Perspectives on Open Innovation

When Theory Meets Practice

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Questions we need answers for?

- What does open innovation (OI) mean to me and my organization/region?
- How can we create an OI culture in our organization/region?
- How can we overcome NIH & NSH syndromes and organizational/regional inertia?
- What is the relationship between OI and open data?
- The future? New curricula (OI-Net)

Potential Goal

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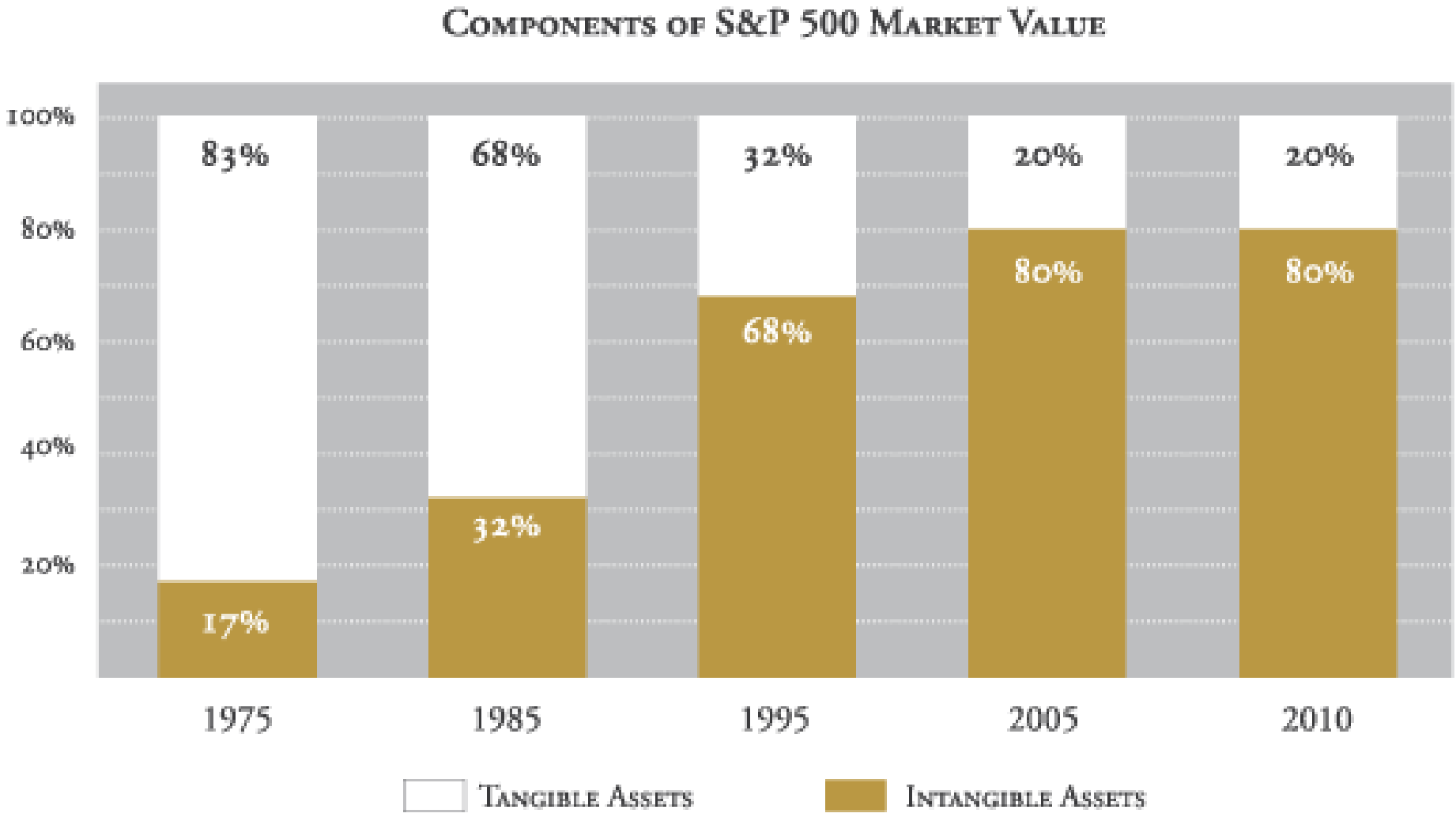
Intangible Assets and Market Value



Quality vs Numbers

PATENT WINNERS

Who comes out tops in intellectual property? It depends on whether the ranking is based on quantity or quality.

	MOST PATENT GRANTS*		MOST VALUABLE PORTFOLIOS**
1	IBM	1	Microsoft
2	Samsung	2	Samsung
3	Microsoft	3	Canon
4	Canon	4	Hewlett-Packard
5	Panasonic	5	Intel
6	Toshiba	6	Hitachi
7	Sony	7	Ricoh
8	Intel	8	IBM
9	Seiko Epson	9	Panasonic
10	Hewlett-Packard	10	Seiko Epson

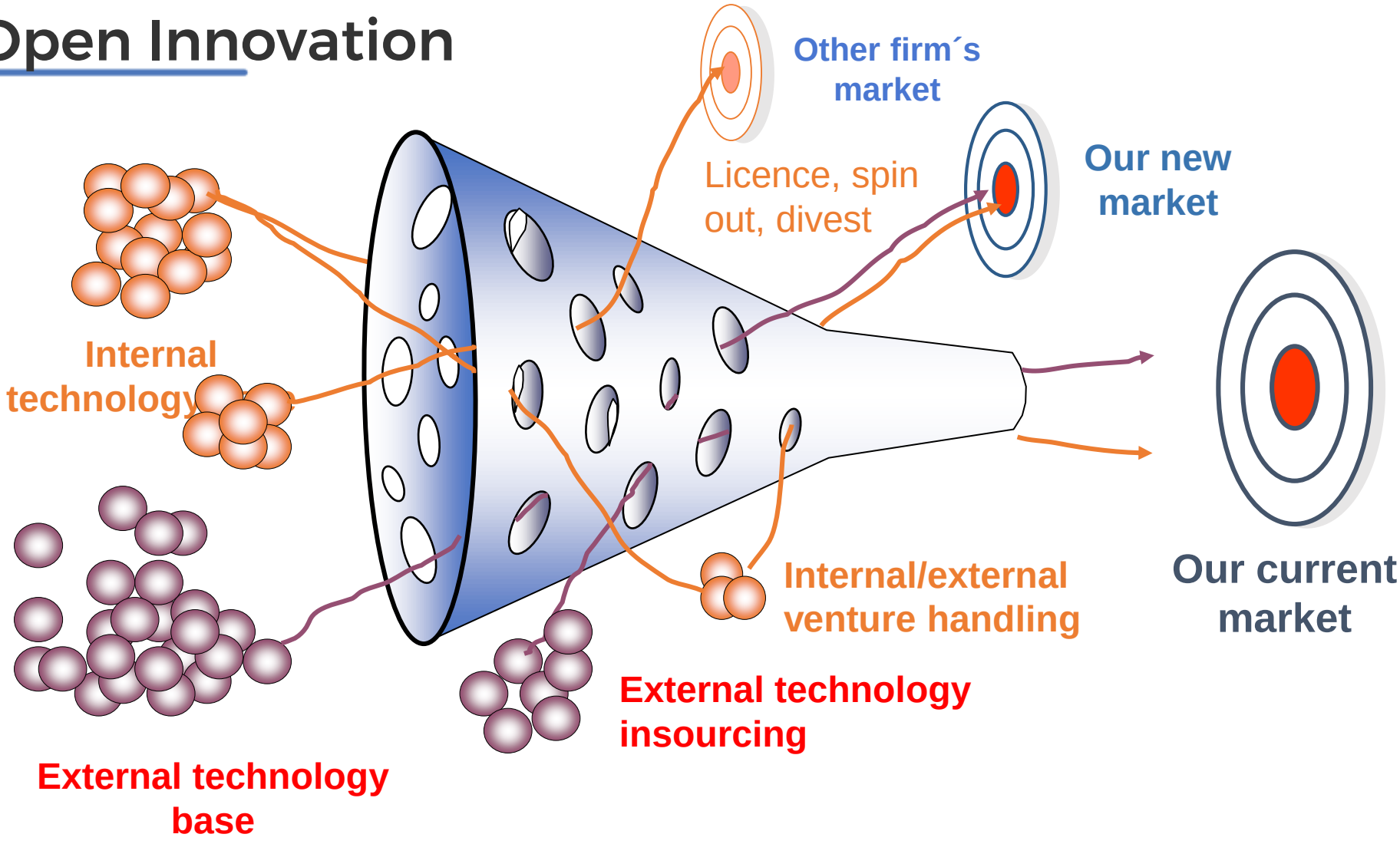
* U.S. patents issued in 2009 ** U.S. patents granted over the past five years
Data: IFI Patent Intelligence, Ocean Tomo

What is Open Innovation?

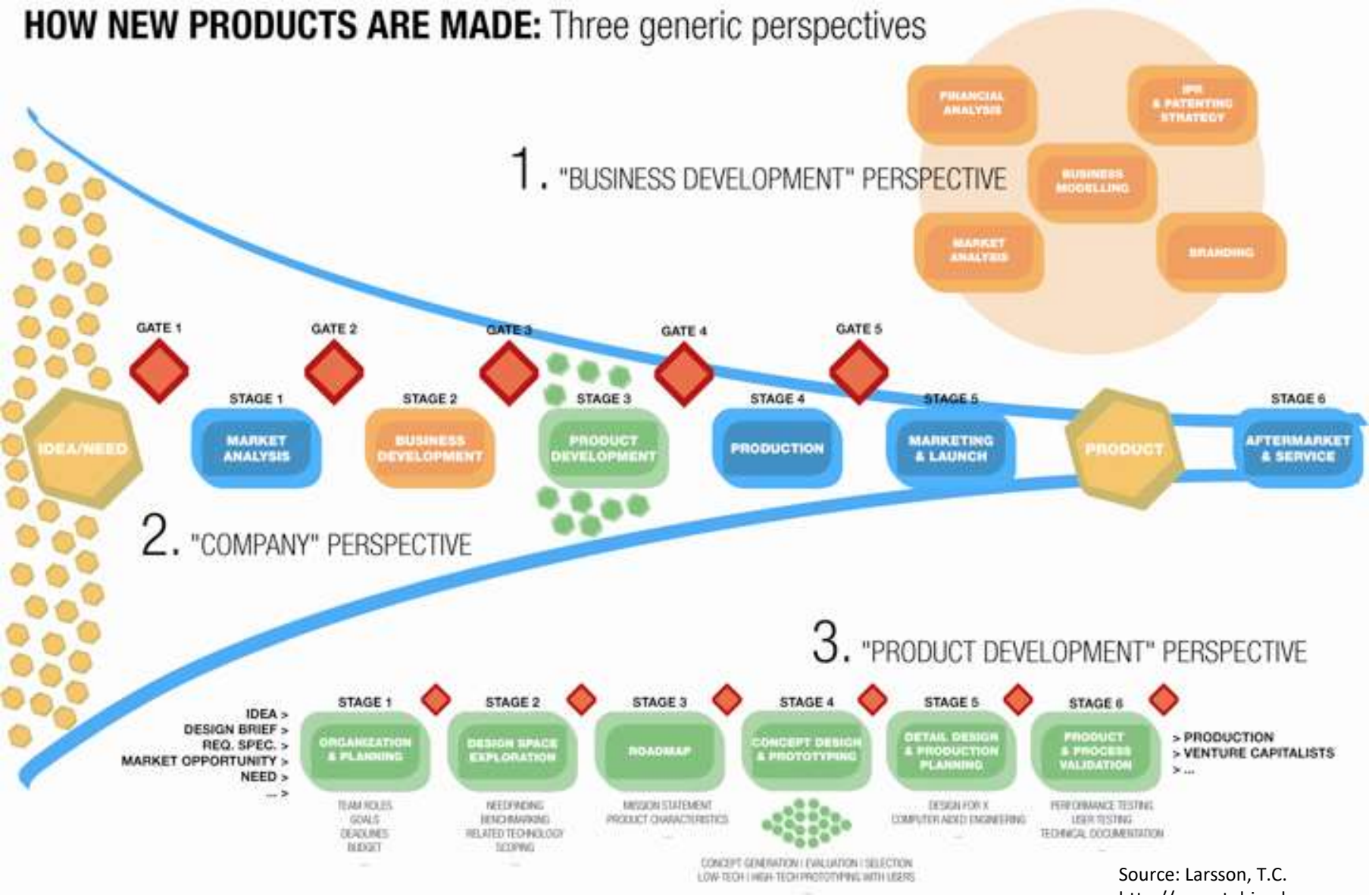
Open innovation means that companies (COUNTRIES, INDIVIDUALS, TEAMS) should make much greater use of external ideas and technologies in their own business, while letting their unused ideas be used by the other companies (CROSS-BORDER). This requires each company to open up its **business model** to let more external ideas and technologies flow in from the outside and let more internal knowledge flow to the outside.

Chesbrough, 2006 – modified

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



Source: Larsson, T.C. http://www.tobiasclarsson.com/wp-content/uploads/pdp.png

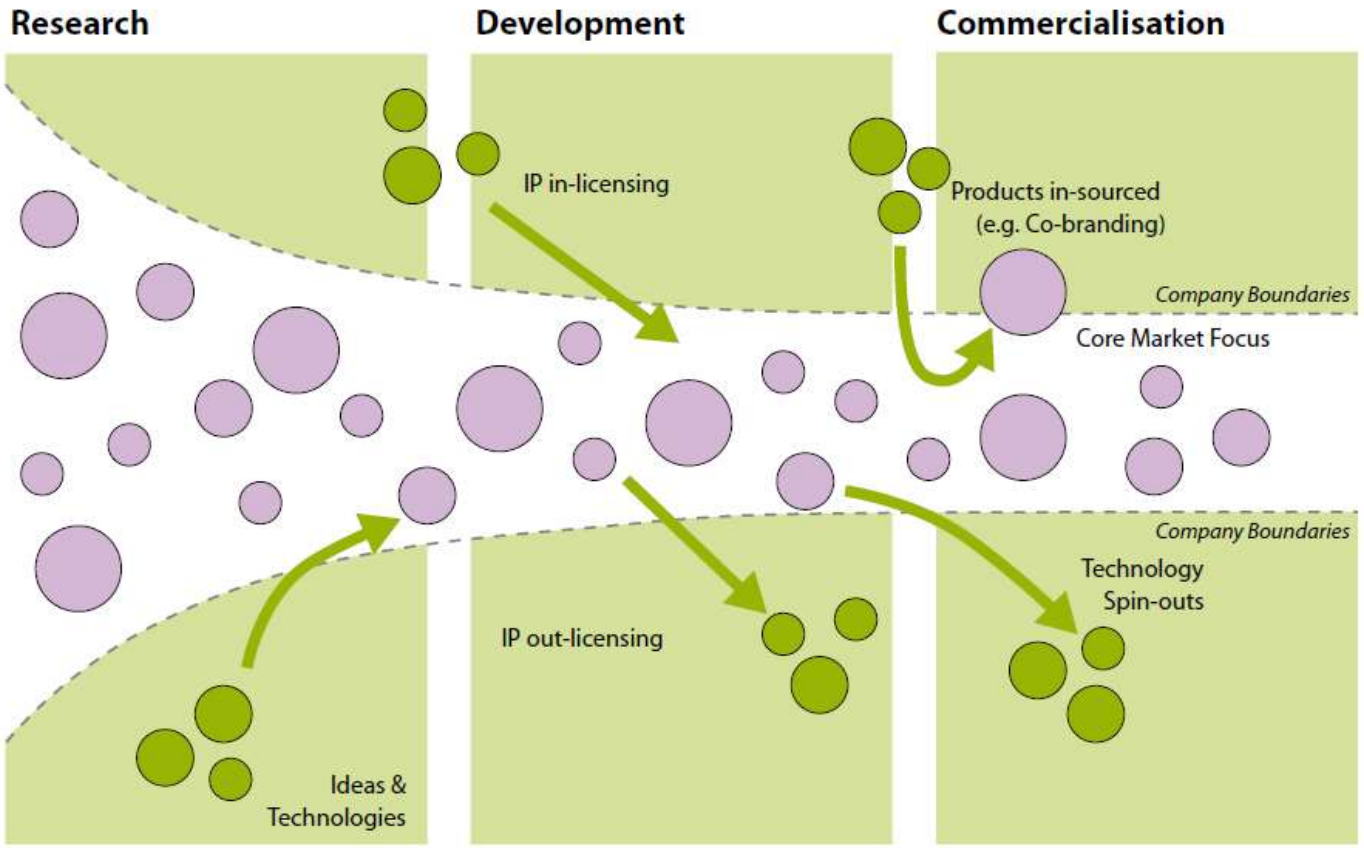
Designed to minimize ”false positive” errors

Ignores risk of ”false negative” errors

Why Open Innovation?

- Time to market is shorter
- New knowledge/technologies beyond usual suspects
- Access to additional competencies and resources
- Cost reduction (faster and cheaper?)
- New ideas, new communities
- Access to new markets

R+D+C

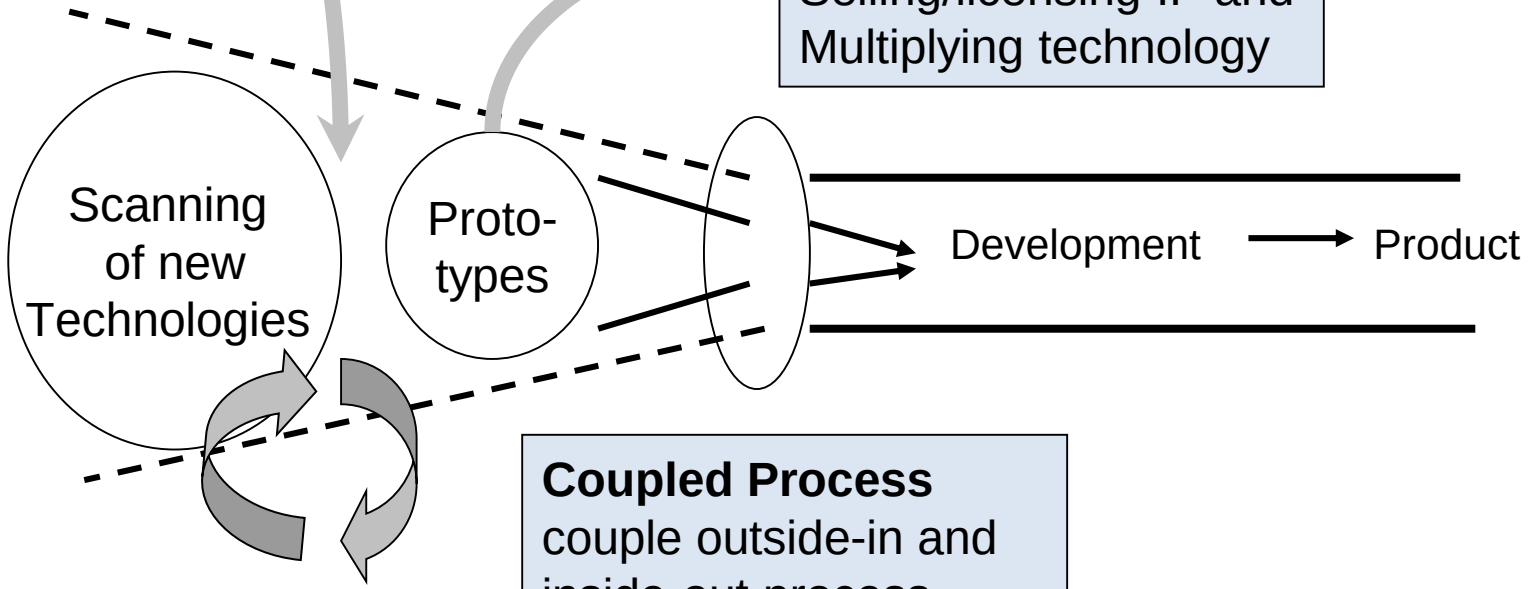


Mortara et al, 2009 p. 12

Three Archetypes of Open Innovation System

Outside-in Process
Integrating external Knowledge, Customers and Suppliers

Inside-out Process
Bringing ideas to market, Selling/licensing IP and Multiplying technology



Coupled Process
couple outside-in and inside-out process, working in alliances with complementaries

Gassmann & Enkel, 2007

Skills needed for OI

Introspective – understanding ourselves	Extrospective – understanding our partners
Strategic insights e.g. understand fit with internal strategies **Legal/IP skills** e.g. understand IP implications, ability to draw up contracts	**Behavioral analyses** e.g. analytical, personal **Strategic insights** e.g. understand fit with partners' strategies
Interactive	
Communication/collaboration e.g. communicate needs internally and to partners, resolve conflicts, language skills, network building **Negotiation** e.g. understand buing and selling tactics	
Technical	
Technological e.g. understand principles of technology being used **Portfolio management** **Financial** e.g. understand and set budgets **Analytical** e.g. evaluation of risk, financial analysis, problem solving	

Mortara et al, 2009 p. 42

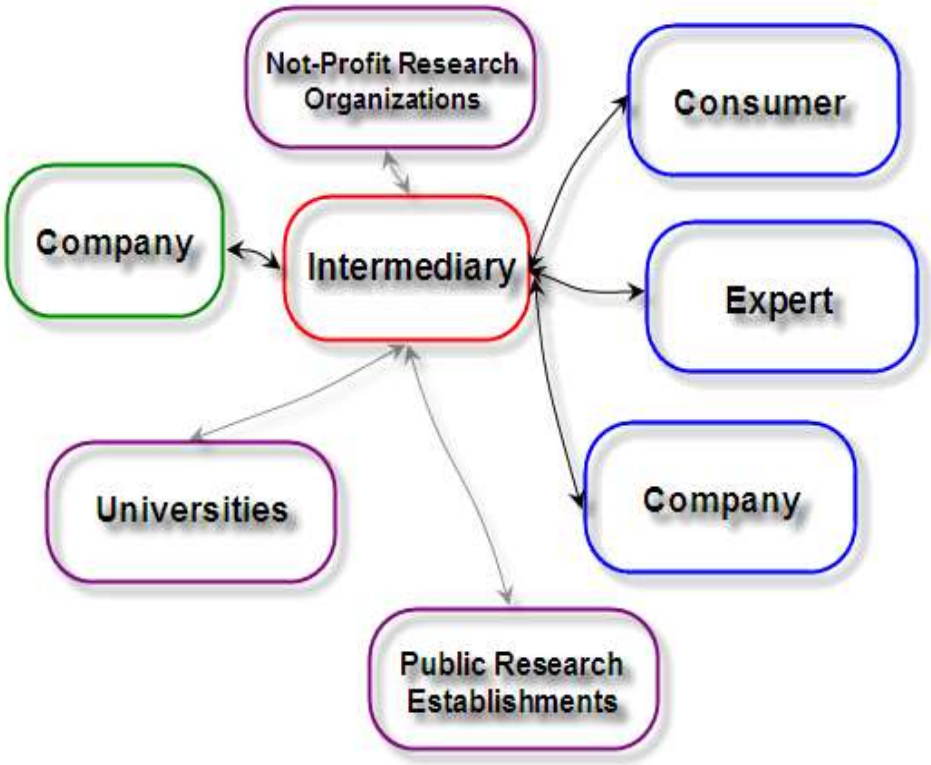
The ”Open Innovation” paradigm

A contingency perspective
(Torkkeli, Kock & Salmi, 2009)

- Question of balancing open & closed innovation
  - Openness is not superior in all circumstances
  - Defining boundary conditions for application of OI
  - Sharing knowledge is likely to reduce rarity of potential inventions and increase competition
- Identifies key contingencies for when to be open
  - Complementary assets (Teece, 1986); absorptive capacity (Cohen & Levinthal, 1990); game theory (Nash, 1950; 1953); scale and learning effects (Sakakibara, 2003); network externalities; learning strategy (March, 1991)

(Open) Innovation Intermediary

- An intermediary can provide an opportunity to economize on a critical area of efficient investments – the expertise to sort profitable and unprofitable ones.
- Innovation intermediaries are those who facilitate companies' access to external technologies and solutions.



Adapted from
http://www.mindtrek.org/pdf/presentations/social_media/Open_Innovation_Mindtrek.pdf

Research & Business Connection

- University partnerships – stipends to PhDs
- SMEs and MNCs – M&As
- Vision and insight
- Test arenas
- Explore beyond usual suspects

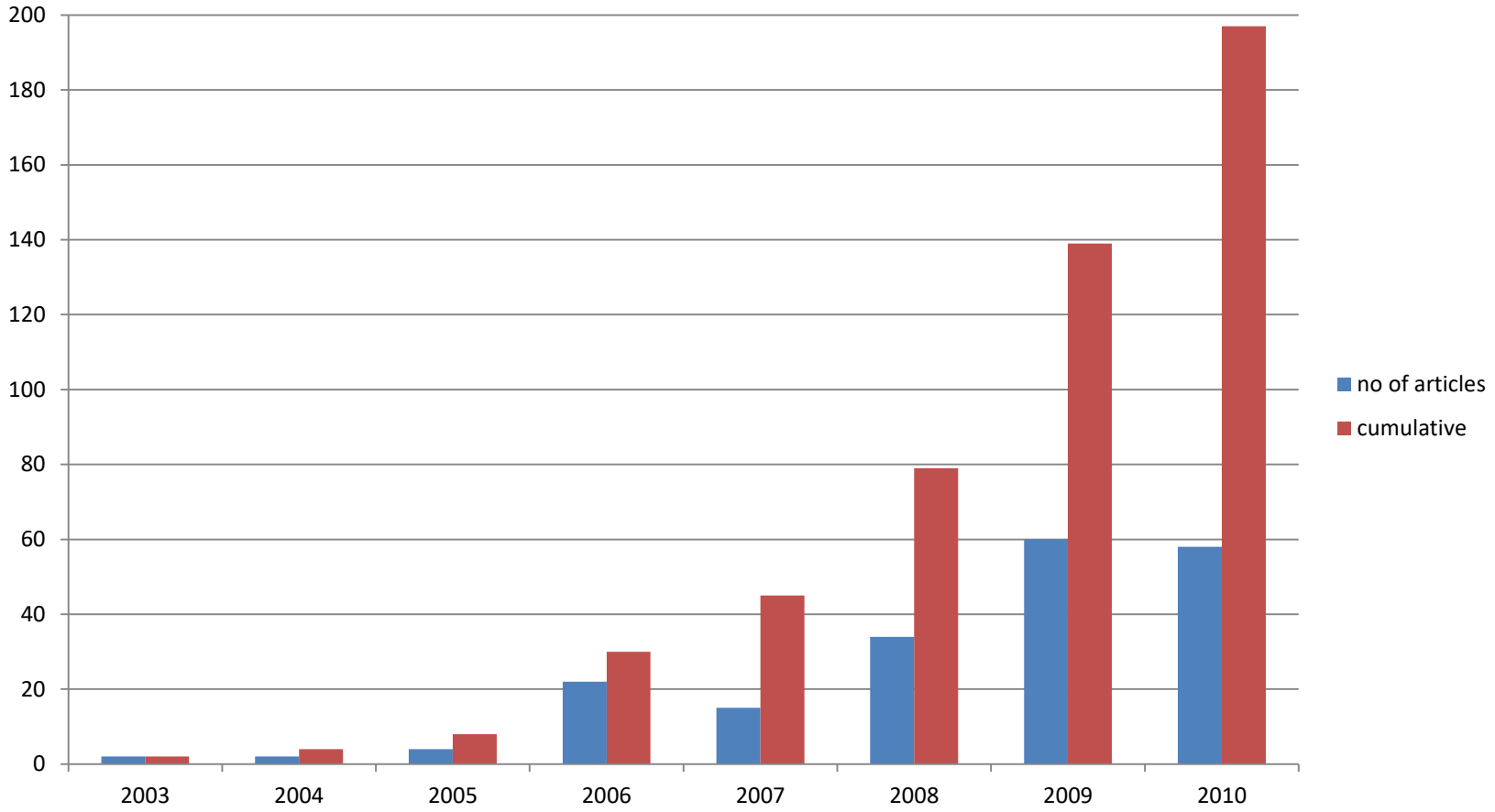
OI instruments

- Exhibitions and poster sessions
- Call for proposals/papers
- Grants
- Intermediaries
- Publicly funded projects
- Campaings and competitions
- Research contracts
- Interns

Evaluation of OI actions with universities and research organizations

- Number of patents (value)
- Commercialized ideas
- Number of projects
- Impact, value captured

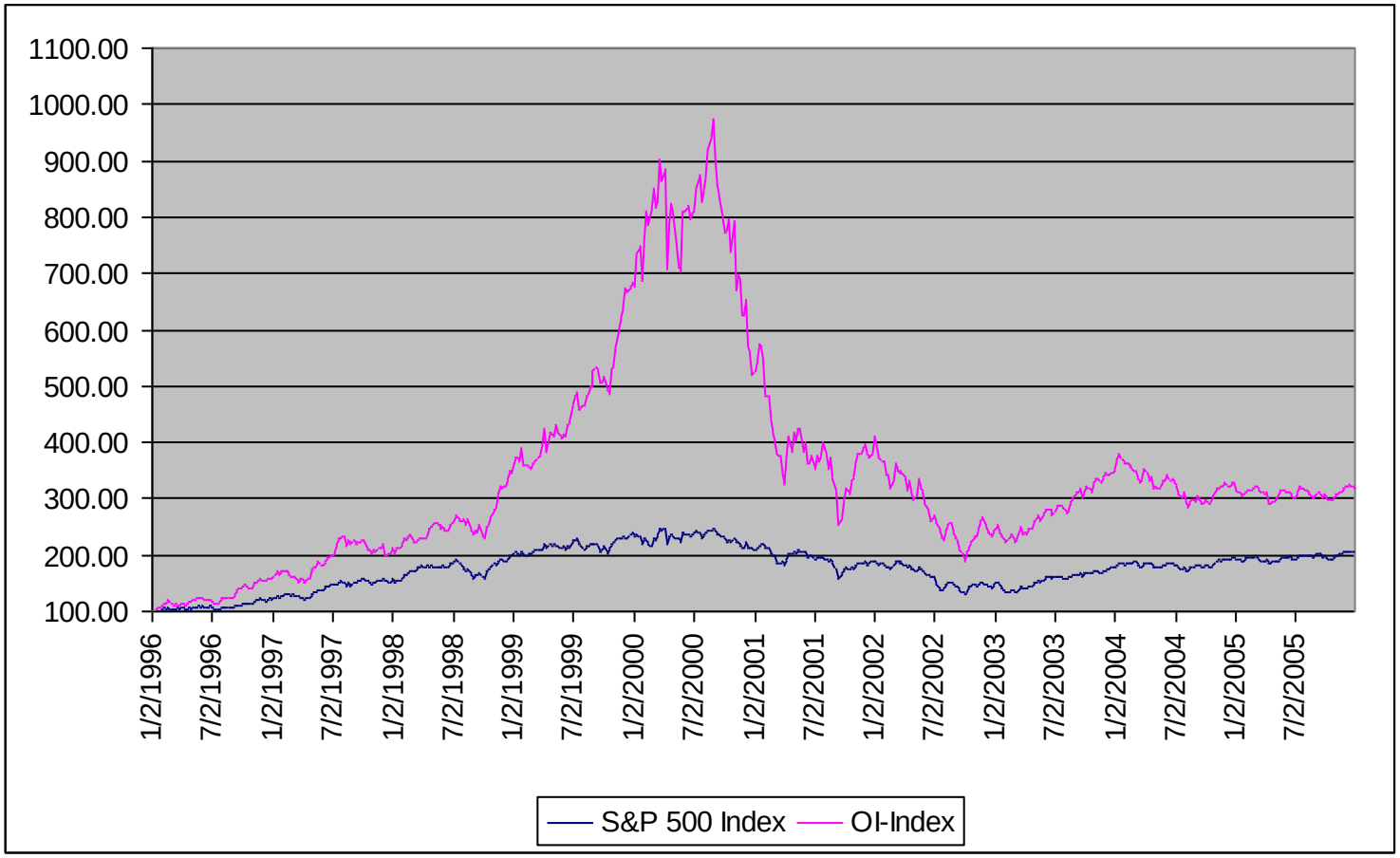
OI Articles and Journals



*2010 is for 9 months

Torkkeli, 2010

Open Innovation is Over-performing



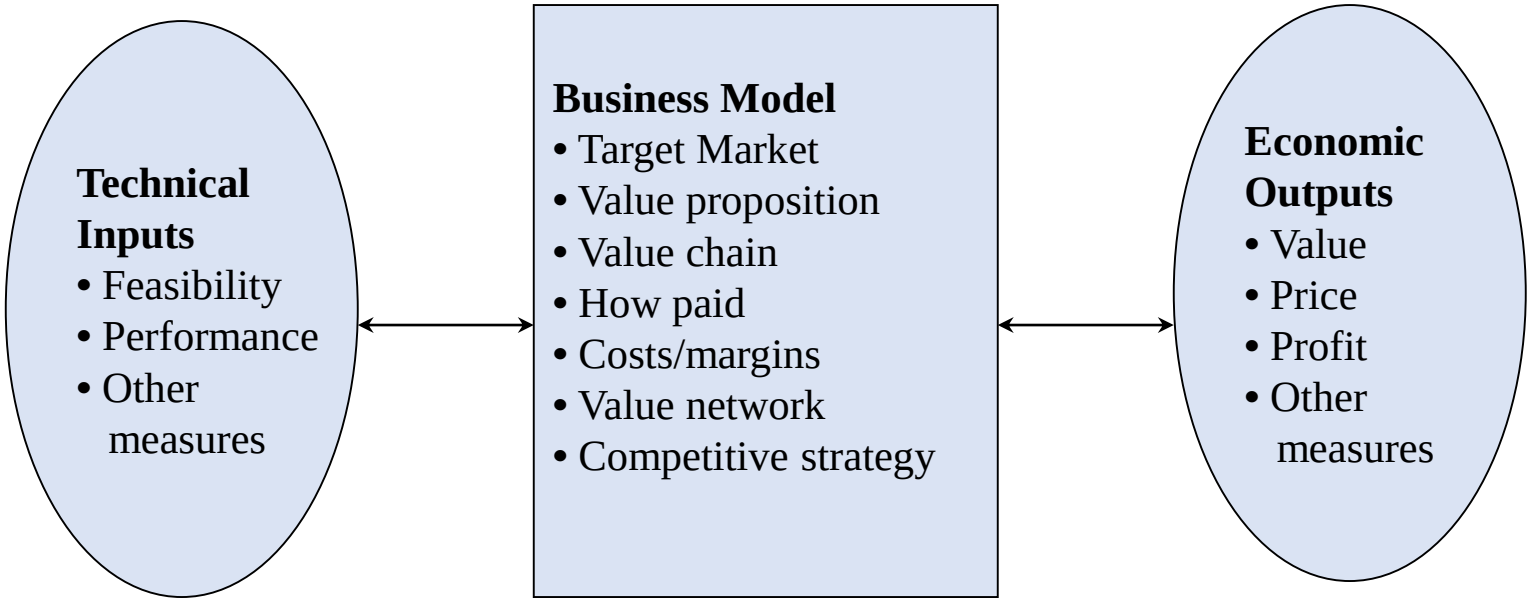
Torkkeli et el (2007), Implementing Open Innovation in Large Corporations: Challenges and Financial Outcomes

How company may failure on OI

- Proper business reasons to engage OI not identified
- OI initiative copied from competitors (imperfectly)
- Employees, partners and customers do not get it
- Different organizational units (especially operational) not fully aligned with OI
- Executives cannot tolerate risk of loosing control
- “Best guys” in traditional business are not necessarily what is needed in order to succeed with open innovation
- Internal innovation process must work first, then you can get results on OI.
- Focus on own gain will not lead true win-win

Lindegaard, 2010

(Open) Business Model



Chesbrough, 2006

Intermediaries and Communities

		Source of ideas or paths used by the innovation intermediary	
		Internal	External
Value creation	Services	Innovation consultants	Innovation traders
	Infrastructure	Innovation incubator	Innovation mediator

Draft by Lopez, Vanhaverbeke and Torkkeli, 2009

Conceptual Framework of Openness in the Innovation Process

Table 30: Defining the right open innovation approach: Matching information requirement and type of initiating the collaboration

	Open search	Open call
Need information	▪ Searching for trends ▪ Integrating the gathered information in own innovation process	▪ Posting a question to a broad community and perform an idea contest ▪ Integrate selected ideas and concepts
Solution information	▪ Searching for certain knowledge and expertise ▪ Integrating the expert holding the needed knowledge	▪ Posting very specific problems to broad or special expert communities ▪ Integrate the solution to the problem

Diener & Piller 2010

OI Examples


IBM
OMRON
Sensing tomorrow™
NOKIA
Connecting People
niServices
Auckland UniServices Limited
skype
3M
DUPONT
The miracles of science
P&G
intel
Leap ahead
crowdSPRING
kluster
PHILIPS
sense and simplicity
INNOCENTIVE
yourencore
CISCO
CrowdSpirit
BETA
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Open Innovation Portal
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MIT
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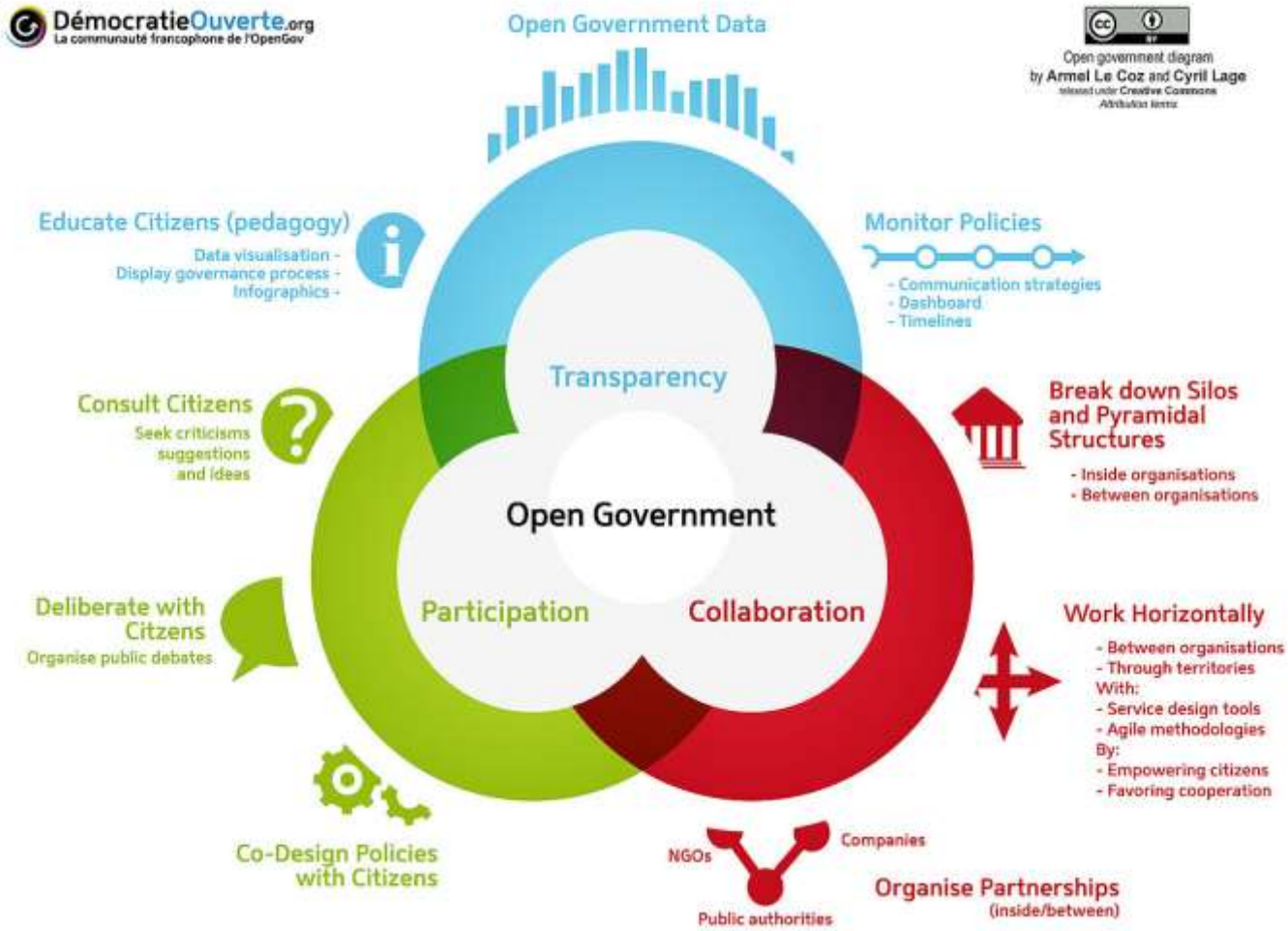
Innovation exchange



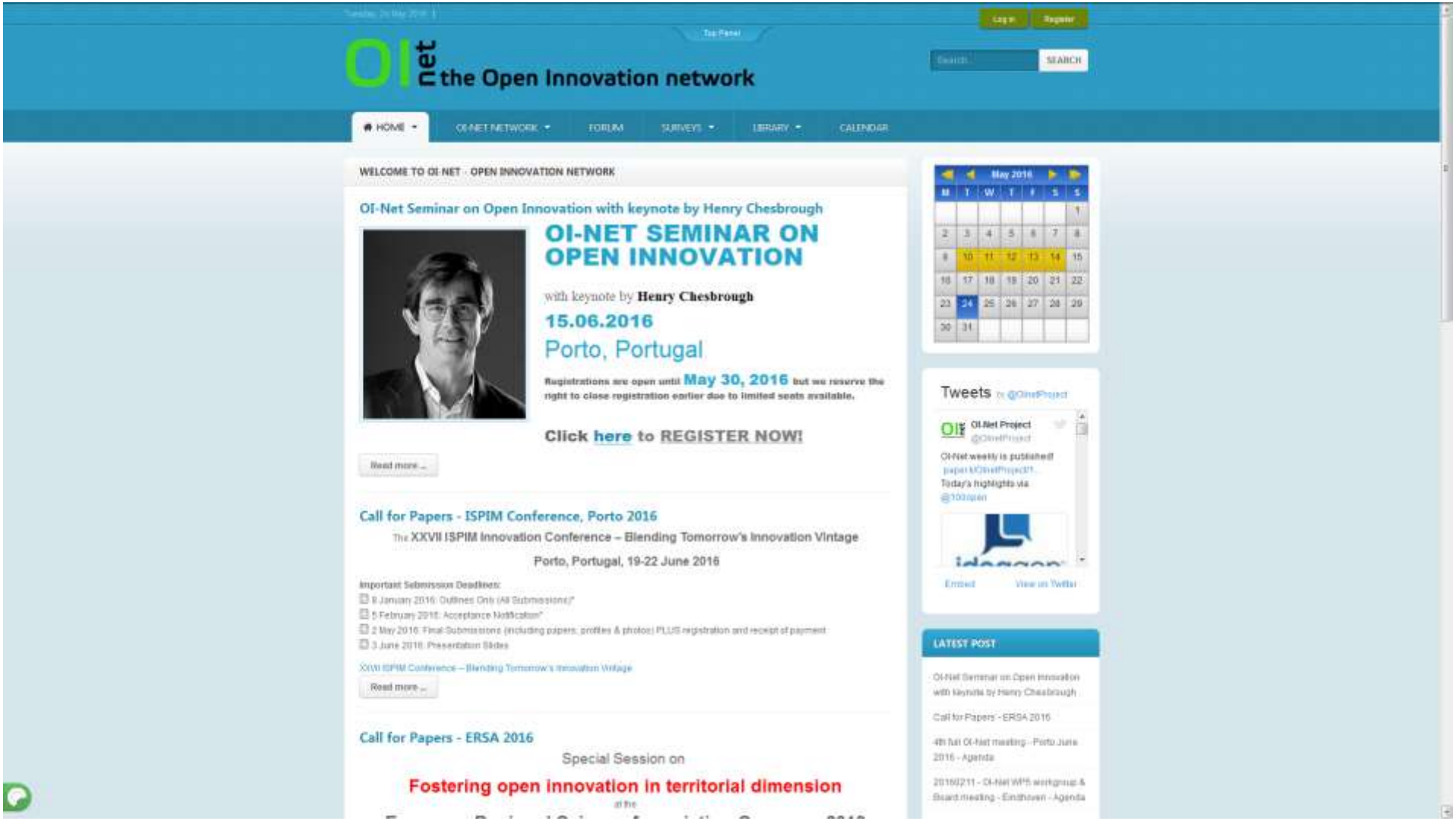
http://ownyourcity.ca/2014/11/open-government/

Recent Trends of Open Innovation

- From concept development to performance measurement
- OI is fully integrated in innovation management practices
- Simulation and networks, new open business models
- New set of skills needed to cope with open innovation at companies and intermediaries
- Bring customers closer (inside) to your innovation process
- Enable ecosystem around your platform
- Services are differentiator over ’commodity trap’, including open architecture
- Large population, serendipity, urbanization

Call for Papers

www.open-jim.org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Thank you

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