of open participation and governance introduce unique challenges for a platform business. Platforms must be carefully architected. Building a plug-and-play business model that orchestrates an external ecosystem requires careful design considerations. This cannot be achieved through tactical tricks and hacks.

## *2. Balancing value creation for both producers and consumers*

Pipe businesses can scale well by optimizing the experience for their customers or users. Focusing on the user or customer at the end of the pipe helps to increase the repeatability and efficiency of the value-creation process and successfully scales a pipe. In contrast, platforms must focus on value creation for *both* producers and consumers. Optimizing the experience for a producer may lead to a poor experience for a consumer. For instance, removing barriers to production may help producers but lead to the creation of noise for consumers. In the same way, optimizing the experience of consumers may discourage producers. Consumers in a marketplace may benefit from competitive bidding among producers, but producers may not find it beneficial.

## *3. Strategic choice of “free”*

On the Internet, “free” is often the refuge of those who haven’t figured out their revenue model. But “free” is not a strategy by itself; it can only be part of a larger strategy that involves some form of monetization made possible by offering some value for free. For example, brands have always provided free samples to encourage trial before purchase.

Most large platforms today – Facebook, Google, Twitter, WhatsApp – started out free, and many remain free. This often serves as license for emerging startups to claim that their choice of “free” offerings is strategic. On platforms, “free” is strategic only if it follows at least one of the following two principles:

- a. *It increases the repeatability of interactions.* If the provision of free services to consumers, producers, or both increases the repeatability of interactions, the choice of “free” is strategic.
- b. *It involves the capture of monetizable data.* Facebook and Google offer free services but capture monetizable data: user interests and search keywords, respectively. Advertisements are served in real-time based on this captured

data. Platforms that offer services for free must capture data and user engagement in a manner that can be monetized. On most platforms, at least one role is subsidized to participate on the platform. Producer participation may be subsidized, and producers may get free access to the production tools to encourage value creation on the platform. Likewise, consumers may be allowed free access to the platform. This helps the platform build a base of consumers that subsequently attracts producers onto the platform. A systems view is required to balance subsidies and prices to ensure that interactions ensue.

## 4. Pull, facilitate, and match

Pipes focus on enabling repeatable processes. Platforms focus on enabling repeatable interactions. Pipe businesses build a business engine that works on the following three-pronged model:

- a.*Source*. The pipe sources inputs into the business.
- b.*Assemble*. The pipe leverages value-creating processes to create value from inputs.
- c.*Deliver*. The pipe delivers value to the user and/or customer.

These three activities – source, assemble, and deliver – are increasingly made more efficient, leading to higher repeatability of the core process. Platform businesses do not focus on any of these activities. With the goal of enabling interactions, platform businesses have three rather different priorities:

- a.*Pull*. The platform must pull producers and consumers to participate on the platform.
- b.*Facilitate*. It must facilitate interactions between them.
- c.*Match*. It must match demand with supply to ensure that the right producers and consumers interact with each other.

The platform achieves this by:

- 1. Architecting incentives that repeatedly pull these participants to the platform.
- 2. Providing a central infrastructure that facilitates the creation and exchange of value.
- 3. Matching participants with each other and with content/goods/services created on the platform.

## 5. Layering on new interactions

Platforms scale by adding more interactions and layering on edge interactions

around a core interaction. All platforms are centered on a core interaction that enables every other (edge) interaction. LinkedIn, for example, has multiple interactions, such as recruiters serving jobs to candidates and thought leaders publishing posts for readers. However, the central purpose of LinkedIn continues to be centered on enabling professionals to connect with each other. LinkedIn's failure to power this core interaction would lead to the failure of all edge interactions that the platform enables.

## 6. Enabling end-to-end interactions

Platforms create efficiencies in interactions by aggregating demand and supply and ensuring that the most relevant users are matched with each other. Most platforms create significant value by performing this matching function.

Increasingly, platforms are expanding beyond the matching function to enable the end-to-end interaction. Uber doesn't merely match the driver to the passenger. It also tracks the duration of the ride and uses that information to charge the passenger accurately and transfer the money back to the driver. Finally, it allows the two sides to rate each other – the exchange of social currencies – to determine signals of quality that it can leverage in subsequent interactions. Efficiencies created in the interaction extend beyond the matching of supply and demand.

## 7. Creation of persistent value beyond the interaction

On many platforms, interactions also enable the creation of lasting and persistent value beyond the single exchange. Airbnb hosts and guests rate and review each other during every interaction, creating *reputation* that enables future transactions. Twitter followers may choose a new account to follow based on a tweet they read, thereby building that particular account's *influence*. Reddit enables the development of crowd opinion on news articles by aggregating reader inputs and creating *authority* and *visibility* for articles. TripAdvisor brings reviewers and travelers reading reviews together to determine the *reputation* and *quality* of an establishment. In all these examples, value created during individual interactions persists to create cumulative value. This is explored in further detail in subsequent sections.

### PLATFORM SCALE IMPERATIVE

A business that goes about building a platform the way it would build a pipe is



setting itself up for failure. Many business leaders erroneously apply the pipe execution model to building platforms. The media industry is struggling to come to terms with the fact that the model has shifted. Traditional retail, a pipe by most measures, is being disrupted by the rise of marketplaces and in-store technology. Platforms require completely different mental models to succeed. They need interaction-first thinking.

Pipes rely on user-first thinking, not interaction-first thinking. In user-first thinking, the single user's perspective rules all business decisions. This perspective works well when value flows linearly from the business to its users.

**As businesses move toward enabling interactions between producers and consumers of value, they must adopt interaction-first thinking.**

In interaction-first thinking, the focus on users does not cease but becomes subservient to the focus on interactions. Single user benefits may be overruled if the interaction between users suffers. However, an interaction is truly desirable when it creates value for all participating users while maximizing the efficiency of the interaction. A business that enables desirable interactions will ensure a desirable user experience as well.

For example, a user-first business focuses on the activation and engagement of users. In an interaction-first business, these are consequences of the main goal rather than the goal itself. User engagement is an outcome of the platform's ability to enable interactions sustainably and efficiently.

The movement from the pipe-based, user-first view to the platform-based, interaction-first view is best captured through the following shift:

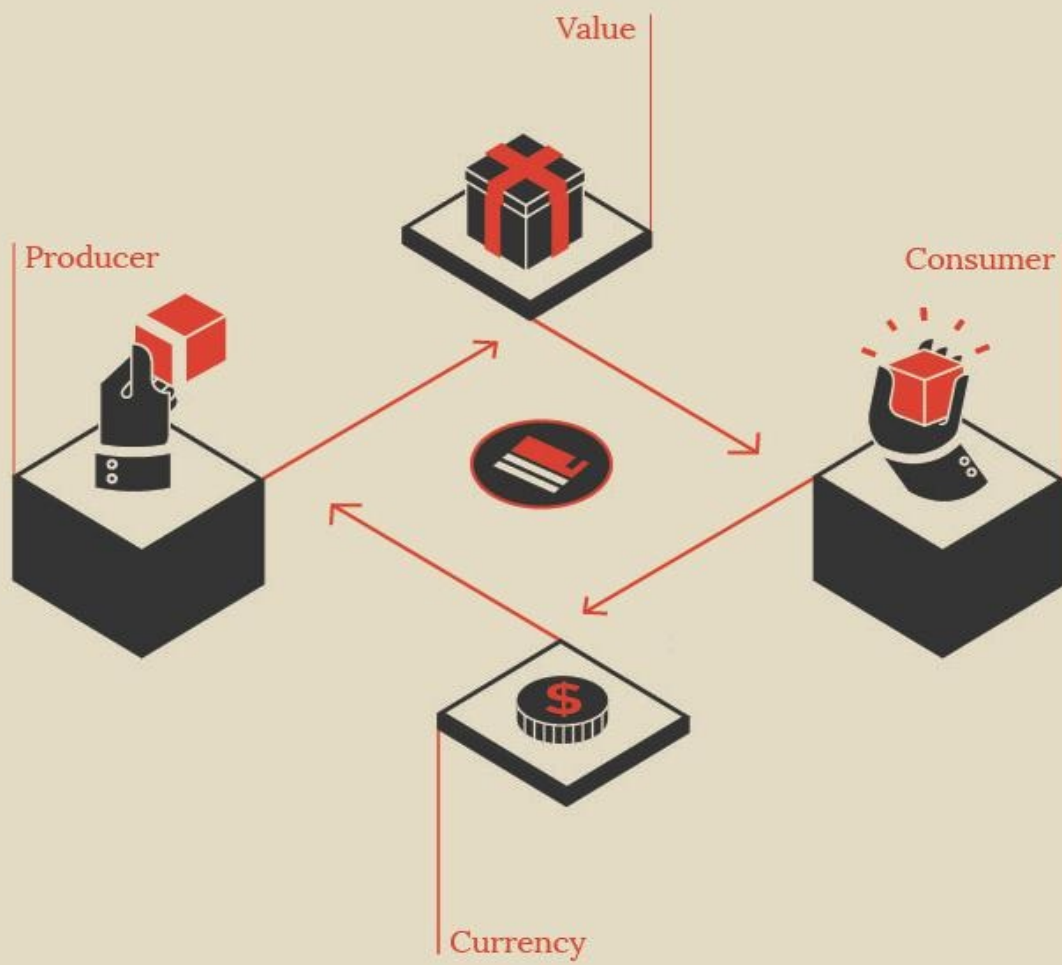
**We are not in the business of building software.**

**We are not in the business of selling products and services.**

**We are in the business of mediating and enabling interactions!**

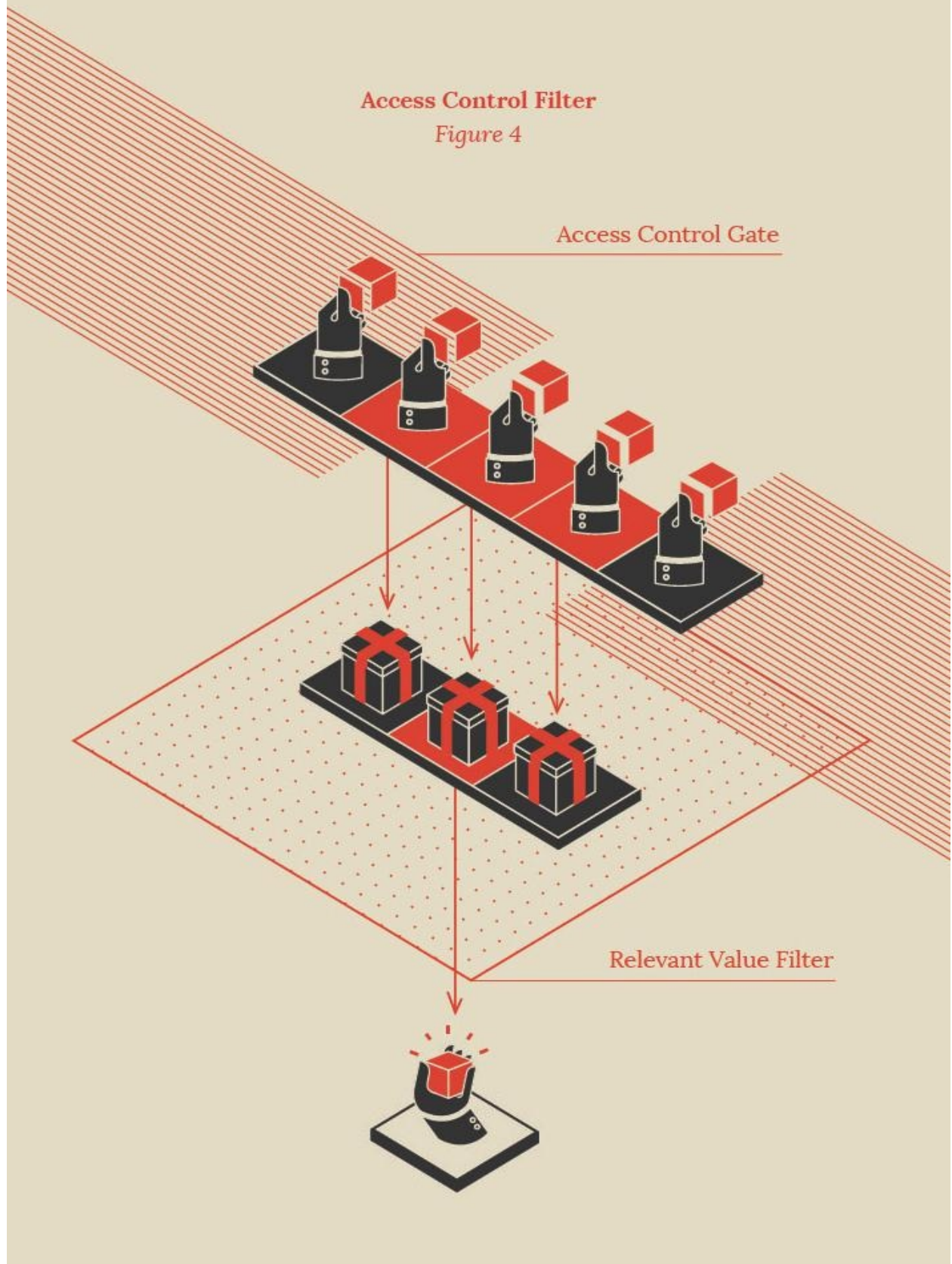
## Interactions

Figure 3



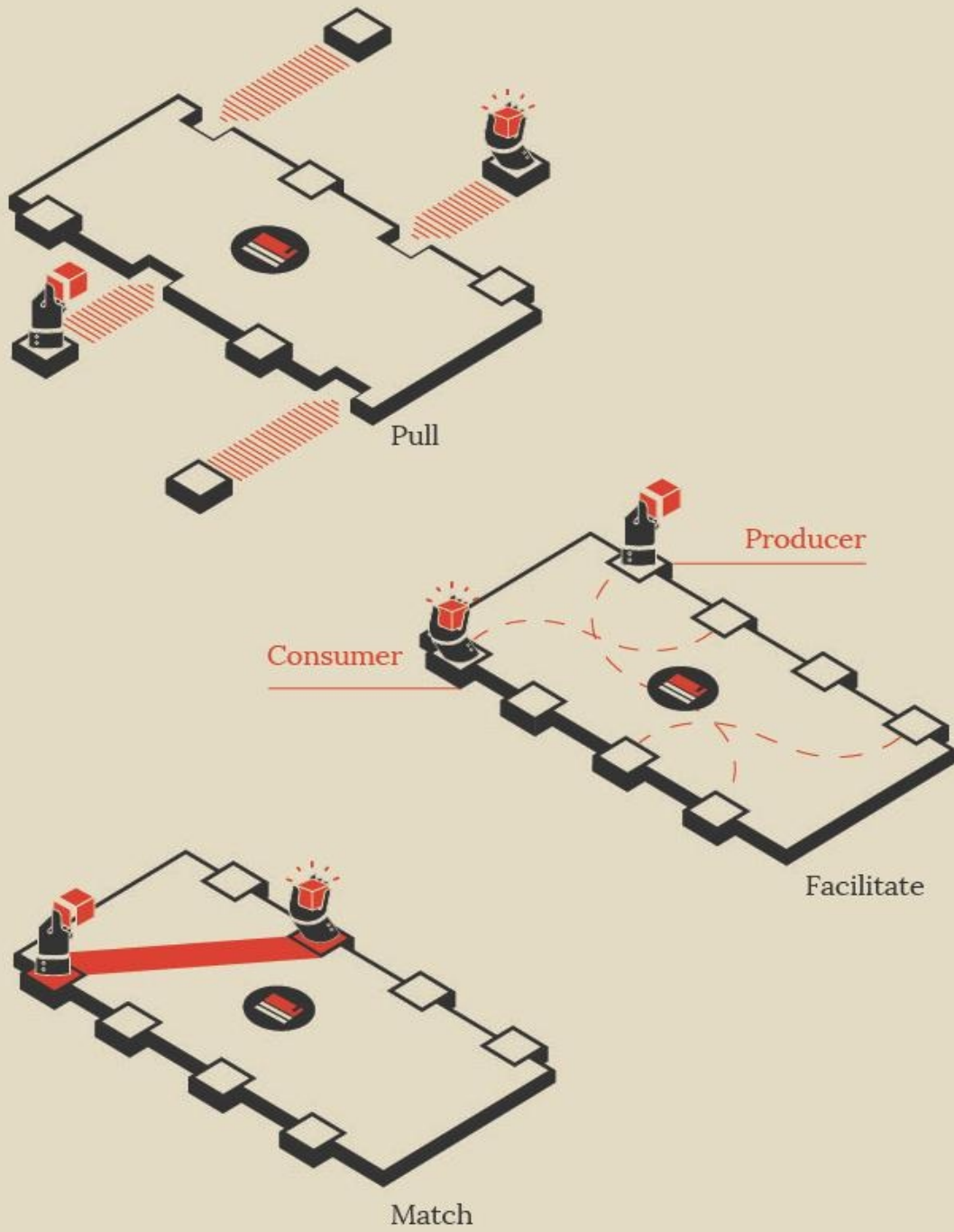
## Access Control Filter

Figure 4



# Pull, Facilitate, Match

Figure 5



## 1.5

# THE INNER WORKINGS OF PLATFORM SCALE

## The Five Ingredients Of Platform Scale

The platforms of the last decade and more have repeatedly sported growth trajectories that are colloquially referred to as “hockey-stick curves.” These growth trajectories sport a short gentle start and an inflection point, followed by a steep, non-linear slope. Their resemblance to the shape of an ice hockey stick gave them the name. Venture investors see these graphs often as startups pitch for the funding needed to get past the inflection point. Arguably, actual growth curves have several inflection points, but the overall shape of many such curves, past the inflection point, is non-linear.

Businesses that achieve platform scale show such growth trajectories. These businesses start slow, reach an inflection point, and gain rapid traction. The user base, the rate of value creation, and, in many cases, the revenues follow such growth trajectories. Understanding the factors that drive platform scale helps entrepreneurs and managers architect the platform in a manner that is best suited for leveraging these factors.

The importance of the right business architecture for achieving platform scale is explained in detail in Section 2. Startups may often implement tactical “growth hacks” without understanding the real drivers of platform scale. This is ineffective in achieving sustainable scale and does not create the conditions by which the platform can seemingly scale of its own accord. Sustainable platform scale depends on the platform’s ability to foster activity in an ecosystem of producers and consumers, and it is achieved only through the right business design and architectural decisions, not through superficial “growth hacks.”

The preceding chapters explained how the repeated participation of producers and consumers leads to platform scale. This chapter explores the key drivers that make platform scale possible.

### A QUICK NOTE ON PIPE SCALE

Pipes rely on internal processes to create and deliver value. These processes require a setup cost. Factories must be set up to build goods. Subsequently, these

processes involve a marginal cost – the cost associated with running through every additional cycle of the process. There are marginal costs associated with production. These involve sourcing, assembling, and preparing the final good or service. Marginal costs associated with distribution are incurred as value is delivered to the consumer. As pipes scale, they try to minimize the marginal costs of production and distribution. They also invest in branding activities that build a brand and eventually help them price better. These factors improve the marginal economics of the business.

This overview of the drivers of pipe scale, while not exhaustive, helps contrast it with platform scale, as illustrated below.

## FIVE DRIVERS OF PLATFORM SCALE

The factors that drive platform scale are very different from those that drive pipe scale. Five specific factors, unique to platform scale, work together to drive the rapid growth trajectories observed with today's leading platforms.

### **1. Minimal marginal costs of production and distribution**

Platforms benefit from unique marginal economics. Unlike pipes, the marginal cost of scaling both supply and demand is minimal on platforms. A hotel chain expands by setting up more hotels and creating more rooms. It incurs marginal costs in maintaining and managing these rooms on a daily basis. In contrast, Airbnb expands with near-zero marginal costs. New rooms are added and maintained by hosts. Airbnb doesn't incur additional costs associated with servicing new rooms. Airbnb does invest in community management to ensure that hosts follow best practices. It also offers insurance cover to hosts to encourage them to participate on the platform. However, compared to a hotel, the marginal costs of value creation are drastically lower for Airbnb.

Only platforms benefit from superior marginal economics of scaling supply. However, both platforms as well as pipes that use the Internet benefit from low marginal costs of scaling demand. Traditional newspapers incurred high marginal costs of delivery associated with the distribution of physical newspapers. Online news is distributed with near-zero marginal costs of distribution. Hence, efficient pipes can benefit from lower marginal costs of distribution, too. Amazon and Netflix have superior distribution economics compared to their traditional counterparts.

The unique driver of platform scale is the ability to leverage better marginal



economics on both supply and demand. Both value creation and consumption scale efficiently compared with pipe scale.

Better marginal economics is only the first source of platform scale. Platforms also benefit from a second source of unfair advantage: network effects.

## **2. Network effects powered by positive feedback**

In a connected network of producers and consumers, greater value creation leads to greater value consumption and vice versa. The two roles fuel each other. A virtuous feedback loop sets in as a platform scales the network of producers and consumers around itself. Coupled with the minimal marginal costs of scaling, this enables platforms to build large businesses with comparatively small investments.

Uber serves as a great example to demonstrate how network effects work. The availability of more cars on the platform attracts more travelers and vice versa. More intricately, the factors that drive scale are not the numbers of cars and travelers but the levels of participation of the two sides. Higher participation from drivers is useful only if it results in higher ride availability and, consequently, lower waiting time for passengers. Similarly, higher participation from passengers is useful to drivers only when it translates into more requests and lower downtime. As demand increases, more drivers join in. In this manner, network effects are powered by a self-reinforcing feedback loop.

Network effects are observed across platforms. The presence of more buyers attracts more sellers on Etsy and eBay. The posting of more videos on YouTube leads to more views and viewer feedback, which in turn leads to the creation of more videos. The creation of more articles on Medium invites higher viewership, which encourages higher participation by writers.

When combined with near-zero marginal economics of scaling, network effects demonstrate a unique advantage that platforms have over pipes. These two factors allow value creation on platforms to be scaled at a rate that is impossible and unforeseen on pipes.

As producers participate more often, they attract consumers, who in turn attract more producers. This may often not be as easy as it sounds. Unlike pipes, which rely on employees and partners to scale value-creating processes, platforms rely on users who are often not contractually bound to the platform. In such cases, platforms rely on an additional source of platform scale: behavior design.

## **3. Behavior design and community culture**

The central challenge in managing user and partner participation on a self-serve system is compliance. In a traditional organization, compliance is achieved through a hierarchy and a set of rules. How does one achieve this for an open system where participants in the system are not bound contractually? How does one get them to participate as often as needed to maintain a healthy and active ecosystem?

To understand the importance of behavior design, it is helpful to reflect on the download and usage of apps on mobile phones. One may download 50 apps but use only 10 of them on a daily basis, and a smaller number of apps are used multiple times a day. These daily usage apps have succeeded in changing behavior.

Behavior design involves the creation of subtle cues that nudge the user toward the desired behavior. Through subtle cues, notifications, and feedback, users are encouraged to take small steps toward desired actions. Undesirable actions are, in turn, discouraged. Over time, a new behavior sets in.

Before designing behaviors for a platform, it is important to determine how often producers and consumers must participate to enable an active and liquid ecosystem. This should be contrasted with how often these participants would themselves want to participate in those actions. If the gap is too large, the platform may have to invest significantly more in behavior design.

One might well argue that not all platforms rely on behavior design. Wikipedia, for example, is infamous for having created a virtual – and often rigid – hierarchy in its ecosystem of contributors. It ensures compliance through a close-knit community and through a virtual hierarchy.

Behavior design ensures compliance and regularity at the user level. Community culture, often complementing behavior design, ensures compliance at the community level. Through community feedback, a user is made more aware of behaviors that are accepted and encouraged. Users who fail to act in accordance with the community's norms are flagged, and their ability to participate in further interactions is restricted.

Behavior design ensures that producers and consumers participate often and that the platform fosters high activity. However, as platforms scale activity and achieve scale, they often suffer from the problem of abundance. As the number of videos on YouTube increases, its ability to serve the most relevant videos to users must also improve. This leads us to a fourth driver of platform scale: learning filters.

## **4. Learning filters**



Facebook's most important feature may well be the newsfeed. The newsfeed filters and serves content based on its judgment of what is most relevant to a particular user. Its ability to filter relevant content improves with greater usage. The news feed is a filter that learns. As a user uses the feed more often, it captures signals on what the user finds desirable (or undesirable) and leverages the data to strengthen the filter further.

Abundance is a characteristic of most platforms. Platforms that allow open participation and production have the potential to gain traction rapidly among producers. This leads to the problem of abundance. This, in turn, makes filters extremely valuable. Without strong filters, higher abundance leads to lower relevance. Lower relevance discourages consumers from participating on the platform, which in turn leads to producers abandoning the platform. Weak filters can weaken network effects, while strong filters constantly strengthen it.

Filters that learn help the platform to scale its ability to deliver value. Platform scale requires scalable relevance and the preservation of an experience that users find valuable.

Platforms that fail to scale relevance often fail despite achieving scale. Scale, ironically, is their undoing. While the impact of filters may not be as obvious as the impact of network effects on platform scale, the strength of a platform's filters determines the platform's ability to continue succeeding after achieving scale. We now explore the final ingredient that contributes to platform scale.

## **5. Virality**

All networked and connected systems benefit from virality, a phenomenon where the user of a system brings in new users in the course of using the system. Platforms benefit from virality, but pipes that leverage the Internet can also benefit from it. Instagram serves as a great example of viral growth, as explained in further detail in Section 5. Every time a user clicks a picture on Instagram and shares it with friends on Facebook, the platform is exposed to new users. This is a unique driver of growth that is very different from traditional word of mouth, where users would recommend an offering. Virality doesn't require a user's recommendation. As explained in detail in Section 5, any networked offering can be architected to be viral so that the offering is exposed to more users every time it is used.

### **PLATFORM SCALE IMPERATIVE**

The drivers of platform scale mentioned above are unique to a networked and

data-rich world with open, participative systems. Network effects and virality can be achieved only on networked systems. Open, participatory systems enable minimal marginal costs of production and consumption. Data-rich environments help to create strong filters and implement behavior design. In particular, network effects and minimal marginal costs of production are drivers that are unique to platforms. The best platforms implement all of the above drivers into their business architecture. Platform scale is achieved not through marketing initiatives and growth hacks but through a series of architectural considerations while designing the platform that optimize the platform for high participation by producers and consumers. The drivers of platform scale must be architected into the platform. The section that follows lays out a detailed framework for architecting toward platform scale.

# CONCLUSION

## The Quest For Platform Scale Starts With Architecture

An enduring theme throughout Section 1 is the contrast between pipes and platforms and the corresponding contrast between pipe scale and platform scale. Platform scale leverages the ability of networked platforms to create and scale value outside the organization in an open ecosystem. Amazon's transition from a pure-play e-commerce retailer to a marketplace, allowing the participation of external merchants with distributed warehouses, is one of the best examples of stepping on the gas and scaling value creation outside the bounds of the traditional organization. But how does one get started with platform scale?

The traditional rules of scaling organizational processes, resources, and labor work well for pipes but do not apply to platforms. Scaling is not a marketing or user acquisition or retention problem. This isn't merely an issue of scaling the ability to generate and fulfill demand. Achieving platform scale requires the ability to scale value creation to scale value exchange – the ability to scale production and consumption simultaneously – and to repeat the two so that each reinforces the other. Hence, a superficial understanding of growth hacks and viral loops isn't sufficient while building platforms. Subsequent sections may address some of these tactical issues, but achieving platform scale requires a deep understanding of the fundamental business design and architecture principles that help achieve scale in platforms.

The quest for platform scale starts with understanding the design principles that enable value creation through ecosystem interactions. To enable this, the platform must be created with an interaction-first approach rather than a technology-first one. We explore this in detail in Section 2.

Most entrepreneurs and managers looking to build the next Airbnb for X or Facebook for Y, dive into the problem headlong by building technology. Instead, technology should be built only after understanding the interaction that needs to be enabled. Without this in mind, one often ends up with a platform that nobody wants to use.

*Build platforms with an interaction-first, not a technology-first mindset!*

## Section 2

# DESIGNING THE INTERACTION- FIRST PLATFORM

*The design of the platform business model involves the design of a core interaction followed by the design of an open infrastructure that will enable and govern this interaction.*

## 2.2

# UBER'S DRIVERS, GOOGLE'S CRAWLERS AND GE'S MACHINES

## How Core Value Units Power The Platform Economy

What do Google's crawlers, Uber's drivers, and GE's machines have in common? Or for that matter, Elance's freelancers, Dribbble's designers, and Twitter's tweeters?

*In a world of platforms, these producers create the fuel needed to facilitate the economic and social exchanges that power business and society.*

The first chapter of this section illustrates how a platform enables the creation of value by an external ecosystem of co-producers. To achieve this, the platform acts as an infrastructure, and producers plug into this infrastructure and create value on top of it. The design of platforms should center on the goal of value creation enabled by them. In this chapter, we explore one of the most foundational concepts of platform mechanics: the core value unit.

### THE CORE VALUE UNIT

The core value unit is the minimum standalone unit of value that is created on top of the platform. *It represents supply or inventory created on top of the platform.* Without this supply, the platform has very little value in and of itself.

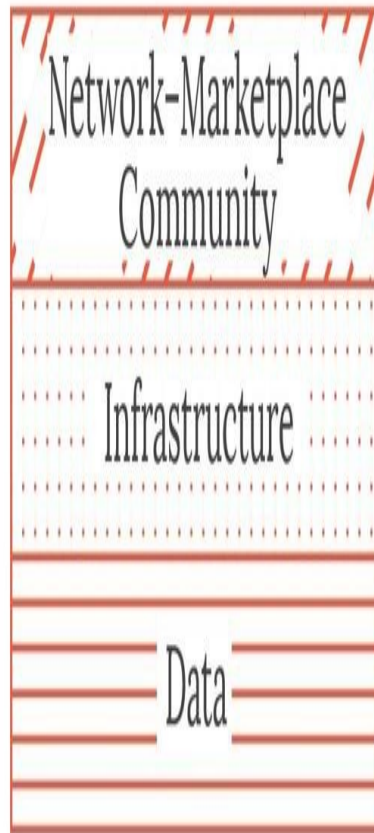
A platform may have more than one form of value unit. In such cases, the platform may have to be designed, keeping each form separately in mind.

### UNDERSTANDING THE CORE VALUE UNIT

The concept of the core value unit is best understood by looking at various examples of platforms. A marketplace like eBay has no value without the product listings on the marketplace. These listings are required to power interactions. Similarly, Instagram will cease to be valuable without a constant stream of selfies and pictures. Airbnb needs to have apartments available on the platform to deliver value.

To understand the concept of the core value unit, let's revisit the platform stack.

The platform stack lays out the three layers of every platform business model.



*Platform Stack*  
*Figure 7*

We noted while analyzing the platform stack that different platforms have different configurations of these three layers. On a platform like eBay, the network/marketplace layer may dominate, whereas, on a platform like Android, the infrastructure layer may be the most important. Let's understand the core value unit in light of these different configurations.

#### **PATTERN 1: NETWORK/MARKETPLACE/COMMUNITY-DOMINATED**

Platforms that have a dominant network/marketplace/community may involve the creation and exchange of goods and/or services. On such platforms, the core value unit may take on three forms:

1. *Goods*. If the platform powers a marketplace for the exchange of goods, the listing that describes the good to be exchanged forms the core value unit. Without these listings, the platform has little or no value; eBay and Etsy are examples of such platforms

2.*Standardized Services*. If the platform powers a marketplace for the exchange of standardized services, the listing that describes the service forms the core value unit. Standardized services cannot be customized and are sold “off the shelf.” A ride on Uber is a standardized service. The availability of accommodations on Airbnb is standardized. The availability of the service denotes the core value, and the listing is the core value unit.

3.*Non-Standardized Services*. In contrast to the above, the service offered by a plumber on TaskRabbit cannot be standardized. In such cases, the listing describes the service provider. The availability of the service provider (not a specific service) and her active participation on the platform denote value. The profile listing for the service provider is the core value unit on such platforms.

Non-standardized services can also be standardized in some scenarios. A designer may offer a non-standardized service on Upwork. However, Fiverr, a platform that allows services of exactly \$5 (and multiples) to be sold, allows the designer to standardize the service as a \$5 Fiverr gig.

## PATTERN 2: INFRASTRUCTURE-DOMINATED

The concept of a core value unit is much simpler to understand in cases where the platform acts as the underlying infrastructure on top of which value is created. Apps form the core value unit on a development platform. The minimum unit of content constitutes the core value unit on a content platform. Articles on Medium, videos on YouTube, and the ephemeral messages on Snapchat, all denote the core value units for the respective platforms.

There is an additional complexity when understanding value on infrastructure platforms. While a single selfie on Instagram – the core value unit – is created by a single producer, a single article on Wikipedia may be created by multiple producers.

When multiple producers collaborate to create value, as on platforms like Wikipedia or Quirky, the actions of all producers need to be designed for.

The concept of the core value unit is easy to understand on infrastructure-dominant platforms because the relationship between the infrastructure and what is created on top of it is very tangible. Tangibility helps us understand the concept better, and this becomes a challenge when we consider data platforms.

## PATTERN 3: DATA DOMINATED

What is the equivalent of an app or a video for the Nest thermostat?

The Nest thermostat is like every other thermostat except that it also streams data on its usage. This data helps the thermostat become more efficient over

time, contributes to other connected thermostats becoming more efficient over time, and has even been used to create services for third parties. How does one think of a core value unit in a scenario where there is no infrastructure and no explicit community or marketplace?

On data-dominated platforms, the data itself is the source of value. Let's move away from the Internet of things for a moment and look at another data platform family: retail loyalty platforms. Retail loyalty platforms capture a consumer's interests based on past consumption to offer him/her more shopping deals in the future. On a retail loyalty platform, the data profile of the consumer is the value unit. It is the core source of value to a retailer interested in targeting that consumer.

In similar fashion, a usage data profile created by a thermostat on Nest is the core value unit on the Nest platform.

Omni-channel shopping platforms track and aggregate customer actions across multiple channels. On such platforms, data created by the shopper are used to serve deals back to the user or to integrate her shopping experience across channels. On all such platforms, shoppers create value and merchants consume value. The data profile that a shopper creates is the core value unit on such a platform.

## CORE VALUE UNITS AND PLATFORM SCALE

There are several properties of core value units that affect platform scale. Understanding these properties helps us understand key execution priorities in the quest for platform scale:

1. The core value unit is the scaling variable of the platform. The more units there are on the platform – and the higher the quality of these units is – the more valuable the platform will be. *To achieve platform scale, focus on increasing the quality and quantity of core value units on the platform.*
2. As platforms scale, they achieve abundance. To deliver value, they need to have strong filters that deliver only the most relevant value to users. We explore this in detail later in this section.
3. The core value unit is required to spark interactions. Interactions are enabled by the platform.
4. The design of the platform should center on the value that is created on the platform.

*The core value unit serves as the starting point for all platform design and architecture.*

## CORE VALUE UNIT: THE FUEL THAT RUNS THE PLATFORM



## ECONOMY THE VALUE PROPOSITION OF A PLATFORM REVOLVES ENTIRELY AROUND ITS CORE VALUE UNITS.

From a producer's perspective, a platform is:

1. An infrastructure to create or store value: Android provides an infrastructure for the creation of applications. YouTube provides an infrastructure to host videos.
2. A marketplace to find an audience for the goods/services represented by the value units: Airbnb acts as a marketplace for listings that represent rooms; Uber serves as a marketplace for information that represents available taxis.

From a consumer's perspective, a platform is a repository of value units that filters the most relevant units to the consumer.

The value proposition for both roles revolves entirely around the value units. A platform without units has little or no value. A platform that fails as an infrastructure or a market for value units will not attract producers. A platform that fails to serve the right units to consumers will fail to retain them.

## THE UNIQUE CHALLENGE OF PLATFORM BUSINESSES

It may be evident by now that the concept of the core value unit is central to all information businesses. Even when information businesses behave like pipes, they transfer value units from the point of production to the point of consumption. The difference, though, is that these units are not produced by external producers. For example, Google's crawlers crawl the Web to create the Web page indices (value units) that make Google valuable as a search engine. The concept of value created on technology and the relationship between value and infrastructure are the same even though the indexed pages are being created by Google's crawlers, not by external users.

Value units are especially interesting in the case of platforms. Unlike pipes, platforms don't control the quality and quantity of their core value units. *Platforms are information factories without control over inventory.* They can create the factory floor, i.e., provide the infrastructure. They can create a culture of quality control, but they do not employ an iron fist in controlling the amount and quality of what is produced and consumed. The challenge of building and managing platforms is that one does not exert direct control over the source of value.

As a result, focus on the core value unit is especially important when running a platform. Who can create value units, how they are created, and what differentiates a high-quality unit from a low-quality one are all critical design decisions when building a platform. As we progress through this section, we will

increasingly note that all platform design decisions are built around the core value unit.

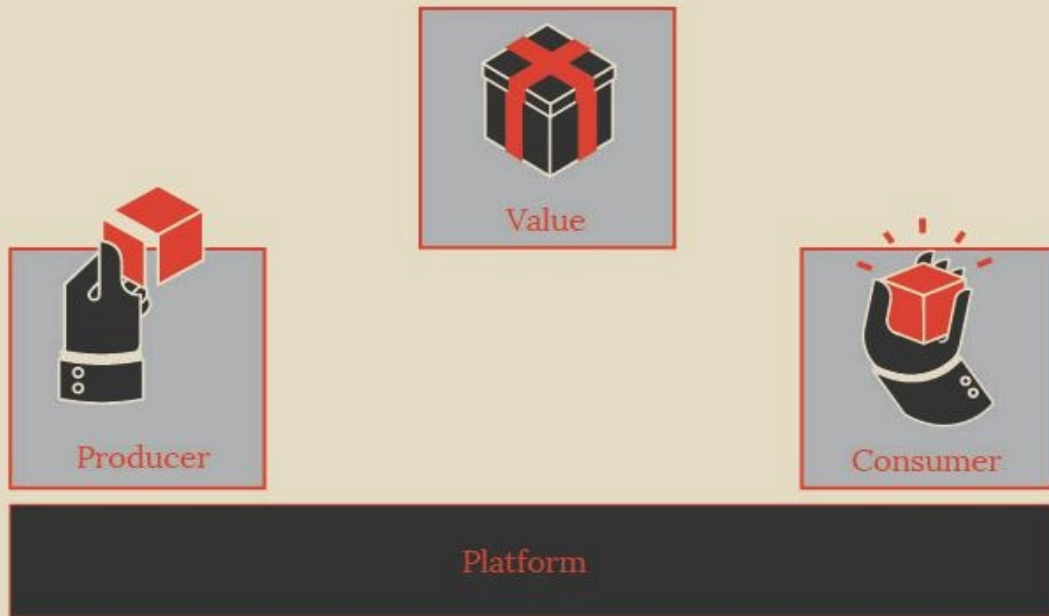
## PLATFORM SCALE IMPERATIVE

The age of the industrial economy accorded inordinate power to those who held the means of production. In the age of platforms, production is decentralized. Whether it is the decentralization of manufacturing through 3D printing, the decentralization of marketing and journalism through social media, or the decentralization of service providers in the collaborative economy, the means of production are no longer limited to large companies or entities. *With decentralized production, the platforms that enable and aggregate this production are the new winners.*

In a platformed world, the people and processes that determine quality and quantity of value units determine success. Google's ability to serve results and solve the world's problems collapses if its crawlers don't work well and its algorithms (filters) fail to serve the most relevant results. Uber's ability to serve consumers collapses if there aren't enough drivers available within a particular area. Instagram's ability to engage users in conversations and keep them away from competing platforms collapses if users stop taking selfies. The core value units power the platform economy. *Any strategy for achieving platform scale should start with a focus on the core value unit.*

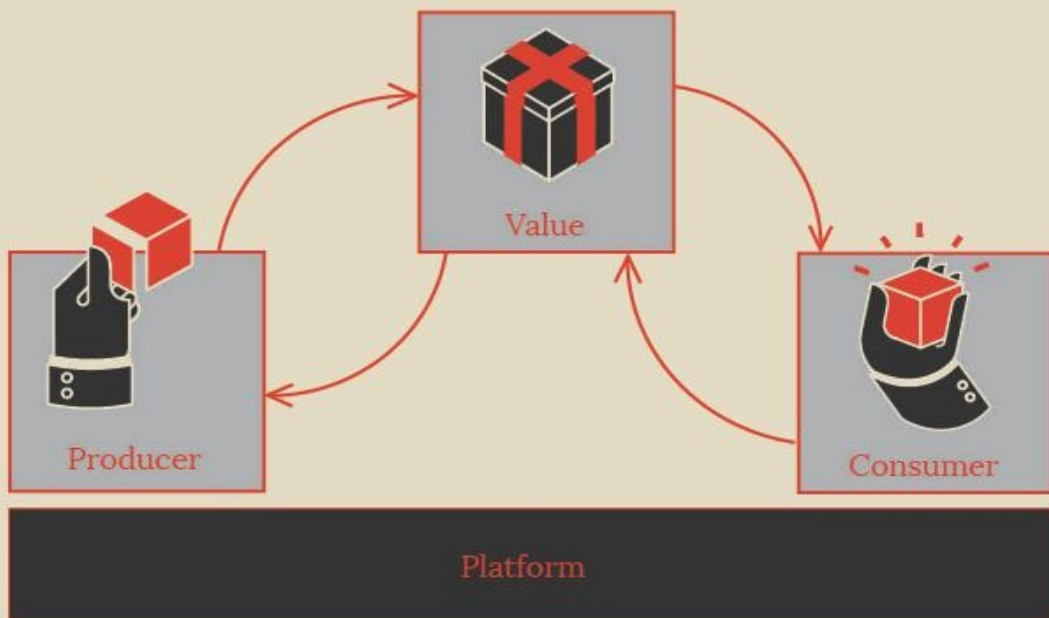
## Ecosystem Players

Figure 9a



## Interaction

Figure 9b



## 2.4

# UBER, ETSY, AND THE INTERNET OF EVERYBODY

## A Visual Guide To Networked Businesses

A network connects diverse participants and enables them to exchange value with each other. Fax machines, telephone networks, stock exchanges, and credit card networks have done exactly that. With the Internet, we now have a universal network that connects everyone with everyone (well, almost).

Networks inherently bring a unique challenge. When value moves in a straight line (as in the case of pipes), it can move in only one direction. On a network, however, value can flow in any direction. Networks function well when the right value is transferred to the right destination.

### VALUE TRANSFER AND BUSINESS DESIGN

We've looked at FedEx as a network that delivers packets from a source to a destination, leveraging data. The goal of the network is to transfer the packet from the source to the destination with minimum failure. False positives deliver packets to the wrong doorstep. False negatives prevent the right recipients from receiving the packets intended for them.

Most platforms work in a similar manner. Every platform is responsible for the transfer of core value units from a source to a destination. Regardless of what these platforms do, the success or failure of their business model depends on their success or failure in making this transfer happen. To understand the importance of value transfer on platforms, it is important to understand the structure of interactions.

### THE ANATOMY OF AN INTERACTION

All economic and social interactions involve the exchange of three fundamental things:

- 1.Information
- 2.Goods/services
- 3.Currency

*All platform businesses require the exchange of information, goods/services, or currency.*

Across all platform-enabled interactions, we note the following three points.

First, some or all of these exchanges may occur through the platform. Some exchanges that do not occur through the platform may still be tracked by the platform.

Second, the exchange of information always occurs through the platform. The exchange of goods/services and currency may or may not occur through it.

Finally, all other exchanges are triggered following the initial exchange of information.

The configuration of different platforms may vary significantly depending on which exchanges they capture and which ones they don't. Below, we explore a few common configuration patterns for platform businesses.

#### PATTERN 1: INFORMATION + CURRENCY

Airbnb's business model requires three exchanges:

1. Transfer of information on accommodation availability from host (producer) to traveler (consumer)
2. Transfer of money from traveler (consumer) to host (producer)
3. Transfer of accommodations-as-a-service from host (producer) to traveler (consumer)

These flows, when visualized, appear as follows: TaskRabbit, a marketplace that allows consumers to find service providers, follows a similar pattern where information and currency (money) flow through the platform but services flow outside of the platform.

Let's look at a variant of this model: a marketplace for physical products, e.g., Etsy (*see Figure 10*). Etsy's business model involves three key exchanges:

1. Transfer of listing information from seller (producer) to buyer (consumer)
2. Transfer of money from buyer (consumer) to seller (producer)
3. Transfer of physical goods from seller (producer) to buyer (consumer)

Again, the transfer of goods/services occurs outside the platform, while the transfer of money is captured on the platform. In scenarios where the transfer of money occurs internal to the platform, platforms often take a transaction cut. *The platform's monetization options are dictated by which transfers can be captured and/or tracked by the platform.*

#### PATTERN 2: INFORMATION ONLY

Several platforms do not capture the exchange of money. These platforms often

monetize by charging a premium listing fee or a lead generation fee.

Craigslist and most other classifieds websites only allow the listing of information. The flow of goods and services, as well as that of money, is neither controlled nor tracked by the platform (*see Figure 11*).

Local commerce platforms like Yelp or India's Justdial enable consumers to connect with local businesses. The money transfer between the participants occurs outside the platform. As a result, their monetization models are based on subscription, paid promotion, or lead generation fees. Groupon, another local commerce player, is slightly different. It enables the transfer of money both on the platform (up to the value of the deal) as well as off the platform (if the transaction exceeds the value of the deal). One may buy a Groupon for a restaurant but exceed the value of the coupon while dining at the restaurant and pay the remainder directly to the merchant. Hence, money is transferred both through and outside of the platform.

### PATTERN 3: INFORMATION + GOODS/SERVICES + CURRENCY

In certain cases, the exchange of goods and/or services may be captured by the platform. Given the digital nature of Internet-enabled platforms, this configuration applies to the exchange of virtual goods (including content) and to services that can be delivered digitally. Clarity is a platform that connects experts with advice seekers through a consulting call. The model works as follows:

1. Transfer of a call request from requestor (consumer) to expert (producer);
2. Transfer of services from expert (producer) to requestor (consumer) via a call;
3. Transfer of money from requestor (consumer) to expert (producer).

All three transfers occur through the platform. The call is enabled by Clarity, and the exact duration of the call is tracked. The subsequent billing for the call is charged on the basis of the exact call duration (*See Figure 12*).

Uber's business model requires three exchanges:

1. Transfer of information on cab availability from driver (producer) to traveler (consumer) in response to the transfer of a request;
2. Transfer of transportation-as-a-service from driver (producer) to traveler (consumer);
3. Transfer of money from traveler (consumer) to driver (producer).

It is important to note that, even though the transfer of goods and services occurs outside the platform, the platform is best able to manage the transaction if it can track this transfer in some way. Uber is aware of the locations through which a ride moves, which in turn helps it bill on exact usage and determine completion

of the ride. We see a similar model at work in the case of virtual goods (see *Figure 12*). On the Kindle Store, readers buy books from authors. The exchanges facilitated are as follows:

1. Transfer of information from e-book author (producer) to e-book searcher (consumer);
2. Transfer of money from e-book searcher (consumer) to e-book author (producer);
3. Transfer of e-book from e-book author (producer) to e-book searcher (consumer).

#### PATTERN 4: ALTERNATE FORMS OF CURRENCY

Not all interactions involve the exchange of money between participants. Other forms of currency may be offered in exchange for the goods and/or services provided. Stream readers on Twitter pay with their attention. By following the tweeter, they also provide her with greater influence. Readers and questioners on Quora pay with views as well as votes. Votes lead to higher reputations for the answer creators. On Quora, votes also lead to the accumulation of credits that can be used to promote more content in the future. Hence, readers pay content creators through a combination of attention, reputation, and influence on Quora. Communities like CouchSurfing work similarly to Airbnb but without the exchange of actual money. In such cases, goodwill and reputation are generated and transferred within the community.

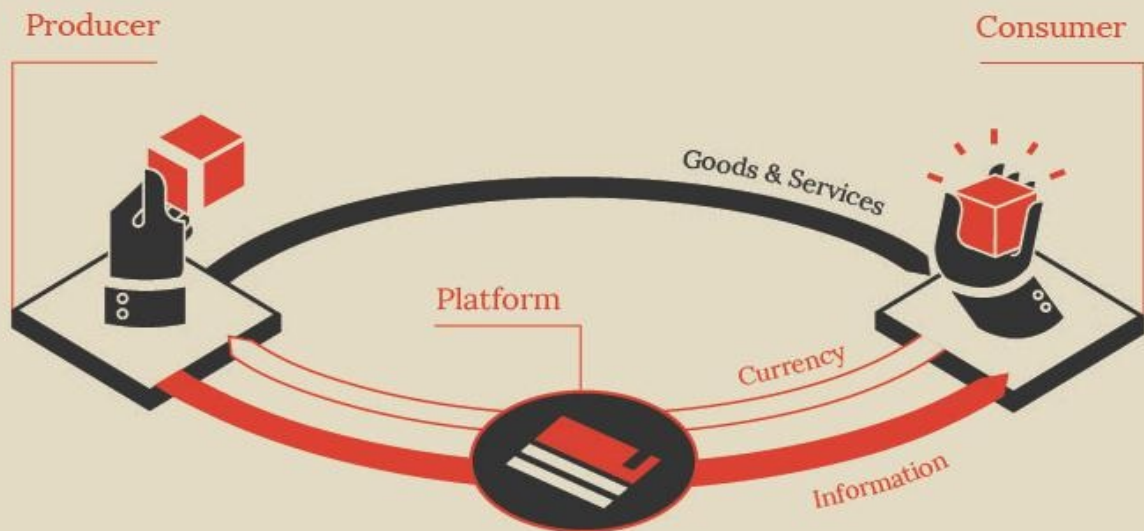
#### PLATFORM SCALE IMPERATIVE

Every platform-mediated interaction starts with the exchange of information. The transfer of information signals the presence of supply and matching supply with demand. Further, it enables the two sides to make a decision about exchanging goods/services for some form of currency. Enabling this exchange of information is critical to achieving platform scale.

In Chapter 1 of this section, we noted the platform's role in acting as a base on which units of value are created. In this chapter, we noted the platform's role in transferring the units to the right consumers and matching supply with demand. Through the rest of this section, we work off these two roles of the platform to build out a framework for the platform's overall architecture.

**Pattern 1**

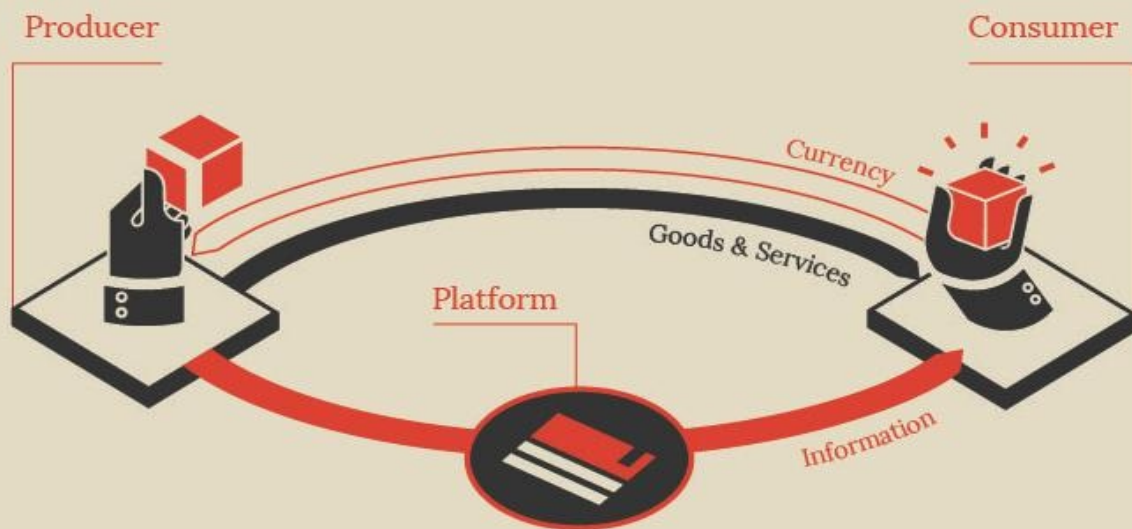
*Figure 10*





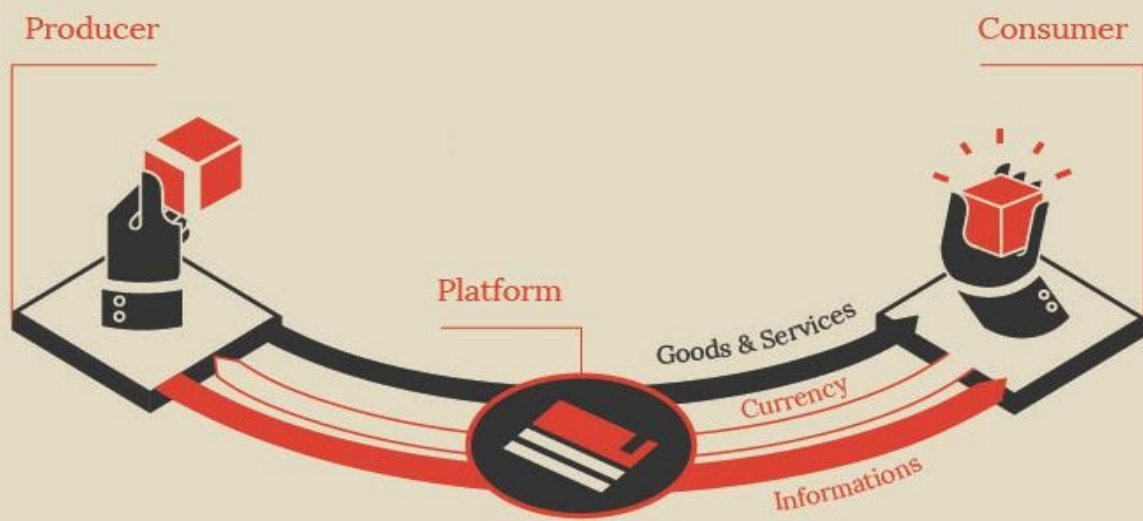
**Pattern 2**

Figure 11

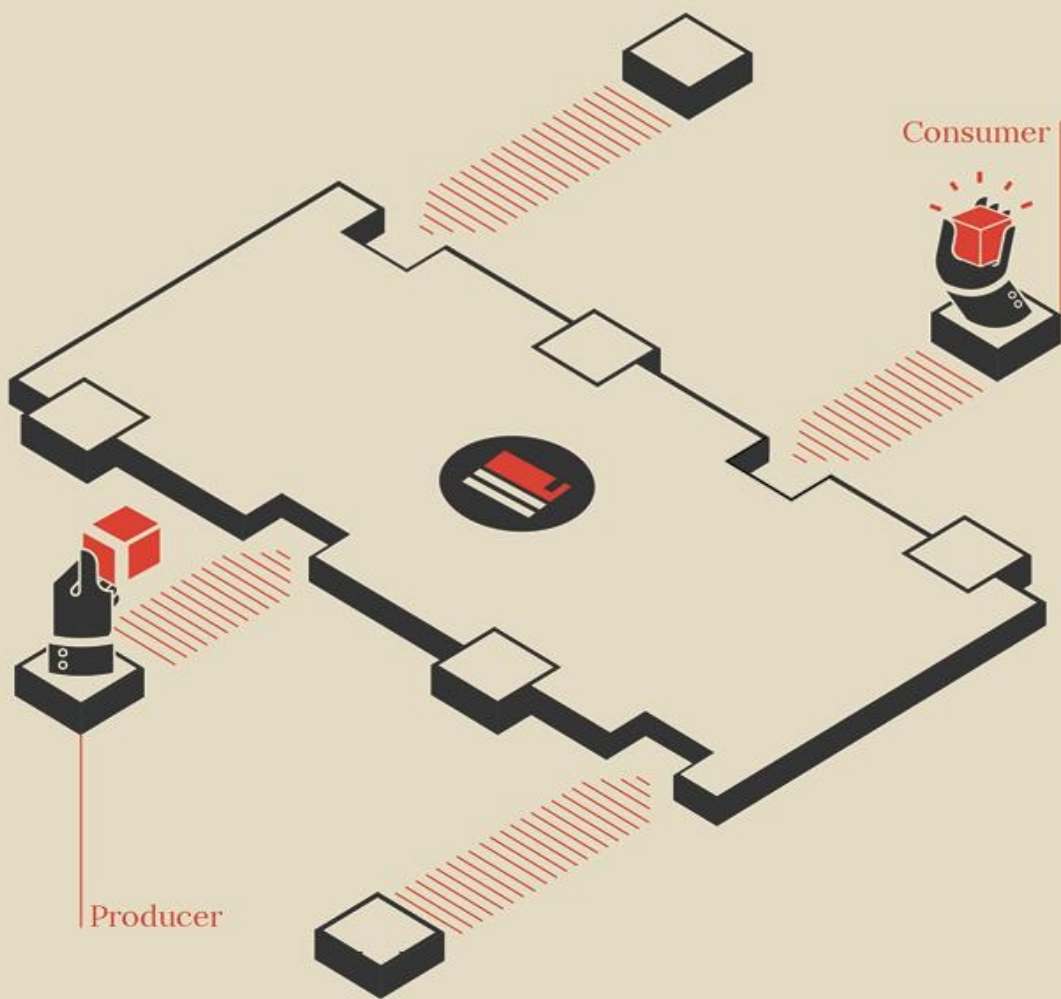


### Pattern 3

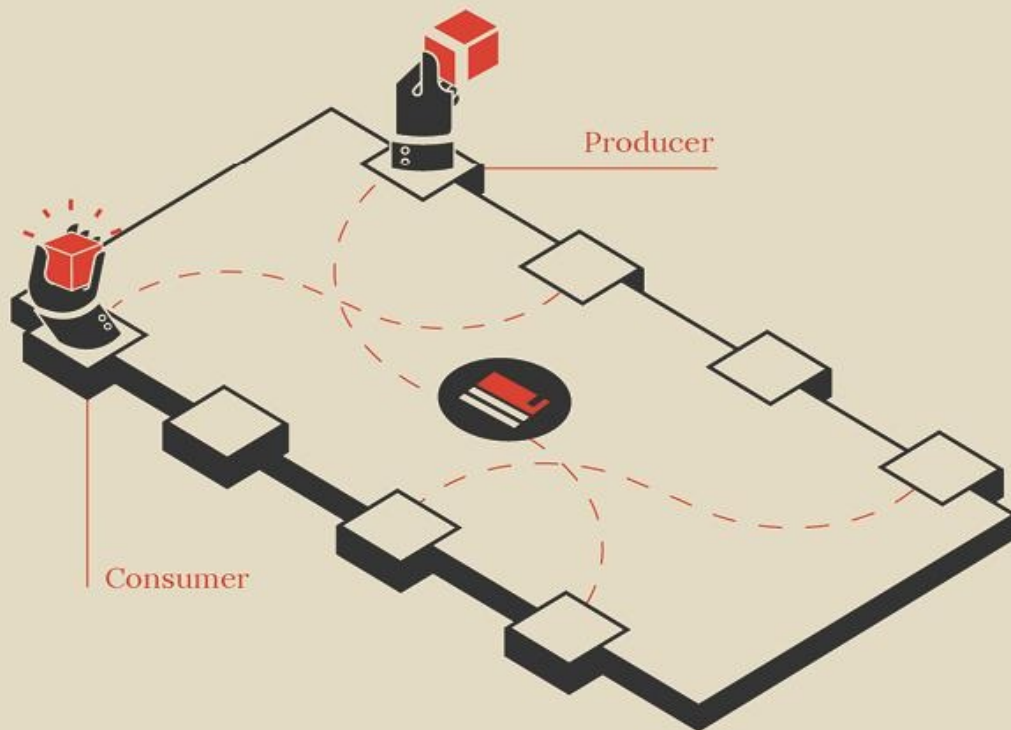
Figure 12



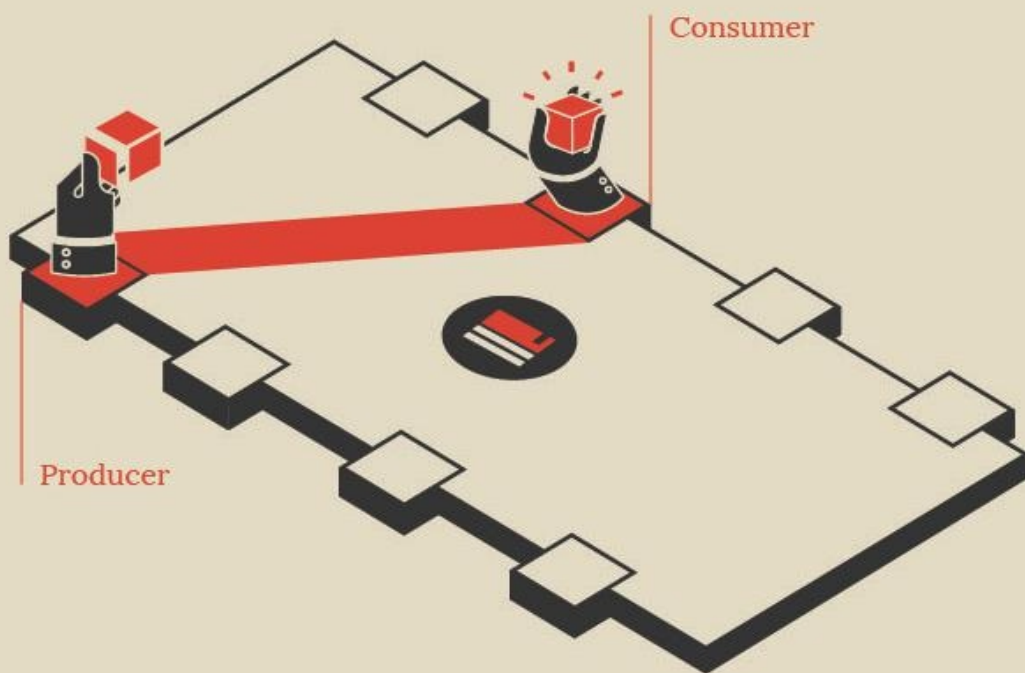
**Pull**  
Figure 14



**Facilitate**  
*Figure 15*



Match  
Figure 16



## Section 3

# **BUILDING INTERACTION-FIRST PLATFORMS**

*Platform scale is achieved by maximizing the repeatability  
and efficiency of the platform's core interaction.*

# INTRODUCTION

## The Entrepreneur's Road To Execution

Execution toward platform scale works on two core principles discussed in the first two sections of this book:

- 1.The platform must build incentives and behaviors to encourage an ecosystem of producers and consumers to interact often.
- 2.The platform must increase the repeatability and efficiency of interactions over time.
- 3.Section 3 explores the design, engineering, and management choices that help achieve these objectives.

### ECOSYSTEM INCENTIVES

User-producers scale value on platforms much like employees scale value in pipe businesses. In-house labor is organized around processes to achieve pipe scale. An entire body of management research is dedicated to helping businesses do this efficiently. Similarly, networked ecosystems of users and partners must be aligned so that they participate repeatedly in the value-creating core interaction on the platform. Users create value for platforms like YouTube, Medium, Quora, and Threadless. Users push the valuation of companies like WhatsApp and Instagram, both of which had a handful of employees while boasting valuations in excess of a billion dollars. Every time that users participate on these platforms, they contribute value in the form of content and data. As users participate more often, platforms scale faster. Airbnb and Uber fight employee-driven organizations with ecosystems. Apple and Android created ecosystems of developers around their respective platforms to disrupt an entire industry. Increasingly numbers of companies are turning to crowdsourcing to solve problems that they traditionally solved in-house.

The user-employee distinction is probably least stark in the case of a host of labor platforms that try to be Uber for X. Platforms like Homejoy, MyClean, and SpoonRocket create ecosystems of contract workers who might as well be employees. While some of these platforms are still negotiating the regulatory structures governing these new business models, many others have already demonstrated the power of producer ecosystems to drive value creation in a networked age.

## INTERACTION REPEATABILITY AND EFFICIENCY

Producers and consumers should be encouraged to participate on the platform in a manner that maximizes the repeatability of the core interaction. The repeatability of the core interaction drives platform scale. To achieve platform scale, a platform must be managed such that the core interaction is repeated in a scalable and sustainable fashion. *Repeatable and efficient interactions hold the key to platform scale.* Repeatability involves ensuring that:

1. All actions in the interaction are executed smoothly.
2. The feedback loop in an interaction is executed so that it kick-starts the next interaction organically.

## SIX ELEMENTS OF EXECUTION

To execute toward platform scale, the following elements must be in place:

1. *Choice of the overall interaction space.* The organization of producers and consumers around an interaction determines their motivation to participate in these interactions.
2. *Production incentives.* Producers must be appropriately incentivized to participate repeatedly.
3. *Building long-term cumulative value.* Platforms must ensure that participants – particularly producers – find long-term value in participation, value that scales as producers participate repeatedly on the platform. A platform that becomes more valuable with usage will attract greater usage.
4. *Strong curation mechanisms and trust.* All participants must be encouraged to repeatedly participate by ensuring that the platform rewards quality and mitigates risk.
5. *Strong filters and relevance.* Consumers should be able to find items of relevance with minimal effort and risk.
6. *Ownable interactions.* The platform should be able to own interactions sustainably and create enough value to prevent off-platform collusion among producers and consumers.

The chapters in this section explore the six elements above, going into the management of platform business models. Chapter 1 lays a foundation for the construction of virtual interaction spaces that are essential to platform interactions. Chapters 2, 3, and 4 focus on interaction repeatability and efficiency from a quantity perspective. These chapters lay out strategies to maximize the number of interactions and make them more repeatable. Chapters 5 to 8 create a framework for understanding interaction repeatability from a quality perspective so that the platform encourages desirable interactions and



discourages undesirable ones. Finally, Chapter 9 explores factors that determine a platform's ability to retain and sustain interactions between producers and consumers in the long run.

When building platforms, entrepreneurs and managers must ensure that they incorporate all six elements mentioned above. These elements work together to ensure the repeatability and efficiency of the core interaction.

## 3.8

# UBER VS. LYFT AND INTERACTION FAILURE

## How Interaction Failure Kills Platforms

The on-demand economy is bringing together technology and freelance workers to deliver services in exciting new ways. We are increasingly using our cell phones as remote controls for the real world. In the past, one could sit on a sofa and flip through TV channels using a remote control device. Today, the phone works as a remote control for the real world, and one can request a taxi, get a home cleaned, or order a bite to eat at the click of a button. On-demand experiences are delivered by platforms – like Shyp, Uber, Washio, and DoorDash – that connect consumers with freelance labor or spare service capacity. *Two critical factors will determine the success of a company in the on-demand economy: multihoming costs and interaction failure.*

### MULTIHOMING COSTS AND WINNER-TAKES-ALL

As explored earlier in this section, multihoming costs determine a platform's ability to develop strong network effects and achieve a winner-takes-all position in the market. The defensibility and competitive advantage of a platform business are very closely related to the multihoming costs that its producers and consumers incur. Multihoming costs vary for different platforms.

When developers co-develop for the Android and iOS platforms, they incur high multihoming costs. Multihoming costs are high for consumers as well because of the cost of mobile phones. Most consumers will own only one phone. However, multihoming costs for drivers to co-exist on Uber and Lyft are relatively low. Many drivers participate on both platforms. Given the ease of booking rides, multihoming costs are very low for travelers/riders on these platforms as well.

This is an important consideration for on-demand platforms. With a limited supply of service providers available, multihoming may lead to a strong, ongoing competition between platforms for access to service providers. Producers can easily switch between platforms without allowing any single platform to develop a long-term competitive advantage and a strong network effect. Multihoming can be a contributor to the eventual loss of platform scale

when it leads to interaction failure on the platform.

## INTERACTION FAILURE

Interaction failure occurs when a producer or consumer participates in an interaction, but the interaction fails to reach its logical, desired conclusion. Imagine a merchant setting up a listing on eBay that never gets any traction or a video enthusiast uploading a video on YouTube that fails to get a minimum number of views. These producers experience interaction failure. Often, these outcomes could be the result of poor-quality listings or videos, but they could also result from the platform's inability to match supply with relevant demand. Producers and consumers who experience interaction failure become discouraged from participating further and eventually abandon the platform.

## THE UBER-LYFT WAR

Interaction failure is especially important for on-demand platforms. Imagine a consumer requesting a service and never being served with a solution. Imagine, in turn, a producer receiving a request and preparing to fulfill that request, only to find that the request is canceled. In both cases, the respective consumer or producer may become discouraged and decide to abandon the platform.

In some of the largest cities, drivers drive for both Uber and Lyft, as well as other competitors. It's not uncommon for these drivers to switch between the two platforms multiple times a day. With a limited supply of drivers in a city and the cost for a driver to connect to an additional platform being so small, drivers multihomed on both Uber and Lyft. This has naturally led to intense competition between the two companies, and Uber infamously resorted to a playbook to create interaction failure on Lyft using questionable tactics.

Uber decided to target interaction failure on Lyft by contracting third-party agents to use disposable phones to hail Lyft taxis. Before the Lyft taxi arrived at its pickup location, the Uber-contracted agent would cancel the ride. With so many cancellations on the Lyft platform, drivers would become frustrated driving for Lyft and, in some cases, switch to Uber. A smaller number of drivers on the Lyft platform meant longer waiting times for travelers. This would, in turn, frustrate travelers, eventually spurring them to abandon the platform.

When multihoming costs are low, producers and consumers may easily participate on multiple platforms. With multiple platforms sharing the same producers and consumers, it is difficult for a business to build defensible network effects. Thus, it is difficult for a clear winner to emerge in the market. With many platforms operating and defensibility low, interaction failure

becomes a key factor in determining long-term winners.

## PLATFORM SCALE IMPERATIVE

Platforms must define interaction failure scenarios and track metrics that help to determine the degree of interaction failure on a platform. Freelancers who don't get business within X days, requests that don't get satisfied within Y minutes, and products that aren't liquidated within a certain period may all be indicative of interaction failure. The exact measure of interaction failure will vary by platform, and the importance of tracking interaction failure will, in turn, depend on the multihoming costs. Tracking and avoiding interaction failure is an ongoing discipline that all platform-scale businesses must embrace.

## 3.9

# INTERACTION OWNERSHIP AND THE TASKRABBIT PROBLEM

## When The Ecosystem Avoids The Platform

Platforms that connect non-standardized service providers with clients (such as TaskRabbit and Upwork) are faced with a unique challenge. Most such platforms cannot facilitate a transaction before the buyer and seller meet and discuss the scope and terms of service. However, connecting the buyer and seller often encourages off-platform collusion, in which the buyer and seller take the transaction off-platform to avoid the transaction cut that the platform charges. In such a scenario, interaction ownership is a critical priority to create a sustainable platform business. Encouraging repeatable interactions isn't useful unless the platform can own the interaction and prevent off-platform collusion.

### THE CHALLENGE OF ENABLING NON-STANDARDIZED SERVICES

Platforms that enable the sale of products (such as eBay and Etsy) or standardized services (such as Uber and Airbnb) do not require the buyers and sellers to discuss before transacting. These products and services are highly standardized, and the buyer can make a purchase decision based on the information available in the listing.

Platforms that allow service providers to offer customized services to clients work in a different manner. Buyers and sellers must interact and discuss the scope and terms of service before transacting. The actual exchange of money often follows the delivery of the service, and the delivery of the service itself requires the buyer and seller to interact directly with each other. When hiring a freelancer on a freelancer platform, the client must define requirements and potentially interview freelancers. Once the end users know each other, they can potentially connect directly on LinkedIn or other networks, thus avoiding the platform cut. Connecting buyers and sellers directly before charging the transaction cut weakens the platform's ability to capture value. The party that is charged the transaction cut is motivated to abandon the platform and conduct the transaction off-platform.

This problem is further enhanced when the delivery of the service requires the

buyer and seller to meet in person. A platform like TaskRabbit enables users to find service providers locally. Since the delivery of service may often involve an in-person meeting, the payments may also be executed in person. This prevents the platform from extracting the transaction cut.

Finally, on platforms like TaskRabbit, a client may want to continue using the same plumber for subsequent interactions once he finds a good one. Every time the platform enables a successful interaction, it is reducing its repeatability, as the client and the service provider can connect off-platform for subsequent interactions. This is a challenge that is not necessarily faced by Airbnb, as most travelers are unlikely to travel to the same city every time and will need to discover new accommodations. This is not a problem for a platform like Uber, either, as travelers care more about waiting time than about riding with a specific driver. Uber helps to optimize for the former criterion, and travelers repeatedly return to the platform.

Platforms that fail to extract the transaction cut often resort to a lead-generation, paid placement, or subscription-based revenue model. The classifieds model has traditionally worked on paid placement. Dating websites and B2B platforms work on a subscription-based model while several financial comparison engines work on a lead-generation model. However, lead-generation models are attractive only at very high levels of activity, and subscription-based revenue models make the chicken-and-egg problem worse than it already is. *A monetization model that involves extracting a cut from the buyer-seller transaction requires a mechanism for owning the end-to-end interaction.*

Some platforms may charge the buyer ahead of the transaction and remit money to the service provider only after the provision of services, thus providing some insurance to the buyer, encouraging her to transact. However, service providers who would normally pay a transaction fee to the platform may often offer a discount to the buyer to encourage off-platform payment. Professional services platforms also require discussions, exchanges, and workflow management during the provision of services before the actual charge can be levied. As a result, charging the buyer ahead of the transaction is all the more complicated.

## SOLVING FOR INTERACTION OWNERSHIP

*To own the interaction, platforms must create more value than they capture.* While the principle sounds simple, its implementation is fairly nuanced. There are several mechanisms by which interactions may be owned by the platform.

### **1. Exchange tracking tools**

Clarity's early success illustrates that a platform's role may involve a lot more than merely connecting buyers and sellers. Clarity connects advice seekers with experts. Traditionally, such platforms would connect the two sides, charge a lead-generation fee, and allow them to transact off-platform. Clarity provides additional call management and invoicing capabilities that help to capture the transaction on the platform. Since the call management software manages per-minute billing, advice seekers have the option to opt out of a call that isn't proving useful. For the experts, the integrated payments and invoicing provide additional value. There is enough value for both sides to prevent them from colluding off-platform.

## **2. Workflow management tools**

Upwork allows clients to manage the work being done by freelancers. Since most freelancers charge by the hour, Upwork provides time-tracking software and constantly monitors freelancers' work by taking regular screenshots of their screen to ensure that they are working as required. Clients benefit from the additional monitoring. Moreover, the platform charges a reasonable 10% transaction fee. It can afford to do this since it retains all ongoing interactions and makes up for the lower margin through volume. Workflow and interaction management tools help to strengthen network effects on the platform in two ways:

- 1.They help to capture repeat interaction between the same service provider and client. If the platform served only to match a service provider to the client, it would lose all subsequent interactions.
- 2.Workflow management tools involve a learning curve and increase multihoming costs. Service providers find it difficult to learn the usage of workflow management tools on multiple platforms and may eventually stick to the one where they see most business, thereby strengthening network effects on that platform.

## **3. Reputation as a source of value**

Some platforms may not allow service providers to gather a rating unless the transaction is executed on the platform. Since ratings help the service provider build a reputation and garner further business, service providers may be incentivized, at least initially, to participate in the transaction through the platform.

## DESIGN PRINCIPLES

When platforms offer additional tools and services to retain the interaction, the following design principles are commonly observed:

- 1.The workflow tools should create additional value for both sides, not just for one. This prevents either side from abandoning the platform for the transaction.
- 2.The tools should reduce friction in the interaction.
- 3.The interaction management tools should feed back into some form of on-platform reputation. Reputation is an added source of value that ensures stickiness on the platform. Clarity calls are followed by a request to rate the other side. Over time, the rating increases the discoverability of an expert on the platform and acts as social proof for future interactions.

## PLATFORM SCALE IMPERATIVE

Platforms may encourage repeatable interactions but fail to capture them. Large platforms with millions of users have failed to monetize because of their inability to own interactions. When platforms monetize by charging a transaction cut, it is important to ensure that all factors that contribute to retaining and owning the interaction on the platform are architected into the platform.



## Section 4

# **SOLVING CHICKEN-AND-EGG PROBLEMS**

*The solution to the chicken and egg problem requires  
a bait that can break the vicious cycle of no activity.*

# INTRODUCTION

## Breakfast For Startups

The network effect, while attractive in scale, is very difficult to kick-start. Most platforms and networks starting from scratch have no value in and of themselves. Value is created through the presence and activity of users. When these platforms start out, they do not have enough intrinsic value to attract an initial set of users. Conversely, unless they get some users on board, they will never get out of this problem. Producers of value will not come on board unless there are consumers, and consumers will not find the platform useful without any production. There is a chicken-and-egg problem involved. Who does one get first: the producers or the consumers?

The chicken-and-egg problem is a vicious cycle, without an obvious starting point. Most new ventures starting out on this journey never fail to get past the chicken-and-egg problem. As a result, the first and most important step in the creation of network effects is crafting a sustainable solution to the chicken-and-egg problem.

This chicken-and-egg problem persists till a point where the platform gains critical mass – the minimum network size at which there are enough producers and consumers of value on the platform to ensure that interactions spark off reliably.

Facebook, Twitter, Airbnb, eBay, PayPal, Uber, and others – seemingly invincible platforms – all started out by finding creative solutions to this problem. Through this section, we explore repeatable patterns and design principles in crafting solutions to the chicken-and-egg problem.

## 4.1

# A DESIGN PATTERN FOR SPARKING INTERACTIONS

## Solving The Chicken-And-Egg Problem

Solving the chicken-and-egg problem starts with understanding the general pattern of the problem. In terms of the producer-consumer parlance that we used to explain network effects in Section 1, the problem can be reduced to the following pattern: *Problem: How do I get producers and consumers, given that Condition 1. I need producers to get consumers, and Condition 2. I need consumers to get producers?*

If the two roles are not too distinct (e.g. Skype), the pattern may simply be stated as: *Problem: How do I get users, given that:*

*Condition 1: Users will not come unless there is value in the platform, and*

*Condition 2: There is no value in the platform without having users on it?*

The chicken-and-egg problem continues to persist till a certain point at which there is enough overlap between supply and demand to sustainably enable interactions. The size of the user base at this point is referred to as the critical mass.

### SOLVING CHICKEN-AND-EGG PROBLEMS

Solutions to chicken and egg problems have a few defining characteristics:

- 1.*Breaking The Vicious Cycle.* Like most vicious cycles, the chicken-and-egg problem is a conceptual loop with no predefined place to start. The platform needs to figure out a way to break into that loop.

- 2.*Positive Feedback.* Once a starting point to the loop is created, it is set in motion through a positive feedback loop. As one side grows, it attracts more of the other side, which in turn, attracts more of the first side, and so on.

- 3.*Maximizing Overlap.* The chicken-and-egg problem exists before a network reaches critical mass. Hence, the longer a network takes to reach critical mass, the longer it has to grapple with this problem. As mentioned, critical mass is a measure of the overlap between production and consumption. Hence, conditions that help maximize this overlap are likely

to yield simpler solutions to the chicken-and-egg problem.

*4.Getting The Harder Side In First.* Some markets are asymmetrical, and it is usually more difficult to get one side than the other. For example, dating websites find it harder to attract women, than they do men. Content platforms find it harder to attract content creators, compared to consumers. Hence, the platform needs to figure out a model that incentivizes the harder side to join in.

*5.On-Boarding Of Two Distinct Markets.* On many platforms, producers and consumers may be two distinct markets. The same user may upload and view videos on YouTube but the traveler and driver markets, on Uber, are largely distinct. The typical user, on these platforms, plays only one of the two roles. Serving two-sided markets requires reaching minimum traction on both sides. Hence, two-sided markets require building two companies, often with completely different challenges, not just building two forms of behaviors among users.

## FIVE DESIGN PRINCIPLES FOR SOLVING CHICKEN-AND-EGG PROBLEMS

With the above characteristics in mind, a solution to any chicken-and-egg problem relies on five key design principles:

*1.Finding A Compelling Bait To Start The Loop.* The first step in breaking a vicious cycle is to find an inorganic bait that attracts and hooks one of the two roles without the need for the other role being present. In many of the strategies that follow through the rest of the section, we look at different types of baits that are used by platforms when starting off.

*2.Ensuring There Is No Friction In The Feedback Loop.* Once one role comes on board, it is important to ensure that there are no barriers to getting the other roles on board. If producers come in first, the platform should make it easier for the consumers to follow suit, and vice versa. This works best when the first role is organically incentivized to bring the second role on board. As an example, project creators host their projects on Kickstarter and subsequently spread the word about their project among their followers and friends. A virtuous cycle of producers bringing in consumers – some of whom then become producers – is set into motion.

*3.Minimizing The Time It Takes For The Startup To Reach Critical Mass.* As we note subsequently with the case studies of Facebook, Tinder, and others, a platform reaches critical mass faster when it is launched in a hotbed of existing activity. In such cases, the platform enters a market that

already has a high overlap of supply and demand, and is well-positioned to exploit it to gain traction. Facebook's launch at Harvard University, and subsequently in similar closed markets, ensured that critical mass was reached a lot faster than the many Myspace copycats that were launching globally around that time.

*4.Incentivizing The Role That Is More Difficult To Attract.* Some user types may require more incentive to be pulled in. Acknowledging this is important, and is counterintuitive to the principles of traditional marketing. And finally,

*5.Staging The Creation Of Two-Sided Markets.* In general, the nature of two-sidedness only allows us to capture such markets one side at a time. However, we do observe exceptions in the strategies that follow. Finding the bait or incentive that brings in one role and enables them to remain while we get in the other role holds the key to succeeding with this model. OpenTable used this strategy to get restaurants on board by providing restaurant management software (the bait) before any consumers signed up. Conversely, Megaupload seeded content (the bait) on its site to attract consumers on board, and subsequently, converted some consumers to producers of content.

Through this section, we look at several strategies that apply the above design principles to solve the chicken-and-egg problem.

## 4.3

# HOW PAYPAL AND REDDIT FAKED THEIR WAY TO TRACTION

## Case Studies In ‘Growth Faking’

There were several factors that contributed to YouTube becoming the #1 video-sharing platform. However, initial adoption was significantly driven by the fact that the platform allowed pirated content to be hosted. If you wanted to watch the latest episode of a sitcom for free, YouTube was your best bet. Kim Dotcom noted how pirated content was driving YouTube’s adoption. As a late follower in the online video category, Dotcom’s Megaupload seeded the platform with pirated content, as a means of solving the chicken-and-egg problem. This strategy worked for a while, but being involved with pirated content was always likely to result in problems. Megaupload went under when it was alleged that the provisioning and hosting of pirated content was a deliberate part of the platform’s strategy.

Megaupload’s deliberate seeding of pirated content offers a rather brute-force but effective tactic for solving the chicken-and-egg problem, and building network effects. Faking initial supply may often serve as the bait needed to kick-start network effects.

Some platform owners, as in the case of Megaupload, solve this by creating a fake inventory of content, using a variety of methods. The in-house team acts as a substitute for the producer side of the platform. First-time consumers get the impression that the platform is already in business, and continue participating. Over time, the user base grows, users start contributing themselves, and the platform sustains activity without having to fake it. There are three broad approaches to faking traction:

### *Seeding And Weeding*

Dating platforms often simulate initial traction by creating fake profiles and conversations. Users who visit the platform see desirable activity and are incentivized to stay on. Over time, as real users join the service, the fake profiles are removed to reduce the noise on the platform.

Marketplaces may also showcase fake activity, initially, to attract buyers or

sellers. Early on, a common tactic is to show top transactions of the day or most recent transactions – to signal high activity – even when very few transactions are taking place on the platform.

Faking usually works only for the first player in a new category. As a late entrant to a category that already boasts players with strong network effects, faking may hurt the platform, instead of helping it. Producers and consumers are unlikely to get onto a platform with fake activity when they already benefit from real interactions on an existing platform.

### *Seeding Demand*

The book, *PayPal Wars*, talks about how PayPal converted a base of eBay sellers, into PayPal users, by faking buyer-side demand for the service. When PayPal deduced that eBay was their key distribution platform, they came up with an ingenious plan to simulate demand. The company created a bot that would buy goods on eBay, and insist, as a prospective buyer, on paying for those goods using PayPal. Not only did sellers come to know about the service, they rushed onto it, as multiple bots, masquerading as buyers, insisted on using the same service, thereby creating an illusion of ubiquity. The fact that it reduced friction compared to every other existing payment mechanism on eBay, only served to increase repeat usage.

### *Seeding Supply*

To solve the chicken-and-egg problem, marketplaces may also create fake supply, to attract buyers. Lending marketplaces like Australian startup, Rentoid.com, seeded initial activity when the founder himself bought products as they were requested and lent them out to users. In its early days, oDesk hired a captive group of service providers to guarantee service provision and attract an initial set of clients. It subsequently used that initial traction to attract freelancers and set off the virtuous cycle of increasingly attracting more of both demand and supply.

Content platforms often rely on ‘faking it’, during the initial days. An in-house editorial team works on creation of content, curation of user-generated content and moderation of other actions by users. As the community scales, the editors scale down content seeding and focus on scaling curation. Quora started off with in-house Quora moderators asking and answering questions to generate activity. As community activity increased, the Quora moderators focused more on curation of content and less on creation. Over time, the curation also phased out into the community as user actions helped the platform determine reputed users

who consistently curated high-quality content. This helped scale quality during the initial growth of the platform. Like all strategies, there is a method here to the apparent madness, as explained below.

## USE USER - FACING TOOLS AND WORKFLOWS WHILE FAKING IT

Even if an editorial team is employed to fake initial activity, the team should focus on using the same tools that the users would eventually use. This ensures a real-time testing of actual activity and ensures that the activity is a fair representation of the eventual user activity desired on the platform. Having editors use community curation tools also helps fine-tune curation algorithms in the initial days.

### *Fake It Well*

Dating communities do not fake it much anymore, but it was not uncommon to see a whole community of models ‘hanging out’ on dating websites some time back. Signaling high-quality production, initially, often helps to attract high-quality production from producers on the platform.

It is equally important not to indulge in any unethical behavior while faking traction. Apart from the legal implications involved, poor ethics, on the part of the platform manager, may discourage users from participating, and impact the community’s culture adversely.

### *Encourage Behavior That Is Desired On The Platform*

This is, by far, the most important principle in getting this right. Reddit cofounder, Steve Huffman, has gone on record stating that the link-sharing platform was initially seeded with fake profiles posting links to simulate activity. The links were posted by fake profiles and the vote counts assigned, to indicate activity, were fake as well. This fake activity was based on one principle: to ensure the seeding of content that the founders wanted the community to eventually discuss. As Reddit gathered traction, the initial content signaled high quality and encouraged user-producers to contribute content of similar quality, eventually creating a culture of such content in the community. Reddit is often criticized for encouraging a hive mind but there is no denying the strong network effects that the platform has succeeded in building.

## PLATFORM SCALE IMPERATIVE

Platforms that try to create entirely new consumption behaviors may benefit from faking production initially. Platforms that require new consumption



behaviors will often find it difficult to attract producers. Producers will likely be skeptical of participating in an interaction without a proven consumption behavior. Faking initial supply may work for platforms that create a new category and aim to cater to entirely new consumption behaviors. However, all attempts at faking supply – or even demand – should be executed carefully. When not done well, fake activity may destroy users' trust in the platform and wreck it before it even gets started.

## 4.4

# EVERY PRODUCER ORGANIZES THEIR OWN PARTY

## The Mechanics Of Producer-led Traction

Some platforms may be designed to benefit from the actions of a few power-producers: producers who individually attract a large number of consumers. Designing your platform so that your producers can bring along consumers helps to solve the chicken-and-egg problem, while concentrating solely on one side of the market. This strategy works when the following design considerations are satisfied by the platform:

- 1.The platform offers a compelling organic incentive for producers to bring consumers onto the platform.
- 2.The ‘off-platform’ influence and following of the average individual producer is significant enough to attract a large number of consumers to the platform.
- 3.The platform allows producers to interact with their followers (consumers) in a much more efficient way than currently allowed by alternative channels.

### TOOLS TO HARVEST FOLLOWERS

One of the most common manifestations of this strategy is seen in the launch of platforms like Kickstarter and Udemy. These platforms allow producers to ‘harvest’ their existing connections and followers on other networks like email, social networks, and blogs. Kickstarter allows project creators to raise funding from their connections and followers. Skillshare allows teachers to teach a course to their followers (and subsequently others). These ‘follower harvesting’ use cases offer compelling incentives for producers to bring in their following. Over time, as different producers bring in their followers, the platform builds out a network of all producers and consumers, allowing followers of producer A to consume from producer B, and so on. Eventually, a small group of power-producers help such platforms solve the chicken-and-egg problem within a short period.

### FROM LOYALTY TO MARKETS

This model works equally well for retail loyalty platforms. Merchants may use loyalty platforms to offer discounts to their existing customer base. In turn, these customers stay more engaged with the merchant. As a result, merchants see value in promoting the consumer-facing applications among their customer base. As a result, every individual merchant brings their existing customer base onto the loyalty platform. As consumer data flows through the platform, the platform learns consumer purchase preferences. This helps the platform ‘cross-pollinate’ consumers to other non-competing merchants, and the power of the network effect sets in.

### THE ‘VOTE ME UP’ CONTEST GONE VIRAL

Platforms that provide production and marketing tools benefit from this strategy as well. One of the widely discussed anecdotes surrounding early traction on YouTube suggests that the platform conducted contests among its user base, asking creators to create videos. Creators were then encouraged to invite their friends to ‘upvote’ these videos. The videos with the maximum upvotes would win a prize. This strategy has been repeatedly applied by platforms like Binpress and Txtweb. The brilliance of this strategy lies in the fact that producers are naturally motivated to not only bring the consumers on board but actually have them pass through a whole loop of consumption and curation, which fully acquaints them with the platform’s value proposition. As with other examples above, some such consumers stay on to become producers themselves and start the virtuous cycle afresh. Once users produce, they become marketing agents for the platform to attract other consumers. We discuss the details of executing such strategies more closely in the next section, on viral growth.

### THE FLY-ATTRACTING BEACON

Malls have been doing this for the last fifty years. Attracting a marquee tenant, by offering prime real estate helps to attract consumers to the mall, subsequently exposing them to smaller merchants as well. This strategy works equally well for kicking off network effects on digital platforms. Ad networks use this strategy by getting exclusive access to premium ‘eyeballs’ and using that to attract advertisers. While AdMob and other US-based ad networks took over the mobile advertising space, India-based InMobi emerged as an unlikely contender by getting access to developing market eyeballs and selling them to advertisers in developed markets. As already mentioned, education platforms like Udemy and Skillshare also try to use the star power of certain teachers (think Seth Godin) to attract students in droves.

## PLATFORM SCALE IMPERATIVE

Identifying a group of power-producers and providing them with tools to better 'harvest' their following can solve the chicken-and-egg problem very effectively. Relying on power-producers is especially attractive because a relatively small number of producers can help to solve the chicken-and-egg problem by attracting a large base of consumers. As social platforms proliferate, allowing users to build large followings, new platforms will increasingly rely on this strategy to encourage users to bring in their off-platform following.

## 4.6

# THE CURIOUS CASE OF NEW PAYMENT MECHANISMS

## Why M-Pesa Works

Finding adoption for a new payment mechanism has always involved solving a chicken-and-egg problem. Ranging from the introduction of new forms of currency in medieval to early modern times, and the adoption of credit cards to the rise of PayPal (as alluded to in many of the strategy discussions in this section) and the recent rage around Bitcoin, new payment systems have regularly offered some of the most complex chicken-and-egg challenges. Both buyers and sellers need to adopt the same exchange mechanism, almost simultaneously. The staging that is possible in some platforms – attracting one side first and then the other – does not work in the case of payment mechanisms. *In such scenarios, the solution to finding adoption often lies in providing backward compatibility with existing solutions.* While most social networks, like Facebook and Twitter, are walled gardens, a new email service is compatible with existing email services and does not need a closed network to be valuable. This principle applies more generally to all types of platforms, and specifically to payment solutions. New payment mechanisms succeed in gaining adoption when they are compatible with existing payment mechanisms. As an example, the lack of backward compatibility in NFC-enabled payment mechanisms has hindered the adoption of such systems. Consumers may not go out of their way to get NFC-enabled phones unless there are enough merchants accepting them, and merchants do not want to invest in terminal hardware unless enough consumers start using the network. Getting both sides to change behavior compounds the challenges associated with launch and adoption.

### BACKWARD COMPATIBILITY IN TANDEM WITH THE STANDALONE MODE

Square solved the chicken-and-egg problem by targeting the merchants with an app and dongle that converted their phone to a standalone payments terminal. They allowed a new mechanism for accepting payments for merchants while leveraging existing payment behavior on the consumer side. Merchants,

especially those who were interested in accepting payments on the move, and who could not afford to carry clunky POS terminals around, took to the new mechanism. Gaining adoption among merchants creates traction on one side, allowing the platform to potentially bring consumers onto Square as well.

Companies like CheckFree have provided a comprehensive payment mechanism to consumers while allowing merchants to either migrate to a new system (online payments) or receive checks in the mail like they already do. CheckFree successfully changed behavior on the consumer side because the consumer had the advantage of making one-stop, one-click payments. Merchants were allowed the option to continue with the old behavior or adopt a new, more efficient one. If CheckFree had insisted that all merchants accept e-payments from the outset, it would not have been able to build a comprehensive portfolio of merchants, which would have prevented it from gaining traction among consumers.

## EFFICIENT REINTERMEDIATION OF A TRANSACTION

Over the last decade, mPesa has established itself as a revolutionary payment mechanism in Kenya. North and East African nations already had a system of money transfer, inherently linked to the Islamic business order, known as Hawala. In the Hawala system, the sender asks a Hawala agent to transfer money to an acquaintance in another location, who then contacts another Hawala agent in the new location to pay the receiver. The sender then pays the sum to the first agent along with a small fee. The debt between the agents is logged and settled at a later date. MPesa adopted this behavior, without trying to introduce new ones, and made it more efficient by tracking the movement of money. The user-agent relationship remained the same while the agent-agent relationship improved significantly. Instead of logging in transactions in a book and settling them at a later date, the payments system allows the agents to settle money transfers instantly, over the network. While reintermediating an existing payments business, mPesa brings in added efficiency to the transaction, without reinventing the end-user behavior.

## BACKWARD COMPATIBILITY AS A ROAD TO GRADUAL BEHAVIOR DESIGN

Any form of payment has to combat a behavioral problem. Hence, building in some form of ‘backward compatibility’ helps spur adoption because users have the choice to continue with the existing method or transition to a new one. Visa and MasterCard have extensive experience regarding disrupting the payments space. When Wave and Pay were first introduced, the new cards that were issued

supported both swipe (existing) and wave (new) modes of payment. Consumers could continue using swipe until merchants set up enough wave terminals. Additionally, a string of incentives to early adopters of wave helped increase the adoption of wave.

## PLATFORM SCALE IMPERATIVE

Platforms that require near-simultaneous adoption by two markets may find it difficult to achieve traction if they try to create new behaviors on both sides. Such platforms may often benefit from backward compatibility that helps the platform remain compatible with old systems while changing behavior on one side.

## 4.8

# BEG, BORROW, STEAL AND THE WORLD OF SUPPLY PROXIES

## The Genesis Of Marketplaces

*How does one kick-start a platform connecting service providers to consumers of that service?*

Unlike content-intensive platforms, the value in services platforms is not in the availability of content but in the availability of service providers and the platform's ability to match a consumer with a service provider interested in providing a specific service within a certain time frame. This nuance allows services platforms to leverage an alternative strategy to solve the chicken-and-egg problem.

Yelp is an online local search platform that allows consumers to search for businesses, read reviews and make decisions accordingly. Yelp started with not one chicken-and-egg problem but two. As a review site, it needed reviewers as well as readers, but as a local commerce platform, it needed merchants as well as consumers to participate. Yelp's solution to the second problem has served as an interesting lesson for many local commerce startups that followed.

Yelp started with a searchable directory of local businesses and used that to gather consumer search intent. Once there were enough consumers, it pitched relevant consumer interest on the platform to merchants. With numbers backing the sales pitch, the businesses were brought on board to claim their listing and advertise for related search terms. Over time, this built up the producer side of the network.

The Yelp model is particularly interesting because the staging of the two sides did not require expensive incentives, and did not need to be coordinated in quick succession as consumers would get value from Yelp's search engine and reviews, even when the merchants were not on board. In this manner, Yelp offered a compelling standalone value proposition.

The model, however, is not as applicable to most other local commerce platforms because they do not necessarily offer a standalone value proposition like directory search. Most similar platforms exist for the purpose of matching consumers to service providers and having them transact. They need both sides



to be on board for interactions to ensue.

However, with a few tweaks, the essential principles of Yelp's model can still be applied to a broader range of platforms and marketplaces.

## YELP'S MODEL TWEAKED

Yelp's model can be tweaked to offer a more generalized solution to the chicken-and-egg problem, for any platform seeking to match service providers with consumers. The following strategies emerge as we tweak this model:

- *Step 1. Source supply proxies* Supply proxies are data points that represent true supply but which are not created by the producer. The platform, hence, does not own the supply side yet. Instead, it intends to have producers come in and claim their supply proxies, eventually creating true supply on the platform.
- *Step 2. Provide a superior interaction experience* The platform does not simply act as a directory of service providers. It provides a superior producer-consumer interaction – discovery, navigation, personalization – which is handled much more elegantly than at the source, from which these supply proxies are picked. Yelp provided a better search experience than yellow pages, and overlaid that with high-quality user-generated reviews and, hence, a reliable mechanism for ascertaining merchant reputation.
- *Step 3. Gather consumer activity* Unlike Yelp, these platforms cannot afford to wait till consumers come on board and remain engaged. Consumers are looking to interact with the producer right away. To stage participation, these platforms should try to encourage actions that allow consumers to stay engaged and express their interest in a particular service without requiring a service provider instantly.
- *Step 4. Invite producers showing them relevant leads and activity* Producers come on board when they see activity and indication of intent from consumers. To ensure they do, the friction required for the producers to come on board should be as low as possible.
- *Step 5. Provide a better transaction experience* As in step 2, ensure that the post-discovery transaction is a more desirable experience than the experience through substitute channels. This ensures that both consumers and service providers repeatedly participate on the platform.

Startups often employ this model to piggyback off Craigslist's listings to start new platforms, as we note in the case study that follows. In an inadvertent comedy of errors, Justdial, India's largest local commerce platform, sued rival, Infomedia, when it found that Infomedia was stealing listings from Justdial. It

figured this out by deliberately introducing false listings into its database that did not exist elsewhere. Once those listings showed up on Infomedia, Justdial had enough evidence to back its claim.

## PLATFORM SCALE IMPERATIVE

Platforms often leverage supply from existing sources to power a better interaction between producers and consumers. This strategy works best when a platform is the first player in a new category. If the platform is a follower, consumers are unlikely to wait for producers to show up on a new platform when producers are already participating on another one. This strategy also does not support on-demand use cases very well. Such use cases are best supported by the platform itself, acting as a producer through a captive base of partner producers.

## Section 5

# **VIRALITY: SCALE IN A NETWORKED WORLD**

*Virality is a business design problem, not a marketing or engineering effort. It requires design before optimization.*

## 5.2

# INSTAGRAM'S MOONSHOT MOMENT

## Deconstructing Luck

Instagram is as famous for its rapid user growth as it is for its billion-dollar acquisition by Facebook. What is less known is the fact that Instagram achieved platform scale without hiring a single traditional marketing manager. At the time of acquisition, Instagram was a 13-employee-strong company without any dedicated effort towards traditional marketing. Started in October 2010, the company took 19 months to reach 50 million users, acquired the next 50 million in 9 months and reached 150 million users in another 6 months. And if the billion-dollar valuation was largely seen as Facebook overpaying for a competitive app, Instagram's valuation skyrocketed to 35 billion dollars within the next 20 months, according to Citigroup Inc. How did a company, without any substantial advertising spend or dedicated marketing resources, succeed in gaining such rapid traction?

Instagram presents a case for scale that was never possible in the industrial economy. In a networked world, businesses no longer rely entirely on push marketing campaigns, or bumps, as we noted earlier. Platform scale is achieved only when users get involved. Viral growth is the promise of the networked age and the only form of growth native to the network.

Instagram's success was not accidental. On the contrary, it was carefully designed. Unlike its competitor, Hipstamatic, Instagram did not stop at taking pictures and applying filters onto them; it encouraged the photo creator to share the photo on an external network like Facebook. Converting a single-user activity to a social, multi-user activity was the key reason for Instagram's growth. Leveraging Facebook, a network where users interact with photos, furthered the cause. A user would take a picture on Instagram and share it on Facebook. Viewers on Facebook, intrigued by the effects generated by Instagram filters, would move over to Instagram, try it for themselves and share their own pictures, thereby restarting the cycle repeatedly. Every time users used the app, they shared their creations externally. Every point of app usage worked as an instance of app marketing. In essence, Instagram achieved something quite

remarkable – it succeeded in converting most of its users into marketers. In the process, it never needed to hire marketers of its own.

## PLATFORM SCALE IMPERATIVE

Instagram's viral growth, as we explore through this section, breaks down into a series of repeatable design patterns. While these patterns do not guarantee viral growth in every instance, they increase the odds of achieving it, if implemented well. A platform scale marketer should look to implement these design patterns that repeatedly convert users into marketers and scale the offering's ability to grow.

## 5.3

# THE FOUR MOST COMMON MISCONCEPTIONS ABOUT VIRALITY

## Unpacking anecdotal truths

Gaining viral adoption is every marketer's dream in a networked world. However, few understand what virality really entails. Through this chapter, we explore the four most common misconceptions about virality.

### MISCONCEPTION #1: VIRALITY AND WORD OF MOUTH ARE TWO NAMES FOR THE SAME PHENOMENON

Virality and word of mouth are two concepts that are often conflated and confused. Word of mouth is a phenomenon where people love an offering so much, they just cannot stop talking about it. Word of mouth is fueled by a company's ability to deliver user delight and its ability to convert users into passionate fans. Nurturing passionate communities helps to drive word of mouth, but the company, or brand, cannot explicitly structure or encourage the process. It can maximize the chances of generating word of mouth by delighting users, but it cannot, directly, get them to start talking about it.

Organic virality, on the other hand, is a phenomenon where users spread the word about an offering, in the context of using it. Unlike word of mouth, virality is not a consequence of users loving the offering, it is a consequence of users using it. As noted earlier, when a Kickstarter project creator spreads the word about their project, the platform achieves greater adoption. The existing users gain value out of taking an action, which, in turn, exposes the underlying platform to new users. Virality does not need fans: it merely needs users, who are encouraged to bring in other users. Word of mouth works effectively both online and offline. Virality works only for networked businesses, and can scale only on digital platforms. Users need to be connected to each other over a network for virality to take place.

### MISCONCEPTION #2: VIRALITY AND NETWORK EFFECTS ARE THE

## SAME AND LEAD TO RAPID GROWTH

Both network effects and virality tend to magnify value and scale, respectively, as more users use the platform. This is probably why the two concepts are often confused. Both are explored in detail in Section 1 as factors that power platform scale. However, there are many businesses that exhibit virality without exhibiting network effects.

Email services and cross-platform communication products serve as a case in point. Email services are interoperable across different email providers. A sender using Gmail can send an email to a recipient using Hotmail. Gmail users do not need to have other users using Gmail to see the value in the email service. This explanation may seem obvious given the ubiquity of email, but it helps to contrast this with a closed network like LinkedIn, where users need other users to join the network before they can communicate with them. Both email providers and closed social networks like LinkedIn, benefit from virality, but email providers do not benefit from network effects, whereas closed networks like LinkedIn do.

Services like SurveyMonkey and Eventbrite leverage external networks for viral spread. SurveyMonkey surveys are answered, and Eventbrite events find registrants only when they are spread on external networks, thereby exposing the respective services to new users. These offerings exhibit virality but have no network effects. The fact that more users use the service does not necessarily add value to other users of the service.

There are many others that exhibit network effects without exhibiting virality. Some marketplaces, for example, may not grow virally but may still benefit from network effects. Sellers may be discouraged from bringing in other sellers, because of competition, and may play no role in inviting buyers either. Likewise, buyers may not invite other buyers into the network without any clear incentive. Craigslist, arguably, has very high network effects but very low virality.

## MISCONCEPTION #3: VIRALITY IS ALL ONE NEEDS FOR A GROWTH STRATEGY

Virality involves users bringing in other users. By definition, this form of user growth requires some users at the start. Viral acquisition of users works in tandem with other user-acquisition models, which bring in the first few users to start with, who then bring in other users. Relying on virality as the only source of user acquisition is a flawed strategy.

## MISCONCEPTION #4: VIRALITY INVOLVES MANIPULATING USERS

## TO SEND OUT INVITES TO OTHER POTENTIAL USERS

Virality is a design challenge. Viral mechanics need to be built into the user experience and workflows. Poorly designed viral mechanics lead to a poor user experience. All too often, the numbers-focused obsession of most marketers leads them to optimize a poorly designed viral mechanic, which, in turn, makes a bad user experience worse. In the early years of the Facebook App Platform, apps would often encourage users to send irrelevant invites and notifications into their network. This notion continues to persist even as Facebook has tightened its policies. Startups still implement virality as an invite loop that can be slapped onto any offering. More often than not, this approach spams recipients and gets in the way of good user experience. The single most important element of getting virality right is to understand virality as a design challenge and to deconstruct it into its constituent building blocks. The keys to this, as we observe in the following chapter, may lie in understanding the spread of diseases and epidemics.



## 5.5

# A DESIGN-FIRST APPROACH TO VIRAL GROWTH

## Because Design Is The Future Of Marketing

Virality is a design problem, not an optimization problem. It is more the prerogative of the product designer than of the marketer. Unfortunately, it is often treated as a marketing or ‘growth hacking’ problem, with an inadvertently high focus on optimizing the likelihood that viral cycles get started. Instead, virality should be solved as a design problem. This chapter lays out a framework for designing offerings for organic virality.

### SENDER INCENTIVES

Why will users spread the word about the platform?

Sender incentives need to be aligned with the core interaction on the platform. As noted in the preceding chapter, virality is kick-started when the sender sends out value units from the platform onto an external network. This act, which drives virality, should not distract users from the core interaction on the platform. Instead, where possible, spread of the units should enhance the value that the user gets from the core interaction of the platform. The more closely this action is aligned with the core interaction on the platform, the more likely is the platform to succeed with crafting the right sender incentives for achieving viral adoption.

Instagram, YouTube, Kickstarter and SkillShare are all examples of platforms where users gain greater value from the core interaction by spreading the word about their creations – the core value units – on external networks. A user uploading a video on YouTube is likely to be motivated by the potential for self-expression or self-promotion (or both) on that platform. The user benefits further by spreading the video on an external network, like Facebook. Project creators on Kickstarter want their projects to be seen by as wide an audience as possible. This encourages them to spread the project page on their personal social networks.

Conversely, many gaming applications fail to grow virally by asking users to invite other users. On these applications, the act of sending invites does not align

with the reason the user plays the game. Some games overcome this by crafting inorganic incentives for the user. Some games may enable users to unlock game levels or weapons if they comply by sending invites.

In contrast, turn-based games have a more organic viral dynamic. A user plays their turn and invites their opponent to play the next turn. Playing a turn constitutes the creation of a unit of value that can be consumed by someone else. The action of inviting an opponent (the sending action), using this value unit, is aligned with the core interaction of gameplay. If the recipient accepts the invitation, the sender's experience is enhanced, and the game acquires a new user, virally. These sending and receiving actions are often designed to work asynchronously on turn-based games. This ensures that multi-player gameplay can continue, without requiring both players to be playing at the same time.

This pattern is repeatedly observed across platforms that achieve rapid viral growth. Senders are appropriately incentivized (usually organically), and the act of sharing these units externally enhances the value derived from the core interaction on the platform.

Sender motivations may vary across producer and consumer roles. Producers may be driven to share their creations for the purpose of self-expression and self-promotion. Consumers may be driven to share content they associate with. Both roles may respond to inorganic incentives, in the form of payments or coupons. The incentives that work vary with the type of platform and the context of usage. Zeroing in on the right incentives, and the optimal workflows, which prompt users to share, may often require several rounds of testing different incentives and workflows with users.

In general, producers spread self-created value units for social feedback. Whether for self-expression or self-promotion, producers tend to be the most active 'senders' and regularly contribute to viral spread. As a result, the most viral platforms often have two things in common:

1. *Low friction in creating core value units*: The easier it is to create units, the more often producers produce and share.
2. *High percentage of producers*: The most viral platforms have a high percentage of their user base creating units.

This is one of the reasons why simple applications, like Instagram and WhatsApp, tend to spread virally.

Aligning the sharing act with the core interaction is the first key principle to building for viral adoption. Question askers on Quora want to get their question answered. They often share the question on Facebook or Twitter, at the time of creating the question. Channel owners on YouTube spread their videos on multiple external networks to gain an audience. Survey creators on

SurveyMonkey spread their surveys via email, blogs and social networks as this helps them get responses. Authors seeking funding on Kickstarter also spread their project page on their social networks. Two key insights emerge across these examples:

- Producers never spread the word about the platform: they merely spread the word about their creations
- Platforms that succeed with viral growth reward users with accelerating social feedback

The second point above is worth noting, as accelerating feedback encourages users to keep repeating their actions. Platforms like YouTube and Quora perform because of social curation. The videos and answers that get higher upvotes get greater exposure on the platform. While on-platform discovery of content leads to higher upvotes, sharing the content on an external network helps to gather a few initial upvotes. This initial curation leads to greater consumption, and hence, further curation on the platform. This, in turn, kick-starts a virtuous cycle, leading to accelerating feedback and resultant higher exposure of the content.

In a similar vein to the producer-as-sender use cases, consumers may also spread value units when they find them relevant, interesting or intriguing, or if they feel the unit can give rise to new interactions on another network. Media companies like Upworthy and BuzzFeed scale solely on the strength of consumer-initiated viral spread. These outlets focus on creating content and headlines that inspire shock and awe among content consumers, encouraging them to spread the word on their respective social networks. Much of 9GAG's viral growth also stems from consumers sharing creations on the platform, rather than the producers alone sharing those creations.

Platforms that require users to explicitly connect with each other, before they experience network effects, grow virally through invites. Communication networks, like Skype and Facebook, require users to explicitly connect with others. These platforms rely on local network effects, where users benefit only from having more friends within their immediate network. In contrast, every user on YouTube or Airbnb benefits when there are a greater number of users using the overall network. Sending invitations aligns with the core interaction of connecting and communicating.

Platforms may also use inorganic incentives, but these incentives need to be carefully structured, to scale well. Poorly structured monetary incentives may lead to high burn rates on a rapidly scaling platform. Inorganic incentives should also be contingent on the final outcome. Groupon gifts Credits to a user, only when friends invited by the user purchase a deal. Finally, inorganic incentives should encourage both senders and recipients appropriately. Dropbox increases

the likelihood of virally acquired sign-ups, by offering free space to the Sender as well as the Recipient, when the Recipient signs up.

## SPREADABLE CORE VALUE UNITS

Are units on the platform designed for spread on an external network?

The most misunderstood contributor to viral adoption is the core value unit created on the platform. The fastest growing platforms have a core value unit that is easily spreadable on an external network. The video on YouTube, the room listing on Airbnb, the game state in a turn-based game or the question on Quora are all examples of spreadable core value units that are created on the respective platforms, and that are then sent out on an external network.

Word of mouth can work for any offering, irrespective of whether it is physical or digital, but viral adoption only occurs in the case of networked systems, where core value units, created on the system, can be spread on an external network.

The value unit is a representation of the platform that can spread on an external network and act as a demonstration for the platform. When the founders of Hotmail inserted: “P.S. I love you. Get your free email at Hotmail” at the bottom of every email generated on Hotmail, they were adopting a design choice that would be repeated across multiple viral platforms. Every email (unit) created on Hotmail would travel to users of other email providers and act as a demonstration of the free email value proposition that Hotmail championed. YouTube videos embedded in Facebook feeds have accounted for the rapid spread of viral successes like Psy’s Gangnam Style, the many Harlem Shake videos, and the ALS Ice Bucket challenge, to name a few.

However, not all value units on all platforms are spreadable. A business exchange platform enabling exchange of proprietary documents may not have units that are spreadable. Users are unlikely to be interested in sharing confidential documents the way they would share photos on Instagram. A spreadable unit has the following characteristics:

1. *It triggers an interaction on an external network.* YouTube owes much of its early growth to MySpace. During its heyday, bands would use MySpace to interact with their fans. Bands, however, had no easy way of sharing videos of their performances and bootlegs with their fans. YouTube explicitly created the functionality to embed videos onto MySpace, allowing bands to host videos on YouTube and embed them on their MySpace profile. These videos helped start an interaction on MySpace, an important requirement for a spreadable unit. Ironically, while MySpace

remains a mere footnote in the history of social networking, YouTube, meanwhile, has grown to become one of the most relevant platforms of our time.

2.*It plays on the producer-as-sender dynamic.* Encouraging producers to spread their creation at the point of production drives growth for many content platforms. Some platforms like Instagram, Kickstarter and SurveyMonkey actively encourage this as part of the user workflow.

3.*The spread of the unit helps to complete an incomplete interaction.* An unanswered question on Quora is a spreadable unit demanding social feedback in the form of an answer. A fresh survey on SurveyMonkey needs responses. A Kickstarter project is a bid to potential funders to come over to Kickstarter and fund the project. While not necessarily a requirement for all spreadable units, the incompleteness of the interaction creates an active call to action for the recipient, prompting them to act.

Spreadable units remain the most important, yet least understood, element of designing for viral adoption.

## EXTERNAL NETWORK

What is the external network on which the unit spreads? Networks grow on top of other networks. Instagram leveraged Facebook, as did Zynga. There are countless examples of viral growth, leveraging Facebook as an underlying network.

For quite some time, startups building new platforms saw Facebook as their savior for solving launch and adoption problems. For many marketers, implementing viral growth translates to little more than a simple introduction via a share button and an integration with Facebook. However, an inadvertent focus on the tools available often distracts platform builders from the right design decisions. There are four key decisions that determine success of viral growth while leveraging an external network:

1.*Choice of network.* The choice of network is an important consideration. One is often tempted to believe that an effective external network for viral growth is likely to be one that publicly offers sharing buttons. Hence, Facebook, Twitter, Google + and their ilk are the first networks that often come to mind. However, any network where users are explicitly or implicitly connected, and which would allow an external party to insert a unit, is a possible choice for an external network. Email and the mobile phone contact list are implicit networks, as is the blogosphere (when imagined as a network connecting blog writers and blog readers, many of

whom are writers as well). Viral applications and platforms have long leveraged chain mails, contact list integration, widgets, phone notifications and newsfeed updates to spread the word on an underlying network. The choice of an underlying network is governed by three considerations: *a. Relevant interactions:* Airbnb reverse-engineered an integration with Craigslist despite the fact that Craigslist does not encourage integration by offering any public APIs. The interactions that Airbnb wanted to facilitate on its platform were already happening on Craigslist. It simply focused on providing a better platform (with better reputation, trust and transaction mechanisms) for those interactions and users switched over. *b. Relevant connections:* In another example of an intelligent choice of network, LinkedIn chose to integrate with Microsoft Outlook, even though most other social networks opted for the easier integrations with Yahoo and Gmail. Users' business connections, the ones that LinkedIn wanted to create, already existed on Outlook. The integration, though time and cost intensive, played out well for LinkedIn. *c. Relevant look and feel:* Pinterest is one of the largest external sources of traffic to Etsy. On an Etsy profile page, users are explicitly encouraged to share on Pinterest, over other networks; the absence of a cluttered buffet of sharing choices is worth noting. Juxtaposing an Etsy profile page and a Pinterest board helps us understand the reason for this choice of underlying network. Etsy's profile pages are photo-centric, especially since the marketplace is used by artists and craftspeople to sell their wares. These pictures work well with Pinterest boards and get spread around on Pinterest. The connections and/or interactions you want to enable on your platform may already exist elsewhere. Look for external networks that facilitate similar connections/interactions.

*2. Add value to users on external network.* As with all other decisions related to platforms, a favorable and compelling user experience is also key to successful viral growth. Flickr's initial growth ensured that it added value to users on an external network. Flickr grew largely because it allowed bloggers a better alternative for hosting their pictures for blog posts. Both bloggers and blog readers benefited from the value. PayPal added value to users on eBay by providing them a safe and secure payments mechanism. As a result, much of PayPal's initial growth was achieved on eBay. While using an external network, one needs to add value to users on that network to achieve sustainable scale.

*3. Unfair advantage.* Companies that are first to leverage a new network often benefit from an unfair advantage. Zynga, RockYou, and Slide used

Facebook for viral growth more effectively than others, because they were among the first to use it. WhatsApp used the phonebook, Airbnb used Craigslist, and PayPal used eBay. All three platforms were the first to use the corresponding external network. In most cases, these external networks step up governance and restrictions as more applications start leveraging them for growth. Users may also get sophisticated over time and stop clicking on, and responding to, invite messages.

4.*Ease of integration.* Finally, as a platform builder, the ease of integration is an important factor when choosing an external network. Today's social networks actively encourage such integrations through single sign-on mechanisms and sharing widgets.

## RECIPIENT INCENTIVES

Why will the recipient perform the desired action?

In this stage of the viral cycle, the platform's business goal is to drive as many conversions as possible on an external network. Unfortunately, interestingness and relevance are characteristics of the unit (often created by a user) and a platform has limited control over it. YouTube does not control the kinds of videos users create. It plays its part in ensuring that the best videos get greater exposure, and hence, spread further. However, as a platform, it cannot itself introduce interestingness and relevance into the content of the video in the way a publisher like BuzzFeed or Upworthy can.

Instead, the platform owner can incentivize conversions through ancillary content that travels with this unit. There are two elements that need to be incorporated into a spreadable unit to incite conversions:

1.*Pitch.* The unit should serve as a compelling pitch for the platform. It should act as a demonstration of the platform and should show the recipient what to expect from the platform. A shared project from Kickstarter shows what users can do on Kickstarter. Each of these is a compelling pitch for the respective platform.

2.*Call To Action.* There should be a targeted and compelling call to action, inciting conversions. When Hotmail first went viral, it carried the message: "P.S. I love you. Get your FREE email at Hotmail" at the bottom of every email. Free email was a new and compelling pitch at that point in time and the call to action ensured that recipients of the message converted in droves. Hotmail was probably the first consumer Internet application that achieved viral growth through a simple tweak in its messaging.

Finally, as noted earlier, a call to action may be implicit, when the spread of the

unit helps to complete an incomplete interaction. An unanswered question on Quora, an open survey on SurveyMonkey and a Kickstarter project waiting to be funded are all incomplete interactions, with a clear call to action for the recipient. The call to action is organically embedded within the unit.

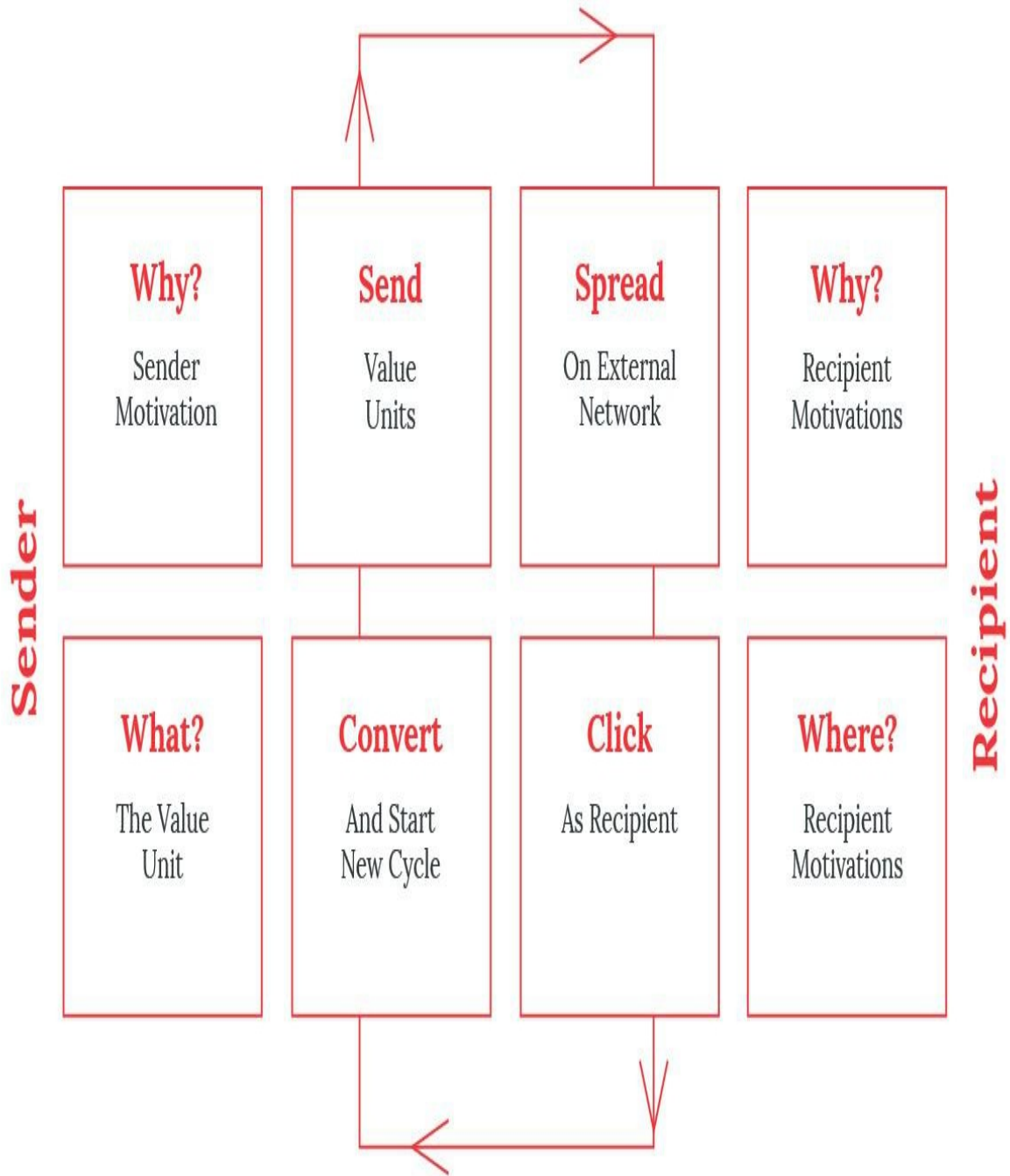
## PLATFORM SCALE IMPERATIVE

The viral spread of any digital offering requires all four elements, working in tandem. An inability to enable any one of these can break down the entire viral spread cycle. To achieve Platform Scale through virality, a platform needs to watch out for four key considerations:

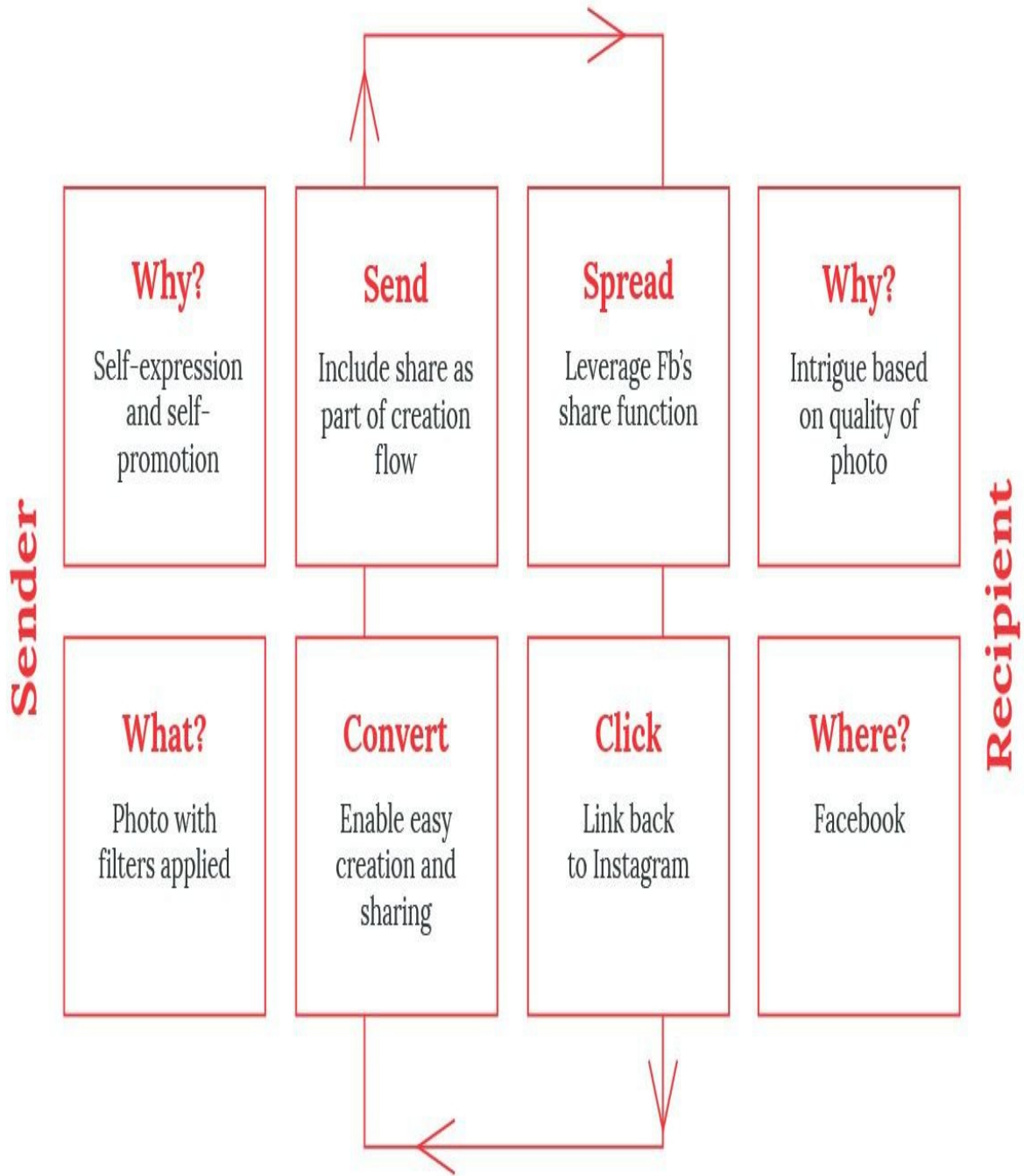
- 1.Alignment of the sharing action with the core interaction of the platform.
- 2.Spreadability of the core value unit.
- 3.Choice of an external network that encourages spread and enables similar or complementary interactions already.
- 4.Design of a clear pitch and call to action, which travel with the spreadable unit.



*The Viral Canvas*  
*Figure 19a*



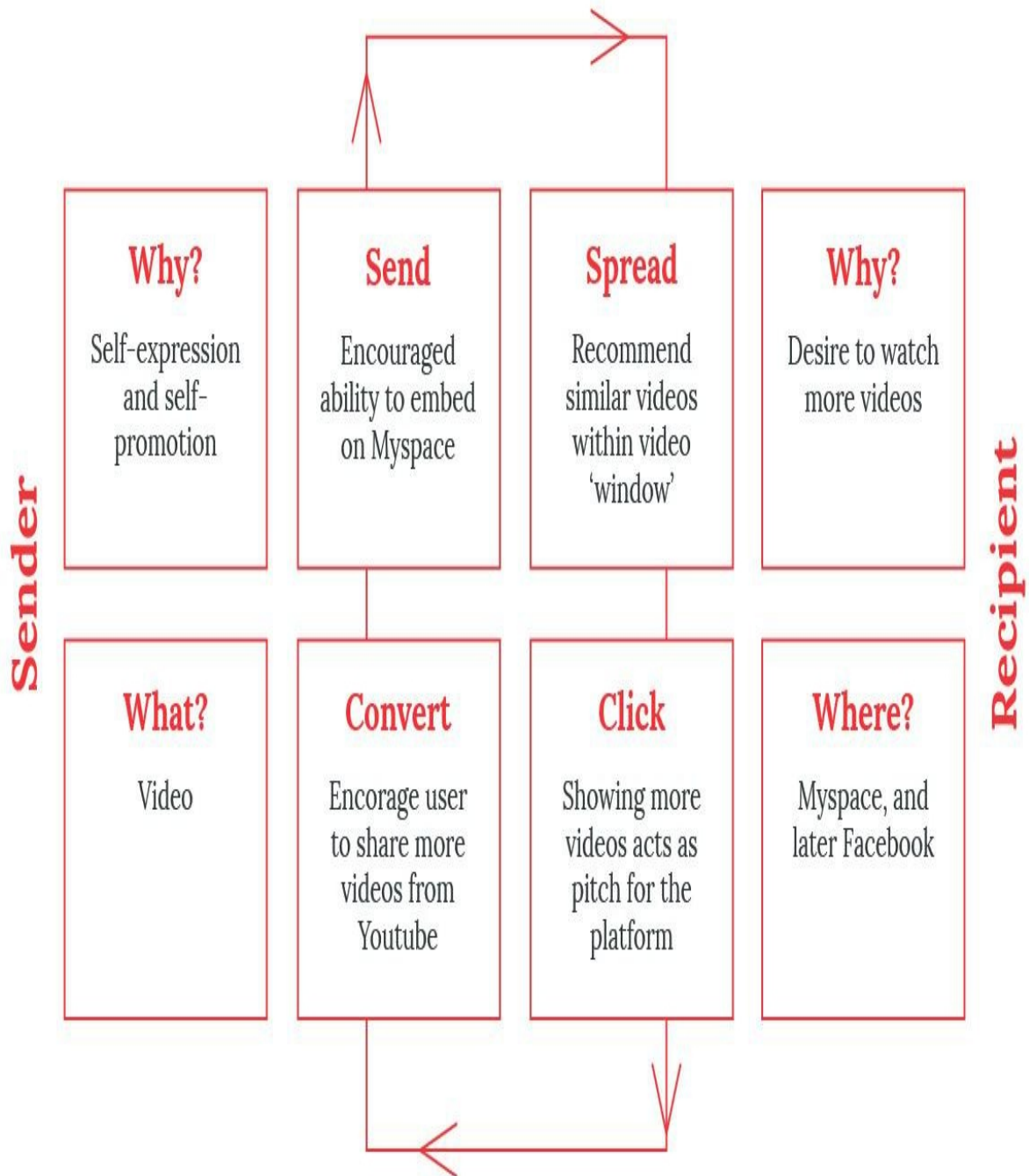
*Instagram*  
*Figure 19b*



Sender			Recipient
<b>Why?</b> Faster booking of accommodation listings	<b>Send</b> Offer "Post to Craigslist" functionality in flow	<b>Spread</b> No spread within Craigslist	<b>Why?</b> To complete transaction
<b>What?</b> Airbnb Listing	<b>Convert</b> Buyer browses other listings and may become host eventually	<b>Click</b> CTA asking buyer to transact	<b>Where?</b> Craigslist

Recipient

*YouTube*  
*Figure 19d*



## Section 6

# REVERSE NETWORK EFFECTS

*The goal of platform scale is to ensure the simultaneous scaling of quantity and quality of interactions.*

# INTRODUCTION

## Too Big To Fail?

The era of big corporations may be drawing to a close, but much of this book makes the case for a new form of big: the era of big ecosystems, built around networked platforms. As the world gets more networked, harnessing the principles of platform scale to our advantage is going to present opportunities to transform entire industries and shape business models that would not have existed before. However, there are limits to platform scale. This section explores the opposing view to platform scale.

The network effect argument posits that platforms should improve in their ability to create and deliver value as they gain greater adoption, however, under certain conditions, scale may work against the platform.

To understand how platforms fail with scale, it is important to revisit the principles that enable platform scale, in the first place. Platform scale is achieved as internal processes are transitioned to external interactions. Platforms that enable highly efficient and repeatable interactions scale faster than those that do not. As a result, if higher adoption gets in the way of interaction efficiency and repeatability, the platform may lose value with scale. The first part of this section lays out a framework for understanding the scalability of network effects. The latter half of this section explores two key considerations that limit platform scale. The first is a design constraint that sets a natural limit to network effects. This may apply only to certain types of platforms and networks. The more interesting – and often overlooked – consideration discusses a unique phenomenon that leads to depleting value and loss of network effects, with an increase in scale.

## 6.4

# DESIGNING THE ANTI-VIRAL, ANTI-SOCIAL NETWORK

## Networks And Platforms That Refuse To Scale

The growth stories of Facebook, Twitter, Pinterest and others have been repeated often enough to make us believe that all social networks benefit from platform scale. However, there are certain social networks that are inherently designed against platform scale.

### THE UNSCALABLE SOCIAL NETWORK

While Facebook, Twitter, and Pinterest have great growth curves to show off, many social networks fail to scale at that rate. There are certain characteristics that structurally prevent such networks from scaling, irrespective of the quality of execution. Networks and platforms that fail to scale, by design, often exhibit one of the following three patterns:

- 1.The need to solve the chicken-and-egg problem multiple times, not just once: This compounds the challenge of execution, and impedes the platform's ability to scale. In such cases, a typical growth graph looks like a series of steps rather than one that grows non-linearly throughout. New networks are created from scratch as the chicken-and-egg problem is solved repeatedly.
- 2.A cap to organic virality: Existing users cannot bring in more than a certain number of other users. This limits the spread of the network.
- 3.Very low overlap between clusters within which network effects operate: This leads to a low probability of easily expanding from one cluster to the other.

Two key determiners of platform scale are the size of the network cluster within which network effects are observed, and the degree of overlap between clusters.

### NETWORK CLUSTERS

Network effects occur when more production leads to more consumption, and vice versa. However, all such effects occur within certain clusters. Within a cluster, producers and consumers benefit from each other.

Geographical limits create a common form of cluster. More Uber drivers in San

San Francisco do not lead to more rides in New York City. The network cluster for Uber is restricted to a city. In contrast, the network cluster for LinkedIn may not have any geographical limits.

LinkedIn also has network clusters, though not geographical. These clusters are industry-specific. However, unlike geographical clusters, industry boundaries are not quite as rigid. The same agency, for example, may service clients in multiple industries. Hence, LinkedIn's clusters have a greater degree of overlap.

As we note through the case studies that follow, the size of the network cluster and the degree of overlap between those clusters determine a network's ability to expand and achieve platform scale.

### PATH: THE ANTI-VIRAL NETWORK

Path is a network that mirrors very strong offline family ties. Every family constitutes a network cluster and Path is made of many such network clusters. Path's network cluster is built around family ties and every user is part of a specific network cluster. There may be some overlap between network clusters as different users may define their family 'boundaries' differently. However, such overlap is likely to be low and a user is likely to be part of only a limited number of extended families.

If one were to visualize different networks, Path would likely have multiple network clusters with low overlap, different family groups with few common relationships. Facebook, in contrast, would have significant overlap between different network clusters (say your college network and your work relationships' network).

Further, Facebook benefits from high virality because a user obtains greater value out of the network by getting all their friends on board. In contrast, Path structurally requires users to invite only family members. The use case itself imposes a natural cap on virality.

### NEXTDOOR: SOLVING THOUSANDS OF CHICKEN-AND-EGG PROBLEMS

Nextdoor is a social network for the neighborhood and each neighborhood forms a unique network cluster. Since users are unlikely to be part of multiple neighborhoods, these network clusters do not overlap. Every neighborhood is insular.

Nextdoor faces a unique problem. Since every neighborhood is an independent network cluster, every such cluster needs to be kick-started from scratch. Members in neighborhood A do not have a natural incentive to invite members



in an unconnected neighborhood B, even though they may be friends otherwise. As new neighborhoods come up on Nextdoor, some word of mouth does get generated within the city, which helps to get new network clusters started. However, Nextdoor has a unique problem. Network clusters in Path are family-sized. As a result, getting two members of a family on board is usually enough to get others on board. Nextdoor needs a larger number of active users, before users in a neighborhood cluster start experiencing value. It faces a chicken-and-egg problem every time it spreads to a new neighborhood. The problem is likely to get easier as it achieves greater penetration and ubiquity in a particular city, but it still exists.

## CITY NETWORKS: WHEN SPILLOVERS DO NOT HAPPEN

City-specific networks and marketplaces like Uber, Yelp and OpenTable also have fairly insular network clusters. Every city is a network cluster of producers and consumers. There is some cross-usage, *e.g.* traveler from city A to city B may reserve a restaurant in city B but the cluster, within which network effects are experienced, is city-sized.

Social networks scale when the activity in one network cluster can spillover to another network cluster. LinkedIn, for example, started out in the US but spilled over to new markets. It also started in the technology or software industry, with its roots in Silicon Valley, but gradually expanded into other industries.

Spillover helps networks scale across clusters. However, spillover is discouraged when a platform encourages the creation of insular non-interacting network clusters like families, neighborhoods or cities.

While Path and Nextdoor have potential for spillover (through word of mouth among users in the same city), city-specific platforms like Yelp, Uber or Foursquare need to start operations from the ground up in every new city, and often build a national brand only after they gain adoption in multiple cities.

## EXPANSION OF CLUSTERS

eBay realized that it was a network of country-level network clusters. Buyers in one country were not too likely to buy from sellers in another country. eBay's expansion strategy, in its early days, involved acquisition copycats in different countries. Facebook, in contrast, never followed this strategy, partly because it would have been a product and data nightmare, but also because geographical barriers do not pose a problem to the type of interactions that Facebook enables. eBay experienced very little spillover while Facebook experienced a lot. However, as eBay realized over time, expansion through acquisition prevents

integration at the data layer. It is almost impossible to create network effects across two networks without data-layer integration.

## GROWTH AND SPILLOVER

Networks that achieve platform scale encourage spillover. Airbnb, unlike Uber and OpenTable, has tremendous potential for spillover. The travel use case makes such spillover organic to the network. The host and traveler will often be part of different cities. Such cross-city interaction allows rapid growth, without the creation of insular clusters, although some clusters may still exist. For example, travelers from Europe may travel more often within Europe, however, many travelers will venture further abroad and clusters will, consequently, show higher overlap.

In contrast, Uber and OpenTable need to start operations from the ground up in every city every time they want to scale geographically. Uber does benefit from a growing brand awareness but that alone is not enough. As a result, Uber's geographical expansion incurs much higher costs than the geographical expansion of Facebook or Twitter.

## INFLECTION POINTS

The growth curves of Facebook, Twitter, Airbnb, and Pinterest have well defined inflection points. Social networks, which encourage clusters, may not have growth curves with well-defined inflection points, because of the additional investment in starting up new clusters. Instead, these growth curves are more likely to show step function characteristics.

## PLATFORM SCALE IMPERATIVE

Platform businesses that encourage the creation of isolated network clusters may still grow and achieve platform scale by implementing one of two strategies.

1. *Cross-Cluster Interactions*: The platform may create an interaction where a user in network cluster, A, needs to interact with a user in network cluster, B. The more often such interactions occur, the higher is the platform's ability to scale. Facebook started out by building standalone campus networks but later allowed cross-campus interaction, and subsequently opened itself completely. In the case of Facebook, cross-university relationships already existed offline. In the case of Path or Nextdoor, some other trigger may be needed, on which two families or two neighborhoods may exchange information. Platforms with small network clusters may achieve spillover by creating an interaction across these clusters.

*2. Cross-Cluster Incentive:* Groupon is another example of a buyer-seller network, where every city is an isolated network cluster. Starting new cities has the same chicken-and-egg problem every time. Groupon combated this by creating national deals – a multi-cluster incentive – that attracted consumers in cities where Groupon had not yet launched. By amassing consumers through national deals, Groupon had an initial base of consumers to start with while kick-starting a new city and just needed to get the merchants and deals on board. Platforms that encourage the creation of insular network clusters must carefully design a cross-cluster interaction that enables the platform to grow across clusters and achieve scale.

# EPILOGUE

## Platform Scale For Traditional Pipe Businesses

*Platform Scale* unpacks the underlying principles that determine business design and direct the growth mechanics of platform business models. While these principles apply equally well to both startups and large traditional organizations, most of the examples mentioned refer to the success of platform startups. Observing startup success is inspirational but not entirely useful while implementing these principles at a large pipe organization. This epilogue addresses this need and lays out a playbook for applying these principles at large pipe organizations.

I work on analyzing the business design and growth mechanics of platform business models because these issues are very poorly understood in business today, but are increasingly important for businesses interested in digital transformation. Much of my work focuses on applying these principles to platform implementations at large pipe organizations, where an understanding of the underlying platform mechanics is especially important. Businesses that fail to understand the underlying mechanics involved try to imitate the poster-boys of platform scale, with little success. Instead, understanding the business design and growth factors involved helps businesses leverage these principles to design new business models most appropriate to them. In this context, the implementation of platform scale at a large pipe organization follows a very different template from the implementation of platform scale at a platform startup. This epilogue lays out a framework that I've repeatedly observed while implementing platform scale at large pipe organizations. It serves as an introductory series of steps for a large pipe organization to embark on the journey to platform scale.

### PLATFORM SCALE: A TEMPLATE FOR STARTUPS

The platform stack serves as a helpful framework to understand the evolution of platform scale at a startup, and how that differs from the evolution of platform scale at a traditional pipe business.

Platforms like Uber, Airbnb, Facebook, YouTube, Android, and Upwork always start at the infrastructure layer and take off by launching the infrastructure layer. Apps and websites, external manifestations of the platform, serve as interfaces to this layer. Managed services offered by the platform may also serve as an

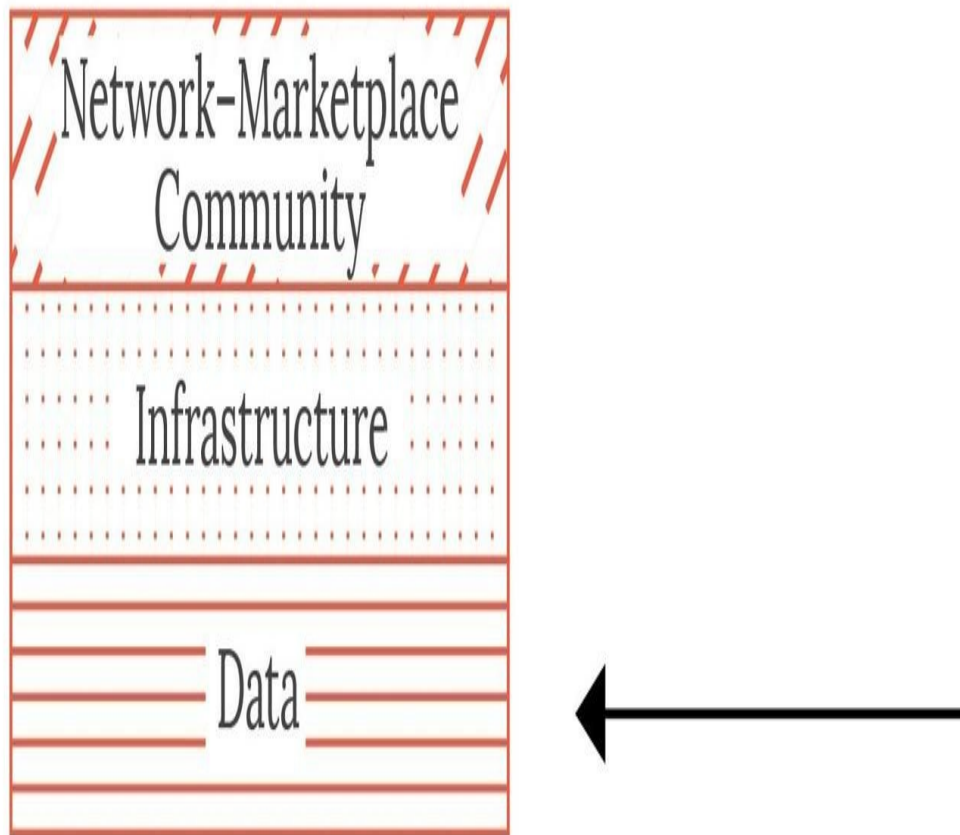
interface to the infrastructure.



As the infrastructure gains adoption, an ecosystem of producers and consumers starts coalescing around the infrastructure. Drivers and travelers start using Uber, hosts and travelers start using Airbnb, and developers and device users start using Android. This is the next discernible stage in the evolution of the platform. The launch of an infrastructure followed by the coalescence of a vibrant ecosystem around it, engaging in explicit exchanges, is the external manifestation of the platform that we are now familiar with.



Finally, activity by producers and consumers on the platform generates significant amounts of . As noted throughout this book, the data layer serves to make future interactions more efficient and keeps users regularly engaged on the platform. As the data layer grows stronger, the network or ecosystem layer also increases in strength.



The development of the data layer and its corresponding impact on the platform do not have explicit external manifestations. To the casual observer, the role of data isn't readily apparent. In contrast, the launch of an infrastructure and the coalescence of an active ecosystem around it are readily observable. Moreover, most multi-billion dollar startups achieved platform scale following the above evolution template. As a result of these two factors, it is often believed that any business seeking to build platform scale should launch technology (as infrastructure) and rapidly acquire users of that technology (towards building an active ecosystem).

This template may work for a startup but fails to work for traditional pipe-based enterprises. As a result, large enterprises that try to imitate startups often fail to move forward on the road to platform scale.

## PIPES AND THE CHALLENGES OF CORPORATE INNOVATION

Traditional pipe-based businesses face several challenges while innovating. The first and most evident challenge is organizational. Their large organizations, while well designed to enable process efficiency for a pipe business, are slow to respond to environmental input. These organization structures are well structured

for maximizing repeatability and efficiency of a well-defined process. But they lack the agility needed to respond to changing usage patterns and to shift direction often while innovating. The second challenge relates to the measurement of platform innovation. Platform scale businesses often take several years to take off, owing particularly to the chicken-and-egg problem discussed in Section four. This does not work well in large organizations where employees are measured and motivated in quarterly and annual timeframes. Owing to the quarterly or annual cycle of measurement, employees working on innovation, particularly on platform scale projects, try to identify metrics that may be effective in demonstrating progress within the specified time period. However, the choice of convenient metrics often obstructs choosing the most appropriate metrics to determine platform health.

Challenges in corporate innovation, particularly the two mentioned above, are well understood and acknowledged. However, it is equally important to appreciate the unique advantage that large pipe businesses possess. Unlike startups, these businesses have been around for decades and have successfully built large pipes that serve millions of users. These businesses have unique market access that they may well leverage towards platform scale.

Pipes pursuing platform scale need to contend with a third challenge, unique to the pursuit of platform scale. Traditional pipe businesses lack a culture that focuses on the user and on external interactions. More importantly, they lack a culture of data acquisition and management.

When traditional businesses see startups innovating, they tend to imitate these startups in the hope of achieving similar outcomes. Pipes interested in achieving platform scale are likely to follow the above template for platform scale that startups leverage and start by launching a website or an app in the hope of kickstarting the rest of the platform evolution. *In following this template, these large pipe businesses fail to factor in their unique advantage in user access and their unique disadvantage with data acquisition and management.* This leads to a failure to innovate. This failure is all too often blamed on the organizational structures of large companies. Instead, many of these failures can be avoided by creating an alternate template for platform innovation unique to a large pipe-based enterprise.

Understanding the above advantage and disadvantage that a pipe business faces when pursuing platform scale helps to create an alternate template for pipe-based enterprises to achieve platform scale.

## PLATFORM SCALE: A TEMPLATE FOR PIPE-BASED ENTERPRISES

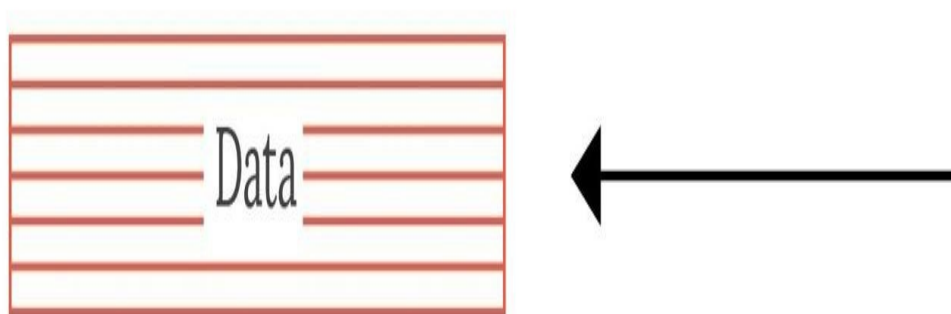
The journey to platform scale for a startup starts with the infrastructure layer. The network or ecosystem layer comes in next and the data layer kicks in at the end. *In contrast, the journey to platform scale for a large pipe-based business starts with the data layer.*

### *1. Build A Culture Of Data Acquisition*

The first step a traditional pipe-based business needs to take is cultural. It needs to create a culture of data acquisition. Most pipe-based businesses have been designed with a culture of dollar acquisition. Sales representatives who acquire revenue are incentivized accordingly. The key metrics measured are structured around the sole priority of dollar acquisition.

To kickstart the journey towards platform scale, businesses will need to create a culture of data acquisition. Businesses like LinkedIn and Netflix demonstrate that higher data acquisition opens greater monetization opportunities. LinkedIn acquires significantly more data from its users than Monster. This has helped create a larger recruitment market on LinkedIn. Using data, LinkedIn recommends highly relevant jobs to professionals and their network and helps recruiters find the most relevant candidates. This is made possible by a relentless focus on data acquisition. For example, the progress bar on the website constantly urges users to enter more data by showing them how far they are from building a full-fledged profile.

On the road to digital transformation, most current pipe businesses launch a portfolio of digital services - apps and websites - available to users. However, these apparently digital moves are often neither strategic nor transformative. *A digital strategy should be evaluated from the lens of dollar acquisition and data acquisition. All digital services launched to users should be integrated at the data layer. More importantly, every service should serve either to acquire dollars or to acquire data that can be monetized in some form in the business.*



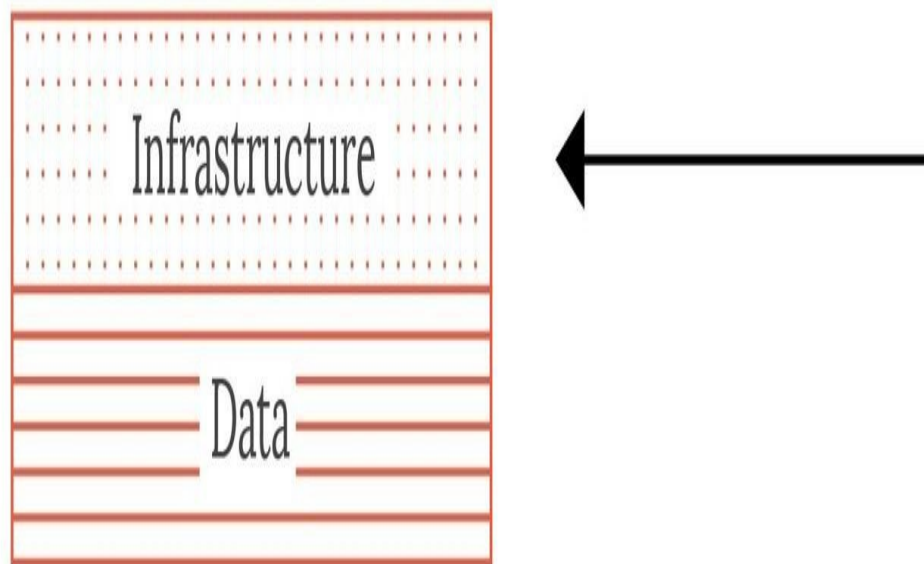


Facebook first launched as a single app on the mobile phone but has gradually built a portfolio of apps. However, this isn't merely a portfolio of disconnected apps launched opportunistically. These apps work together as interfaces for a common platform, all integrated at the data layer.

*A free app is a user benefit in exchange for data.* The app store is flooded with free apps but not all of them are necessarily strategic in intent. To be strategic, a free app should be a data acquisition interface that powers a larger business model. Every app by Facebook is structured as a user benefit in exchange for data. Facebook's news feed itself is the best example of a user benefit in exchange for data. As Facebook and LinkedIn demonstrate, a digital strategy, particularly one that intends to leverage platform scale, should start with a cohesive data strategy. This needs to be executed using a culture of data acquisition.

## *2. Enable Data Porosity And Integration*

Platform business models are enabled by platform organizations. An organization that is not integrated at the data layer cannot enable an ecosystem that is orchestrated by data.



With a clear platform strategy in mind and having set a culture of data acquisition, a pipe organization must institute infrastructural change. It must start integrating its internal organization.

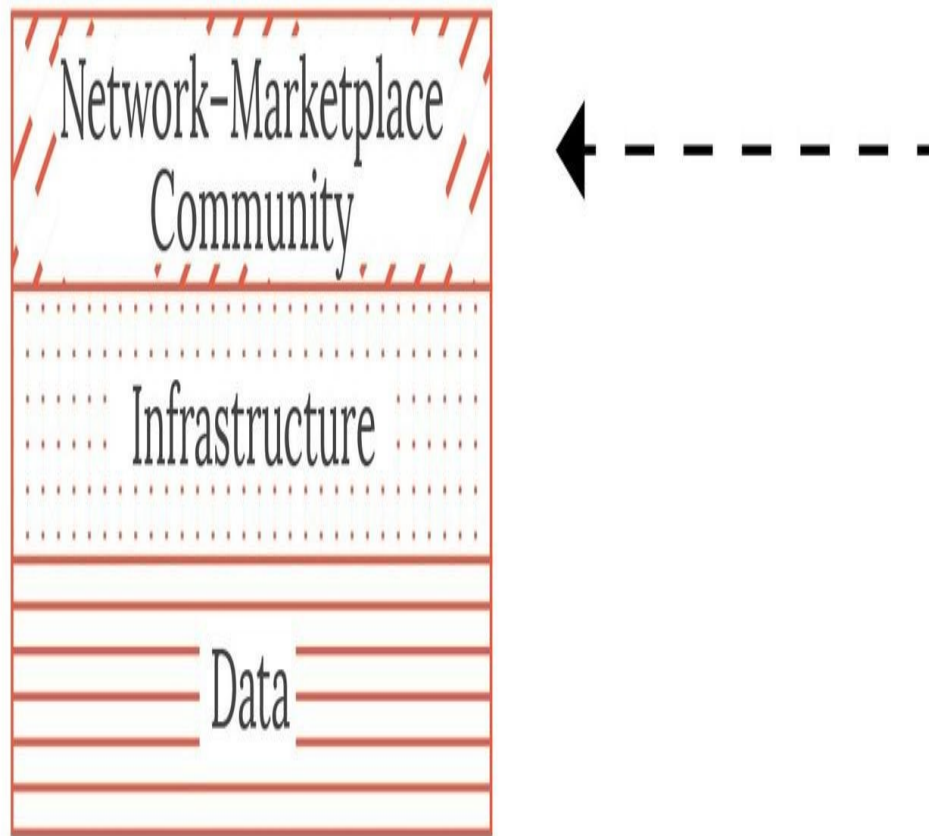
The pipe business must integrate all processes, workflows, and touchpoints at the data layer. Pipe businesses must restructure their internal systems to be more

data-porous. This requires the implementation of internal APIs. Today, most organizations leverage IT as a backend infrastructure, but their business units work in silos and do not communicate with each other. There is minimal data exchange between business units. To eventually leverage platform scale, pipe organizations must be data porous. Most importantly, they must have a unified view of the user. Every user should be represented by a unique data entity. Pipe businesses that have never implemented a centralized user focus often struggle with this, but any quest for platform scale will remain incomplete and ineffective without it.

*The move towards data acquisition and data porosity signify the two most important steps in the journey towards platform scale.* Businesses that acquire and leverage data will find new ways of understanding their users and moving up the stack to the network layer. Toyota, GM, and Ford are becoming data acquiring companies. Their cars constantly stream data about usage. This helps the businesses better predict after-sales service and also allows them to monetize this data by selling it to insurance companies. Retailers today realize the need for acquiring data and integrating the buying experience across multiple touchpoints. Financial services companies have long been in the information business but are only now realizing the inefficiencies of operating in a data-rich but non-porous internal environment.

### *3. Leverage Implicit Data-Driven Network Effects*

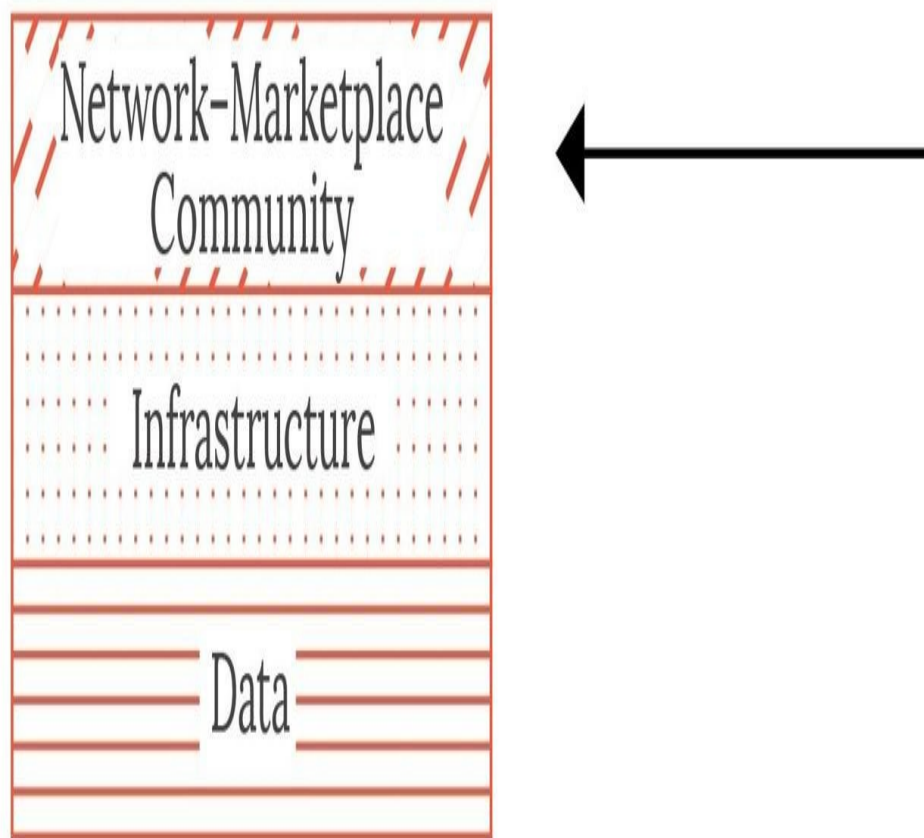
The first two steps in the quest for platform scale were structured to address the disadvantage that pipe businesses face by not having a data-first outlook. The third step leverages the unique advantage that an established business has when compared to a new startup: the access to a large user base.



Once the user is uniquely represented at the data layer, following steps one and two above, the business can start benefiting from implicit network effects. Users of Amazon benefited from implicit network effects even in its early days through product recommendations powered by the buying decisions of other users. Amazon's users-who-purchased-this-product-also-purchased-the-following is a mechanism of delivering a benefit through implicit network effects. Traditional branded retailers can provide similar services by leveraging purchase data.

#### *4. Build Explicit Communities*

Pipe-based businesses should start building explicit communities among their user base only after the first three steps are well executed. It is only at this point that the pipe's business model starts showing external manifestations of the platform business model. For example, a retailer may encourage



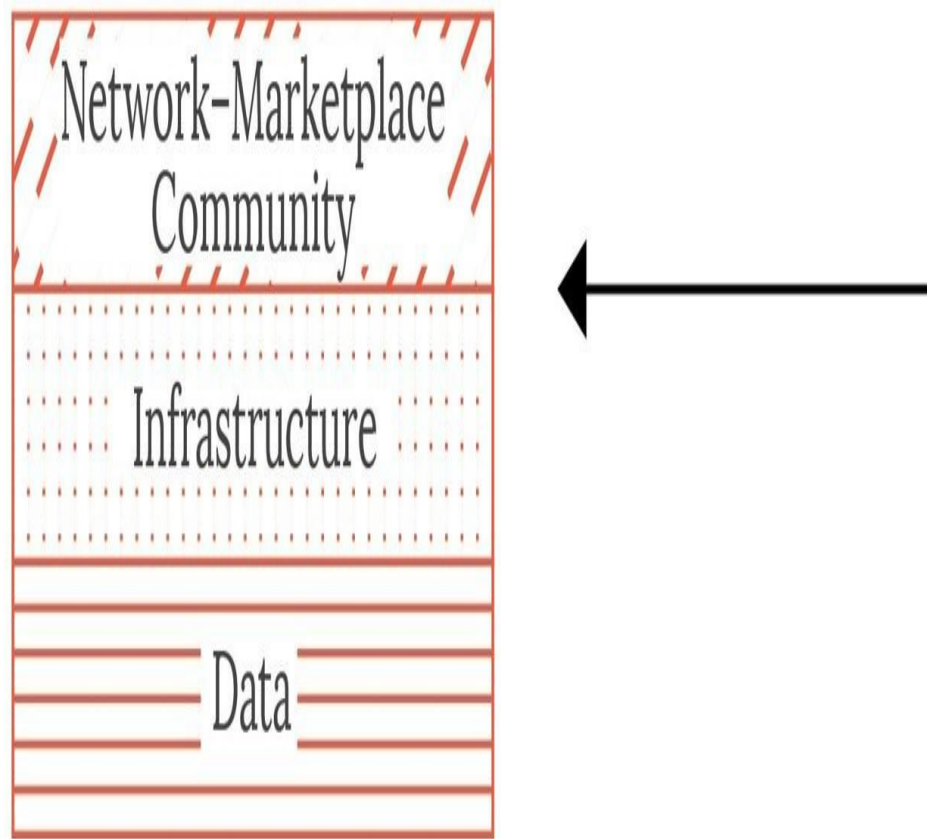
buyers of a brand to connect within a locality. A bank may identify the network of transactions that a small business customer has and encourage the creation of closed industry networks around the bank's products.

In the quest to transform to platform models, pipe businesses often skip the first three steps and move to the fourth. They may be effective in building communities but will fail to leverage the power of data, filters, and intelligence because of poor integration at the data layer. In effect, they will fail to benefit from true platform scale.

#### *5. Enable Explicit Exchange*

The final step involves the enablement of the actual exchange. At this stage, the pipe business can move in completely new directions and fully leverage platform scale.

Users are now connected and are being led to new interactions.



This is the original vision with which most pipe businesses start when they want to realize platform scale. However, the path towards this vision is quite different from the path that a startup would follow. This is needed because a large pipe organization should innovate in a manner that best leverages its advantages - access to a large user base - and acknowledges its disadvantages, stemming from a lack of focus on data acquisition and porosity.

#### A FINAL NOTE

In the course of my work helping large pipe organizations transform themselves for a platformed world, I regularly observe the above template for digital transformation. It is a slower path to a more sustainable platformed future. Innovation efforts often seem exciting when they deliver rapid results. However, a sustainable shift in strategy and business design is best achieved by building these capabilities in the pipe organization across all layers of the platform stack. Quick experiments to build user communities or launch digital services may seem innovative, but may not necessarily be strategic.

The business design and growth principles in this book lie at the core of the

transition from pipes to platforms. Those that understand the underlying mechanics of platform scale will exploit this to their advantage. As the world gets more connected, the businesses that benefit from platform scale will increasingly disrupt and replace the ones that don't.

The platformed world is here to stay.

## WHAT'S NEXT

Thank you for investing in this book. Now that you have read it, I would love to hear from you.

If you found this book useful, I would really appreciate it if you could leave a review for the book on Amazon and on Goodreads.

To learn more about platforms, visit the companion blog Platform Thinking at <http://platformed.info> and sign up for the Platform Newsletter. For an in-depth analysis of the other issues involved in managing platform business models, please check out my forthcoming book *Platform Revolution* (details follow).

For any queries regarding speaking or advisory as well as for any feedback or questions, contact me at [sangeet@platformthinkinglabs.com](mailto:sangeet@platformthinkinglabs.com).

## **ABOUT PLATFORM THINKING LABS**

Platform Thinking Labs is a C-level advisory and research firm focused on the application of platform strategies across industries. It engages in CXO-level advisory with Global 2000 firms as well as with high growth startups on network effects and platform strategies. Advisory work ranges across diverse industries, with clients in Europe, USA, Australia , South America and Asia.

The services offered by Platform Thinking Labs include the following: 1.C-level executive education on management of platform business models and network effect businesses 2.Platform business design workshops and masterclasses 3.Strategic advisory on platform business design and execution strategy 4.Commissioned research 5.Keynote speaking

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# PLATFORM REVOLUTION

What next?

*Platform Scale* starts a discussion of platform business models and unpacks the factors that drive their scalability. But as these models become more important, they will transform the design and management of many businesses. A whole slate of additional issues comes into focus:

- 1.Competition: How does competition change in a world of platforms?
- 2.Governance: How are platforms governed and managed?
- 3.Regulation: How will platforms be regulated?
- 4.Metrics: How can we measure platform success?
- 5.Monetization: Why do traditional monetization strategies fail?
- 6.Disruption: How can pipes predict disruption and how can they respond to it?
7. Future: What can we say about the platform world that looms ever closer?

My upcoming book *Platform Revolution* (published by W.W. Norton & Company, Inc, February 2016) addresses these questions. Co-authored with world experts Geoffrey Parker and Marshall Van Alstyne from MIT, this book brings together more than a decade of our research and practical applications to answer the most pressing questions about platforms and their future.

To pre-order a copy of the book now, visit [www.platformscalebook.com](http://www.platformscalebook.com)

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The quest to understand business in a world of platforms has captivated me for over three years now. This book is an outcome of many of the ideas that I've developed through the course of this quest. This journey wouldn't have been quite the same without the support and partnership of many people who have made this both an enriching and a hugely satisfying pursuit.

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