Introduction

Identifying opportunities, developing strategies, and designing processes for the creation of new products, are key responsibilities for both entrepreneurs and managers in established firms. But developing new products is also fraught with risk: an overwhelming majority fails when introduced to the market.

This course is about improving the odds of placing winning bets on new products.

We especially recommend the course to students who expect to (i) launch their own businesses, (ii) work as brand or product managers, or (iii) have responsibilities requiring knowledge of product strategies and management of new product initiatives. Consultants who advise clients on product strategies may also benefit from taking the course.

We consider both strategies and processes for new product development. Strategy provides the context for product development --- without it, each product development project is a separate and disjointed effort that has a much lower chance of success. This is one major reason why so many new products fail. Strategy for new products requires aligning new product development with market opportunities (for example in emerging markets, or by exploiting new inventions and technologies); selecting business models; and choosing effective marketing and manufacturing strategies. Process includes choosing a sequence of activities that is both rational and effective for converting ideas into compelling new products. These activities include concept development, design, prototyping, demand estimation, costing and pricing, branding, packaging, product testing, and market testing. However, not all products use the same development processes, and it is important to understand when to use which processes.
Course objectives
The objective of this class is to develop capabilities that will allow you to make smart
decisions about which new products to make, and what strategies and development
processes to use. The aim is to combine the development of a conceptual framework
with real life examples and assignments that can help form a solid foundation for
designing strategies and development processes for new products.

In parallel with the development of the conceptual framework, students will work on a
project analyzing a specific opportunity, developing a strategy, and performing selected
steps in the process of product development. This will allow them to:
- Apply the conceptual framework to analyze a specific opportunity and identify new
  products to exploit the opportunity.
- Develop a product concept and defend a strategy for a new product.
- Learn from the presentations and discussions of other groups.
- Be exposed to a variety of new product opportunities across industries/geographies.

Class structure
To this end, we will examine:
- Frameworks for developing strategies for new products; and
- Processes used for structuring new product development.
The first half of the course will focus on strategies, and the second half on processes, for
new product development.

Class time will be split among (i) lectures; (ii) case discussions; (iii) guest speakers; and
(iv) project work. The last session will be dedicated to having the groups present their
different projects, answering questions, synthesizing what was learned and receiving
feedback from the rest of the class.

Required readings and cases
Selected chapters from Walter Isaacson’s (2011), Steve Jobs, Simon & Schuster: New
York, NY (order directly).

Course packet of reading and cases.
Grading
Grades will be based on the following areas:

1. Class Attendance & Participation 30%
2. Homework assignments (two short assignments) 30%
4. Final project 40%

Group project
All students will work on a group project. The typical group size is 4-5 students. The instructors will guide the teams on both the technical and business dimensions of the work. Each group will submit a powerpoint presentation to the instructor and give a presentation to their fellow students in the last class of the semester. Please note that there is no other written report that needs to be submitted.

All projects must be in an industry that has broad appeal, such as consumer products, retailing, retail banking, mass media or telecommunications. Markets with few customers, and business-to-business projects, are not appropriate for this course.

Each project should consider an opportunity from one of the following perspectives: (i) an entrepreneur looking to exploit a specific opportunity (the entrepreneur could be one or more of the students in the group); or (ii) an entrenched firm/organization that is already a player in the relevant industry and country (e.g., Tata Motors in India).

Pick any one of the following four options. In each case, use the relevant concepts and ideas discussed in the class.

Option 1: Start with a market opportunity and conduct an ideation session to identify new product ideas (a variation on this option is to start with any product ideas that you may have and evaluate them in the context of a market opportunity). Select one idea. Analyze the market, the competition and the buying behavior of consumers. If appropriate, assess alternative business models. Specify the target market, the value proposition and the positioning for the product. OPTIONAL: If you have the time, develop a product concept and obtain rough estimates of demand and costs.
Option 2: Select an invention, or an existing product or service that has not been successful. First analyze why you think it has not been successful. Then describe how you think the product/service might be turned into a successful new product. Your analysis should consider the market opportunity, the strategy for the firm (beyond the single product), alternative business models (if appropriate); the firm’s capabilities and resources; competition; and the buying behavior of consumers. If necessary, choose a new target market, value proposition and product positioning. OPTIONAL: If you have the time, develop a product concept and obtain rough estimates of demand and costs.

Option 3: Choose this option if you already have a previously developed strategy and target market for a new product. Develop product ideas into product concepts, evaluate these concepts (by obtaining feedback from consumers), specify a design brief (including the look and feel, user interface, brand name, logo and packaging), and obtain demand and cost estimates.

Option 4: Select a business or industry undergoing change in a market or country – for example television, cell phones, music, manufacturing (3D printing), customized medicine, biotechnology, energy, automobiles. Explain how the business or industry is changing; discuss the forces that are at play, and project where you see the industry to be heading. Then (1) describe the opportunities for new products in the industry, (2) evaluate these opportunities and identify/describe those that you consider to be the most promising, (3) assess the potential impact of the new product on business, markets and society, and (4) propose how you would bring the new product to fruition. You can choose to limit your analysis to one or another part of the world, if that is more reasonable.
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<thead>
<tr>
<th>Session and Topic</th>
<th>Readings (R) and Cases (C)</th>
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<tbody>
<tr>
<td>- Lecture: Types of opportunities and types of new products. Develop a strategy for a new product.</td>
<td>- Steve Jobs, Chapters 30, 31, 36, 38 (if you have the time, please contrast with the early years, described in Chapters 2, 5, 6, 8)</td>
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<td>- Discuss homework 1: Develop a strategy for Soylent (<a href="http://www.soylent.me">http://www.soylent.me</a>)</td>
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<td><strong>2. Product development strategies - II</strong></td>
<td>- Tesla Motors (<a href="http://www.teslamotors.com">http://www.teslamotors.com</a>) (C)</td>
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<td>- Selected student presentations of homework 1</td>
<td>- The End of Food (Reading for homework 1)</td>
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<td>- Case discussion: Tesla Motors</td>
<td>- Slow ideas (R)</td>
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<td>- Lecture: Business models, disruptive innovations.</td>
<td>- Business models, business strategy and innovation (R)</td>
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<td>- Case discussion: Launch of the Indian Premier League</td>
<td>- Steve Jobs, Chapter 25 (start reading from p. 334) and Chapter 39 (read up to p. 517)</td>
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<td><strong>4. Product development process - I</strong></td>
<td>- Dropbox (<a href="https://www.dropbox.com">https://www.dropbox.com</a>) (C)</td>
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<td>Lecture: Development process. Concept development.</td>
<td>- Do you need a new product-development strategy? (R)</td>
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<td>Guest speaker: The stage gate process</td>
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<td>Discuss homework 2: redesign of grocery cart</td>
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<tr>
<td>Lecture: Product design and product architecture.</td>
<td>- Three levels of design: visceral, behavioral and reflective (R)</td>
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<td>- Selected student presentations of homework 2.</td>
<td>- Steve Jobs, Chapters 12, 25, 26, 27</td>
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<td><strong>6. Final project presentations. Wrap up.</strong></td>
<td>Wrap-up</td>
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<td>- What did we learn from the projects?</td>
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<td>- Which ones would you choose to invest?</td>
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<td>- What next?</td>
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Optional readings


About the instructor

Rajeev Kohli is the Ira Rennert Professor of Business in the Marketing Division at Columbia Business School. He has research and teaching interests in product development, emerging markets, pricing, and mathematical models of consumer choice. He has taught MBA and Executive MBA courses at Columbia Business School on New Product Development, Catching the Growth Wave in Emerging Markets, Innovation and Opportunities in India, Information Technology in Marketing, and Marketing Planning. He also teaches a PhD course on mathematical models in marketing. Professor Kohli serves on the advisory board of New York City’s Media Lab.