The objective of the Technology Strategy & Innovation Management course is to help analytically minded students improve their ability to make well-reasoned judgments regarding business problems. More specifically, the Technology Strategy & Innovation Management course provides students with a strategic perspective on management in complex, knowledge-intensive, and dynamic environments. The degree of uncertainty and volatility in these settings (e.g., think about pharmaceuticals or semiconductors as well as some AI/ML) pose a different set of challenges to the identification and pursuit of competitive advantage than described in other business courses. Although tradeoffs between different resource allocation policies and organizational forms remain critical, the emphasis is now on whether and when to shift from old to new sources of advantage. These distinctions often require new tools to consider: (a) how to evaluate highly uncertain investment proposals, (b) whether and how to capture value from intangible (vs. tangible) assets, and (c) how to design organizations that can assemble and organize the resources necessary to exploit existing advantages and explore new opportunities. In sum, this course considers temporal tradeoffs in addition to the functional and product-market tradeoffs emphasized in other courses.

The pedagogical approach taken in Technology Strategy & Innovation Management involves a mixture of readings, videos, case analyses, and in-class discussions. The readings and videos present models that illustrate interactions between competitive strategy and patterns of technological, market, and competitive change. These tools provide a foundation from which to develop a reasoned analysis of a wide range of challenges examined in the course. The cases and examples offer an opportunity to explore how these tools may be applied in practice. In most cases, students diagnose a root challenge, formulate a problem statement and suggest a recommended treatment to alleviate the root challenge. The discussions allow us to review the assumptions and propositions associated with the conceptual tools and consider impediments to the formulaic application of these tools. The objective is to provide you with a means to consider which firms will benefit from a technology/market change, the types of technologies and markets in which a given firm should invest, and why many existing firms do not incorporate new technology on time.

The IBE Technology Strategy & Innovation Management course consists of three modules:

1. **Creating Value: Patterns of Change in Technologies & Markets.** This module examines how changes in consumer preferences, technological solutions, and regulatory constraints create opportunities for new value creation. The main idea is that change creates imbalances that are amenable to innovative organizational solutions. The objective is to consider how a firm may evaluate investment proposals in uncertain and dynamic markets.

2. **Capturing Value: Profiting from innovation in the market for ideas.** The second module explores factors that affect the fraction of value created that is captured by a firm. Economic value is often created through the coordinated action of a group of firms. This module explores the tradeoffs inherent in the use of four approaches (intellectual property protection, complementary assets, demand-side disruption, and platforms) to capture value from innovation.

3. **Delivering Value: Identifying innovative ideas & building an innovation competence.** The final module explores how managers assemble and organize resources to deliver value in dynamic settings. The module describes different types of innovation, the types of organizational problems associated with these forms of innovation, and the resource allocation and organizational mechanisms managers use to “solve” these problems. The module emphasizes the tradeoffs managers face when designing organizations to innovate.

I created Technology Strategy & Innovation Management to help students carefully consider the factors that dynamically affect competition. I’ve delivered elements of the course to colleagues, consultants, and students in Asia, Europe, and the US and updated the course to reflect insights from these participants. The course is likely to be of particular interest to students interested in creating, managing, or consulting with organizations active in complex, knowledge-intensive, and dynamic settings. Students with interests in design, engineering, science, and public policy may also find the course rewarding.
COURSE REQUIREMENTS AND GRADING

Required Materials:
- Chapters from a draft of the primary textbook for this course are available at no charge on the Carmen Canvas website.
- Readings marked “Read (Carmen)” may be downloaded at no charge either from Carmen Canvas or the OSU library system. Where possible, I will include a link through Carmen. In instances where this is inappropriate, you may navigate to http://library.osu.edu/, click the “research database” quick link, and search the “Business Source Complete” tool. If you are accessing the site from an off-campus location you will need to provide your “name.number” OSU email username and password. The Business Source Complete database allows you to search and download PDF files.
- Cases and Readings marked “Read (HBSP)” are included in a course packet that is available through the HBS Publishing Clearinghouse (https://hbsp.harvard.edu/import/1092845). Upon registering at the HBSP website you will be prompted to enter payment.
- Book: Govindarajan, VJ, and C. Trimble. (2013). How Stella Saved the Farm: A tale about making innovation happen. St. Martin’s Press. This book is available on Amazon at https://www.amazon.com/How-Stella-Saved-Farm-Innovation/dp/1250002125 for between $5.00 (Kindle) and $12.50 (Hardcover). It’s an easy and fun read that is quite informative—I’ve successfully used this in forums with executives from multiple local companies.

Instructional Procedure:
This seminar is taught through a combination of readings, videos, simulations, cases, and in-class discussions. My goal is to introduce you to fundamental management theories (and their propositions) and to offer you an opportunity to leverage these theories to make decisions from foundational principles. There are two objectives to this approach. The first is to allow you to develop your own understanding of the strengths and limits of particular theories. A second is to allow you to develop your own personal synthesis and approach for identifying and solving the type of unstructured problems that you will face in your careers.

Evaluation:
The grading plan describes the relative importance attached to each of the individual activities used to assign a course grade. The overall course grade will reflect your performance in terms of the: (1) Assignment Questions and Peer Feedback (30%), (2) Class Participation (40%), and (3) Final Exam (30%). At the end of the semester, you will be given an opportunity to evaluate the contribution of each team member. Grading will be based on relative rather than absolute standards (such as the OSU standard grading plan). Each of the grade components is described below.

(1) Assignment Questions and Peer Feedback (30% of Grade).
In order to help students prepare for class and to improve everyone’s classroom experience, students are asked to write a short response to assigned questions for sessions 5, 8, and 12. These responses are due before the associated class session. While I will not impose a length requirement, experience suggests that ~500 words are sufficient to respond to most questions. A better heuristic is to use the length you believe you need to answer the question (while keeping a peer engaged and interested).

Some of these questions may ask you to utilize generative AI and evaluate the response from a tool such as ChatGPT. The goal of introducing these tools is to help us consider questions such as: (1) whether and how generative AI may help us create new value, (2) whether and how generative AI affects your ability to capture value, and (3) whether you are able to deploy generative AI in a way that is not easily replicated by others. That is, whether and how does generative AI affect your ability to generate an advantage over close competitors? These responses will naturally be longer as you’ll include both the generative AI response and your critique of that response.

In order to further foster interaction between student participants, we will use the peer review function in Carmen Canvas assignments. Peer review enables a student to provide feedback on another student’s submission—to annotate, comment, and evaluate (using a rubric) work submitted by your classmates. Research has demonstrated that peer review is beneficial to developing your critical thinking skills according to Bloom’s Taxonomy. This approach promises to enhance your learning by allowing you to share and reflect on your peers’ responses to class discussion questions (Please see Carmen Peer Review for Students at https://teaching.resources.osu.edu/toolsets/carmencanvas/guides/carmen-peer-review-students).
Three peers will be randomly selected to offer anonymous feedback on each student's initial response. These responses are designed to be short (250 words). I have also published an evaluation rubric on Carmen that asks the peer to evaluate the original student's response on dimensions such as their understanding of the relevant concept and ability to apply the tool to generate insight. However, the primary objective is to provide peers with honest feedback on their responses (consistent with the check, check-plus, and check-minus grading norms described below).

I review all assignments and feedback. In evaluating these assignments, I am not looking for one "right answer." Rather, my goal is to create an incentive for you to think through the question in depth, apply the appropriate theoretical tools and frameworks, and develop a consistent and logical argument that supports your position. Sometimes it is easy to grasp the basic ideas underlying a tool or theory, but more difficult to actually apply the ideas. Thus, good responses indicate why the chosen theoretical tool is appropriate for the business problem, describe the assumptions and logic underlying the chosen tool, and correctly apply the tool.

Consistent with the objective of encouraging excellent class preparation, I grade the assignment responses using a simple system of 'check,' 'check-plus,' and 'check-minus.' My assumption is that most responses will receive a grade of 'check' indicating that the work has satisfied the criteria for good class participation listed below and that the subsequent class participation will be of high quality. In exceptional cases, a check plus grade will be awarded when the case preparation work, as demonstrated in the write-up, is extraordinary. A check minus grade will be given when the write-up is less than the norm for that session. The point equivalents for each write-up are 95 points for check-plus, 91.5 points for check, and 88 points for check-minus. Given the nature of the assignment, the maximum grade for a late assignment of any kind is an 83.

At the end of the term, I will add an additional entry based on my perception of the quality of each individual's feedback. This evaluation of your peer feedback will also be evaluated using the simple check, check-plus, and check-minus system. The overall Assignment Questions and Peer feedback grade component is calculated as the simple average of your responses to the assignment questions and my end-of-term evaluation of the quality of your peer feedback.

(2) Class Participation (40% of Grade). Much of our learning will occur through in-class discussion. The grading plan attempts to emphasize the quantity and especially the quality of insight you provide through your comments. Students earn excellent class participation when their comments demonstrate that they understand the presented business tools and can develop creative and innovative insights regarding the business tools and problems discussed in class. These comments demonstrate a deep and nuanced understanding of course concepts and often generate entirely new insights. Students earn good class participation when their comments demonstrate that they understand the presented business tools or can generate some productive insights from this understanding. Good comments demonstrate a solid understanding of course concepts and an ability to build on prior comments to advance class discussion. Students earn basic class participation when their comments indicate that they have only developed a rudimentary understanding of the business tools or problems discussed in class.

At the midpoint of the term, I will post my first-half class participation score to Carmen. At the end of the course, I will post my second-half class participation score to Carmen. In addition to the instructor's evaluation, each student is given the opportunity to list up to five individuals in the class who, in their opinion, demonstrated excellent class contributions throughout the semester. Students may not list themselves on this form. I will provide access to a Google Form (via a Carmen Announcement) prior to the last day of our class that will allow you to anonymously identify those individuals who you believe contributed most significantly to your learning in this course.

(3) Course Exam (30% of Grade). This course is designed to help you achieve 3 goals. One is to develop diagnostic reasoning skills appropriate for business and management. A second is to learn how to better communicate your reasoning in verbal and written form. The third is to help you learn how to apply the theories, tools, and frameworks of strategic management applicable in dynamic settings. While it is possible to evaluate your skills on the first 2 of these goals through class discussion and written reports, the only opportunity to fully evaluate your progress on the third goal is through the course exam. Consequently, the final exam will focus exclusively on the conceptual tools, theories, and frameworks developed in the course. While past exams include a number of short-answer type questions, given the rapid advances in large language models, I may alter the exam format. Regardless, I will provide additional detail, including sample exam questions, during the wrap-up session. I anticipate offering the exam online via the Carmen Quiz function during a 48-hour time period preceding the final exam date/time that OSU assigns to this course (Friday, Dec. 8).
CLASSROOM POLICIES

Course technology:

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk.

**Self-Service / Chat support:** [ocio.osu.edu/help](http://ocio.osu.edu/help)  **Phone:** 614-688-4357(HELP)

**Email:** servicedesk@osu.edu  **TDD:** 614-688-8743

Attendance:

A major part of your learning in this course will take place in the classroom. Given the complexity and interdependence of the problems we will discuss, responses are often contingent and multi-faceted. As the course is designed to help you develop a personal synthesis and perspective regarding these problems it is not possible to make up for an absence. Moreover, your active participation is helpful in enhancing everyone’s understanding of the material. While I do not believe it is productive to take attendance at the collegiate level, it is not possible to earn class contribution points in sessions you do not attend. Please contact me if you anticipate missing multiple sessions.

Classroom Technology:

While I see benefits to the use of laptops, smartphones, and other electronic devices, they have considerable negative externalities. Empirical evidence indicates that students learn more when they do not use electronic devices in class and physically write down any notes.\(^1\) While I have no desire to restrict the tools you choose to use in our classroom, **please be mindful that any technology you use does not distract those around you. The inappropriate use of technology is an indicator of poor class contribution.**

OSU Disability Policy:

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue

OSU Academic Misconduct Policy:

The Ohio State University’s Code of Student Conduct, Section 3335-23-04 defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s Code of Student Conduct is never considered an “excuse” for academic misconduct. The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Failure to follow the rules and guidelines established in the University’s Code of Student Conduct may constitute “Academic Misconduct.” Sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University. For more information, please reference: [http://oaa.osu.edu/coamfaqs.html#academicmisconductstatement](http://oaa.osu.edu/coamfaqs.html#academicmisconductstatement)

Grade Appeals:

Grades on exams and assignments are intended to reflect the overall quality of performance of the student. If you think your grade on an exam or assignment does not reflect the quality of your performance, submit a clear written

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explanation of your reasoning within a week after your work is returned. I will carefully consider all such appeals. In the case of the final exam, I will not re-grade individual questions. I will only re-grade an entire exam. The final grade for the re-graded exam may be greater than, less than, or equal to the original grade.

Carmen Access:

You will need to use BuckeyePass multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click Enter a Passcode and then click the Text Me New Codes button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.
- If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and IT support staff will work out a solution with you.

Safety and health requirements:

All faculty, staff, and students are required to comply with and stay up to date on all University safety and health guidance.

AI Policy:

I expect students in this course to be aware of Artificial Intelligence (AI) tools such as ChatGPT and expect you to use these tools in your coursework. Learning to use AI is an emerging skill and I will aim to help you think about how to use these tools. As part of our learning about AI, I would like to make sure everyone is aware of some of the limits of tools such as ChatGPT.

- If you provide minimum effort prompts, you will get low-quality results. You need to refine your prompts in order to get good outcomes. This takes work.
- Do not trust anything that AI tools say. If an AI gives you a number or states an opinion, you should assume it is wrong unless you either know the answer or can verify the answer via a reputable source (a colleague has demonstrated several logical inconsistencies with ChatGPT). You are responsible for any errors or omissions in responses generated by the tool. It works best for topics you understand.
- AI is a tool, but one that you need to acknowledge using. Please include a paragraph at the end of any assignment that uses AI explaining how you used the AI and what prompts you used to get results. I interpret failure to do so as a violation of our academic misconduct policy.
- Be thoughtful about when AI is useful. It may be beneficial to recall that most AI uses probabilistic logic (vs. formal, informal, or mathematical logic). Do not use AI if it is inappropriate for the case or circumstance.
About Your Instructor
Michael J. Leiblein, Ph.D.

Michael Leiblein is a Professor of Management with expertise in strategic management and innovation management. Michael created the Advanced Competitive Strategy, Management Consulting (Business Solution Teams), and Technology Strategy and Innovation Field Study MBA elective courses at the Fisher College of Business. He has previously taught the MBA business core and MBA corporate core strategy courses, electives on corporate strategy, as well as executive and Ph.D. seminars on competitive strategy, innovation management, and research design. He has won multiple outstanding MBA core course instructor awards, led executive and Ph.D. level seminars in the US and Europe for academic and non-academic institutions, and been invited to be a strategy and innovation subject matter expert for the Accenture Academy. He has consulted in the United States, Europe, and Asia for a variety of organizations and associations.

Michael’s academic research focuses on the relationship between strategic decisions, organizational form, and firm performance in technology-intensive industries. He has published over two dozen academic articles and monographs in top-tier (FT 50) academic journals such as the Strategic Management Journal, Strategy Science, the Academy of Management Review, the Academy of Management Journal, the Journal of Industrial Economics, the Journal of International Business Studies, the Journal of Management, and the Journal of Management Studies. His research has been recognized with academic awards from the Academy of Management, the Academy of International Business, and the Strategic Management Society. In addition, his research has received funding from organizations such as the National Science Foundation and been published in international media outlets such as The Financial Times (London), Les Echos, Red Herring, and USA Today.

Michael’s service to the strategic management field is broad and significant. He is a founding co-editor of the Strategic Management Review and co-chair of the Strategy Research Foundation. In 2019, he was elected to a five-year leadership position at the Academy of Management’s (AoM) Strategic Management (STR) division (>5,800 members in July of 2021). He currently serves on the editorial and advisory boards of journals including the Strategic Management Journal (since 2004) and Strategy Science (since its founding in 2013). He previously served as an editorial board member on the Academy of Management Journal and the Academy of Management Review; as an advisory panelist for the National Science Foundation; as an associate editor for the Journal of Management; as chair of the SMS’s competitive strategy interest group; and as an executive committee member of the AoM's Business, Policy, and Strategy (BPS) division. At Ohio State, Leiblein currently serves as the founding academic director of OSU’s Integrated Business and Engineering Program. He was a founding co-director of OSU’s multidisciplinary Food Innovation Center and the founding academic director of the OSU Center for Innovation (2016). He co-developed the OSU YPO-WPO innovation program (2015), an innovation summit with Cherry Bekaert, the National Center for the Middle Market, and the Strategic Management Society (2015), and the OSU@CERN Transatlantic Innovation program (2016). Previously, he developed the TechColumbus Innovation Summit (2009 through 2012).

Michael received his Ph.D. from Purdue University and his M.B.A. and a B.S. in Electrical Engineering from Rensselaer Polytechnic Institute. Before his doctoral studies, he worked as a consultant for Andersen Consulting (Accenture) and as an engineer for Johnson Controls. In his free time, Michael enjoys attending collegiate sporting events, opera, and hiking through New England and the American Southwest.
## Technology Strategy & Innovation Management
### Detailed Course Agenda

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Course Introduction. Syllabus, Pseudo-Science, and the role of business</th>
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<tbody>
<tr>
<td>Mon., 10/16</td>
<td>- Read (Carmen). Syllabus.</td>
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<tr>
<td></td>
<td>executives should care about management theory,” Harvard Business</td>
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<td></td>
<td>- Optional (Carmen). Pfeiffer, A. 2009. Close link between engineering</td>
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<tr>
<td></td>
<td>- Optional (Carmen). Vermeulen, F. 2013. Beware the sirens of</td>
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<tr>
<td></td>
<td>Management Pseudo-Science. <a href="https://hbr.org/2013/08/beware-the-">https://hbr.org/2013/08/beware-the-</a></td>
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*Syllabus Questions:*

1. What are your learning objectives for this course?
2. What does the phrase “management theory” mean to you? Do you agree with Christensen and Raynor’s position regarding the importance of management theory? Can you provide an example of how a good business theory might help you?
3. Ask AI, how should business navigate a world where truth becomes unclear and everything is politicized. Do you agree?

<table>
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<tr>
<th>Session 2</th>
<th>(Good) Strategy. Generating Superior Performance</th>
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<tbody>
<tr>
<td></td>
<td>strategy is?</td>
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<tr>
<td></td>
<td>- Read (Carmen). Rumelt, R. 2011. The perils of bad strategy, McKinsey</td>
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<td>Quarterly, 1-10.</td>
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*Syllabus Questions:*

1. What is meant by competitive advantage, superior performance, and sustained competitive advantage? Can you list three things that affect WTP, Price, Cost, and WTS? What do these lists tell you about advantage and sustained advantage?
2. How does Rumelt define strategy? (Why) Is this approach helpful to managers?
3. Ask AI, how can a business education (or our course) help managers to choose better strategies? Do you agree?

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<tr>
<th>Session 3</th>
<th>Innovation Strategy. Choice Matters</th>
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<tr>
<td></td>
<td>Strategy. Chapter 1 (Overview) &amp; Chapter 3 (These Choices Matter).1</td>
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<tr>
<td></td>
<td>- I can state how technology management differs from “regular”</td>
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*Assignment Questions:*

1. How does technology management differ from “regular” management?
2. What are the key choices facing innovators? What are some of the challenges associated with decision-making and managing in a dynamic environment?
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<tr>
<th>Session 4</th>
<th>Considering Dynamics via a Real Options lens</th>
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 □ I understand whether and why real options valuation differs from standard NPV valuation. |

**Assignment Questions:**
Please read the Luehrman article and respond to the following prompt questions.
1. Why are traditional DCF techniques such as NPV limited? How does the real option approach help managers? Is there anything missing in the real options approach?
2. Ask AI, how does a real options valuation differ from a standard NPV valuation. Do you agree?

<table>
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<tr>
<th>BONUS Opportunity</th>
<th>I am hosting Max Michaels on campus this Friday. Max is on the board of a “FinTech” firm that is the subject of a forthcoming HBS case. He is coming to OSU to present the case. We will “pre-read” the case and Max will lead two sessions—the first on entrepreneurship and strategy in FinTech and a second session on business ethics in the context of AI from a board director perspective.</th>
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<td>Fri., 10/27</td>
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<th>Session 5</th>
<th>Choosing a Sequence of Customer Segments</th>
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 □ Read (Carmen). *Lytro Case*.  
 □ Optional: Jobs to be Done Slides (Identifying Customer Needs).  
 □ Respond to assignment questions.  
 □ Respond to peers’ initial responses.  
 □ I can state the criteria for when it is useful to choose a sequence of customer segments. |

**Assignment Questions:**
Please respond to the following prompt questions after reading the assigned material.
1. How would you choose which customer segments to target in an emerging or dynamic market? Be specific—what attributes of a segment would you pay attention to and why? Does your decision-making process differ from that in a mature market? Why or why not? Does your favorite AI device provide a similar answer?
2. Looking forward, identify two distinct potential Lytro customer segments. Describe how these customers are different than each other and how the value proposition for each group differs. Which customer should Lytro choose? Can they serve both equally well?
Session 6
Wed., 11/1

Choosing a Technological Trajectory

☐ Read (Carmen link). The future of light is the LED
☐ I can state criteria for choosing between technologies with different current performance, rates of improvement, or long-term potential performance.
☐ I understand how uncertainty affects these choices.

Assignment Questions:

Please respond to the following prompt questions after reading the assigned material.

1. Given the reading, how would you choose among competing technologies in an emerging technological space? Whether and how do the criteria vary across mature and emerging technologies?
2. The Future of LED article illustrates several of the challenges of forecasting the evolution of a technology (or competing technologies). Using data from the reading, which light bulb technology would you invest in at the time of the article? Why?
3. Ask AI, what should I consider when choosing amongst a set of technologies in stable or dynamic environments? Do you agree?

Session 7
Mon., 11/6

Entrant and Incumbent Firm Competition

☐ Read (HBSP). Synthes
☐ I can state at least two advantages held by entrant and incumbent firms encountering technical change.

Assignment Questions:

Please respond to the following prompt questions after reading the assigned material.

1. What are the risks of coming out with a bioresorbable product? What is the worst that could happen? The best? What are the risks of not coming out with a bioresorbable product? What is the worst that could happen? The best?
2. What should Synthes do?
3. Ask AI, when should a firm pursue an early mover advantage? Does your answer vary for entrant or incumbent firms? Do you agree?
MODULE II:
CAPTURING VALUE: CHOOSING MECHANISMS TO PROFIT FROM INNOVATION

Session 8
Wed., 11/8
Choosing a Business Model
☐ Read (Carmen link). Avatech mini-case
☐ Optional. Read Winter, Sydney. Appropriating gains from innovation.
☐ Respond to assignment questions & offer peer feedback.
☐ I can define the four business models in G&S.
☐ I understand the causes and consequences of differences (e.g., identity, customers, technology) across these models.

Assignment Questions:
Please respond to the following prompt questions after reading the assigned material.

1. Please describe the four “business models” identified by Joshua Gans, Erin Scott, and Scott Stern (IP, Demand Side Disruption, Value Chain, and Architectural). Are there instances where you would favor one business model over another?
2. Considering that the snow-detecting equipment industry is still in its infancy, which of these business model approaches would help a startup such as Avatech succeed on an ongoing basis? What data or experiments might you run to suggest one approach is better than the others?

Session 9
Mon., 11/13
The Demand Side Disruption Business Model
☐ Optional (Library). Christensen, C., M. Raynor, & R. McDonald. 2015. What is Disruptive Innovation?
☐ Assignment (HBSP): Play the HBS Disruptive Innovation simulation.
☐ I can define a sustaining and a disruptive innovation.
☐ I can state why it is hard for established firms to respond to disruptive innovations.

Assignment Questions:
Please respond to the following prompt questions after reading the assigned material.

1. How does Professor Christensen define the concept of “disruptive innovation?” How does this compare to the notion of technology s-curves or product diffusion curves?
2. Can you identify instances where the popular / “real-world” use of the disruptive innovation phrase is or is not consistent with Professor Christensen’s definition?
3. Ask AI, what is disruptive innovation? Do you agree?
Session 10
Wed., 11/15

Complementary Assets & the “Value Chain” Business Model

- **Prepare** (HBSP). Abgenix and the Xeno Mouse case.
- I can define complementary assets and the value chain model.
- I understand how complementary assets affect choice and outcomes.

**Assignment Questions:**

Please respond to the following prompt questions after reading the assigned material.

1. How do Gans and Stern suggest the value chain model differs from the “disruptive” or “architectural” innovation models? What factors would you focus on in choosing a value chain partner? Which of these factors are most important?

2. What should Scott Greer do? Should he direct Abgenix to “go it alone” through Phase II trials or sign with Pharmacol or BioPart? In the Abgenix case, what factors help you decide whether Abgenix should pursue a value chain approach? What factors affect the choice between Pharmacol and BioPart as partners?

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Session 11
Mon., 11/20

Architectures, Standards, & Platforms: The Platform Business Model

- **Prepare** (HBSP): Fasten: Challenging Uber and Lyft with a new business model.
- I can define network effects.
- I can list at least three choices a platform owner make to capture value in the presence of network effects.

**Assignment Questions:**

Please read chapter twelve by Gans and Stern, the “Fasten” case, and respond to the following prompt questions.

1. What are the core drivers of value creation and capture in a platform approach to architectural strategy? Can you list the sources of the externalities that led to tipping in the case of Android and iOS (or Lyft and Uber)?

2. What customer, technology and positioning choices allow a start-up to effectively “core” and “tip” a single standard or platform?

3. What explains the rapid growth of ridesharing companies such as Uber and Lyft? What explains Fasten’s successful entry into the Boston market? What should Fasten do?

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Thanksgiving Holiday
Enjoy your day!
### Module III:
**Delivering Value: Using Organization to Assemble Knowledge and Build Competence**

#### Session 12
**Managing the Resource Allocation Process**

- **Prepare (HBSP)**: Linking Strategy to Innovation: Materials Technology Corporation.
- Respond to assignment questions and offer Peer feedback.
- How do Wheelwright & Clark suggest investment (projects) differ?
- What are the implications of these differences in projects?

**Assignment Questions:**

Please read the Wheelwright and Clark article, the “Linking Strategy to Innovation” case and respond to the following prompt questions.

1. How would you characterize the various projects MTC has undertaken in the framework proposed by Wheelwright & Clark?
2. Is this the right set of projects for MTC? If you were advising Spencer Quinn on how to build MTC into a successful company, what would you tell him?
3. Ask AI, what is an innovation portfolio? Do you agree?

#### Session 13
**Managing Innovation within the Firm**

- **Read (Purchase)**: Govindarajan, VJ, and C. Trimble. *How Stella Saved the Farm*
- I can state why it was difficult for all the animals (functions) to get along.
- I can argue one way I would manage to improve the situation.

**Assignment Questions:**

Please read the Govindarajan and Trimble book and respond to the following prompt questions:

1. “Adopt” a character or set of characters from the story (e.g., Deirdre, Bull, Mav, Stella, Maisie (and Andrea), or Rambo and Einstein). Briefly describe the story from your character’s perspective. What did your character do well (or not so well)?
2. By the end of the story, what had your character(s) learned about innovation?
3. Make the best argument that you can that your character(s) saved the farm.

#### Session 14
**Seminar Wrap-Up**

- **View (Carmen)**: Paul Schoemaker (Wharton’s Mack Institute) on Scenario Planning
- I understand the course content.
- I understand the final exam format.

**Assignment Questions:**

1. Come to class with any questions you have regarding the material presented in this course.


There is a lot of contemporary literature surrounding the ideas of standards and platforms. Yet, many of these current ideas have roots that go back in time. The following articles provide a mix of contemporary and classic work on standards, network externalities, and platform competition.