Innovation Strategy
MGMT/ENTR 522
Spring 2022

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Course website: To be released

Office hours: One hour before each class session, or at a mutually convenient time.

Teaching Assistant: XXX will help me organize and run the class. Please feel free to reach out if they can assist you with your learning experience in the course.

"Innovation distinguishes between a leader and a follower"
Steve Jobs
"Innovation is the single most important activity of an ongoing business.
All progress occurs through innovation."
Peter Drucker
"We owe every step of progress, intellectual as well as moral,
to the daring of innovators."
John Stuart Mill

Course Overview:

The purpose of this course is to better understand the dynamics of industries driven by technological innovation and to provide a series of frameworks for managing technology-intensive businesses. The emphasis throughout the course is on the development and application of conceptual models which clarify the interactions between competition, patterns

of technological and market change, and the structure and development of organizational capabilities.

Course Learning Objectives:

In this course will help students understand:

- What are the best practices for improving new product development processes to maximize the likelihood of success?
- How do firms make the choice between protecting their technologies with patents versus rapidly disseminating them to build an installed base and complementary goods?
- How do firms choose among multiple attractive innovation projects?
- How do firms decide whether to go it alone or collaborate, and how do firms develop an effective collaboration strategy?

Faculty Info

Warren Boeker	**TA:**
Email: wboeker@uw.edu	Email:
Ph: (206) 543-8731	**Office Hours:**
Office Hours:	By appointment
One hour before each class session.	
I can also meet other times at your convenience; email me to set an appointment.	

Faculty Bio:

I have taught at the University of Washington's Foster School of Business since 1998, where I am the Douglas Olesen/Battelle Chaired Professor of Management and past Chair of the Department of Management and Organization.

Before coming to Foster, I taught strategic management and entrepreneurship for ten years at Columbia University in New York City and global strategy development at London Business School for two years. I received his PhD from the University of California, Berkeley and was a former chemical engineer.

Course Structure and Format

Teaching Approach:
The course will be structured around practical application of lead-edge theories focused on how innovation and technology should be managed. This requires to you apply concepts to case examples and to make practical suggestions for the actions an organization should take in a case situation. I like to keep the class environment interactive and participative.

Textbook
Schilling, M., Strategic Management of Technological Innovation, 2019, 6th edition. New York: McGraw-Hill Publishers

Readings and Case Studies
   Many cases I have written from previous experience advising firms. A small number of readings and cases will be purchased through HBS publishing. Link will be coming soon

Graded Material Overview

Activity:	Value
Individual case analysis (Hunter Labs)	25%
Team case analyses (2) (Alcatel-Lucent and Dynosys)	15% each
Case Exam	25%
Participation and individual contribution	20%

Assignments:

Individual Case analysis – Hunter Labs (25%)

Answer the questions below for the Hunter Labs case. Post a copy to Canvas before the beginning of class.

Your individual case analysis report should be no longer than 1800 words. The individual case analysis should represent your own independent work (no collaboration or discussion of the case with others).

Use only the information in the case. Place charts, tables, figures, etc. in the Appendix. They do not count as part of the page total.

Questions:
1. Why does the president have trouble introducing the product structure? Why is he getting resistance?
2. Which of the four different product development team structures that Schilling discusses do you think is most appropriate for Hunter?
3. How might the appropriate team structures be different depending on the product and how mature or established the product is in the market?
4. What changes would you make to the metrics and incentives? How should these vary by product group?

Team Case analyses – Intrapreneurship at Alcatel-Lucent (15%)
Answer the questions below for the Alcatel-Lucent case. Post a copy to Canvas before the beginning of class.

Your team analysis report should be no longer than 1800 words.

For all case analyses use only the information in the case. Place charts, tables, figures, etc. in the Appendix. They do not count as part of the page total.

Questions:
1.   We have discussed several elements that should be considered in firm innovation, such as structure, incentives, metrics, people, and culture. How would you design a successful intrapreneurial bootcamp for Alcatel-Lucent? Describe how each element you identify might be used in the bootcamp and why it would be important for innovation.

2.   List the four most important elements or practices you would want to introduce **in order of priority.**

3.   Discuss in detail how you would implement the system you describe. What are the key considerations in introducing the bootcamp approach and how would you deal with any potential challenges?

Team Case analyses – Dynosys (15%)

Answer the questions below for the Dynosys case. Post a copy to Canvas before the beginning of class.

Your team analysis report should be no longer than 1800 words.

For all case analyses use only the information in the case. Place charts, tables, figures, etc. in the Appendix. They do not count as part of the page total.

Questions:
1. How had product development happened historically at Dynosys? Why and how did that change?
2. What are the key problems they are facing at the end of the case? Which are the most critical?
3. What do you suggest they do?

Case Exam (30% of grade)
The final exam consists of a case that applies the materials covered in class to a relevant, real-world situation.

The case and case questions will be distributed via Canvas at after our final class. The completed exam will be due back one week later. You are to take the exam at some point during this one-week window within a 2-hour block of time (2 consecutive hours).

The exam is an individual effort (no collaboration) and your exam may not exceed 1500 words. Further details will be provided as we approach the date of the exam.

Class Participation (20% of grade)
The class should be a common learning experience. I want you all to take ownership and initiative for the success of the class.

You are expected to be thoroughly familiar with the assigned readings and cases before coming to class and have formulated your own answers to the syllabus questions for the cases.

Come to every class well prepared, with strong opinions but with an open mind. You should spend significant time and effort thinking about and answering syllabus questions for each case before class.

The case studies we cover in class describe strategic issues at a specific point in time. Case analyses and discussions should be based solely on the information provided in the case.

Conduct in Class

You are professionals; treat your classmates and me as respected, valued colleagues. Consequently, punctuality and regular attendance are important responsibilities.

Honor Code

I expect you to adhere to the Foster Honor code. As a student in this class, you acknowledge that you are a member of a learning community in the Foster School of Business that is committed to the highest academic standards. As a member of this community, you agree to uphold the fundamental standards of honesty, respect, and integrity, and accept the responsibility to encourage others to adhere to these standards.

<u>Device policy:</u>

Research shows that being online (surfing the Web, checking email, texting, etc.) inhibits your ability to learn and your ability to participate actively in the discussion, while being distracting to me and to your fellow students.

Additionally, we occasionally will have guests who are volunteering their valuable time to come to our class. I would like to ensure that you are fully focused on and engaged in their presentations.

As a result, and following Foster School guidelines, the course will be device free. I will provide hard copies of any materials you need to view during the class (e.g., PowerPoint slides, case updates).

Assignment Grid

Class & Date	Case	Readings	Assignments
1: 3-28	Telecam (A)	Schilling Chapters 1-2 Schilling pp. 250-252 – Stage gates	Be prepared to discuss case and readings (true for all sessions).
2: 4-4	Intrapreneur-ship @ Nokia Software	Schilling Chapter 3 Understanding Gartner's Hype Cycles	Be prepared to discuss case and readings (true for all sessions). **Etc.**
3: 4-11	Internal innovation at Winston	Schilling Chapter 4	
4: 4-18	Surface Logix	Schilling Chapter 9	
5: 4-25	**Intrapreneur-ship at Alcatel-Lucent**	Schilling Chapter 11	**Team case write-up of Alcatel-Lucent questions**
6: 5-2	Seeing in the Dark: Innovation at Flir	Design Thinking Design Thinking comes of age	
7: 5-9	**Dynosys**	**Guest**	**Team case write-up of Dynosys questions**
8: 5-16	Xenomouse	Schilling Chapter 8 Corporate VC Primer **Guest**	
9: 5-23	**Hunter Labs**	**Guest**	**Individual case write up of Hunter Labs questions**

Course Calendar

Session 1 (March 28th)

Topics:

    Course introduction and overview

    Innovation in established firms

    Innovation strategies

    Stage gates

Readings:

    Schilling, Chapters 1 and 2

    Schilling pp. 250-252, "Stage gate processes"

Case:

    Telecam (A)

    Case questions (Prepare to discuss during class):

1. Has it been important for British Northern Communication (BNC) to innovate in order to be successful? Does Don Rice (BNC's president) care about innovation?
2. Overall, do you like the Internal Ventures approach? What are its advantages?
3. What are potential problems or disadvantages of the Internal Ventures approach? What might go wrong in the future?

Session 2 (April 4th)

Topics:

    History of technological innovation in firms

    Technological cycles

    Hype cycle

    Network effects and switching costs

    Technology roadmap

Readings:

    Schilling Chapter 3

    Understanding Gartner's Hype Cycles

Case:

Intrapreneurship @ Nokia Software

1. Why does Nokia start this? What are they trying to achieve?
2. What are the keys to the intrapreneurship process described in the case?
   a. What are the stages involved?
   b. How is it structured?
   c. How are proposals evaluated?
3. Come up with 3-4 specific ideas about how the process could be improved.
4. What are reasons this might fail?

Session 3 (April 11th)

Topics:

Platform businesses
Designing innovative organizations
Diagnosis/root cause/Solution generation

Readings:

Schilling Chapter 4

Case:

Internal Innovation at Winston Consulting

1. Is cross-selling a good idea for Winston?
2. Why are Kirby and Winter having problems implementing cross-selling?
3. What would you do differently? What sort of changes would you make?
4. How would you introduce and implement these changes?

Session 4 (April 18th)

Topics:

Intellectual property
Implementing innovation
Modes of entry to new technology
Business model innovation

Readings:

Schilling Chapter 9

Case:

> Surface Logix
>
> 1. Which customer should be chosen? Why? What are the advantages of your choice? What are the disadvantages of the other choice?
> 2. Who are the stakeholder groups within and outside Surface Logix that affect this choice? How does each of these groups feel about the choice of which customer to serve?

Session 5 (April 25th)

Topics:

> Innovation assessment
> Ecosystems and winner-take-all
> Network diversity

Readings:

> Schilling Chapter 11

Case:

> **Team case analysis (15% of grade)**
> **See assignment details in syllabus**
>
> **Intrapreneurship at Alcatel-Lucent**
> 1. We have discussed various organizational design elements for innovation in the course. Utilizing the materials discussed in class, particularly around designing innovative organizations, how would you design a successful intrapreneurial bootcamp for Alcatel-Lucent?
> 2. Describe how each element you identify might be used in the bootcamp and why it would be important for innovation. List the four most important elements or practices you would want to introduce **in order of priority.**
> 3. Discuss in detail how you would implement the system you describe. What things would you do to overcome the failure of the earlier effort?

Session 6 (May 2nd 25th)

Topics:

> Design thinking
> Design sprints
> Application of design thinking

Readings:
    "Design Thinking," **Harvard Business Review**, June 2008. R0806E
    "Design Thinking Comes of Age" **Harvard Business Review**, September 2015. R1509D

Case:
    <u>Seeing in the Dark: Innovation at Flir</u>
1. How could the process described in the Flir case be improved?
2. How does your company come up with new ideas? Could the innovation system described at Flir be used in your organization? Which parts would work, which wouldn't?

Session 7 (May 9th)

Topics:
    Adoption by users and adoption speed
    Segment zero
    Hackathon, Innovation boards other ideation approaches

Case:
    Team case analysis (15% of grade)
    See assignment details in syllabus

    <u>Dynosys</u>
1. How had product development happened historically at Dynosys? Why and how did that change?
2. What are the key problems they are facing at the end of the case? Which are the most critical?
3. What do you suggest they do?

Guest

Session 8 (May 16th)

Topics:
    Collaboration
    Corporate venture capital
    Accelerators
    University-sponsored innovation

Open innovation and crowdsourcing

Readings:

Schilling Chapter 8

Case:

Xenomouse
1. What are the pros and cons of Abgenix's collaborating with a partner on ABX?
2. If Abgenix chooses collaboration, would it be better off licensing ABX to the pharma company or forming a joint venture with the biotech company? What are the key considerations here?
3. What are the pros and cons of Abgenix's collaborating with a partner on ABX?
4. If Abgenix chooses collaboration, would it be better off licensing ABX to the pharma company or forming a joint venture with the biotech company? What are the key considerations here?

Guest

Session 9 (May 23rd)

Topics:

Course summary and integration

Case:

Individual case analysis (25% of grade)
See assignment details in syllabus

Hunter Labs
1. Why does the president have trouble introducing the product structure? Why is he getting resistance?
2. Which of the four different product development team structures that Schilling discusses do you think is most appropriate for Hunter?
3. How might the appropriate team structures be different depending on the product and how mature or established the product is in the market?
4. What changes would you make to the metrics and incentives? How should these vary by product group?

Guest