

# STRATEGIC MANAGEMENT OF TECHNOLOGICAL INNOVATION

科技與創新管理

[724 M0050]

[English speaking course]

Graduate Institute of International Business, National Taiwan University,  
2011, Spring

**Time:** Class 2~4 Wednesday

**Instructor:** Pf. Wu, Hsueh-Liang

**Classroom:** Room 204 Building I

**Office:** 901 Management Building II

**Course website:** [https://ceiba.ntu.edu.tw/982W\\_TIM](https://ceiba.ntu.edu.tw/982W_TIM)

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## ■ Introduction

As innovation is now the most important driver of competitive success, practitioners and scholars have raced to better understand the nature and the process of innovation. This course aims to provide a strategic framework for managing technology and innovation. Specifically, we will pay more attention on the dynamics of innovation, formulation and implementation of technological innovation strategy, and highlight global competition whenever possible.

The objectives of this course are set as follows:

1. To help students have in-depth understanding of the dynamics of innovation.
2. To familiarize students with how a technological innovation strategy is crafted.
3. To expose students to the well-designed processes for implementing an innovation strategy.

The course is taught with a combination of lecture, case discussion and presentation of assigned readings by student teams. All students enrolled will form teams (with no more than three in a group) by the *second Week* and these teams constitute the members for the group work. Please fill in the *Student Information Form* and hand over to TA by the second class.

## ■ Learning Materials

### ☞ Textbooks:

Melissa Schilling (2010) *Strategic Management of Technological Innovation*, 3<sup>rd</sup> ed., McGraw-Hill. (華泰代理)

☞ **HBS cases:** Harvard Business School cases will be assigned in this course. You are required to pay **NT\$300** for reprint permit fee to HBS and the cost of photocopy.

☞ **Mini cases in the textbook:** the small cases in the textbook should be prepared in advance and would be discussed on the class.

☞ **Assigned HBR articles:** These materials are downloadable from the CEIBA website before

class. They should be prepared beforehand and would be presented on the class on a group basis.

## ■ Course Requirements

- This course is based on the premise that the bulk of your learning will take place as you prepare for each class, attend the class, and participate in the ensuing group and class discussions. As such, attendance to the class on time is mandatory. Because learning takes place in class, you must be prepared for each class. As a result, this is a very intense and demanding course. Active participation, both in the class and in the group, is an indispensable element of learning experience. Meaningful participation means making a contribution to the intellectual conversation. Our interest is not a clear cut between “right” or “wrong”, but the extent to that you make contribution to the development of the issues under study by the class (group), and whether your opinions move the class (group) forward. Much of the professional activities of managers involve speaking about their analysis of issues in front of other managers. Communication skills, such as these, should prove useful in whatever career you choose.
- **HBR article as the assigned reading and class presentation:** To enhance your reading and presentation skills, I will assign HBR articles for some topics related to this course. Student groups are responsible for on-class presentation and for leading the discussion afterwards.
- **HBS cases and Write-ups:** You are required to read and submit the case write-ups for each HBS case. The case write-ups have to be word-processed, with 1.5 line space and font size in 12, and **signed by all team members before turning in.** Since report length will not necessarily reflect its quality, please limit your write-ups within **TWO pages** each, excluding necessary appendices. Finally and most importantly, all assignments are due by the date of case discussion. There will be no credit for overdue write-ups.

## ■ Grading Policy

➤ Mid-term and final exams	60%
➤ Class participation	15%
➤ Case Write-Ups (by group)	15%
➤ Group Presentation	10%

## ■ Course Schedule

2010.3.17

	Date	Textbook	On-class activity	Assigned reading: HBR article
1		* <i>Course orientation</i> Ch 1 Why do we need Technological Innovation?		<b>What Strategy Can Do for Technology</b> <i>Kim B. Clark (1989), HBR, 5p</i>
2		Ch 2 Where can we have innovation? The sources of innovation	-Mini-case #1 -Documentary film #1: <b>Ancient inventions in war</b>	<b>Discipline of Innovation</b> <i>Peter F. Drucker (2002), HBR, 7p</i>
3		Ch 3 How do various technologies evolve? * <i>Student grouping</i>	-Mini-case #2 -Documentary film #2: <b>Who kill electric car? The story of GM EV1 model</b>	
4		Ch 4 Battles of industry standards: The concept of dominant design	-Mini-case #3	<b>Group 1: How to identify your enemies before they destroy you (2002), HBR, 10p</b>
5			<b>HBS Case #1: Kodak &amp; Digital Revolution</b> [Grp 6]	
6		Ch 5 Timing of new product entry	-Mini-case #4	<b>Group 2: Innovation: the Classic Traps</b> <i>Rosabeth Moss Kanter (2006), HBR, 14p</i>
7			<b>HBS Case #2: Philips Compact Disc Introduction</b> [Grp 5]	
8		Ch 8 Do it along or with your friends: Collaboration strategy		<b>Group 3: Open-Market Innovation</b> <i>Darrell K. Rigby, Chris Zook, (2002), HBR, 12p</i>

<b>9</b>		<b>Mid-term exam</b>		
10		Ch 13 Crafting a deployment strategy for your new products	-Mini-case #6	<b>Group 4: Technology Integration: Turning Great Research into Great Products</b> <i>Marco Iansiti; Jonathan West (1997), HBR, 11p</i>
11			<b>HBS Case: #3:</b> RIM: Managing explosive growth [Grp 4]	
12		Ch 9 How much can you capture the value of your new product: The regime of appropriability	-Movie: A flash of Genius	<b>Group 5: Discovering New Value in Intellectual Property</b> <i>Kevin Rivette, David Kline (2000), HBR, 11p</i>
13		Ch 10 How to organizing for innovation?	<b>HBS Case: #4:</b> Philips vs Martsushita [Grp 3]	
14			<b>HBS Case #5:</b> 3M's intrapreneurship [Grp 2]	
15			<b>HBS Case #6:</b> NEC's R&D site selection [Grp 1]	
16		Ch 7 How to choose innovation projects?	-Mini-case #9	
<b>17</b>		Ch 11 Managing the new product development process		<b>Group 6: Organizing for Innovation: When is virtual virtuous?</b> <i>Henry W. Chesbrough; David J. Teece (2002), HBR</i>
<b>18</b>		<b>Final exam</b>		

Note: the timetable is tentative and subject to change. All changes will be announced on the CEIBA website.