UCLA Anderson School of Management
Evolution and Innovation in the Global Mobile Industry
Syllabus

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Office Hours: By Appointment (in person or via Zoom/FaceTime).
Class Sessions: (10 sessions, 3 hours each)
Time: Wednesday's, section 4: 2:30-5:20 pm; section 5: 5:30-8:20 pm
Room: A301
TA's: Section 4 (afternoon) : Morgan Greenwald  
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Section 5 (evening): Siddhant Ranjane  
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Course Overview

The birth of the mobile communications industry created a fundamental change in society and how it communicates—creating a platform for consumers and enterprises to take their work and lives with them on the go. The mobile industry has experienced several waves of growth—each requiring significant "bets" to be placed, an industry structure that supported both entrepreneurial innovation and scale to afford significant investments. The first wave included broad mobile communications access in a variety of nations for core voice and text communications. This initial wave of growth required significant investments in network infrastructure. A second wave of growth occurred with the advent of the iPhone, other attractive smartphones and their underlying mobile operating system that drove the creation of a new mobile ecosystem made up of network operators, device makers, operating system developers and app developers. This new ecosystem changed the balance of power between all players in the ecosystem but also created a surge in industry growth and innovation. Most recently, a third wave of mobile industry growth is occurring where notable innovation and value appears to be driven by both: a) a strong demand for video content/communications and b) virtual assistants coupled powered by artificial intelligence, which may allow customers to bypass other traditional means of accessing the Internet. Thousands of new ventures are being created in addition to new product and M&A thrusts by established tech giants are being executed to capitalize on this latest chapter of the mobile "revolution."
This mobile revolution has created new opportunities for some ventures, destroyed others and in many cases change the balance of power between members of the mobile ecosystem based on the relative value they create for customers. The emerging Internet of Things sector represents a great example of this changing ecosystem with new offerings and a changing landscape of partners, winners and losers. How has the mobile industry evolved to achieve this revolution? What areas of mobile innovation today offer the greatest opportunity? Who will be the winners and who the losers? And how does this innovation and industry revolution look different country by country? Where are best practices being exported and where are they being imported?

This course will look at the rapid development of this industry--the disruption, innovation and bold strategic moves taken to create competitive advantage. This course will make significant use of case discussion which both highlight strategic issues confronting the industry and permit students to sharpen their strategy development skills and ability to assess the use of innovation in driving market success. This course will also feature leading representatives from the mobile industry, venture capital firms, entrepreneurs and policy makers to engage students in a discussion of real world issues, decisions, successes and failures. While this course is focused on the mobile industry, the core learnings in strategy development, disruptive innovation, business models and global context are relevant to numerous other industries.

Assignment and Grading

Class discussion and participation will be strongly emphasized in this class.

Final grades will be comprised of:

35%--Class participation

15%--Written assessment of 3 pre-assigned cases

25%--Midterm case exam

25%--Team presentation at end of course on promising new mobile venture not developed before

For class participation, a grade using a "1, 2 or 3" basis will be utilized where a “1” indicates a basic level of participation (recitation of case facts, comments on industry news), a “2” indicates analysis/insights on a particular issue, and a “3” clearly demonstrates a point of view and/or analysis which reflects strong knowledge of the case/issues and notably advances the classroom discussion often in the form of a full, well substantiated argument/recommendation.

Overall class grade distribution will align with UCLA Anderson guidelines.
Individual Case Write Up's

Students should plan to complete case write up’s for the following cases: “Apple’s iPhone: Calling Europe or Europe Calling” (week 2), “$19B 4 txt app WhatsApp…omg!” (week 4) and The Rise and Fall of Nokia (week 8). The case write up’s should include a one sentence problem statement (problem being solved in case), full assessment of context (e.g. trends in technology, consumer preferences, competition, public policy…etc.) along with a well full, substantiated recommendation. These write up’s should be no longer than 2 pages (prose or bullets) submitted via CCLE just prior to the beginning of class.

Midterm Case Write Up

In lieu of a midterm or final exam, students will be given a case to assess and make recommendations. This will be conducted as an individual exercise and will be distributed between weeks 5 and 6 and timed electronically. You will have a maximum of 5 hours to complete the case assessment. The ability to reflect on class learnings, assess industry and technology context as well as make logical, well-substantiated recommendations will be key. This case will be focused on a specific application at the intersection of the Internet of Things, autonomous vehicles and artificial intelligence. The TA’s will poll the class to determine the single best day/time for this case to be posted and completed via CCLE. The paper will be limited to five pages single-spaced (prose or bullets) with a maximum of two pages of exhibits if needed. Please note that this midterm case will be provided via the course reader. It’s required that each student purchase the course reader.

Team Project

Students should form 8-9 teams of ~5-6 members who ideally have a diversity of skills and industry expertise. These teams should be formed ~ week 2/3 once specific student class registration has been confirmed. Teams can choose a project of their own or from this defined list categories:

- Virtual assistants
- Mobile payments
- Video
- Customer analytics/ contextualization/ personalization
- Technology/infrastructure solutions
- Enterprise based solutions:
  - Device/service management/mobile security
- Enterprise IoT
  - Cloud based services
  - Emerging market internet access solutions
  - Internet of things (wearable devices, connected home, connected car, etc.)
  - Over The Top and converged solutions

Projects should assess a specific product/service opportunity in this area including all relevant areas of assessment including: the customer "problem" being addressed, market sizing, technology & product requirements, business models, financial projections for market and venture, attractiveness for funding from a VC's point of view, and key success factors for the venture. A one-page written project proposal should be emailed to the Professor, with a copy to the TA, for approval no later than May 2, 2019. A written and oral presentation should be prepared and delivered. The written report should be no longer than 10 pages (prose) and is due Friday May 31, 2019. The oral presentation will be 15 minutes with a 10-minute Q&A session. The oral presentations will be held during class on week 10 and week 11-finals week. All students must attend both days of presentations--both as a presenter and member of the audience/questioner. Students will be asked to allocate: a) $1M across all the teams in to identify those innovations they find of greatest value and b) $1K amongst the members of your own team to ensure strong participation and teamwork within each team.

Attendance

Attendance during each session is critical as we will cover a significant amount of materials during each session and class participation is highly weighted. I also expect you to arrive on time. One-half grade reduction will occur for any unexcused absence. Excused absences will only include death in the family, illness or recruitment activity that can't be rescheduled. Prior approval is required.

Use of Laptops and Mobile Devices In Class

Laptops and mobile devices can be used in class for note-taking purposes only. No use of laptops or mobile devices for any other purposes including emails, web surfing… etc. as a sign of respect for your classmates and to ensure productive engagement in class discussion. Violations of this policy will result in a firm “laptop down” policy or select cold calling.

Honor Code

UCLA Anderson’s Honor Code will apply at all times.

Plagiarism, failure to follow guidelines of assignments, failure to properly cite reference materials and disrespectful behavior in class are all unacceptable.

*There will be no final exam in this course.*

The course can be taken pass/no pass by non-MBA students

**Other Events:**

I will host informal "faculty/student lunches" every week for groups of 7-8 students on a first come-first serve basis. My assistant, Patrisha Reyes will send a registration link and confirm attendance. These lunches are purely voluntary but will hopefully give us a chance to spend time together outside of the classroom.

**Course Materials**

Specific readings and case materials listed under "topics and class sessions." Every student should purchase the course reader.
Class 1--Drivers of Industry Structure and Competitive Advantage-April 3, 2019

This first session will review the course curriculum, expectations and 5 forces and SWOT analysis as a framework for assessing industry structure, drivers of value and strategic imperatives. Students will receive a broader overview of the mobile industry, its history, development, new ecosystem and drivers of growth. A review of the key elements of formulating strategy will be reviewed with a specific application to the mobile industry.

Required Readings:

1. Mobile Broadband and The Telecommunications Industry in 2011, Lynda Applegate, Kerry Herman, Christine Snively

Case:


Study Questions: (for consideration in addition to a contextual assessment of the environment)

1. Develop scenarios for the future of this industry. What would cause the industry to evolve in different ways?
2. What are the critical issues facing McCaw in 1990?
3. What are McCaw’s strategic alternatives?
4. What do you recommend to Craig McCaw and why?
Class 2--Changes in Key Success Factors in Mobile-April 10, 2019

This class will discover, how, as time progressed, the mobile industry sources of differentiation have shifted, and with this shift, the accompanying transfer of relative power in the mobile ecosystem.

Required Readings:


Case:

Sieber, “Apple’s iPhone: Calling Europe or Europe Calling”, Harvard Business School, 2008.

Optional Readings:


Study Questions: (for consideration in addition to a contextual assessment of the environment)

1. Describe the mobile telecommunications industry in 2008. What are the main drivers of revenue for the different players?
2. What is your opinion about Apple entering this industry?
3. Do you think it is a good idea for the carriers to share part of their revenue with a handset manufacturer? Why or why not?
4. How do you think the iPhone will work in Europe? Do you think contracts like the one between Apple and O2, described in the case, will be made by other companies such as Nokia and Sony-Ericsson with other mobile carriers?

Speaker: Marni Walden, Former EVP and President of Global Media, Verizon Communications (TBC)
This class will explore in detail the key players in the mobile ecosystem. The class will then discuss how the successful alignment of multiple elements in the ecosystem served as the catalyst necessary to create a surge in growth in the mobile and changing the growth trajectory of what was a maturing business. As part of this discussion, it will also be uncovered that the intersection of the telecom and internet businesses has also created a collision of business models.

**Required Readings:**


**Case:**


**Study Questions:** (for consideration in addition to a contextual assessment of the environment)

1. Describe the general characteristics of the wireless ecosystem. What are the economics in the industry? What changes occurred in 2008 that have already impacted or will have the potential to impact the U.S. Wireless Industry?

2. What is Android, and how does it compare to other operating systems for smartphones?

3. Why is Google investing in Android? How and when will Google be able to determine if Android is a success?

4. To what extent are the stakeholders in the wireless industry aligned with Google? What are the motivations and risks on which each member of the wireless ecosystem are focused? What sources of competitive advantage does each possess? How will the viability of OHA be impacted by the actions that members of the ecosystem take?

5. How likely will Google be a cross boundary disruptor for the wireless industry? Why?

6. What would you do if you were a wireless operator with the introduction of Android and the iPhone?
Speaker: Dennis Patrick, CEO Pillar productions, former CEO Time Warner Communications, former CEO AOL Wireless, former Chair, Federal Communications Commission (FCC)
Class 4--Mobile Innovation-Drivers of Innovation-April 24, 2019

This first of three sessions on innovation will look at the strategic rationale for innovation and how innovation occurs. This class will delve into the innovation imperative, where innovation occurs, the elements of successful innovation, as well as potential challenges to innovation. These concepts will provide context for a broader discussion around strategic and innovation imperatives for mobile operators, device makers, app developers, and OS players.

Required Readings:


Cases:


Optional Readings:


Study Questions: (for consideration in addition to a contextual assessment of the environment)

1. Do you agree with Facebook’s $22b purchase of WhatsApp? Why? Why not?
2. What analyses support your position? What are the underlying assumptions you are making?
3. Would you have accepted the $22 billion offer?

Speaker: Gabe Esparza, SVP and Head of Global Partnerships, RapidSOS; former VP Global Business Development, Corporate Payments, American Express
Class 5--Mobile Innovation--Areas of Promising Innovation--May 1, 2019

This class will explore some of the most promising areas of mobile innovation with a special focus on the rapidly growing area of the Internet of Things. Students will be engaged in an assessment of business models, impact on customers and roles played by members of the mobile ecosystem in bringing these innovations to market. This class will also cover how technologies can change the means of competition and disrupt traditional industries such as banking, health care and education and how established enterprises can utilize mobile technologies to deeper their customer engagement, acquire new customers and avoid potential disruption.

Required Readings:


Case:
Karim R. Lakhani; Marco Iansiti; Kerry Herman, “GE and The Industrial Internet,” Harvard Business School (2014)

Study Questions: (for consideration in addition to a contextual assessment of the environment)

1. How would you assess GE’s industrial Internet initiative?
2. When are the next steps? What specific actions do you recommend Beth Comstock and William Ruh take to advance this initiative?
3. Who will be GE’s most feared competitor in the next five years? Why?
4. What do you think GE’s share price will be in the next five years? Will it outperform the market?

Speaker: Danny Yu, CEO and Co-Founder Sandbloom, former CEO Daintree Networks
Class 6—Mobile Innovation—Areas of Promising Innovation-May 8, 2019

This class will advance the discussion on areas of promising mobile innovation. A special focus will be placed on the intersection of mobile, internet of things and the shared economy with new offerings in areas such as autonomous vehicles and ride sharing which often couple new technologies, new service offerings and new business models.

Required Readings:


Case:

The assigned midterm will be the basis of class discussion today.

Speaker: Lori Van Deloo, Former Head of Global Product Management and Coordination, Visa
Class 7 --Context Matters--Innovation in a Global Context-May 15, 2019

This class examines how strategy and innovation differ based on context and the need to assess market structure, differences in customer preferences and competitive landscape in assessing how/where innovation will occur. A review of the Indian mobile market and its differing market structure, products/services and business models will be contrasted to the U.S. As part of this discussion, we will look at “forward versus reverse innovation” and “global versus local” issues.

Required Readings:

4. ProjectSHED (A) Stanford Graduate School of Business (2011) (background on speaker)

Case:


Study Questions: (for consideration in addition to a contextual assessment of the environment)

1. Why did the market environment in India permit tower sharing to develop vs. other markets?
2. How do both the tower economics and marketing priorities of mobile operators drive the construct, priorities and pricing of Indus towers?
3. Should Indus Towers expand into urban areas or not? How is the idea of tower sharing potentially relevant to other markets internationally?
4. What type of CEO should be hired to succeed Stefan Langkamp? What are the key skill requirements?
5. How should Indus Towers organize itself going forward? How should it evaluate itself and what should be the measures of success?

Speaker: Scott Brady, Managing Partner, Innovation Endeavors and former Founder/CEO, Slice (acquired by Rakuten); former Founder, CEO FiberTower
This class brings together the challenges of effective strategy development in a changing environment—how the rigor of an assessment of context and core competencies can drive either a successful or failed strategy. Students will explore how a rapidly changing environment can create either rapid success or decline and the key indicators which must be heeded to devise successful strategy. In addition, understanding the key elements of effective strategy execution will be covered.

**Required Readings:**


**Case:**


**Optional Readings:**


**Study Questions:** (for consideration in addition to a contextual assessment of the environment)

1. Assess the main strategic actions taken by each Nokia CEO. What actions created enduring sources of competing advantage? What actions (or lack of actions) contributed to Nokia’s fast decline?

2. Please be sure to cover the following dimensions of strategy: products, vertical scope, horizontal scope, geographic scope, technology, organizational structure.

3. What decisions would you have made differently and when?

4. What were the external factors that enabled Nokia to establish market leadership in the mobile phone business? How did each CEO react to these external factors? Did Nokia have any influence on these external factors?

5. How did Nokia manage its ecosystem (consisting of operators in early years and app and software developers more recently)? What would you have done differently?

6. How could the firm have better prepared itself for the smartphone era?

**Speaker:** Jeetu Patel, Chief Product Officer and Chief Strategy Officer, Box (please note: Jeetu Patel will be speaking from 5-6 pm for both sections combined) TBC
Day 9-- Where From Here--Threats and Opportunities-May 29, 2019

This session will review the broad geopolitical environment of mobile impacting future development as well as areas of future product/service innovation. This session will step back from the commercial and "today" issues of mobile and explore the public policy issues that fundamentally affect the mobile ecosystem. Public policy imperatives for leaders will be explored.

The final element of this session will look fancifully at the potential future of the mobile industry with the driving principal of "mobile is the platform of the future" as its premise. The types of mobile innovation we might see and how citizens, consumers and societies will be impacted will be the focus.

Required Readings:

1. Evans, Presentation: “Mobile is Eating the World”, Andressen Horowitz, 2017—viewing at:


Case:

Optional Readings:

1. WCIT-12 Background Brief, “What are the International Telecommunications Regulations- and Why Do They Matter?”

   http://www.slideshare.net/TerryKramer1/wcit-paperfinal-1

3. FCC’s Guide to The Open Internet
   http://www.fcc.gov/guides/open-internet

Study Questions: (in addition to a contextual assessment of the environment)

1. What aspects relevant to their negotiations had changed in the respective environments of Google and the Chinese government between the initial 2006 agreement and the relicensing in 2010?
2. Consider whether there might have been conflicting interests and priorities within the Chinese government. What potential groups or factions with contrasting interests or priorities might have characterized the Chinese government’s side of the negotiating table?

3. Where do priorities align and conflict for the Google groups? For the Chinese groups? Are there any priority alignments across the table, both for the larger entities or the subgroups? What do these alignments and conflicts suggest about preparation for the across-the-table negotiation?

4. Why did Google go public in January 2010 about the cyberattacks? What was it trying to accomplish? What were the risks of employing this strategy?

5. What should Google’s position and tactics be for the 2010 negotiations?

Speakers: Patrick Ryan, Trust, Strategy and Engineering Principal, Google
Day 10--Class Presentations--Promising New Mobile Ventures--June 5, 2019

Student teams (of 5-6 each) will present their projects on most promising future mobile ventures. Mobile ventures can be in any area--mobile payments, advertising, infrastructure, new service offerings from mobile operators, mobile banking in emerging markets, social media plays utilizing mobile platform...etc. Recommendation for new mobile ventures (not previously commercialized) to be based on learnings from class including assessment of changing customer needs, technology development, partnering and business model development based on ecosystem requirements, global context and implementation implications. Students teams will present for 15 minutes with 10 minutes of Q&A from student audience. Student audience to act as potential VC/investors, CEO of large company, potential partner...etc.

Also: completion of course evaluation. Please bring laptop or tablet to complete.

Day 11--Class Presentations--Promising New Mobile Ventures--Part II--June 12, 2019

Student teams (of 5-6 each) will present their projects on most promising future mobile ventures. Mobile ventures can be in any area--mobile payments, advertising, infrastructure, new service offerings from mobile operators, mobile banking in emerging markets, social media plays utilizing mobile platform...etc. Recommendation for new mobile ventures (not previously commercialized) to be based on learnings from class including assessment of changing customer needs, technology development, partnering and business model development based on ecosystem requirements, global context and implementation implications. Students teams will present for 15 minutes with 10 minutes of Q&A from student audience. Student audience to act as potential VC/investors, CEO of large company, potential partner...etc.