



Innovation management

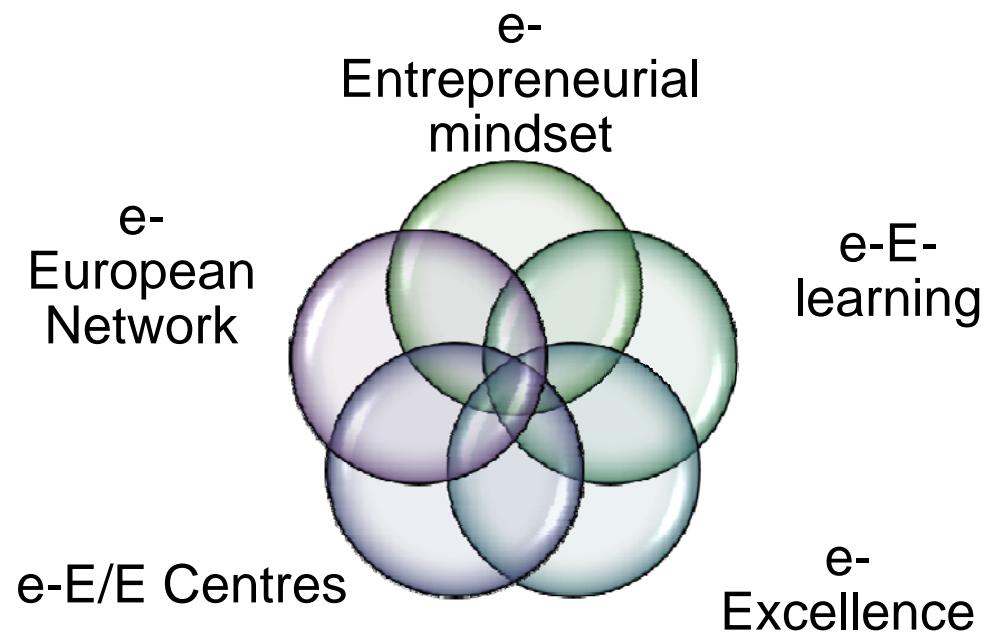
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TEMPUS Fostering Entrepreneurship
in Higher Education - FoSentHE e⁵

5e⁵ output model





1920 - 21





Over time, the Defining **Challenges** for competitiveness Have Shifted

Late 1980s - 1994

Getting the House in Order

- Increased competition across advanced nations
- Achieving macroeconomic stability and fiscal discipline
- A focus on efficiency/quality
- Microeconomic Reform

1995 - 2001

The Innovation Challenge

Exploiting the IT revolution, as both a supplier & user of advanced tech

Local clustering, global supply chains The fiscal fruits of microeconomic and budgetary reform

A Technology-Driven Boom

2002 -

Achieving an Innovation-Driven Economy

Executing Innovation Policy Initiatives

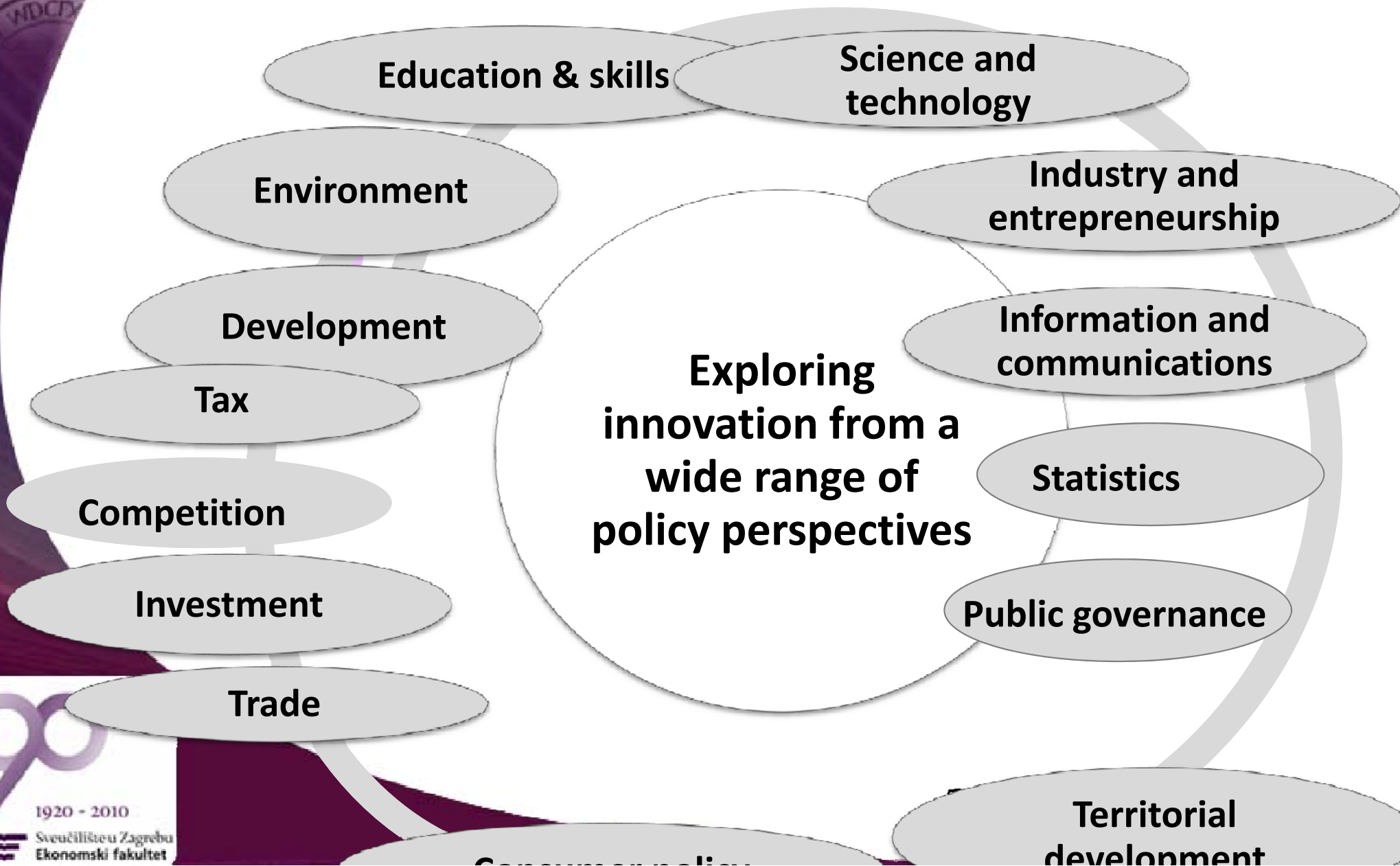
Leveraging comparative advantage

Increasing competition and outsourcing of both manufacturing and “knowledge” work



A “horizontal” approach

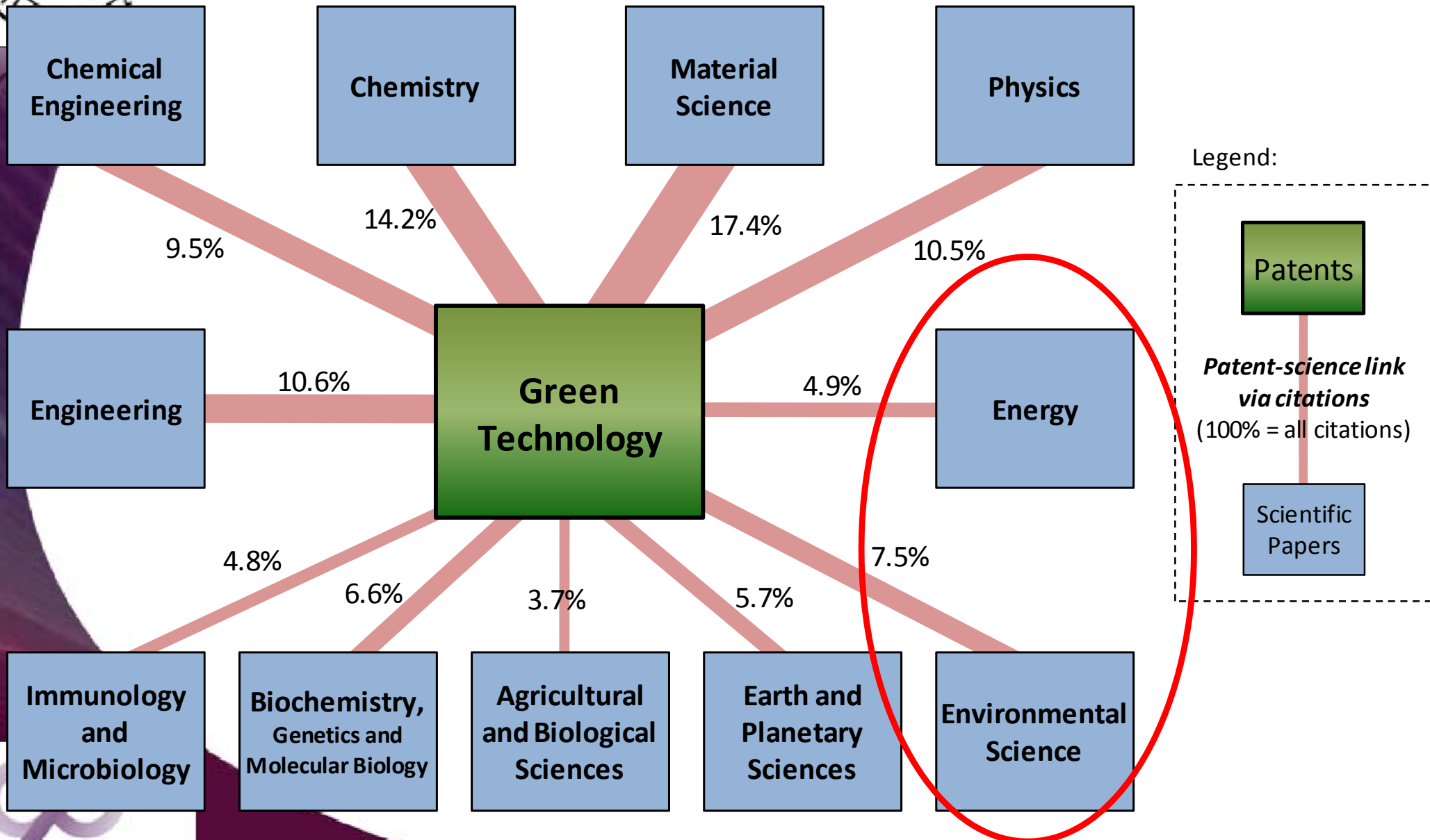
Cutting across policy areas





Innovation is multidisciplinary...

Scientific publications cited by "green" patents

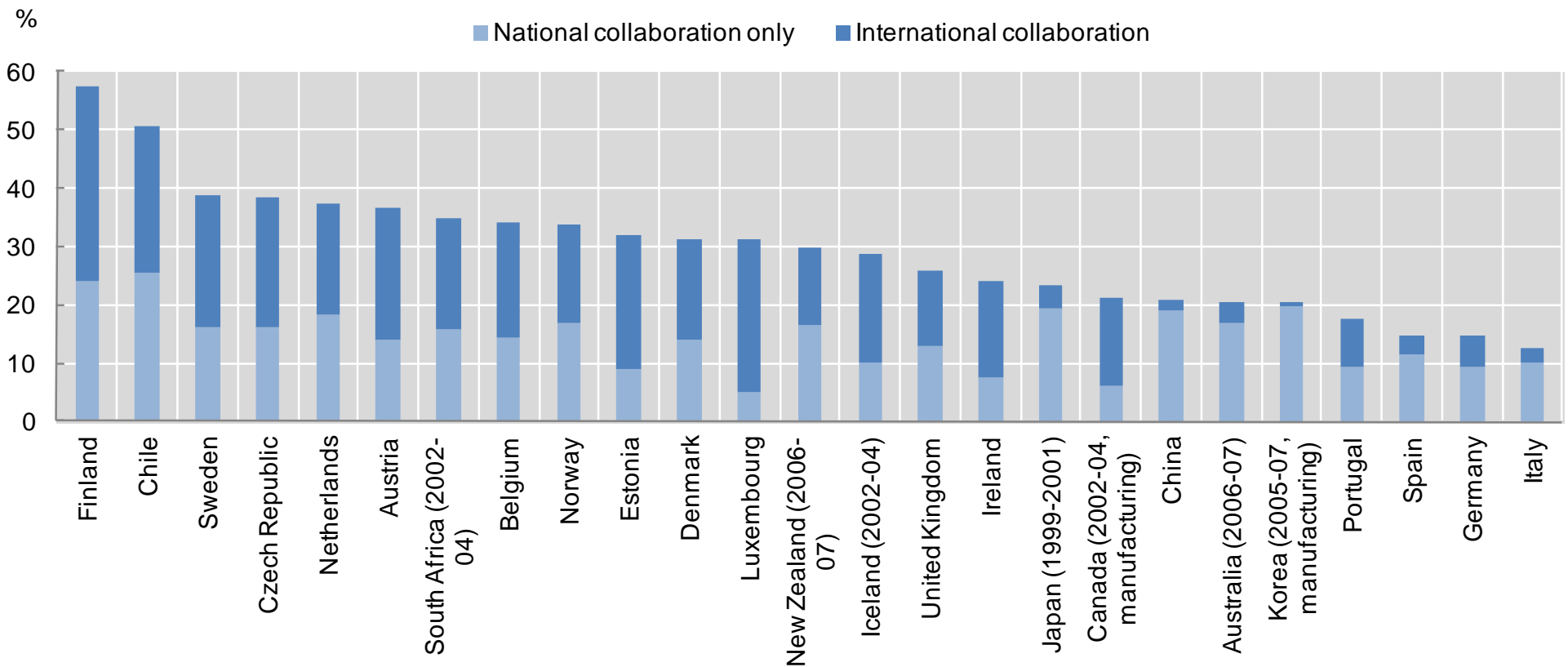


Source: OECD (2010), *Measuring Innovation: A New Perspective*, OECD, Paris based on Scopus Custom Data, Elsevier; OECD, Patent Database; and EPO, Worldwide Patent Statistical Database.



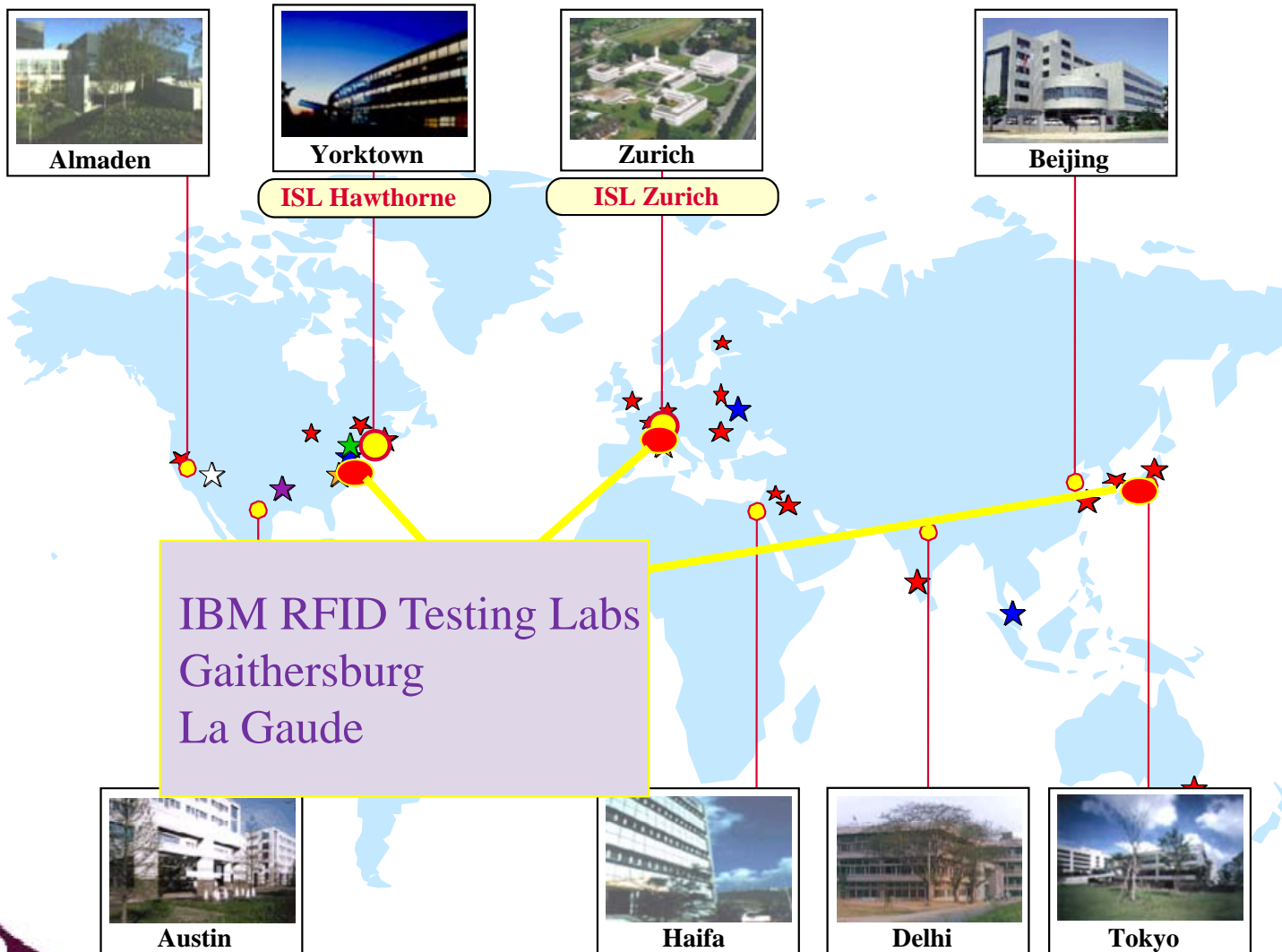
Firms collaborate with each other

Firms with national/international collaboration on innovation, 2004-06
As a percentage of innovative firms





IBM laboratories worldwide – 8 research centers focused on RFID advanced learnings, 3 testing labs





Key Questions:

- **When should an entrepreneurial firm develop it's own:**
 - Manufacturing
 - Distribution
 - Sales
 - capabilities?
- **When should a mature firm outsource it's:**
 - Manufacturing
 - Distribution
 - Sales
 - capabilities?



1920 - 2010



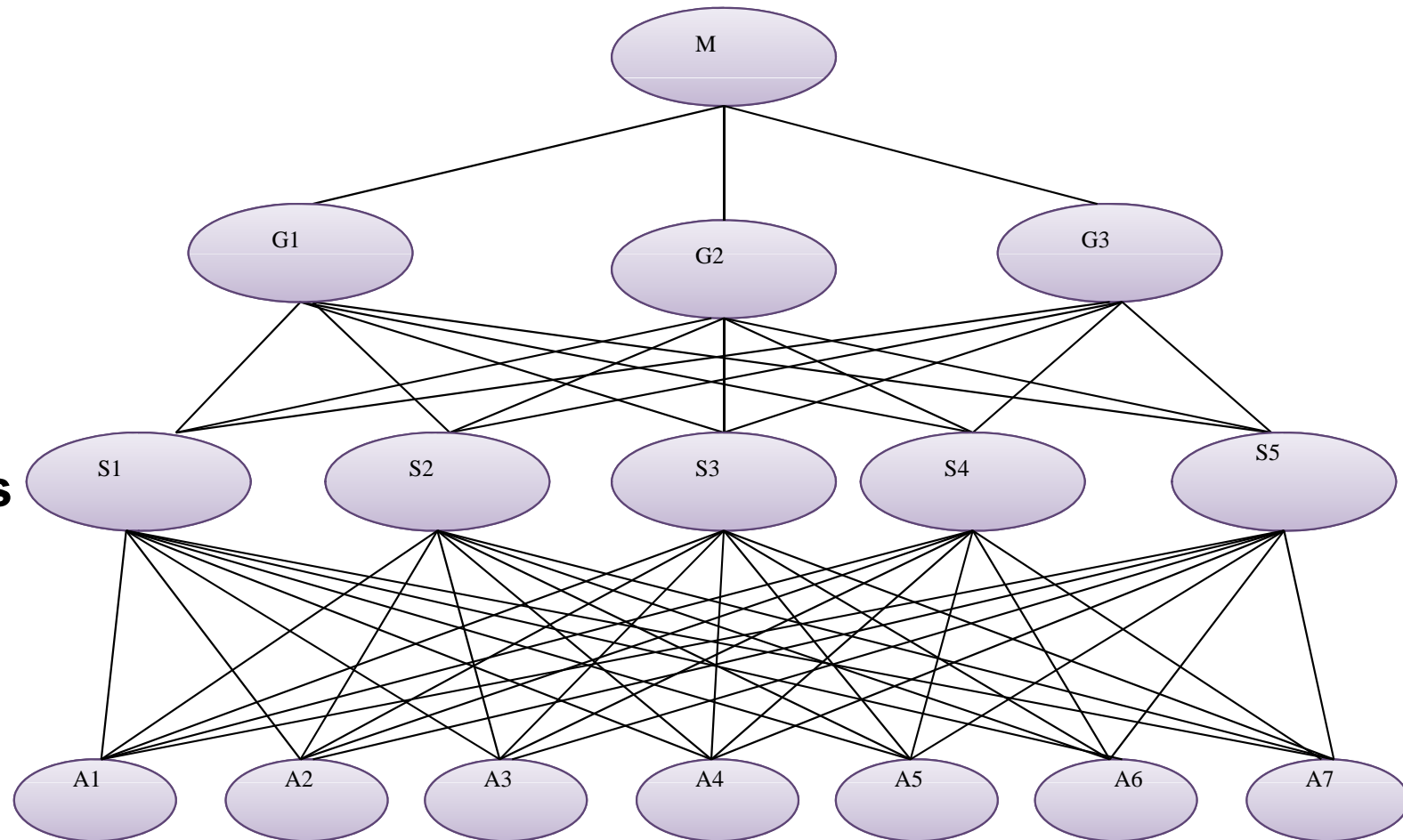
THE DECISION MODEL

mission

goals

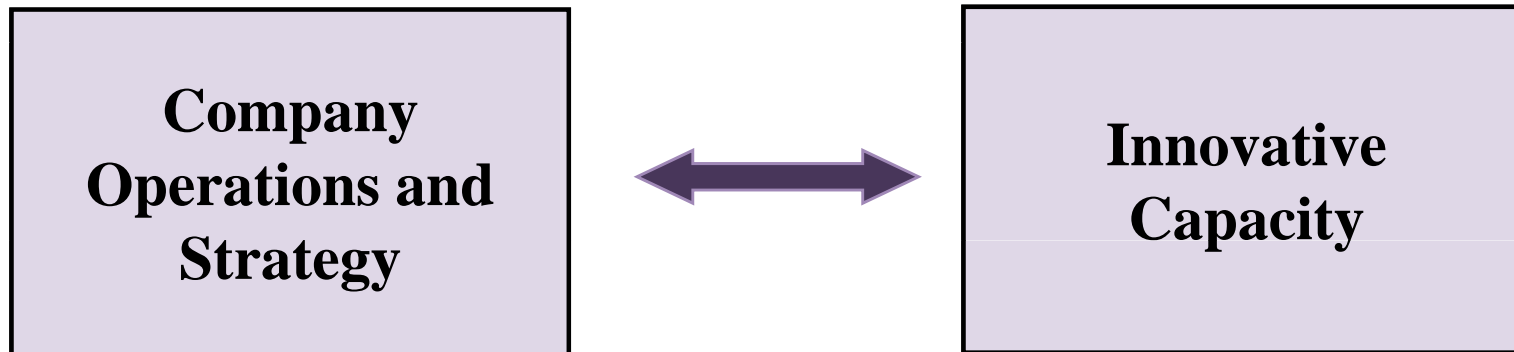
strategies

actions





global innovation leadership results from **leveraging** local innovative capacity through effective and sophisticated **firm operations and strategy**

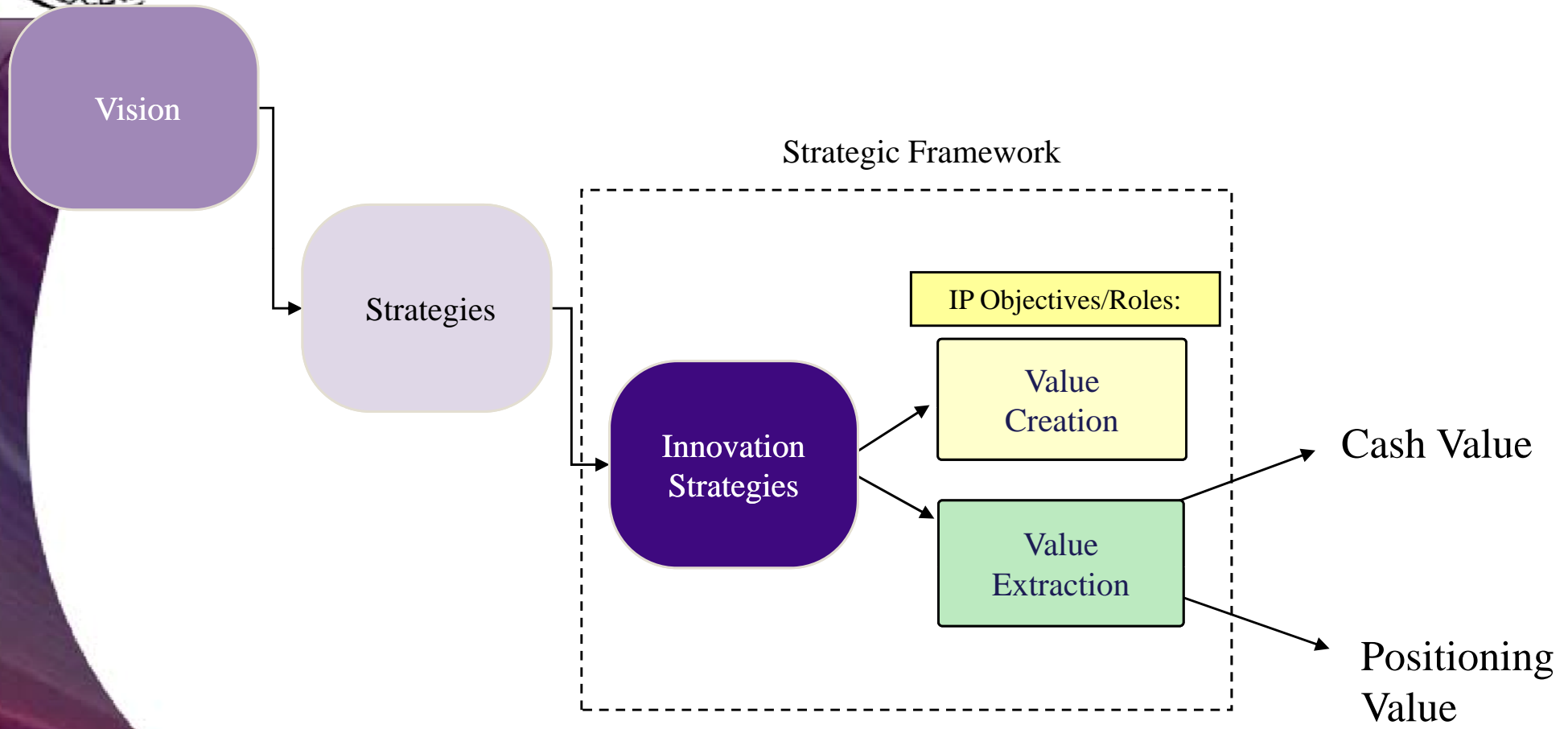


- National innovative capacity may be **squandered** through **ineffective innovation management**
- Innovation leadership **within a region** results from integrating external resources with internal capabilities

- R&D productivity depends on the **locations** at which a company's business units are based
- **Cluster participation** is an important contributor to innovative success



Aligning Capabilities



Where does Intellectual Property fit into this?



1920 - 2010



INTRODUCING INNOVATIVE PRODUCTS INTO MARKETS

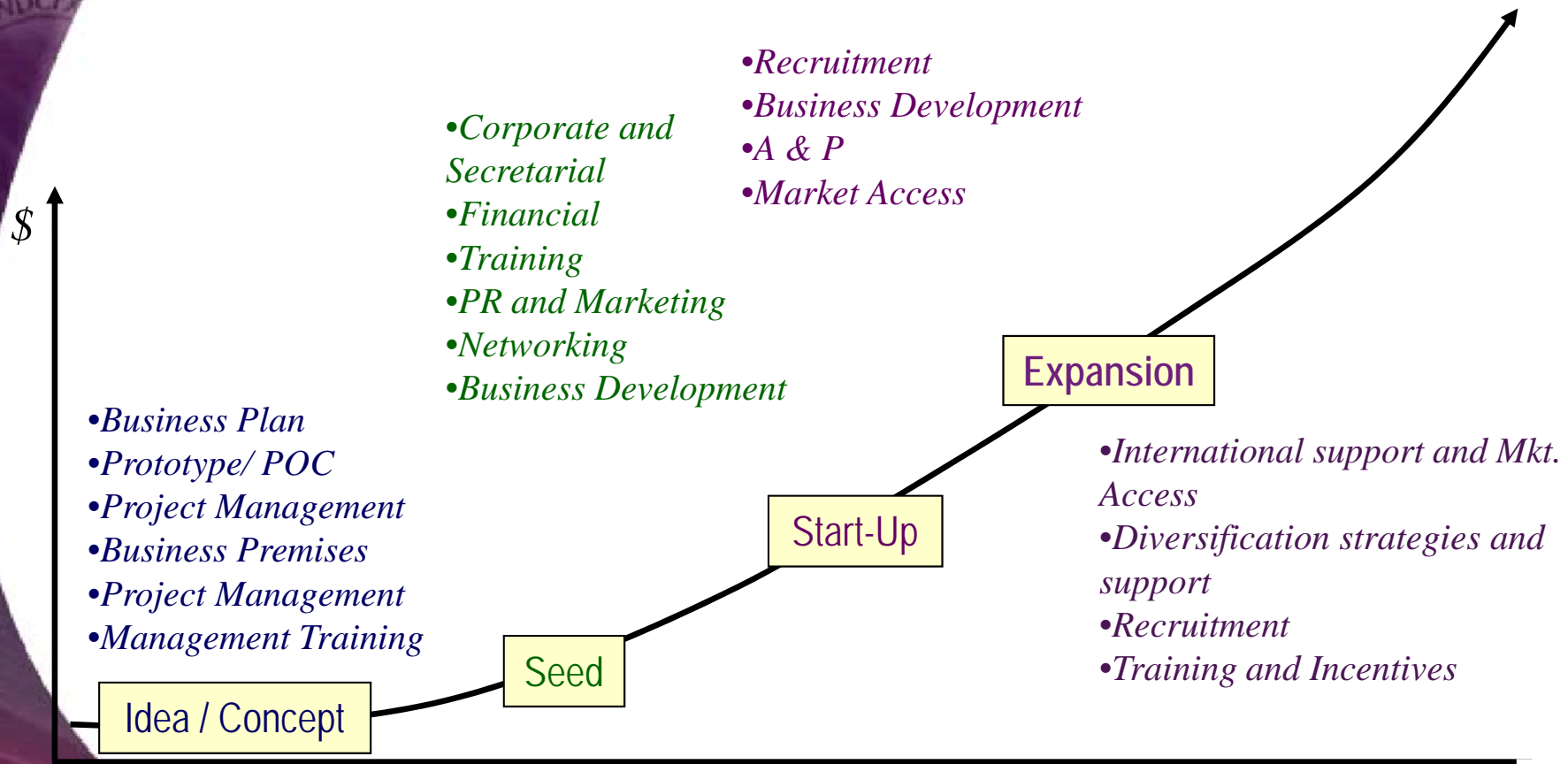
STRATEGIC OPTIONS

- 1. EXTENSION STRATEGY –
Same approach in foreign and home market**
- 2. ADAPTATION STRATEGY -
Makes changes to fit new market requirements**
- 3. INVENTION STRATEGY -
Entirely new approach is developed for
the new market**





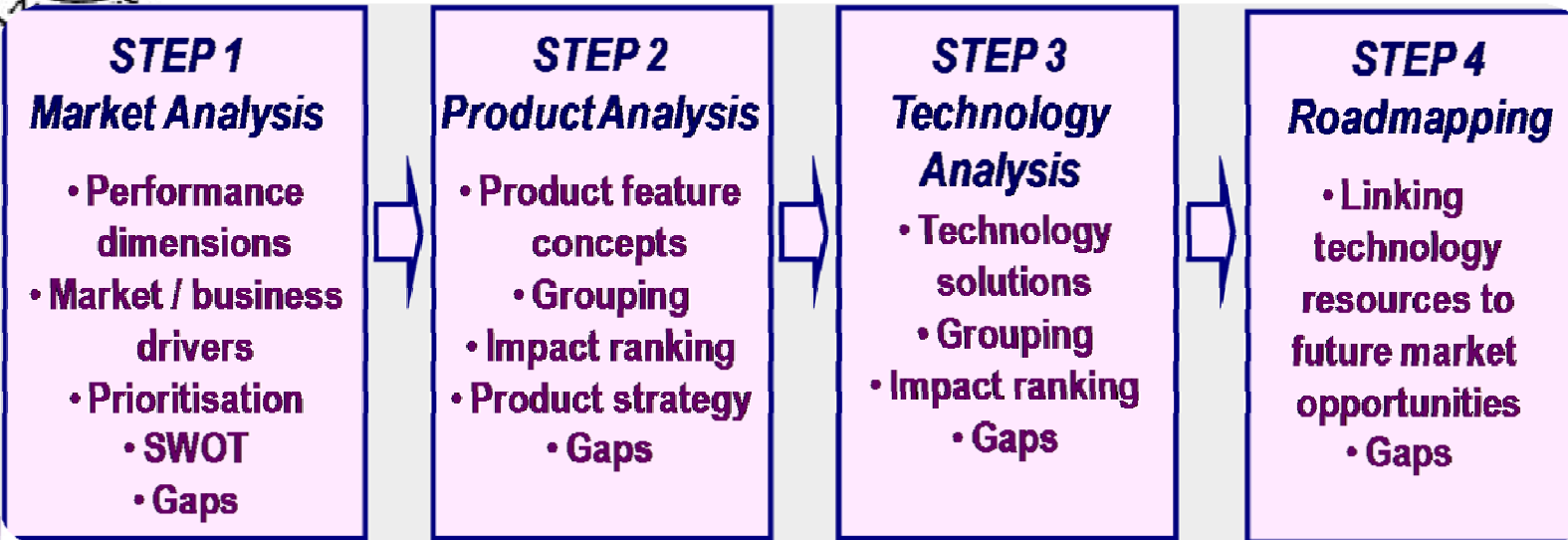
The Needs of Each Stage



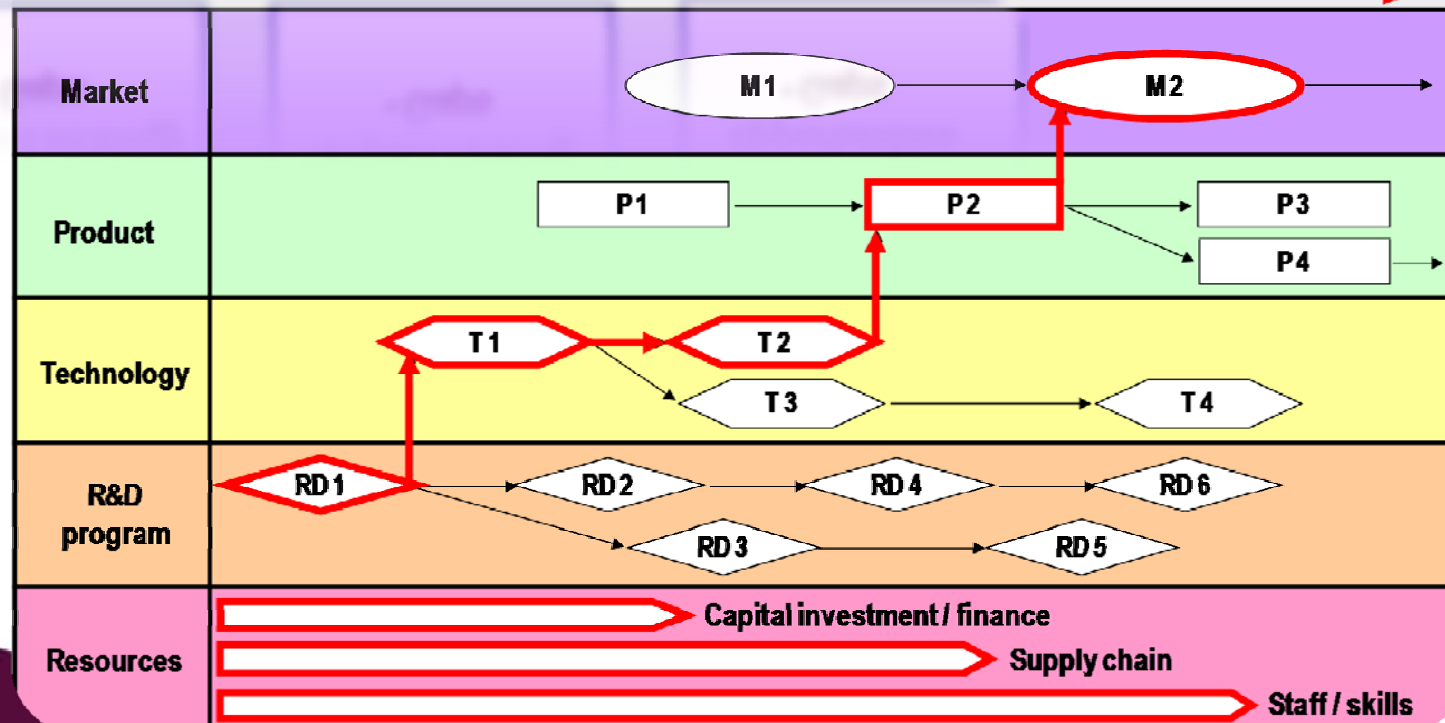
IP Management Needed in all stages



Key Elements of a Technology Roadmap

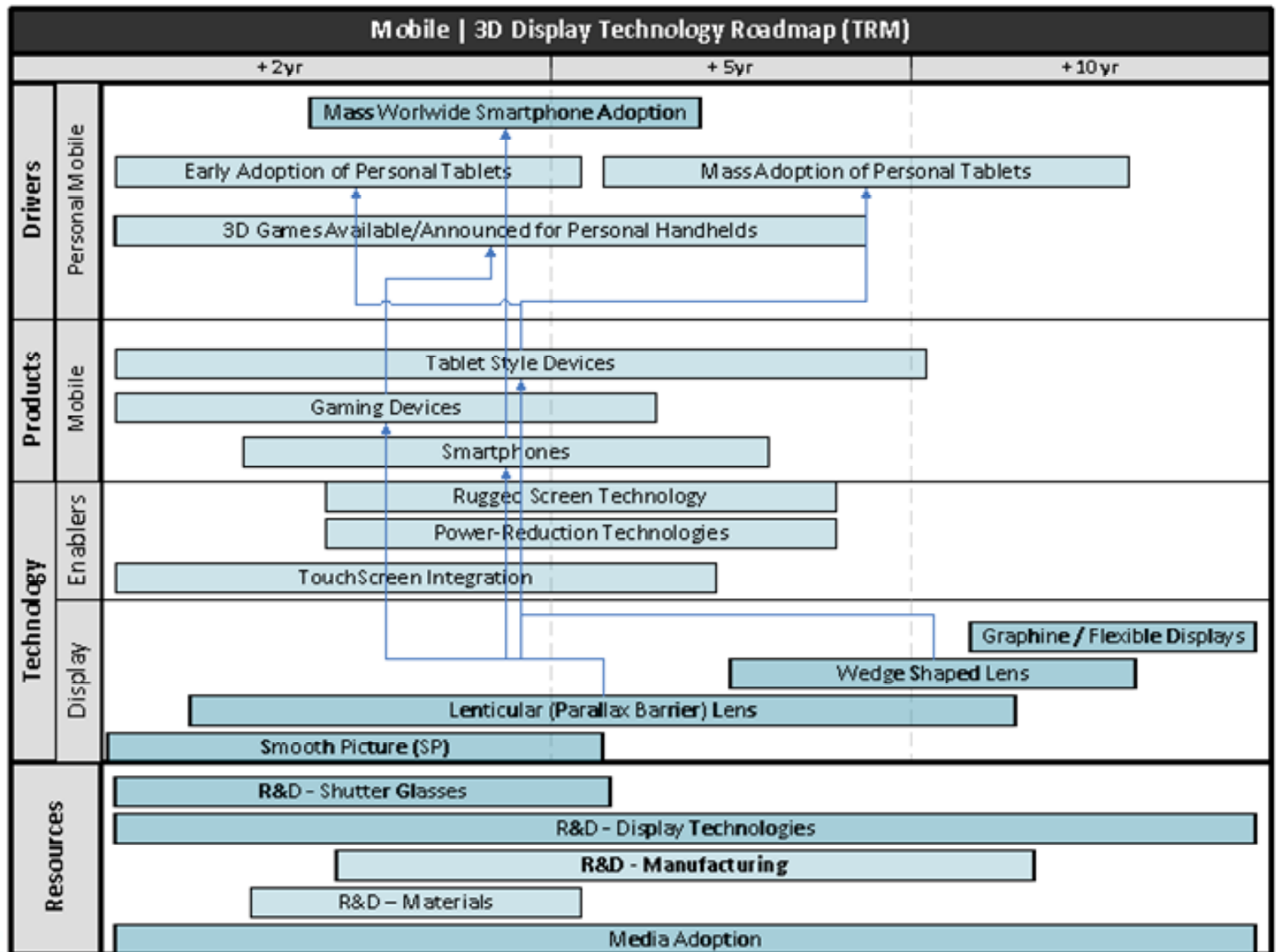


Source: Phaal et al, Univ of Cambridge



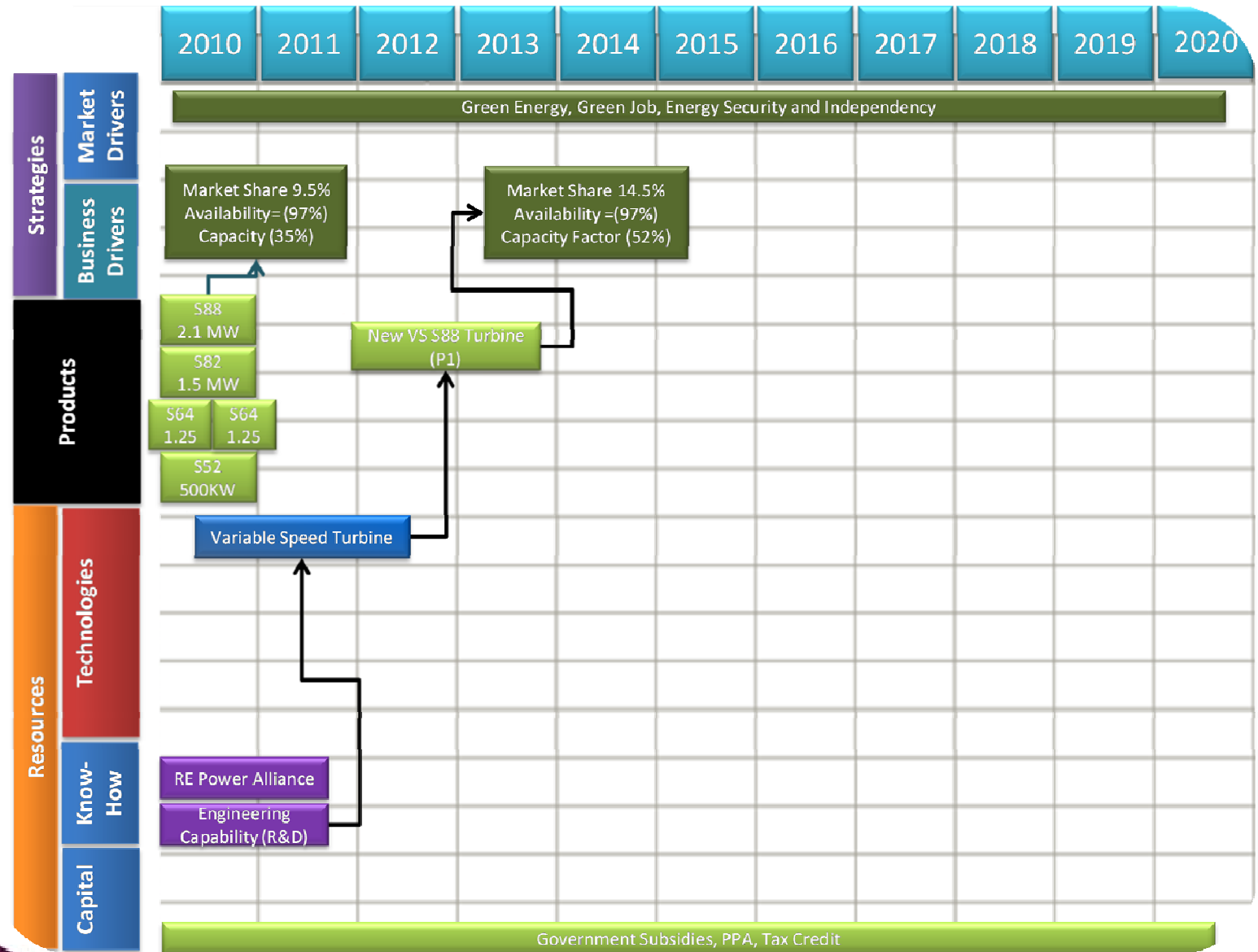


Roadmap Applications



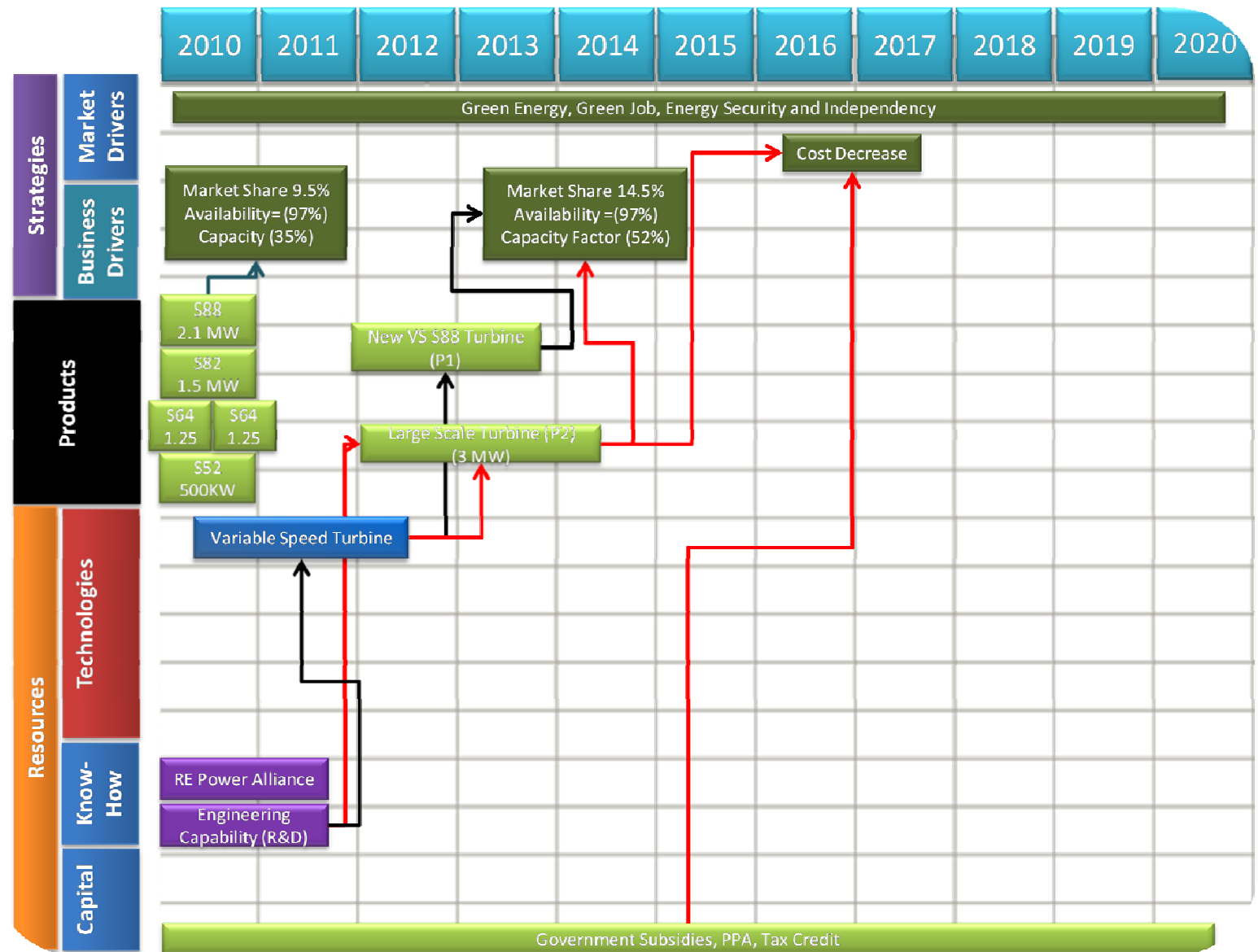


Building a Roadmap



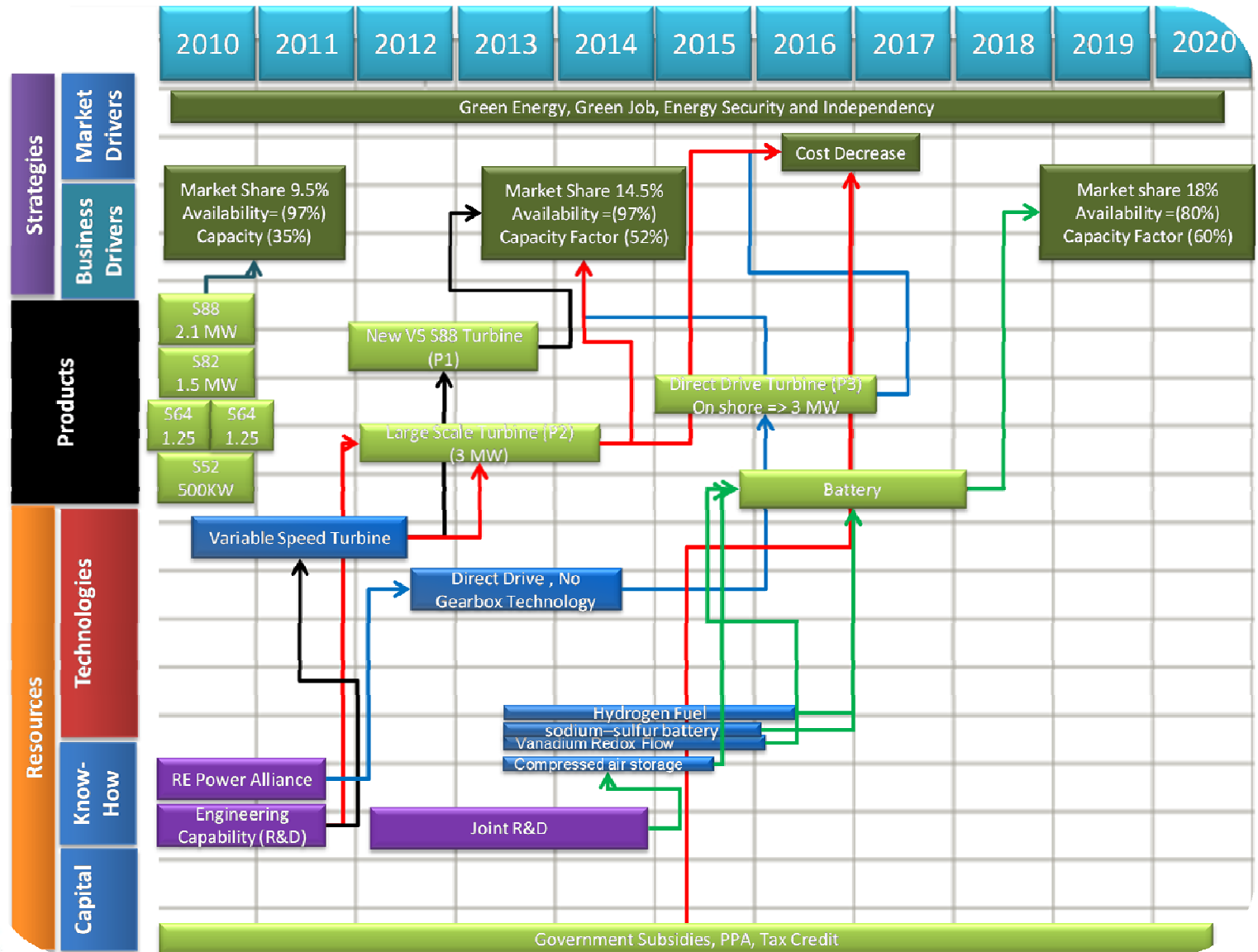


Building a Roadmap



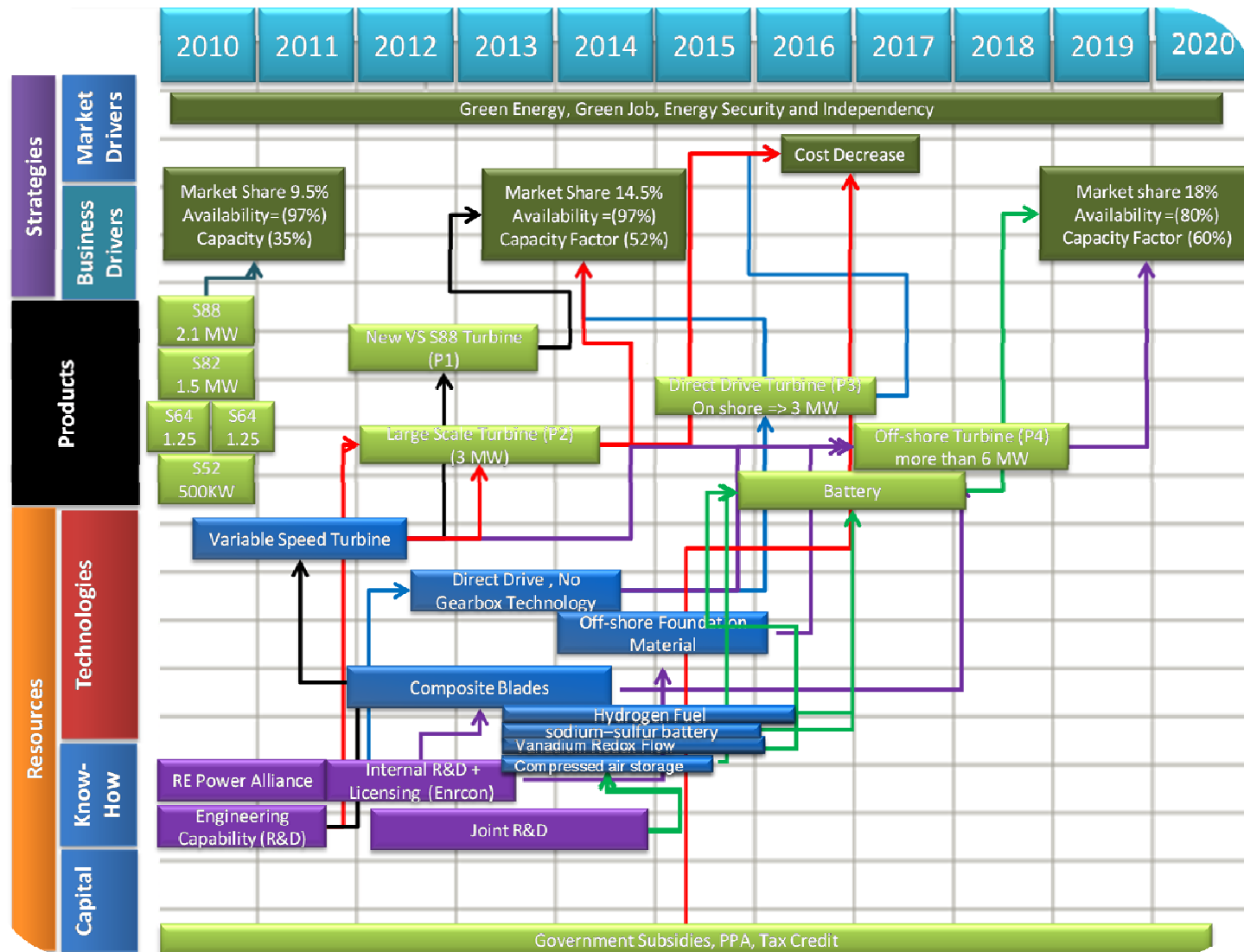


Building a Roadmap





Building a Roadmap





Large Company Reliance on Customer's Views

What

Why

Who

How

Many experienced large companies are relying more on interactive development with lead customers

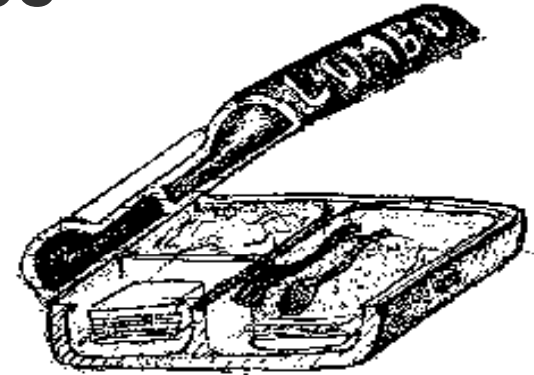
Traditional market research for truly innovative new products has frequently proved misleading

3M
Hewlett-Packard
Sony
Raychem

Radically new products introduced by small teams working closely with lead customers (e.g. retailers). With this info. designs rapidly modified and interactive changes made



Concept to Prototype

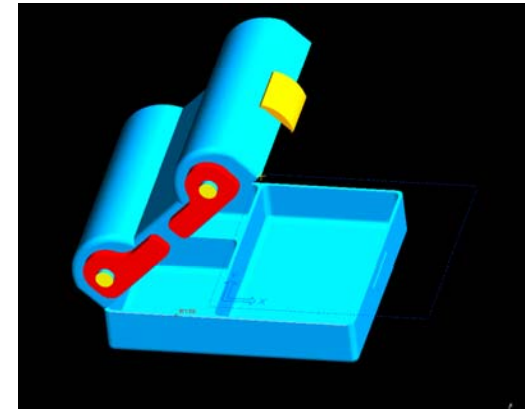


- **Current Situation**



- **Concept Idea Sketch**

- **Idea's Solid Model**



- **Prototype**
COMBO Lunchbox





Research at N. Brown

- **High rate of returns in 1993**
- **Manchester University paid £100k to research women's sizes**
- **50,000 measurements taken**
- **Women have "thicker waists, lower busts and conical figures"**
- **Shape of clothes was changed**
- **Returns down to 27% (vs industry average of 35%)**



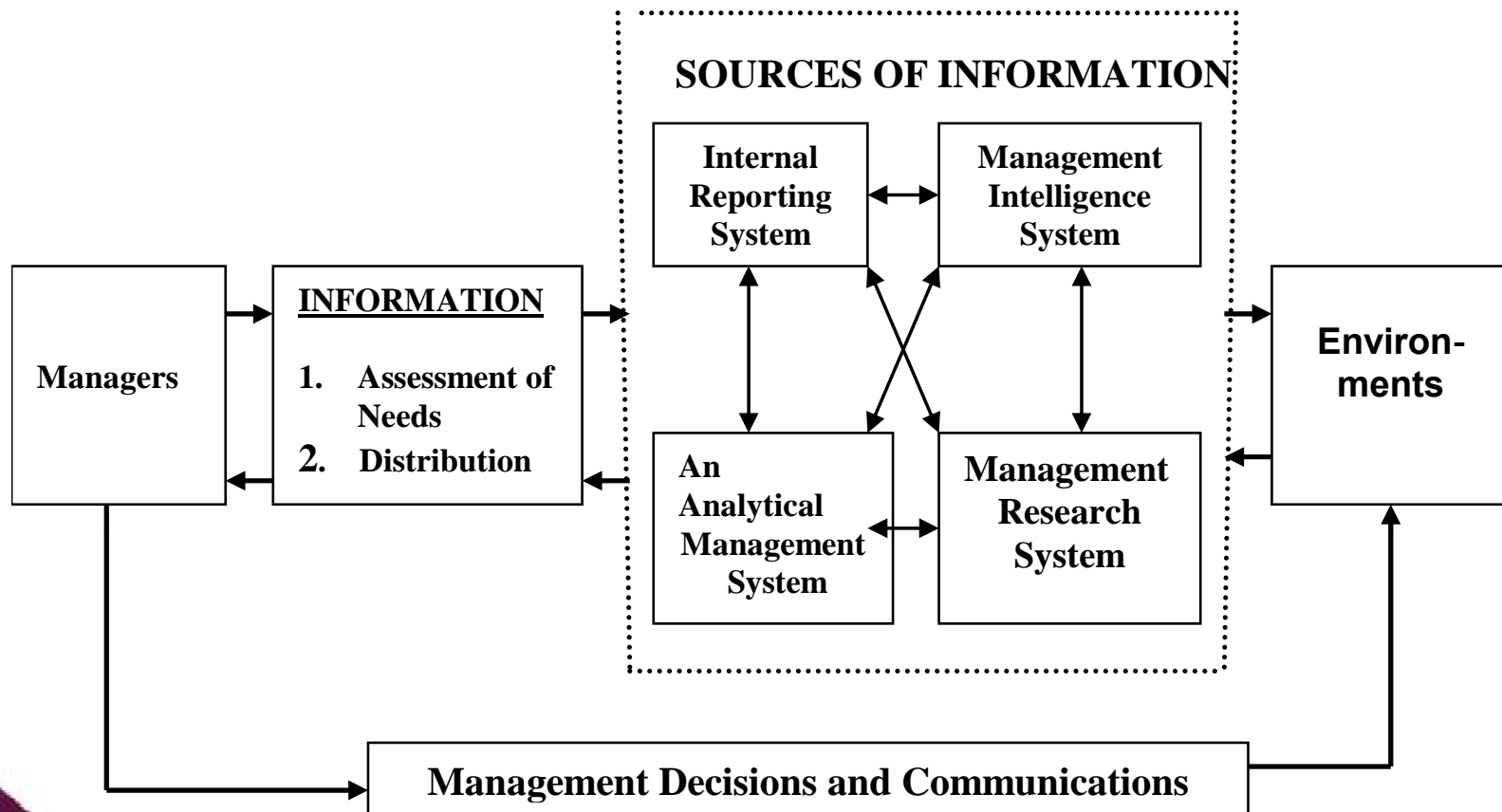


“It is a capital mistake to theorise before one has data”

Sir Arthur Conan Doyle

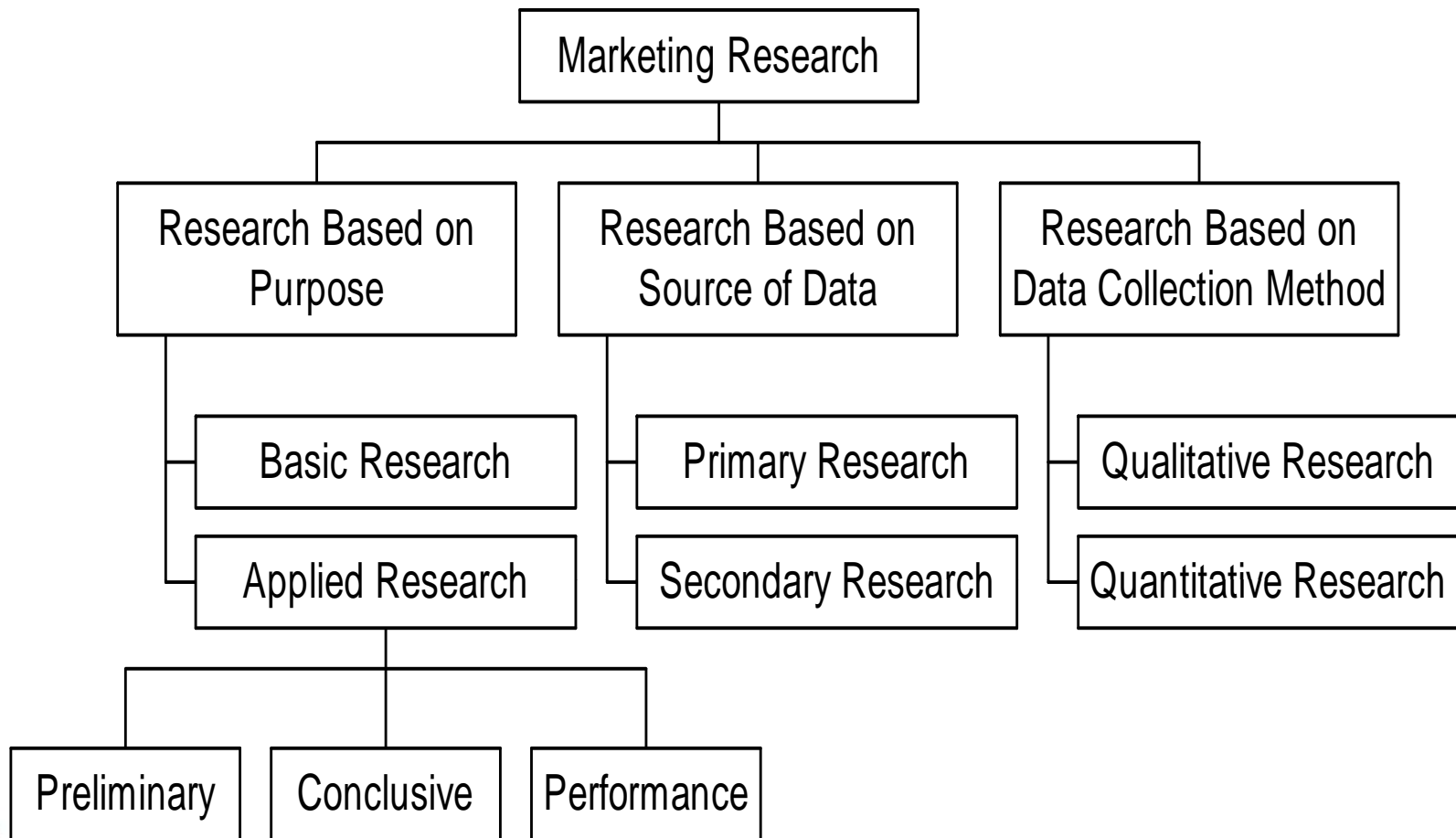


THE MANAGEMENT FORMATION SYSTEM





Types of Marketing Research





Applied Research

Conducted when a decision must be made about a specific real-life problem

Life! Give my PC life!



ILLUSTRATION BY TOMER HANUKA

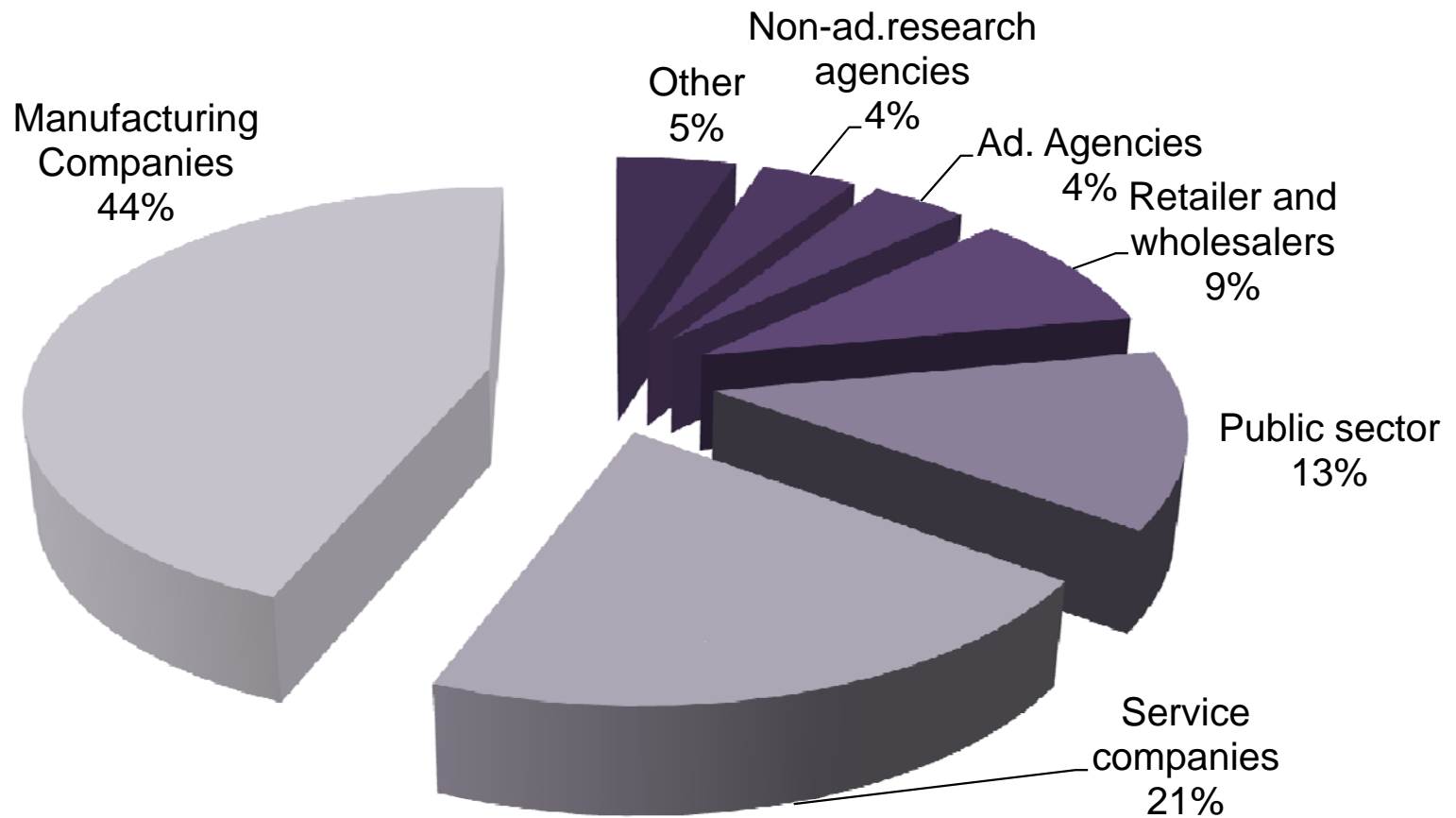


Types of Market Research: By Methodology

	Qualitative	Quantitative
Type of Question	Probing	Simple
Sample Size	Small	Large
Information per respondent	High	Low(ish)
Questioner's skill	High	Low(ish)
Analyst's skill	High	High
Type of analysis	Subjective, Interpretative	Objective, Statistical
Ability to replicate	Low	High
Areas probed	Attitudes Feelings Motivations Demographics	Choices Frequency

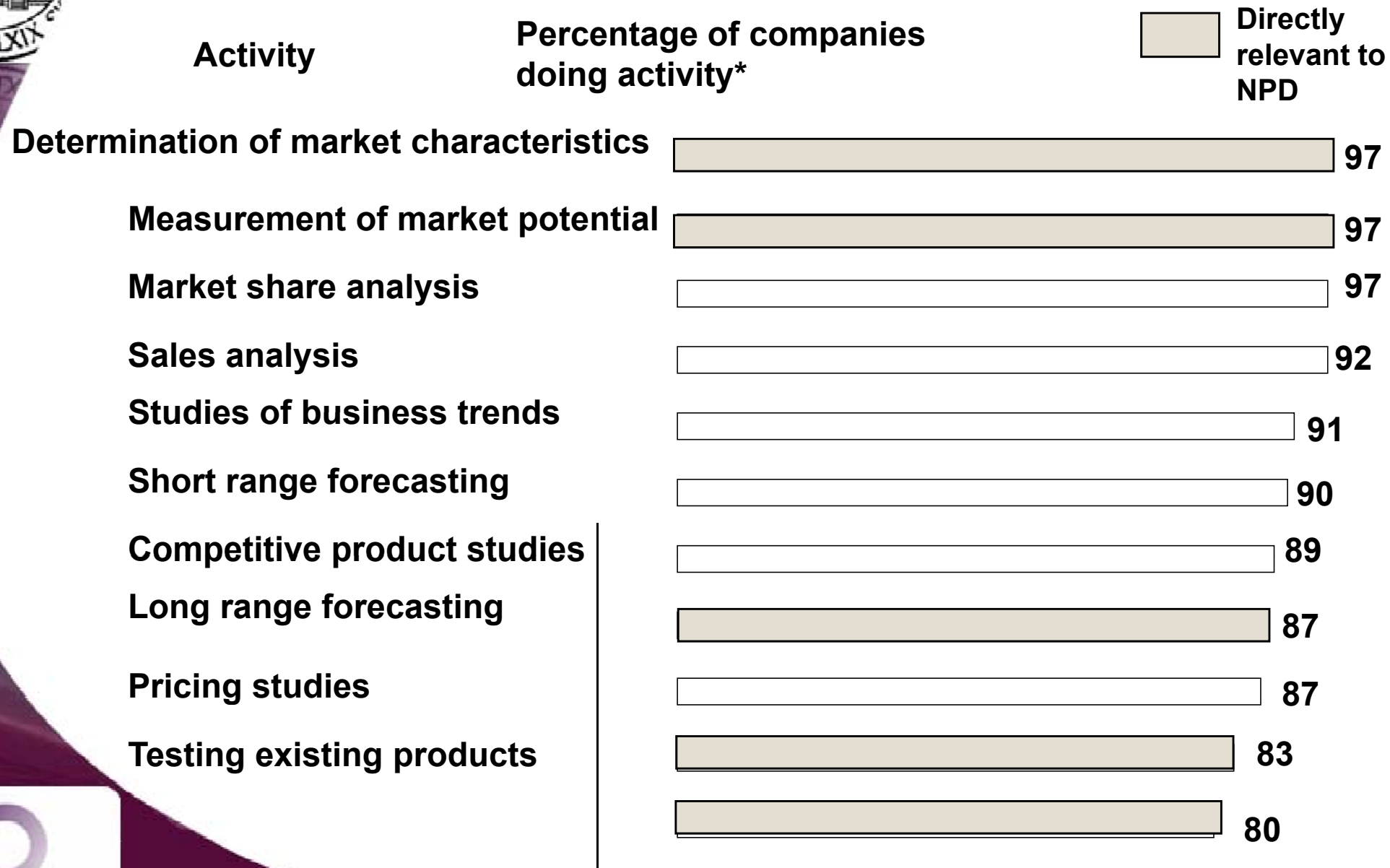


Spending on Market Research by Sector in the UK





The Ten Most Common Market Research Activities



* based on research activities of 599 companies in the US



Top 10 market research activities

Market Measurement	18%
New Product development/concept testing	14%
Ad or brand awareness monitoring/tracking	13%
Customer Satisfaction (inc Mystery Shopping)	10%
Usage and Attitude Studies	7%
Media Research & evaluation	6%
Advertising developing and pre-testing	5%
Social Surveys for central/local government	4%
Brand/corporate reputation	4%
Omnibus Studies	3%

Source: BMRA



Marketing and Distribution

Short Term

Premium price
\$35/unit → Supreme combo
\$20/unit → Basic combo

Advertising on local medias
-TV
-Magazine, Newspaper

-Directly distribute to local retails
in Northwest area.
- TV direct sale

Long Term

Price
-Moderate pricing (decreasing
10-20% from premium price)
Increasing market share

Promotion
- Extending advertising to
national medias

Placement
- Extending to retail store in
others area
-Company's e-business website



Potential Value of a Marketing Research Effort Should Exceed Its Estimated Costs

- Decreased uncertainty
- Increased likelihood of correct decision
- Improved marketing performance and resulting higher profits

- Research expenditures
- Delay of marketing decision and possible disclosure of information to rivals
- Possible erroneous research results

Value

Costs