

Open innovation and the management of innovation

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Sources

- & Ecole de Paris's workshop on innovation management
 - & Discussion on real stories, with the people who were involved
 - & 116 meetings since 1997
 - & <http://www.ecole.org>
- & Futuris (foresight on the French research and innovation system)
 - & 30 interviews of companies active in R-D
 - & Work in progress
 - & <http://www.anrt-asso.fr>
- & REMI (network for innovation management studies)
 - & Scholars from different organizations (mainly in Paris area)
 - & Discuss work in progress
- & Observatoire des pôles de compétitivité (clusters)
 - & <http://www.obervatoirepc.org>
- & Observatoire des sciences et des techniques
 - & <http://www.obs-ost.fr>
- & Background research, research contracts, consulting
 - & <http://www.cerna.ensmp.fr/>

Paradox of industrial research

& Innovation

- & Source of competitiveness in developed countries (satiety, high salaries) where consumers have 'anything they want' (demand-driven)
 - & Let them believe that they have dreamt of what you offer them
- & Enables access to market in developing countries (bottom of the pyramid) where consumers cannot afford what is offered

& However, many companies cut on their R-D budget



Management of open innovation

Outline

& The paradox of innovation

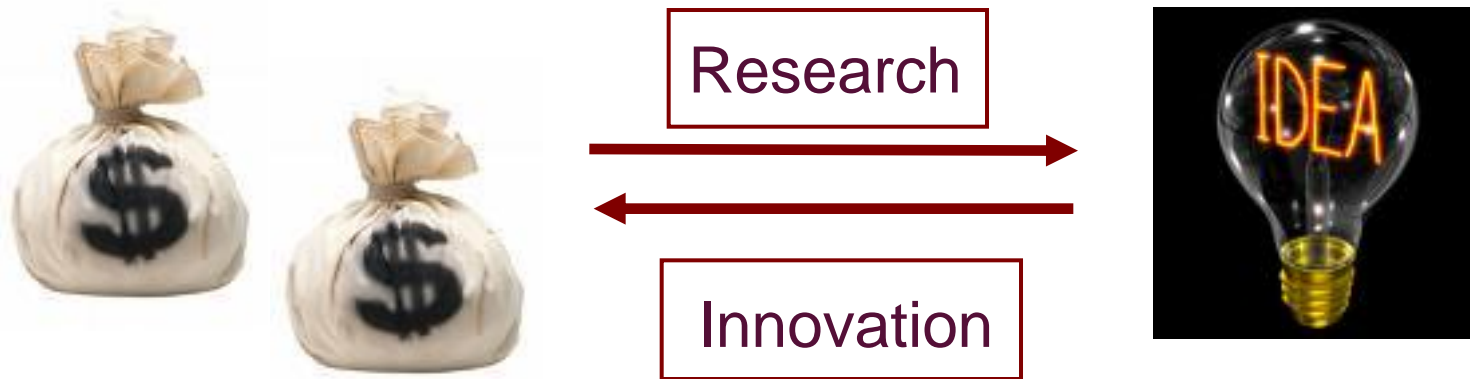
- & Increasing need of innovation vs. decreasing R-D budgets in many companies
- & Does R-D yield innovation? Can the yield be improved?

& From integrated firms to open innovation

& Managing for innovation in industry, what is it about ?

& What kind of cooperation ?

Will R-D make you rich ?



- & Loose correlation between wealth and R-D spending
- & Bell Labs, IBM,... spent money in R-D when they were rich and shielded from competition

Getting rich through innovation?



From integrated firms to open innovation

& Yesterday, firms relied on their own bolts and nuts and ideas

& Today

& They buy bolts

& They partners for sophisticated nuts

& They get most ideas through cooperation with academia and competitors

& They understand what to develop thanks to more intimacy with their customer

& You may get money with your own ideas, or with other's ones

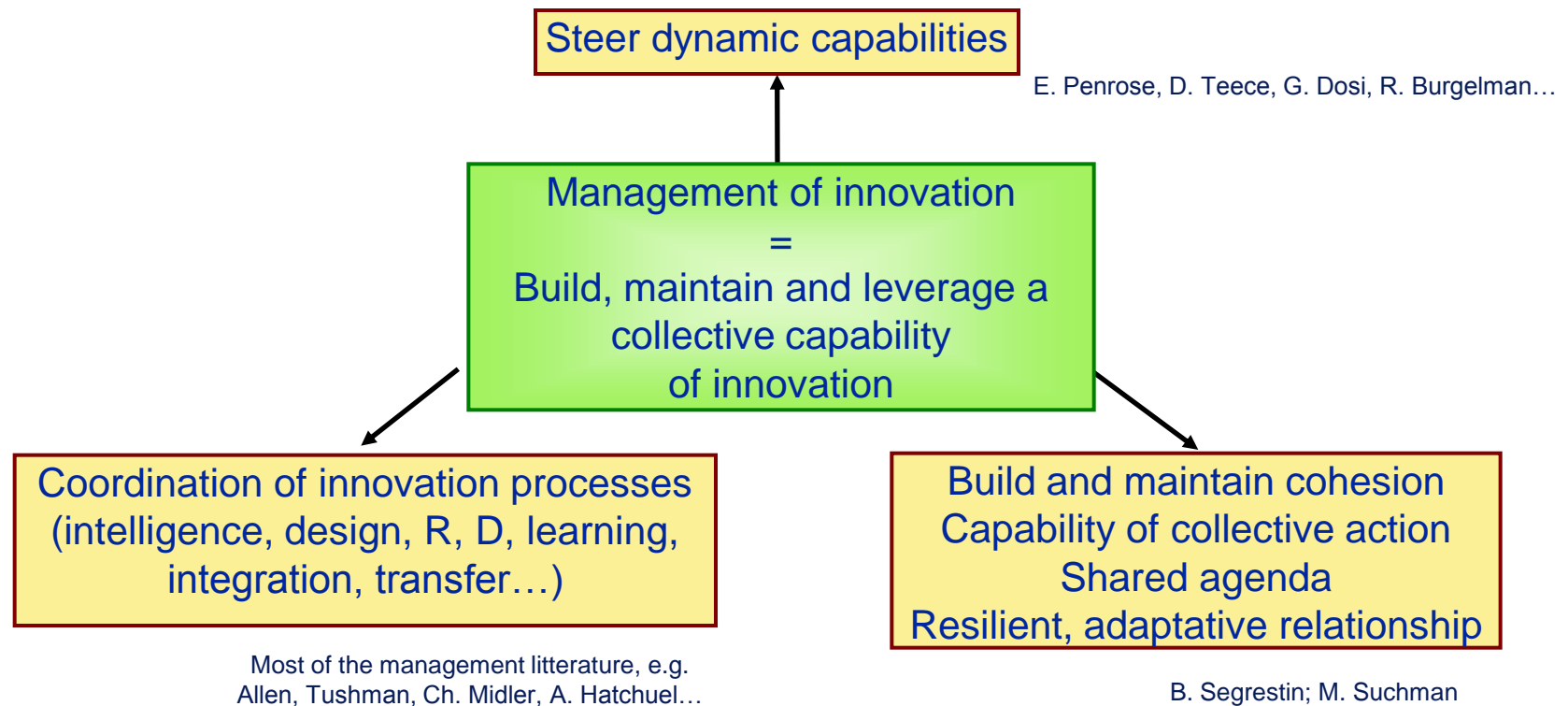
& Do you still need R&D ?

& ¥€\$

& To build a capacity for knowledge absorption and integration

& But it may be a different R&D (goals, organization, people management)

What is management of innovation about?



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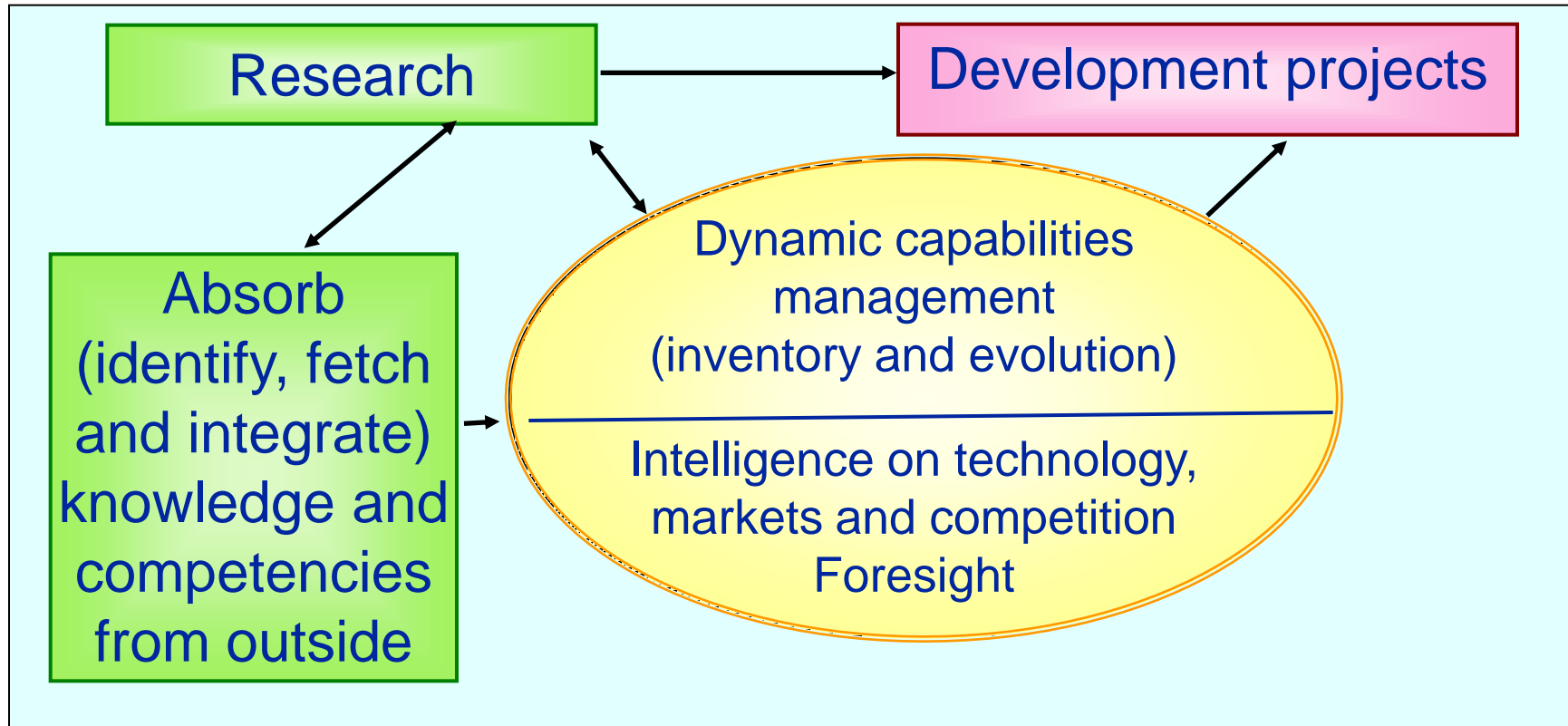
Some processes

- & From R-D to dynamic management of capabilities
- & Learning
- & Realizing the potential of your knowledge outside your current business

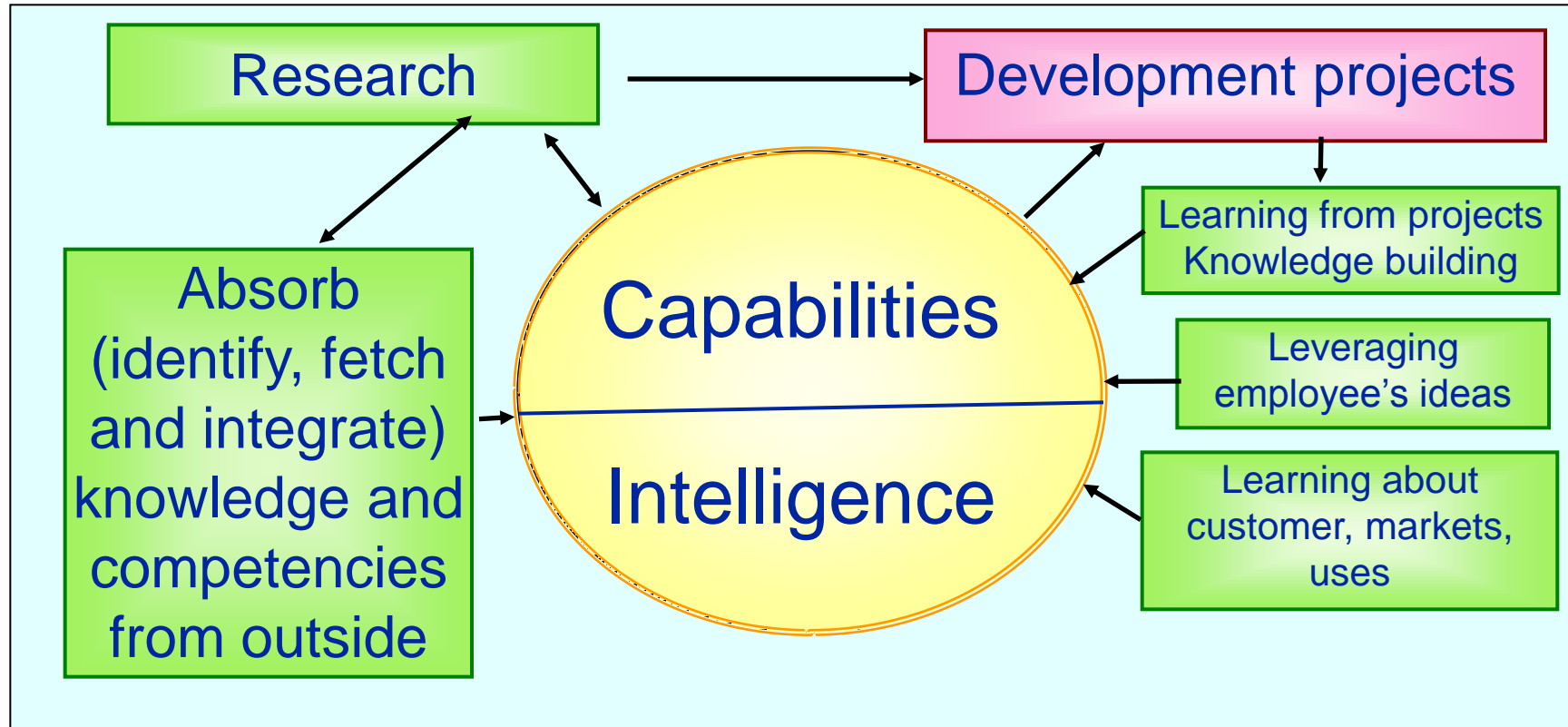


- ⌘ Neither techno-push...
 - ⌘ when you found problems for your solution: synthetic polymers (Nylon), transistor, ICs, laser, recombinant DNA...
- ⌘ ...Nor market push
 - ⌘ When you found the knowledge to build upon ready 'on shelves'
- ⌘ No possible 'just in time research': ≠ time horizon
 - ⌘ Strategy: which problem you'd like to solve
 - ⌘ Design: which knowledge you need
 - ⌘ Integration: how you get it and combine it (from inside or outside)
 - ⌘ If you haven't it yet, you'd rather find it outside
 - ⌘ You'll find it and integrate it more efficiently if you have internal knowledge (absorption capability)

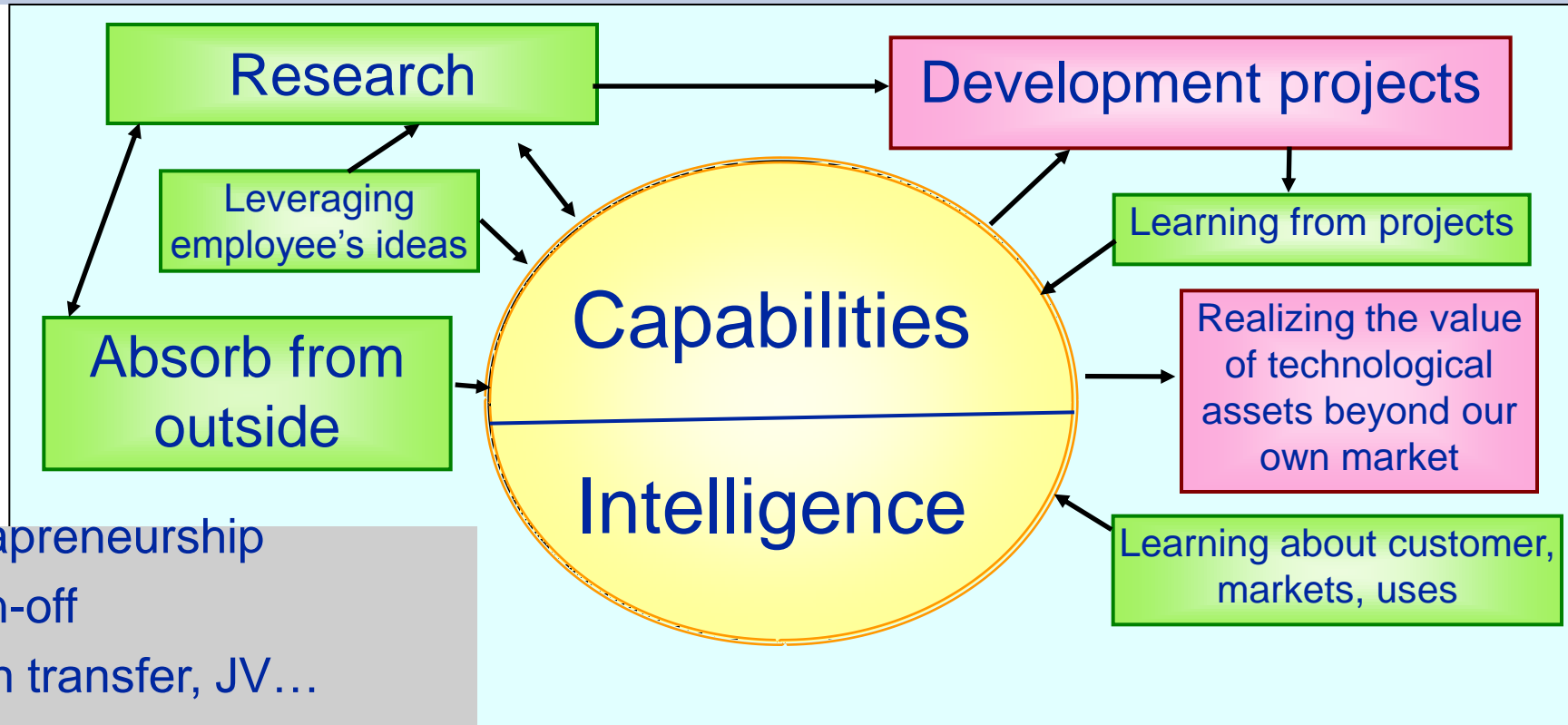
Dynamic management of an inventory of capabilities (skills, knowledge, access to customer, technology,...) and 'procurement'



Learning from one's and others' experience

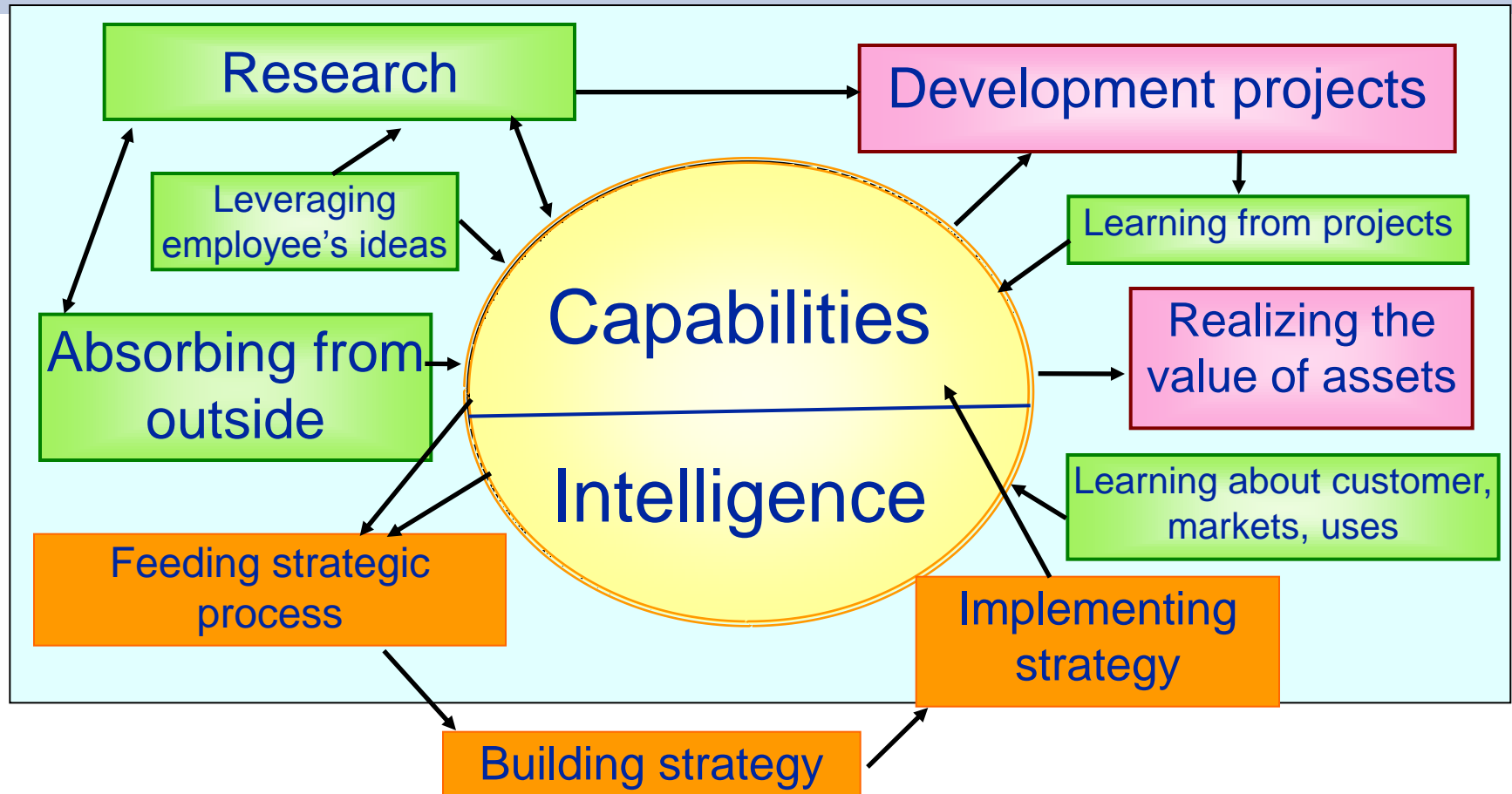


6/ Realizing the value of technology (as well as of other capabilities)



- ⌘ Intrapreneurship
- ⌘ Spin-off
- ⌘ Tech transfer, JV...
- ⌘ IP mgt

Coupling strategy to capabilities: fields of innovation



Current trends

& Framing trends

- & Globalization + specialization > leadership on a narrower scope
- & Providing complete solutions to customer > integration of supplier's inputs
- & Teaming to build or access new markets
- & Market of technologies, reshaping supply chains

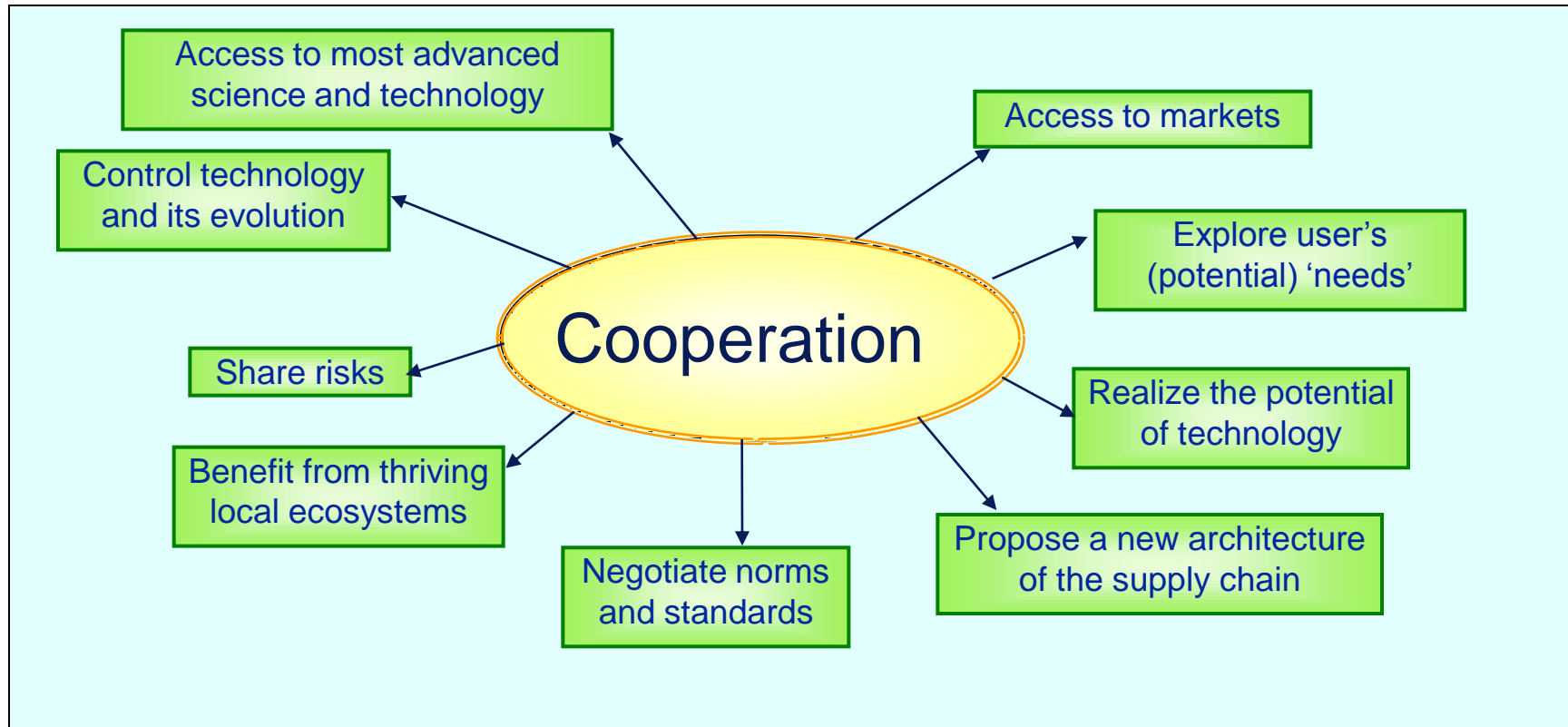
& Open innovation

- & R closer to sources of knowledge (subcontracted, pooled)
- & D closer to customer (decentralized in BUs) > complete, contextual solutions

& Simultaneous exploration of technology and markets (© Gastaldi 2007)

- & Impact on the steering, organization of research and HR management

Rationale for cooperation



Summing up

& Managing innovation is about

- & nurturing an inventory of capabilities that can be tapped by innovation projects
- & generating and handling promising projects
- & maintaining coordination and cohesion
 - & through
- & Monitoring environment to understand what you need
- & Developing a learning organization and managing knowledge
- & Absorbing technologies from others
- & Realizing the potential of these capabilities and found their renewal

& Neither pure technology push nor market pull: concurrent exploration of technology and market

- & Steering research: managing a project portfolio: balance BU/corporate, inside/outside
- & Organization: Project vs. Expertise, Open innovation
- & HR: promote networking, reward team players, encourage diversity and risk taking

& Increasing cooperation of multiple kinds

- & Access to technology, markets, standards, exploration of customer practices and latent needs, cost and risk sharing, rearranging the value chain,...

Discussion

Steering

- & Setting the budget of R-D, managing the project portfolio
 - & Difficult economic assessment of a project, no reliable ROI or EVA
 - & New products, new technology, reusable knowledge, new concepts, feed-back on customers and users
 - & Analysts and finance people buy results rather than a good process (a new drug at approval stage) and benchmark you with the free riders
 - & Real option paradigm > nice concept but hard to implement

- & Trends in successful innovative companies
 - & Balance strategic flexibility vs. lasting commitment to develop core competences
 - & Involvement of CEO
 - & CTO in executive committee
 - & Manage portfolio of projects, positive and negative risk assessment
 - & Repeated, sustained innovation (not a single shot), lines of products
 - & New combinations of existing technologies, new concepts
 - & Concurrent exploration of technology and markets
 - & Going beyond customer's expressed demands, looking at their own customers (in B2B)
 - & Shield radical innovation from short term stress for profitability

Organization

- & Balancing corporate and BU R-D, linking R-D and markets
 - & Involvement of Bus in corporate portfolio management
 - & Involvement of CTO in BU R-D management
 - & Balance of funding
 - & Budget for exploration

- & Project vs. technological or scientific field of expertise
 - & Projects efficient to improve time to market and integration
 - & Accumulation of knowledge in technical communities

- & Open innovation
 - & Platforms, common projects, clusters, ecosystem development
 - & Be clear on what can be shared and what cannot

HR management

& Promote networking behaviors, gatekeeping

- & Reward team players, beyond individual targets
 - & 360°, bonus on collective achievements
- & Hire and develop T-profiles (broad and locally deep), gatekeepers

& Deal with knowledge workers

- & Act as an impresario or a coach rather than a directive boss
- & Ensure researcher are well informed on company strategic goals
- & Discuss targets, do not impose means (professional and libertarian culture)
- & Allow free exploration time, with ex post evaluation
- & Right level of interaction on exploration tasks (concerned but trustful mgt)
- & Encourage cultural diversity and channel the resulting tensions
- & Tolerate failure and deviance, encourage risk taking

Public policy concerns

- & Does innovation mainly come from
 - & Academia
 - & Small businesses
 - & Large firms
- & And which way should we focus on?

- & Different, complementary innovations
- & You need the whole ecosystem
 - & But may temporarily focus on the weak link

What is management of innovation about?

