

“User innovation” definition

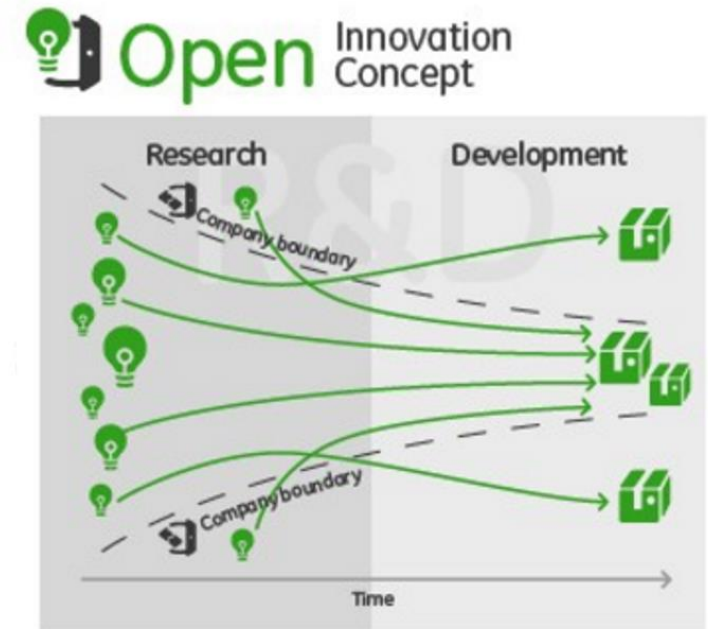
- **User innovation** is the idea that users and consumers are more innovators of new products than suppliers.
- Eric von Hippel was among the first to notice and explore this trend.
- Products made by manufacturers (or software companies) are ~~typically developed to meet a wide range of the needs~~ of a wide range of people.
- Therefore, when a particular user experiences needs that are not yet felt by most consumers, they make the adjustments themselves to meet their needs.



Eric Von Hippel (MIT)

“User innovation” definition cont’d

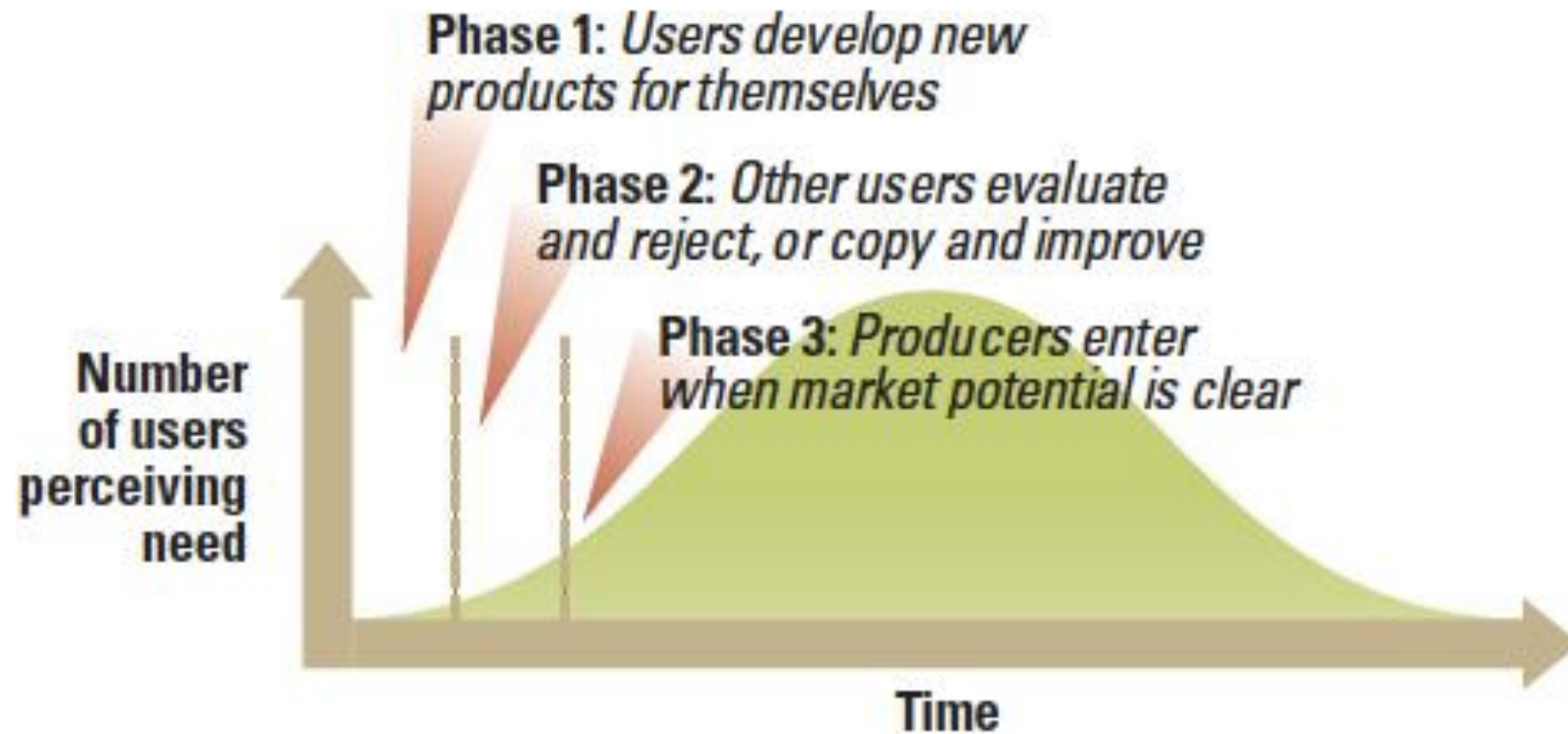
- Often, these ideas are fed back to the companies from these users in the hope that the product will be produced for them.
- These ideas, which we discussed as part of ‘Open Innovation’ **can also lead to new companies being formed**, especially with IT products



User Innovation



Eric Von Hippel
MIT Sloan School of Management



<http://sloanreview.mit.edu/article/the-user-innovation-revolution/> (MAR'25)

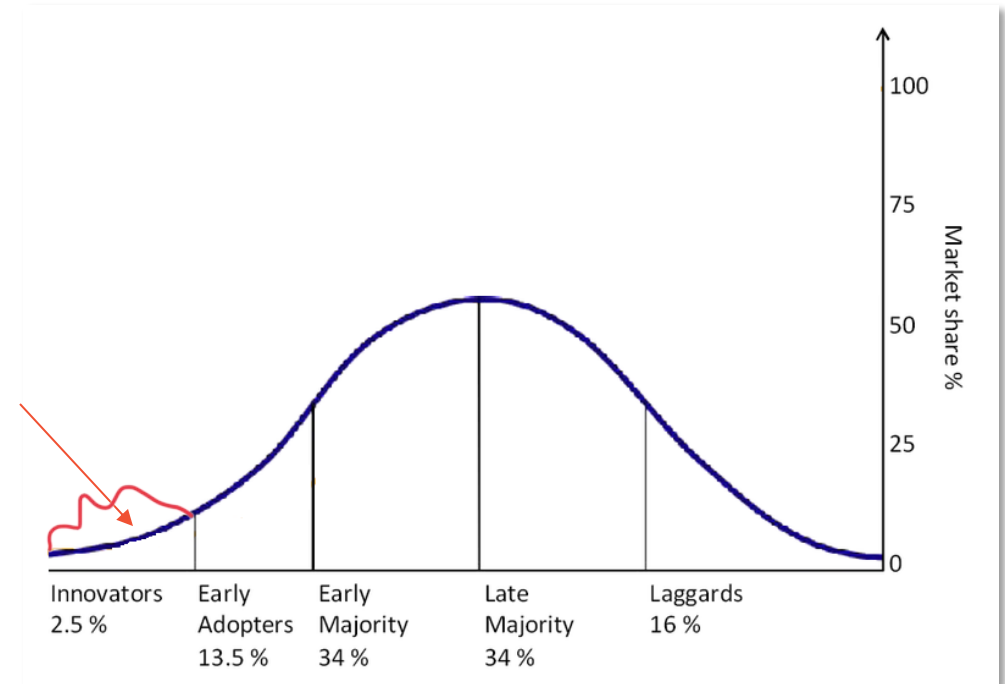
Lead Users

- Involving lead users often leads to more effective innovation.
- Lead users may be individuals, companies, or communities.



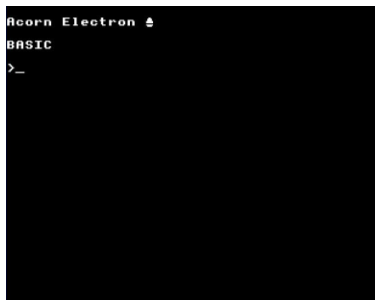
1986 journal article in **Management Science**
“Lead Users: A Source of Novel Product Concepts”

Lead users

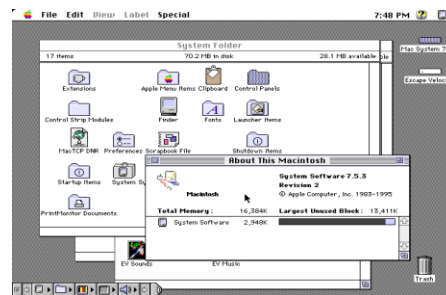


Lead users

- In some product categories (e.g. cleaning products, food products etc), **market research** focuses on **typical users** (e.g. with interviews, or focus groups)
 - The feedback and opinions of typical users can be useful in developing new products.
- For **IT** and other **high-tech industries**, **typical users are not so effective**
 - E.g. they often suffer from “**functional fixedness**” (a cognitive bias that limits a person to use an object only in the way it is traditionally used)



Typical users not likely to suggest



Typical users not likely to suggest



How to identify lead users



- According to Von Hippel...
- **Lead Users:**
 - Face the needs that will be general in the market, but months or years before the general marketplace realises the needs.
 - Will benefit significantly by obtaining a solution to those needs
 - Spend resources trying to solve those needs
 - Are at the leading edge of trends and are very knowledgeable about “state of the art.”
 - **Note:** Lead users are not usually a company’s “lead customers” – they are usually not satisfied with current products, so have had to create their own

Source: Von Hippel (1986)

User-led Innovation – An alternative perspective

- **Users insights can't predict future demand:** The users themselves often have **no idea if they will like a breakthrough product** before they start using it.
- **User focus makes companies miss out on disruptive innovations:**
“Focusing on users will lead companies to make **incremental innovations** that typically tend to make the products more expensive and complicated and ironically, in the long run, less competitive.”
- **User-led design leads to sameness:** “Even if user insights were useful, it is **not a competitive advantage**. Even the most advanced **user studies are now widely available**.”

<http://www.forbes.com/sites/stevedenning/2011/02/15/user-led-innovation-cant-create-breakthroughs/#35edb5c75a9b>

<http://www.fastcodesign.com/1663220/user-led-innovation-cant-create-breakthroughs-just-ask-apple-and-ikea> (MAR'25)

IT Innovation to Maker Innovation

- User Innovation propelled by IT – simple to get started as all the necessary technologies are already available e.g., APIs, open source, cloud computing, etc.
- But building, it's more difficult as there is the need for manufacturing (e.g. prototype), electronics etc.
- Things are changing with new technologies, in particular, 3d printer, Raspberry Pi etc.
- Maker movement has made tremendous interest in the recent years

User innovation: becoming an even bigger force in innovation – e.g. “Maker movement”



Image source: <http://spotlight.macfound.org/blog/entry/craftsmanship-is-dead-long-live-maker-culture/>



Image source: <http://robodino.org/>

“The maker movement, as we know, is the umbrella term for independent inventors, designers and tinkerers”

<http://time.com/104210/maker-faire-maker-movement/> (MAR'25)

What is Maker Movement

- *The Maker Movement is the embodiment of the **do-it-yourself** tech community — a celebration of the ever-growing culture bred from the cross-section of collaboration and creativity that is continuously recruiting people and ideas and technologies and inviting them to be tested and broken and shared. Makers are everywhere — welding in a garage, tucked away in a lab or DIY-ing on the living room floor — but the community's unofficial headquarters are all around the nation, and creating a place for makers of all kinds in the form of Makerspaces.*

[Make: Community – Home](#) (MAR'25)

Platform businesses

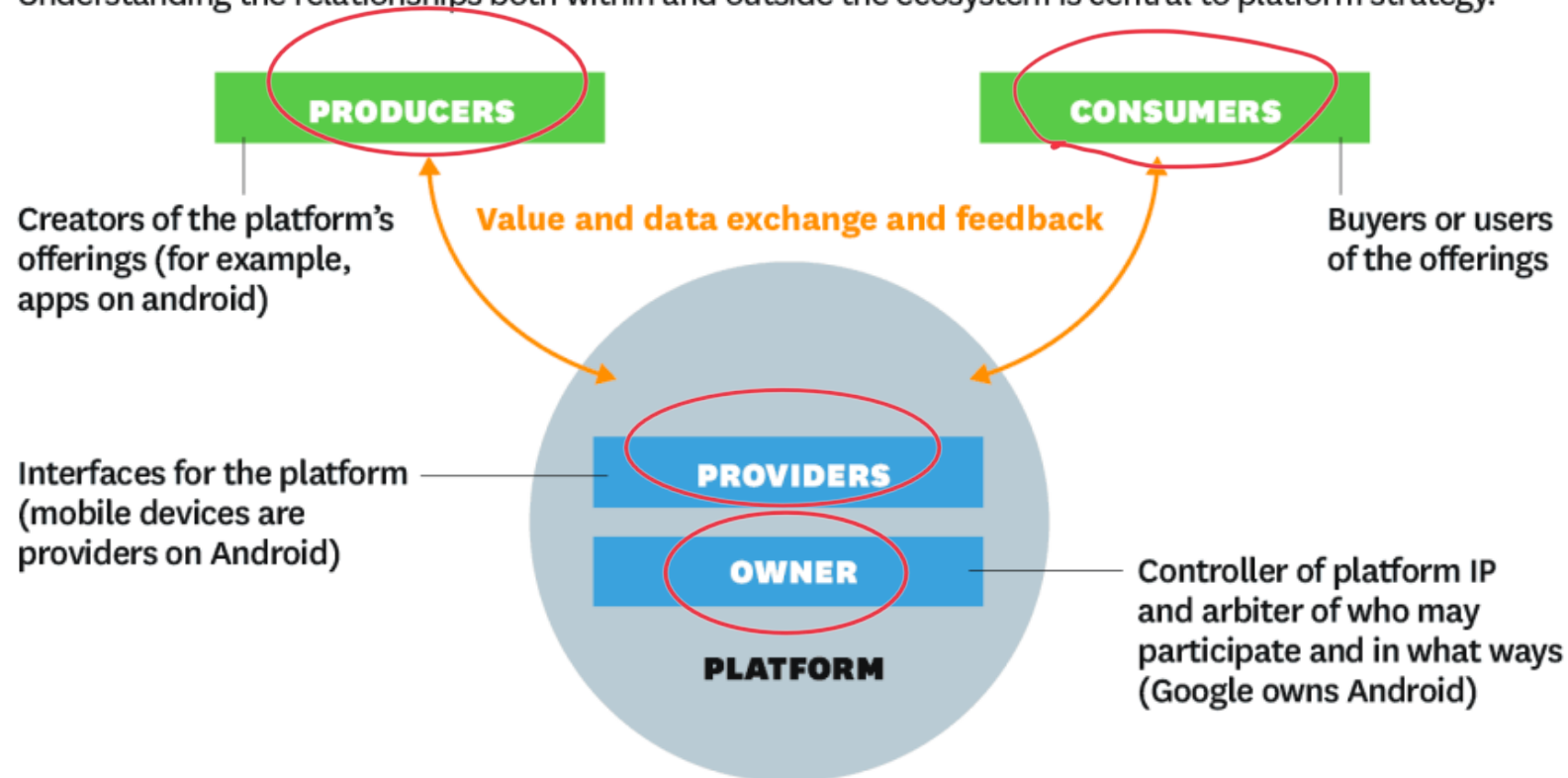
- Platform businesses bring together producers and consumers in high-value exchanges.
- Their chief assets are information and interactions, which are also the source of the value they create for their competitive advantage.

Source: Van Alstyne, Parker and Choudary

Main players in a platform ecosystem

The Players in a Platform Ecosystem

A platform provides the infrastructure and rules for a marketplace that brings together producers and consumers. The players in the ecosystem fill four main roles but may shift rapidly from one role to another. Understanding the relationships both within and outside the ecosystem is central to platform strategy.



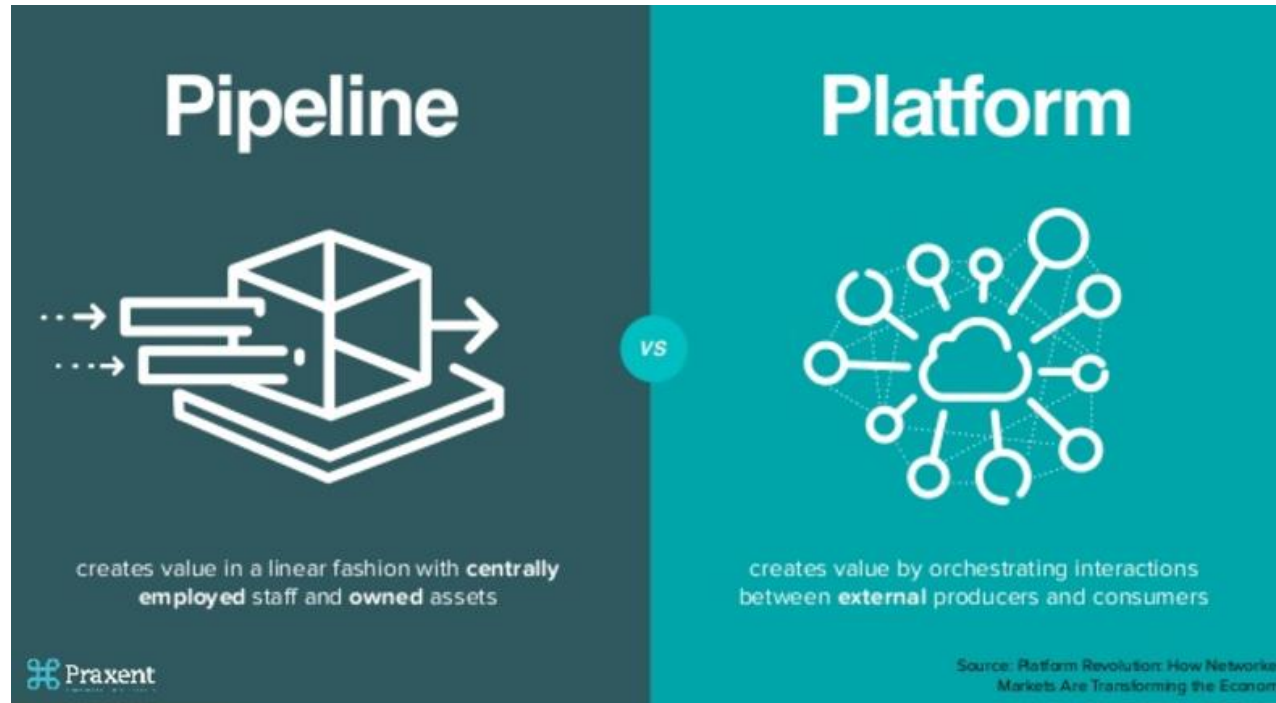
Platform Ecosystem

SOURCE MARSHALL W. VAN ALSTYNE, GEOFFREY G. PARKER, AND SANGEET PAUL CHOUDARY
FROM "PIPELINES, PLATFORMS, AND THE NEW RULES OF STRATEGY," APRIL 2016

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Pipelines vs Platforms

Companies that **take** in resources, add value to them and then **release products** that are higher value



Companies that **create** value by **controlling the interactions** between producers and consumers

Can be both (e.g., Amazon, Apple)

<https://www.slideshare.net/praxent/launching-a-hyper-scalable-platform-business-by-praxent>
(MAR'25)

Strategy: From Pipeline focus to Platform focus



1. From *resource control* to *resource automation*
 - The main asset for platforms is the network of producers and consumers
2. From *internal optimisation* to *external interaction*
 - Platforms focus on facilitating interactions in the network
3. From a focus on *customer value* to a focus on *ecosystem value*
 - Platforms focus on the total value of the expanding network

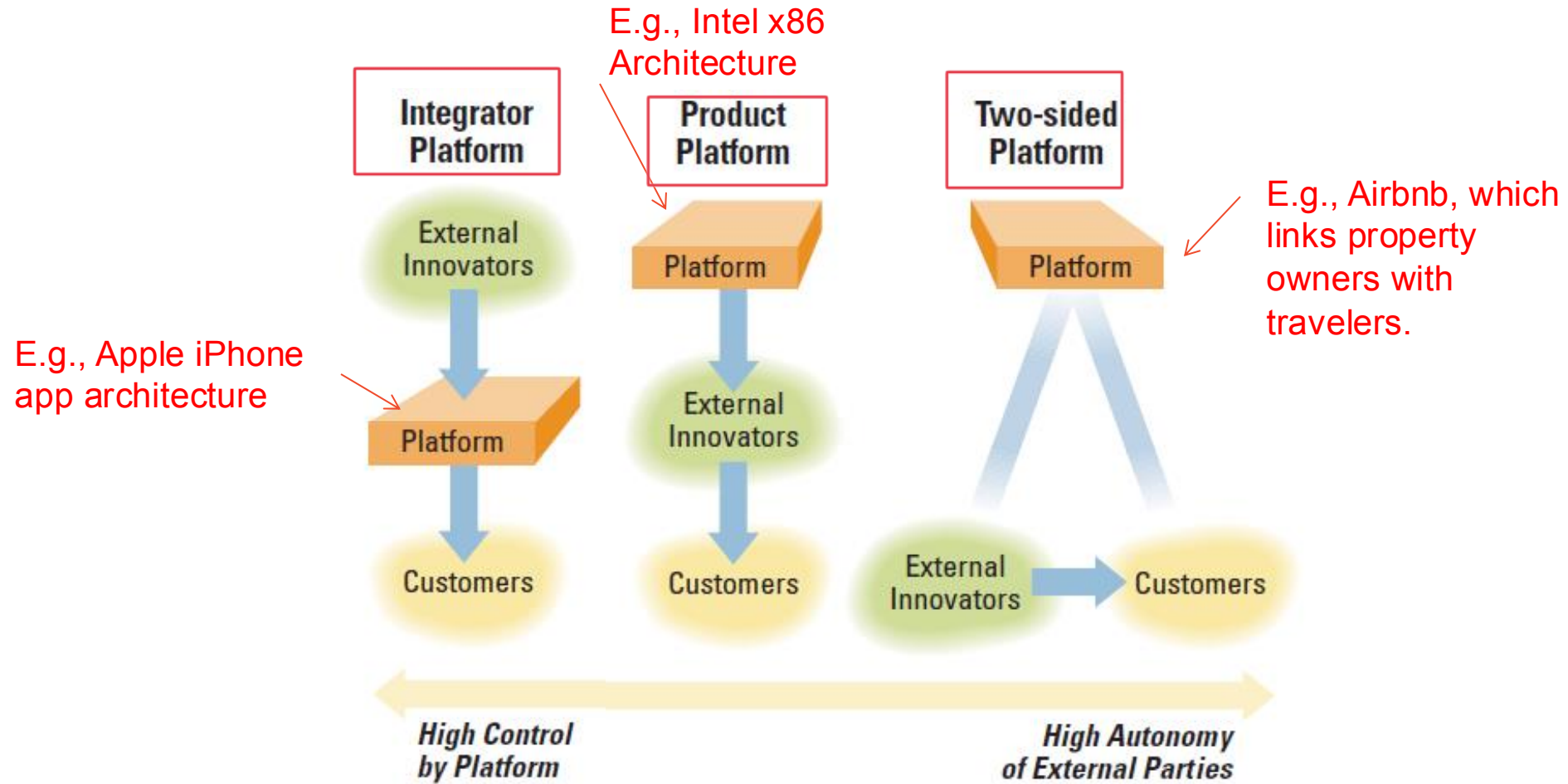
Source: Van Alstyne, Parker and Choudary

Measuring a platform business

- Interaction failure:
 - Failure of a key interaction between producers and consumers
- Engagement:
 - Level of participation enhancing network effects
- Match quality:
 - Level of quality of interactions between producer and consumer
- Negative network effects:
 - Need to manage the platform carefully to avoid e.g., over-supply or over-demand

Source: Van Alstyne, Parker and Choudary

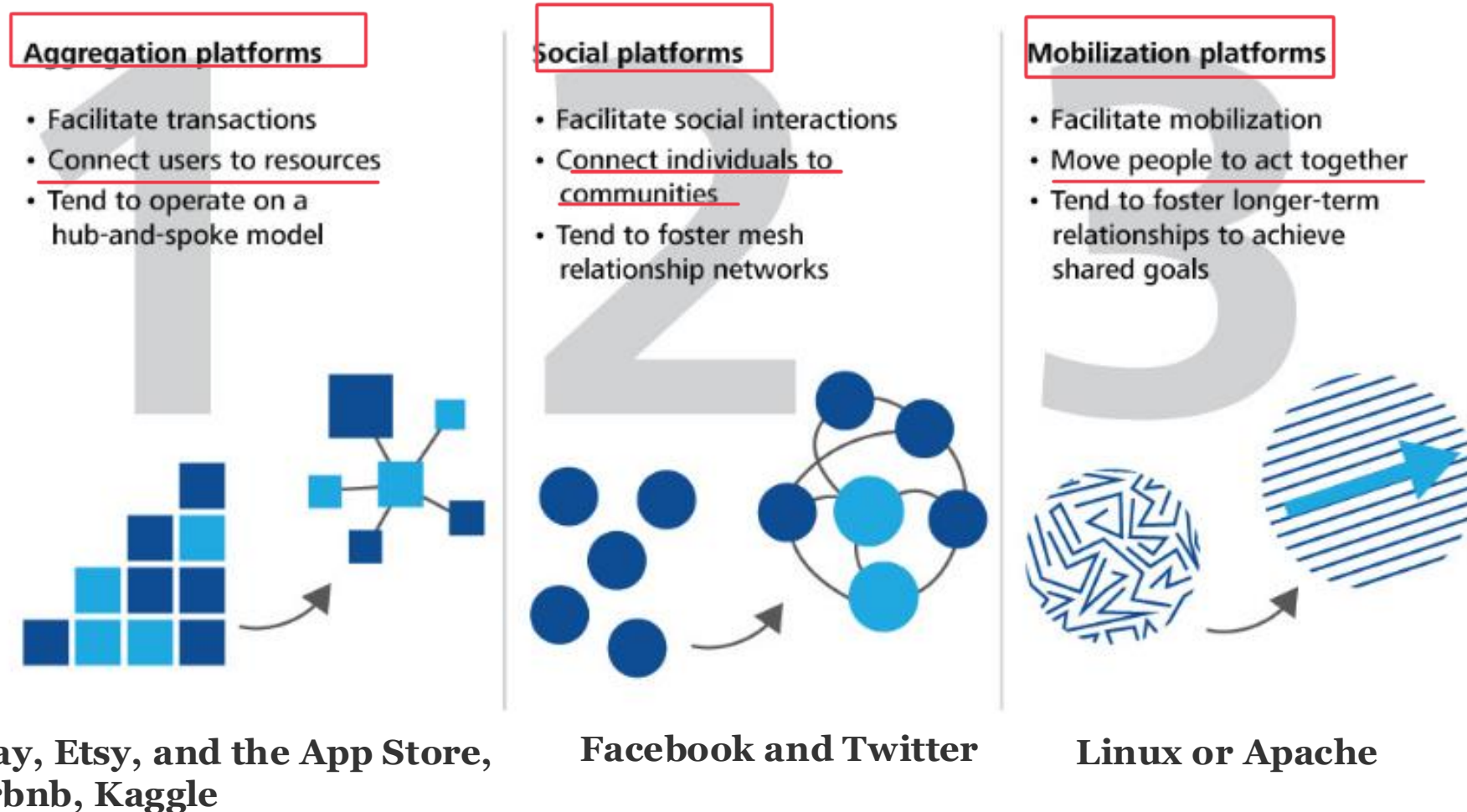
Different forms of platform businesses



Source: K.J. Boudreau and K.R. Lakhani

Common Platform Types

Figure 2. Three common platform types that facilitate transactions, interactions, and mobilization



Deloitte, 2015

Governance – Protocols or Standards

- A couple of key elements come together to support a well-functioning platform:
 - **A governance structure:** including a set of protocols that determines who can participate, what roles they might play, how they might interact, and how disputes get resolved.
 - **An additional set of protocols or standards:** is typically designed to facilitate connection, coordination, and collaboration.
- Platforms are increasingly supported by global digital technology infrastructures that help to scale participation and collaboration

Apple – Pioneering the App platform

- Apple (along with Google’s competing Android system) overran the incumbents by exploiting the **power of platforms** and leveraging the new rules of strategy they give rise to.
- Platform businesses bring together producers and consumers in high-value exchanges. Their chief assets are information and interactions, which together are also the source of the value they create and their competitive advantage.
- Understanding this, Apple conceived the iPhone and its operating system as more than a product or a conduit for services. It imagined them as a way to connect participants in two-sided markets – App developers on one side and App users on the other – generating value for both groups.

Marshall W. Van Alstyne Geoffrey G. Parker Sangeet Paul Choudary, 2016

Apple – leveraging the Network Effect



- As the number of participants on each side grew, that value increased – a phenomenon called “network effects,” which is central to platform strategy. By January 2025, the company’s App Store had offered 1.92 million apps, and the developers generated US\$1.1 trillion in total billings and sales in the App Store ecosystem in 2022.
- Apple’s success in building a platform business within a conventional product firm holds critical lessons for companies across industries.
- Firms that fail to create platforms and don’t learn the new rules of strategy will be unable to compete for long.

Platform Economy – Global companies

- Seven of the 10 most valuable companies globally are now based on a platform business model: the creation of digital communities and marketplaces that allow different groups to interact and transact.
Companies like Apple, Google, Amazon and Alibaba have used the model to grow exponentially and grab significant market share from established firms.
- Platforms represent a big change in the way industries have traditionally been organized. And first mover advantage is important in an environment where the winner often takes all.
- More than 30% of global economic activity — some \$60 trillion — could be mediated by digital platforms in six years' time, according to a McKinsey research report, and yet experts estimate only 3% of established companies have adopted an effective platform strategy.