RIETI

Research Institute of Economy, Trade & Industry Conference

on « Corporate Value Creation Through the Strengthening of Intellectual Asset Management »

Tokyo, 30 November 2005

Modeling and Reporting
Intangibles in
the Knowledge Economy
A European Perspective

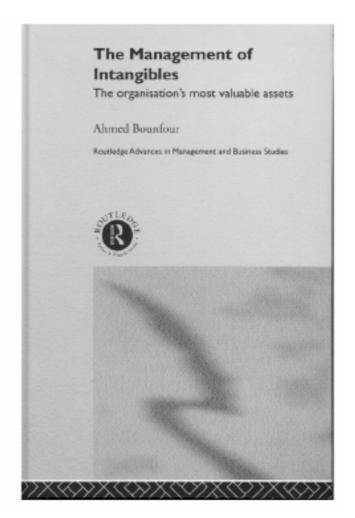
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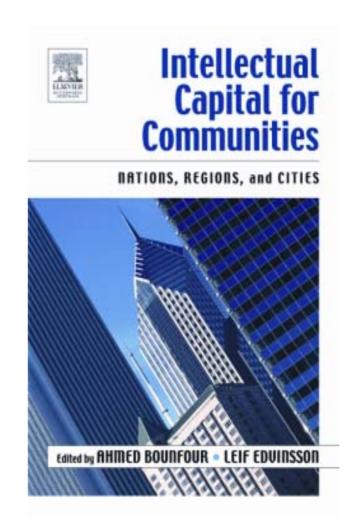
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The Agenda

- 1. Why intangibles (IC) are so important today?
- The Knowledge Economy as an organisational Concept
- 3. Theoretical modelling: The question of theoretical foundation for IC is now clearly posed
- 4. The Lisbon Agenda
- 5. Some recent facts From Europe
- 6. The EU 3% objective and the RICARDIS Report
- A Forthcoming Pilot project on Guidelines for Business Services
- 8. The Community Dimension
- 9. Conclusion: The Next Steps









A Series of academic and Institutional Initiatives

- Mid-1980s-Early 1990s : OECD studies (1987, 1992)
- 1990s: A series of Studies by the European Commission, Eurostat and National Statistical Offices
- 1999: OECD, Dutch and Danish Governments Conference
- Late 1990s: a Series of Studies and Research Projects initiated by the European Commission (DG Internal Market, DG Enterprise, DG Research and DG IST): PRISM / Meritum projects, B2B Metrics
- 1997-2000: NYU Conference on Intangibles Reporting (sponsored by PWC)



- 1997- 2004: McMaster University World Congress on Intellectual Capital (Hamilton, Ontario)
- 2002: International Conference in Madrid (European Commission, Spanish Government, OECD)
- 2004: International Conference in Helsinki
- 2005(June): The First World Conference on Intellectual Capital for Communities (Paris, the World Bank, OECD, EPO, EC, EIB, University of Marne-La-Vallée)
- 2005 (oct): The OECD Conference on Intellectual capital, Ferrara.
- 2005 (Nov): A series of Conferences on Intellectual Assets reporting and Management (Tokyo, Japan)







Intellectual Capital for Communities in the Knowledge Economy Nations, Regions and Cities

The First World Conference on Intellectual Capital for Communities

Organised by PRISM-OEP Group of the University of Marne-La-Vallée in cooperation with The World Bank
June 20, 2005
World Bank Office,

66, Avenue d'Iena 75016 Paris











I-Why intangibles (IC) are so important today?

... Problematic issues for Intangibles

The New Club of Paris initiative as <u>A platform</u> for exchange and cross learning on IC for Communities on a global scale, with already four main instruments:

- An **Annual conference** in Paris (June)
- A set of related (sister) conferences (Tokyo, Nov. 05; South Africa, June 05; Rio de Janeiro, Sept 05)
- A Roundtable for High level Policy makers
- A PhD & MBA sponsored programme (under def).



I-Why intangibles (IC) are so important today?

... Problematic issues for Intangibles

The New Club of Paris Three initiators



Leif Edvinsson Chairman



Ahmed Bounfour Vice- President



Guenter Koch Secretary General

Around Fifty (50) Founding Members on a Global scale (Europe, Asia, North & South America)



- The rapid growth of service activities and its deep impact on professional socio-links andthe dematerialisation of manufacturing activities
- The recognition of knowledge as the main source of competitive advantage, the Knowledge divide..... And The Lisbon Agenda
- The issue of the theoretical framework
- There is no more close (and clear) relationship between inputs (investments in) and outputs (performance)....
 Volatility and "furtivité" are more and more predominant



- The role of New Information and Communication technologies and the transparency requirement
- The role of demography in innovation (the Ageing population)
- The relationship to Time (the Time-Span of business and society) ...and Space (Globalisation, Space of Flows): Predominance of Space of Flows over Time.
- The major issue of rent generation And IPRs



II- The Knowledge Economy as an organisational Concept

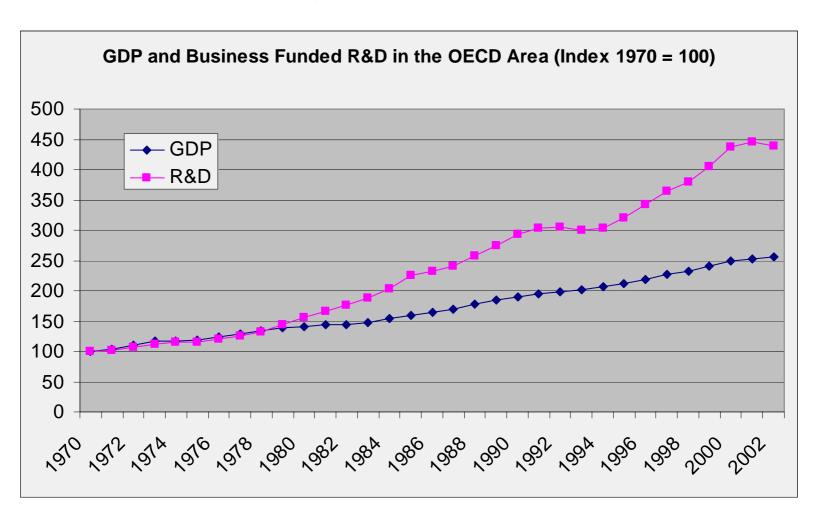
The Knowledge Economy as an Economic concept:

Predominance of three factors (Foray, 2000): research and education, relationship to growth, and learning and capabilities

 The knowledge Economy as an Organisational system Concept: Knowledge Capitalism as a « Total Organisational system » has to be discussed both as a concept and practice



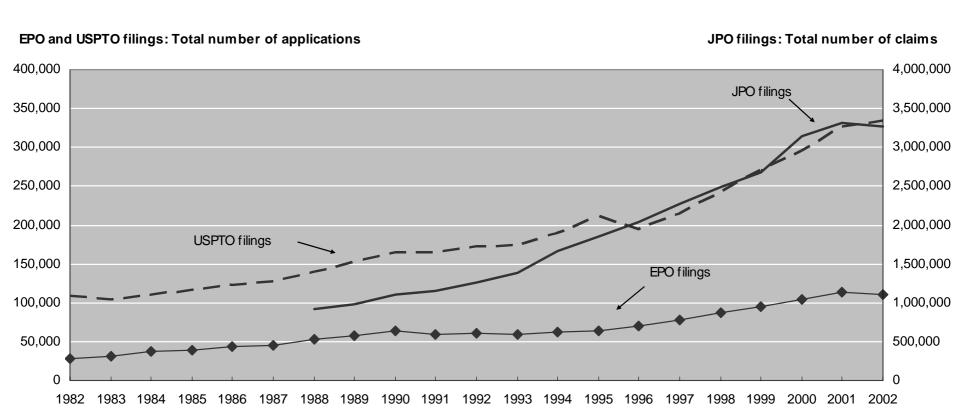
The surge in innovation



Source: D. Guellec, University of Marne La Vallée-World Bank Conference on Intellectual Capital for Communities, Paris, June 20, 2005, based on OECD data



A global surge in patent numbers

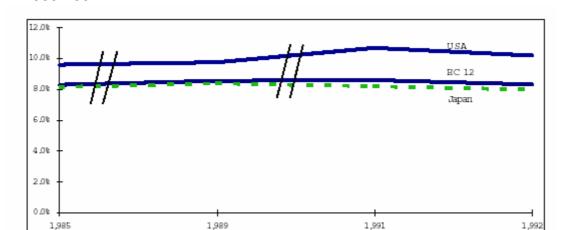


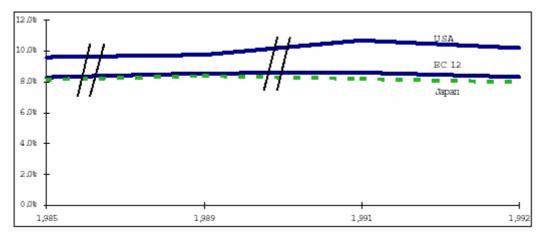
Source: D. Guellec, University of Marne La Vallée-World Bank Conference on Intellectual Capital for Communities, Paris, June 20, based on OECD data



IC for Natural Communities:

Intangibles Investment in % of GDP : EU (12), USA and Japan,
1985-1992



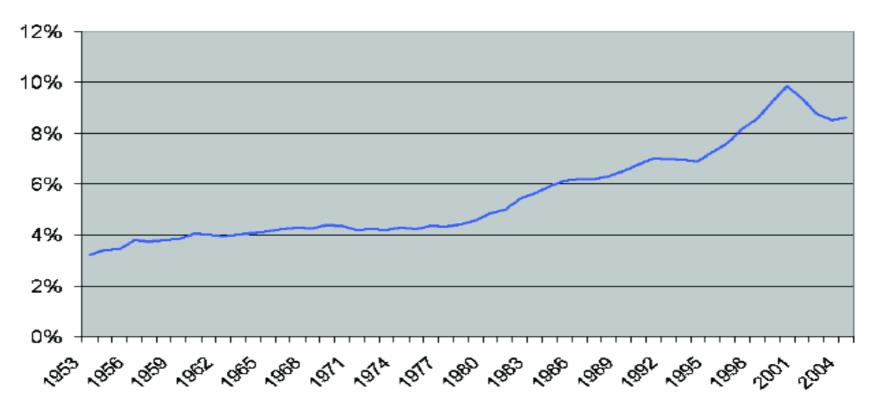




Intangibles Investment in % tangible investment :

The Case of USA

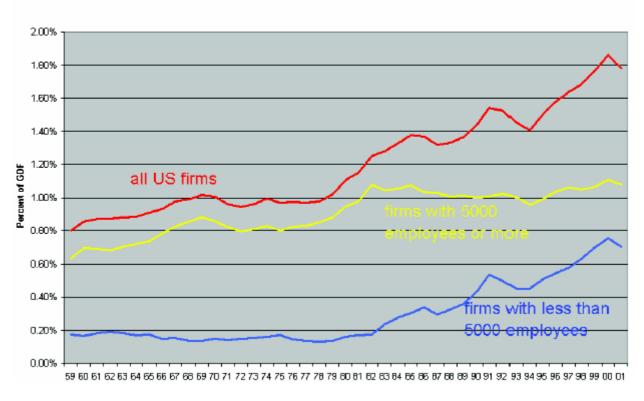
Estimated Gross Investment in Intangibles As Proportion of GDP





The Case of USA

Most of the rise came because of new, small firms



Source: L. Nakamura. , University of Marne La Vallée-World Bank Conference on Intellectual Capital for Communities, Paris, June 20



III-Theoretical modelling: The question of theoretical foundation for IC is now clearly posed

- We need to discuss and challenge- the existing theories and models (Macro versus Microtheories)
- As far as the intangible thematic is concerned, we are not in a vacuum of theories but rather in a "patch working" context
- This tends to suggest that the newness of intangibility as a problematic lies mainly in its transversal nature.



Ill-Theoretical modelling: The question of theoretical foundation

Some theoretical considerations

- The Measurement Issue
- The Valuation Issue
- The Reporting Issue (Why and How?): Should we treat intangibles assets like other assets (physical and financial)?
- The Asymmetry of information
- How to consider the fundamental characteristics of intangibles: their «combinatory » and entangled nature
- Under what conditions is it relevant to report on them: micro-economic versus macroeconomic perspective; The Idiosyncrasy Issue

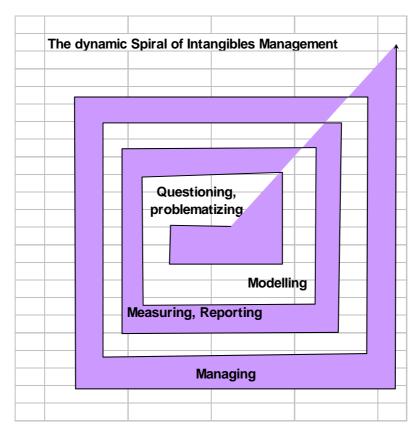


The question of theoretical modelling: <u>Vertical</u> versus <u>horizontal</u> language: "grammar" or "photography"?

- If we follow the recommendations of the actual dominant paradigmsi.e. the RBV and the dynamic capabilities approaches to the firm- we
 would then say that every firm positioning is singular and then
 should be every "reporting on IC"
- Hence the predominance of the Vertical/intentional dimension (René Thom) in comparison to the Horizontal/informational dimension of reporting (Bounfour 2003)
- The Horizontal dimension refers here to a possible standardised language for comparing organisations performance.
- Grammar might be more relevant than photography



The question of theoretical modelling: Vertical versus horizontal language: "grammar" or "photography





III- Theoretical modelling: The question of theoretical foundation for IC is now clearly posed (cont'2)

LITERATURE ON INTELLECTUAL CAPITAL: SELECTED BIBLIOGRAPHY, A Review by OECD for the Amsterdam Conference (1999)

- 1956: J.W. Kendrick, "Productivity Trends: Capital and Labour", Review of Economics and Statistics, May 1952.
- **1958:** J. Mincer, "Investment in Human Capital and Personal Income Distribution", *Journal of PoliticalEconomy*.
- **1962:** E.F. Denison, "The Sources of Economic Growth in the United States and the AlternativesBefore Us", Committee for Economic Development, Supplementary Paper, No. 13, New York.
- **1962:** Gary S. Becker, "Investment in Human Capital: A Theoretical Analysis", *Investment in HumanBeings*, NBER Special Conference 15, supplement to *Journal of Political Economy*, October 1962.
- [1962: F. Machlup: "The Production and Distribution of Knowledge in the United States", PrincetonUniversity Press, Princeton.
- [1963: OECD: "Proposed Standard Practice for Surveys of Research and Development" (The Frascati Manual) OECD, Fifth Edition 1994.
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- **1964:** Gary S. Becker, "Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education" NBER and The University of Chicago Press, 1964 (Second Edition 1975, Third Edition 1993)
- **1967:** E.F. Denison: "Why Growth Rates Differ: Postwar Experience in Nine Western Countries", Brookings Institution, Washington D.C.
- **1969:** T. W. Schultz, "Investment in Human Capital" in E.S. Phelps (ed.) "The Goal of Economic Growth", Norton, New York.
- **1975:** Gary S. Becker, "Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education" Second Edition, NBER and The University of Chicago Press
- **1976:** J.W. Kendrick, "The Formation and Stock of Total Capital", Columbia University Press, New York.
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- 1986: P.M. Romer, "Increasing Returns and Long-run Growth", Journal of Political Economy, Vol. 94, No. 5.
- 1989: P.M. Romer, "Human Capital and Growth, Theory and Evidence", NBER Working Paper No. 3173.



Ill- Theoretical modelling: The question of theoretical foundation for IC is now clearly posed (cont'2)

- **1991:** "Internal Report of the Working Group on Accounting Standards- Accounting for Intangibles, Synthesis Report on the 1991 Roundtable", OECD Paris, 1991.
- **1992: "Technology and the Economy The Key Relationships"**, Report on the Technology/EconomyProgramme, OECD Paris, 1992.
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- **1992:** Gary S. Becker, "Human Capital: A Theoretical and Empirical Analysis with Special Referenceto Education" Third Edition, NBER and The University of Chicago Press
- 1996: Riel Miller, "Measuring What People Know", OECD, Paris 1996.
- **1996: "Financial Accounting and Reporting of Intangible Assets"**, Symposium sponsored by the United States Securities and Exchange Commission (SEC).
- **1996:** Manuel Castells, "The Information Age: Economy, Society and Culture: Vol. I: The Rise of theNetwork Society", Blackwell, 1996.
- **1996:** "Employment and Growth in the Knowledge-based Economy" (Papers presented to a conference in Copenhagen in November 1994), OECD, Paris 1996.
- **1997:** "Proposed International Accounting Standard: Intangible Assets" (Exposure Draft E60 by the International Accounting Standards Committee.
- **1997:** Jørgen Mortensen, Clark Eustace and Karel Lannoo, "Intangibles in the European Economy", Centre for European Policy Studies, March 1997.
- 1997: "Enterprise Value in the Knowledge Economy" Ernst & Young and OECD, 1997.
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- 1997: Manual for Better Training Statistics: Conceptual, Measurement and Survey Issues, OECD.
- 1997: Industrial Competitiveness in the Knowledge-Based Economy: The New Role of Governments, OECD. 1998: Michel Croes (for CBS) "Intangible investments: Definitions and data sources for technological, marketing, IT and organisational activities and rights" Statistics Netherlands for Eurostat, February 1998.
- 1998: Launching by the Brookings Institution of the project "Understanding Intangible Sources of Value".
- **1998:** RCS Conseil "Intangible investments" (*The Single Market Review*, Subseries V: Impact on Competition and Scale Effects, Vol. 2) European Commission 1998.



IV- The Lisbon Agenda

- This differentiation in terms of performance between the EU and US was at the origin of several policy initiatives taken at the European Union
- In January 2000 the Commission adopted a communication proposing the creation of a European Research area (ERA)
- The project was adopted at the Lisbon European Council on March 2000, and subsequently a set of indicators have been selected for benchmarking national innovation systems along four themes: Human Resources in RTD, Public and Private Investment in RTD; Science and technology productivity and Impact of RTD on competitiveness and employment



IV- The Lisbon Agenda

- The Lisbon summit established a strategic goal for Europe " to become [by 2010] the most competitive and dynamic knowledgebased economy in the world, capable of sustainable economic growth with more jobs and greater social cohesion"
- To achieve this a new mechanism of coordination was instituted called: "Open method of coordination" among national innovation systems, with the aim of avoiding duplication and increasing convergence and benchlearning
- In 2002, the European Council (Barcelona, March 2002) retained the objective of achieving an average of R&D investment at the level of 3% of GDP for all present EU Members.
- These two strategic objectives are important drivers for investment in intangibles at the EU level



IV- The Lisbon Agenda

The Lisbon agenda and intangibles (IC) modelling and reporting

- The Lisbon Agenda (Presidency Conclusions, 2000), defined a strategic goal for the European Union and established ad hoc objectives:
- The transition to a competitive, dynamic and knowledge-based economy".
- "Modernising the European social model by investing in people and building an active welfare state".
- Four Main components: R&D (and innovation); Information technology (and processes and networks); Human capital (jobs creation and training) and social cohesion.
- The reference to a "European social model" is not neutral from the IC perspective
- Most of these objectives have restated in the Presidency conclusions of the recent Council (7619/05)



V- Some recent facts From Europe

A General Remark

• Europe has the largest experience in the World in Research and practice in managing and reporting on intellectual capital.... An effort which is not sufficiently leveraged (FP, national programmes, efforts by statistical offices, ... etc.)

Some Recent facts

- The adoption of IASB norms for listed companies since 2005
- The adoption of specific laws for reporting on intangibles, in the private sector (Denmark), the research organisations (Austria) and to a certain extent in France (the so-called Loft Law)
- Two important projects aiming at establishing guidelines for reporting on IC for RTD activities (SMES) and business services



V- Some recent facts Form Europe

- Beside a Holistic approach, recent initiatives addressed specific <u>Functional Groups</u>: the CIO Community and the IPR Community in France, using the IC-dVAL® approach
- For CIO, the exercise aims at responding to a very critical question:
 How to make explicit the value created (if any) by IT functions and systems?
- A project conducted with a Group of 120 largest companies in France, with a total cumulated IT budget of more than 33 Bns €
- Distribution groups, services, High-Tech groups as well as traditional manufacturing are prototyping a detailed approach to reporting and managing Intellectual Capital



VI- The EU 3% objective and the RICARDIS Report

EUROPEAN COMMISSION DG RESEARCH

REPORT TO THE COMMISSION OF THE HIGH LEVEL EXPERT GROUP ON RICARDIS

REPORTING INTELLECTUAL CAPITAL TO AUGMENT RESEARCH, DEVELOPMENT & INNOVATION IN SMES



END-REPORT INTRODUCTION & PART 1



VI- The EU 3% objective and the RICARDIS Report

Objectives

 In December 2004, the DG RTD of the European Commission set up a High Level Expert Group to propose a series of measures to stimulate the reporting of IC in researchintensive SMEs

A General Approach:

- A search guidance rather than Guidelines
- A report with recommendations addressing three targeted audiences: Policy Makers, SMEs, Investors and Infomediaries



VI- The EU 3% objective objective and the RICARDIS Report

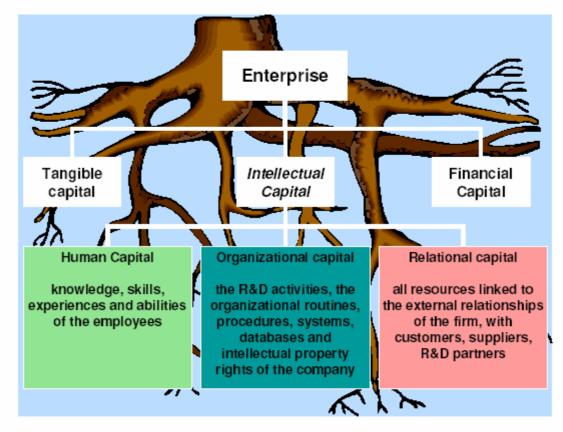


Figure 1 The Intellectual capital roots of the enterprise



VI- The EU 3% objective objective and the RICARDIS Report

Two conceptual and policy perspectives

- The Microeconomic perspective and the issue of mastering (controlling) complementary assets
- The macroeconomic perspective and the issue of fluidity of resources, due (thanks) to a potential reduction in asymmetry of information



VI- The EU 3% Objective and the RICARDIS Report

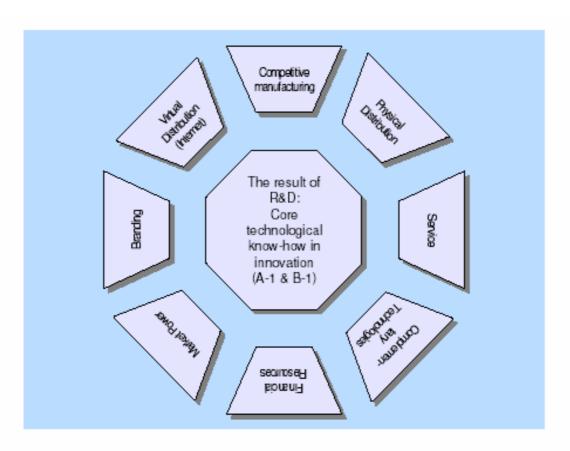


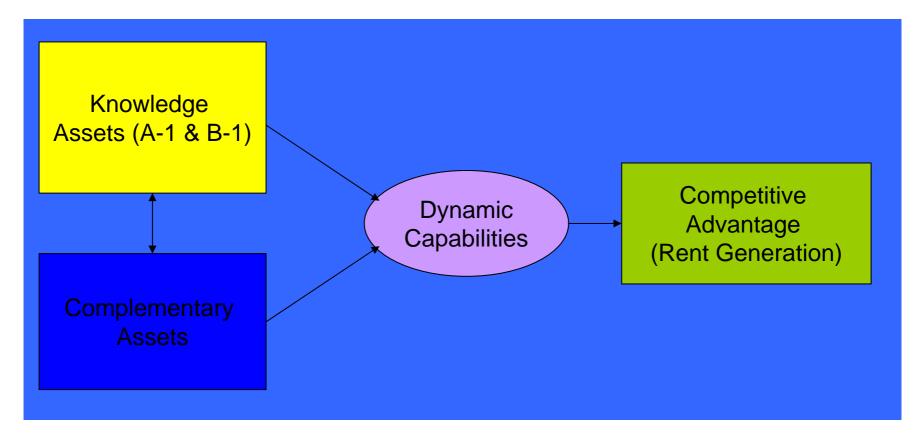
Figure 4: Complementary assets needed to create value from the results of R&D (Adapted from Teece, 2000)



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VI- The EU 3% Objective and the RICARDIS Report

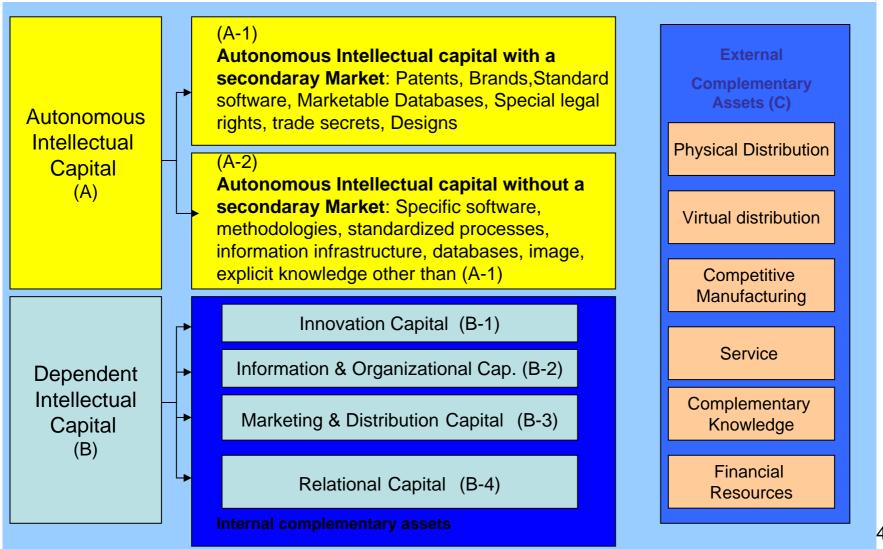
Complementary Assets and Value creation





Source: Bounfour (2005), Ricardis, 2005, (Part 1: 33)

VI- The EU 3% Objective and the RICARDIS Report SMEs, Complementary Assets and Reporting A proposed taxonomy



Source: Bounfour (2005), adapted for Ricardis, 2005, (Part 1: 31)

VI- The EU 3% Objective and the RICARDIS Report

A large experience gained from Practice in reporting and managing intangibles

Origin	Name	Key Focus	Benefits	Links
Austria.	ARC ICReport	Structure d presentation of goals, potentials, processes, and resuming intangible & tangible results.	Holistic view on the 'intellectual status and current value' of the organization. Justification of tax payers' investments in public R&D	www.arcs.ac.at/publik/ fulltext/wissensbilanz/ ARCS Wissensbilanz 1999.pdf
Denmark	Danish Guidelines	Portfolio of, investments in, and effects of knowledge resources. Relates practices and purposes of IC resources	Supports management and reporting of IC. Develops IC indicators. Identifies properties of IC statements for analysis and benchmarking.	www.videnskabsministeriet.dk/ icaccounts/
France	IC-dVAL®	Performance indexes and value of IC	Support management and IC Reporting Building sense of IC Internal and external signalling of value and performance for IC	www.icforcommunities.com
Germany	Wissensbilanz	IC processes	Supports management decision making	www.akwissensbilanz.org
Iceland	PiP project	Indicators	Harmonized indicators that allow for benchmarking	http://nhki.si.is/
Spain	MERITUM	Differences between intangible resources and intangible activities	Supports management and reporting of IC. Provides a set of characteristics that indicators should have	http://www.urjc.es/innoted/home/php
Spain	Intellectus Model ®	Dividing IC into its minimum components	Adaptability to each organisation	http://www.ofenhandwerk.com/ okld/pdf_files/K-4_deCastro.pdf
Sweden	IC-Rating™	IC position	Visibility of IC, finds areas to improve and enables benchmarking	www.intelle.ctualcapital.se

Source: Ricards, 2005, (Part 1: 6)



VI- The EU 3% Objective and the RICARDIS Report

The RICARDIS Fifteen (15) Main recommendations (Extracts)

W	hat should be done?	Who Acts?
1-	Promote existing guidelines and increase awareness	■European Commission, Member States
2-	Develop an IC Portal	• European Commission
3-	Create an IC reporting award for countries, regions, enterprises and persons	 European Commission Member States Business Associations News papers/Media Universities/Business Schools
4-	Motivate specific industries that involve a lot of research intensive SMEs to adopt IC reporting (e.g. software industry)	European Commission
5-	Produce a practical guide on IC Reporting for research- intensive SMEs, banks, investors and infomediaries	European Commission
6.	Act as a catalyst in the development and inclusion of the state of-the art IC management and reporting modules into science, engineering and business school curricula, and promote the reporting of IC by universities and RTOs	European Commission

VI- The EU 3% Objective and the RICARDIS Report

The RICARDIS Fifteen (15) Main recommendations (Extracts)

What should be done?		Who Acts?
7-	Support (Examined) IC Guidelines initiatives	European adoption task forceMember StatesBusiness Associations
8-	Establish Prototyping Activities with Research Intensive SMEs in all EU countries	European Commission take the initiative and coordinate together with Member States
9-	Establish a European Adoption Task Force that oversees and catalyses the development of IC Reporting and Management in Research Intensive SMEs and as a learning Platform	European CommissionEuropean Adoption Task Force
10-	Increase the Role of Banks, Investors and Infomediaires, Through Networking Activities	European CommissionBusiness AssociationsProfessional Associations
11-	Apply IC Reporting as an Important Criterion for public support	EIB Group should take the lead and act as first mover



VI- The EU 3% Objective and the RICARDIS Report

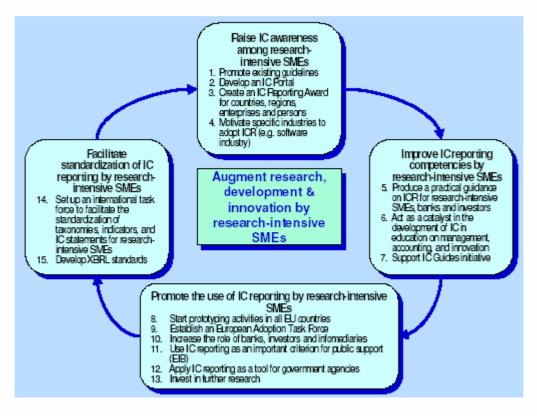
The RICARDIS Fifteen (15) Main recommendations (Extracts)

What should be done?	Who Acts ?
12- Apply IC Reporting as a tool for Government Agencies	European CommissionMember States
13- Commence Further Research (From the Very Beginning, Impact should be Analysed after 2 years): e.g. research on New business models and the importance of IC; research on IC of Nations, Regions, Cities and Other emerging communities	European CommissionUniversities and Business SchoolsApplied Science Researchers
14- Set up an International Standardization Task Force to facilitate the development of consensus-based standardization of Taxonomies, Indicators, and IC Statements for Research Intensive SMEs	European Commission
15- Develop XBRL Standards	Standardization Task Force



VI- The EU 3% Objective and the RICARDIS Report

and the RICARDIS Report The RICARDIS Fifteen (15) Main recommendations (Extracts)



A concerted effort to augment R&D and innovation in research-intensive SMEs

Source: Ricards, 2005, (Part 1: 8)



VII- A Forthcoming Pilot project on Guidelines for Business Services

Context

 The Communication on the « Competitiveness of business related services and their contribution to the performance of European Enterprises [COM(2003) 747 outlined specific measures dedicated to improving the Competitiveness of European enterprises, such as Reporting on intangibles, innovation and R&D

Objectives

- Identify categories of intangible investment that are relevant to monitoring the performance of companies
- To provide managers in the participating companies with the necessary skills
- Conduct an extensive data collection exercise

Modalities:

This should be done by searching a convergence between existing models



VIII – The Community Dimension

New experiences are emerging for managing intangibles at the Community level (Nations, Regions, Cities, research organisations), in Europe but also in other parts of the World:

- Nordic Countries
- Austria
- EU as a whole
- Croatia
- Taiwan
- Arabic countries
- Israel

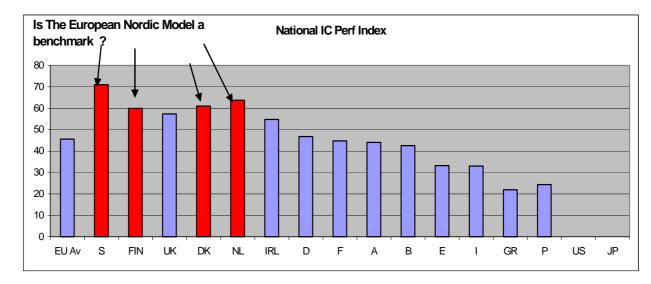
Next Countries: Japan? China, India, Brazil



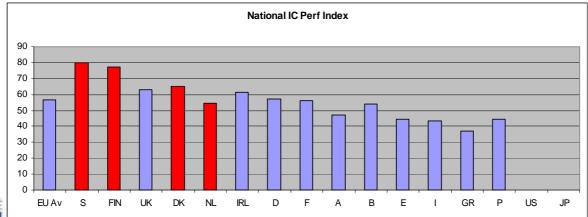
IC-dVAL ®

The Macroeconomic perspective: Final performance Indexes Is the Nordic Model a Benchmark for the Others?

2001



2004





IC for Nations: The strategic « Tableau de Bord »

Resources & Competences

Key Competences for specific Sectors and technologies

Processes

Generic

Processes

(innovation, Productivity, IPRs. **Building Relational**

Specific

Capital

Processes

Related to

particular resources

Capital

Market Outputs:

Growth in sectors production & sales Exports, International growth

Structural Outputs:

Patents, brands, methodologies, Software, etc.

Impacts

Employment Regional Development Social Cohésion

Structural

Capital

Relational

Capital

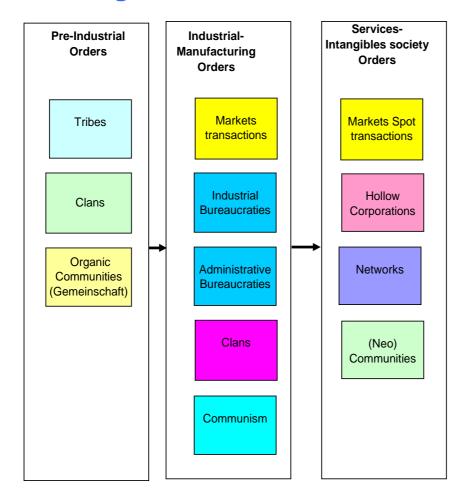
Human

The Futur ?: The critical role of Understanding Emerging Communities



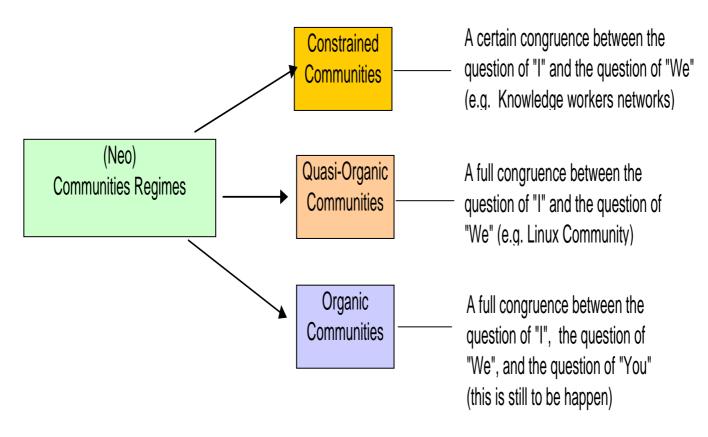
IC for Emerging communities

Organisational orders from a long-term perspective





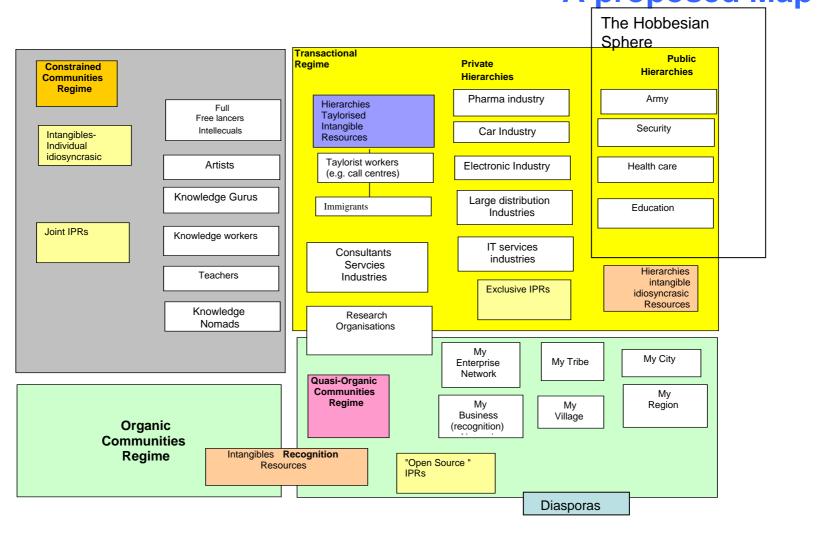
Typology of Emerging Communities



Source: Bounfour. A. (2005): « Modeling Intangibles: Transaction regime Versus Community Reigmes » in Bounfour, Edvinsson (eds.): Intellectual Capital for Communities, Nations, Regions and Cities, Chapter 1. Elsevier Butterworth-Heinemann, Boston, MA. p.10



Types of regime, Intangible Resources and IPRs A proposed Map





Implications for intangibles reporting

Table 2: Critical issues for reporting on intangibles under the two regimes

	TT . D .	C : D :
	Transaction Regime	Community Regime
The question of "T"	Individual knowledge assets	To exist "T" need to be
	are of particular relevance	inserted into "We"s
The question of "We"	"We" is less and less relevant	"We" is necessary to valorise
	A more focus on the	individual knowledge assets
	"Structural Capital"	Methods for reporting are
	dimension	still to be defined
The question of "You"	Asymmetry of information,	The language of "You" is
	Idiosyncratic nature of	Still to be defined
	"combinatory function"	
	Grammar is more relevant	
	than photography	
	Learning is more relevant	
	than benchmarking	



Types of regime, Intangible Resources and IPRs

Typologies of intangible resources

Transaction regime:

- Taylorised intangibles for hierarchies
- Idiosyncratic intangibles for hierachies

Community regime

- Individual idiosyncratic intangibles for constrained communities
- Recognition intangibles (Quasi organic & Organic communities)

Typology of IPRs

Transaction regime:

Exclusive IPRs for hierarchies

Community regime

- Joint IPRs for constrainted communities
- Open-source IPRs for Quasi & organic Communities



Types of regime, Intangible Resources and IPRs

- Two Major and closely related- analytical and policy issues
- The equilibrium between Transaction and Recognition and their relative importance in dynamic terms as well in terms of organisational forms (spot transactions in markets versus longterm established relationships)
- The « IN » and « Out » (and between)
 Intangibles (Intellectual Capital) (for individuals, networks, communities, diasporas, etc...)



IX – Conclusion: The Next Steps

- Extending and coordinating reporting on IC for benchlearning purposes (Japan /EU /Asia, other parts of the World)
- Extending the analysis to the Community dimension:
 Natural communities Nations: IC of Japan, IC of Europe, IC of China, IC of India, IC of Brazil; Regions and Cities
- But also to <u>Emerging Communities</u> (Constrained n Organic, and Quasi-Organic Communities)
- IC for Communities conference, and the New Club of Paris are proposed as a platform for such a fruitful dialogue



Thank you for your attention

