

HARVARD | BUSINESS | SCHOOL



Managing Curious Minds – Global Trends in Accounting, Reporting and Valuation of Intellectual Capital

Alexander G. Welzl, EFFAS CIC April 9, 2008

1494 – First Codification of Double-Entry Accounting



Source: http://en.wikipedia.org/wiki/Luca_Pacioli

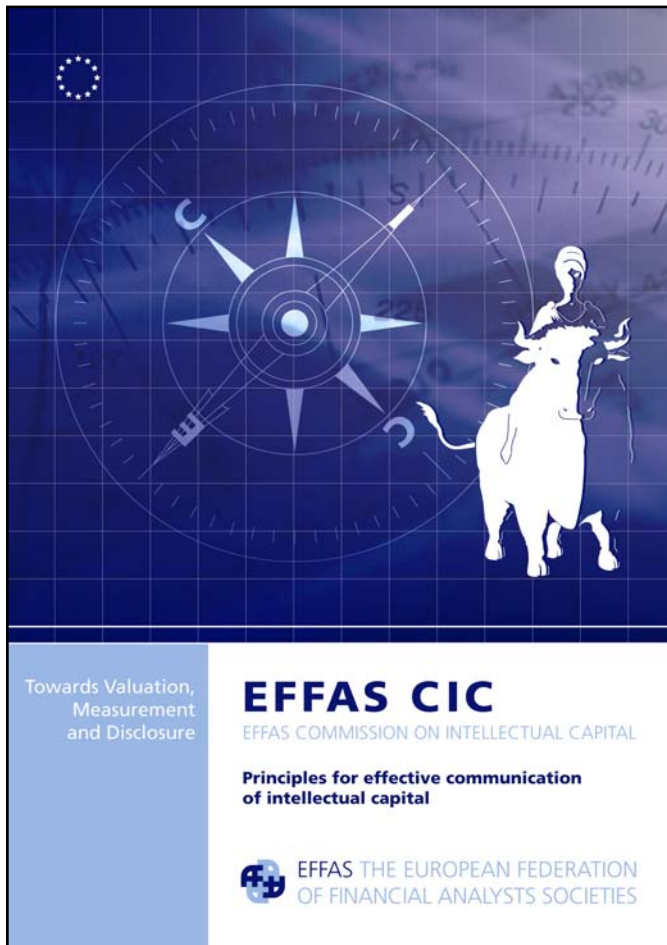
1. Fra Luca Bartolomeo de Pacioli (1494)

Publication: 'Summa de Arithmetica, Geometria, Proportioni et Proportionalita' (Everything About Arithmetic, Geometry and Proportion)

2. De Computis et Scripturis (Of Reckonings and Writings)

- Bookkeeping one of five topics covered
- 36 short chapters on bookkeeping
- "in order that the subjects of the most gracious Duke of Urbino may have complete instructions in the conduct of business," and to "give the trader without delay information as to his assets and liabilities"

2008 – EFFAS Principles of Intellectual Capital Valuation



1. European Federation of Financial Analysts Societies (EFFAS), March 2008

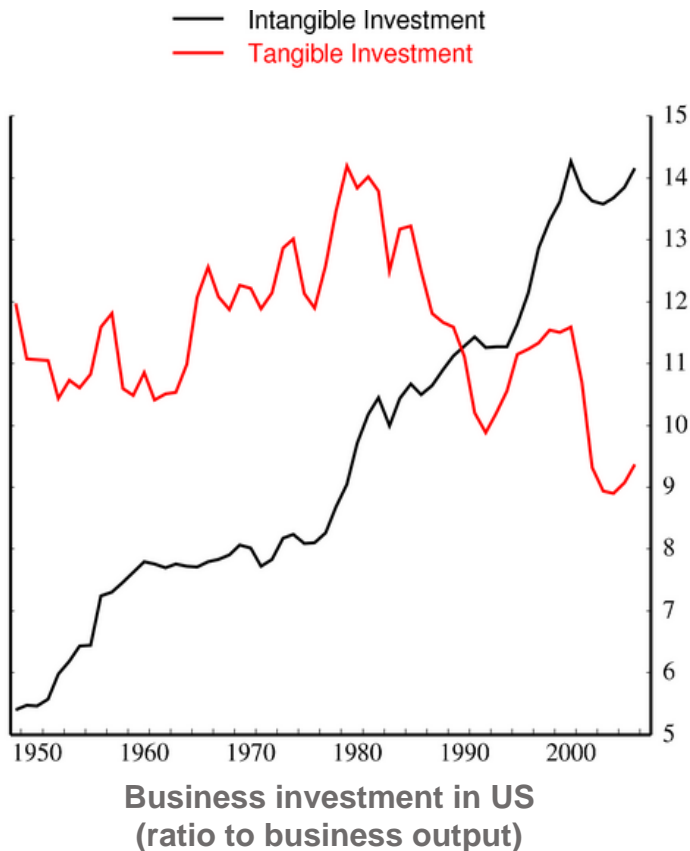
Publication: 'Principles for Effective Communication of Intellectual Capital'

http://www.effas.com/pdf/EFFAS_CIC_web.pdf

2. EFFAS Commission on Intellectual Capital (EFFAS CIC)

- global pioneers in investment professionals community
- Ten commandments of intellectual capital measurement, disclosure and valuation
- EFFAS: umbrella organisation and voice of the European investment professionals, 25 National Member Societies, 14.000 members

20th Century - Growing Importance of Intellectual Assets



1. Reflected in corporate expenditure:

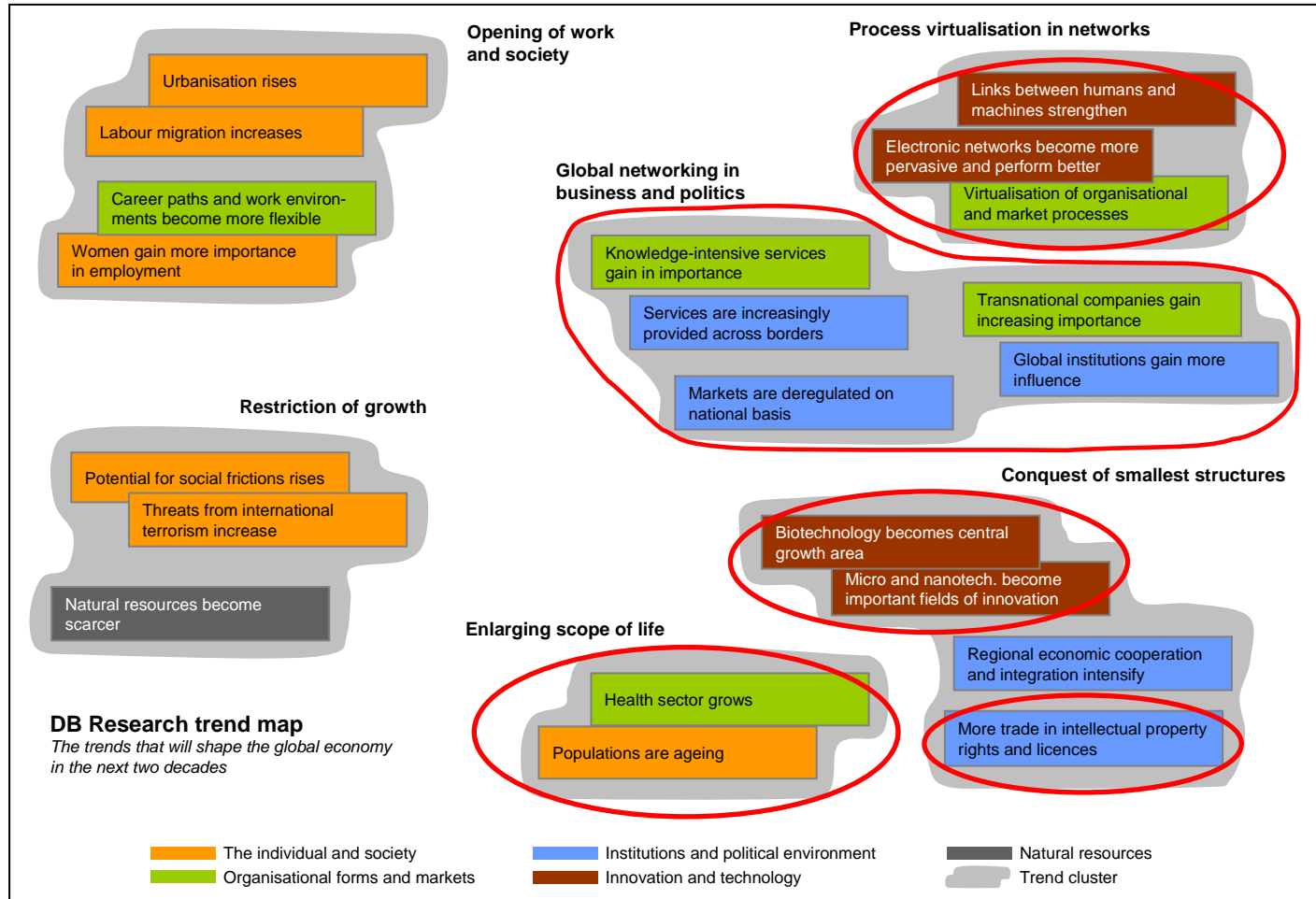
- Investments in intellectual assets are matching to those in tangible capital
- U.S. intangible business investment was more than \$1 trillion in the late 1990s: software, innovation (R&D, design, etc.) and firm competitiveness (brand, human capital, organisation)
- In first 6 years of this decade: intangible business investment 40% larger than tangible investment

2. G6 and EU-15:

- R&D-intensive producers and knowledge-intensive service providers in 2002 made up one third of economic output in G6 and EU-15
- G6 is US, JP, DE, FR, GB, and IT

Sources: Corrado, US Federal Reserve Board (2007); Corrado, Hulten, and Sichel (2006, 2007); Hofmann, DB Research (2006); Tojo, OECD (2008)

2020 - Trends in the global knowledge economy



Increase of Knowledge Intensity of Goods and Services

1. New forms of division of labour:

- Differentiated sourcing (outsourcing, offshoring)
- Emergence of new value creation networks with intensified co-operation of actors (co-opetition)

2. Competitive products based on more complex scientific knowledge:

- Pharmaceuticals (biotechnology)
- New materials (nanotechnology)
- Financial services (mathematics and information sciences)
- Smarter products (cognitive sciences)

3. More demanding customers

- Ancillary services get more important

Knowledge – The fourth Production Factor

1. OECD Definition of Intellectual Capital/Intellectual Assets (2008):

‘Resource utilised in future value creation without a physical embodiment’. It includes

- Proprietary Knowledge
- Human Capital
- Relational Capital
- Organisational Capital

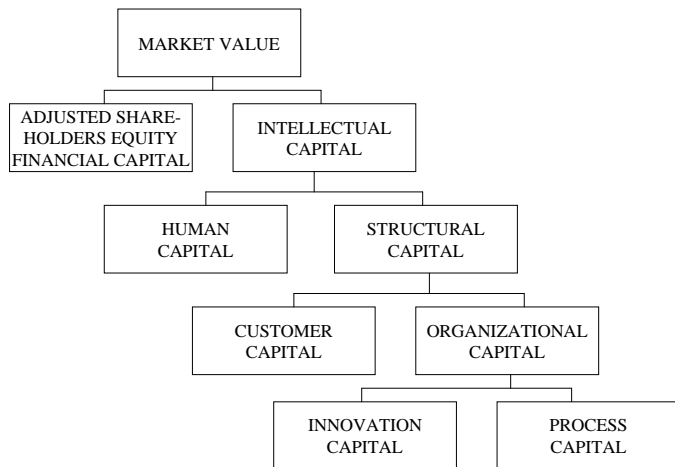
2. EFFAS Definition of Intellectual Capital/Intellectual Assets (2008):

- Staff and management skills
- Software
- R&D
- Brands and patents
- Strategies
- Processes
- Relationships with suppliers and customers

Intellectual Capital Reporting – Evolution of Models

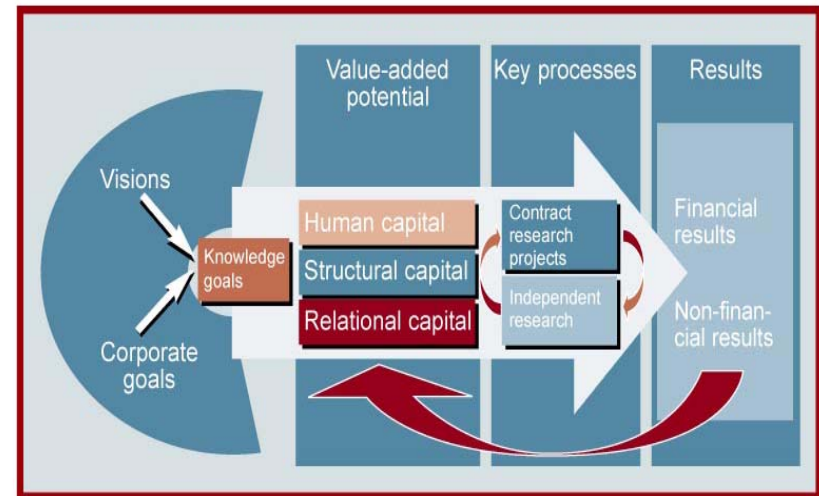
Structure Approach

Sweden 1994



Process Approach

Austria 2000



Source: ARC (2000)

IC-Reporting - National Guidelines and Standards worldwide

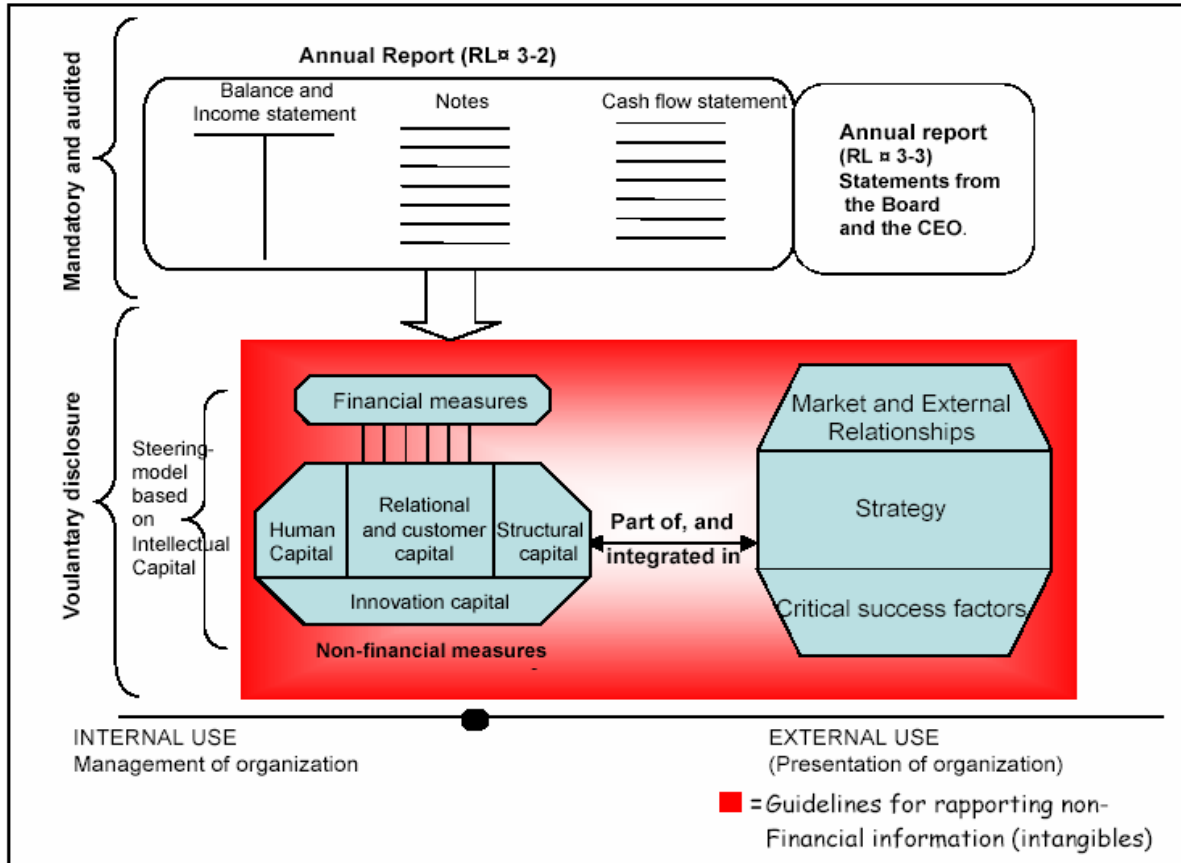
1. Austria – first legal standard for Intellectual Capital Reporting:

- With ongoing implementation and publication of Intellectual Capital Reports based on legal framework (Austrian Universities)
- Besides that companies have started to publish ICRs on their own

2. National voluntary guidelines worldwide:

- Europe (Denmark, Germany)
- Asia (Japan)
- Pacific Region (Australia)
- With companies publishing Intellectual Capital Reports based on these guidelines

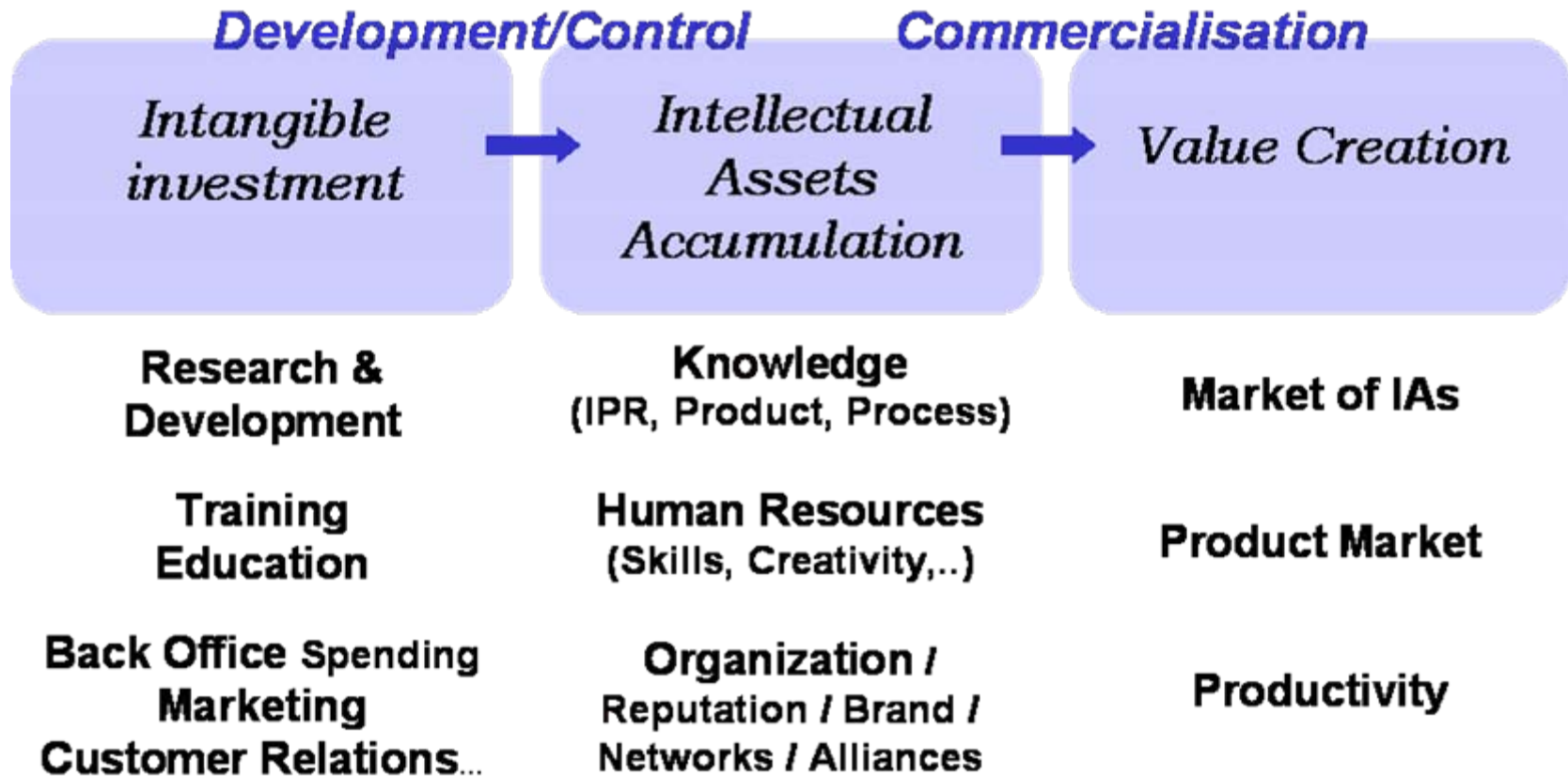
Convergence of internal and external Reporting on IC



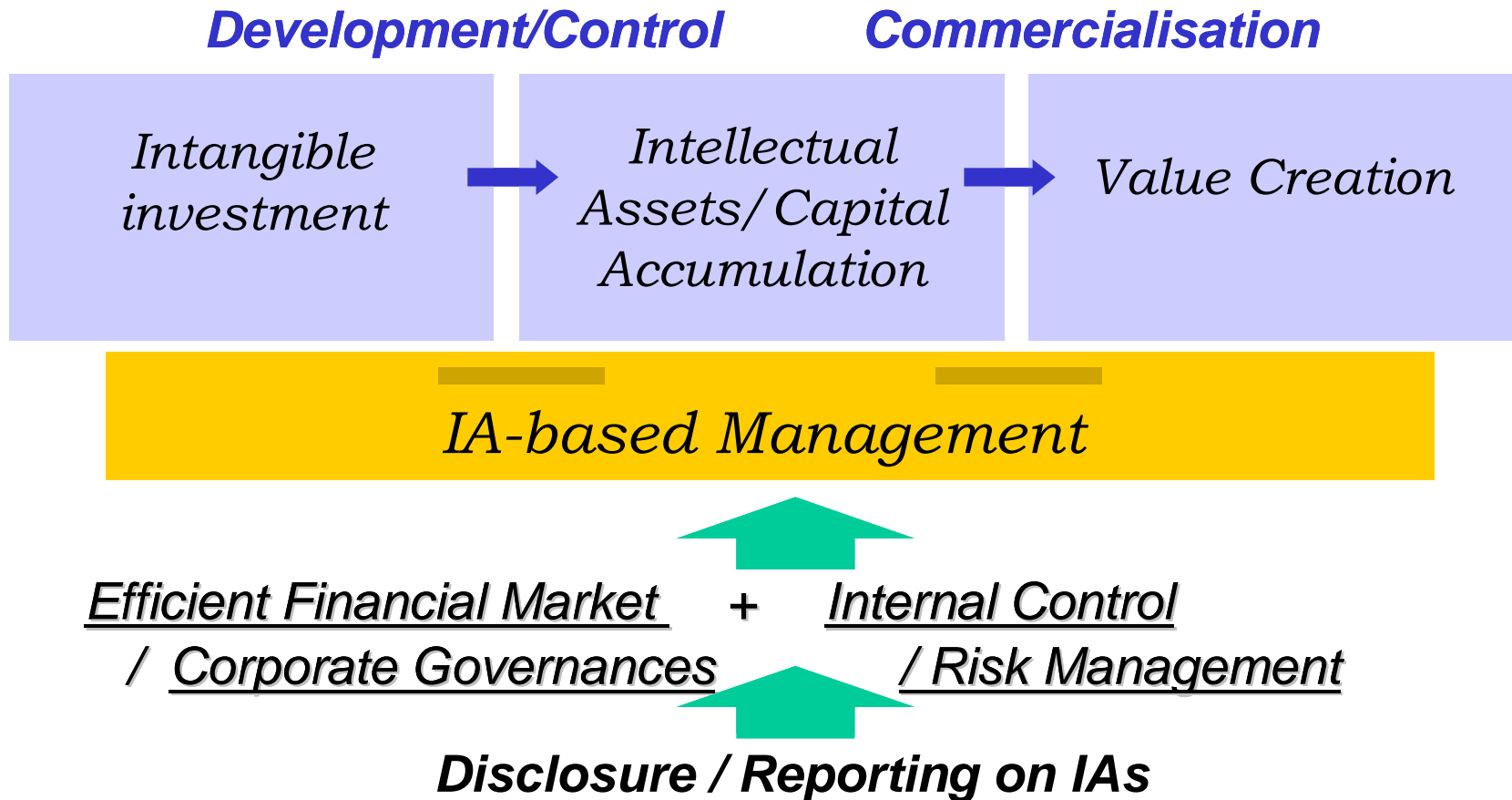
Overall model for reporting of non-financial information

Source: NFF - The Norwegian Society of Financial Analysts, Oslo (2002)

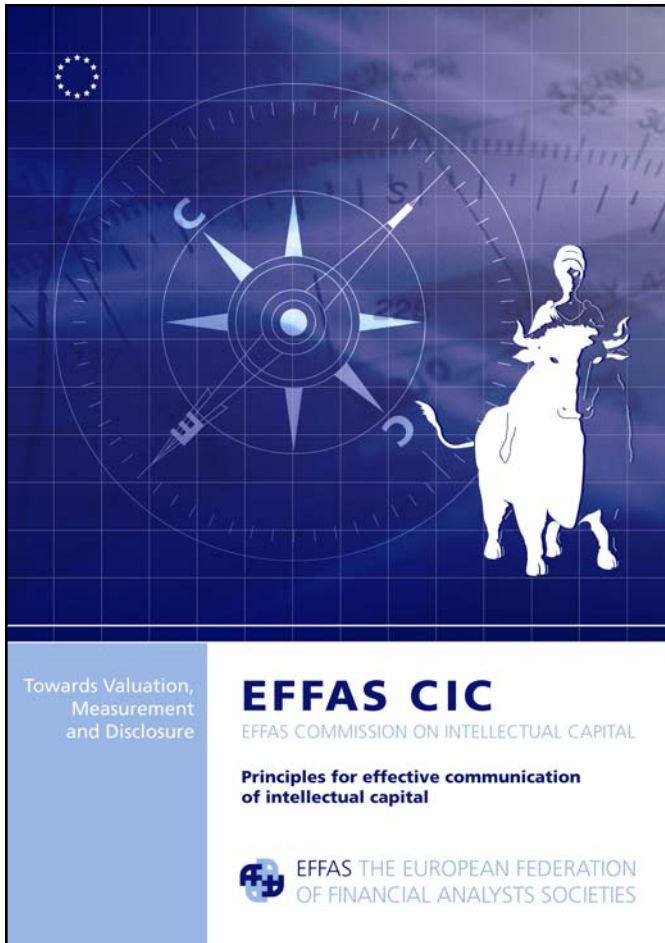
OECD IC-Model – Development, Retention, Commercialisation



The OECD Model of IC-based Value Creation



The 10 EFFAS CIC Principles for IC-Disclosure



1. **Clear link to future value creation**
2. **Transparency of methodology**
3. **Standardisation**
4. **Consistency over time**
5. **Balanced trade-off between disclosure and privacy**
6. **Alignment of interests between company and investors**
7. **Prevention of information overflow**
8. **Reliability and responsibility**
9. **Risk assessment**
10. **Effective disclosure placement and timing**

EFFAS Recommendation of IC-Disclosure Instruments

Corporate Intellectual Capital and IC-based value creation should be disclosed:

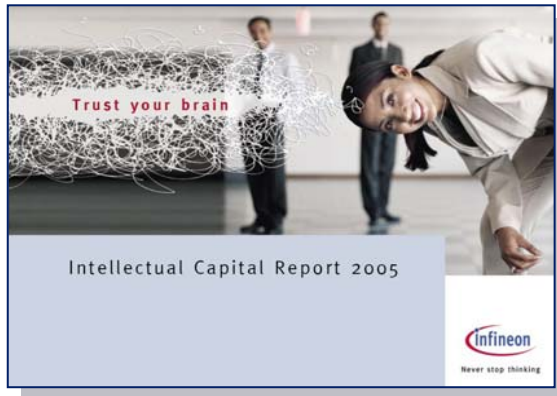
1. As a separate Intellectual Capital Report:

- In the context of the whole corporate reporting system
- Business case: Infineon Technologies Austria AG (IFAT), Austria/Europe

2. As part of the Annual Report:

- Included in the 'Management Commentary' (or 'Management Discussion and Analysis')
- Business case: Bankinter S.A., Spain/Europe

Intellectual Capital Measurement and Reporting in Austria



1. Austria's long tradition in IC-reporting

- Austrian Research Centers Ltd. (since 1999)
- Austrian National Bank OeNB (since 2004)
- Federal Province Upper Austria (2004)
- Infineon Technologies Austria AG (since 2006)

2. First legal national standard worldwide for an entire branch

- Austrian universities have to publish IC-reports annually since 2006
- Standard regarding performance indicator set and structure of the report
- IC-report as reporting instrument for intellectual asset-based performance and future potentials towards stakeholders

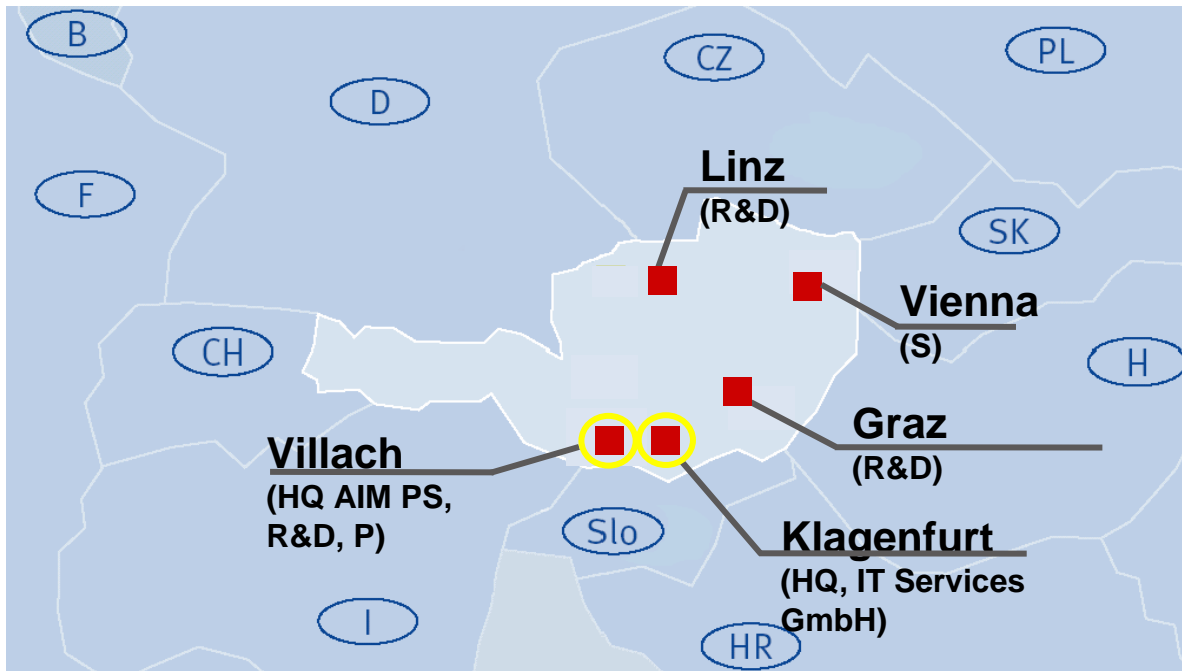
IC & Innovation - main Value Drivers in Semiconductor Industry



1. **This industry is a top-innovation branch**
 - on an average 15 % of turnover reinvested in R&D
2. **It has an enabling role**
 - with worldwide semiconductor market revenues of \$ 213 bn generating revenues of around \$ 1,200 bn in the electronic systems market and even \$ 5,000 bn in the service industries
3. **It creates clusters of excellence**
 - driving leading-edge research, knowledge-transfer and innovation which in the end leads to a boost of intellectual capital (human capital, structural capital, relational capital, intellectual property etc.)

Therefore Intellectual Capital Reports are an appropriate tool to measure, valuate and disclose intellectual asset-based corporate performance.

Infineon Technologies Austria AG - a Subsidiary of Infineon



HQ: International Headquarter Functions
 R&D: Research and Development
 S: Sales

P: Production
 PS: Power Management & Supply
 AIM: Automotive, Industrial & Multimarket



Infineon's IC Report – a Tool to make the Goals transparent

1. Infineon Austria wants to be the

- Regional and global innovation leader in all its core competencies and wants to set standards in defined markets with new technologies and products
- Central hub for the generation and the technological and commercial exploitation of knowledge

2. Infineon Austria wants to

- Build on its strengths and continue to advance those activities, where a favorable market position already exists
- Be one of the leading companies in adopting a Zero-Defect-Culture
- Position itself as a learning organization, that pursues long-term relationships with experts and organizations in education and qualification

IFAT ICR 2005 - targeting internal and external Objectives

Internal effects:

- making transparent employee's contribution to innovativeness of the company and the value of their potential (pride!)
- identify and realize potentials for improvement

External effects:

- strategic communication towards stakeholders: media, cooperation partners, customers, government officials of Austria
- communication of: strategic goals, resources, core processes and results of intellectual asset-based value creation and management

The Report in a Nutshell - basic Ideas and Structure

1. Basic issues:

- People in the center (human capital)
- Communicate intellectual assets as main sources for longterm competitiveness
- Create a holistic view on the intellectual asset-based value creation processes at Infineon Austria
- Communicate value of Infineon's hightech-products and describe importance of microchips in every-day life

2. Process oriented approach:

- Performance and value creation is shown on the basis of a process model starting with strategic goals (long-term and mid-term goals)
- The transformation of input factors (intellectual capital) in output/impact for stakeholders is described along Infineon-specific core processes

3. Management based approach:

- As far as possible indicators are used that are part of Infineon Austria's current internal performance management

Infineon ICR 2005 - Project Structure and Organization

1. Phases & project parts:

- Phase 1: Analysis and IC-model
- Phase 2: ICR-design and realization
- Duration: 01 – 11/2006

2. Steering committee:

- Representatives of the board
- Top-management of business units
- Experts from production and R&D
- 5 meetings during the whole project

1. Project core-team & involved units:

- IFAT CFO
- Project Management
- Communications
- Human Resources
- Operational Planning & Controlling
- IP Management
- Quality & Business Excellence

2. Expanded project team

Contributions from:

- Experts within the company
- Customers
- Employees
- Austrian government officials
- International organisations

Infineon's IC-Report – OECD and METI global best practice

1. Press conference, Vienna, November 2006



- Infineon's Intellectual Capital Report is presented to the public
- Picture (from right to left): Monika Kircher-Kohl (CFO Infineon Technologies Austria AG), Dr. Reinhard Ploss (CEO, Group Vice President and General Manager, Automotive, Industrial and Multimarket, Infineon Technologies AG), Alexander G. Welzl

2. OECD Conference on Intellectual Asset-based Management, Tokyo, December 2006

OECD 知的資産経営国際カンファレンス
 OECD Conference on Intellectual Asset-Based Management
 -イノベーションと持続的成長に向けて-
 -Toward Innovation & Sustainable Growth-



- OECD and Japanese Ministry of Economy, Trade and Industry (METI) select Infineon's IC-Report as global best practice business case
- Picture from right to left: Monika Kircher-Kohl (CFO Infineon Technologies Austria AG), chairman of the panel Takatoshi Yamamoto (Vice President UBS Investment Bank, Japan; Vice Chairman 'Security Analysts Association of Japan'), Alexander G. Welzl

Infineon's 'Brainport' Approach - creating an innovative Environment for talented Knowledge Workers

Only the combination of a sum of different, specific factors characterises a 'Brainport' like Infineon Austria and creates its competitiveness!



Management Culture

diversity management (nationalities, gender diversity, fields of knowledge), managers as sponsors of employees

Corporate Culture

of trust and respect

Networks & Relations

international, national and regional; between industry, academia & public sector; between company locations

R&D, Innovation, Organisational change

R&D and innovation intensity; capacity for continuous change

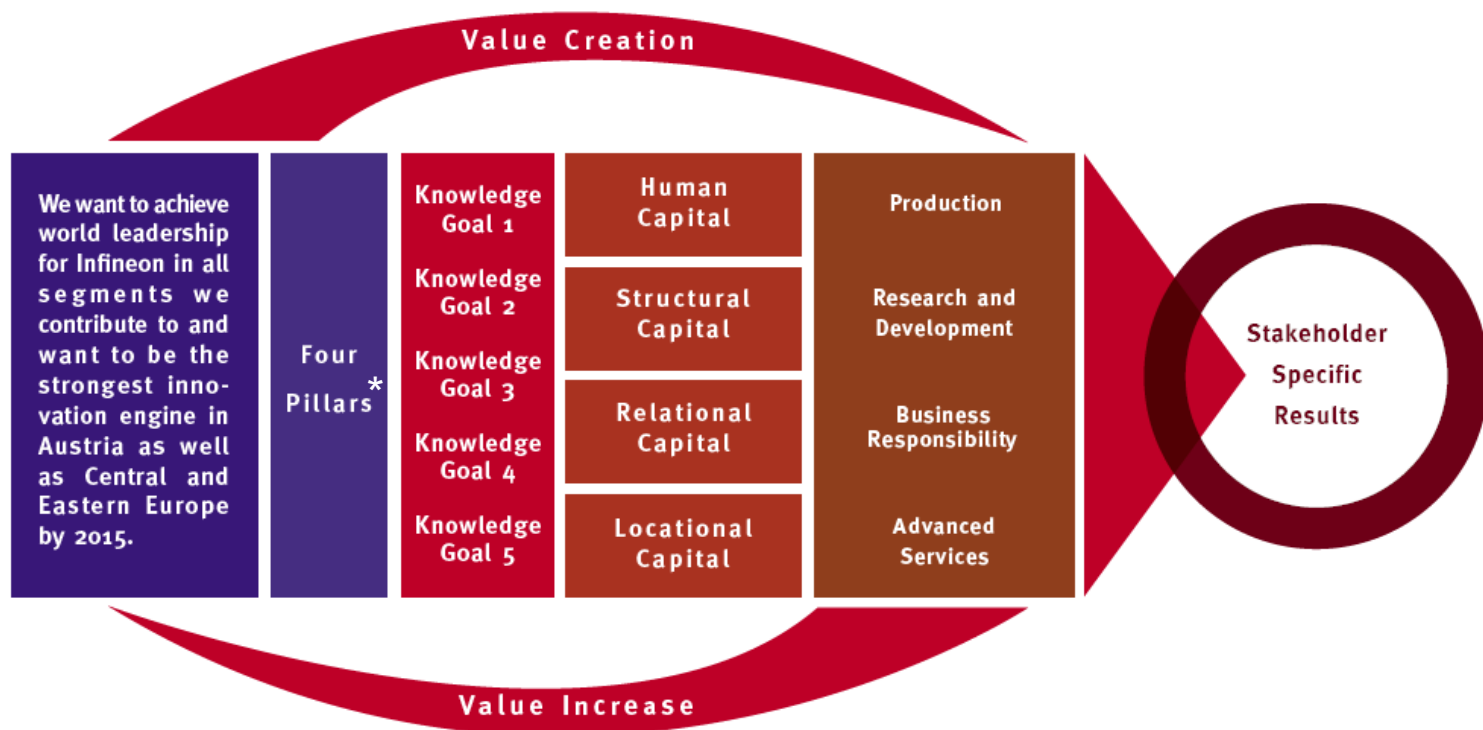
Interdisciplinary Problem solving

based on a variety of technologies and fields of knowledge

Lifelong learning & Learning Organisation

put into practice as a part of corporate culture and management approach

Infineon's Intellectual Capital Report Model



* Infineon's Four Pillars: Profitable Growth / Customer Focus / Collaborative Leadership / Operational Excellence

Practical Example - Measurement of IC-based Value Creation

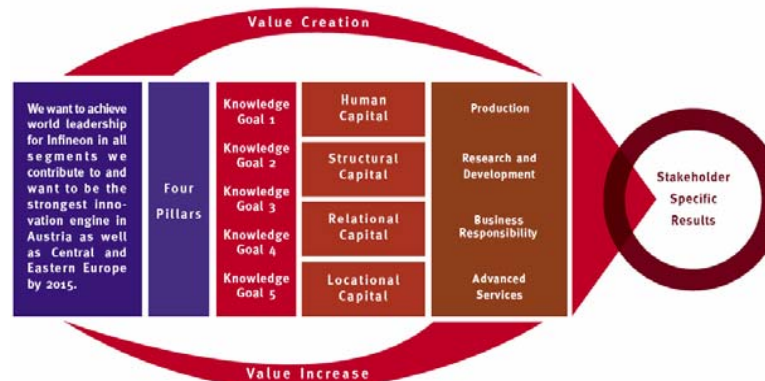
STEP 2 Input: Human & Relational Capital indicators

- International employees: **13,9% (35 nationalities)**
- Employees changing locations within corporation: **15**
- Ratio of female employees: **11,0%**
- Female employees in management functions: **3,3%**
- Short and long term delegates at Infineon Austria: **25**
- Cooperation partners in R&D projects: **77**

STEP 1

Knowledge Goal 2 ‚Life is a network‘:

As a regionally based and globally networked ‘Brainport’ we strive to become a hub for development and application of leading-edge knowledge.



STEP 4

Output and Impact Indicators

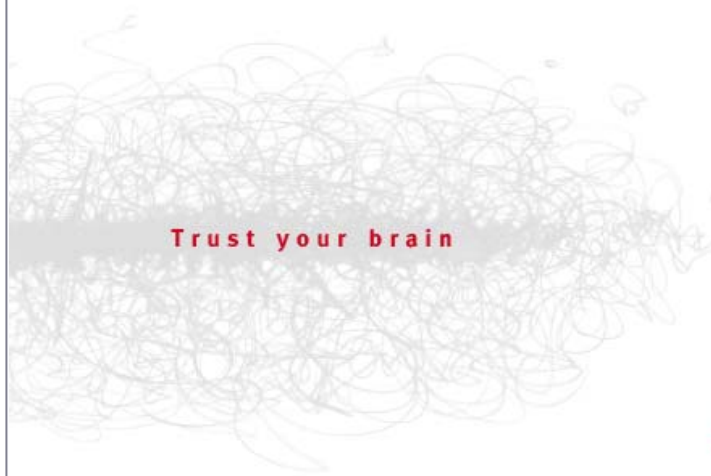
- Participations at Centers of competence: **10**
- Austrian SMEs involved in R&D cooperations: **15**

STEP 3 Indicators of core processes

- New R&D-projects: **26**
- finalised R&D-projects: **23**
- New products (business unit Power Management & Supply PS): **98**
- Share of new products (< 3 years) from turnover (business unit PS): **65%**

Infineon's IC-Report – Structure and Content

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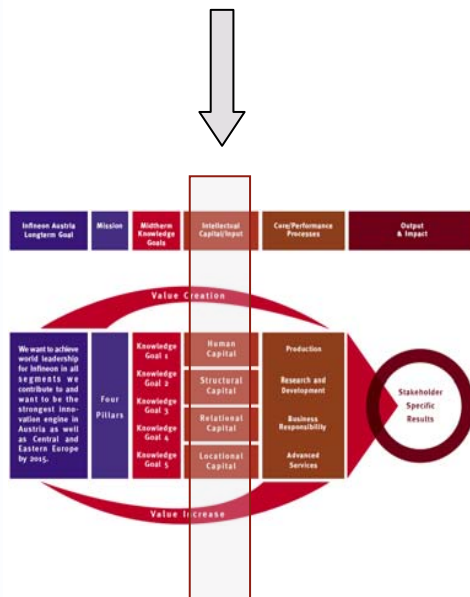


Trust your brain

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Infineon's IC-Indicators – The Intellectual Capital (Input)



Intellectual Capital (Input)

Human Capital

Basic Data

Employees total (number)	2.697
Employees in partial retirement (number)	49
International employees (in %)	13,9
Graduands (number)*	51
Doctoral students (number)	7
Temporary workers (number)	237
Apprentices (number)	40
Ratio of female employees (in %)	11,0
Female employees in management functions (in %)	3,3
Female employees in technical careers (in %)	5,6

Labor turnover

Resignations (in %)	1,6
Labor turnover rate, total (in %)	4,1
Relocation of employees within corporation (number)	15

Employee Qualification

Employees in in-service training (in %)	2,0
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Education and Training

Internally organized training units (number)	1.818
Externally organized training units (number)	392

Work-Life Balance

Employees on maternity leave (number)	16
Teleworking workplaces (number)	286
Employees with part-time work (number)	110

Structural Capital

Quality and Efficiency

Suggestions for improvement (number)	23.160
--------------------------------------	--------

Flexibility and Security

Possible shift models in manufacturing (number)	988
Employees with additional voluntary special tasks (number)	216

Relational Capital

Worldwide Corporate Network

IFAT** employees working on Infineon locations (number)	23
short und long term delegates at IFAT* (number)	25

Supplier Network

Supplier companies (number)	1.957
SME***-ratio of supplier companies (in %)	80,7
Ratio of bought services from supplier turnover (in %)	2,8

R&D Cooperations

Cooperation partners in R&D projects (number)	77
Participations in research-networks (number)	10

Education and Qualification Networks

Cooperations in teaching and education (number)	15
Holiday internships (number)*	613

Locational Capital

Legal Framework

Processing time of authorization procedures (weeks)	10
Processing time for labor permits of non-EU citizens (weeks)	6

Governmental R&D Incentives

Ratio of R&D expenditure from GDP (in %)	2,35
Average effective corporation tax rate (in %)	21,97

Quality of Life

Safety of individuals and property (position in international ranking)	3
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Energy

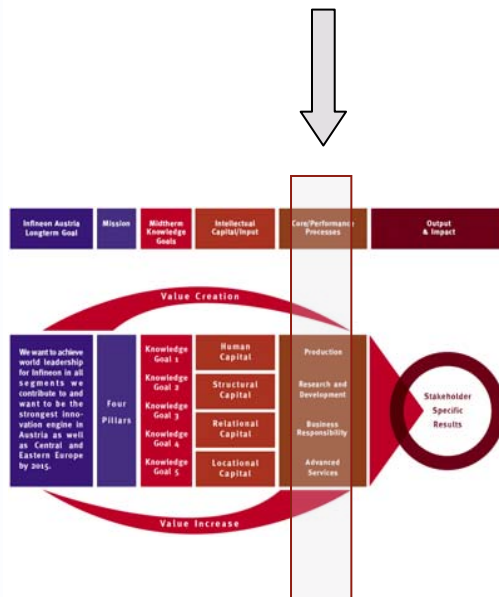
Energy-based production downtimes (number)	7
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Labor Market

graduates of technical universities (number)	2.683
Female graduates of that group (number)	478
Graduates of technical universities of applied sciences (number)	1.830
Female graduates of that group (number)	316
Students at polytechnic schools (number)	59.437

* data aggregated over the whole year / ** Infineon Technologies Austria AG / *** Small and Medium-sized Enterprises

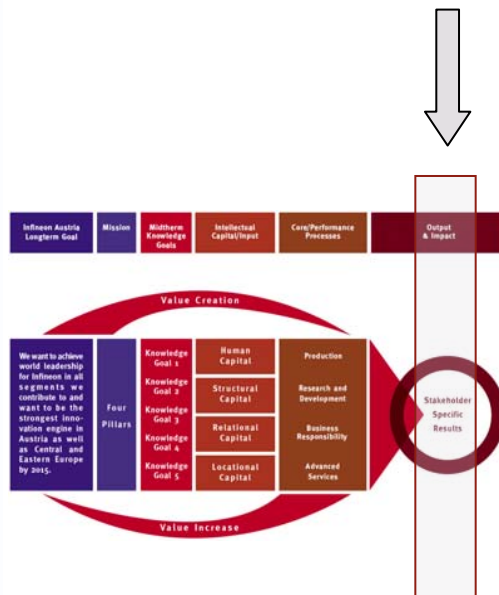
Infineon's IC-Indicators – The Core/Performance Processes



Core/Performance Processes

Production	
Product Portfolio	
Flexible use of employees in the modules of production (in %)	37
Infineon Austria Products (number)	850
Power Logic Essentials	
Ratio 6" to 8" wafer fabrication	57/43
Ratio of thin wafer fabrication (in %)	53,0
Ratio of automation (in %)	81,0
Research & Development	
Project Portfolio	
New started R&D projects (number)	26
Finalizations of R&D projects (number)	23
Competitive Advantage	
Invention reports (number)	297
Future Potential	
Ratio of IFAT R&D employees to corporate R&D employees (in %)	10,6
R&D expenditure (in million €)	181
R&D employees (number)	784
Headquarter RPT - laboratory	
Number of tests carried out (number)	4.004
Employees (number)	51
Business Responsibility	
Business Unit Power Management & Supply	
Active products (number)	588
New products as of business year 2004/2005 (number)	98
Ratio of new products (shorter than 3 years) from turnover (in %)	65,0
Advanced Services	
General Performance	
Ratio of employees in support from overall employees (in %)	3-7
IT Services Performance	
New started R&D IT-projects (number)	53
Employees of IT-services with corporate support assignments (in %)	72-9
Human Resources Performance	
Offered trainings according to topics (number)	235
Offered contracts for permanent employment (number)	115
Hiring of leasing personnel (number)	186
Hiring of working students and internships (number)	447
Internal Communications	
Use of electronic employee newsletter (categories)	narrativ
Finance & Accounting Performance	
Ratio of F&A employees from overall employees (in %)	0,8
Expenditure for F&A from turnover (in %)	0,29
Strategic Purchasing Performance	
Cost reduction compared to previous year (in %)	4,5
Cost avoidance within business year (in %)	18,7
External Support	
Executive and board functions in Austrian partner organizations (number)	27
Company presentations for educational institutions and partner organizations (number)	59
External projects sponsored by Infineon Austria (number)	50

Infineons's IC-Indicators – The Stakeholder specific Results



Output & Impact

Stakeholder Specific Results

Customer Specific Results

Customer visits in production (number)*	13
Successful audits of top-customers in production (number)*	15
'Quality indicator' of customer audits (in %)*	96,7

Employee Specific Results

Principals, Senior Principals and Fellows (number)	30
IFAT Principals, Senior Principals und Fellows an IFX-gesamt (in %)	9,4
Vocational graduation in business year 04/05 (number)	15

Supplier Specific Results

Ratio of domestic suppliers of IFAT Suppliers (in %)	57,4
Regional Suppliers (number)	342

Population Specific Results

Visits of politicians (number)	9
Public appearance and participation in panel discussions (number)	62

Results for Educational and Research Institutions

Funded projects of universities and research organizations (number)	26
Accepted conference papers (number)	74
Doctoral theSis and post graduates (number)	2
Cooperation in CD-laboratories and centers of competence (number)	10

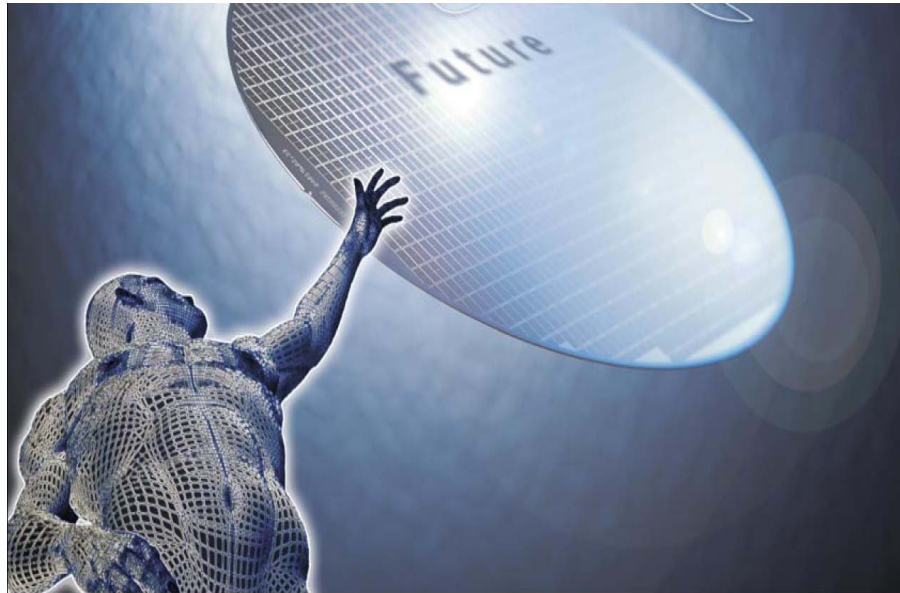
Media Specific Results

Ratio of coverage of IFAT compared to coverage of the corporation in Austrian media (in %)	34,4
Ratio of R&D topic in media coverage (in %)	16,5
Ratio of personnel topics in media coverage (in %)	12,8
Ratio of production topics in media coverage (in %)	6,1

Results Relevant to Macro-Economics

Development of R&D expenditure compared to previous business year (in %)	+18,3
Austrian SMEs involved in R&D cooperation (number)	15
Change of IFAT workforce (in %)	+2,8
Change in number of temporary workers (in %)	+38,4
Additionally generated jobs **** (number)	4.800

Key Findings and Lessons Learned



1. **Internal reporting**
 - Clear ownership for database, data delivery and definition of KPIs is necessary
2. **Learning organization**
 - Measure to steer and control also relevant for the organization as a whole
3. **'The complete is more than the sum of its pieces'**
4. **'If Infineon only knew what Infineon knows!'**
 - Knowledge of and about the organization has been made accessible

IFAT IC-Reporting – Status-quo of internal Use 2008

1. Convergence of internal and external Reporting

- Business reporting supply chain: internal Intellectual Capital Reporting tool, external Intellectual Capital Report
- Use of common database (~ 100 indicators)
- Consistent indicator definition (source, dimension, calculation, reporting rhythm)

2. Internal Intellectual Capital Reporting Tool

- Intranet-based 'Tableau de Bord': ~ 100 Intellectual Capital indicators
- Connection to strategic knowledge goals
- Addressees: executive board, executives on first and second reporting level
- Time series: business years 04/05, 05/06, 06/07 available
- Annual data collection

3. Quarterly Report on HR-Data

- Separate internal report: all HR-relevant data of the IC-database
- Addressees: executive board, executives on first and second reporting level
- Data quality improvement: consistence of indicator definition over time
- Quarterly data collection

Next Steps - IC-based Management in Business Units

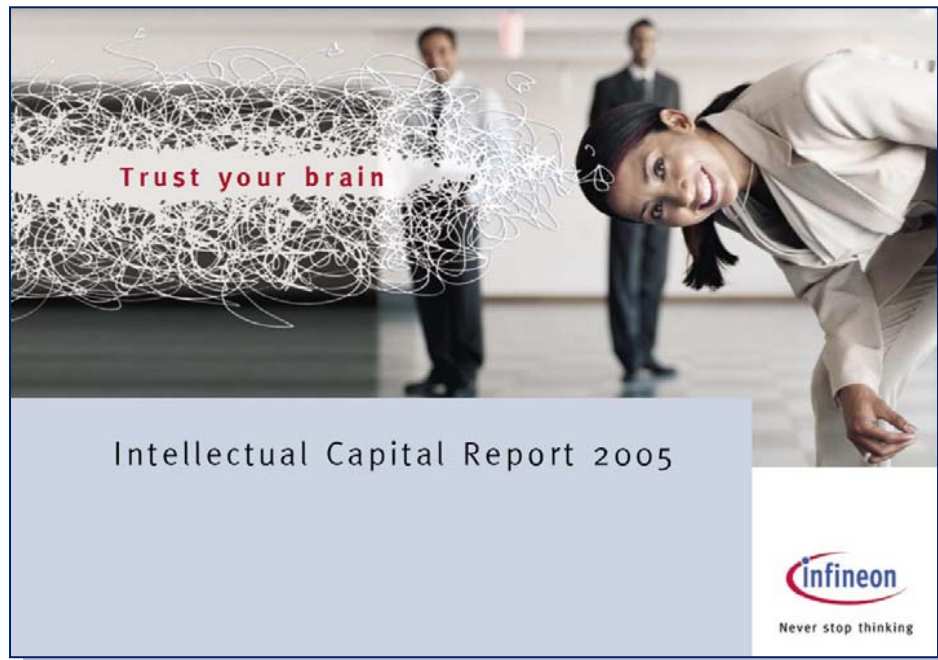
1. Strategic KPIs – privacy and significance

- Starting point: some meaningful indicators not useful for disclosure, aggregated data (corporate level) not significant in all cases
- Team: Chairman of Supervisory Board, CEO & Members of the Extended Board, executives and experts of business units, Director Accounting and Finance, HR, Quality and Business Excellence, Corporate IT, ICR project manager
- 15 strategic KPIs (2/3 contained in IC-database)
- Addressees: executive board, executives of IFAT business units

2. Internal Benchmarking

- Data collection: on business unit level (production in Villach; Development Centers in Linz, Graz and Villach; IT-support in Klagenfurt; Power Management & Drives worldwide)
- Meaningful IC-performance indicators for business unit managers
- Each KPI displays data on corporate level as well as business unit level
- Qualitative comment on status-quo and strategic objectives by executive board
- Example: indicators ‘Number of graduands’ and ‘Number of doctoral students’

Infineon Intellectual Capital Reporting – 2008 and beyond



1. Triennial publication of IFAT Intellectual Capital Report

- Publication date of ICR business year 07/08: Q4 2008

2. Consistent indicator framework

- Majority of indicators of ICR 05 published again 2008
- Internal benchmarking: time series and interpretation on aggregated level (IFAT)

3. Strategic and process focus

- Strategic long-term and mid-term goals ('knowledge goals') as in ICR 05
- ICR model of corporate IC-based value creation processes as introduced in 2005

IC in Annual Reports – the Case of Bankinter (Spain)



1. Structural IC-approach

- Only the input side is described (no process model)

2. Internal benchmarking

- Time series since 2004
- Only limited narrative interpretation of data
- Focus on Relational Capital

2. Stable indicator set

- Large sample: 110 IC-indicators
- Strategic goals not obvious

Source: Bankinter (2007)

Human Capital Valuation in Practice – ODDO Securities, France

,In this respect, it is worth noting that (...), we have seen no improvement over recent years, either in Europe or elsewhere, in terms of public access to relevant, consolidated and long-term HR information.'

The ODDO Human Capital Valuation Model

TOP AND BOTTOM LINE IMPACT OF HR THEMES OF ANALYSIS IN THE AEROSPACE-DEFENCE SECTOR

HR theme	Top line impact	Bottom line impact	Weight in model
Governance and HR profile	X	X	25%
Pulling power and recruitment	X		17%
Integration and career management	X		7%
Motivation and satisfaction	X	X	24%
Operational HR management	X	X	27%

TABLE 7 | SOURCE: ODDO SECURITIES

Criteria and Indicators – three tiered Analysis and Evaluation

HR themes	Tier 1 criteria	Weighting	Tier 2 criteria	Tier 3 criteria
Governance and HR profile Pulling power and recruitment	Country HR potential	3%		
	Expansion model	8%	M&A integration track record	
	Average age	2%	R&D employees	Share of engineers and managers, average length of services
	HR function represented on the executive committee	2%	HR organisation	
	HR transparency	2%	HIRS & reporting	
Integration and career management Motivation and satisfaction	Technological shifts	8%		
	Size pulling power	2%	Relations with universities	Image rankings
	International pulling power	4%	Applications/headcount	Rate of acceptance of job offers/new hires
	Economic pulling power	2%	Quality of recruitment process	
	Business pulling power	3%	Recruitment orientation	
Operational HR management	Employee share ownership	6%		
	Net growth in headcount	3%		
	Integration and frequency of annual reviews, career management	2%	Corporate university and promotion	Work/life balance
	Quality and efficacy of training	2%	Access to and emphasis on training	
Operational HR management	Management of reorganisations and restructuring	10%		Corporate culture
	Key personnel departures	5%	Management of key skills	Leadership provided by senior managers, internal networks
	Absenteeism	2%		
Governance and HR profile	Social dialogue and labour relations	7%	History of strikes	
	Average salary cost	2%		
	Payroll	2%		
	Frequency and severity of workplace accidents	2%	Professional illnesses	
	Quality of local management and HR	5%	Quality and HR	
	Operating margin per employee	6%		
	Employee liabilities	10%		
Total	24	100%	14	6

TABLE 8 SOURCE: ODDO SECURITIES

Nine Key Criteria for Human Capital Valuation

9 KEY HR CRITERIA IN THE AEROSPACE-DEFENCE SECTOR

HR themes	Criteria	Weighting in model	Comments
Governance and HR profile	Expansion model	8%	Organic, acquisition-led, hybrid, success of mergers
	Technological changes	8%	Electrical/electronic change, change in composite materials
Pulling power and recruitment	Employee share ownership	6%	Thresholds: +/- 3% of capital, +/- 25% of employees
Motivation and satisfaction	Management of reorganisations and restructuring	10%	Scale and duration of employee assistance
	Key employee departures	5%	R&D functions, senior management, sales
	Social dialogue and labour relations	7%	Relations with unions, history of strikes
Operational HR management	Quality of local management and HR	5%	Project management, client culture, motivation
	Revenues per employee	6%	
	Employee liabilities	10%	Pensions, healthcare, class-action lawsuits
Key criteria	9	65%	

TABLE 9 SOURCE : ODDO SECURITIES

Four Human Capital Recommendation Levels

Strong opportunity (1):	Relative performance expected to beat the average by over 15%.
Opportunity (2):	Relative performance expected to beat the average by between 0% and 15%.
Moderate risk (3):	Relative performance expected to underperform the average by between 0% and 15%.
High risk (4):	Relative performance expected to underperform the average by over 15%.

TABLE 10 | SOURCE: ODDO SECURITIES

HR Strengths and Opportunities

SUMMARY OF HUMAN RESOURCES STRENGTHS AND OPPORTUNITIES

Dominant positioning	Companies	Governance and HR profile	Pulling power and recruitment	Integration and career management	Motivation and satisfaction	Operational HR management
Prime contractors	Boeing					
	Dassault Aviation				X	X
	EADS		X	X		
	Lockheed Martin			X		
	Northrop Grumman	X		X		
Systems manufacturers	Bae Systems	X				
	Finmeccanica			X		
	Raytheon					
	Thales		X			
Equipment makers	Goodrich					X
	Honeywell					X
	Latécoère			X		
	Rolls-Royce	X				
	Safran					
	Zodiac			X	X	X

TABLE 18 | SOURCE: ODDO SECURITIES

Areas for Improvement and HR Risks

SUMMARY OF AREAS FOR IMPROVEMENT AND HUMAN RESOURCES RISKS

Positioning	Company	Governance and HR profile	Pulling power and recruitment	Integration and career management	Motivation and satisfaction	Operational HR management
Prime contractors	Boeing		X	X	X	
	Dassault Aviation					
	EADS	X			X	X
	Lockheed Martin		X			
	Northrop Grumman		X			
Systems manufacturers	Bae Systems			X		X
	Finmeccanica	X	X			
	Raytheon		X	X		
	Thales					
Equipment makers	Goodrich		X	X		
	Honeywell					
	Latécoère	X		X		
	Rolls-Royce			X		
	Safran	X		X	X	
	Zodiac					

TABLE 19 SOURCE: ODDO SECURITIES

The Result – Sector specific Recommendations

AEROSPACE-DEFENCE – SUMMARY OF HR SCORING, HUMAN RESOURCES RECOMMENDATIONS AND FINANCIAL RECOMMENDATIONS

Dominant positioning	Company	Evaluation	Ranking	Human resources recommendations	Financial recommendations
Prime contractors	Boeing	48.0	13	High risk (4)	Not covered
	Dassault Aviation	64.5	2	Opportunity (2)	Not covered
	EADS	47.8	14	High risk (4)	Reduce (3)
	Lockheed Martin	61.0	6	Opportunity (2)	Not covered
	Northrop Grumman	57.5	10	Moderate risk (3)	Not covered
Systems manufacturers	Bae Systems	60.3	8	Opportunity (2)	Not covered
	Finmeccanica	56.1	12	Moderate risk (3)	Buy (1)
	Raytheon	58.2	9	Moderate risk (3)	Not covered
	Thales	62.4	4	Opportunity (2)	Add (2)
Equipment makers	Goodrich	57.1	11	Moderate risk (3)	Not covered
	Honeywell	63.0	3	Opportunity (2)	Not covered
	Latécoère	61.3	5	Opportunity (2)	Reduce (3)
	Rolls-Royce	60.8	7	Opportunity (2)	Not covered
	Safran	47.7	15	High risk (4)	Buy (1)
	Zodiac	73.0	1	Strong opportunity (1)	Buy (1)
Sector average		58.6			
Prime contractors average		55.8			
Systems manufacturers average		59.2			
Equipment makers average		60.5			

TABLE 2 | SOURCE: ODDO SECURITIES

BNDES – IC-based Financing for Companies in Brazil

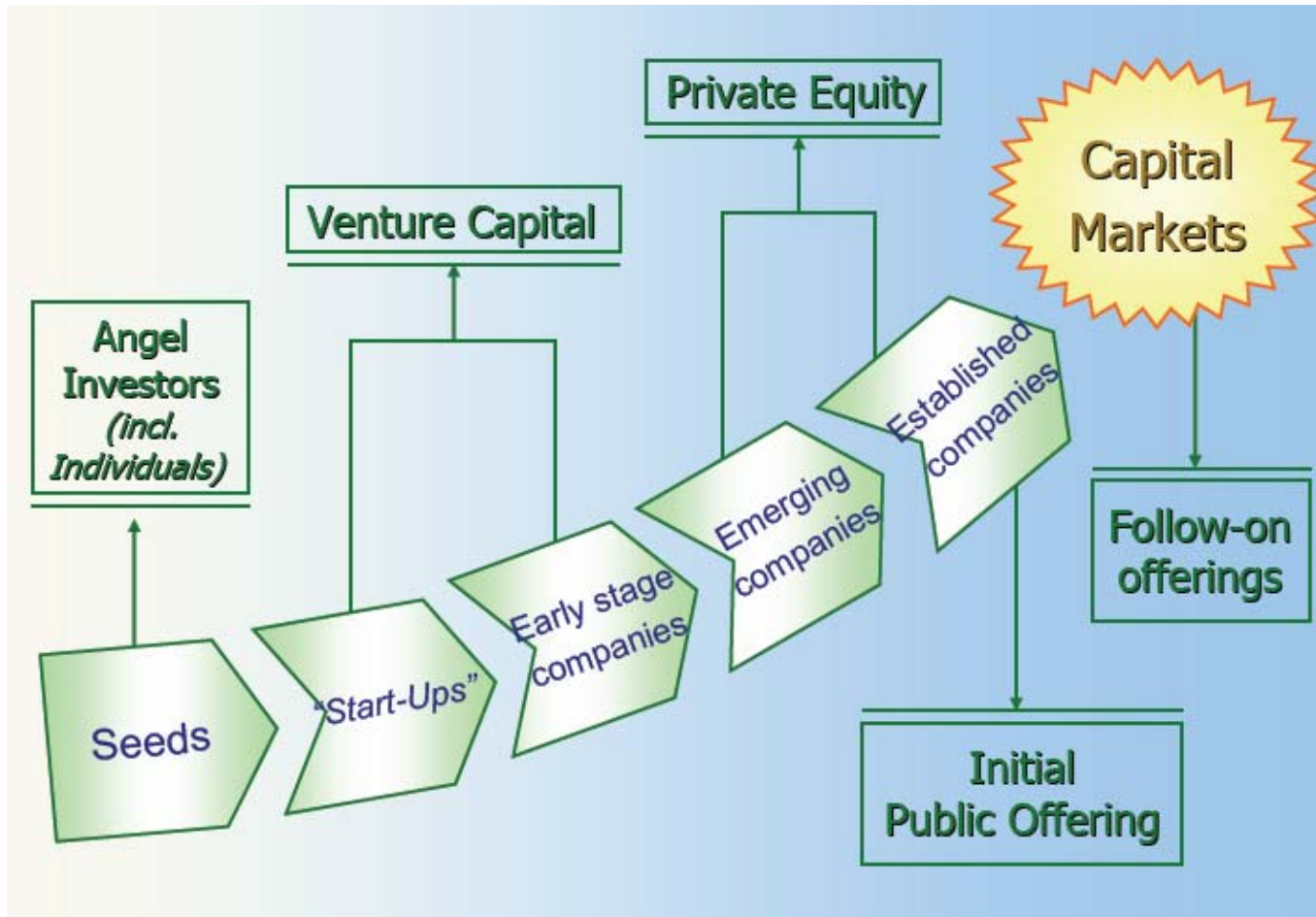
Brazilian Development Bank's (BNDES) Agenda

- 1. Break traditional banking paradigms (guarantees, valuation of intangibles)**
- 2. Foster and support new lending and investment practices**
- 3. Develop new financial products**

The expected impacts:

- 1. Accurate evaluations**
- 2. Better rating**
- 3. Intellectual Capital Reporting culture spread around the Brazilian capital market**
- 4. Seed Money Funds to finance innovative small companies**

Equity Investments in Small and Medium innovative Firms



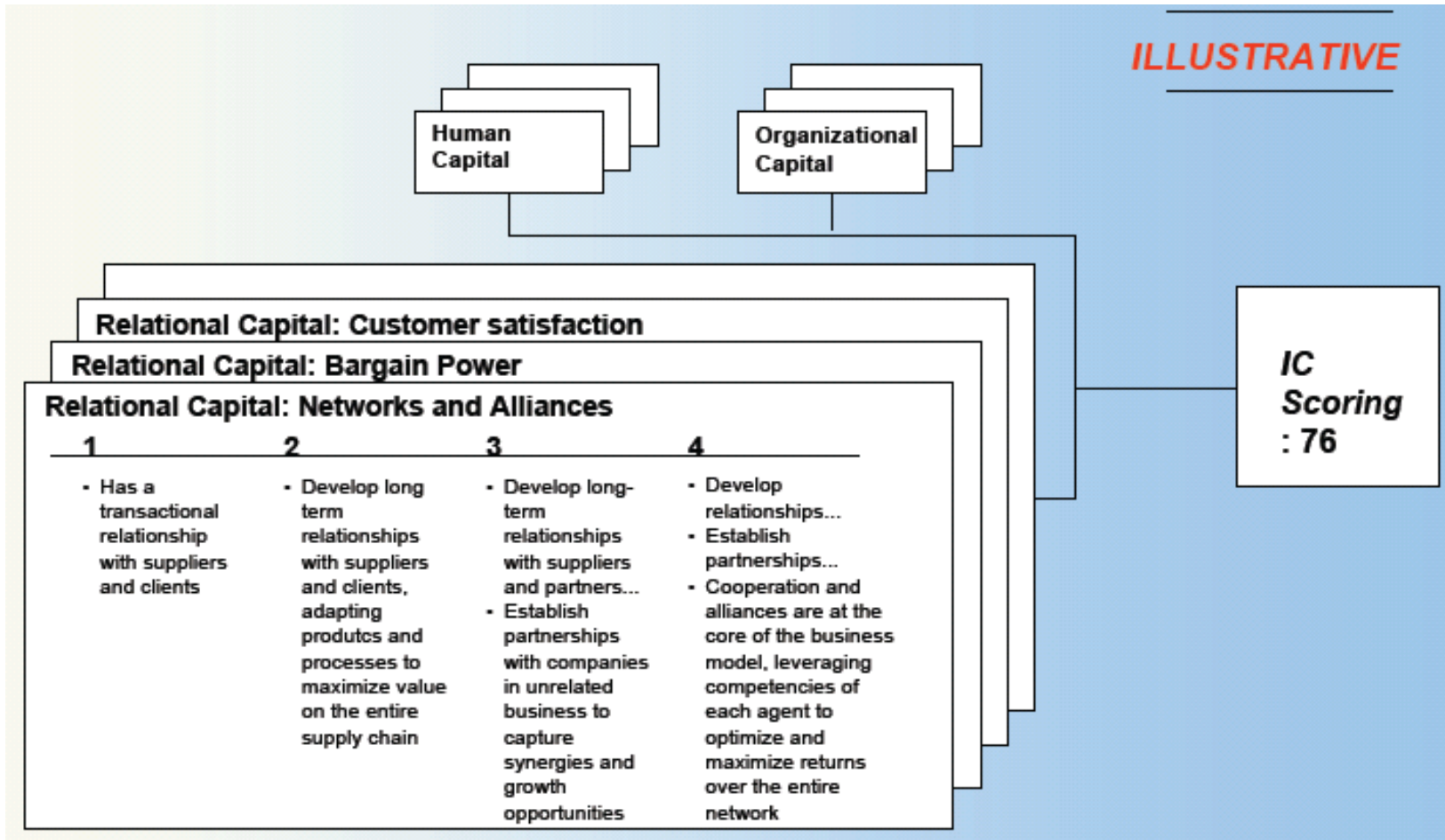
Source: Rath Fingerl, BNDES (2006)

Intellectual Capital Evaluation System and new Metrics

Structural or Organizational Capital	Institutional and Relational Capital	<i>EXAMPLE</i> Human Capital
Market Value X Book Value	Long term relationship with clients and suppliers	Educational level of employees
Annual investment in IT Optimized Processes (ERP)	Market Share and New Clients per year	Employees satisfaction and motivation
Corporate Governance items: BSC, external consulting, boarding committee, etc	Expenditures in marketing and clients satisfaction research	Training: expenditures and hours per employee
Patents registered and quoted	Technological Partnerships	Knowledge and Skills Management
Operational X Administrative Staff	Communication channels: website, ombudsman, ad, mailing list, etc	Organizational Commitment and Capacity of Learning

Source: Rath Fingerl, BNDES (2006)

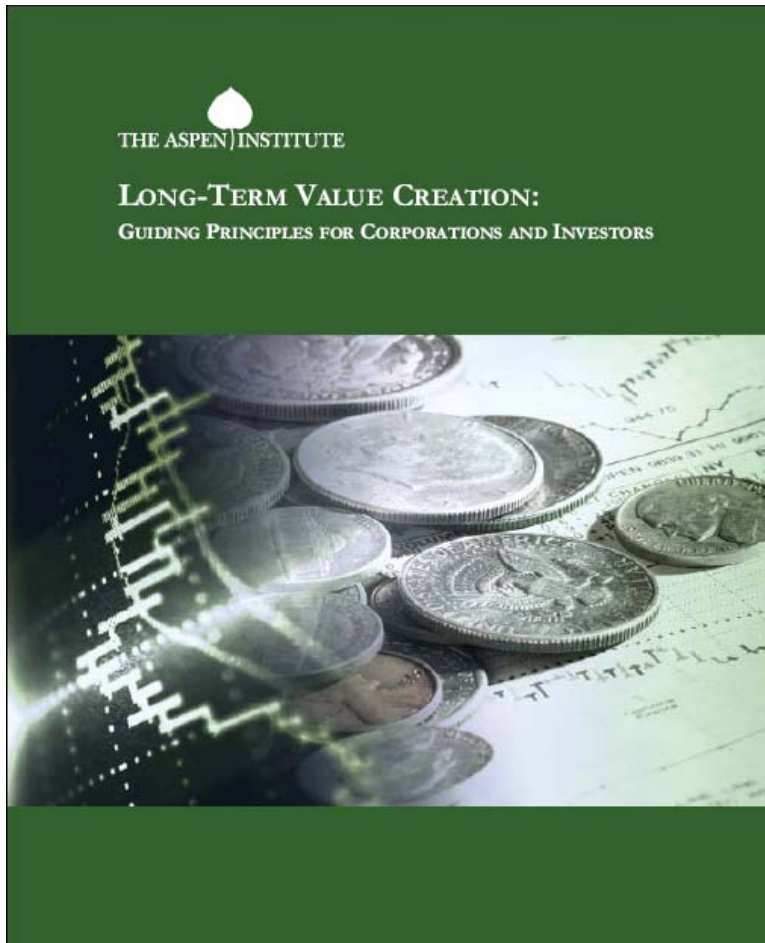
Methodology for Intellectual Capital Evaluation



BNDES on the Move – Validation of Methodology just started

- 1. Methodology is applied in 40 companies**
- 2. Pilot companies represent a mixed set of sectors**
- 3. Start on April 1, 2008**
- 4. Goal: stimulate innovative companies with a much better understanding of their strategies, governance, R&D programs etc.**
- 5. Result for the bank: changing of mindset and internal culture**

US Investors – Call for long-term Focus and Value Creation



- 1. Define metrics of long-term value creation**
 - e.g. Human Capital (recruiting, motivating and retaining high-performing employees), Relational Capital (relationships with customers, suppliers, employees), innovation
- 2. Focus corporate-investor communication around long-term metrics**
- 3. Align company and investor compensation policies with long-term metrics**
- 4. Current subscribers (as of February 2008):**
 - CalPERS
 - TIAA-CREF
 - New York State Common Retirement Fund etc.

Source: The Aspen Institute (2008)

World Intellectual Capital Initiative (WICI)

1. **Initial meeting at OECD Headquarters in Paris, October 2007**
2. **Founding Members: OECD, EBRC, EFFAS CIC, METI, University of Ferrara, Waseda University**
3. **The WICI goals:**
 - To promote the management and reporting of intellectual capital at organisational / company level throughout the world
 - To promote international dialogue on the management and reporting of intellectual capital with other organisations and interested parties

EFFAS CIC – The Virtuous Circle and the Road ahead



Giampaolo Trasi (Chairman EFFAS CIC),
Alexander G. Welzl (European Coordinator,
EFFAS CIC)

The virtuous circle that we hope to see is one whereby:

1. The company first of all becomes used to managing and measuring its intangible value drivers
2. It subsequently raises their visibility by reporting such drivers to the market
3. Thereby triggering a greater valuation in respect of competitors
4. This will reduce the cost of capital, forcing out and justifying further efforts in terms of communication and transparency in respect of this fundamental component of enterprise value.

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