



Innovation and organization of companies

Prof. S. Barile

Assistance

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- Class Schedule:

Monday 16.00-18.00 Aula 6a

Tuesday 14.00-16.00 Aula Parrillo

Wednesday 14.00-16.00 Aula Parrillo

- Final Exam Schedule:

21/01/2019, 13/02/2019, 17/06/2019, 10/07/2019

STRATEGIC MANAGEMENT OF Technological Innovation

FIFTH EDITION



Melissa A. Schilling

**Mc
Graw
Hill**
Education

Schilling –Strategic Management of Technological Innovation

- **PART ONE**
- **Industry Dynamics of Technological Innovation 13**
- Sources of Innovation 15
- Types and Patterns of Innovation 43 Standards Battles and Design Dominance 67 Timing of Entry 89
- **PART TWO**
- **Formulating Technological Innovation Strategy 107** Defining the Organization's Strategic Direction 109 Choosing Innovation Projects 129
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- Protecting Innovation 183
- **PART THREE**
- **Implementing Technological Innovation Strategy 209**
- Organizing for Innovation 211
- Managing the New Product Development Process 235 Managing New Product Development Teams 265 Crafting a Deployment Strategy 283

Course Information

- Lessons
- Assessments
- Group Works

Where to find materials:

<https://www.dropbox.com/sh/xnbvt2lx0zx0mph/AAAZ5jytOZYOVdy2uMM1JHHka?dl=0>



Chapter 1

Introduction

Importance of Technological Innovation

- Technological innovation now the single most important driver of competitive success in many industries
 - Many firms earn over one-third of sales on products developed within last five years
 - Product innovations help firms protect margins by offering new, differentiated features.
 - Process innovations help make manufacturing more efficient.

Importance of Technological Innovation

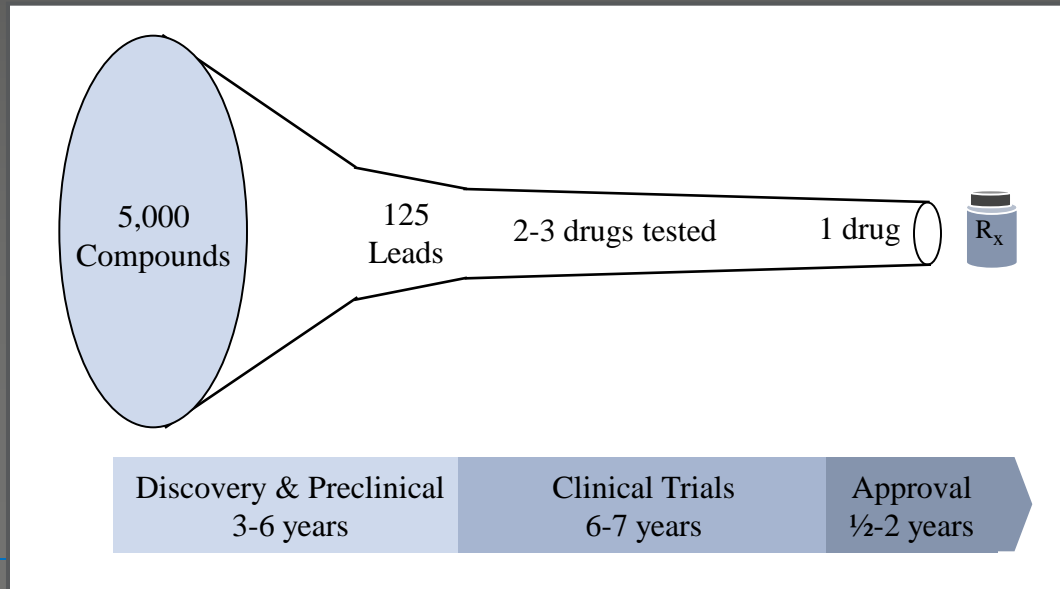
- Advances in information technology have enabled faster innovation
 - CAD/CAM systems enable rapid design and shorter production runs
- Importance of innovation and advances in information technology have lead to:
 - Shorter product lifecycles (more rapid product obsolescence)
 - More rapid new product introductions
 - Greater market segmentation

Impact on Society

- Innovation enables a wider range of goods and services to be delivered to people worldwide
 - More efficient food production, improved medical technologies, better transportation, etc.
 - Increases Gross Domestic Product by making labor and capital more effective and efficient
 - However, may result in negative externalities,
 - E.g., pollution, erosion, antibiotic-resistant bacteria

Innovation by Industry: The Importance of Strategy

- Successful innovation requires carefully crafted strategies and implementation processes.
- Innovation funnel
 - Most innovative ideas do not become successful new products.
 - E.g., The New Product Development Funnel in Pharmaceuticals



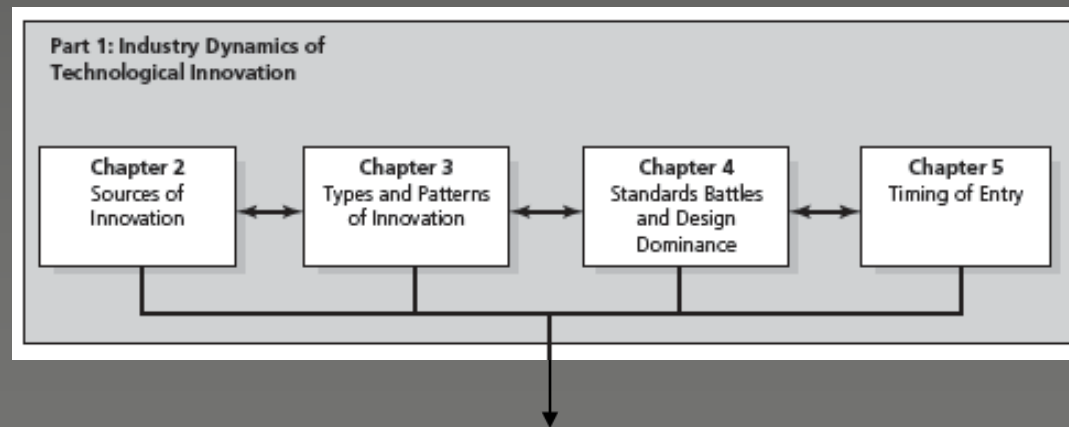
Research Brief

How long does new product development take?

- Study administered by the Product Development and Management Association found:
 - Length of development cycle varies with innovativeness of project
 - Incremental projects took 6.5 months from concept to market introduction
 - “More innovative” projects took just over 14 months.
 - New-to-the-world products took 24 months.
 - On average, firms reported 12% to 40% shorter cycle times than they reported in 1995.

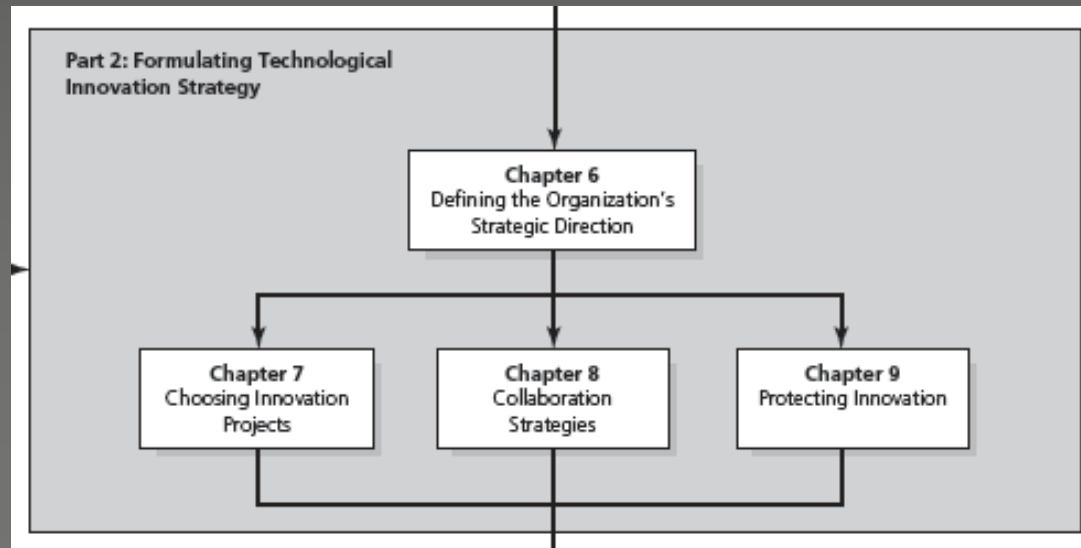
The Strategic Management of Technological Innovation

- **Part One: The foundations of technological Innovation**
 - Sources of innovation
 - Types and patterns of innovation
 - Standards battles and design dominance
 - Timing of Entry



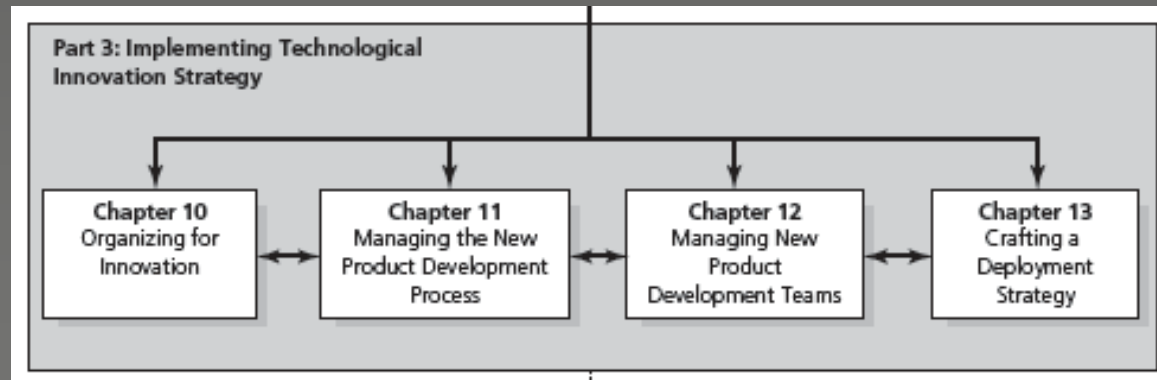
The Strategic Management of Technological Innovation

- **Part Two: Formulating Technological Innovation Strategy**
 - Defining the organization's strategic direction
 - Choosing innovation projects
 - Collaboration strategies
 - Protecting innovation



The Strategic Management of Technological Innovation

- **Part Three: Implementing Technological Innovation Strategy**
 - Organizing for innovation
 - Managing the new product development process
 - Managing new product development teams
 - Crafting a deployment strategy



Discussion Questions

1. Why is innovation so important for firms to compete in many industries?
2. What are some of the advantages of technological innovation? Disadvantages?
3. Why do you think so many innovation projects fail to generate an economic return?

Part One: Industry Dynamics of Technological Innovation

- The sources from which innovation arises, including the role of individuals, organizations, government institutions, and networks,
- Types of innovations, and common industry patterns of technological evolution and diffusion,
- The factors that determine whether industries experience pressure to select a dominant design, and what drives which technologies dominate others,
- Effects of timing of entry, and how firms can identify (and manage) their entry options.