Agenda

- What is a Platform business?
- What are network effects, and why are they important?
- What is the structure of platforms, and what are its implications for managing platforms?
- What are envelopment attacks?
- What changes are induced in an Organisational context due to the Platform Business Model?

1

What is a Platform business?

2

Platform Business

- Platform business is a business model (not a technology infrastructure) that focuses on helping to facilitate interactions across a large number of participants
- The role of the platform business is to provide a governance structure and a set of standards and protocols that facilitate interactions at scale so that network effects can be unleashed

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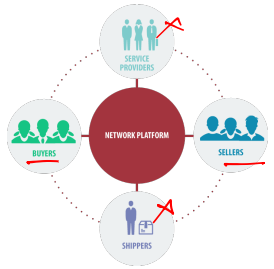
Platform

- A platform encompasses the common components and rules employed by network users in most of their interactions
- Products and services that bring together groups of users in two- or three- sided networks are platforms



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Platform Function

- **Connectivity**: Point-to-point transfer of information, goods, passengers
- **Variety**: they elicit offers from supply-side users that vary along the dimensions valued by the demand-side
- **Matching**: facilitate members of two distinct groups with heterogenous needs to discover suitable transaction partners
- **Price-setting**: help users to disclose the price at which they are willing to exchange well-defined items

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Types of Platform Business Models

- Platform Businesses can be classified based on the kind of interactions that the platform creates, on the type of relationships those same platforms nurture or with a functional approach.

1. **Interactions approach.**
2. **Relationship approach.**
3. **Functional approach.**

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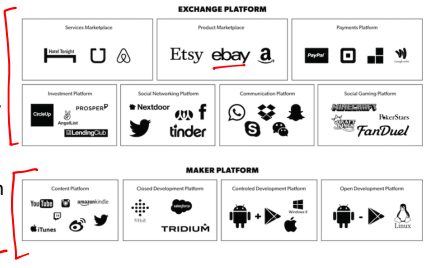
Types of Platform Business Models

- Platform Business Model as **Interactions**
  - **Exchange Platform**: An exchange platform allows a one-to-one platform, where two sides interact as smoothly as possible, e.g., Airbnb, Amazon
  - **Maker Platform**: A maker platform allows one-to-many interactions. In short, a creator connects with her audience, e.g., Apple Store, Kindly



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Types of Platform Business Models

- Platform Business Model as **Relationships**
  - **Aggregation platforms**: bring together a broad array of relevant resources and help users of the platform to connect with the most appropriate resources, e.g., Oyo, Zomato, Uber
  - **Social platforms**: build and reinforce long-term relationships across participants on the platform, e.g., LinkedIn, facebook
  - **Mobilisation platforms**: don't just allow people to form relationships based on interests but to take actions together, e.g., change.org
  - **Learning platforms**: aim is to facilitate learning, but also insights exchange, e.g., GitHub

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Types of Platform Business Models

- Platform Business Model as **Functional Marketplaces**
  - **Transaction platforms:** act as intermediaries facilitating exchanges or transactions between different users, buyers, or suppliers , e.g., Flipkart, Amazon
  - **Innovation platforms:** consist of a technology, product, or service acting as a foundation for other firms to develop complementary technologies, products, or services (this is usually a loosely organised ecosystem) , e.g., Zoho, Tally
  - **Integrated platforms:** usually a technology, product, or service that works both as a transaction platform and an innovation platform, e.g., Razorpay, SalesForce
  - **Investment platforms:** consisting primarily of companies that have developed a platform portfolio strategy and act as a holding company, active platform investor, or both , e.g., PhonePe, PolicyBazaar

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Network Effects

Winner Takes All Market

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Networks

- A network is a system of interconnected nodes
- The nodes can be people, companies, places or things
- In platform mediated networks, the nodes are called network users.

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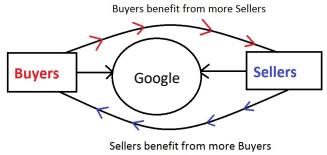
One-, two-, and three-sided networks

- Networks can be categorized according to the number of distinct user groups they encompass.
  - **One-sided**: If users are homogenous, i.e., all perform similar functions
    - Stock trader, phone user
  - **Two-sided**: Have two distinct user groups who consistently play the same role
    - Credit-card (cardholder & merchants)
  - **Three-sided**: Have three distinct groups of users
    - You-tube: Content consumer, content provider, advertisers



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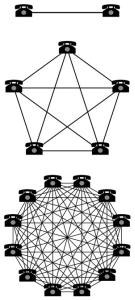
Network effects

- Network effects can be positive or negative
- **Positive** - a larger user base is appealing
  - Network growth increases WTP – Fax
  - Subsidizing one side to increase growth and profit from the other side
- **Negative** – a larger user base is distracting
  - Network growth decreases WTP – you-tube advertisers
  - Milk the negative side to the extent possible



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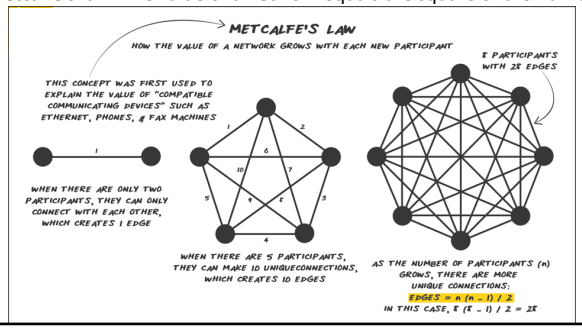
Strength of network effects

- **Metcalfe's law**: The value of a network equals the square of the number of users



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Strength of network effects

- The penguin problem
  - Prospective users on each side will not invest in the platform until they are confident there will be enough users on the other side

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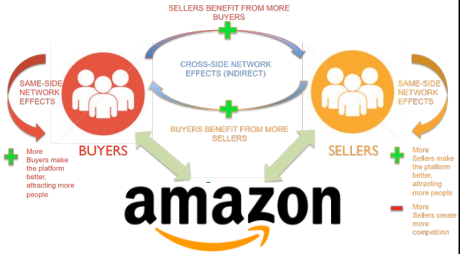
Network Effect

- Network effects are evident when a network's value to any given user depends upon the number of other users in the network.
  - **Cross-side network effects**: Members of each group exhibit a preference for the nos of users in the other group *(indirect network effect)*
  - **Same-side network effects**: members have preference regarding nos of users in own group *(direct network effect)*



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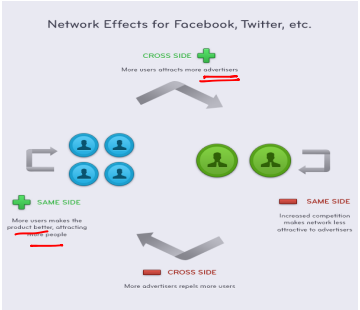
Pricing the Platform

- Typically, two-sided networks have a '**subsidy side**' i.e. a group of users who when attracted in volume are highly valued by the '**money side**'



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Pricing the Platform

- A platform provider subsidises some network users, catalysing positive feedback fuelled by network effects.
  - After other users join, the platform provider charges them fees that recover the subsidies.
- Subsidies can take several forms.
  - Penetration pricing
  - Exclusivity
  - Permanent Subsidies
  - In-house compliments

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Winner Take All Market

- **Strong network effects**: Users want access to all potential transaction partners. A sub-scale platform is of little use unless it provides the only way to reach some partners.
- **Multi-homing costs**: "Homing" costs include all the expenses incurred by network users due to platform affiliation. When users multi-home – i.e., when they use multiple platforms – their costs increase.
- **Inimitable features are not valuable**: If demand for special features is low, then users will converge on one platform.

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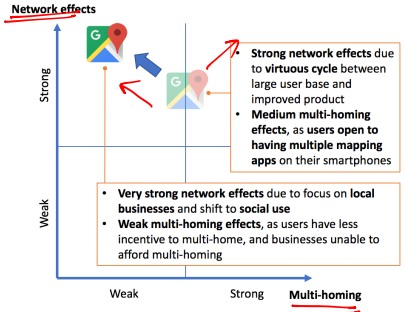
Winner take all Dynamics

- A network platform is likely to be served by a single platform when:
  - Multi homing costs are high for at least one user side
  - Network effects are positive and strong – at least for the users on the side of the network with high multi homing costs
  - Neither side's users have a strong preference for special features



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Structure of Platforms

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Platforms

- Platforms includes common components and rules
  - Components include hardware, software and services along with the architecture
  - Rules includes standards, protocols, policies and contracts
- **Platform providers**: who does a user contact first when a transaction goes wrong
- **Platform sponsors**: unsponsored, single vs multiple sponsors Visa MasterCard
- **Component based network effects**

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Structure of Platform

1. **Proprietary platform** has a single sponsor e.g. Apple Mac, Sony Playstation
2. **Shared platform** has multiple firms collaborating in technology but competing in market to offer differentiated products e.g. Visa
3. **Joint venture** has multiple firms developing the platform but a single firm serves as the provider
4. **Licensor** has a single firm develop the technology and license the technology e.g. AMEX

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Structure of Platform

1. Proprietary Platforms

- A proprietary platform is owned and controlled by a single entity. The owner of the platform sets the rules, controls the infrastructure, and often manages the interactions between users (both producers and consumers). This model allows the owner to capture a significant portion of the value generated by the platform.
- **Examples**: Apple's iOS and Google's Android (to some extent, given its open-source nature but proprietary elements like Google Play Services).
- **Advantages**: High control over the ecosystem, ability to monetize extensively, and strong ability to enforce security and quality standards.
- **Disadvantages**: High responsibility for maintenance, development, and legal compliance; potentially less innovation from external sources.

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Structure of Platform

2. Shared Platforms

- Shared platforms are co-owned and operated by multiple stakeholders. These can be formed through partnerships or consortia where each member has a stake in the platform's success. Governance, profits, and control are shared among the owners according to pre-agreed terms.
- **Examples**: Blockchain platforms like Ethereum where multiple stakeholders participate in the network, or airline alliances like Star Alliance.
- **Advantages**: Risk sharing, increased resources for investment, broader adoption due to shared influence and resources.
- **Disadvantages**: Potential for conflicts between stakeholders, slower decision-making processes, complexity in revenue sharing.

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Structure of Platform

3. Joint Ventures

- In a joint venture, two or more parties come together to create a new entity, pooling resources to benefit all involved parties. This structure is often used to enter new markets or for combining strengths in a complementary manner. The new entity operates somewhat like a shared platform but is distinct in that it is a new business unto itself.
- **Examples**: Hulu was initially a joint venture formed by major media companies to deliver streaming video content.
- **Advantages**: Combines strengths and capabilities of founding companies, shared risk, and investment, focused governance.
- **Disadvantages**: Complexity in management, potential for conflicts among parent companies, shared profit.

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Structure of Platform

4. Licensors

- In this model, the platform owner licenses other companies to use the platform under certain conditions. This allows other companies to leverage the platform for their own users under a brand licensing agreement, typically for a fee or royalty.
- **Examples**: Microsoft Windows OS licensing to computer manufacturers.
- **Advantages**: Rapid scalability and expansion through partners, revenue generation from licensing fees, reduced operational responsibilities.
- **Disadvantages**: Lesser control over how the platform is used, potential dilution of brand, dependency on licensees' performance.

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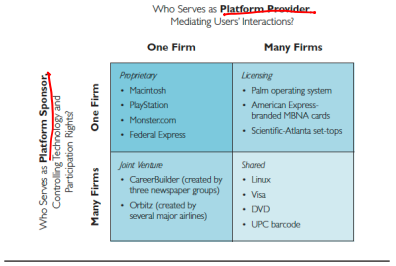
Examples Categorized using Structural Taxonomy of Platforms

FIGURE 1. Models for Organizing Platforms



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When one firm has an edge…

- When a firm that aspires to serve a new platform-mediated market has an unambiguous edge over potential rivals, it almost always should choose a proprietary model.
  - A proprietary provider can capture 100% of the platform's added value
- Firms can develop superior technology that is inimitable due to patents or trade secrets.
- Aspiring platform providers can derive a competitive advantage by virtue of their control over crucial resources or relationships

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When many firms are evenly matched…

- The attractiveness of a proprietary versus shared model will hinge on:
  - whether building a platform requires significant investments that are subject to free rider problems;
    - Centralized infrastructure
    - Network user subsidies
    - R&D spending
    - Soln: Contracts or Govt. as partner
  - Whether the market is likely to be served by a single platform over the long term
    - Network efforts are strong
    - Multi-homing costs are high
    - Demand for differentiated features is limited

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FIGURE 2. Contingencies Favoring Proprietary vs. Shared Platforms

Does Network Mobilization Require Big Investments That Are Subject to Free Rider Problems? (• Centralized Infrastructure • User Subsidies)	Will a Single Platform Serve the Entire Market? — Yes	Will a Single Platform Serve the Entire Market? — No
Yes	*Cell #1: Proprietary Platforms Favored* • *Proprietary examples:* online auctions, Yellow Pages in smaller cities, email-based payments (e.g., PayPal), shopping malls, most local newspapers • *Shared examples:* World Wide Web, U.S. residential real estate	*Cell #2: Proprietary Platforms Favored* • *Proprietary examples:* satellite radio, instant messaging, console-based video games, paid search (e.g., Google), online photo sharing • *Coexistence examples:* credit cards, stock trading (e.g., shared NYSE vs. proprietary ECNs)
No	*Cell #3: Shared Platforms Favored* • *Shared examples:* DVD, fax, barcodes, Wi-Fi/802.11, text messaging, Bluetooth	*Cell #4: Proprietary and Shared Platforms Often Coexist* • *Coexistence examples:* mobile phone operating systems (e.g., shared Symbian vs. proprietary Blackberry), PC operating systems (e.g., shared Linux vs. proprietary Macintosh)

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Managing Shared Platforms

- **Restricting Membership**: Limit the size of the provider peer group and thereby reduce rivalry.
- **Profiting from IP**: Allow platform providers to earn license fees from intellectual property (IP) that they contribute to the shared platform.
- **Profiting from Implementation**: Cooperating on a common standard, then competing in the marketplace with products that implement that standard.

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FIGURE 3. Strategic Challenges and Management Priorities During Network Mobilization

	Proprietary Platform	Shared Platform
Strategic Challenges	*Creating Value for Network Users* Which subsidization strategies should the platform provider use to address adoption barriers? • Penetration pricing and aggressive promotion to early adopters • Concessions to attract marquee users • Permanent discounts to one side of a two-sided platform • In-house complement production	*Capturing Value for Peer Providers* How can platform architects ensure that peers earn enough profit to warrant participation? • Restrict membership • License IP • "Profit from implementation" via time-to-market, cost, or differentiation advantages
Management Priorities	• Assessing strength of network effects to avoid under/over-investment in accelerated growth • Funding accelerated growth in the face of boom-bust capital market cycles • Designing governance arrangements that support "bet-the-company" strategies	• Timing technical proposals to avoid moving too early or late • Protecting against IP-related claims through licensing and disclosure policies, patent pools, and so on. • Mastering diplomacy (e.g., logrolling, brinksmanship, "burning bridges," balance-of-power strategies) • Designing platform governance to manage conflict (e.g., voting procedures, board veto powers)

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Envelopment

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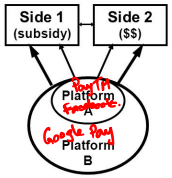
Threat of Envelopment

- Platforms frequently have overlapping user bases
- Leveraging these shared relationships can make it easy and attractive for one platform provider to swallow the network of another



- Platform providers in separate but adjacent networked markets (A and B) share users
- Provider B enters A's Market
- Provider B bundles products A and B, undercutting provider A's "money side"

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Platform Envelopment

- ***Platform Envelopment:*** Entry by one platform provider into another's market, combining its own functionality with the target's in a *multi-platform bundle* that leverages *common components* and/or *shared user relationships*
- Envelopment is a powerful force shaping the evolution of platform-mediated networks
  - Path to platform leadership change that ***does not require Schumpeterian creative destruction***
  - Driver of industry ***convergence***
  - Strategy for ***cross-layer competition***

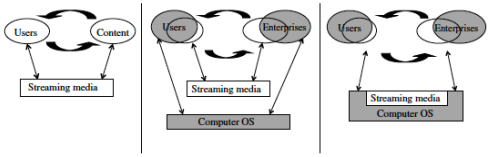

Figure 1. Microsoft's envelopment of RealNetworks

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Typology of Envelopment Attacks

- An envelopment attack most often succeeds when:
  - The target's and attacker's users overlap significantly
  - the attacker can harness price discrimination benefits
  - economies of scope are high
- Any two platforms must be related in one of three ways:
  - Complements
  - Substitutes
  - Functionally unrelated

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Typology of Envelopment Attacks

- **Foreclosure attack**: The target provides a compliment to the attacker's core platform.
  - By bundling the target's platform with its own, the attacker *forecloses* access to its core platform's users, reducing the target's revenue
  - The enveloper can extend its market power into the target's market and increase barriers to entry in its core market
  - As the target's platform declines in value due to network effects, standalone rivals in the envelopers' core market must rely on an inferior compliment
  - The enveloper will have efficiency gains

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Change

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Change in Organisations due to Platform Business Model

1. **Change in Business Focus**
   - **From Product to Ecosystem**: Traditional businesses focus on producing and selling products or services. In contrast, a platform business model shifts the focus to creating and managing a vibrant ecosystem where different users (providers and consumers) can interact. This requires the organization to think not just about product development but also about building and nurturing the community around the platform.

Service .

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Change in Organisations due to Platform Business Model

2. Change in Revenue Streams

- **Diversification**: Platform businesses often have diverse ways of generating revenue, such as taking a commission from transactions, charging for premium features, advertising, and data monetization. This can lead organizations to explore and adapt new revenue models which may require different sales strategies and operational adjustments.

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Change in Organisations due to Platform Business Model

3. Change in Operational Processes

- **Scalability Challenges**: As the platform grows, operational processes need to be scalable. This might include automating certain processes, adopting new technologies for data handling and transaction processing, and reorganizing teams to manage increased activity.
- **Feedback and Adaptation**: Platforms often rely heavily on user feedback to refine and improve the service. This necessitates a more agile operational approach that can quickly incorporate user feedback into iterative product updates and service improvements.

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Change in Organisations due to Platform Business Model

4. Technological Transformation

- **Infrastructure**: Adopting a platform model often requires robust technological infrastructure to handle data, transactions, user interactions, and analytics effectively. This might involve significant IT upgrades or even a shift to cloud-based solutions to ensure scalability and reliability.
- **Data Analytics**: Platforms generate vast amounts of data that can be analyzed for insights into user behavior, platform performance, and market trends. This requires advanced data analytics capabilities and potentially AI-driven tools to harness these insights effectively.

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Change in Organisations due to Platform Business Model

5. Organizational Culture and Mindset Change

- **User-Centric Approach**: Platforms thrive on user engagement and satisfaction. This necessitates a cultural shift towards being intensely user-focused, requiring teams across the organization to prioritize user experience in their decision-making processes.
- **Innovation and Experimentation**: The need to constantly attract and retain users on the platform can foster a culture that values innovation and encourages experimentation with new ideas or features.

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Change in Organisations due to Platform Business Model

6. Regulatory and Compliance Adjustments

- **Navigating New Regulations**: Platform businesses can face unique legal and regulatory challenges, particularly around issues like user privacy, data security, and antitrust considerations. Organizations may need to invest in legal expertise and compliance frameworks to navigate these challenges effectively.

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Change in Organisations due to Platform Business Model

7. Change in Market Position and Competition

- **Network Effects**: As the platform model grows, it can significantly alter market dynamics. The network effect can lead to a dominant market position if managed effectively. However, it also means that competition isn't just with direct competitors but also with other platforms vying for user attention and engagement.

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Change in Organisations due to Platform Business Model

8. Strategic Partnerships

- **Leveraging Partnerships**: Platforms often rely on partnerships for rapid scaling and expansion. This can mean a strategic shift in how an organization views alliances and partnerships, focusing on symbiotic relationships that can drive mutual growth.

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Recap

- Platforms, Networks, Two-sided markets
- Types of network effects
- Pricing of networks
- Winner takes all dynamics
- Structural taxonomy of platforms
- Managing platforms
- Threat of envelopment

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