

# Innovation & Entrepreneurship

## From Close to Open Innovation

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Most innovations fail.  
Companies that don't innovate die.  
True or False?

# We Know Innovation is Important

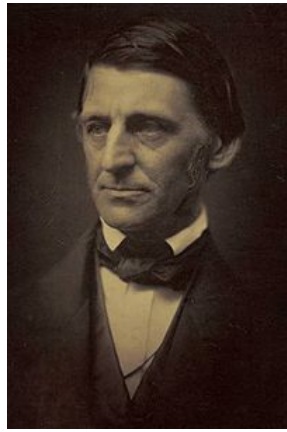


*"The most successful organizations co-create products and services with customers, and integrate customers into core processes."* IBM CEO Survey

*"We need diversity of thought in the world to face the new challenges,"* Tim Berners-Lee

*"When the rate of change outside an organization is greater than the change inside, the end is near"* Jack Welch

**Ralph Waldo Emerson** (May 25, 1803 – April 27, 1882)



*Rev. Emerson.*

**“People only see what they are prepared to see.”**

# Some definitions and the paradigm shift

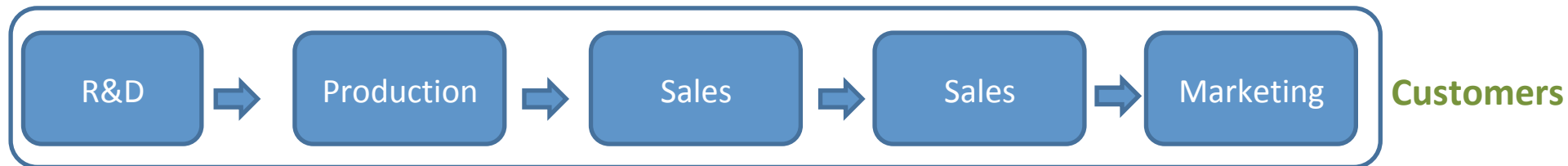
World views change and application to other spheres beyond science

- **Invention** implemented and taken to market
- **Create** a **reality** that did not exist before
- Change, **transforms** the challenge into a solution
  
- When a new paradigm emerges, the world is seen and perceived differently
- According to him, we are passing through a paradigmatic shift in innovation and the way we do it...from close to open innovation
- And beyond innovation is ...**disruptive innovation** – changes social practices

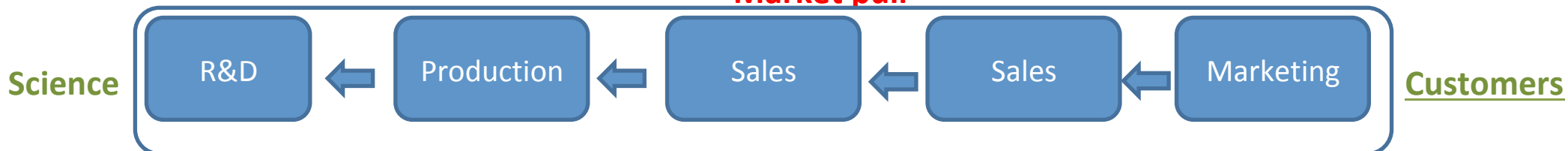
# Closed innovation

- Innovation happens within the firm
- The logic is the one of “buy” knowledge or develop internally
- Resources can be easily recruited and the firm has enough critical mass
- Innovation is not systematic
- It follows a linear model that can be production push or market pull

## R&D Push

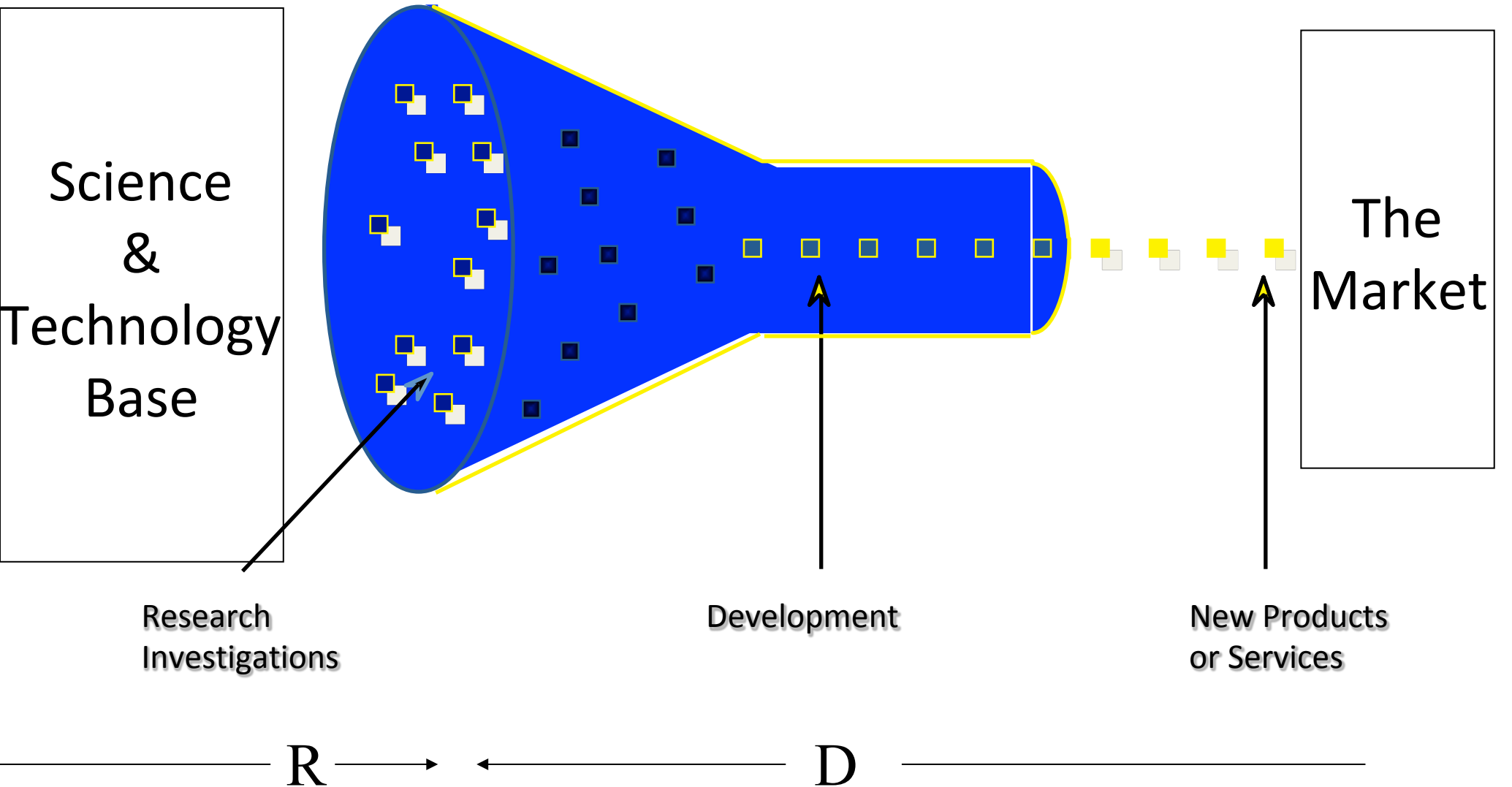


## Market pull



# A Closed Innovation System

.CIS



Source: Henry Chesbrough

# Make or Buy

## Closed innovation



**Advantage:**  
minimize dependency

**Disatvantage:**  
lack of flexibility

## Open innovation



**Advantage:**  
Total flexibility

**Disatvantage:**  
Total instability

Knowledge is a scarce resource

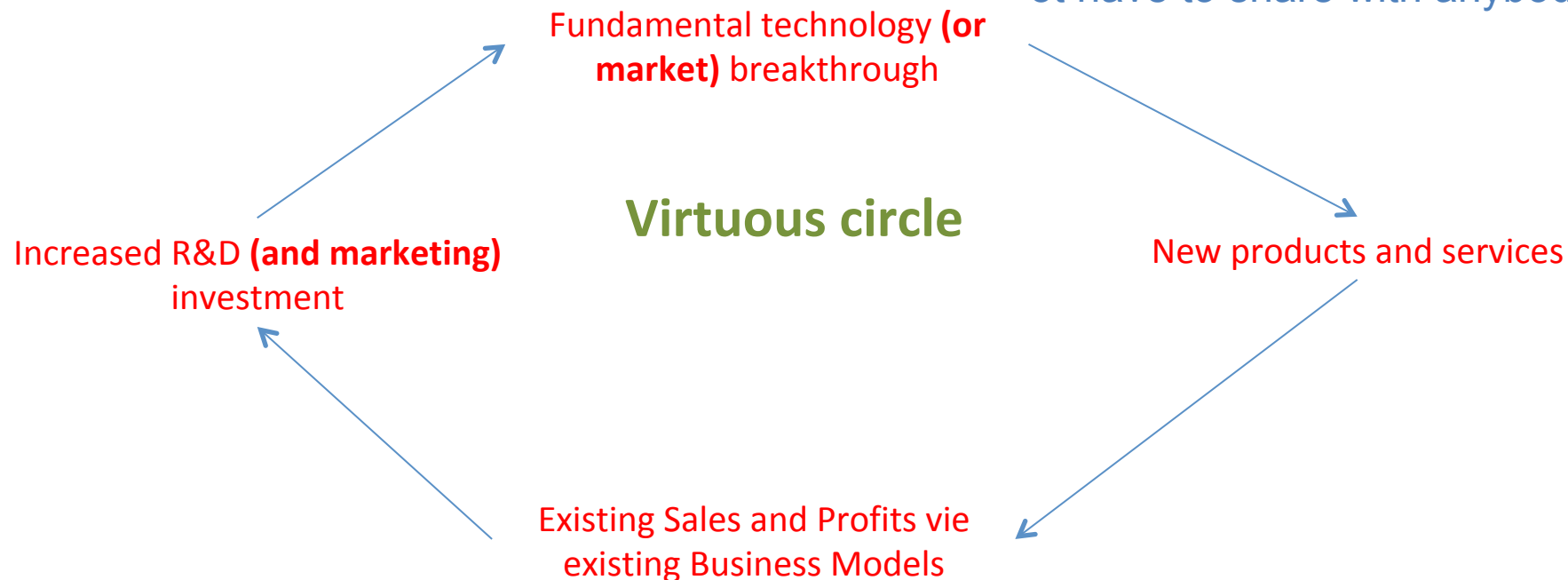
Trade-off

Knowledge is abundant



# How the close paradigm works

- Recruit and buy the best, internalize or make
- We have to sort out what can be produced or what is wanted
- The goal is to be a first comer, the others are competitors or suppliers
- The winner takes all
- R&D leadership is key and we have to protect our intellectual property
- Our customers are passive buyers and we do not have to share with anybody else



# Changing assumptions

- What if the needed knowledge and competence is not available?
- What if the critical mass of investments is too big?
- What if top managers know less than those “on the spot”?
- Can we always plan and predict what is good idea?

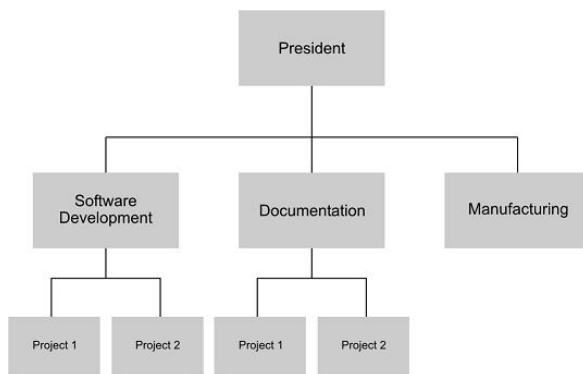


# Organizational forms for closed innovation

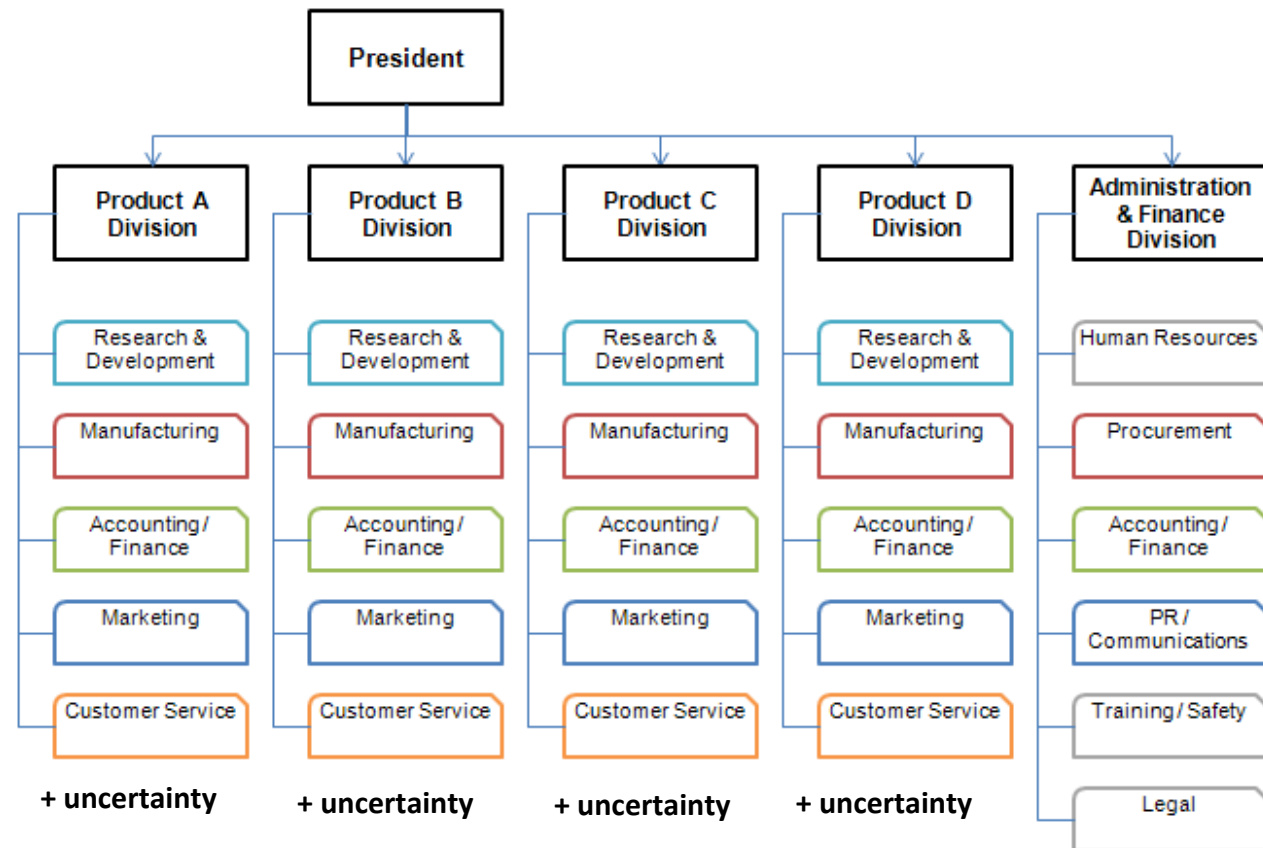
- In R&D push, the customer is not the driver, but the technical skills
- In Market pull, markets and customers are driving production

## Market pull: divisional

## R&D Push: functional



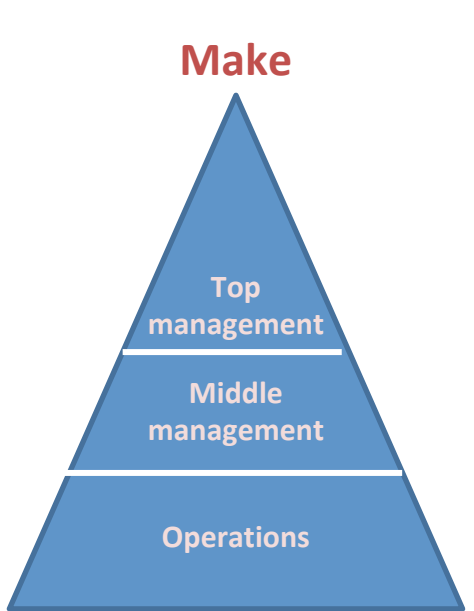
Functional Organization



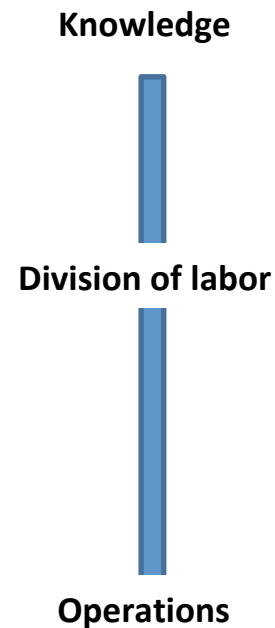
# Type of organizational control

The closed model is typically vertical

- Few decide what needs to be done (either R&D or Marketing Top Managers)
- These decisions are transformed in action plans
- These action plans are transformed in operations
- Market feedback is not relevant
- The operational line has nothing to do with the external world



**Pure Vertical Hierarchy**



# .The Crowd Wants to Contribute

“People are inherently creative and want to engage with organizations; they don’t want to have products and processes imposed on them.”

- *Venkat Ramaswamy & Fancis Guillard*

*HBR, October 2010*



# The Targets of Innovation Are Expanding ...

.... and success is dependent on explicit goals



## **Products & Services**

*Greater customer value*

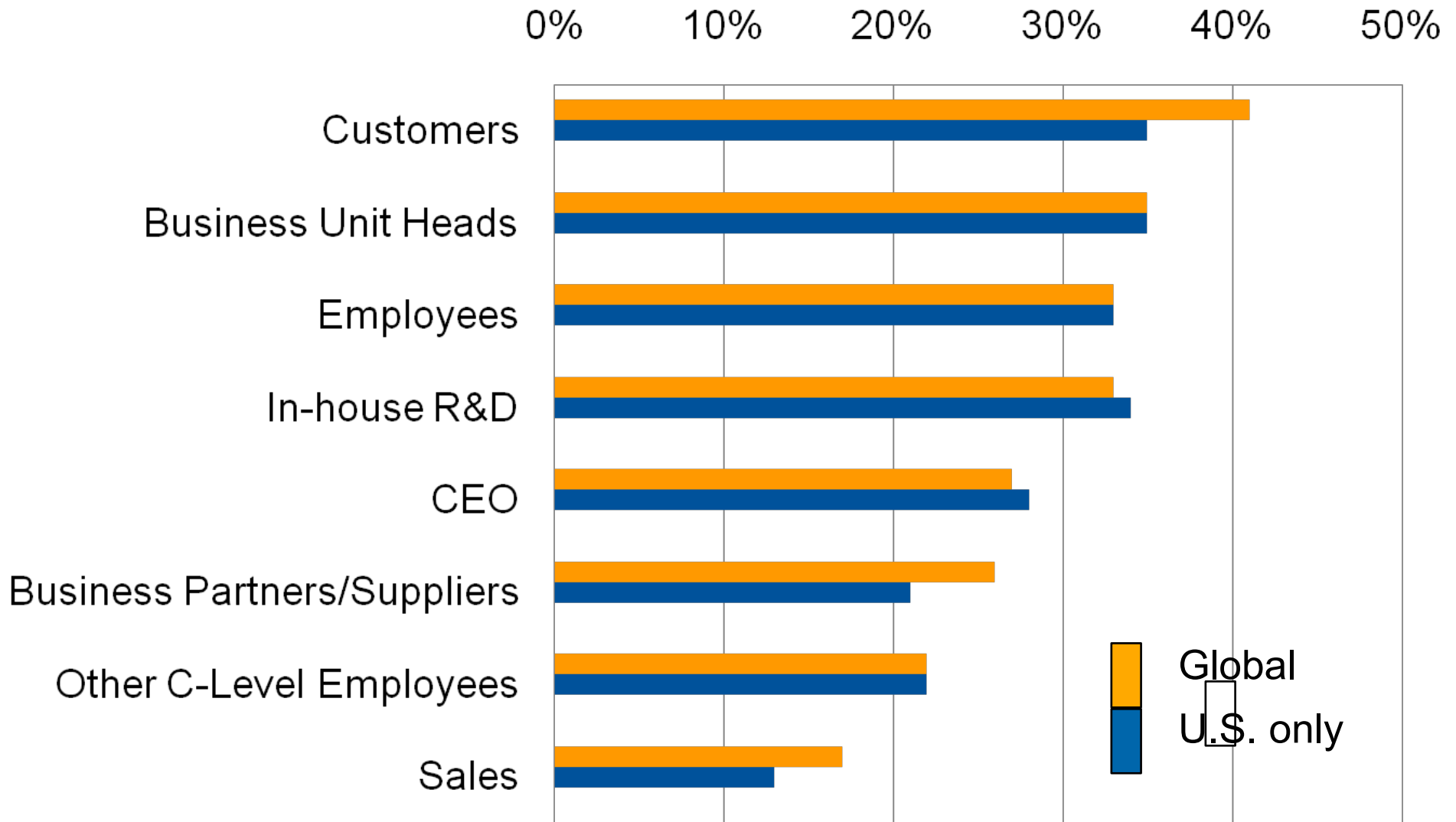
## **Operations**

*New ways of working*

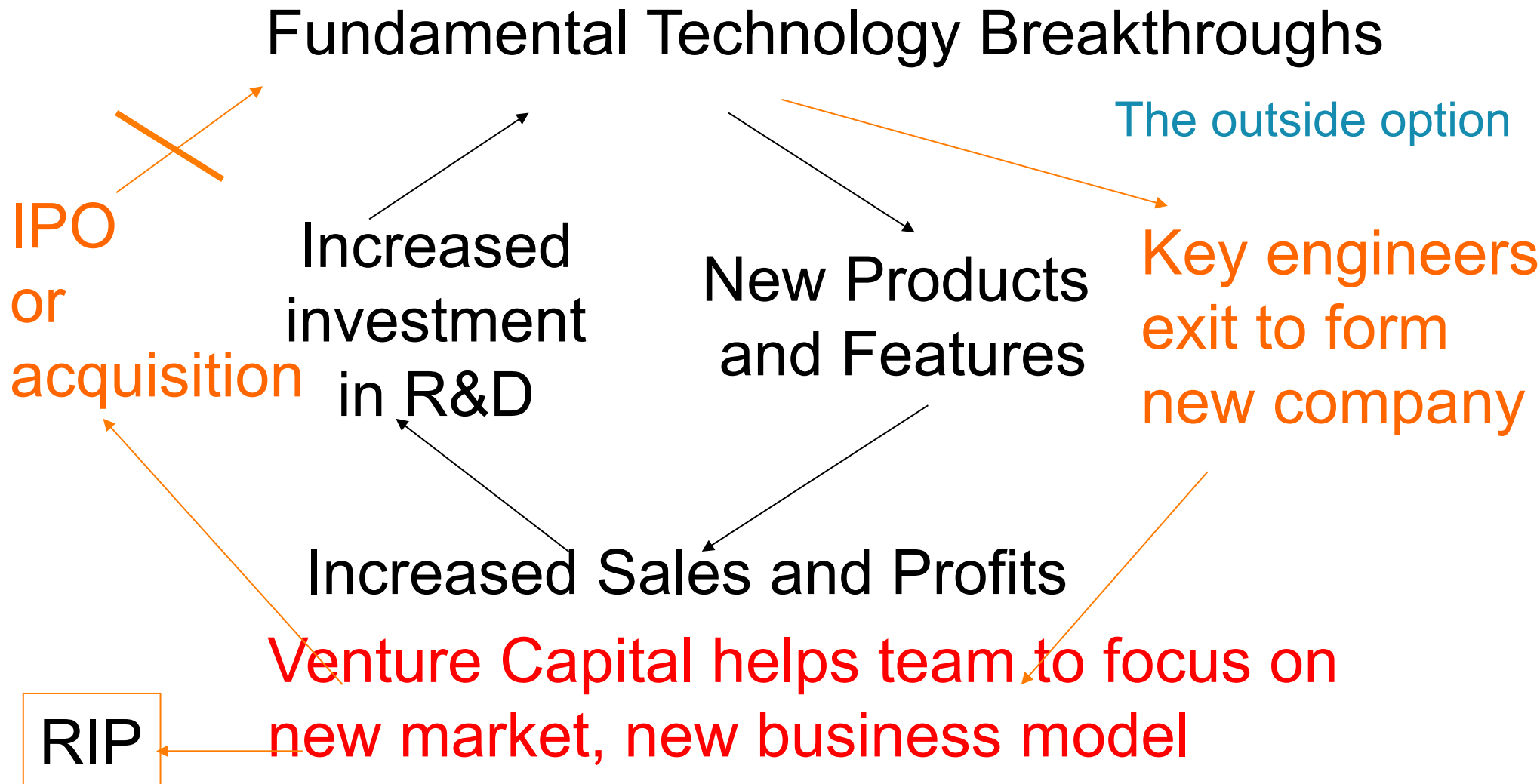
## **Management**

*Oversight & decision making  
structures & competencies*

# Know the Sources of Innovation



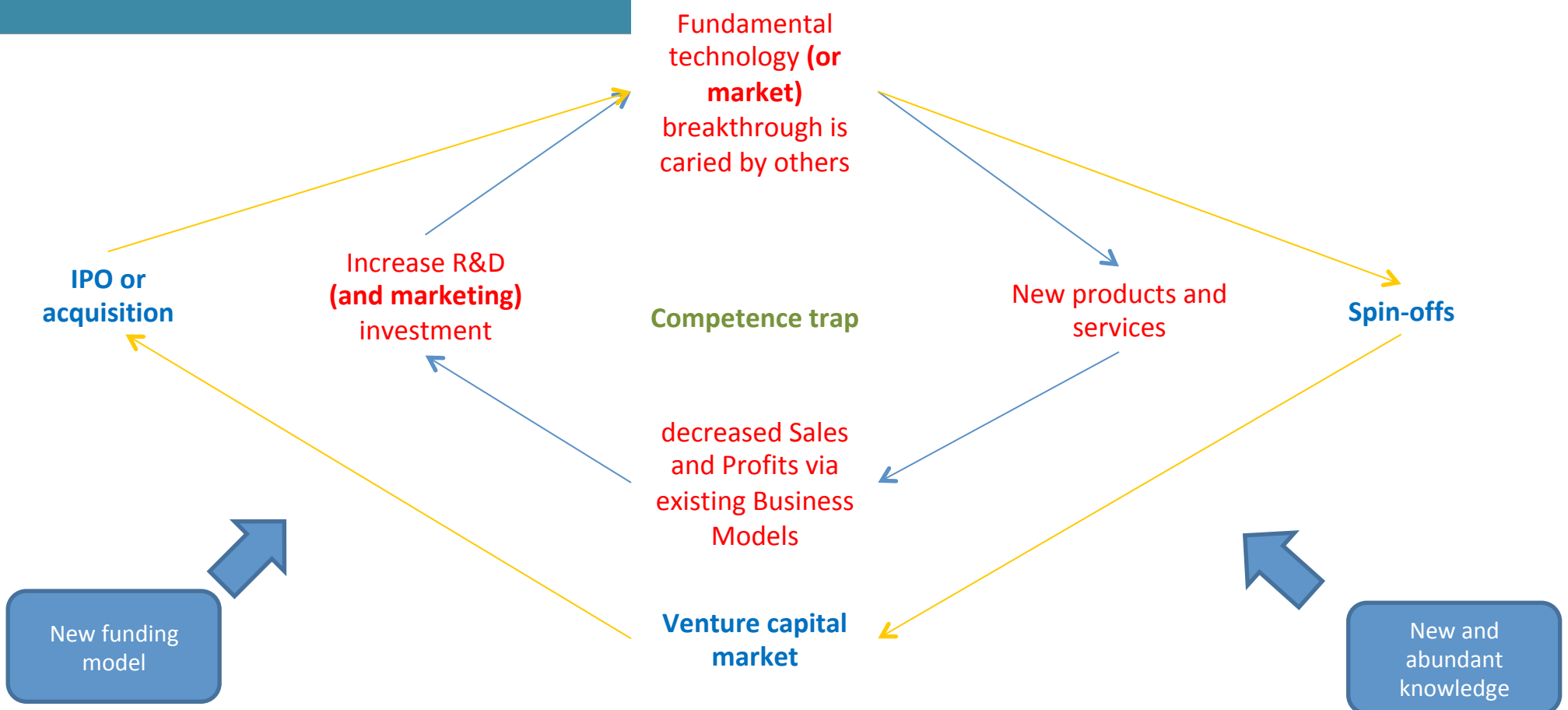
# .OI: The Virtuous Circle Broken



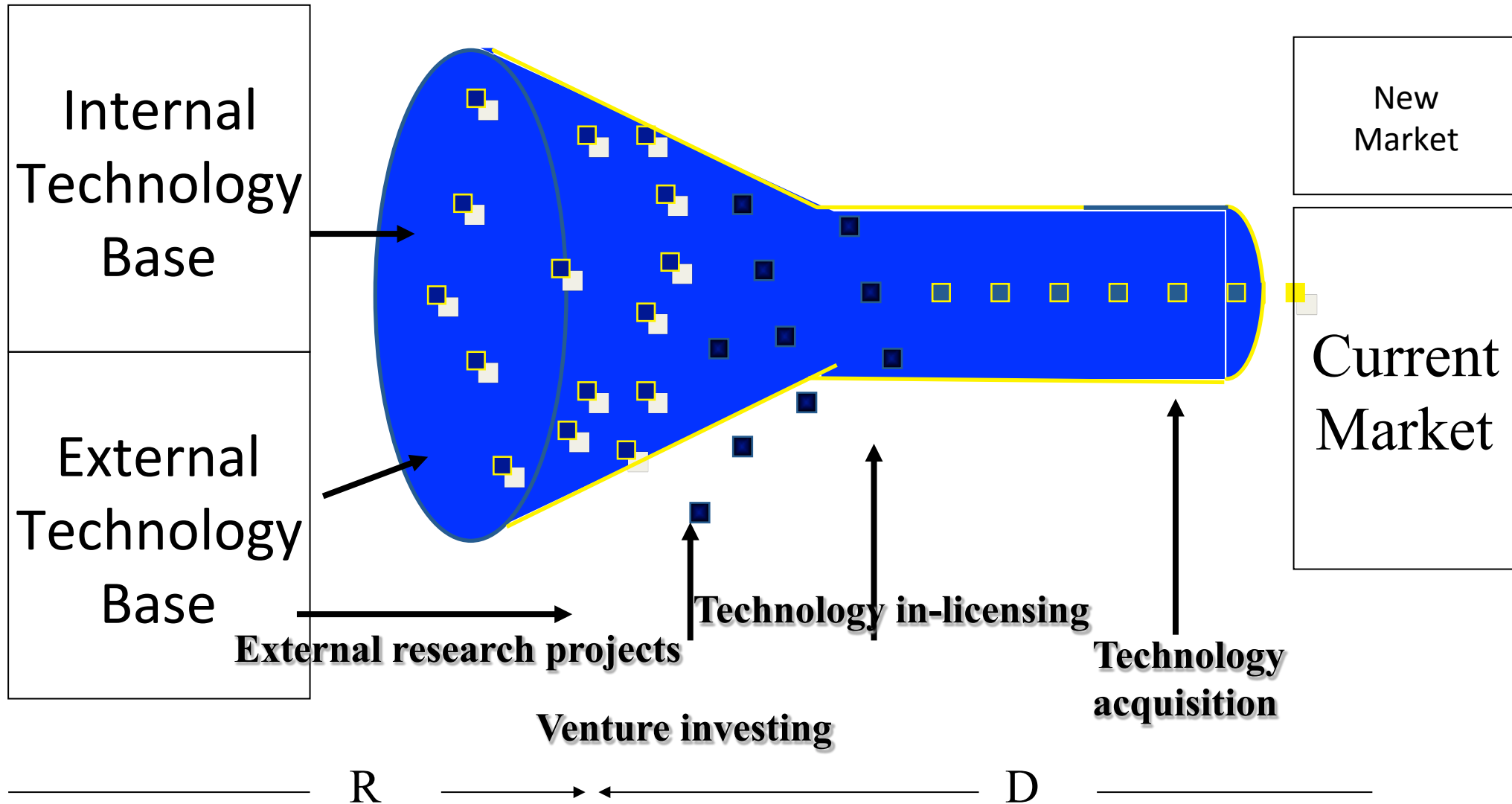


# The breaking of the closed innovation loop

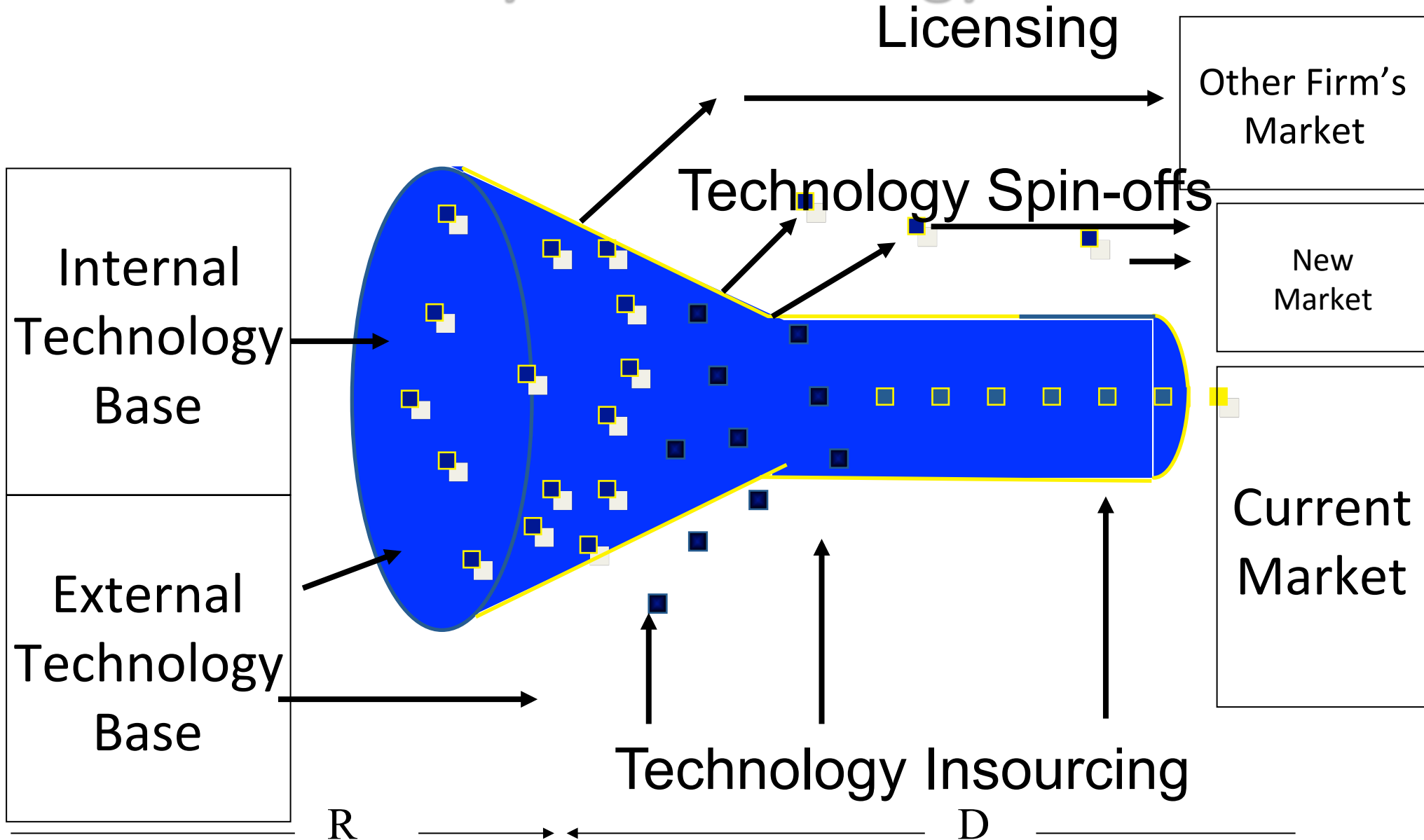
- What if the needed knowledge and competence is not available?
- What if the critical mass of investments is too big?
- What if top managers know less than those “on the spot”?
- Can we always plan and predict what is good idea?



# Inbound OI: Filling gaps with external technology



# Outbound OI: Profiting from others' use of your technology



Source: H. Chesbrough

# Key drivers to open innovation:

## 1. funding

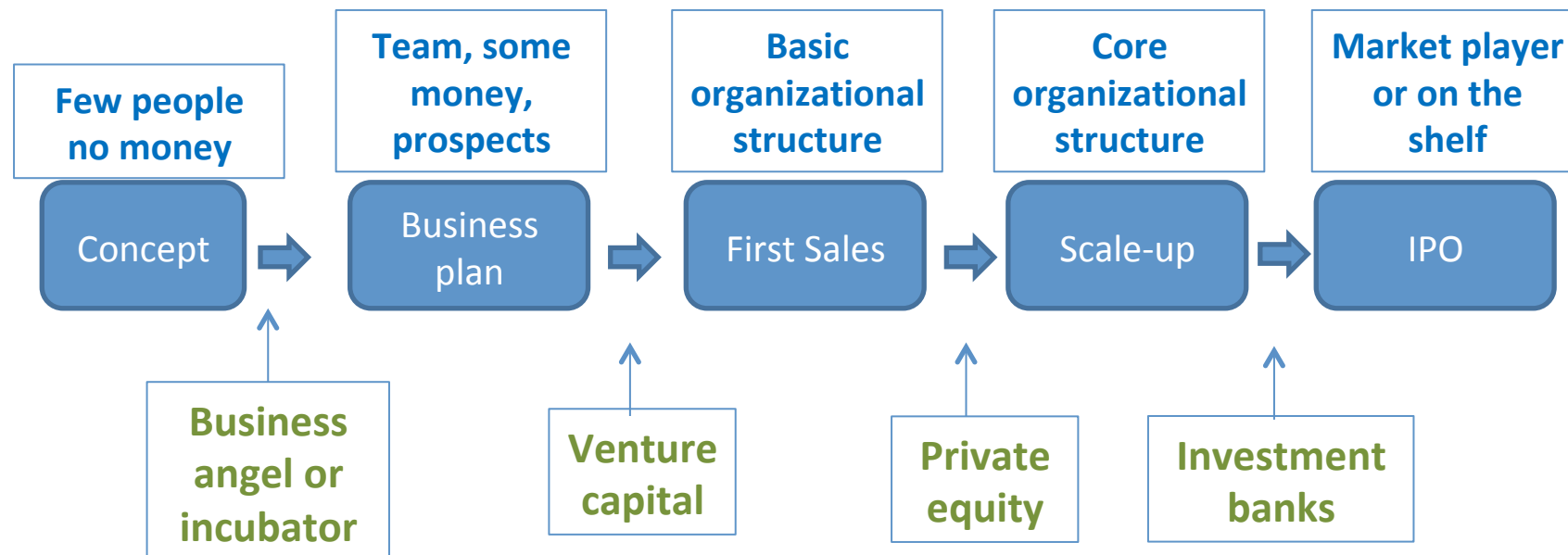
The breaking of the loop goes hand in hand with an evolution of the financial market

- Closed: basically self funding or debt
- ....need to share risk with new financial players which bet on the business

Some issues:

- They work on statistics
- They ask you to invest
- They value the team
- They value the system (the business model)
- They are used to see a lot of tech gadgets...

### Innovation funding chain



# Key drivers to open innovation: 2. The end of knowledge monopolies

The breaking of the loop coincides with the end of knowledge monopolies:

- Knowledge is distributed
- Knowledge is more valuable when it's capable to change
- Knowledge as an asset becomes easily obsolescent

Explosion of patents

Explosion of patents

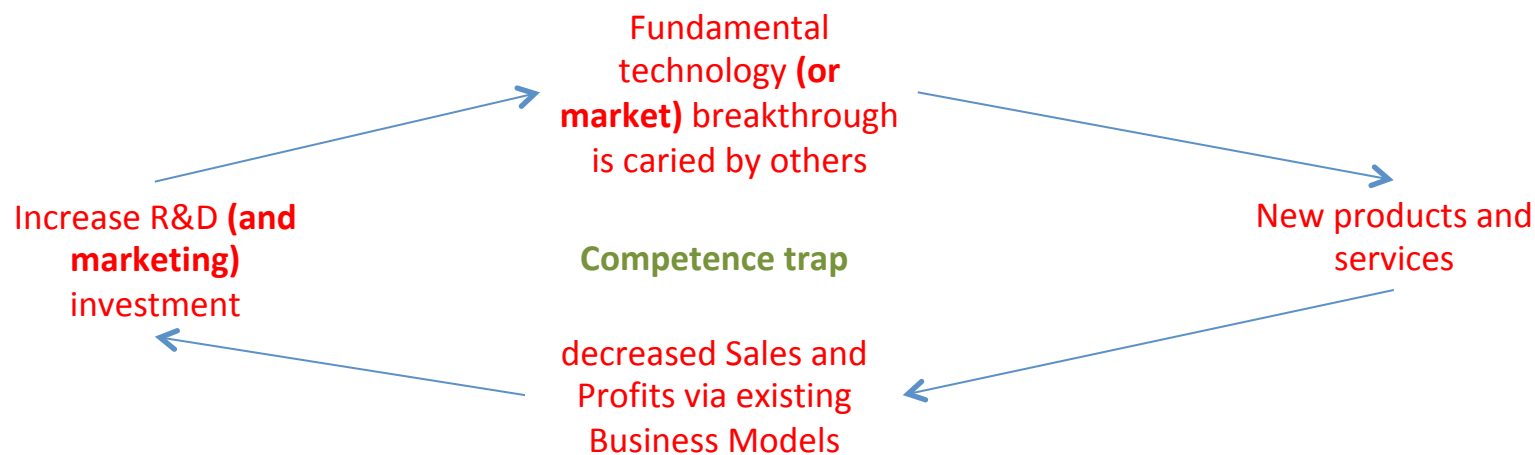
Universities as knowledge producers

Small players are more flexible in producing new ideas

ICT and the web enables all to generate, use, diffuse knowledge at 0 cost

Globalization and increase of human capital

Knowledge is abundant and distributed



# Paradigm shift: Open Innovation

The knowledge division of labor becomes distributed, systematic, involves all level of the value chain. Knowledge cannot be possessed.

- Goods and services are increasingly knowledge intensive
- Knowledge is abundant, spread, a valued resource, cannot be easily internalized
- The knowledge needed to pursue innovation requires huge economies of scale if internalized...new financing models
- When you cant afford knowledge you need to develop “absorptive capacity” and to collaborate with other knowledge sources
- The kinds of knowledge needed are wide, heterogeneous, interdisciplinary, unforeseen
- ICT made the value chain more flexible and reconfigurable
- Knowledge is a leaking matter and some times is better to share it rather than protect it
- The pace of change in preferences and needs is dramatic, obsolescence a norm
- The capacity to change or reconfigure knowledge (learn) is more valuable than that of retaining it
- The knowledge market is fragmented, and composed by entities of various shape and goals
- You never know who knows what

# Open Innovation: it is about...

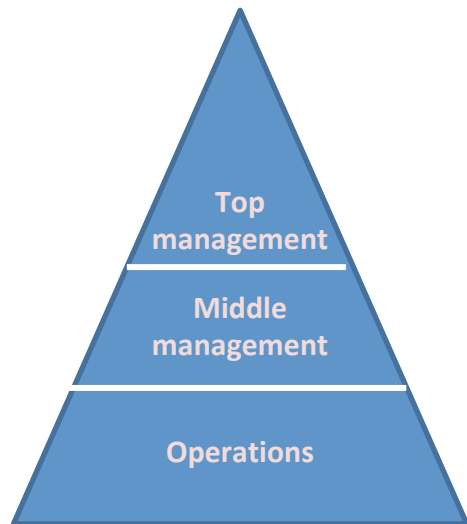
The blurring boundary  
between inside and  
outside...or, what is inside  
and outside?

- Work with smart people inside and outside the company
- External R&D can be convenient. But internal one serves a new purpose: “absorptive capacity”
- Research can originate somewhere else... need to partner with research players
- Talents are part of a global market...need to partner with education players
- Rather than being first, is better to be a sustainable business model
- Winners are systems, not individual players
- Intellectual property is tricky...if you let it flow out you might lose it but you might attract unforeseen partners and talents able to make a useless gadget a “winner takes all”

# Paradigm shift: Open Innovation from vertical to horizontal

- In between market (total control) and hierarchies (no control), new cooperative shapes are taking place to balance flexibility and reliability
- These shapes are alliances, joint ventures, networks, communities, clusters, groups of interest, constellations of organizations
- The main goal is innovation as a systematic process

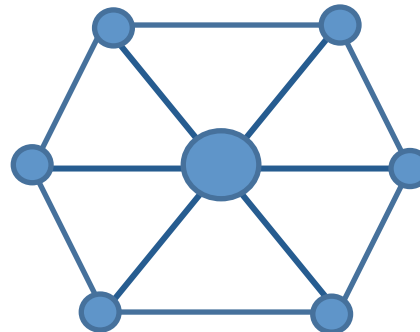
**Make**



**Pure Vertical Hierarchy  
and closed model**

**Trade-off**

**Open up  
and  
cooperate**



**Buy**



**Pure Horizontal Market  
and competitive model**



Some more literature on the topic...



2003

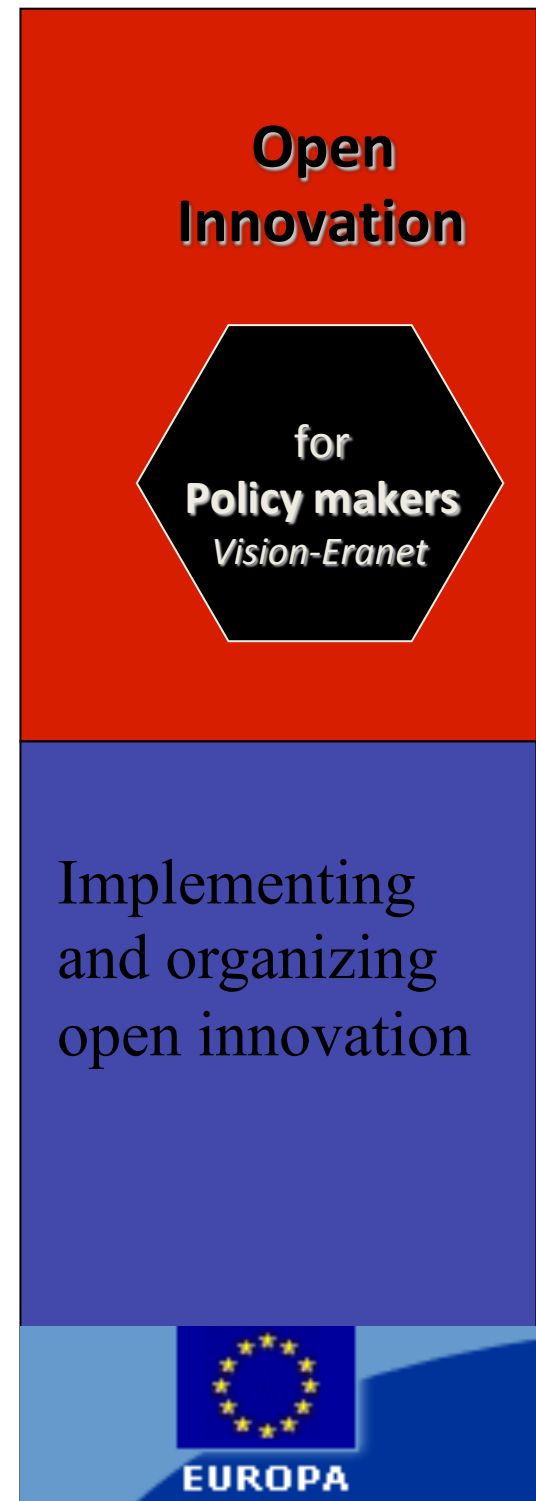
2006



2006



2008



# To pose some questions:

Critical approach is  
necessary even for...  
innovation

- Is Innovation always a solution or could it be a problem?
- Is it about doing things better or is it a fashion?
- Is it technological or .....?
- Do we really need it?
- Does it make our lives better /easier?