

Intellectual Capital

(a Short Introduction, its Challenges)

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Our Economic Environment

- Continuous (market) globalization
- The knowledge economy emerged
(Knowledge based products and services increased);
- Shorter product life-cycles;
- Dynamic changes in the business environment
- Virtual Market
- Dramatic changes inflicted by IT&C – a jobs creation enabler (both 'white' and 'blue collar' sectors), each job began to rely more and more on computers.

Intangibles / Knowledge / Intellectual Capital

- Asset Class - not physical in nature.
- Two categories:
 - “recognized” and have an attributed value in the financial statements
 - unrecognized for financial reporting purposes.
- Growing corporate impact of intangible assets;

(IMA Report 2014)

- Business success / gaining 'competitive advantages';
- a critical aspect of organizations' sustainability into the future;
- “company's ability to offer the same products as its competitors at a cheaper price, or better products at the same price” (Hungenberg, 2004).

A Brief History

- 1929 The great crash – US & many other industrialized nations affected;
- 1930 recovery process / tremendous changes in corporate accountability;
- 1997–2000 dot-com bubble (also referred to as the dot-com boom, the Internet bubble and the information technology bubble);
- 1999–2001 collapse - some failed completely, others lost a large portion of their market capitalization but remained stable and profitable;
- Oct 2001 Enron scandal, led to the bankruptcy also Arthur Andersen, the largest bankruptcy reorganization in American history & biggest audit failure;
- 2007–2008, The financial crisis known as the Global Financial Crisis considered - the worst financial crisis since the Great Depression of the 1930s /threatened the total collapse of large financial institutions;
- 2008–2012 global recession and contributing to the European sovereign-debt crisis.

Reporting Gaps / Fill in Vulnerabilities

- Reporting those intangible assets to customers, partners and investors systematically has become a critical factor of success in the context of the globalization process (Mertins et al, 2006; Will et al, 2006)
- The evolution from the agricultural age to the industrial one properly understood
- New economy – the knowledge economy – changes everything. has an incredible impact in the process of evolution;
- industrial society focused on tangible assets use => create goods and services and deliver value for investors;
- knowledge society increasingly relies on intangible assets;
- two “societies” overlap—traditional manufacturing organizations apply the newer concepts of knowledge management techniques to optimize the performance of tangible equipment—both types deliver results harnessing, utilization, and development of intangible assets
- current framework of accounting rules and standards do not match... decline tangible assets importance that ref organizational competitiveness and sustainability, and rise in importance that intangibles

How IC Influenced Reporting / A brief history

- 1960 first efforts to measure intangibles and to evaluate their potential - Schultz (1961) and Becker (1964). (how investing in HC affects the growth of national economies);
- 1964, Human Resource Accounting approach (Hermanson Flamholtz (1974) and Fitz-enz (1984) models calculating the costs, value of human resources a more effective management;
- early 1980s management of intellectual capital emerged, as managers, academics and consultants slowly became aware firm's intangible assets, its intellectual capital, often have major corporation's profits;
- end 1980s comprehensive management information systems developed but financial indicators still dominated;
- circa 1980, Japan, Hiroyuki Itami noticed the difference in performance among Japanese companies and differences in the firm's intangible assets;
- 1986 Sweden Karl-Eric Sveiby, published The Know-How Company, on how to manage these intangible assets;
- 1986 University of California Berkeley Business School Professor David Teece wrote "Profiting from technological innovation", identified the steps necessary for the extraction of value from innovation major implications for innovation-rich companies;
- 1991 - 1994, Tom Stewart, "brainpower" articles at Fortune magazine discussed - company's intellectual capital (employees) had much to do with its profitability or success;
- end 1980s comprehensive management information systems developed but financial indicators still dominated;
- 1996 Balanced Scorecard (BSC) (Kaplan & Norton,) knowledge about 'soft' factors prominence (Management Accounting - Society of Management Accountants of Canada, 1998), CRM (Shapiro, 1974), Scandinavia, etc.;

Practitioners / First Steps

- 1991, Skandia AFS - first corporate intellectual capital office, Leif Edvinsson vice-president for intellectual capital.
- 1993, The Dow Chemical Company, identify ideas or innovations greatest profit-making potential, Gordon Petrash director of intellectual assets.
- (1997, 2002) Edvinsson & Malone and Sveiby influenced two different IC models development
 - ‘Skandia Navigator’ (Edvinsson & Malone, 1997)
 - ‘Intangible Asset Monitor’ (Sveiby, 2002).
- Both models aimed at identifying and evaluating IC, improve mainly financially oriented management.
- Two paths for thinking about intellectual capital
 - knowledge and brainpower, focused on creating and expanding the firm's knowledge (Stewart, Edvinsson, Sveiby and others).
 - resources-based perspective, how to create profits from a firm's unique combinations of intellectual and tangible resources (Itami, Sullivan, Teece and others).

Edvinsson subdivided IC into HC, structural capital (SC) and relational capital (RC) (most frequently used to describe intangible assets - Alwert, 2006).

- **IPSAS**
- **InCaS** (Intellectual Capital Statement - made in Europe) European standard

Winners of tomorrow

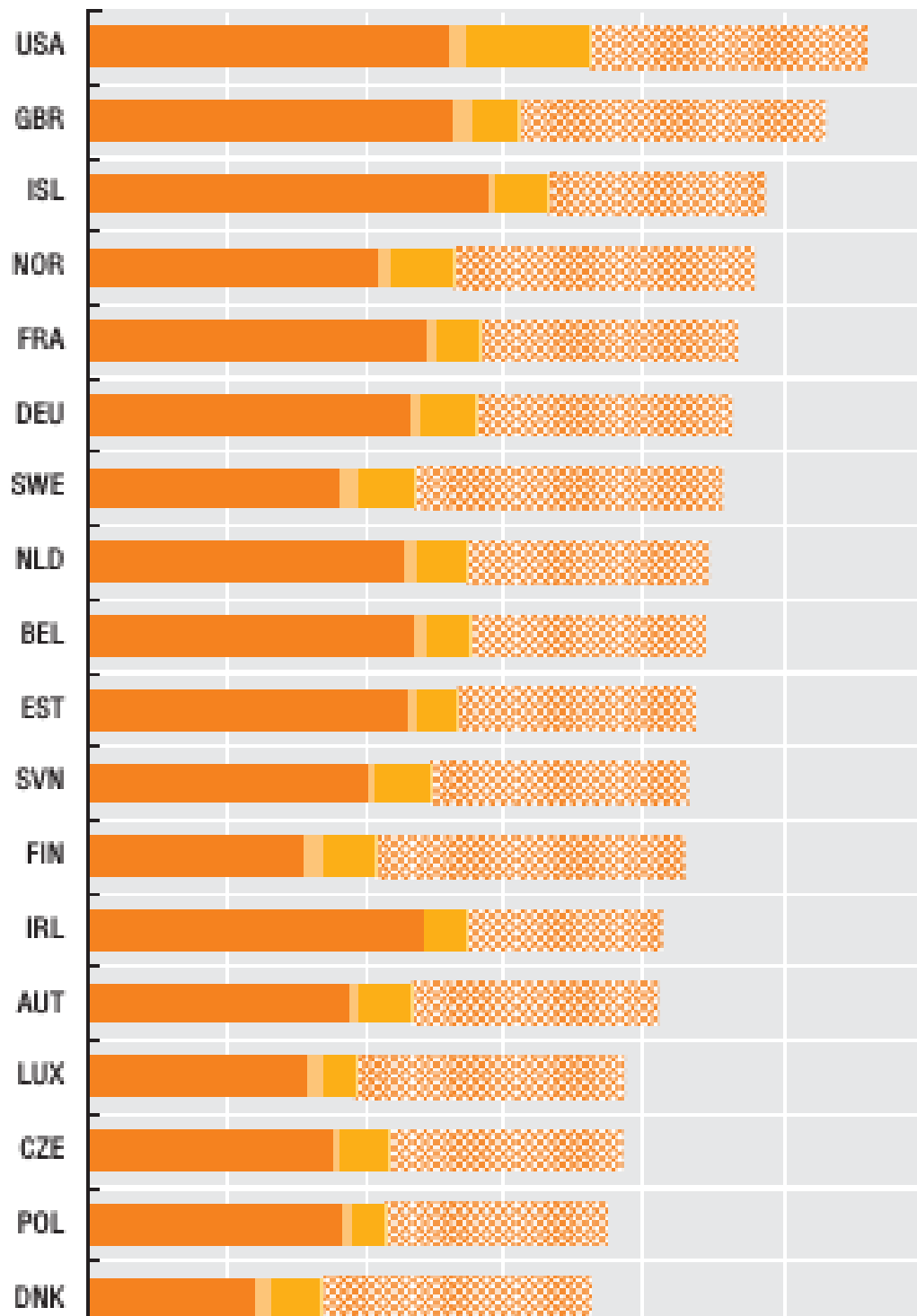
- OECD report, “Scoreboard 2001- Towards a Knowledge-based Economy”, an “countries with knowledge based industry are the winners of tomorrow”.
- Sweden - close to the top of the global knowledge league.
- Top ten countries:

Switzerland, Sweden, USA, the Netherlands, Hungary, Canada, Belgium, Great Britain, Finland

(summary OECD 2001 report/ Financial Times)

OECD 2012

Knowledge-base Capital



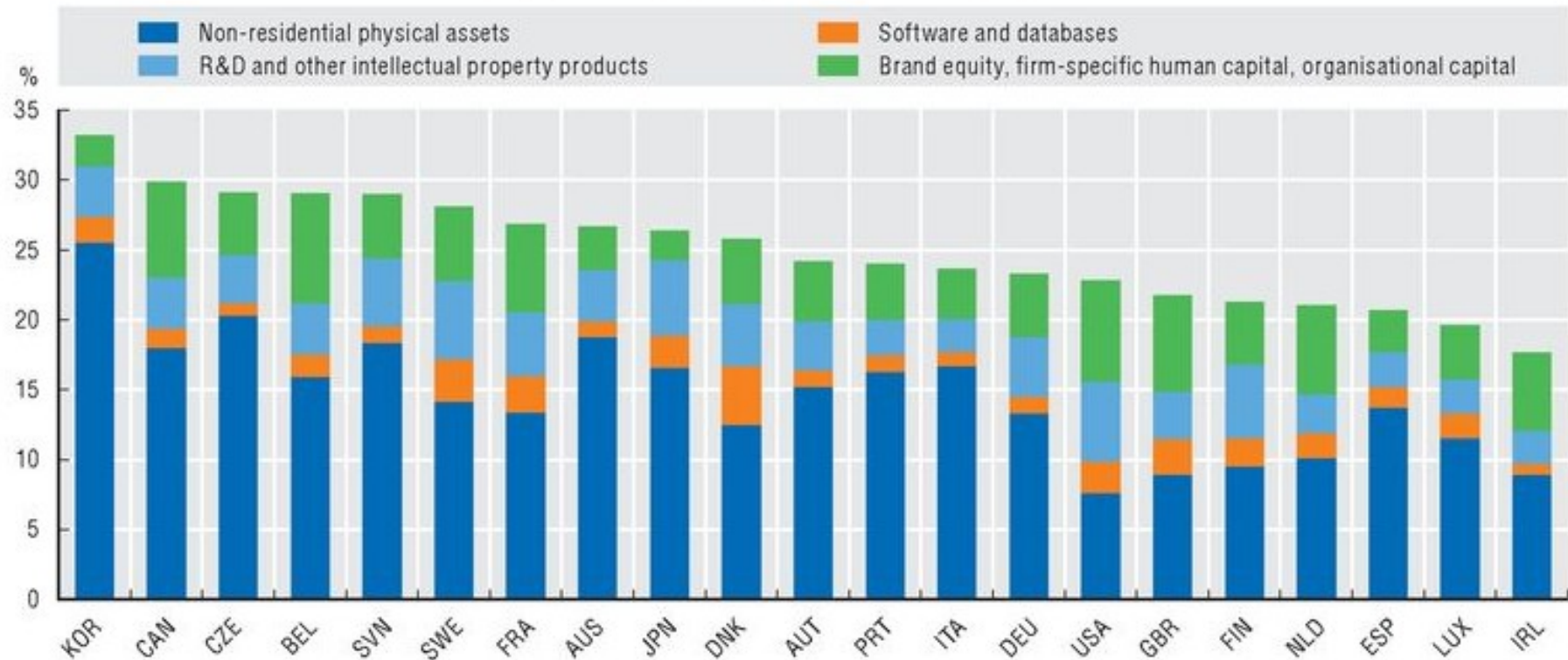
OECD R&D 2013

Researchers, per thousand employment




28. Investment in physical and knowledge-based capital, 2010

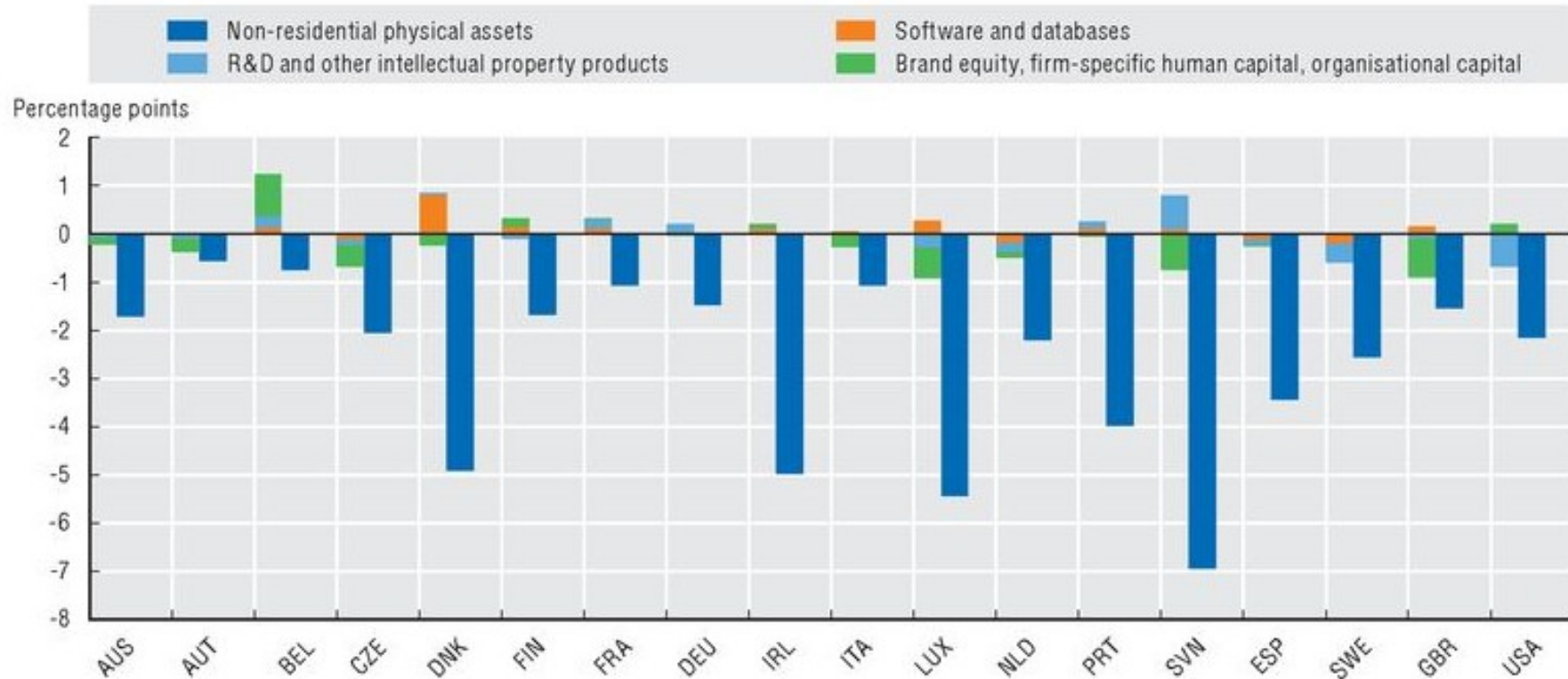
As a percentage of value added of the business sector




Source: Statistics on knowledge-based investment based on INTAN-Invest Database, www.intan-invest.net, and national estimates by researchers. Estimates of physical investment are based on OECD Annual National Accounts (SNA) and INTAN-Invest Database, May 2013. See chapter notes.

StatLink  <http://dx.doi.org/10.1787/888932889820>

29. Change in business investment intensity between 2008 and 2010



Source: Statistics on knowledge-based investment are based on INTAN-Invest Database, www.intan-invest.net, and national estimates by researchers. Estimates of physical investment are based on OECD Annual National Accounts (SNA) and the INTAN-Invest Database, May 2013. See chapter notes.

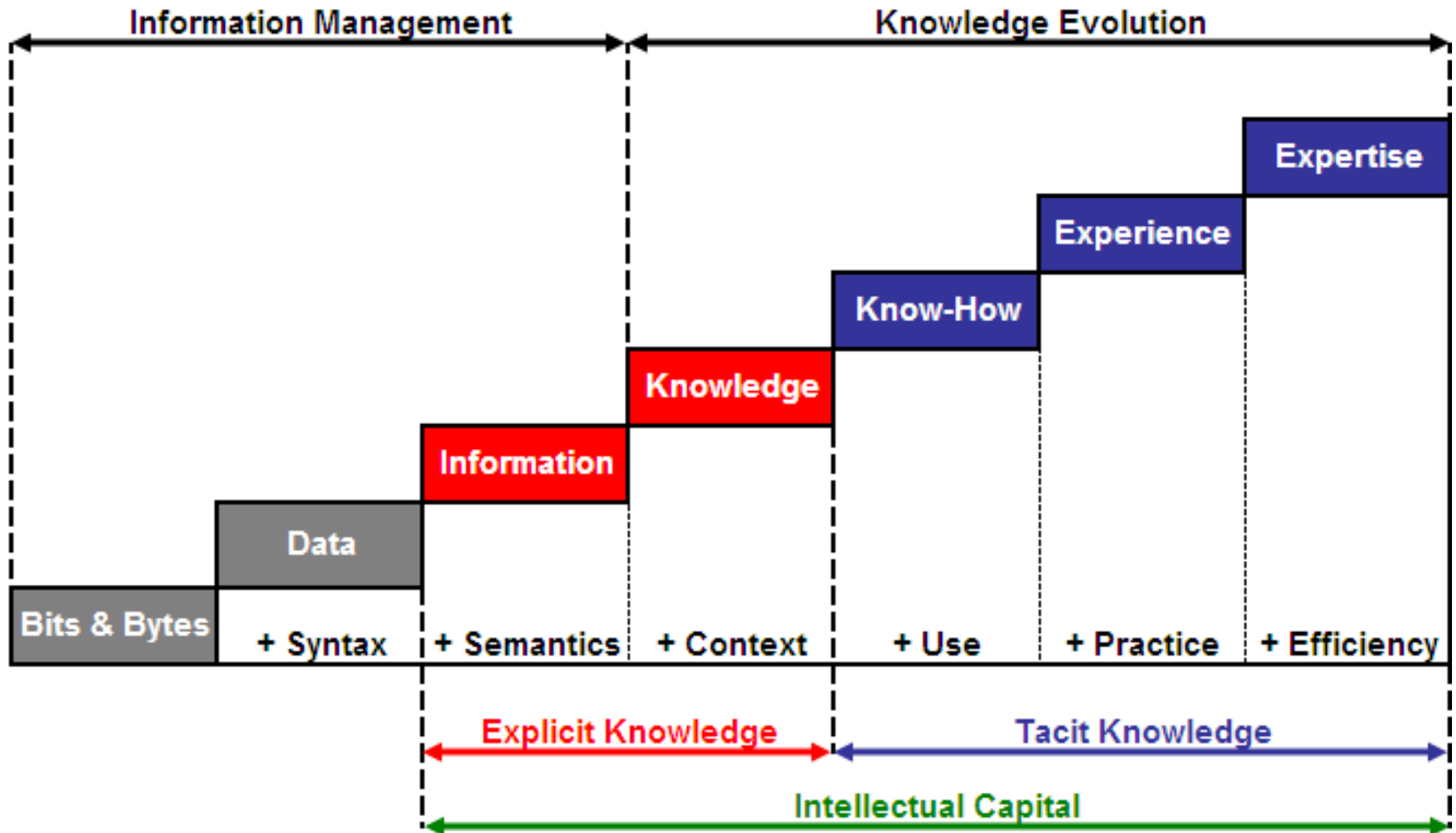
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Intellectual Capital - the Hidden Driver of Knowledge-based Economy

Intellectual Capital as "Information and knowledge applied to create value" (Edwinson and Malone - Vasly, 2008);

- Not included in the traditional accounting model, therefore mostly ignored in
 - the decision-making
 - investments in (R&D)
- traditional accounting model:
 - principle of historic cost
 - record of what has happened in the past
 - IC Statements take a different and complementary stance (primarily about internal reporting, management and control)
- good IC Report will improve organisation's internal processes for managing its overall resources, both tangible and intangible;
- This internal focus extended external audiences (seek finance, equity from investors);
- help to clarify the way competitive advantage is being built, provide clues, explanations
- Explain value chain positioning and the business model for value creation;
- Has ability to provide a credible picture of what is being done and why this will result in future success.

Knowledge vs Intellectual capital



Knowledge Building Process & Intellectual Capital

Measuring Intangible Assets

- 1990 "Kunskapsledning" - world-first with "Knowledge Management" in the title (K.E.Sveiby);
- 1993 the Swedish Council of Service Industries recommended his approach/ adopted as a standard, the first ever standard in this field;
- 1993 began advising large multinational companies on how to implement the strategic aspects of managing knowledge organizations;
- 1997 "The New Organizational Wealth" outlined how adopting a "Knowledge- focused Strategy" will create both more human and more profitable organizations (K.E.Sveiby).

Measuring Intangible Assets

- Classic model :
 - Intangible assets identification (required to achieve the strategic objectives);
 - Measurement (once identified critical assets and fixed assets and causal relations between them, it is passed to each intangible asset measurement by means of specific indicators to be relevant, reliable and comparable);
 - Monitoring and control (intangible assets state evaluated, the IC management system developed, consolidated and integrated).

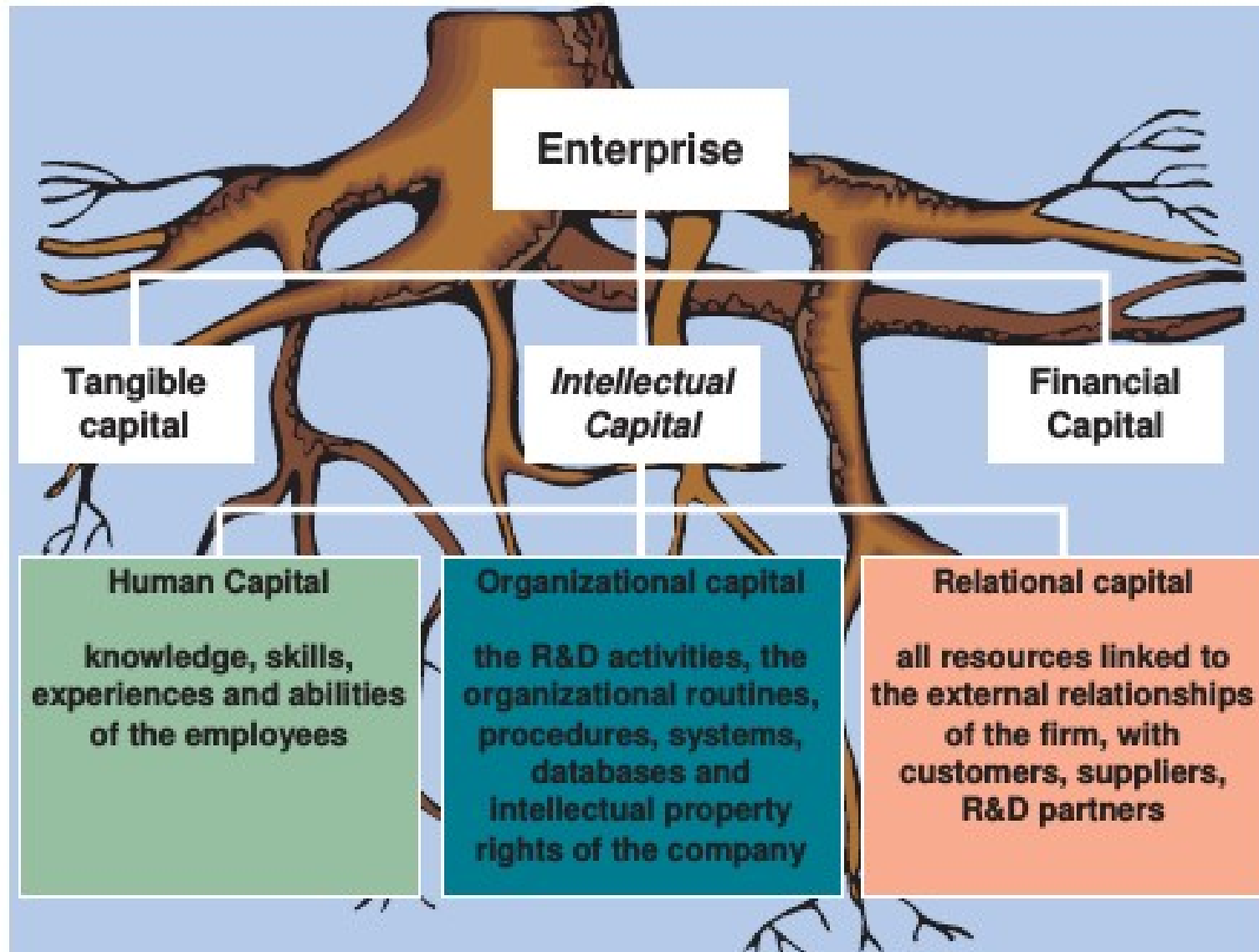
Intellectual Capital Calculation

	Human Capital	Customer Capital	Structural Capital (Organizational Capital)
GUTHRIE (2001)	<ul style="list-style-type: none"> • Know-how; • Education; • Vocational qualification; • Work-related knowledge; • Work-related competencies; • Entrepreneurial spirit • Innovativeness, • Proactive and reactive abilities • changeability 	<ul style="list-style-type: none"> • Brands • Customers • Customer loyalty • Company names • Distribution channels • Business Collaborations • Licensing agreements • Favourable contracts • Franchising agreements 	<ul style="list-style-type: none"> • Patents • Copyrights • Trademarks • Management Philosophy • Corporate Culture • Management processes • Information Systems • Networking Systems • Financial Relations

Source: Adopted from Guthrie (2001), p.35

Enterprise IC Roots

(MERITUM, 2002)



Corporate Capital

Tangible Capital

Financial Assets

Equipment

Plant

Property

Intangible Capital

Human Capital

Management

Employees

Structural Capital

Intellectual Property

Processes

Relationship Capital

Network

Brand

Customers

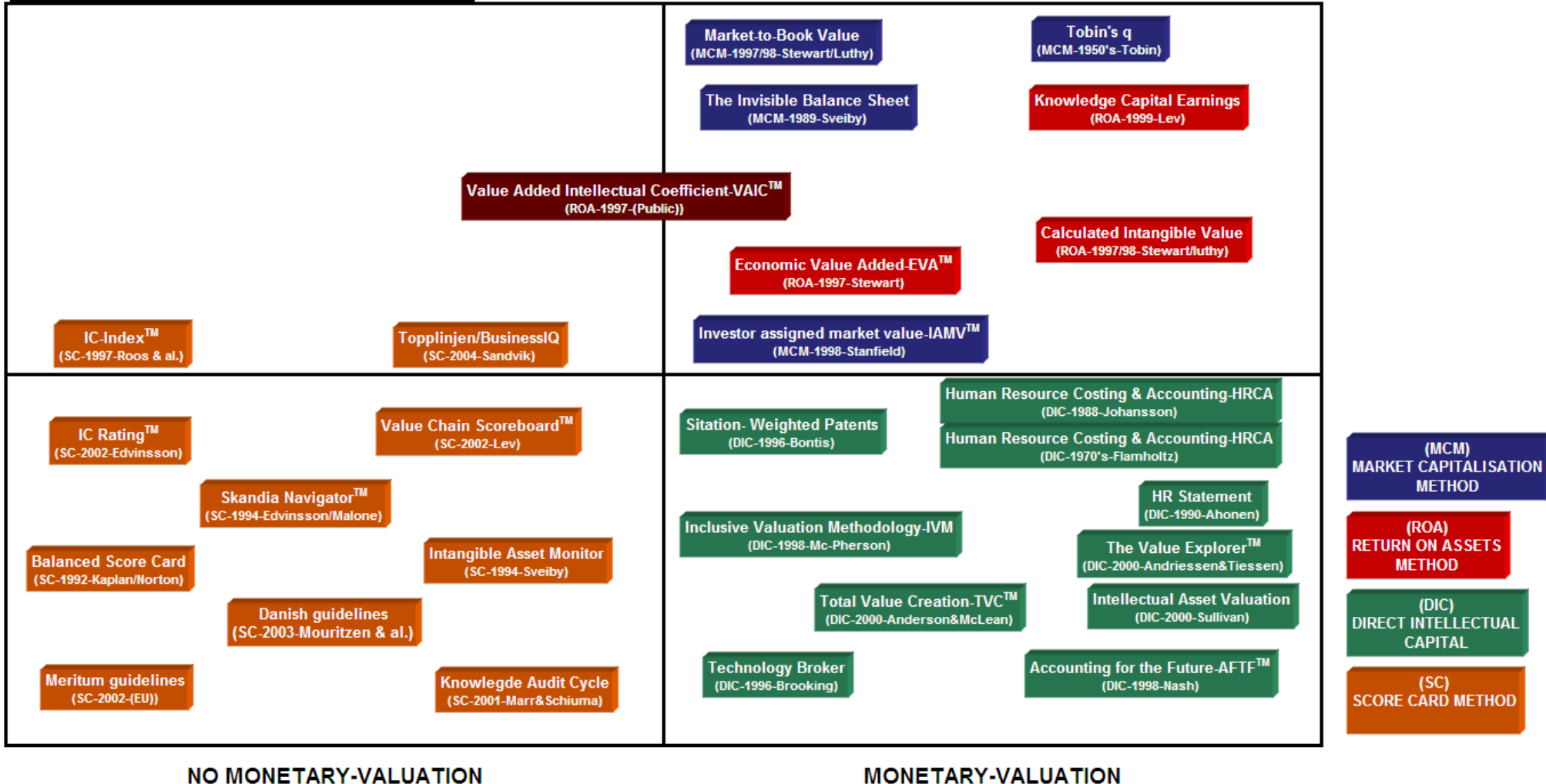
The Four Approaches for Measuring Intangibles (RICARDIS)

- **Market Capitalization Methods (MCM):** Calculate the difference between a company's market capitalization and its stockholders' equity as the value of its intellectual capital or intangible assets (stock exchange capitalization - book value of equity).
- **Return on Assets methods (ROA):** Average pre-tax earnings of a company for a period of time are divided by the average tangible assets of the company. The result is a company ROA that is then compared with its industry average. The difference is multiplied by the company's average tangible assets to calculate an average annual earnings from the intangibles. Dividing the above-average earnings by the company's average cost of capital or an interest rate, one can derive an estimate of the value of its intangible assets or intellectual capital
- **Scorecard Methods (SC):** The various components of intangible assets or intellectual capital are identified and indicators and indices are generated and reported in scorecards or as graphs for both boards of directors, management and operations.
- **Direct Intellectual Capital methods (DIC):** Estimate the \$-value of intangible assets by identifying its various components. Once these components are identified, they can be directly evaluated, either individually or as an aggregated coefficient (manage on medium and long-term not for estimating intangible assets value owned by it) - Balanced ScoreCard (Kaplan and Norton), Skandia Navigator (Edvinsson), Intellect (Euroforum), Intangible Assets Monitor (Sveiby), Technology Broker (Brooking), Meritum Project. (EU)

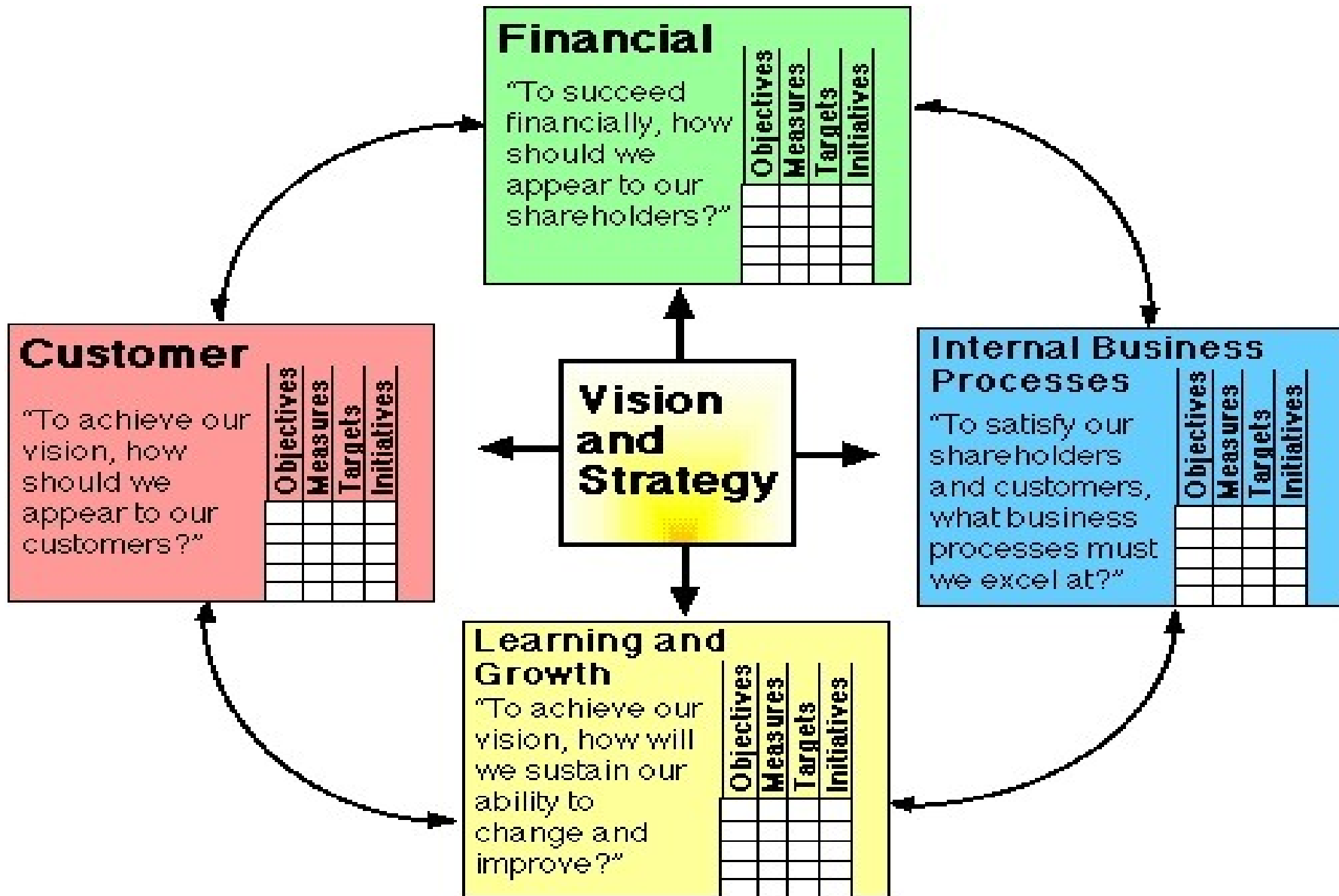
Karl-Erik Sveiby's Model

Methods for Measuring Intangibles

Intangible Assets Measurement Models (Sveiby, 2004)

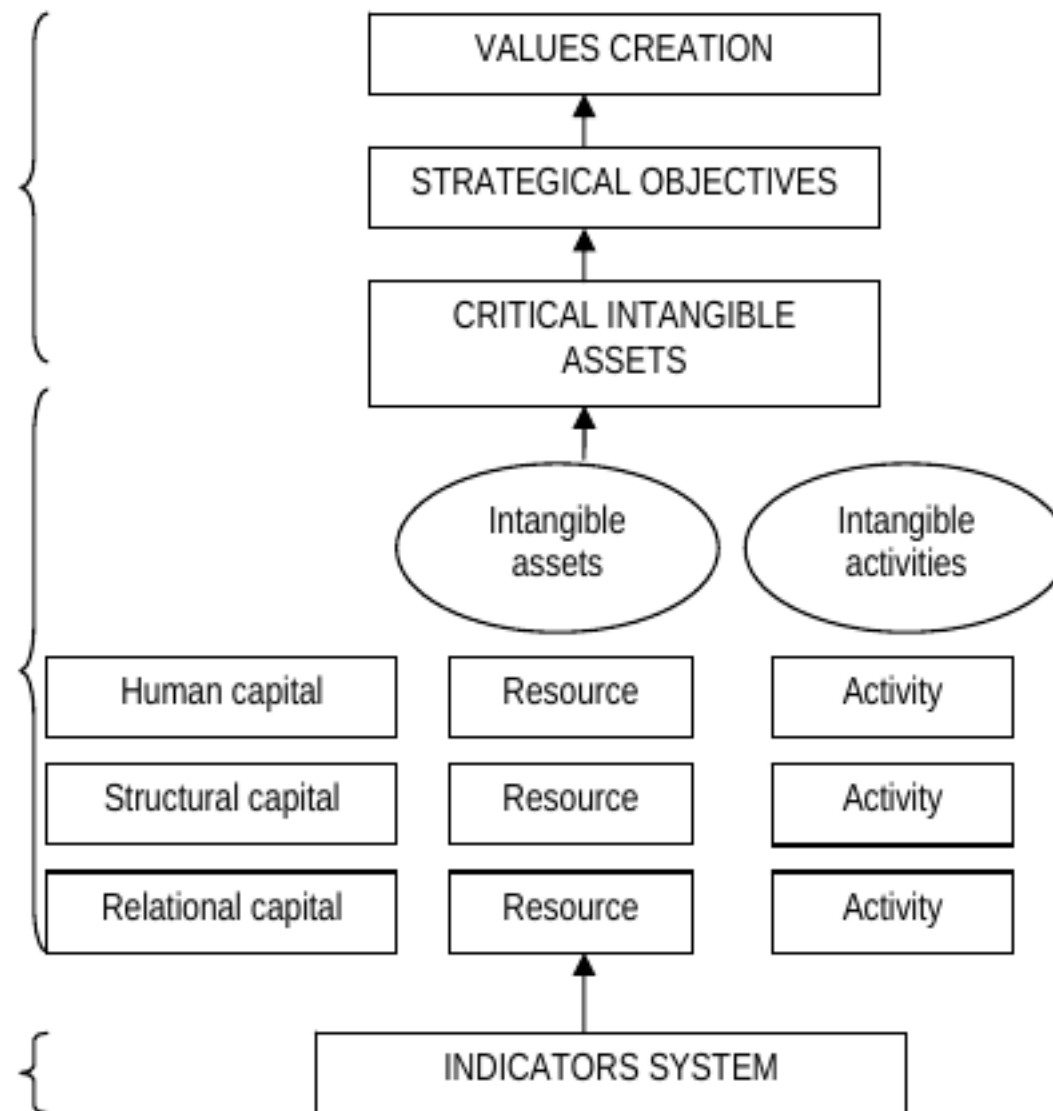


BSC Model



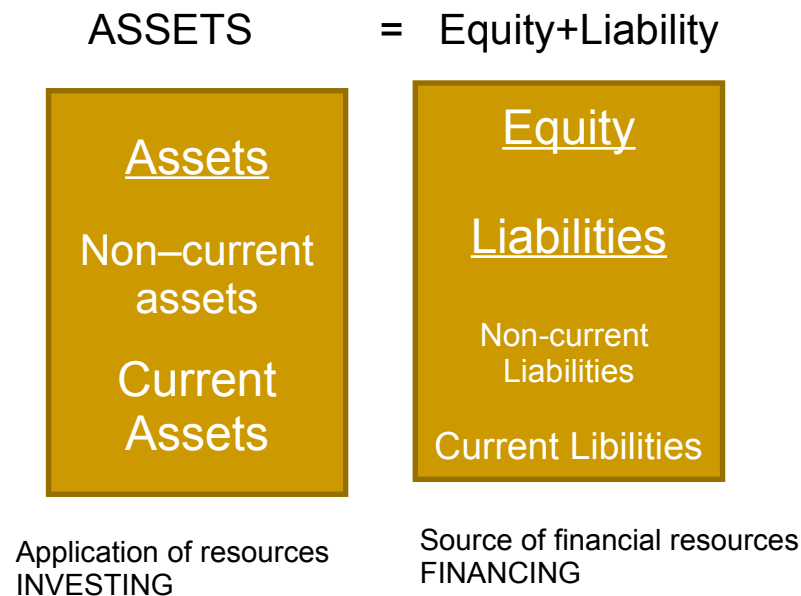
Knowledge Resources Report presentation scheme

Source: Viedma, 2003, p. 122



INTANGIBLES AND THE MANAGEMENT ACCOUNTANT

- Intangible (most are unknowable and unmeasurable).
- Balance sheet



- records all assets and liabilities as well as reporting owners equity.
- “book value” valid until 1970s,
- today explains only 1/3 of this value.

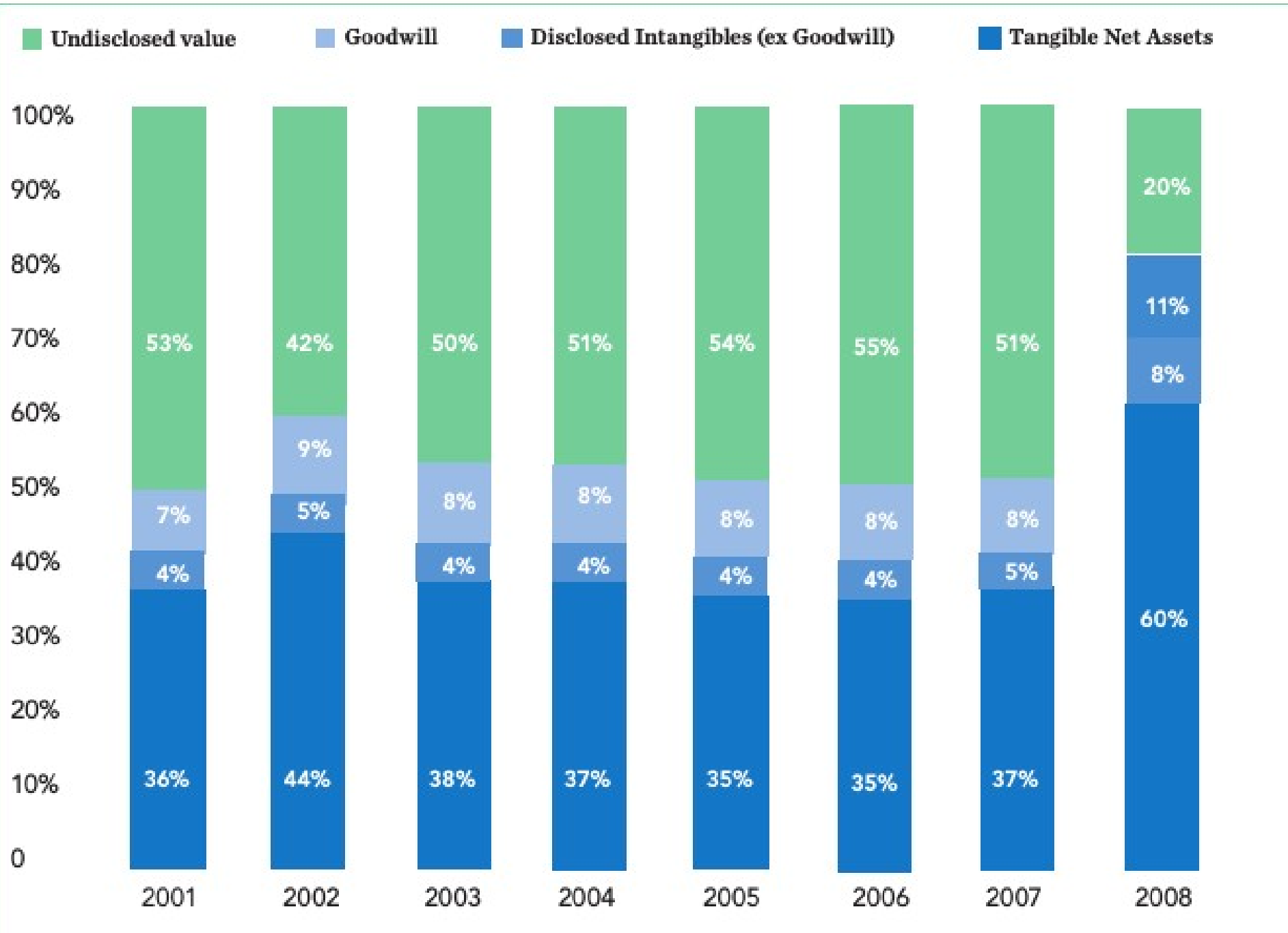


Chart reproduced courtesy Brand Finance "Intangible Finance Tracker 2009".

ICA - EC Fourth and Seventh Directives

19 July 2002 the EC Regulation no. 1606/2002 of EP & EU Council, compulsory use by January 2005 of **International Accounting Standards – IAS** (today **IFRS - International Financial Reporting Standards**).

- IFRS 3 (objective - prescribe the accounting treatment for business combinations);
- IAS 38 (prescribe the accounting treatment for intangible assets that are not dealt with specifically in another IAS).

IAS 38

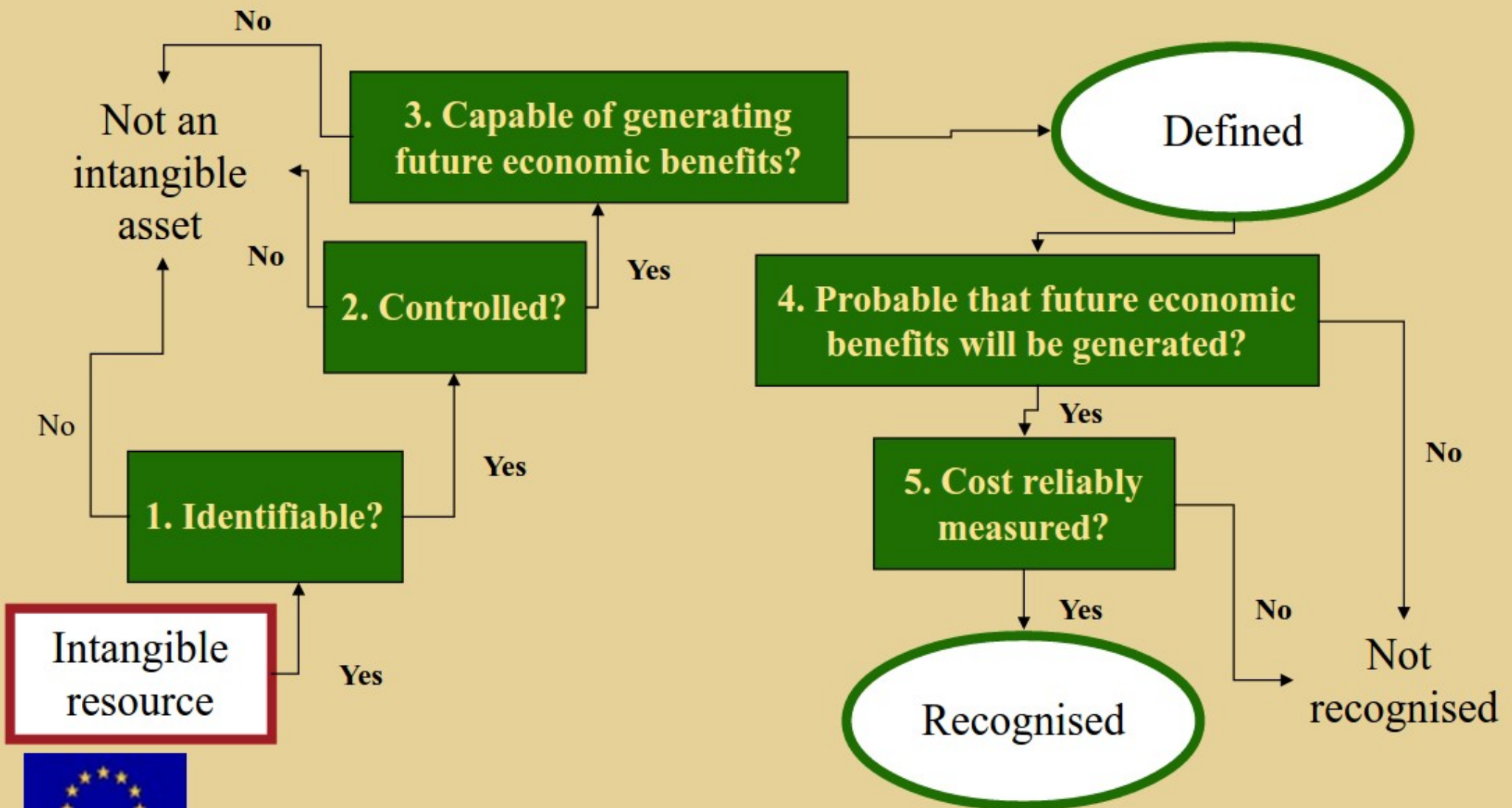
- **Define & Recognise** an intangible asset if, and only if, certain criteria are met.
- specifies how to **measure**
- An intangible asset is :
 - an identifiable
 - non-monetary asset,
 - without physical substance.
- **Useful life** is the period of time over which an asset is expected to be used by the entity
- An asset = a resource that is controlled by the enterprise as a result of past events (i.e. purchase or self-creation) and future economic benefits capabilities (inflows of cash or other assets) are expected.
- Three critical attributes:
 - identifiability;
 - control; and
 - future economic benefits.

IAS 38

(cont.)

- From a “Defined” intangible asset we further need, to recognize it, whether acquired externally or generated internally (self-created at cost), if and only if:
 - it is probable that the future economic benefits that are attributable to the asset will flow to the enterprise; and
 - the cost of the asset can be measured reliably.
- There are additional recognition criteria for internally generated intangible assets.

Criteria for Recognition



NON-CURRENT ASSETS (ACTIVE IMOBILIZATE)

- TANGIBLE ASSETS (Active tangibile/ Mobilizari corporale)
 - Physical substance. This type of assets can be bought or manufactured by the company;
 - Land, building, furniture, equipment...
- INTANGIBLE ASSETS (Active intangibile/ Mobilizari necorporale)
 - Assets without physical substance
- RESEARCH & DEVELOPMENT
 - Research, development, patent
- GOODWILL
 - cumulated value of unrecognized assets (such as exceptional management, skilled employees, highly quality products, good and faithful customers...);
 - has limited life, yearly reviewed for impairment

Intangible Assets Management

- Identification of Key Intangible assets (usually focused on the revenue generation side of the business);
- Inventory of intangible asset – classification grouping;
- Model how the system fits together (for management purposes);
- Map how components interact (functions);
- Identify metrics for execution;
- Execute/learn/adapt to improve / PDCA;

Tools / National Approaches

- Knowledge Narrative - Based on the Danish Guidelines
- Identifying your Intellectual Capital by looking at your current initiatives
- German: Wissensbilanz (Milestone I-IV)
- Swedish: IC-Rating™ (Efficiency, Risk, Renewal)
- Belgium: ICV calculation
- European: MERITUM

Thank you!