

# DESIGNING PLATFORM BUSINESS MODELS

## Business Model Design

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Aalto University



Design, create, lead.

# WE?

# A”

Aalto-yliopisto



# CASES WE HAVE BEEN LOOKING INTO



*And many others...*

# SOME RELATED PUBLICATIONS

- Bengts, A., Eloranta, V., Hakanen, E., Turunen, T., and Tullney, V. (2024). **Elevating Business Models to the Ecosystem Level: Evidence from Web3 and Beyond**, Proceedings of the Hawaii International Conference on System Sciences (HICSS).
- Hakanen, E., Eloranta, V., Marttila, J., and Amadae, S. (2023). **Digital Protocols as Accounting and Incentivization Mechanisms in Anti-Rival Systems: Developing a Shareable Non-Fungible Token (sNFT)**, The Fifth Wave–BRIE-ETLA Collection of Articles.
- Hakanen, E., Eloranta, V., and Shaw, C. (2022). **Forming Digital Commons: The Role of Signaling and Sociology of Translation in Decentralized Systems**, Academy of Management Proceedings. Seattle, US. August, 2022
- Eloranta, V., Ardolino, M., and Sacconi, N. (2021). **A Complexity Management Approach to Servitization: The Role of Digital Platforms**, International Journal of Operations and Production Management.
- Könnölä, T., Eloranta, V., Turunen, T., and Salo, A. (2021). **Transformative Governance of Innovation Ecosystems, Technological Forecasting and Social Change**.
- Töytäri, P., Turunen, T., Klein, M., Eloranta, V., Biehl, S., and Rajala, R. (2018). **Aligning the Mindset and Capabilities within a Business Network for Successful Adoption of Smart Services**. Journal of Product Innovation Management, 35(5), 763-779.
- Turunen, T., Eloranta, V., and Hakanen, E. (2018). **Contemporary Perspectives on the Strategic Role of Information in Internet of Things -Driven Industrial Services**. Journal of Business and Industrial Marketing.
- Hakanen, E., Eloranta, V., Töytäri, P., Rajala, R., and Turunen, T. (2017). **Material intelligence: Cross-organizational collaboration driven by detailed material data**. Proceedings of the Hawaii International Conference on System Sciences (HICSS).
- Eloranta, V. and Turunen, T. (2016). Platforms in service-driven manufacturing: **Leveraging complexity by connecting, sharing, and integrating**. Industrial Marketing Management, 55, 178-186.
- Eloranta, V., Orkoneva, L., Hakanen, E., and Turunen, T. (2016). **Using platforms to pursue strategic opportunities in service-driven manufacturing**. Service Science, 8(3), 344-357.
- Eloranta, V. and Turunen, T. (2015). **Seeking competitive advantage with service infusion: a systematic literature review**. Journal of Service Management, 26(3), 394-425.

# TODAY'S LEARNING OBJECTIVES

1. **Identifying the core concepts related to platforms as ecosystem-level business models.**
2. **Identifying and comparing different approaches to platform economy.** Exploring different metaphors of platform business. Reflecting these from own perspectives
3. **Why anti-rivalry matters in platform economy.** Most platform businesses are about data and knowledge. Why such “goods” are unique and how to benefit from them in business model innovation.

When you are designing platforms, you are not designing business models or firms.

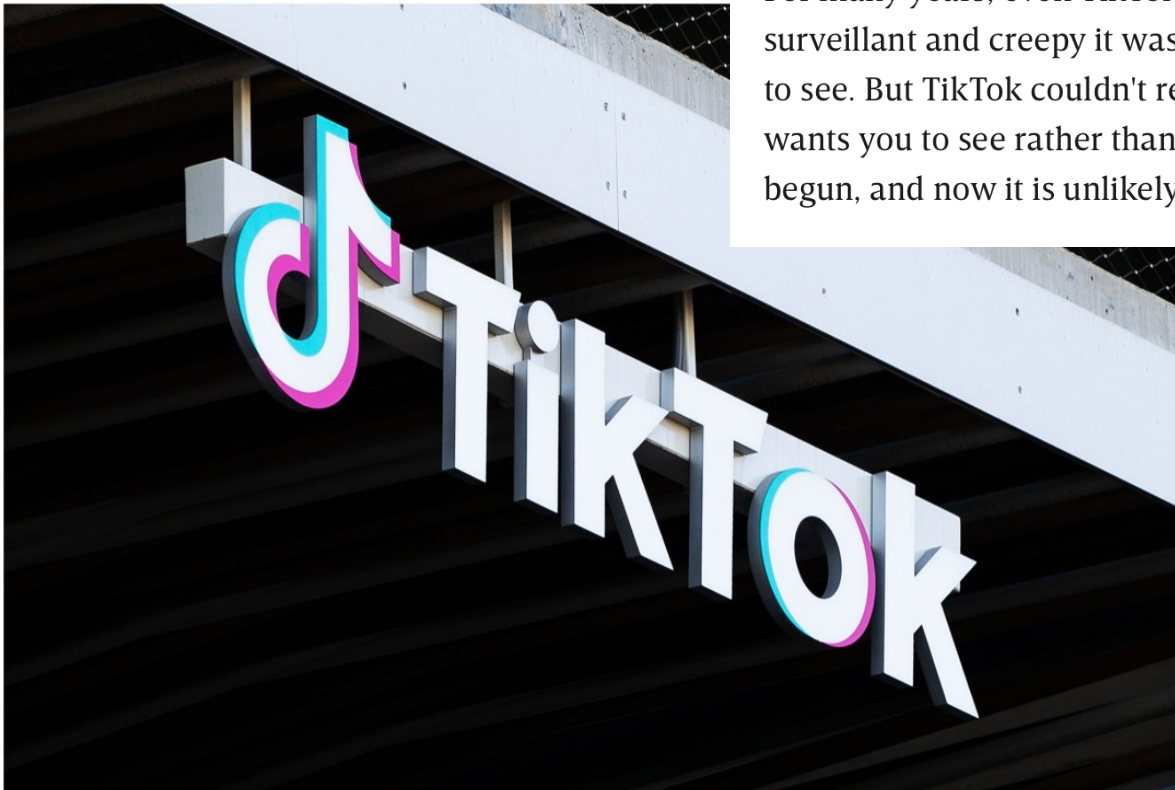
**You are designing institutions.**

CORY DOCTOROW IDEAS JAN 23, 2023 12:44 PM

# The 'Enshittification' of TikTok

Or how, exactly, platforms die.

For many years, even TikTok's critics grudgingly admitted that no matter how surveillant and creepy it was, it was really good at guessing what you wanted to see. But TikTok couldn't resist the temptation to show you the things *it* wants you to see rather than what *you* want to see. The enshittification has begun, and now it is unlikely to stop.



PHOTOGRAPH: AARONP/GETTY IMAGES

**Designing institutions involves a great responsibility.**

Institutions are providing the basis for all business. They set the baseline for accountability, fairness, and – ultimately – sustainability.



# **NEXT**

- 1. Platforms as ecosystem-level business models**
2. Using metaphors to understand platforms
3. How to benefit from “anti-rivalry” in platform business
4. Summary

# **KEY CONCEPTS**

# ECOSYSTEM?

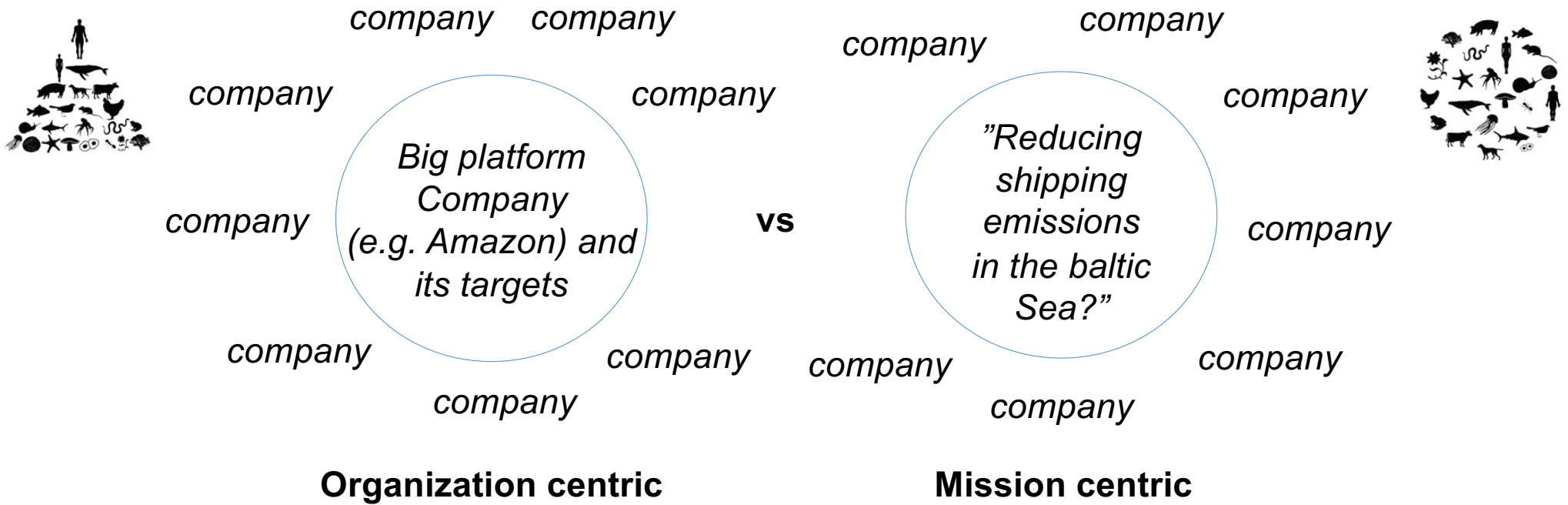
Set of interacting organizations

Connected together with a modular structure

**Not necessarily hierarchic but can be**

Bound together by the nonredeployability of their  
collective investment elsewhere

# ORGANIZATION VS MISSION CENTRIC ECOSYSTEM?



# **BUSINESS MODEL?**

***Value creation +  
value sharing***

# **CONCEPTUAL HIERARCHY**

# CONCEPTUAL HIERARCHY

Business  
environment

**Business ecosystem**  
(interdependent people, organizations, autonomous machines, etc.)

# CONCEPTUAL HIERARCHY

Way to organize agents to  
create and share value

**Platform as an ecosystem-level business model**

Business  
environment

**Business ecosystem**  
(interdependent people, organizations, autonomous machines, etc.)



# CONCEPTUAL HIERARCHY

Platform variations



Way to organize agents to create and share value

**Platform as an ecosystem-level business model**

Business environment

**Business ecosystem**  
(interdependent people, organizations, autonomous machines, etc.)

“

A platform is a plug-and-play business model that allows multiple participants (producers and consumers) to connect to it, interact with each other and create and exchange value.

”

Source: PLATFORM THINKING



# **THREE SOURCES OF VALUE IN PLATFORMS**

# Across all platforms, we can observe the following three sources of value



Network / Marketplace / Community



Technology Infrastructure



Data



## **Community**

Users connect with each other, e.g. to share thoughts and ideas (Facebook), offer services, (Airbnb, Uber, Taskrabit), trade goods (Ebay)



## **Technology infrastructure**

Developer build apps with technology (android), video creators host videos (Youtube), sellers and buyers list product availability (Ebay)



## **Data**

Users and content are matched with data (Facebook, Youtube), users are provided insights with data (Uber, AirBnB)

**DIFFERENT CONFIGURATIONS  
EXPLAIN SUCCESS AND FAILURE!**



Ever heard of  
Hipstamatic?

It was Instagram, before Instagram  
existed



**Why did it fail?**

Source: PLATFORM THINKING



## Hipstamatic



Technology Infrastructure

Focus on provision of  
tools only

## Instagram



Network / Community



Technology Infrastructure



Data

Focus on creation of community  
through provision of tools





# Why did **LinkedIn** beat Monster?

Source: **PLATFORM THINKING**



## Monster



Network / Community



Technology Infrastructure



Data

Lower network effects, focusing only  
on active job seekers

## LinkedIn



Network / Community



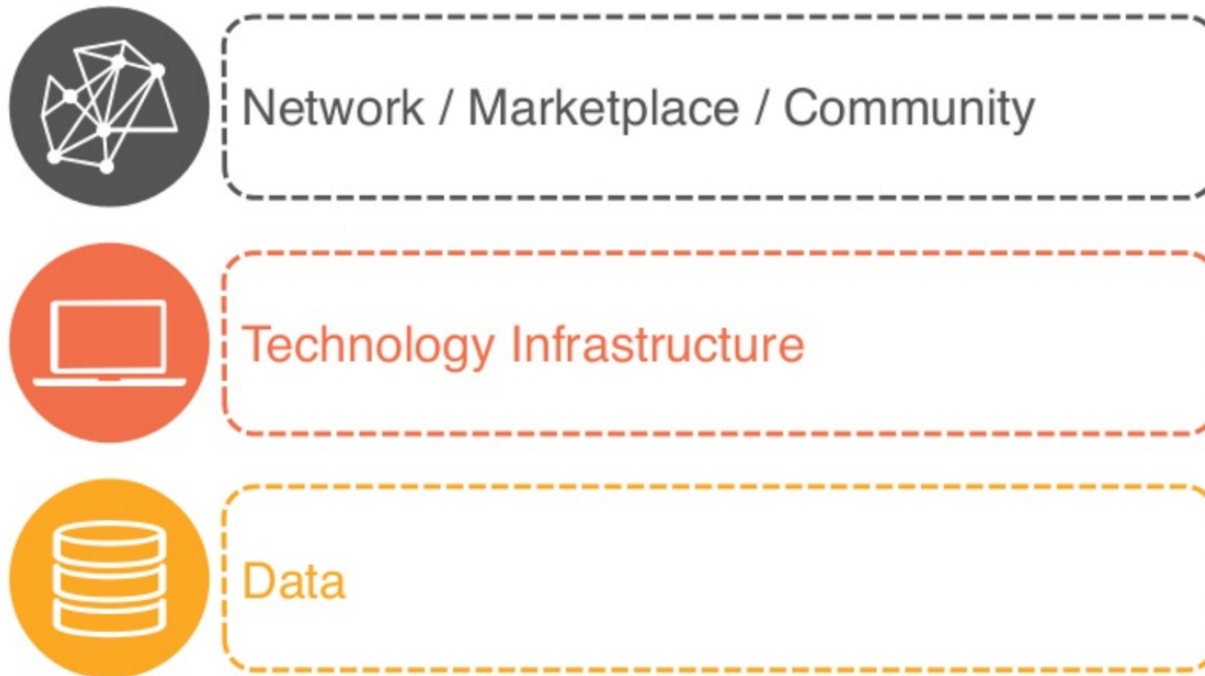
Technology Infrastructure



Data

Much stronger network effects and higher data leverage  
leading to activation of passive seekers

# The sources of value in platforms



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**THE KEY QUESTION:**

**WHAT IS THE PURPOSE/MISSION OF OUR PLATFORM?**

**WHY DOES IT EXIST?**

**WHO DOES IT BENEFIT?**

~~**LET'S BUILD UBER FOR OUR INDUSTRY**~~

IS YOUR **STARTUP IDEA** TAKEN?

	UBER	TINDER	BIRCHBOX	AIRBNB
DOGS	WAG	BARKBUDDY	BARKBOX	DOG VACAY
FOOD	POSTMATES	NIIBLY	BLUE APRON	EAT WITH
WEED	EAZE	HIGH THERE	POTBOX	BUD AND BREAKFAST
LAUNDRY	WASHO			LANDFORMATCH
PARKING	MONKEY PARKING			SPOT PARK
MASSAGE	ZEEL			
BEARDS		BRISTLER	DOLLAR BEARD CLUB	ROOST
STORAGE	CLUTTER			ANTLOS
BOATS	BOATBOUND			DRONERS
DRONES	ANIMAL ROBO			EVENTUP
PARTIES		KICKON	OPULENT BOX	ONE FINE STAY
ELITISTS	BLADE	THE LEAGUE		
DOCTORS	HEAL			
MOVING	LUGG			GLASSFUL
ALCOHOL	MINIBAR			CRAFT COFFEE
COFFEE	CLONTER			LOLA
BODILY FLUIDS				APPHP
WORKSPACE	BREATHR			SPARE CHAIR
SHIPPING	SHYP			
FLOWERS	BLOOMTHAT			THE BOLOS
JOBS	TASKRABBIT			
GAMERS	PUSH FOR PZA			LOOT CRATE
				SWIP AND DIP

# **BUILDING BETTER UNDERSTANDING WITH ORGANIZATIONAL METAPHORS**

- We need to **widen our perspective** about platforms and their future. One way to do this is to use **metaphors**.
- Metaphors are mappings across conceptual domains, meaning that they describe a concept in terms **borrowed from another context** (Lakoff 2009).
- I will approach the concept of the platform economy using 7 metaphors derived from **organizational studies** (Morgan 1997; Jackson 2003)



# FRAME INNOVATION

CREATE

*NEW THINKING*

BY DESIGN

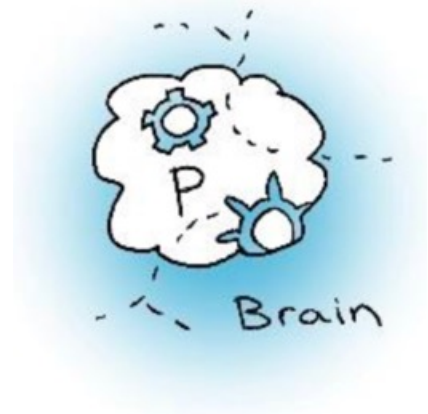
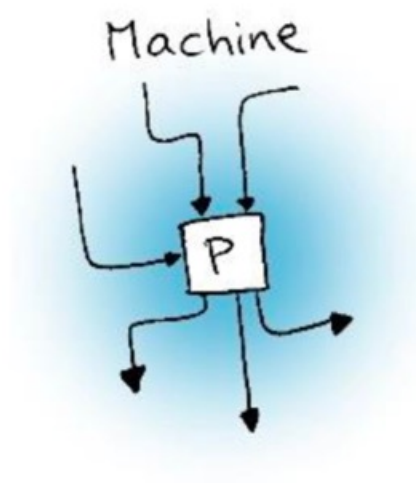
**KEES DORST**

# DISCUSSION IN GROUPS

1. I will give each group a metaphor
2. Discuss in groups: What does the word mean? Why does such thing exist?

\_ mins in groups

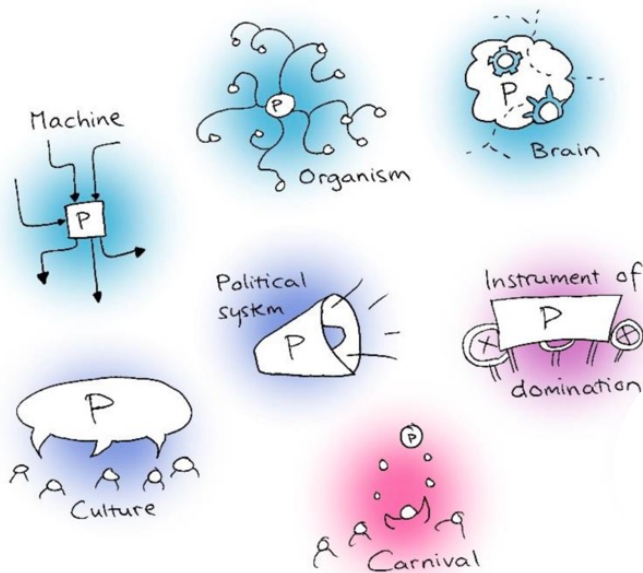
**What do these words mean?  
Why do such things exist?**



# What do these words mean? Why do such things exist?



# SUMMARY OF THE METAPHORS



## Metaphors benefit you when

1. illustrating alternative perceptions about platform companies
2. structuring the discussion around them, and
3. making sense of the opportunities and threats around the platform business

The idea is **not** to "pick one metaphor for your platform". The idea is to **describe** the platform from **different** perspectives... and check whether you could **benefit** from that perspective, and how you can **mitigate the risks** related the perspective.

**WHAT IS THE PURPOSE/MISSION OF OUR PLATFORM?**

**WHY DOES IT EXIST?**

**WHO DOES IT BENEFIT?**

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# **In platforms, you are often creating, sharing, and using digital goods**

- Digitalization has transformed data, information, and knowledge into critical economic success factors.
- Consequently, a new type of good—the digital good—has gained an increasing role in society.
- Digital goods or e-goods are intangible goods that exist in **digital form** (examples: databases, registers, workbooks, worksheets, articles, posts, e-books, downloadable music, streaming media, fonts, logos, photos and graphics, virtual goods used within the virtual economies, etc.)



# What is do different in digital goods – from economics perspective?

- From the economic perspective, the two most distinct features of digital goods (like knowledge and data in digital form) are zero marginal production costs and negative subtractability.
- **One can say: digital good is “anti-rival”**

*Anti-rival good is defined as one that gains value when used and further making a distinction between excludable and nonexcludable anti-rival goods*

***Digital goods are usually here***

**Table 1.** Rival, nonrival, and anti-rival goods (adapted from Nikander et al., 2020)

<i>Subtractability</i>			
<i>Excludability</i>	<b>Rival</b>	<b>Nonrival</b>	<b>Anti-rival</b>
<b>Excludable</b>	Private goods (e.g., coffee)	Club/toll goods (e.g., museum visit)	Network goods (e.g., closed data commons)
<b>Nonexcludable</b>	Common-pool goods (e.g., ocean fish)	Public goods (e.g., public park)	Symbiotic goods (e.g., contribution to an open-source code)

# The paradox of digital goods (and any anti-rival good)

*On the one hand, digital goods seem to be unleashing the economic system from scarcity due to negative subtractability ...*

*... on the other, producing and organizing digital goods always, at the end of the day, uses some finite resources of the planet*

**In practice:** We need to meet the **compensation** needs of the **initial contributor** (who uses rival resources like time – e.g., an academic writing a paper or a composer making a song). Such need is usually best fulfilled by exclusion...

...but also to assure the good's **societally optimal allocation** (which is usually optimized by maximizing sharing)

# Why don't we just let the markets do their job?

- Markets allocate digital goods poorly. Seeking price equilibrium fails with digital goods.
- An attempt to make a digital good market compatible requires either
  1. **Making the good artificially scarce** with digital rights management protection. This leads to underprovision of the good.
  2. **Undercompensating the producers** as the marginal price of production nears zero and thereby also the “willingness to pay” by market actors. This leads to producers exiting the market.

***Antirival resources lead often to market failure!***

# How have we solved it so far – without artif. scarcity or undercompensation?

- Large-scale systems can use institutional and regulatory power—for example, innovation contests, salary capping, setting of open-access conditions for receiving public funding (*consider academic research, R&D, etc.*)
- In small communities, anti-rival goods can be organized using interorganizational dependencies and interpersonal trust.
- In specific settings, such as open-source software development, systems can leverage the characteristic features of the particular context (*e.g., in open source: codified contributions and strong meritocracy*).

# **But where is the money?**

- A common yet controversial feature of alternative organizing structures involving digital anti-rival goods is that such structures **do not fit well with the “business narrative,”** which is traditionally dominated by market and corporate logics.
- **So: how can you take benefit of anti-rivalry in business models? Or can you?**

# **WE CONDUCTED RESEARCH TO ANSWER THE QUESTION**

*Researchers: Ville Eloranta, Annika Bengts and Apurva Ganoo.*

# **We looked into the dilemma through research, funded by EU (ATARCA)**

- We acknowledge: Due to the finite planetary resources, all economic systems inherently include some rivalrous goods. They are organized through a logic of scarcity.
- At the same time, we recognize the increasing role of anti-rival goods, which are best benefited from when not artificially restricted. They are organized through a logic of abundance.
- Including rival and anti-rival goods into same business model creates a “hybrid system”. From the institutional logic perspective, hybrid systems create logic misalignment—referred to as institutional complexity



# **We looked into the phenomenon with “business model pattern” perspective**

- We assessed business models from a business model pattern (BMP) angle
- The literature defines “patterns” as reproducible and configurable building blocks that provide a “solution” to a recurring “problem” (Alexander et al., 1977, p. 17).
- Following this reasoning, BMPs aim to represent successful business models’ proven, repeatable components (Gassmann et al., 2014).
- Business models can be perceived as combinations of different BMPs

# What we did in our research

1. We collected, from the academic literature (journals), all recognized business model patterns (building blocks of business models) involving digital goods
2. We analyzed how such business model building blocks aimed to benefit from the anti-rivalry while maintaining the sustainable use of rival resources
3. Here, we analyzed the “complexity management” mechanisms of the business models
4. We recognized the mechanisms in the BMPs that help benefiting from anti-rivalry

**WHAT WERE THE RESULTS**

# **Results: seven mechanisms in BMPs that help benefiting anti-rival goods**

1. Using Communities to Minimize Rival Costs and Maximize Anti-Rival Value
2. Subsidizing Sharing-Related Rival Costs to Allow Anti-Rival Sharing
3. Shifting the Revenue Focus from Rival Resource Usage to Anti-Rival Results
4. Creating Parallel Offerings
5. Enabling Anti-Rivalry through De-Transactionalization
6. Converting the Resource for Better Fit with Anti-Rivalry
7. Facilitating Shared Ownership

# 1. Using Communities to Minimize Rival Costs and Maximize Anti-Rival Value

# SEED & SPARK



## Connect with creators and stories

### Discover stories that reflect you

Seed&Spark's crowdfunding platform empowers some of the most unique creator voices as they build audiences, raise funds and build careers. Discover the next award-winning films before they're even made!

A screenshot of the Seed&Spark crowdfunding platform interface. It shows three film projects in a row, each with a thumbnail image, a title, a progress bar, and funding details. The projects are: 1. 'Red Ink' (Los Angeles, California • Short, Crime, Film-Noir, 87% funded), 2. 'CLARA' (Vancouver, Canada • Feature, Horror, 46% funded), and 3. 'HUNGRY' (Long Beach, California • Short, Drama, Thriller, 33% funded). Navigation arrows are visible on the left and right sides of the project list.

Project Name	Location	Genre	Funding Status
Red Ink	Los Angeles, California	Short, Crime, Film-Noir	87% funded
CLARA	Vancouver, Canada	Feature, Horror	46% funded
HUNGRY	Long Beach, California	Short, Drama, Thriller	33% funded

An online-based crowdsourced film studio that helps creators build audiences through crowdfunding. Audiences can watch movies and shows through on-demand streaming. The platform **maximizes the sharing** of movie ideas and experiences, while **decentralizing production and maintenance costs**.

## 2. Subsidizing Sharing-Related Rival Costs to Allow Anti-Rival Sharing



WIRED BACKCHANNEL BUSINESS CULTURE GEAR IDEAS SCIENCE SECURITY

CORY DOCTOROW IDEAS JAN 23, 2023 12:44 PM

### The 'Enshittification' of TikTok

Or how, exactly, platforms die.



*A work-related social media platform that provides infrastructure for professionals to connect. Sharing of work-related content, links, and memes is **maximized**. The **costs are subsidized** with revenue coming from the intelligence gathered from the network.*

### 3. Shifting the Revenue Focus from Rival Resource Usage to Anti-Rival Results



## Google Display Network



*An online media agency that distributes ads in a large-scale content network. **Plain visibility in the network is almost free.** Customers **pay based for conversions** (e.g., people signing up to a marketed service after clicking an online ad). The best performing ads are prioritized in the network to keep the network's rival resource usage sustainable.*

## 4. Creating Parallel Offerings

# The Guardian

### Support fearless, independent journalism

As a reader-funded news organisation, we rely on your generosity. Please give what you can, so millions can benefit from quality reporting on the events shaping our world.



Europe € ▾

Single

Monthly

Annual

€3 per month

€5 per month

€7 per month

€10 per month

Choose your amount

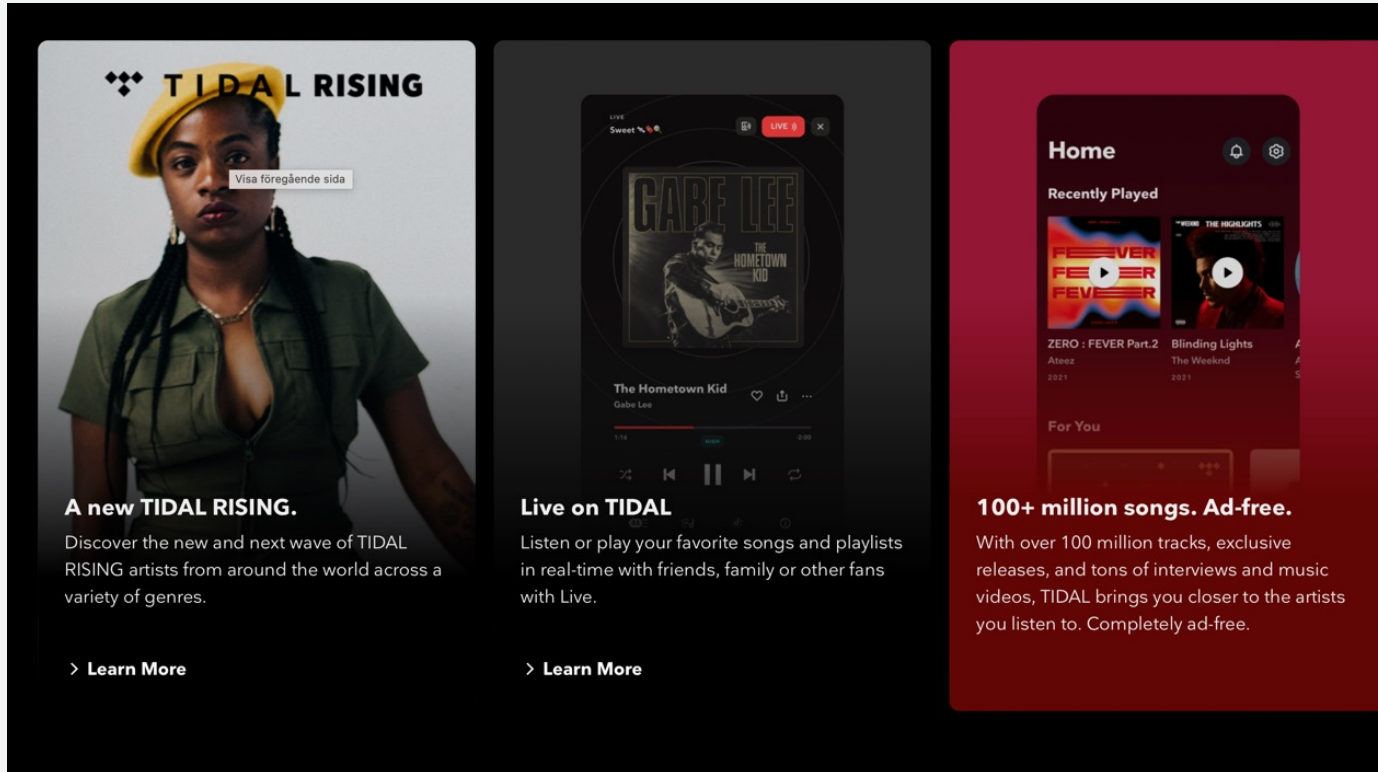
#### For €10 per month, you'll unlock

- ✓ **A regular supporter newsletter.** Get exclusive insight from our newsroom
- ✓ **Uninterrupted reading.** See far fewer asks for support
- ✓ **Full access to our news app.** Read our reporting on the go
- ✓ **Ad-free reading.** Avoid ads on all your devices

*A reader-funded news platform that relies on the reader's generosity and **complementary added-value services**. The outlet is available to everyone for free, but as a paid customer, one also has access to certain **unique features**.*



## 5. Enabling Anti-Rivalry through De-Transactionalization



The image displays three panels from a TIDAL advertisement. The first panel on the left features a portrait of a woman wearing a yellow beret and a green shirt, with the text 'TIDAL RISING' and 'A new TIDAL RISING.' Below it, it says 'Discover the new and next wave of TIDAL RISING artists from around the world across a variety of genres.' and includes a '> Learn More' link. The middle panel shows a mobile app interface for a live stream of 'The Hometown Kid' by Gabe Lee, with the text 'Live on TIDAL' and 'Listen or play your favorite songs and playlists in real-time with friends, family or other fans with Live.' and a '> Learn More' link. The third panel on the right shows a mobile app interface for the 'Home' screen, highlighting '100+ million songs. Ad-free.' and 'With over 100 million tracks, exclusive releases, and tons of interviews and music videos, TIDAL brings you closer to the artists you listen to. Completely ad-free.'

**A new TIDAL RISING.**  
Discover the new and next wave of TIDAL RISING artists from around the world across a variety of genres.  
> [Learn More](#)

**Live on TIDAL**  
Listen or play your favorite songs and playlists in real-time with friends, family or other fans with Live.  
> [Learn More](#)

**100+ million songs. Ad-free.**  
With over 100 million tracks, exclusive releases, and tons of interviews and music videos, TIDAL brings you closer to the artists you listen to. Completely ad-free.

*A platform that employs a subscription pattern wherein users pay a **recurring monthly or annual fee for unrestricted access to a vast library of music**, disregarding the amount of use. Similarly, a premium membership model allows premium subscribers additional benefits like ad-free listening and offline access.*

## 6. Converting the Resource for Better Fit with Anti-Rivalry



Browse millions of royalty-free one-shots, loops, FX, MIDI, and presets in a sample library deep enough to get lost in. It all starts on Splice.

Start now

*A platform that **converts music production assets to easily shareable and recombining** formats, such as **samples, loops, and virtual instruments**. The business fosters a community of musicians who can create, collaborate, and remix using each other's projects, thereby promoting **efficient utilization and recombination of available assets**.*

## 7. Facilitating Shared Ownership



### Welcome to Ethereum

Ethereum is the community-run technology powering the cryptocurrency ether (ETH) and thousands of decentralized applications.

[Explore Ethereum](#)

*A blockchain-enabled network that allows **shared ownership** schemes for a decentralized technological infrastructure. The ownership is organized with digital tokens that represent a **share of the network's valuation, tied to the utility of the network**. Transferring ownership of the tokens is moderated by the network's code-based constitution, preventing token speculation and rent-seeking.*

# **SUMMARY**

*On the one hand, digital goods seem to be unleashing the economic system from scarcity due to negative subtractability ...*

*... on the other, producing and organizing digital goods always, at the end of the day, uses some finite resources of the planet*

**Key question: how can business models benefit from the anti-rivalry of digital goods without unsustainably exploiting rival resources.**

We found seven mechanisms, and related examples, that fulfill the criteria.

*We also recognized 39 business model patterns that use those mechanisms.  
More about that, next week...*

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# **Task for Thursday**

- We will run a set of tasks: instructions will be today in Mycourses so you will know what needs to be done
- Tasks are done in teams.



# Q&A

# MORE INFORMATION

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