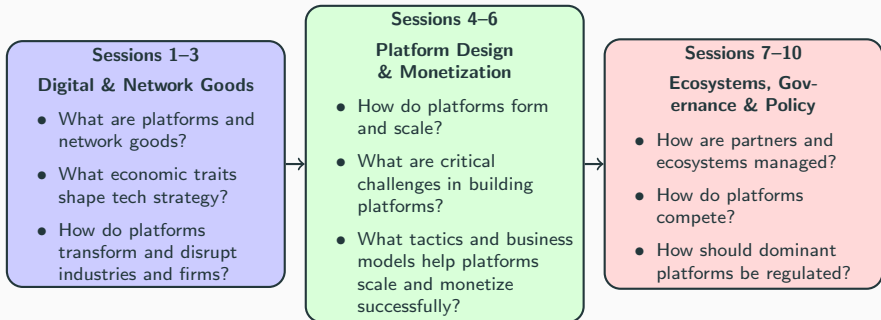


Syllabus: **MGx450: Technology Competition and Strategy**

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(Revised 06/13/2025, 07/11/2025, 08/03/2025)



Summer (Aug 12-19-26 + Sept 2-9) + Fall (Sept 23-30 + Oct 7-14-21).

MGx450. Course Overview

This course offers a framework to understand and respond to the forces shaping competition and strategy in technology-driven markets, especially those dominated by platforms and digital goods.

Platform-enabled businesses, encompassing digital marketplaces, cloud services, and other internet-based goods and products which leverage network effects, are a primary revenue driver for many of the world's largest companies (e.g., Apple, Meta, Amazon, Google, Microsoft, Walmart, and major financial institutions). Technology entrepreneurship is commonplace. But ... Technology industries operate under distinctive — sometimes counterintuitive — economic dynamics, including zero marginal costs, demand-side economies of scale, and platform-mediated value creation. These features require novel strategic responses and create both immense opportunities and serious risks.

The course is most relevant to information goods and technology-intensive industries — including software, media, telecommunications, finance, transportation, and healthcare — but its tools apply broadly wherever digitization and network effects are at play.

Core Learning Outcomes

- Understand different types of technology businesses and products, and the conceptual foundations underlying their distinctive position.
- Analyze the strategic dynamics of multi-sided platforms and digital goods.
- Design monetization and network mobilization strategies for platform businesses.
- Evaluate the societal impact and regulatory issues surrounding dominant technology platforms.

Please form your **Teams** (1 / 2 / 3 / 4), and enter them into Canvas, latest by Session 1 (5-6 students per team), for group assignments, case discussion work, and project.

Classwork and Teams

There are individual and team assignments: the latter includes case discussions and projects. At the start of the quarter, pick what team you want to be on, defined by what assignments are allocated to the team.

Team Assignments

Team	Case Analysis	Case Background	Platform presentation (10-15 min. + Q&A)
Team 1	Square (S3)	WeChat (S7)	YouTube platform success (S5)
Team 2	Intuit (S5)	Square (S3)	Economics of Spotify (S7)
Team 3	WeChat (S7)	Intuit (S5)	Amazon business model (S6)
Team 4	none	all 3	Future of Creator Economy (S8)

Case Preparation and Analysis

Your written submission requires only the exercises corresponding to your team assignment. But, everyone should read the case and think through all the questions listed (because any student can be name-called in class). For case background work: submit at least one answer as a well-prepared engaging video which can be shown in class. Use bullet points, graphics, etc. to enhance the clarity and precision of your responses (vs. long paragraphs). Make sure every word counts. Gibberish, gobbledygook, and obfuscation will earn negative points.

Summary notes after each session

- What are your top 3-5 learnings or insights from this class?
- Was there something you found difficult to follow? Or, did anything impede your learning?
- List 1-3 students whose contribution in class positively impacted your learning.

Application Project

Project Purpose

Learn by applying platform thinking ideas, concepts and methods onto a concrete platform business problem. Vision and ideate a platform idea, scope it out, discuss product design, launch, pricing, network mobilization, costs etc. Make the stated business impactful, successful, and financially sustainable.

Rubric for Platform Project Evaluation

Criterion	Excellent (A)	Good (B+)	Weak (B/B-)
Concept & Vision	Clear, original, compelling	Plausible but modestly differentiated	Generic or unclear
Platform Structure	Coherence in: core interaction, platform sides, logic of value and participation	Mostly clear platform logic	Some key aspects underdeveloped
Economic Reasoning	Strong coherence in costs, value, monetization	Good use of economics, some gaps	Incomplete or inconsistent logic
Network Mobilization	Strategic staging, incentives, critical mass addressed	Covers basic tactics, missing some nuance	Superficial or generic approach
Monetization Strategy	Realistic, diverse, aligned with platform model	Reasonable revenue logic	Unclear or mismatched to platform type
Presentation Quality	Clear, well-structured, good visuals	Mostly clear, some disorganization	Unclear, disjointed, hard to follow

Bonus points for validated testing, live mockups, or user engagement data.

Some Project Ideas

Here are some project ideas to give you a flavor. At the end of this syllabus there are additional ideas in more detail. These are suggested projects. I welcome suggestions for an alternate project that your team can do in a timely manner.

1. PETCare: A “Lyft” for pets (and potentially for farm animals and other such things). It would connect those who need their pets cared for with those who can provide the service. “Service” could range from pet-sitting to walking/teaching to medical care. Many variations and extensions are possible.
2. UC Davis “free lance” service: campus units frequently need short-term help on tasks that need specific skills, but external contracting is extremely slow and burdensome. Build a matchmaking system that can leverage internal campus resources for such task opportunities.
3. Food Waste Management service: every day tons of food (raw, cooked, packaged) gets wasted in Davis due to excess supply, while at the same time thousands of people are short of food or money for healthy food. Solve this problem with a web platform (covers discovery, matching, routing etc.).
4. Healthy Davis: barriers to fitness and healthy living include access to facilities, but also lack of motivation, expertise, equipment, fitness partners, social groups etc. Design a solution that leverages network effects, communities and other platform features to promote health and fitness within the Davis community.

Session Details

Class Rules and Guidelines

Project Ideas

Exercises

Session Details

Learning objectives and Session Plan

- Startup, + Introductions – Getting to know each other, course, workload, syllabus overview. [40 min]
- Understand key aspects of the digital economy and technology goods (= information goods, network goods, and platform business) [60 min]
- Understand how technology goods disrupt traditional market structure and strategy and require distinct competitive strategy: Ex. 9–10–11 [60 min]
- Housekeeping (Groups, Project, Syllabus details), + Questions and next steps [40 min]

Readings

- Varian; “High Technology Industries and Market Structure”.
- Barefoot et al.; “Research Spotlight Measuring the Digital Economy”
- Goldfarb and Tucker; “Digital economics”
- **Optional:** Cusumano; “Platforms Versus Products: Observations from the Literature and History” (pp. 35–63). [https://www.emerald.com/insight/content/doi/10.1108/S0742-3322\(2012\)0000029006/full/html](https://www.emerald.com/insight/content/doi/10.1108/S0742-3322(2012)0000029006/full/html)
- **Optional:** [How platforms transform traditional industries](#)

Learning objectives and Session Plan

- Startup + Session overview [15 min]
- Explain how network effects are distinct in how they create value: Ex. 12, and differentiate various types of network effects: Ex. 13. [60 min]
- Explain how network effects create value, and how we can model this to understand their impact on adoption and demand, and firm strategy. [70 min]
- Questions and Next steps [15 min]

Readings

- Eisenmann; "Platform-Mediated Networks: Definitions and Core Concepts". [p. 1-8 (Networks) and Appendix B-C]
- Bhargava; "Platform technologies and network goods: insights on product launch and management".
- **Optional:** [Duncan Gilchrist, A dummy's guide to network effects, July 2016 \(online\)](#)
- **Optional:** [Engineering Optimal Network Effects via Social Media Features and Seeding](#)

Learning objectives and Session Plan

- Quiz1 + session overview [20 min]
- Monetization challenges and tactics in dealing with heterogeneous consumers: Product and price differentiation, segmentation, versioning and bundling (for durables); one-time vs recurring revenues for consumables, ex. 14 [55 min]
- Adapting tactics for information and network goods - *Square* case (Ex. 22) [75 min]
- Project status (Ex. 1) + next steps [20 min]

Readings

- Bhargava and Gangwar; "Pricing Strategy for Service Start-ups: How to Employ Access and Usage Fee?"
- Needleman; "From 'Call of Duty: Black Ops Cold War' to 'Fortnite,' Here's How Videogame Pricing Works"
- Bhargava; "Monetization Tactics for Information and Network Goods".
- **Case discussion:** Markovich et al.; "Hip to be Square: Disruption in the U.S. Mobile Payment Market".

Learning objectives and Session Plan

- Startup + Session overview [15 min]
- What is the essence of platforms? How are they transformational and disruptive? Ex. 15. [60 min]
- What are the key building blocks of platforms? What's the platform's value and core purpose (Ex. 2), and how to manage and leverage network effects? [30 min]
- Network mobilization, monetization, and coordination: key challenges in succeeding with a platform strategy? Mini-case: EVs as platforms (Tesla vs rest). [50 min]
- Project status and next steps [15 min]

Readings

- Eisenmann; "Platform-Mediated Networks: Definitions and Core Concepts". [p. 8-23 (Platforms and Appendix A)]
- Van Alstyne, Parker, and Choudary; "Pipelines, platforms, and the new rules of strategy".
- Hagiu; "Strategic Decisions for Multisided Platforms"
- Anderson et al.; "Electric Vehicles Are a Platform Business: What Firms Need to Know".
- Sangeet Paul Choudary, "The Core Interaction: What Platforms and Marketplaces can Learn from Super Mario Bros", 2018. ([online](#))

Learning objectives

- Startup + Session overview [15 min]
- Platform OR product? When to be (or not to be) a platform business? Ex. 16 [40 min]
- Building a platform business - how do MSPs form? how do they mobilize multiple sides? [50 min]
- **Intuit** case discussion (Ex. 23) [55 min]
- Project status (Ex. 3) and next steps [20 min]

Readings

- Edelman; "How to Launch Your Digital Platform: A Playbook for Strategists."
- Eisenmann and Hagiu; "Staging Two-Sided Platforms"
- Zhu and Furr; "Products to Platforms: Making the Leap".
- Hagiu and Altman; "Intuit QuickBooks: From Product to Platform".
- Read the **Amazon story (Forbes)**. ([online](#))
- Steve Jobs on iPhone openness, <https://youtu.be/pqrCk7gpTsA> ([online](#))

Learning objectives

- Quiz 2 + Startup [20 min]
- Guest Speaker: Fran Meier (Match.com; Babytrip) [55 min]
- Challenges for successful platforms (why do many fail? Ex. 18) and business model strategies (Ex. 17, [The Paypal experience](#)) [75 min]
- Project status (ex. 4) and next steps [30 min]

Readings

- Van Alstyne, Parker, and Choudary; “6 Reasons Platforms Fail”.
- Eisenmann, Parker, and Alstyne; “Strategies for Two-Sided Markets”
- Bhargava; “Monetization Tactics for Information and Network Goods”.
- [Paypal history](#) (online)

Learning objectives

- Quiz 3 and Startup [25 min],
- Ecosystem strategy and co-dependence between platform and complementors: Building platform power and how to manage (and motivate, and possibly compete against) communities and complementors? Apple vs Microsoft (Ex. 19) Project Ex. 5 [65 min]
- Case discussion: **WeChat** and Tencent (Ex. 24), Platform scope and envelopment, creating platform defense and lock-in [75 min]
- next steps [15 min]

Readings

- Reeves et al.; "How Business Ecosystems Rise (and Often Fall)".
- Yoffie and Kwak; "With friends like these: The art of managing complementors."
- Birkinshaw, Ke, and Diego; "Innovation and agility at Tencent's WeChat".
- **WeChat's Ascendance** (online)

Optional Content

- Hemant K. Bhargava (2016), **AT&T — Time Warner Deal Confirms Walled Gardens Future of Entertainment.**
- Hemant K. Bhargava (2018), **What's Next in the Disney-Netflix Streaming Battle?**

learning objectives and session plan

- Startup + Session overview [15 min]
- understanding platform ecosystem scale and design [30 min]; vertical integration and market disruption, and revenue sharing [30 min]
- Building and growing a platform, managing communities (Guest Speaker: Tim Csontos - TaxiMagic, Concur, ...) [60 min]
- Drivers/predictors of winner-take-all markets (in-class exercise) [20 min]
- Project status (Ex. 6) + next steps [25 min]

Readings

- Bhargava; “The creator economy: Managing ecosystem supply, revenue sharing, and platform design”.
- Zhu; “Friends or foes? Examining platform owners’ entry into complementors’ spaces”. (video: iPad and Kindle, Friends or Foes?)
- Eisenmann; “Winner-Take-All in Networked Markets”.

learning objectives and session plan

- Quiz 4 + session startup [25 min]
- Evidence of platform dominance and why the timing? (Ex. 21) [35 min]
- Building platform power through ecosystem strategy **Guest speaker: Darin Laframboise (Auth0, Facebook, Atlassian)** [60 min]
- Issues and challenges in platform regulation: How should platforms be regulated, and is the classic lens (abuse of monopoly power against competitors or against consumers) effective and appropriate? [40 min]
- Project status (7) + next steps [20 min]

Readings

- Kif Leswing, **House antitrust subcommittee: Apple has 'monopoly power'**, Oct. 2020. ([online](#))
- **App Store and Google are monopolies**
- Hemant K. Bhargava, **Google antitrust case suggests Apple should be in the Department of Justice's crosshairs too**, The Conversation, Oct. 2020.
- Bhargava, Evans, and Mani; "The Move to Smart Mobile and Its Implications for Antitrust Analysis of Online Markets". ([online](#))

Learning objectives

- Session startup and Online course evaluations [30 min]
- Platform project presentation and discussion (Ex. 8) [60 min]
- Establishing an immersive gaming platform: being the DoubleClick or Switzerland of In-Game Advertising **Guest speakers: Cary Tilds, Jon Troughton (FramePlay)** [60 min]
- Course Wrap-up: Take-aways, and Future of Platforms. [30 min]

Readings

- Cusumano, Yoffie, and Gawer; "The Future of Platforms".

Optional Calvano and Polo; "Market power, competition and innovation in digital markets: A survey"

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Hal R. Varian. “High Technology Industries and Market Structure”. *Federal Reserve Bank of Kansas City Proceedings* (2001). URL: <https://people.ischool.berkeley.edu/~hal/Papers/structure.pdf>.



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Andrei Hagiu. “Strategic Decisions for Multisided Platforms”. *MIT Sloan Management Review* (Jan. 2014). URL: <https://sloanreview.mit.edu/article/strategic-decisions-for-multisided-platforms/>.



Edward G Anderson et al. “Electric Vehicles Are a Platform Business: What Firms Need to Know”. *California Management Review* 64.4 (2022), pp. 135–154.



Daniel Edelman. “How to Launch Your Digital Platform: A Playbook for Strategists.”. *HBS Blog* 93 (4 Apr. 2015). URL: <https://hbr.org/2015/04/how-to-launch-your-digital-platform>.



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Julian Birkinshaw, Dickie Liang-Hong Ke, and Enrique de Diego. "Innovation and agility at Tencent's WeChat". *London Business School* (Aug. 2019).



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Class Rules and Guidelines

Class Rules and Support

- **Class Rules.**

- inform me asap about any needs that affect your learning experience.
- review syllabus and session details ahead of session 1, note any questions you have.
- be in class on time. or early.
- do all listed pre-class work and submit it ahead of class meeting (due dates on Canvas).
- never hesitate to ask questions or for help, in class or out (email professor or TA).
- respect all rules of academic integrity in homeworks, exams, and all around.

- **Support.** UC Davis provides a **wide range of remote services** such as counseling, tutoring, academic advising, and community building and engagement for its students. If you feel like your performance in class is being impacted by circumstances outside of class, do not hesitate to let me know. I want to help you to the extent possible while meeting the learning objectives for this course.

- **Online Classes.** 1) sign in 5 min before class, 2) test your equipment (wifi connection, camera, mic, speakers, etc.), 3) be familiar with Zoom features such as screen-sharing, raising hand, indicating emotions (like, dislike, claps etc.), 4) have your mic off (except when speaking), 5) have your camera on (so we can have real engagement), 6) be ready for class by doing all assigned prep, and 7) be ready to participate like you would in an in-person class.

Student Workload and Grading

Pre-Course Assessment	Individual HW	Group HW	Case Prep	Class Participation	Quizzes and/or Exam	Project	Platform Presentation
10%	5%	14%	12%	15%	15%	20%	10%

Grading Principles

Maintain a B by attending class, listening responsibly, making timely and effort-ful submissions. Shift lower by missing class, being late on assignments, or being disruptive (e.g., being late) or distracting (e.g., using social media). Improve to B+ or A- through high quality on assigned work. Get an A by demonstrating high level of understanding, analysis, and insight.¹

How to think about grades: **[A]** A cause for celebration; **[B]** Be happy, this is pretty commendable; **[C]** See what happens if you don't follow instructions?; **[D]** Do you really want to go there?

- HW assignments (and Readings) aim to prepare you for class, will be graded on effort.
- Class participation: 0.5 for **punctuality**; 1.5 for **outstanding** contribution; 1 in the middle.
- 4 Quizzes (5 pt each), lowest score will be dropped.
- Individual HW 1 pts each; Group HW 2 pts each.

Academic Integrity and Code of Conduct: All students are governed by the [Univ. of California's standards of ethical conduct for students](#). These sections set forth the responsibilities of students and faculty to maintain a spirit of academic honesty and integrity. You were given this code of conduct with explicit explanations of violations (e.g. plagiarism, cheating, unauthorized collaboration, etc.) and your responsibilities in regard to them during orientation, and you signed a statement affirming that you understand it. It is essential that you are aware of this code of conduct and the disciplinary actions that may be taken in the event of a violation. A copy of the Code of Academic Conduct may be found in your student handbook or at <https://ossja.ucdavis.edu/code-academic-conduct>. If you are uncertain about what constitutes an academic conduct violation, please refer to the code linked above, contact your instructor, or refer to the Office of Student Judicial Affairs.

Principles of Community: All participants in the course, instructor and students, are expected to follow the UC Davis Principles of Community, which includes affirmation of the right of freedom of expression, and rejection of discrimination. The right to express points-of-view without fear of retaliation or censorship is a cornerstone of academic freedom. A diversity of opinions with respectful disagreement and informed debate enriches learning. However, in this course, any expression or disagreement should adhere to the obligations we have toward each other to build and maintain a climate of mutual respect and caring.

Statement on Accommodation: UC Davis is committed to educational equity in the academic setting, and in serving a diverse student body. All students who are interested in learning about how disabilities are accommodated can visit the Student Disability Center (SDC). If you are a student who requires academic accommodations, please contact the SDC directly at sdc@ucdavis.edu or 530-752-3184. If you receive an SDC Letter of Accommodation, submit it to your instructor for each course as soon as possible, at least within the first two weeks of a course.

Safety and Emergency Preparedness: UC Davis has many resources to help in case of emergency or crisis. While reviewing campus Emergency Information, you may want to register for UC Davis Warn Me and Aggie Alert, which will give you timely information and instructions about emergencies and situations on campus that affect your safety. If there is an emergency in the classroom or in non-Davis locations, follow the instructions of your instructor.

Project Ideas

Project 1: StudySync - Academic Collaboration Platform

- **Platform Purpose:** Connect students across different courses and universities for collaborative learning and resource sharing
- **Key Groups:** Students seeking help, students offering tutoring/expertise, study group organizers, and academic content creators
- **Core Interactions:** Students exchange study materials, form study groups, provide peer tutoring, and share course-specific insights
- **Value Creation:** Improves academic performance through peer learning while building a repository of verified study resources
- **Network Effects:** More participants increase variety of subjects/expertise available and quality of collaborative learning experiences
- **Testing Feasibility:** Can start with UC Davis students, measure engagement metrics, and validate willingness to share/pay for premium features
- **Monetization:** Freemium model with premium features for advanced study tools and priority matching

Project 2: LocalMaker - Community Creation Platform

- **Platform Purpose:** Connect local artisans, makers, and DIY enthusiasts with community members needing custom products or repair services
- **Key Groups:** Skilled makers/crafters, customers needing custom work, suppliers of materials, workshop/makerspace owners, and event organizers
- **Core Interactions:** Customers post project requests, makers bid on jobs, materials sourcing, skill-sharing workshops, and community event coordination
- **Value Creation:** Promotes local economy, reduces waste through repair culture, builds community connections, and facilitates local events
- **Network Effects:** More makers increase service variety; more customers create steady demand; shared resources reduce costs; community events strengthen local ties
- **Testing Feasibility:** Focus on Davis community, track completed projects, measure customer satisfaction, maker retention rates, and event attendance
- **Monetization:** Commission per transaction, premium listings for makers, and event planning service fees
- **Platform Variations:** Could expand to include venue booking for maker events, tool library coordination, and integration with local maker spaces and community centers

Project 3: GreenCommute - Sustainable Transportation Hub

- **Platform Purpose:** Optimize sustainable transportation options by connecting commuters, vehicle owners, and mobility service providers
- **Key Groups:** Daily commuters, car owners offering rides, bike/scooter owners, public transit users, and local transportation services
- **Core Interactions:** Ride matching, vehicle sharing, route optimization, and multi-modal trip planning
- **Value Creation:** Reduces transportation costs and environmental impact while improving commute efficiency
- **Network Effects:** More participants enable better route coverage, higher matching success, and more transportation options
- **Testing Feasibility:** Start with UC Davis campus routes, measure usage patterns, and validate cost savings for participants
- **Monetization:** Platform fees on rides and premium route optimization features

Project 4: SkillBridge - Professional Development Marketplace

- **Platform Purpose:** Match working professionals seeking skill development with experienced practitioners offering micro-mentoring and project-based learning
- **Key Groups:** Skill seekers (early-career professionals), skill providers (experienced practitioners), corporate sponsors/employers, and student consultants
- **Core Interactions:** Short-term mentoring sessions, hands-on project collaborations, skill assessments, professional network building, and micro-consulting tasks
- **Value Creation:** Accelerates professional development while creating revenue streams for experienced professionals and students
- **Network Effects:** Larger network increases matching quality and variety of skills available; reputation systems build trust; corporate partnerships expand opportunities
- **Testing Feasibility:** Target Sacramento/Bay Area professionals and UC Davis MBA students, measure skill improvement, career advancement outcomes, and project completion rates
- **Monetization:** Platform fees on mentoring sessions, corporate subscription packages, and commission on consulting projects
- **Platform Variations:** Could include MBA student micro-consulting for startups/NGOs, campus-specific career services integration, and specialized tracks for different industries or skill levels

Project 5: LocalLoop - Neighborhood Resource Sharing

- **Platform Purpose:** Enable neighbors to share underutilized resources, tools, and services within local communities
- **Key Groups:** Resource owners (tools, equipment, skills), resource seekers, local coordinators, community organizations, and institutional participants
- **Core Interactions:** Item lending/borrowing, skill sharing, neighborhood services, community project coordination, and institutional resource redistribution
- **Value Creation:** Reduces individual ownership costs while strengthening community bonds, promoting sustainability, and reducing waste
- **Network Effects:** More participants increase resource variety and availability; stronger community ties improve trust and participation; institutional partnerships expand resource pool
- **Testing Feasibility:** Target specific Davis neighborhoods and UC Davis campus, measure sharing frequency, community engagement levels, and waste reduction
- **Monetization:** Premium insurance coverage, logistics coordination fees, and institutional partnership revenue
- **Platform Variations:** Could include campus-specific modules for reusing furniture/books/lab equipment, integration with university sustainability programs, and expansion to include department-to-department resource sharing

Project 6: Local Skill Exchange Platform

- **Platform Purpose:** Create a hyper-local platform connecting individuals with specific skills to those needing short-term help or services within a defined community
- **Key Groups:** Skill providers (handymen, tutors, dog walkers, tech support, students offering services), skill seekers (individuals, small businesses, busy students), and local coordinators
- **Core Interactions:** Service posting, matching, direct exchange of services, payment processing, and peer-to-peer service delivery
- **Value Creation:** Facilitates convenient access to local services while creating income opportunities for skill providers, especially students
- **Network Effects:** More providers increase service variety; more seekers create steady demand; reputation systems improve matching quality; local focus builds community trust
- **Testing Feasibility:** Focus on specific Davis neighborhoods and UC Davis campus, test user acquisition strategies and different pricing models (hourly vs. project-based)
- **Monetization:** Commission per transaction, premium listings for providers, subscription model for high-demand seekers, and verification service fees
- **Platform Variations:** Could include student-specific services (tutoring, food delivery, event planning), integration with campus employment programs, and specialized modules for different service categories (tech support, home services, academic help)

Project 7: Sustainable Local Food Hub

- **Platform Purpose:** Reduce food waste and promote local food consumption by connecting local producers/restaurants with consumers and food aid organizations
- **Key Groups:** Food donors (restaurants, farms, grocery stores with surplus), consumers (seeking discounted local produce), and food aid organizations (charities, food banks)
- **Core Interactions:** Surplus food listing, consumer purchasing/claiming, and coordinated pickups/deliveries for redistribution
- **Value Creation:** Reduces food waste while providing affordable food access and supporting local food systems
- **Network Effects:** More donors increase food variety; more consumers create demand; aid organizations expand distribution reach
- **Testing Feasibility:** Start within single city/county, analyze collection/distribution logistics and assess food waste reduction impact
- **Monetization:** Subscription fees for donors, transaction fees for consumer purchases, or premium delivery services

Project 8: Niche Hobbyist Exchange & Learning Platform

- **Platform Purpose:** Create a platform for specific niche hobbies (e.g., vintage camera repair, rare plant cultivation, tabletop gaming modding) to connect enthusiasts for exchange of goods, services, and knowledge
- **Key Groups:** Hobbyist service providers (buyers, sellers, repair specialists) and knowledge seekers/sharers (those offering or seeking advice, tutorials, workshops)
- **Core Interactions:** Item buying/selling, repair services, class teaching, and forum participation for troubleshooting and skill-sharing
- **Value Creation:** Connects niche communities while providing specialized knowledge and hard-to-find items/services
- **Network Effects:** More hobbyists increase item/service variety; knowledge sharing improves community expertise; reputation builds trust
- **Testing Feasibility:** Start with highly specific niche, assess demand for specialized services and willingness to pay for expert knowledge
- **Monetization:** Listing fees, premium memberships for advanced features, or targeted advertising for relevant businesses

Exercises

Platform Project: Milestones and Deliverables

1. **Project Plan:** Develop a platform project idea as discussed in Session 2 (pick something comparable in scope to the examples given). Write a 1-page proposal. Define the platform in terms of the pain points it would address. The proposed business should have potential to be impactful, successful, and financially sustainable. The application work will cover platform definition, and issues of product design, launch, pricing, costs, etc.
2. **Core interaction:** Identify core value unit(s) and interaction(s) for your project, the sides of your platform (who is the consumer/producer? how do they consume/produce? how is quality determined?). Discuss what tools and services the platform should provide to support these sides (creation/consumption/customization, and also discovering, filtering and matching). 1-2 pages, use visuals to explain.
3. **Platform roadmap:** Identify how you would populate the sides of your platform (all in parallel, or in what sequence?). Explain how this maps to the *structure* of the value that your platform offers to its participants. 1-2 pages, based on analysis of the following questions.
 - What value do platform participants (on each side) obtain from the platform? What time-linked factor does this value depend on?
 - What cost do participants incur or perceive? (price + “bio-cost”)
 - What do you offer, such that to a potential adopter, at the time of joining, $value > cost$?
 - How do you signal relevant network size to a potential adopter?
 - What other tactics might you employ to get sufficient number of early adopters?
4. **Platform monetization and business models:**
 - How will your platform make money (exceeding its costs)? What will you charge for? Who will you charge? When will you start charging?

Exercises ii

- Are there negative consequences that monetization will have on growth? How will you ensure that the net result is positive?
 - What other alternative business models did you consider? (What are your 2nd and 3rd ranked models?)
5. **Platform community:** From your platform's perspective, what are the communities, and among these are they "givers" or "takers"? For a "giver" community that helps make the platform valuable to its users, what are the challenges in making this community "work for" the platform? What actions or techniques does/should the platform employ to motivate and manage the community? Hint: think about how these platforms do it – Waze, eBay, AWS, Tik Tok, Uber, Airbnb. (1 page write-up, use visual illustration.)
6. **Platform competition:**
- While building and launching your platform, what are the biggest competitive threats and how will you deal with them?
 - Will you, and how will you, create lock-in effects within your platform network so that you can fend off competitors, and particularly prevent leakage of the "subsidy" side of your platform?
7. **Platform Project Discussion** You will soon have your final presentation (see Ex. 8). In half a page, describe your progress in laying out different elements of building your platform business. Include a summary of what you did in the previous exercises, identify a few open questions (around the tactics for monetization, mobilization, staging, scaling). Next: put it all together, tie any loose ends.
8. **Platform Presentation** Upload presentation (slides+notes) to Canvas for Professor to preview your presentation plan. Cover these topics (and any others relevant):
- Summary of platform vision: purpose, sides, core value units and interactions, platform services.

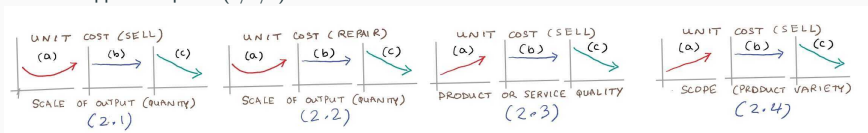
- Platform Thesis: why is this a good opportunity, why a “platform” model vs a traditional businesses, and why now?
- Monetization: Who pays? For what? What are prices based on? (Eg fixed amounts? percentage of some metrics etc?) What were alternative ways to monetize and why did you pick what you picked?
- Network mobilization: How (using what tactics) do you get participants on each side to join? and to engage? (Consider: what value they get, What cost they incur, including non-economic? other barriers to their participation - including lack of awareness and plain old inertia - how do you overcome all these?)
- Staging: What is the platform build sequence for the multiple sides, and how does the platform structure evolve? (Which side or sides come first, and how do those sides contribute to building out the later sides?)
- Scaling: What is the scaling up and rollout sequence? (Eg start with all sides locally in some regions, then expand ... or start all across but with fewer sides, then add other sides?)

Ensure consistent economic story (costs incurred, revenues) across the different elements (monetization, mobilization, staging, scaling).

Exercises iv

Individual Effort

9. Pick a “traditional” product (e.g., bicycle, wooden toy, prosthetics, paint, car, prescription eyeglasses, leaf blower, shoes, ski jacket, furniture, etc.) - and a corresponding specific brand and company that makes it.
- 9.1 State, about 25-50 words, the essence of this business ... what is it's purpose, how does it achieve it?
 - 9.2 Why might the firm want to do all this at large scale, and what must it do to operate at large scale?
 - 9.3 What are some pitfalls in scaling up?
10. Take two products: (1) the product you chose in Ex. 9, and (2) a “digital” or information good (movie, book, software app, operating system, streaming service, game, information service, search engine, research report, etc.). Then, consider the 4 sets fo 3 panels below. For each product, identify the most-applicable panel (a/b/c).



- 10.1 which panel (a / b /c) best captures how “unit cost” (comprising production, marketing, distribution and other activities) changes with scale or number of units?
- 10.2 which panel (a / b /c) best captures the unit cost of fixing defective units (e.g., product recall) or upgrading them?

- 10.3 which panel (a / b /c) best captures how unit cost varies with the “quality” level of the product, or the utility it provides to buyers.
- 10.4 which panel (a / b /c) best captures how unit cost varies with “product variety” - e.g., compare unit cost if making 1000 units of the same product vs 10 units each of 100 variations of it.
11. Create a wrap-up visual to show the “traditional vs digital good” contrast, distilling the key contrasts: cost curves, value creation, quality control, etc.
12. **Product value analysis:** Pick a common product (like in Ex. 9 - and a specific brand/item to make the analysis concrete). As a consumer (think what this product is worth to you):
- what factors affect how much you value the product?
 - who in the industry chain controls or decides these factors and quality levels?
 - generally, how does the product quality (i.e., its worth to you) change over time and with use?

Repeat with one of: Waze, YouTube, SnapChat, Tik Tok, Amazon, iPhone+iOS+AppStore (or, Android-Play Store), Airbnb, Uber.

13. For each company/product in EACH of the two lists below (pick as many companies as group members), identify any standalone benefit or intrinsic value in the product. Then, if there are direct and/or cross-sided network effects, a) explain which kind, b) what is the network(s) that define the network benefit, c) how the network contributes to value, and d) what the platform or company can do in order to amplify the network benefit. List 1: Nextdoor, Atlassian, eBay, Salesforce, iOS, Stack Overflow, American Well, Zelle, Netflix. List 2: Venmo, PatientsLikeMe, Lime (or Bird), Slack, Substack, Spotify, Android. Be precise in answering, and provide your short responses in the form of a table like below.

Company, Standalone Benefit	Type of Network Benefit	The Network(s)	How the network enables value	How to intensify it
Dropbox (a place to store files)	Direct	Users	Sharing files among users	Good search capabilities, good UI for setting sharing privileges, file editing Good authentication and access methods
	Cross-side	(Users, Connected Tools)	Seamless import/export from external tools (eg PDF writer) into Dropbox	
...				

Group Homework Assignments

- Monetization tactics:** Using one or more company as an example (Ford, Ikea, Kraft Foods, Boeing), explain how they use each of these tactics to better monetize the market they serve, i.e., to extract higher prices from buyers: a) bundling, b) vertical product differentiation (versioning), c) horizontal product versioning, and d) recurring revenues.
- Business analysis for a platform good:** Consider a platform good (such as a video on TikTok or YouTube, a place to rent on Airbnb, a ride on Uber, traffic information on Waze, an app on App Store or Play Store, a news feed on Facebook, etc.) - and think also of a counterpart traditional product (e.g., a show on HBO, a room at a hotel, a taxi ride) or even a product from Ex. 9. **For both of these: make a graph where the businesses involved in this product (and the customer) are nodes, and the "connections" depict business relationships between nodes.**
As an example: if I picked a "wrench", then my answers might be: a) \$15, b) grip, reliability, versatility, c) manufacturer, d) wrench designer + (Raw materials suppliers → Steel makers, grip makers) → manufacturer → distributor → retailer → me. Materials or value flows from left to right, payment flows from right to left.
- Platform Misfits:** From your independent research and analysis, identify two industry domains where the idea of multi-sided platforms (value creation by loosely affiliated external 3rd party providers) is unlikely to work, and (if possible) give examples where it was tried and failed.
- Business Models:** Pick 4 companies (from at least 3 groups below), and summarize: their key product/service, who are their users/customers, and how they make money. 1) Whatsapp, PatientsLikeMe, Match.com, 2) Doordash, Atlassian, Spotify, 3) OpenTable, Kyruus, TikTok, 4) CreditKarma, Armoire (<https://unlimited.armoire.style/>), Fortnite, 5) Overleaf, Amwell, Clash of Clans, 6) FramePlay, LinkedIn, Substack.

18. **Platform failures** From your own research (i.e., not from assigned readings) identify 3 notable failures of new platform businesses, and the essential reason underlying the failure in each case. Submit your work as a 2-3 minute video.
19. **Apple vs Microsoft Platforms** (Mini-Case): Compare - highlight the critical differences or similarities in - the *Apple and Microsoft approaches* to competing in the personal computing market (break your answer roughly into 2 parts, \approx 1980-2000, 2000-2015). Discuss, among other things, the two firms' success (or failure) in leveraging network effects, their choices in dealing with "ecosystem partners," and their choices to be "open vs closed," systems. Include a visual comparison of the financials of the two companies, in the two time periods.
20. DROPPED
21. **Platform power:** Identify the top 10 firms in terms of "market capitalization" now, and 10 and 20 years ago (find and use a suitable source, see e.g., https://en.wikipedia.org/wiki/List_of_public_corporations_by_market_capitalization). Classify these firms by industry sector (e.g., telecom, banking, oil and gas, computers). Present this data in a compelling and clear visual manner, ideally which demonstrates the changes across these 20 years. What explains the timing of the dominance of platform firms?

22. Square

(A) Case Background

- (1).A.1 Summarize the (financial payments) industry that Square entered in 2009 – the players, products (and costs), customer segments, and how they monetized them.
- (2).A.2 Draw a timeline of Square's evolution from 2009 onwards (what products were introduced, when), and visualize Square's business performance in terms of users, activity, revenue, etc.
- (3).A.3 For each of Square's major products since 2009 to now: identify (a) the market segment(s) Square targeted (include numbers such as size and revenue potential), (b) its competitors, and (c) how Square's product was different and innovative relative to prevailing competition.

(B) Case Analysis

- (1).B.1 (3-4 slides plus supporting analyses) Square Reader market: Do a quantitative analysis to critique Square's pricing (\$0 for card; the \$0.15 per-transaction fixed fee; and the 2.75% rate). The goal is to examine: why these levels? what happens if you increase one and reduce the other?
Profits from Reader: Suppose that if Square sold the reader (which costs \$10 per unit) at price s , it would attract $B = Me^{-as}$ merchants (assuming they find the usage terms also attractive), where $a = 0.1$ and $M = 10$ million is the potential target market. What is the optimal s to maximize Reader profits?
Profits from Transactions: Think of how Square might optimize the per-transaction fee (call it p per \$ run through the reader; e.g., \$0.03). To do this, suppose that if the number of merchants with the Square Reader is B , then a subset Be^{-bp} (with $b = 200$) would use it. What is the optimal value of p to maximize Square's profit? Assume an average (annual) transaction volume $T = \$2,000,000$ per merchant, and that Square's average back-end costs are $c = \$0.02$ per \$ of transaction.
Total Profits from Reader + Transactions: What would s be if you factor in the market for transactions?
- (2).B.2 (1-2 slides) As a newcomer in 2009 in an established market, where incumbents served certain segments and were a poorer fit for other segments: (a) analyze which segments Square should target with their product (explain pros and cons); and (b) given this choice and Square's pricing strategy, critique how Square created success (market share, profit) without eliciting a harsh competitive response or price war.

(3).B.3 Pricing with data monetization (1 slide)

If Square could monetize merchant data (i.e., earn \$ v per merchant) how would it affect pricing of the Reader and other products? Consider the likely Square user base, the nature of heterogeneity among users, the fixed and variable costs to Square, Square's existing competitors (their products, prices, and target segments), customer acquisition, retention, lock-in, and value of data.

(4).B.4 Critique the pricing of Square Cash (1 slide): \$0 up to \$2,500 per week; 2.75% rate for larger business accounts.

(5).B.5 Network effects (1-2 slides)

Which of Square's products have substantial network effects? Explain what types of network effects? what are the sides? in what way does the network create value for a user? How should the existence of network effects affect Square's pricing strategy?

23. Intuit

(A) Case Background

- (1).A.1 Summarize Intuit's journey as a software provider (of Quicken, Quickbooks) - its customer segments, strengths in serving them, and level of financial success and growth rate.
- (2).A.2 What new business opportunities did Intuit's software products enable, i.e., what new value propositions could Intuit offer its customers on top of the data and transactions in its software products?
- (3).A.3 Develop a timeline comprising Intuit's evolution from a software product company to its later forms (including as an MSP) - cover its products, target markets, and financial success.

(B) Case Analysis

- (1).B.1 (1-2 slides) What mechanisms or initiatives represent Intuit's transition from a software product company to a MSP? In each case, what are the networks and network effects Intuit created? What part of the Quickbook/Intuit business system was opened, what services did it offer network participants, and what were the technological elements underlying these services?
- (2).B.2 (2 slides) Evaluate the strategic merits of alternative business models for this transition (i.e., be an open marketplace, vs a limited curated marketplace, vs reseller) - do this separately for i) QBF and ii) Concierge.

- (3).B.3 (1-2 slides) How and where should Intuit draw the boundaries between being a “product provider” vs a “platform”? For instance, what sort of platform-level data should Intuit leverage solely vs. share with 3rd party providers? What new business services should Intuit keep to itself? Answer in terms of specific products/services, as well as general principles for making this choice.
- (4).B.4 (2 slides) Was it smart for Intuit to transition from a “product” model (i.e., leveraging all of its expertise and IP to make and monetize new products on its own) to a multi-sided marketplace platform model (allowing 3rd party providers to use Intuit infrastructure and reach Intuit’s customers) a smart move for Intuit?
What are pros and cons, strategic challenges, organizational and decision making culture (e.g., metrics and incentives), underlying these two directions? If possible, consolidate these into a mathematical/economic model (include things such as discovering new ideas, risks in implementing them, likelihood of success or failure of each, costs incurred, direct revenue or commission as platform operator, etc.).

24. WeChat

(A) Case Background

- (1).A.1 Develop a timeline comprising WeChat’s evolution - cover its products, target markets, and financial success - and link this to new technologies (introduced and adopted) during this period.
- (2).A.2 What are the different business ventures of WeChat and briefly discuss each of their business models.
- (3).A.3 What are the different sides and network effects of the WeChat open platform?

(B) Case Analysis

- (1).B.1 (1 slide) A key strategy for WeChat was to branch from messaging to a host of other applications and services. Comment on pros and cons to be a specialist or a wide (and thin) generalist, keeping in mind also future evolution, future outcomes, and competitive response. Relate this to the lack of focus that killed the once-dominant Yahoo!
- (2).B.2 (1 slide) Explain and critique WeChat’s ability to use product design to engender stronger network effects?
- (3).B.3 (1-2 slides) What lessons does WeChat’s history provide you regarding staging and evolution of large-scale platforms? Specifically, address growth, monetization, transformation from one type of network good to another etc., and the wisdom of opening up the platform to external third-party firms.

- (4).B.4 (1-2 slides) Beyond WeChat's early success, critique what contributed to its future continued ascendance: was it the early success, market leadership and large installed base acting as effective barriers to competition? Or was WeChat's continued ascendance more driven by continuous innovation and strategic agility?
- (5).B.5 (1-2 slides) Evaluate the strategic and financial merit of WeChat's potential drive for global dominance. In what ways does WeChat's solid position in the China market help or hurt? What about spreading capital to create growth internationally vs. focusing to grow just in China.