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*Henry Chesbrough
Center for Open Innovation – UC Berkeley*

Palestra Open Innovation and Open Business Models

Patrocínio:



**VSE - VALE SOLUÇÕES
EM ENERGIA**

Realização:



Open Innovation and Open Business Models

Open Innovation Seminar 2008

World Trade Center, Sao Paulo, Brazil

Henry Chesbrough

Executive Director

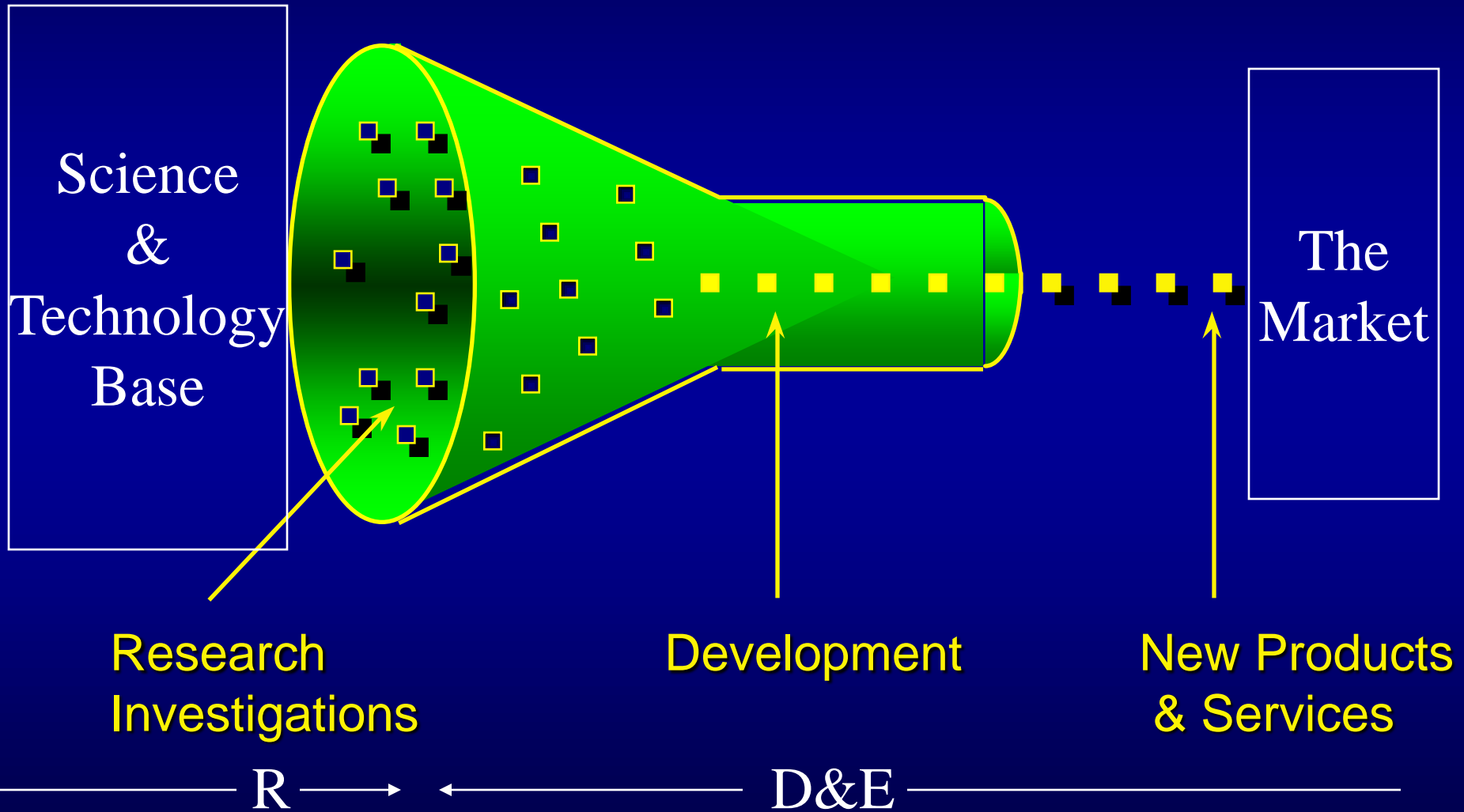
Center for Open Innovation

UC Berkeley

Where Were the Great Ideas for Innovation 50 or 100 years ago?

- Individual Inventors
- A few very large companies' R&D labs
- “The key [to success] is to find a man of genius, give him money, and leave him alone.”
 - James Conant, former President, Harvard Univ.

The Current Paradigm: A Closed Innovation System

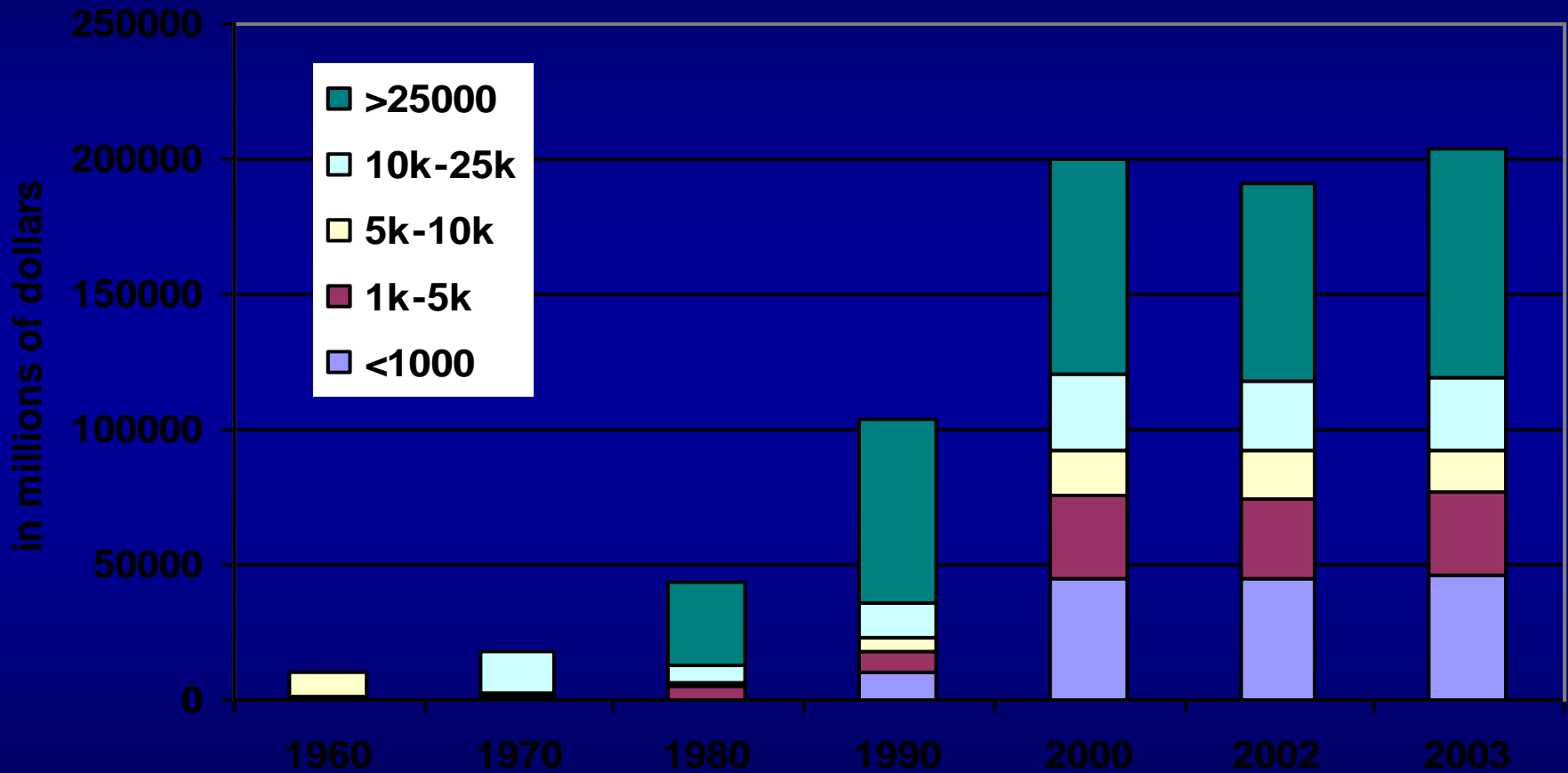


Diminishing Economies of Scale: US Industrial R&D by Size of Enterprise

Company Size	<u>1981</u>	<u>1989</u>	<u>1999</u>	<u>2003</u>
< 1000 employees	4.4 %	9.2%	22.5%	22.5%
1,000 – 4,999	6.1 %	7.6 %	13.6%	14.8%
5,000 – 9,999	5.8 %	5.5%	9.0%	7.5%
10,000 – 24,999	13.1%	10.0%	13.6%	13.4%
25,000 +	70.7%	67.7%	41.3%	40.9%

Sources: National Science Foundation, Science Resource Studies, Survey of Industrial Research Development, 1991, 1999, 2001, 2003.

R&D Spending by Firm Size, in \$



What changed?

Five Erosion Factors

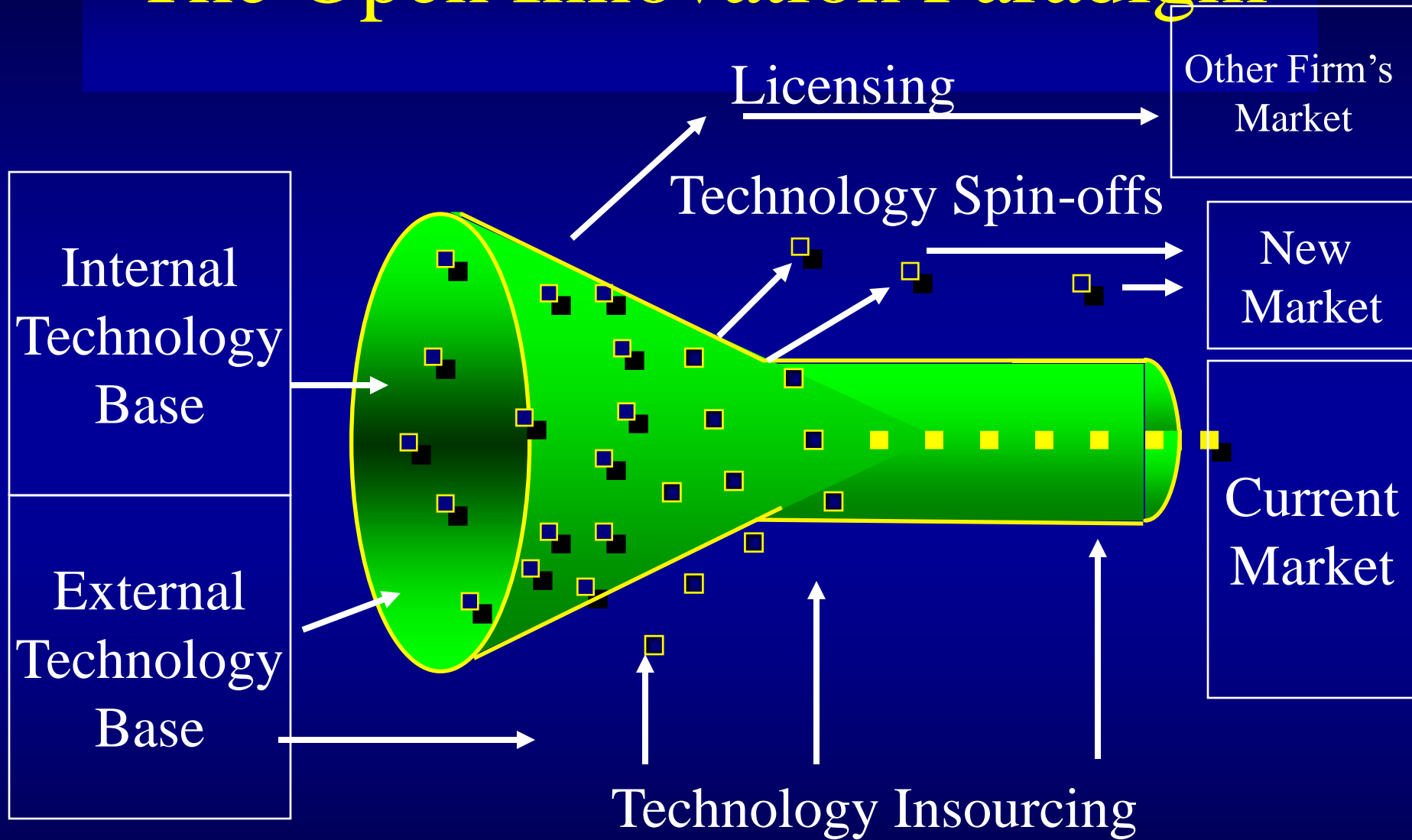
1. Increasingly mobile trained workers
2. More capable Universities
3. Diminished US hegemony
4. Erosion of oligopoly market positions
5. Enormous increase in Venture Capital

Where are the Great Ideas today?

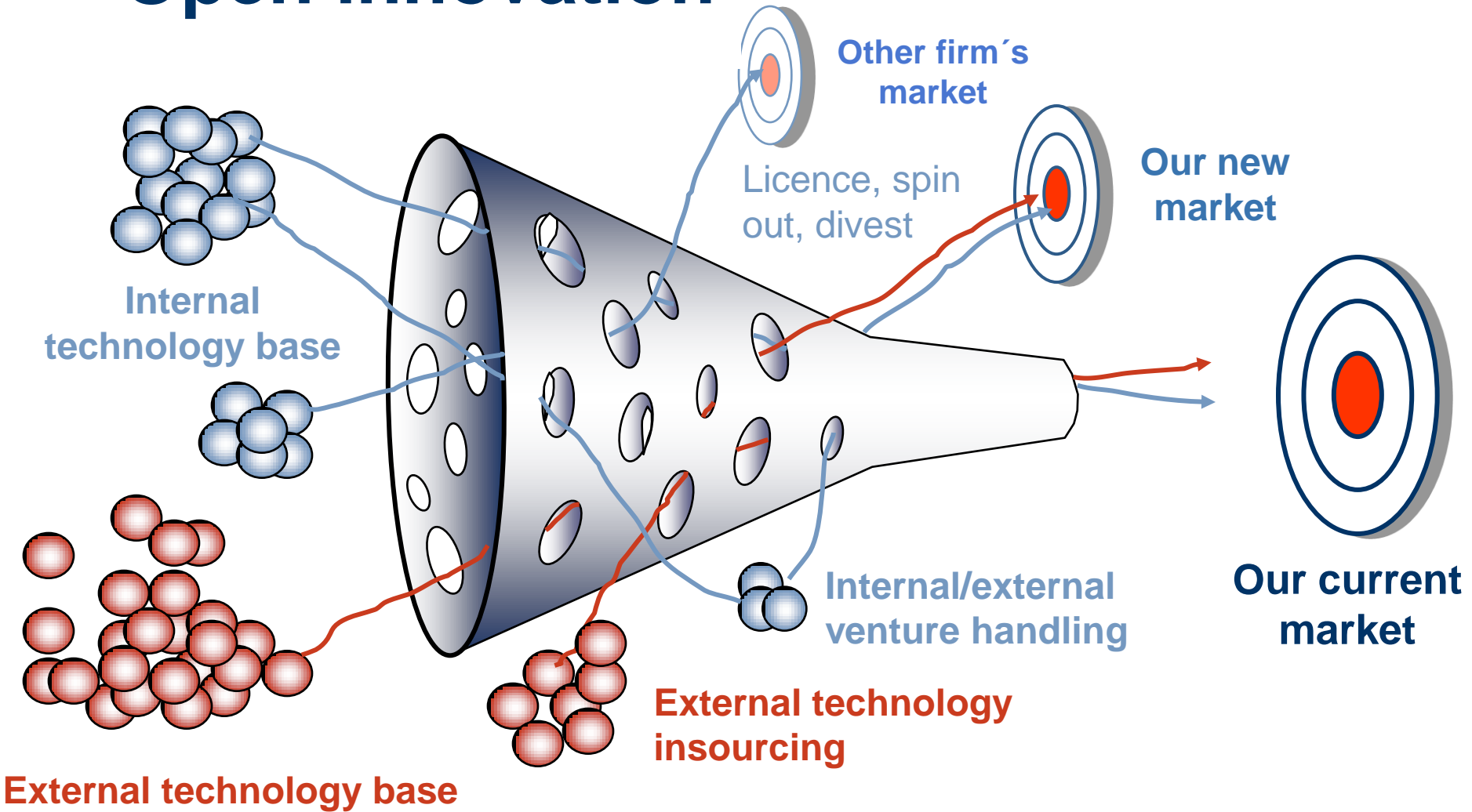
- Individual Inventors
- SMEs
- Universities and Research Institutes
- Some large companies

- “Not all the smart people in the world work for you.”
 - Bill Joy, founder, Sun Microsystems, now Partner at Kleiner Perkins.

The Open Innovation Paradigm



Open innovation



Stolen with pride from Prof Henry Chesbrough UC Berkeley, *Open Innovation: Renewing Growth from Industrial R&D*, 10th Annual Innovation Convergence, Minneapolis Sept 27, 2004



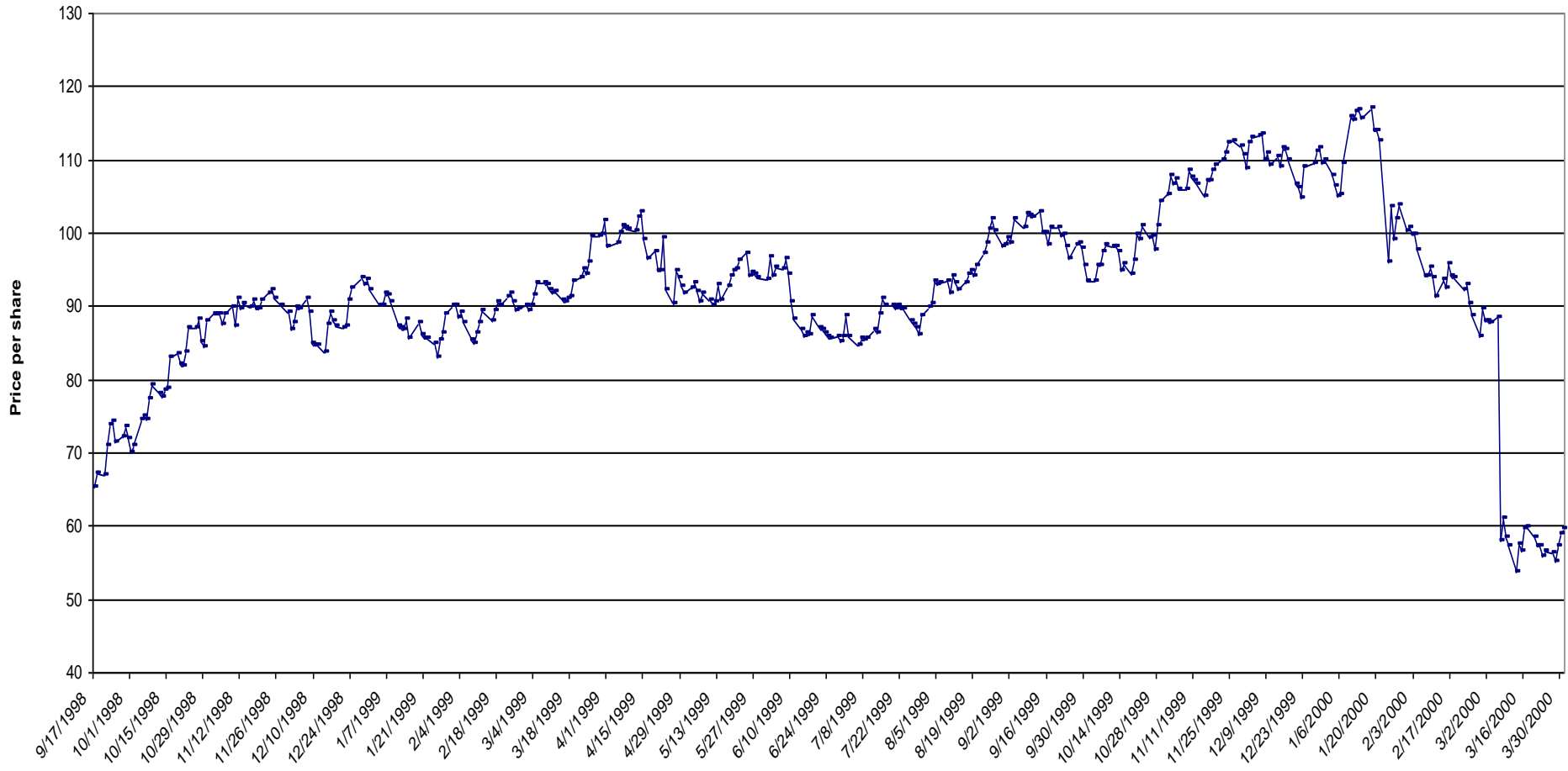
A New Perspective Towards R&D



Procter & Gamble

- P&G used to be a VERY closed organization
 - “We invented Not Invented Here” – J. Weedman
- P&G financial crisis, in 2000
 - Missed a series of quarterly financial estimates
 - Stock market lost confidence in the company
 - Stock price fell by more than half in 4 months!
 - CEO (Jagr) was fired

P&G Stock Price



Searching for the Root Cause

- “We fundamentally had a growth problem. Our current brands were performing well. But we weren’t developing many new brands.” – C. Wynett
- To get new brands, P&G needed to open up.
- Connect and Develop
 - SpinBrush, Swiffer, Regenerist

Example: Proctor & Gamble



A.G. Lafley

President and CEO
P&G

“We will acquire 50% of our innovations from outside P&G”

Jeff Weedman

28 External Business Development managers

VP, External Business Development

“We don’t care where good ideas come from.”

Nabil Y. Sakkad

SVP, R&D, Global Fabric & Home Care

“There’s 1.5 Million people in the world who know about my business. I want them on my team”

Larry Huston (just retired)

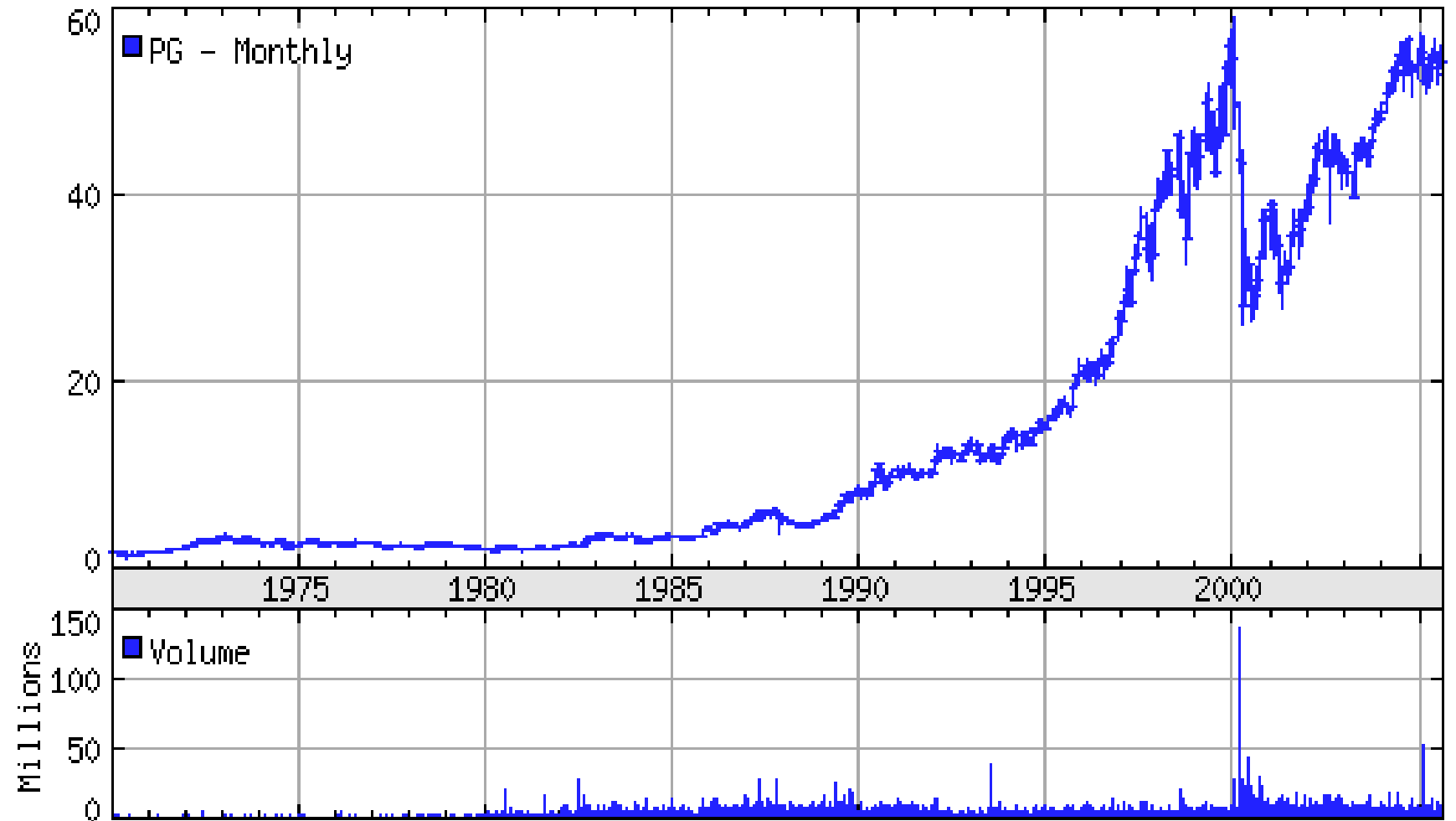
120 Technology Entrepreneurs

VP, Knowledge & Innovation, Corporate R&D

P&G Share Price Restored!

PROCTER GAMBLE CO

as of 8-Aug-2005



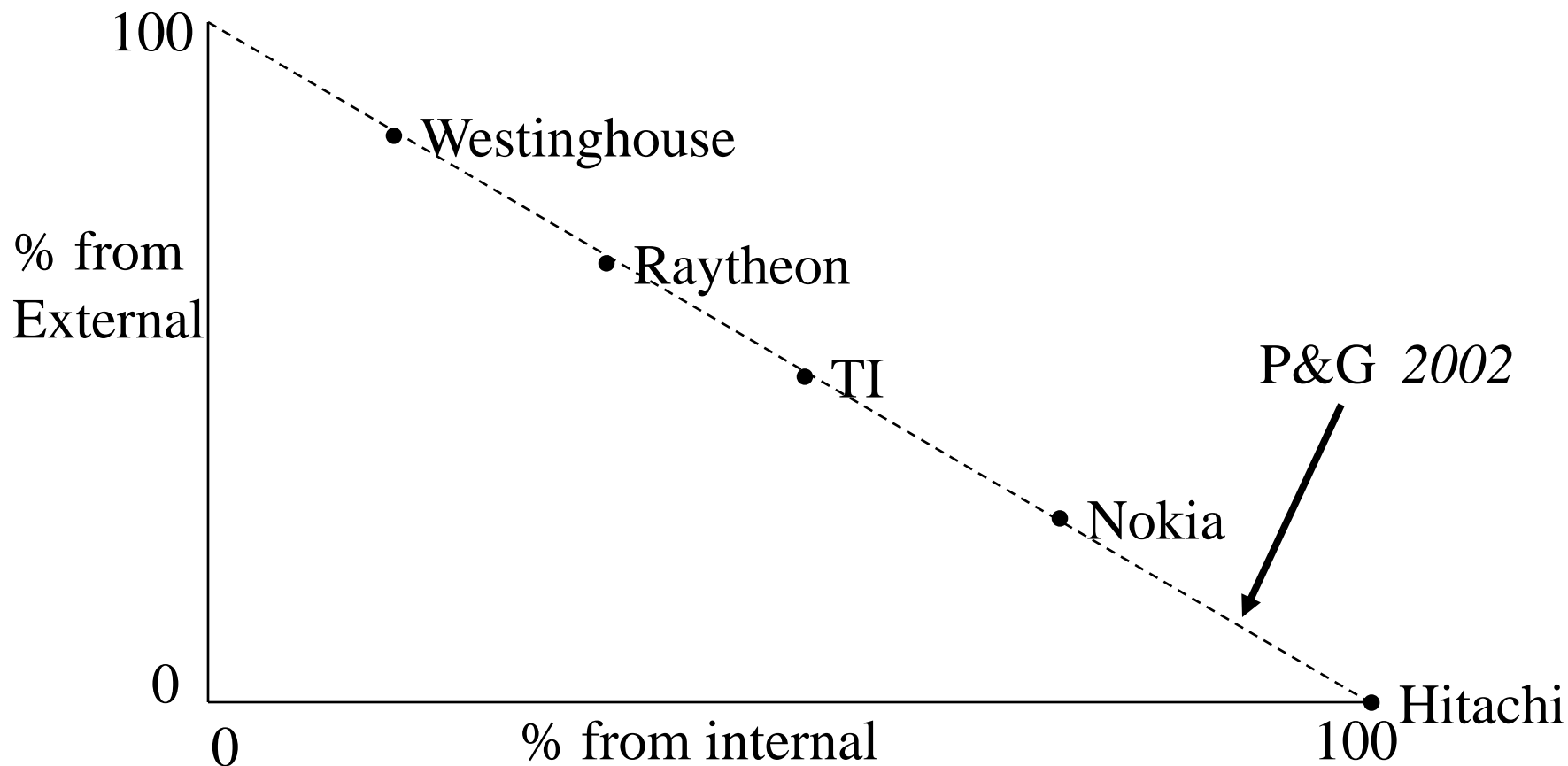
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The New P&G

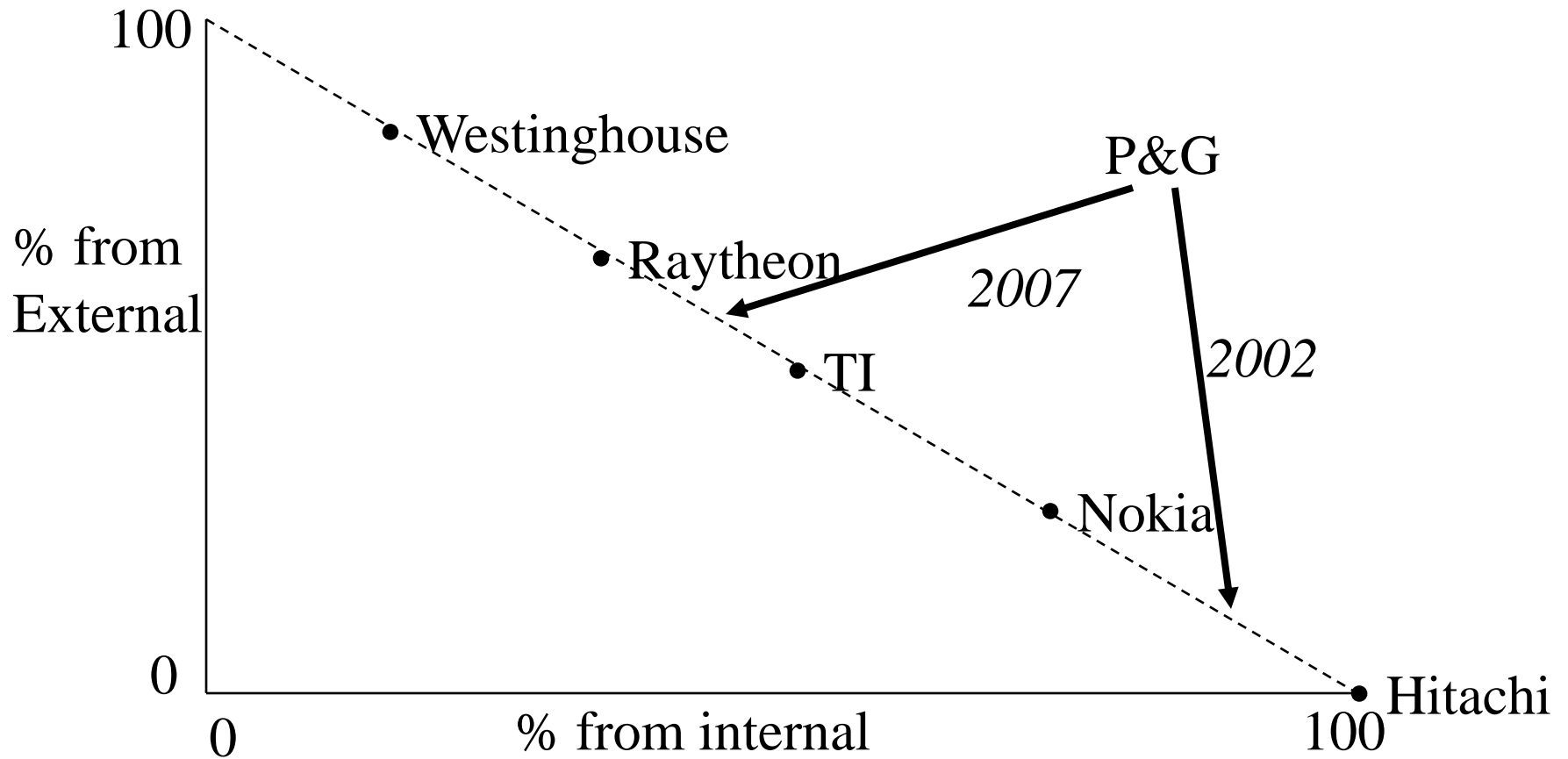
- Many processes to enable open innovation
 - Technology scouts
 - Legal templates for IP, partnering
 - Investments in Innovation Intermediaries
- The Goal Now: Become the open innovation partner of choice

Balancing Internal and External R&D Funding: P&G



Source: Gassmann, v. Zedtwicz (2002)

Balancing Internal and External R&D Funding: P&G



Source: Gassmann, v. Zedtwicz (2002)

Open Innovation examples in Latin and South America

- **Biocancer (Br)** Provides drug development and clinical trial services to international pharmaceutical companies, mostly from the USA
- **TVEI (Br)** A company founded by local media industry experts, offers multi-platform sport-related interactive content to consumers and advertising services to businesses.
- **Movix (Ch)** Technologies for mobile operators developed by former employee of a large telco, the main product was licensed exclusively to a(nother) telco
- **Akikb (Ch)** Self-storage solution, not available in Chile at the time, based on a widespread model from the USA and leveraging the infrastructure of an established “sister” construction company
- **Alltournative (Mx)** Ecotourism and recreational experiences with the support and collaboration of local Mayan communities
- **Interfactura (Mx)** Billing software and services initially developed for a large firm and integrated to its network of suppliers

Source: Dr. Jaime Garcia Alba, IADB

Case Studies' Innovation Sources

	Biocancer	TVEI	Movix	Akikb	Alltournativ	Interfactura
Innovation	Process	Service	Product	Service	Product/Process	Process
Networking Patterns	Global Value Chain	Intra-industry	Intra-industry	Transplant	Global Value chain	Company Value Chain
Financing	Personal, Customer	self	Internal company	Sister Company	self	Internal company
Intellectual Assets	Not Important	Important	Not Important	Not Important	Not Important	Not important

Source: Dr. Jaime Garcia Alba, IADB

Case Studies Key Success Factors (KSFs)

- **Initial Customers:** Most start with very few clients, typically large firms
- **Prior Experience:** A number of entrepreneurs have an international background (prior US experience)
- **Business Focus:** Most offer services rather than products
- **Source of Capital:** Personal/Family sources initially, followed only later by bank and PE/VC
- **IP Protection:** Not a KSF. Limited use of intellectual property protection mechanisms

Source: Dr. Jaime Garcia Alba, IADB

Challenges facing SMEs

- Less internal R&D capability
- Less ability to absorb external R&D
- Less “status” as a partner for others
- Less market power, weaker ability to capture value
- Less IP (usually, not always)
- IP Enforcement often too expensive

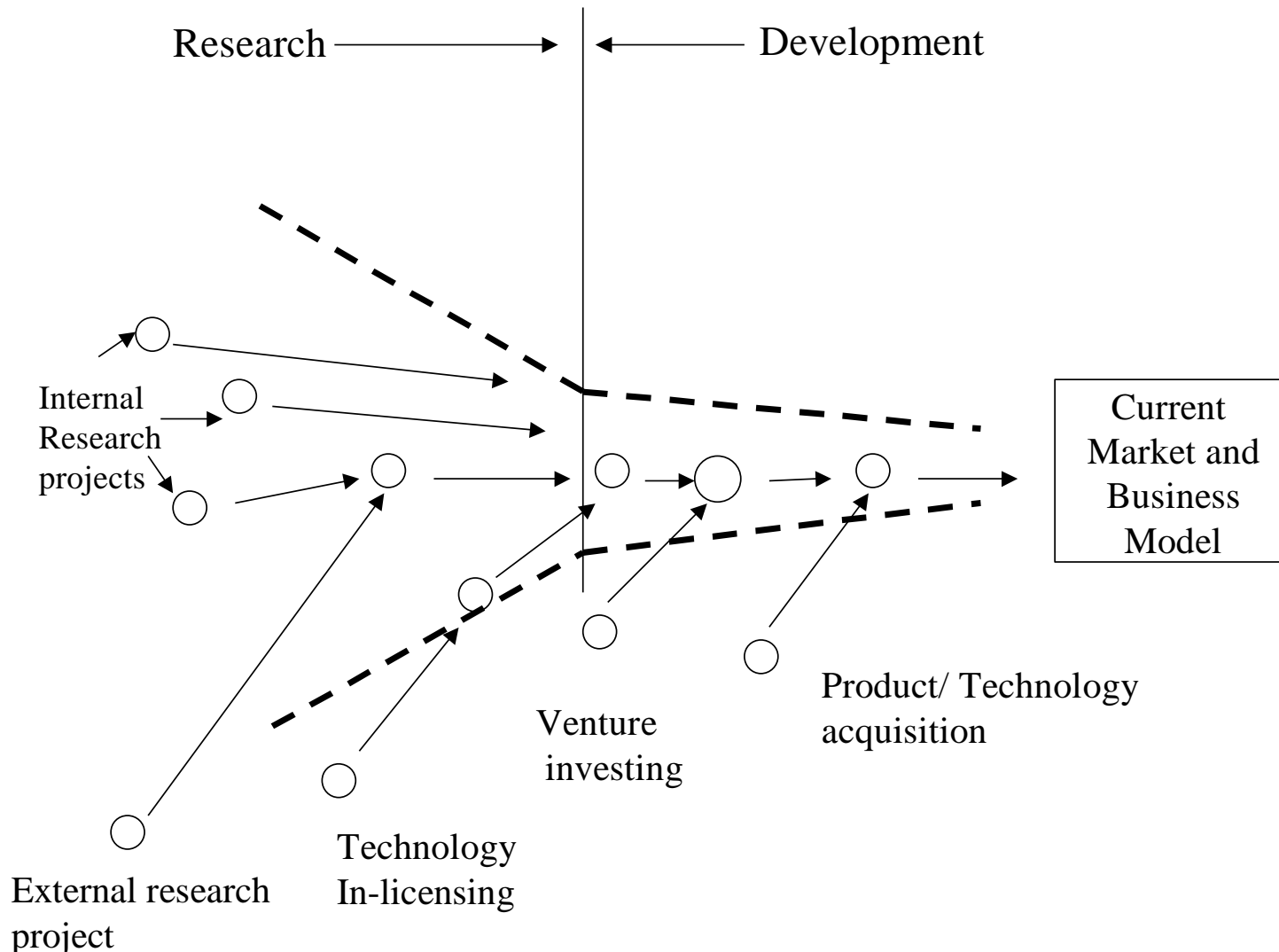
Advantages of Small Companies

- Size: markets that are too small for large firms can be attractive
- Focus: greater ability to execute for a specific segment or set of customer needs
- Specialization: ability to develop deep knowledge of a specific domain
- Entrepreneurial: external focus on results, much less internal “politics”
- Speed: faster decisions, faster execution, faster results

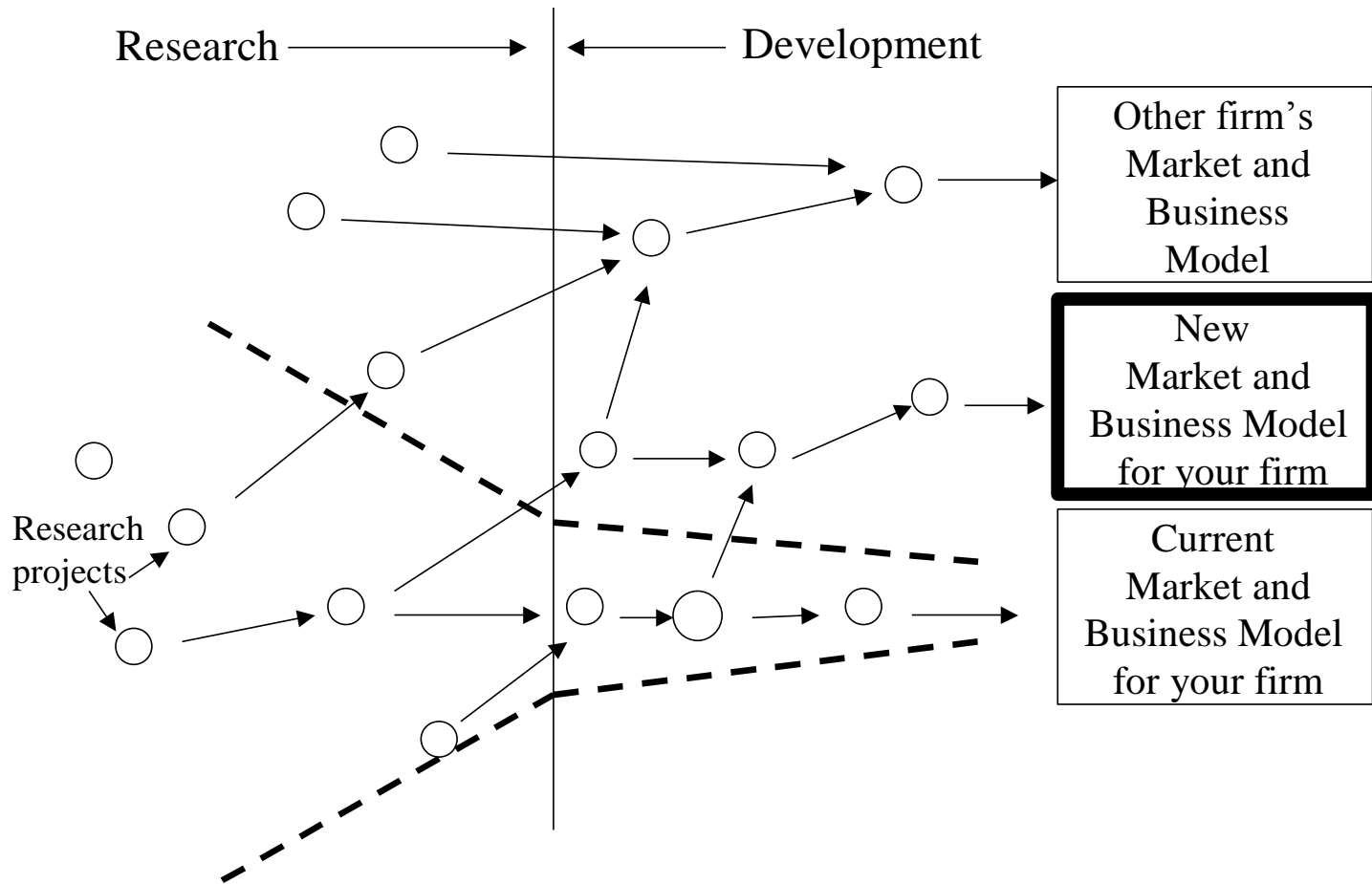
Open Innovation Benefits for SMEs

- Large firms increasingly value collaborative partnerships
- Large firms create platforms that seek supporting investments from SMEs
- Users (customers) initiate more innovative activity, a big opportunity for SMEs
- SMEs can expand geographically now at lower cost, “hidden champions”
- Greater rewards to specialization in Open Innovation

Job #1: Strengthening the Current Business



Job #2: Finding and Growing the New Business



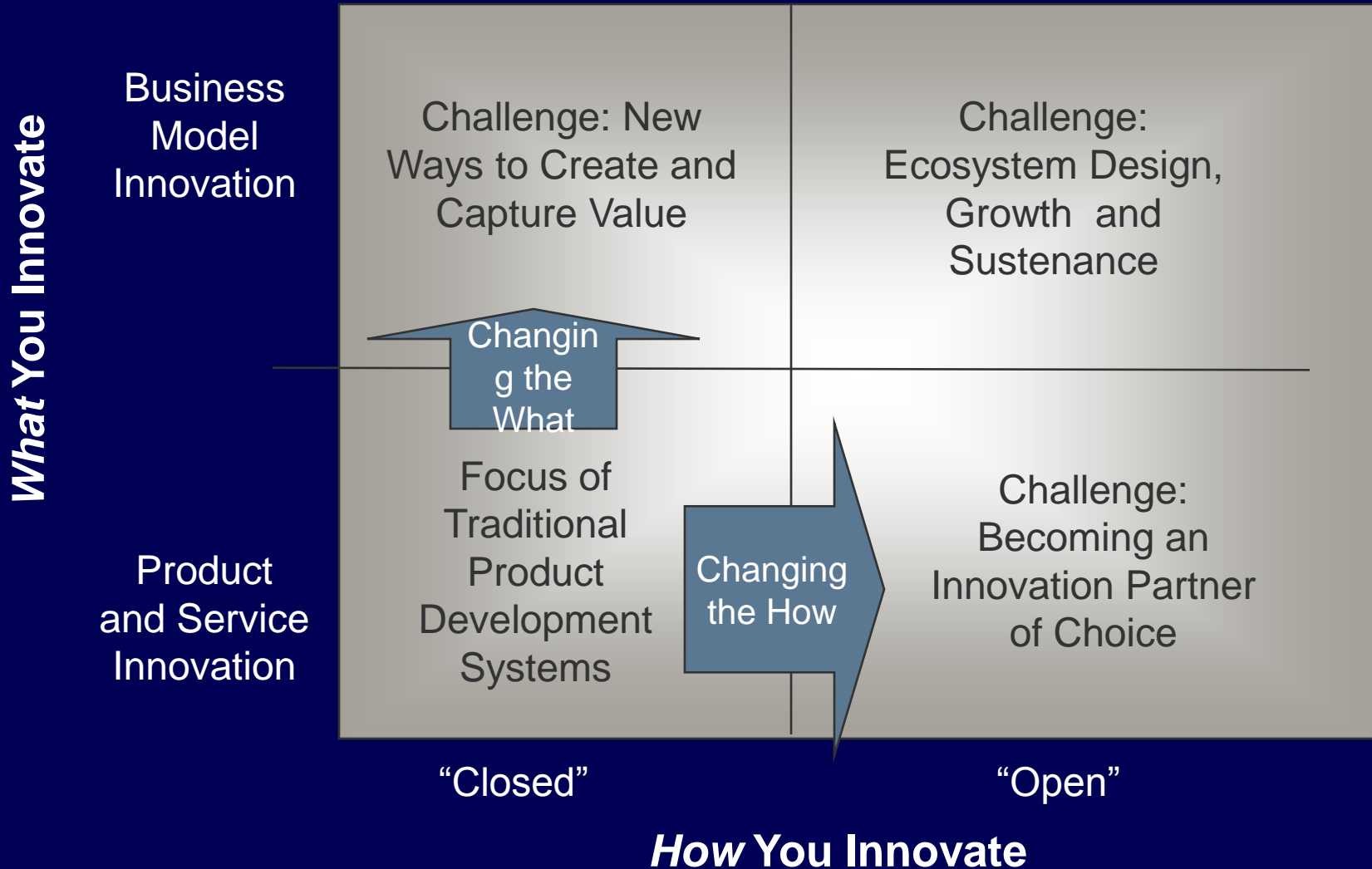
Issues for Open Innovation

- Where will the basic science come from?
- Will stronger Intellectual Property help or hurt the greater inflow and outflow of ideas?
- Will companies accept external ideas as willingly as internal ideas?
- Will companies allow internal ideas to flow outside to other businesses?
- How can companies manage Open Innovation?

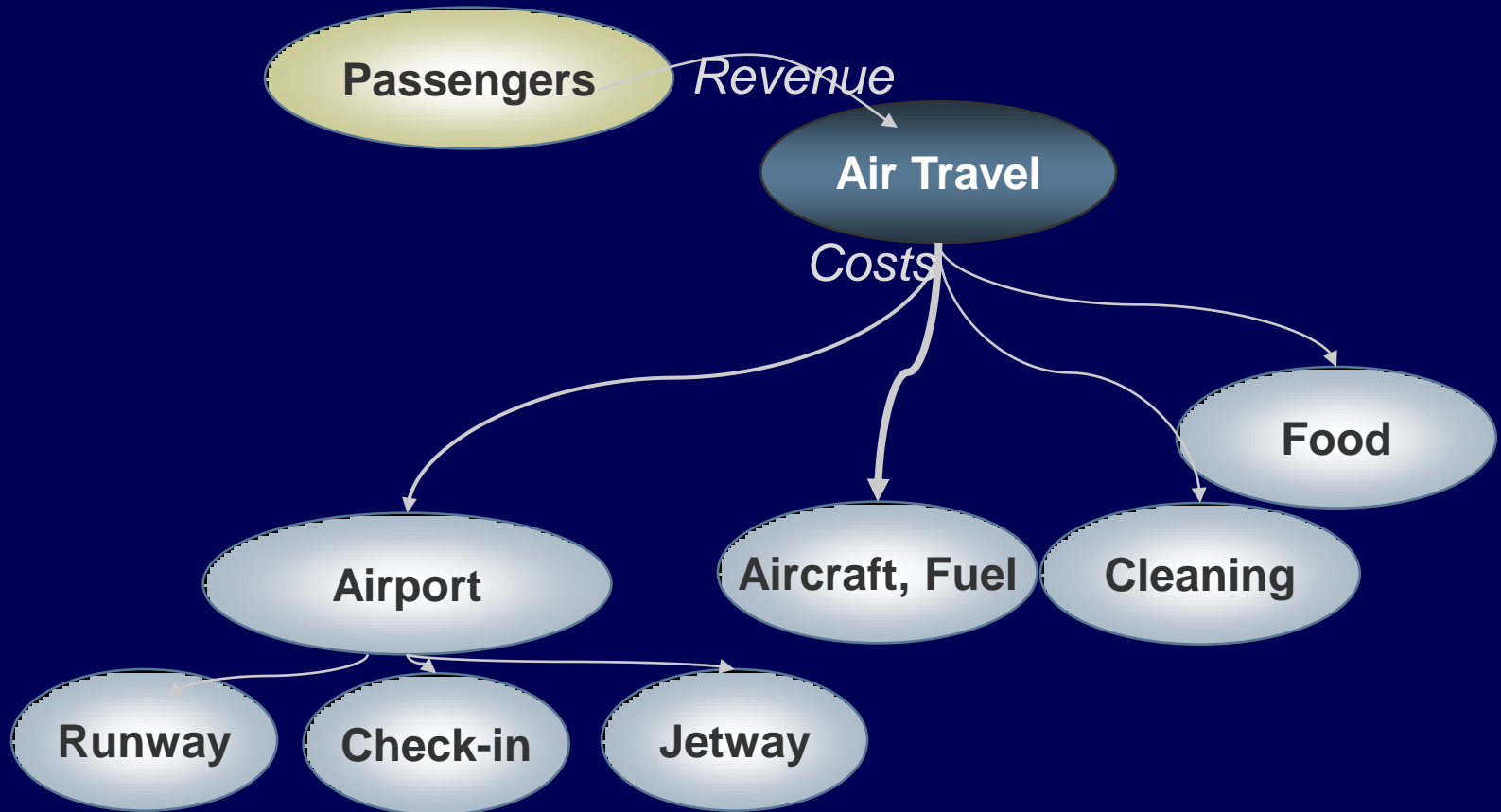
Issues for Open Innovation in Brazil

- Can Universities and Research Institutes rise to the challenge of working more effectively with industry?
- Can SMEs obtain the necessary financial and human capital to innovate and grow?
- Are Intellectual Property laws and enforcement sufficient for Open Innovation?
- Will large companies collaborate, or exploit?

Sustaining Innovation Capabilities: *What You Innovate* and *How You Innovate*



Graphic Illustration of a Generic Airline Business Model



Ryan Air

- Ryan Air is a regional low-fare airline operating in the United Kingdom and northern Europe.
 - Only flies into regional airports, no landing fees.
 - Guarantees airport certain # passengers in their terminal
 - Airport pays Ryan Air to operate out of its airport
 - Airport provides Ryan Air a percentage of the revenues from shops, restaurants, car hire and hotels at airport.

The Ryan Air Business Model



Business Model Maturity Stages

6 stages

1. Undifferentiated business model
2. Differentiated business model
3. Segmented business model
4. Externally aware business model
5. Integrated business model
6. Platform leadership business model

Adopting Darwin's Perspective

- “It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.”
- By analogy, it is not the strongest or best informed business model that prevails.

The Business Model Innovation Gap

- Who is responsible (budget and authority) for business model innovation at your company?
- What processes are in place to experiment with alternative business model possibilities?
- How do resources for business model innovation compare to resources for technical innovation?

What is Innovation?

Before

- Invention
- Product

- Technology-driven
- Internally generated
- Engineering's job

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Before

- Invention
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After

- Commercialization
- Business, including process and biz model
- Business/value-driven
- Internal Integration of int. and ext. stuff
- Everyone's job

FOREWORD BY JOHN SEELY BROWN

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for Creating and Profiting
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