

# M478: Product Innovation and Marketing (9/2/05 VERSION) – Prof. E. Dahan

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Session Summary	Readings	Assignments DUE
<b>1</b> Friday, September 2, 2005, 9:30am – 12:30pm Listening to and Observing Customers Introduction of class projects CASE: <i>Lead Users at 3M</i>	<i>Mktg Eng</i> : pp. 233 – 239 <i>HBR Innov</i> : pp. 31 – 53 <i>Why Not?</i> : Preface & pp. 1 – 12	<ul style="list-style-type: none"> <li>• Form Project Team</li> <li>• Think about your own Why Not? idea(s)</li> </ul>
<b>2</b> Friday, September 16, 2005, 9:30am – 12:30pm Generating Innovative Ideas Measuring Customer Preferences CASE: <i>iPods</i>	<i>Mktg Eng</i> : pp. 239 – 253 <i>Why Not?</i> : pp. 13 – 63 Conjoint: Manager's Guide Notes on Listening	<ul style="list-style-type: none"> <li>• iPod conjoint study</li> <li>• [1] Submit idea by 9/14: <a href="http://www.whynot.net">http://www.whynot.net</a> and cc: edahan@ucla.edu</li> </ul>
<b>3</b> Saturday, September 17, 2005, 8:30am – 11:30am Diffusion of New Technologies CASE: <i>HDTV</i>	<i>Mktg Eng</i> : pp. 253 – 263 <i>Why Not?</i> : pp. 65– 83 <i>Mktg Eng</i> : pp. 277 - 282	<ul style="list-style-type: none"> <li>• [2] Turn in answers to: Zenith HDTV Case.doc</li> </ul>
<b>4</b> Saturday, October 1, 2005, 1:00pm – 4:00pm Consumer Biases and Simplifying Heuristics CASE: <i>Smart Phones</i>	<i>HBR Innov</i> : pp. 77 – 102 Spark...Empathic Design	<ul style="list-style-type: none"> <li>• Submit your team's course project plan</li> </ul>
<b>5</b> Friday, October 14, 2005, 9:30am – 12:30pm Grouping Similar Customers Market Segmentation & Targeting CASE: <i>ABB Electric</i>	<i>Mktg Eng</i> : pp. 61 – 103 <i>HBR Innov</i> : pp. 1 – 30 <i>Why Not?</i> : pp. 87 – 114	
<b>6</b> Saturday, October 15, 2005, 8:30am – 11:30am Product Positioning Perceptual Mapping & Factor Analysis CASE: <i>Infiniti G20</i>	<i>Mktg Eng</i> : pp. 117 – 146 <i>HBR Innov</i> : pp. 131 – 152 <i>Why Not?</i> : pp. 201 – 214 <i>Mktg Eng</i> : pp. 148 – 154	
<b>7</b> Friday, October 28, 2005, 1:30pm – 5:00pm Disruptive Technologies Pricing, Cost Reduction & Competitive Response CASE: In-class exercise	<i>Mktg Eng</i> : pp. 180 – 212 <i>HBR Innov</i> : pp. 103 – 129 <i>Why Not?</i> : pp. 115 – 132 Control Tomorrow's Cost... Danger: Stealth attack	<ul style="list-style-type: none"> <li>• [3] Conjoint Utility Estimation &amp; Simulator Worksheet</li> </ul>
<b>8</b> Friday, November 11, 2005, 9:30am – 12:30pm Managing for Creativity and Innovation Sources of New Product & Service Ideas Video CASE: <i>IDEO Dilbert Cubicle</i>	<i>HBR Innov</i> : pp. 55 – 76 <i>Why Not?</i> : pp. 135 – 156 Robert Cooper article Sam Farber on Design	
<b>9</b> Saturday, November 12, 2005, 1:00pm – 4:00pm Testing New Products & Services ASSESSOR, Market Simulators, Logit CASE: <i>Team New Zealand</i>	<i>Mktg Eng</i> : pp. 263 – 271 <i>HBR Innov</i> : pp. 179 – 205  <i>Team New Zealand</i>	<ul style="list-style-type: none"> <li>• [4] Parallel &amp; Sequential Prototyping Homework</li> </ul>
<b>10</b> Friday, December 2, 2005, 1:30pm – 5:00pm Measuring Market Response, Allocating Resources Optimally CASE: <i>Nestea &amp; Fruitopia</i>	<i>Mktg Eng</i> : pp. 414 – 448  Class Handout	
<b>FINAL</b> Saturday, December 3, 2005, 8:30am – 11:30am FINAL EXAM OR PROJECT DUE		

## OBJECTIVES

Innovative products and services are the lifeblood of the firm in a highly competitive global market place. “Insanely great products,” as Steve Jobs has coined them, generate healthy demand, profits and customer loyalty. Creating such products and services requires, above all, that you understand your potential customers, i.e. who they are, what motivates them to do business with your organization, and how they can be influenced to become better customers. It also requires an understanding of the relative strengths and limitations of your firm, including its relative cost position and technological capabilities, and its competitive environment.

The course is about innovating and marketing insanely great products and services to customers.

We utilize marketing science, customer research, and creativity tools - i.e. marketing & economic models, market research methods to measure and quantify preferences and customer decision processes, and sources of innovative ideas and creativity. Our goal is to help create value and allocate company resources that maximize customer response to new products, and thereby maximize the profits that result. The emergence of the internet as a platform for interacting with customers creates unique opportunities for implementing product innovation and marketing.

The course builds on the principles of marketing taught in MGMT 472, and integrates many elements from economics, statistics, accounting and operations that you learned in the first year of the program. Key components of the course are:

- Listening to and understanding customers about their needs and thought processes
- Sources of new product ideas, concepts, creativity, and insanely great design
- Market forecasting and diffusion to innovative and imitative customers
- Grouping customers into segments, targeting certain groups, and positioning products
- Responding to threats including new technology and low cost competitors
- Testing new products and services to improve the odds of success
- Optimally allocating marketing resources based on market response

## GRADING

1. Contributions to class discussion:	20%
2. One report on a case of your choosing:	20%
3. Four additional short assignments (5% each)	20%
4. Course Team Project <i>or</i> Open Book Final Take-Home Exam:	40%

**CLASS DISCUSSION CONTRIBUTIONS (20%)**

A great deal of learning comes from hearing and responding to what your colleagues have to say. Please complete the readings prior to each class and the assignment questions. You may be “cold-called.” Absences will affect your grade adversely. In order to receive participation credit for a missed class, submit a two-page summary of the session missed by the beginning of the following class. Quantity and quality of participation are both important. The grading formula will be along the following lines:  $CDG = \sqrt{Qty \times Avg.Score} - Absence Penalty$ , where  $CDG$  is the class discussion grade,  $Qty$  is the number of significant contributions, and  $Avg. Score$  is the average quality of your contributions. *If you find it difficult to participate, please discuss this with Professor Dahan.*

**WRITTEN ASSIGNMENTS (40%)**

- **One case study write-up (20%):** Handed in prior to the beginning of class for that case discussion. Write up one of the following five: *3M Lead Users*, *Zenith HDTV Diffusion*, *ABB Segmentation*, *Infiniti G20 Positioning*, or *Team New Zealand Testing*, maximum of 4 authors per report, maximum of 8 double spaced pages + exhibits
- **Four Short Individual assignments** will be assigned during the quarter (5% each)
  - a) Due 9/14/05: Submit idea to <http://www.whynot.net> & PowerPoint to [edahan@ucla.edu](mailto:edahan@ucla.edu)
  - b) Due 9/17/05: Submit answers to “Zenith HDTV Case.doc”
  - c) Due 10/28/05: Submit Conjoint Utility Estimation & Simulator Worksheet
  - d) Due 11/12/05 Submit Parallel & Sequential Prototyping Homework sheet

**PROJECT (40%)**

**Objective:** The project provides an opportunity for in-depth study or application of the techniques or concepts discussed in class. The project should be done alone or in groups of up to four students. Using data from your or a team member's company, conduct a pilot project focusing on one of the following:

- market forecasting, diffusion, and/or product life cycle analysis of a product or service
- customer preference assessment, perceptual mapping, segmentation, targeting, positioning
- measurement of the effectiveness of marketing programs and resource allocation practice
- creating, designing, developing and/or testing an original new product or service

The report should state the problem, present the analysis and findings, and offer strategic recommendations. Submit a one-page project proposal for my comments and approval by October 1 at 4pm. You may undertake this project solo, or in teams of up to 4 people. Team work is recommended, as it generally enhances quality and spreads the workload. The report will be printed double-spaced and should not exceed twelve pages, plus exhibits. All reports will be read in confidentiality and will be returned to the lead participant (please specify).

*or*

**TAKE-HOME FINAL EXAMINATION (40%)**

For those students unable to participate in the course project, there will be an optional take-home final exam consisting of quantitative analysis, short answer and/or multiple-choice, plus essays. It will be distributed at the end of class on Saturday, November 12, and due three weeks later on Saturday, December 3, 2005. You must *commit* to taking the take-home final examination *or* completing a team-based course project by the morning of Saturday, October 1, at 4:00pm.

**COURSE READINGS****We will study the following three (3) texts and readings:**

[Mktg Eng] *Marketing Engineering, Revised 2<sup>nd</sup> Edition* (2003).

[HBR Innov] *Harvard Business Review on Innovation* (2001).

[Why Not?] *Why Not? How to Use Everyday Ingenuity to Solve Problems Big and Small* (2004).

Various articles, cases, and datasets, available on i:\dahan\M478 or handed out, including:

“Conjoint Analysis: A Manager's Guide.” HBS Note [9-590-059]

“*Note on Listening to the Customer: Parts I and II*”.

“Spark Innovation Through Empathic Design.” *HBR*. [97606]

“Control Tomorrow's Costs Through Today's Designs.” *HBR*. [96104]

“Danger: Stealth attack.” *Forbes*. 1/25/99. pp. 88-93.

“Winning at New Products” by Robert Cooper

“Entrepreneur Sam Farber on Design” @*issue* (Corporate Design Foundation).

“Team New Zealand (A).” *HBS Case* [9-697-040]

**Useful References (from A to Z) on Creativity and Innovation**

Adams, James, *Conceptual Blockbusting: A Guide to Better Ideas*

Amabile, Teresa, D. Leonard & J. Rayport, *Harvard Business Review on Breakthrough Thinking*

Csikszentmihalyi, Mihaly, *Creativity: Flow and the Psychology of Discovery and Invention*

De Bono, Edward, *Lateral Thinking: Creativity Step by Step*

De Bono, Edward, *Six Thinking Hats*

De Bono, Edward, *The 5-Day Course in Thinking*

Feinstein, Jonathan S., *The Nature of Creative Development*

Hamel, Gary, *Leading the Revolution*

Kelly, Tom and Jonathan Littman, *The Art of Innovation: Lessons in Creativity from Ideo*

Michalko, Michael, *Tinkertoys*

Sutton, R., *Weird Ideas That Work: 11½ Practices for Promoting, Managing, & Sustaining Innovation*

von Hippel, Eric, *Democratizing Innovation*

Weisberg, Robert W., *Creativity: Beyond the Myth of Genius*

Zeitl, Paul, *The Art and Craft of Problem Solving* (more mathematical)

**Other Useful References for Quantitative Marketing**

Aaker, Kumar & Day (2004). *Marketing Research*, 8th Edition. New York: Wiley.

Armstrong, J. Scott (2001). *Principles of Forecasting*. Boston: Kluwer Academic Publishers.

Berry & Linoff (1997). *Data Mining Techniques For Marketing, Sales, and Customer Support*. New York: John Wiley & Sons.

Blattberg, Thomas & Getz (2001). *Customer Equity*. Boston: Harvard Business School Press.

Brandenburger & Nalebuff (1996). *Co-opetition*. New York: Doubleday.

Dolan & Simon (1996). *Power Pricing*. New York: The Free Press.

Doyle (2000). *Value-Based Marketing*. New York: Wiley.

Kotler (2003). *Marketing Management: Analysis, Planning, Implementation & Control, 11th Edition*. Englewood Cliffs: Prentice-Hall.

Mahajan, Muller & Wind (Eds.) (2001). *New-Product Diffusion Models*. Boston: Kluwer.

Rao & Steckel (1998). *Analysis for Strategic Marketing*. Reading, MA: Addison-Wesley.

Rust, Zeithaml & Lemon (2000). *Driving Customer Equity*. New York: The Free Press.

Sudharshan (1995). *Marketing Strategy: Relationships, Offerings, Timing & Resource Allocation*. Englewood Cliffs: Prentice Hall.

Tellis, Gerard J. (2004). *Effective Advertising: Understanding When, How, and Why Advertising Works*. Sage Publications.

Urban & Hauser (1993). *Design and Marketing of New Products, 2nd Edition*. Englewood Cliffs: Prentice-Hall.

Urban & Star (1991). *Advanced Marketing Strategy*. Englewood Cliffs, NJ: Prentice-Hall.

**Session 1****Friday, September 2, 2005, 9:30am – 12:30pm****Session Title: Learning About Customer Needs to Drive Innovation**

We'll look at the case of a new medical product line being designed at 3M utilizing Eric Von Hippel's *Lead User* methodology. We'll also introduce the course project, which is largely up to you to define based on your own goals, but which incorporates methods we will learn during the quarter. Capturing the "voice-of-the-customer" is critical to meeting customer needs and wants, but it is quite a challenge. We will compare many ways of listening to customers, including lead user analysis, Zmet, focus "troupes," cultural anthropology, empathic design, Kano, conjoint analysis, etc.

**(3) Readings:**

<i>Marketing Engineering:</i>	pp. 233 – 239
<i>HBR on Innovation:</i>	pp. 31 – 53 (3M case)
<i>Why Not?:</i>	Preface and pp. 1 – 12

**Case:** *3M Medical Products***Assignments:**

Due by Saturday 9/3/05:

- (1) Submit a list of your team members, up to four people per team, who will complete a course project, via email to **edahan@ucla.edu**. Topics to be finalized in two weeks.
- (2) Think about possible ideas that you might personally submit to **<http://www.whynot.net>**

Prepare the following study questions for class discussion:

- How has 3M's innovation process evolved since the firm's founding?
- What characterizes ideal lead users?
- How does the lead user method differ from other methods of understanding customers?
- Has the Medical-Surgical team applied Lead User research appropriately?
- Why is the customer's voice important? Why do we listen to customers?
- What part of the customer's voice might we choose to ignore?
- If you choose this case for your case report, prepare up to an 8-page report addressing the above questions, and a maximum 5-slide PowerPoint presentation (both due prior to class on 9/1/2005).

**Keywords: Lead users, Product Concepts, Focus Groups, Benefit Chains, User Observation, Cultural Anthropology**

**Session 2 Friday, September 16, 2005, 9:30am – 12:30pm****Session Title: Quantifying Customer Preferences and Generating New Concepts**

Capturing the “voice-of-the-customer” is critical to meeting customer needs and wants, but it is quite a challenge. We will study *conjoint analysis*, a method of quantifying the tradeoffs customers make when choosing between competing products and service. We will compare conjoint analysis with other ways of listening to customers, including lead user analysis, Zmet, focus “troupes,” cultural anthropology, empathic design, etc. Then we will turn to the topic of creativity and the process of generating new product concepts. The real world example of iPod music players will illustrate many of these issues.

**(4) Readings:**

*Marketing Engineering*: pp. 239 – 253

*Why Not?*: pp. 13 – 63

Note: “Conjoint Analysis: A Manager's Guide.” HBS Note [9-590-059]

Note on Listening to the Customer: Parts I (17 pages) and II (5 pages) by Prof. Dahan.

**Case:** *iPod web-based conjoint study*

**Individual Assignments:**

Due Wednesday 9/14/05 (TWO DAYS PRIOR TO CLASS):

- (1) Go to <http://www.webconjoint.com>; take the iPod conjoint study by yourself (ungraded)
- (2) Submit a one-paragraph idea to <http://www.whynot.net> and a copy, in the form of a single PowerPoint slide, in 24pt. type or larger to [edahan@ucla.edu](mailto:edahan@ucla.edu) (5% of grade)

Prepare the following study questions for class discussion:

- What are *preferences*?
- How do the different types of customer needs raised by Kano and others affect product design? Marketing? Manufacturing?
- What are the primary benefits of conjoint analysis?
- What kind of attributes should be evaluated? Which should not? Why?
- How should a product's price be set given conjoint data?
- How does a product's cost enter the picture??

**Keywords: Conjoint Analysis, Fractional Factorial Design, Product Attributes, Features, Tradeoffs, Utility, Kano Analysis, Kansei Analysis, Concept Generation**

**Session 3 Saturday, September 17, 2005, 8:30am – 11:30am****Session Title: Diffusion of New Technologies Over Time**

One of the key problems in market assessment and product management is forecasting how sales will grow over time. It is therefore important to develop the right intuitions and ideas about how sales *evolve over time*. The purpose of this class is for you to discover several useful and actionable regularities about the size of the market as a function of time. Real world examples will be used as illustrative cases for additional discussion.

**(3) Readings:**

<i>Marketing Engineering:</i>	pp. 253 – 263
<i>Why Not?:</i>	pp. 65 – 83
<i>Marketing Engineering:</i>	pp. 277 – 282 ( <i>HDTV case</i> )

**Case:** *Zenith HDTV*

**Individual Assignment:**

Due Saturday 9/17/05:

Answer the questions in “Zenith HDTV Case.doc” (**5% of grade**).

Use the spreadsheet, Analysis Helper Zenith HDTV.xls or the spreadsheet in the Zenith Case (CD-ROM), but please complete this assignment on your own.

- What are the key determinants of new product success in the eye of the consumer?
- How does one estimate the Bass diffusion model?
- What is the role of advertising and price in a diffusion model ?
- In the context of diffusion models, what are the three principal forces that drive market volume as a function of time?
- How might the  $p$  and  $q$  parameters be correlated? What underlies the relationship?
- If you choose this case for your case report, prepare up to an 8-page report and a maximum 5-slide PowerPoint presentation (both due prior to class on 9/16/2005).

**Keywords:** Bass Diffusion Model, Diffusion of Innovations, Imitators, Innovators, Early Adopters, Late Adopters, Laggards, Maturity, Crossing the Chasm, Product Life Cycle

**Session 4 Saturday, October 1, 2005, 1:00pm – 4:00pm****Session: Consumer Decision-making, Simplifying Heuristics, Biases & the Buying Experience**

It's not enough to invent a better mousetrap. To actually succeed with a product or service, and to maximize profitability, managers have to account for consumers' decision processes and perceptions throughout the entire buying experience. In this session, we explore some of the many mental processes, simplifying rules and biases that consumers employ in considering products and choosing which ones to actually buy and use.

**(2) Readings:**

*HBR on Innovation:* pp. 77 – 102

“Spark Innovation Through Empathic Design.” *HBR*. [97606]

**Case:** *Smart Phones* (in-class example)

**Team Assignment:**

Due Saturday 10/1/05:

Submit a one-page summary of your team's plan for the course project.

Prepare the following study questions for class discussion:

- What steps do customers go through to get from realizing a potential need to actually selecting, purchasing, and using a product nor service?
- Can the conjoint model of utility functions and tradeoffs predict the outcome at each of these steps? What other models or descriptions might fit better?
- What do we know about consumer *biases* in decision-making?
- What advantages does *Empathic Design* bring over other methods of gathering customer info?
- How do Kim and Mauborgne's “Utility Map”, “Price Corridor of the Mass”, and “Business Model Guide” fit the preference and conjoint utility view of customers?
- On page 86, Kim and Mauborgne mention *network externalities*. Are these the same forces that we saw in the previous session on diffusion?

**Keywords: Consumer Decision Making, Biases, Process of Elimination, Simplifying Heuristics, Empathic Design**

**Session 5****Friday, October 14, 2005, 9:30am – 12:30pm****Session Title: Market Segmentation and Targeting**

Once we have listened to various customers and measured their preferences, it is possible to group them into according to similarities. This enables managers to deal with heterogeneity, while maintaining the advantages of mass markets. In this session, we study methods of aggregating customers into groups, and consider alternative criteria such as demographics, geography or preference on which individuals may be similar.

**(3) Readings:**

<i>Marketing Engineering:</i>	pp. 61 – 103
<i>HBR on Innovation:</i>	pp. 1 – 30
<i>Why Not?:</i>	pp. 87 – 114
<i>Marketing Engineering:</i>	pp. 113 – 116 ( <i>ABB Electric Case</i> )

**Case: *ABB Electric*****No Assignment to be Turned In**

Prepare the following study questions for class discussion:

- On which bases might you group consumers into market segments?
- What are the pros and cons of using observable versus unobservable (*but measurable*) characteristics to segment markets?
- Which statistical methods exist for grouping consumers?
- Why does one segment markets in the first place?
- How can one optimally offer different versions of the same basic product?
- How can one bundle different products together to please multiple segments?
- If you choose this case for your case report, answer the five questions on page 116 and prepare up to an 8-page report and a maximum 5-slide PowerPoint presentation (both due prior to class on 10/12/2005 via email to edahan@ucla.edu).

**Keywords: Market Segments, Cluster Analysis, Target Marketing, k-Means Clustering, Versioning, Demographics, Benefit Segments, Bundling**

**Session 6****Saturday, October 15, 2005, 8:30am – 11:30am****Session Title: Perceptual Mapping, Factor Analysis, and Product Positioning**

In the previous session we studied how to aggregate individual customers into groups which we term segments. In this session, we measure customer perceptions of products and brands on multiple, underlying dimensions using perceptual mapping and factor analysis. By combining the segmentation and perceptual maps, we can optimally position products and target them to given market segments.

**(4) Readings:**

<i>Marketing Engineering:</i>	pp. 117 – 146
<i>HBR on Innovation:</i>	pp. 131 – 152
<i>Why Not?:</i>	pp. 201 – 214
<i>Marketing Engineering:</i>	pp. 148 – 154 ( <i>Infiniti G20 Case</i> )

**Case: *Infiniti G20*****No Assignment to be Turned In**

Prepare the following study questions for class discussion:

- Be prepared to discuss the five study questions on page 154 of *Marketing Engineering*.
- When would you use perceptual mapping, and when factor analysis?
- If you choose this case for your case report, answer the first four questions on page 154 and prepare up to an 8-page report and a maximum 5-slide PowerPoint presentation (both due prior to class on 10/14/2005 via email to edahan@ucla.edu).

**Keywords: Perceptual Maps, Factor Analysis, Product Positioning, Competitive Position, Branding, Targeting**

**Session 7****Friday, October 28, 2005, 1:30pm – 5:00pm****Session Title: Disruptive Technologies, the Role of Cost, and Competitive Response**

Clay Christensen of Harvard proposes the notion of disruptive technologies to explain why many firms succeed with a product initially, but fail to repeat their success as markets evolve. He even suggests that sometimes firms might be better off ignoring their current customers, and proposes significant organizational responses to these threats.

Unit manufacturing costs are typically outside the purview of marketing managers, but may affect marketing success. We consider how low product cost can be achieved through (a) product/service design, (b) low cost sourcing, and (c) operational efficiency. We also consider how costs decline over time due to “learning curve” effects from cumulative production volume. Outsourcing to other firms, and to countries such as China and India will also be discussed, as is competitive pricing response.

**(6) Readings:**

*Marketing Engineering:* pp. 180 – 183

*Marketing Engineering:* pp. 188 - 212

*HBR on Innovation:* pp. 103 – 129

*Why Not?:* pp. 115 – 132

“Control Tomorrow's Costs Through Today's Designs.” *HBR*. [96104]

“Danger: Stealth attack.” *Forbes*. 1/25/99. pp. 88 - 93.

**Case:** *In-class exercise on cost reduction*

**Individual Assignment:**

Due Friday 10/28/05 at the beginning of class:  
Submit your Conjoint Utility Estimation & Simulator Worksheet (**5% of grade**)  
and Email a copy of your conjoint responses to: **edahan@ucla.edu**

Prepare the following study questions for class discussion:

- When do customers mislead? Why should firms sometimes ignore their customers?
- What, exactly, should be ignored? What should not be ignored?
- How would you address the problem of disruptive threats?
- Why is product cost so important to firms like Toyota?
- Why should a marketing manager care about unit manufacturing cost?
- How should target costs be set? What information would be most useful when setting them?
- What determines the cost of each part in a product? What should determine it?
- Identify some characteristics of an organizational structure and culture that promotes the implementation of cost reduction?
- How is design for manufacturability and assembly (DFMA) implemented in the organizations in which you work (or have worked)?
- Do you concur with the concept that “Quality is free?”

**Keywords: Sustaining Technologies, Disruptive Technologies, Cost Reduction, Price Elasticity, Competitive Response, Target Cost, Learning Curve, Outsourcing, China, India, DFMA**

**Session 8 Friday, November 11, 2005, 9:30am – 12:30pm****Session Title: Managing Innovation; Sources of Creative Ideas**

All the professional management in the world can't save a terrible idea. But where and how do great ideas originate? Is it the lone creative genius? Can creativity be learned? In this session, we try to understand creative people and creative methods, and the sources of insanely great ideas. And we ponder, does great industrial design really matter?

Of course, creativity exacts a price, too. Sometimes, creative types of people are not easily managed – they are commonly non-conformists. So one goal of today's session is to consider management practice adapted to creative teams.

We also infer “rules of thumb” about what managerially controllable factors promote success in innovation and new product development based on econometric research and case studies.

**(4) Readings:**

*HBR on Innovation:* pp. 55 – 76

*Why Not?:* pp. 135 – 156

Robert Cooper article on *Winning at New Products*

Sam Farber on Design

**Case:** *IDEO Dilbert Cubicle video*

**No Assignment to be Turned In**

Prepare the following study questions for class discussion:

- How can you: identify creative people? Create the proper environment for them?
- How can you apply *Why Not?*'s “Principled Problem Solving” to your project?
- Where *should* new product ideas come from? Where *do* they come from?
- How might one implement knowledge brokering?
- How can creativity be promoted and managed on cross-functional teams?
- What role does industrial design play in a product's success?
- How do you test whether a design is good or not? When do you know?
- How would you manage Farber's designers if they worked for you?
- Based on Cooper's analysis, what actions would you take?

**Keywords: Innovation, Winning at New Products, Cross-functional Teams, Co-location, Creativity, Innovation Factory, IDEO, Knowledge Brokering, Design, TRIZ**

**Session 9 Saturday, November 12, 2005, 1:00pm – 4:00pm****Session Title: Testing New Product & Service Concepts: Simulators, ASSESSOR, Prototyping**

Once a new product or service has been designed and developed, the firm must determine if it will be demanded by consumer, manufacturable, reliable, and within any necessary performance and cost parameters. In short, successful and profitable. There are many possible tests to evaluate a new product including computer simulations, simulated test markets, actual localized test markets, and prototyping. In this session, we study the optimal approach to experimentation and testing prior to product launch. These ideas are highlighted in a fun case about the Americas Cup yacht race, and Team New Zealand's innovative approach to testing.

**(3) Readings:**

<i>Marketing Engineering:</i>	pp. 263 – 271
<i>HBR on Innovation:</i>	pp. 179 – 205
“Team New Zealand (A).” HBS Case	[9-697-040]

**Case:** *Team New Zealand (A)*

**Assignment:**

Due Saturday, 11/12/05, please submit:  
Parallel & Sequential Prototyping homework assignment sheet (**5% of grade**)

Prepare the following study questions for class discussion:

- What do you think team New Zealand should build?:  
[ ] Two similar boats now [ ] Two different boats now [ ] One boat now, one boat later
- Try to quantify the expected seconds of improvement from each approach?
- How would you evaluate Team New Zealand's use of simulation in the design process?  
What are its advantages and disadvantages?
- What role does computer-aided design (CAD) play in prototyping?  
What effect will lower CAD and simulation costs have on new product development?
- What is most beneficial about simulated test markets in guiding a new product launch?
- What are the strengths and weaknesses of simulated test markets?
- If you were a product manager of a packaged good, what kind of information would you like to get on (a) an ongoing basis, (b) a quarterly basis, and (c) a yearly basis?
- If you choose this case for your case report, answer the questions at the end of the case and above, and prepare up to an 8-page report and a maximum 5-slide PowerPoint presentation (both due prior to class on 11/11/2005 via email to edahan@ucla.edu).

**Keywords: Concept Tests, Simulated Test Markets (STM's), ASSESSOR, Experimentation, Parallel Testing, Sequential Testing, Virtual Prototyping, Market Simulators**

*Happy Thanksgiving Day Holiday!*

**Session 10 Friday, December 2, 2005, 1:30pm – 5:00pm****Session Title: Measuring Market Response and Optimally Allocating Resources**

The most important task of many managers is to manage a full business or product line. To this end, budget allocation of marketing dollars to marketing mix instruments for each product, and between products in the firm's portfolio, is a central theme in many careers in marketing. Hence, we spend a session on the topic of resource allocation.

We will try to understand how one might apply market assessment data to the real world marketing issues of product design, pricing, promotion and placement.

**(2) Readings:**

*Marketing Engineering:* pp. 414 – 448  
Handout on Dorfman-Steiner conditions

**Case:** *Nestea versus Fruitopia (in-class exercise)*

**No Assignment to be Turned In**

Prepare the following study questions for class discussion:

- How much should one spend on advertising? Promotions? Sales force? Product Design?
- What is a sales response function?
- How might we estimating parameters of the sales response function:  
(a) judgment, (b) experimentation, (c) econometric approaches?
- How can we calculate elasticities?
- How do elasticities affect pricing and other marketing decisions?
- How do we deal with the inherent differences in “clock speed” (time lags) of the 4 P's?
- How should firms set prices for products? How do managers actually set prices?
- What are different ways in which marketers allocate budgets ?

**Keywords: Market Response Function, Price Elasticity, Advertising Elasticity, Promotion Response, Resource Allocation, BCG Growth-Share Matrix, Dorfman-Steiner conditions**

*Have a wonderful holiday break!*