

INTELLECTUAL CAPITAL ACCOUNTS: WHAT PIONEERING FIRMS FROM ASIA AND EUROPE ARE DOING NOW

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Abstract

This time the business world has been ahead of the academic world in terms of measuring and reporting intellectual capital. In recent years, literature on Strategic Management like the Resource-based Theory of the Firm, the Knowledge-Based View of the Firm, Knowledge Management and Organizational Learning highlight the importance of knowledge-based resources for the achievement of a sustained competitive advantage. Nonetheless, these views do not explain the configuration of the knowledge-based resource map of the organization. However some pioneer executives decided to measure and report these resources even before accounting regulatory bodies focused on these strategic intangible resources.

The goal of this paper is to get real-life lessons from pioneer firms on how to measure and report knowledge-based resources like intellectual capital. With this aim we performed a case study with 20 world's pioneer companies in measuring and reporting intellectual capital from Austria, Denmark, Germany, India, Spain, Sweden and UK. In total, 29 categories of indicators and 163 indicators were identified to reflect the map of intellectual capital of a company. These indicators are distributed into 3 major areas: human capital, relational capital and structural capital. We found 8 categories of indicators and 58 indicators for human capital, 9 categories of indicators and 47 indicators for relational capital, and finally, 12 categories of indicators and 58 indicators for structural capital

From the analysis of the results of the case study and feedback derived from interviews with managers, significant implications for management emerge. Firms measuring and reporting intellectual capital are absolutely convinced of the benefits of these practices. Building a map of intellectual capital for the firm allow them to become more efficient and effective, thus gaining a competitive advantage in the market.

Keywords: Case study, indicators, intellectual capital reports, organisational competitiveness.

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ACADEMIC TRACK

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ABSTRACT

This time the business world has been ahead of the academic world in terms of measuring and reporting intellectual capital. In recent years, literature on Strategic Management like the Resource-based Theory of the Firm, the Knowledge-Based View of the Firm, Knowledge Management and Organizational Learning highlight the importance of knowledge-based resources for the achievement of a sustained competitive advantage. Nonetheless, these views do not explain the configuration of the knowledge-based resource map of the organization. However some pioneer executives decided to measure and report these resources even before accounting regulatory bodies focused on these strategic intangible resources.

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1. INTRODUCTION

Both from the academic and business field, recently it has been highlighted the importance of intangible resources for competitive advantage in the New Economy. In this case, it was the business world that achieved first mover advantages in measuring and reporting these resources.

Resource-based Theory of the Firm in the 1980's and the Knowledge-based View of the Firm and the literature on Knowledge Management and Organizational Learning (Argyris, 1992; Argyris and Schon, 1996; Barney, 1991, 1992, 2001; Bontis et al., 2002; Grant, 1991, 1996; Nonaka and Takeuchi, 1995; Penrose, 1959; Priem and Butler, 2001; Peteraf, 1993; Wernerfelt, 1984, 1995) in the 1990's agree in claiming that organizational knowledge is a source of a competitive advantage in the long run. Thus, the creation, deploy, transfer, transformation, renewal and accumulation of knowledge turned out to be strategic activities for the firm. That is to say, knowledge management plays a key role for the firm.

Nonetheless, these views do not address the issue of how the organizational knowledge map is configured, that is to say, what particular resources are available for the firm. Thus, can the firm manage its knowledge portfolio without measuring these resources?

Undoubtedly the measurement of organizational knowledge is the first step towards the management of this portfolio of resources, as shown by current business practices. In this paper, it will be analyzed how a group of pioneer firms at international level are measuring its intangible resources and building a new corporate report called "intellectual capital accounts" or "intellectual capital report". From these innovative experiences, significant implications for management will be discussed.

2. NEW CHALLENGES FOR THE FIRM

In recent years, though the recognition of the strategic importance of intangible resources for the achievement of a sustained competitive advantage, executives find themselves with significant problems due to the insufficient information available on these resources, which, undoubtedly influence firm's financial situation. The question now is "why is this information scarce?". This fact is due mainly to the strong requirements demanded by the accountant norms to recognize investments on intangible resources as assets in the firm's financial accounts. No doubt, one of these resources is the intellectual capital of the firm. Intellectual capital is divided into three elements: human capital, relational capital and structural capital. These elements will be discussed later in Section 4.2.

Thus the lack of information which is relevant, timely and reliable about these resources may lead executives to decision making based only on financial information periodically published by the firm, as the traditional financial accounts.

Even though accounting regulations does not cover the building and publishing of information on knowledge-based resources, however, managers must have a precise image of the intellectual capital map of the firm if they wish to make adequate decisions for the firm. To this aim, they need to measure intangible resources and build reports with the results of their measurements.

In this case, the first step in measuring and reporting intellectual capital was taken by a group of pioneer managers that have been ahead of academic proposals. Thus in 1994 the Swedish firm Skandia (Edvinsson, 1997; Edvinsson and Malone, 1997) was the first company in the world to measure and report on intangible resources. Subsequently, in 1997, the Danish Agency for Trade and Industry starts to work together with a group of Danish firms to measure their intellectual capital and publish the *Intellectual Capital Report*. From then on, other pioneer firms from Asia and Europe have made important advances to measure and report intangible resources, thus configuring the knowledge map of the firm. Many others are aware of the urgent need to measure these resources and observe with extraordinary attention the first steps of these pioneer firms in order to learn from them and later replicate the lessons in their own firms.

3. DATA COLLECTION

As stated before, the aim of this paper is to get real-life lessons from pioneer firms on how to measure and report on intangible resources. With this aim, we performed a case study with 20 pioneer firms in measuring knowledge-based resources and building a new type of corporate report called the Intellectual Capital Report. These firms have their headquarters in Austria, Denmark, Germany, India, Spain, Sweden and UK, respectively.

We contacted this group of pioneer firms in order to collect all intellectual capital reports they had published until now (March 2003). In total, we analyzed 42 intellectual capital reports. Table I shows information on activity sector, country and year of publication of these reports.

***INSERT TABLE I HERE**

In addition to the information provided by the intellectual capital report, with the aim of getting richer information, in some cases we interviewed managers responsible of building these reports, and in others, when possible, we used a survey among these managers in order to get more exhaustive information on measuring and reporting activities performed by these firms.

4. DESCRIPTION AND ANALYSIS OF INTELLECTUAL CAPITAL REPORTS: A CASE STUDY

4.1 The concept of intellectual capital report

From the context proposed in previous sections, now we present main results of the case study on pioneering firms from Asia and Europe in measuring and reporting intellectual capital.

The intellectual capital report is a new type of corporate report that complements the information gathered in the financial accounts of the firm. This innovative report covers those strategic intangible resources that even though they contribute to the creation of organizational value, they do not appear in the financial reports. These resources are called intellectual capital.

4.2 Description of the intellectual capital report

After the definition of the intellectual capital concept, now several issues will be addressed. First, who is in charge of the building of the intellectual capital report? The intellectual capital report is built by the intellectual capital director, chief knowledge officer or human resource manager, in collaboration with the rest of departments of the firm.

Basically, this report addresses two key issues. On the one hand, knowledge management activities implemented by the company; and on the other, the analysis of knowledge stocks in the firm, that is to say, the intellectual capital. As indicated by its title, the basic object of this report is the intellectual capital of the organization.

The analysis of the intellectual capital reports of the participating firms in this research shows there are not significant differences in the structure of these reports depending on the country of the headquarters of the firm. Broadly these reports are structured into three chapters. Let's now analyze each chapter of this report.

These reports start with a description of the firm, its vision, mission and main values (Chapter I). Subsequently they address firm's knowledge management strategy whose aim is the creation, acquisition, transformation, transference and accumulation of knowledge (Chapter II). The length of the two first chapters, in comparison with the Third Chapter, is short, generally 2-3 pages, to move immediately to focus on the analysis of the intellectual capital (Chapter III). This last chapter, which constitute the core of the intellectual capital reports, is subdivided into three major sections, each one addressing a specific component of the intellectual capital. In particular, this chapter clearly defines each of these components –human capital, relational capital, and structural capital- stressing activities developed target at each particular component. After covering these activities, finally the intellectual capital reports present tables with

indicators of human, relational and structural capital, respectively. This section of the third chapter is the real core of the report. Here we will analyze with detail the structure and content of these tables. Double-entry charts with the following elements form these tables: category of indicators, indicators, annual values and finally short and long term objectives. Prior to present the results of our case study, we will define these elements.

- Category of indicators: it represents a set of indicators that quantify a particular dimension of each component of the intellectual capital.

Indicators: They show proxies that together configure a “category” of indicators for each element of intellectual capital.

Annual values: they reflect the value of each indicator for both current and previous year, respectively. This enables the firm and external parties to obtain a comparative view of the evolution of the components of intellectual capital both at aggregate and disaggregate level.

Short and long term objectives: they indicate the future trends the firm aims to achieve.

4.3 Intellectual capital report architecture

Human capital area

In general, human capital area shows knowledge, experience and skills of the employees of the firm. Furthermore it also reflects the commitment and motivation of the employees, respectively, as result of their continuance in the firm. It also indicates the influence of this human capital on organizational performance.

This area is divided into 8 categories:

Employee profile: it describes basic features of the employees of the firm.

Capacities to work in different environments (geographical and functional): it indicates the adaptation potential of the employees of the firm to different working environments.

Staff turnover: it shows the number of new hired employees as well as the employees who leave the firm, that is, the rotation.

Education: it represents employee's training and experience abroad.

Commitment and motivation: it reflects employee's commitment with the firm as well as the motivation due to different factors such as working environment, promotion systems, and attention paid to employee's opinions and suggestions, among others.

Permanent training: it quantifies the investment on employee's permanent training and refreshing (both in terms of money and time).

Permanent learning through external agent relations: it shows employee's learning as a result of his/her relations with external agents, like customers, suppliers, shareholders and investors, among others.

Results: it reflects the influence of human capital on organizational performance.

***INSERT TABLE 2 HERE**

Relational capital area

This area measures the organizational value that emerges from firm's relations and connections with other social agents, mainly customers, but also current and potential suppliers, shareholders, other agents, and the society in general. In this area, nine categories can be identified:

- Client profile: it presents a typology of firm's current customers, differentiating between national and international customers.
- Customer's portfolio: it describes firm's portfolio of customers according to different indices (satisfaction, loyalty), longevity of connections as well as investment on relational marketing, among other factors.

Quality of customer portfolio: This category reflects the number of customers from the same business sector.

Public image: it represents the public image of the firm in the market measured through indicators like value perception, media exposition, and spontaneous notoriety.

Stakeholders: it shows the relations of the firm with its stakeholders.

Level of integration with suppliers: it indicated the deepness of the relations with suppliers.

Networking: it shows firm's social network.

Intensity, collaboration and connectivity: it indicates the level of both intradepartmental and interdepartmental collaboration and sharing within the firm as well as the use of technology information tools.

Results: it shows the influence of organizational image on the buying on shares by the employees of the firm.

***INSERT TABLE 3 HERE**

Structural capital area

Finally, the structural capital area shows the supportive structures for knowledge creation and deployment as well as the set of knowledge, skills and abilities embedded in the organizational structure. In order to do this, the section of structural capital is divided into 12 categories:

Infrastructure: it shows the funding for offices in terms of space, Pcs and phones available, as well as facilities to work out of the office.

Knowledge-based infrastructure: it reflects ongoing knowledge management projects, database and intranet, among other elements.

Customer support: it indicates the number of offices devoted to customer service, both in the own country and abroad.

Administrative processes: it reflects the efficiency of the administrative structure of the firm in terms of speed of customer service.

Innovation: it indicates the commitment on organizational innovation regarding investment on projects and process development, launch of new projects and services, excellence centers and project profits.

Agility to profit from business opportunities: it reflects the organizational capability to detect and exploit opportunity gaps.

Quality and improvements: it reflects organizational efforts towards these goals.

- Maximizing benefits of leadership and cohesion: this feature is measured through the experience of the firm's executive team.

Shared organizational values: it reflects the level of internalization of organizational values as well as the sharing of these values.

Business and advanced management models: it indicates the knowing and application of state-of-the-art management.

Shared strategic management: it shows the agreed implementation of strategic management models.

Social and environmental commitment: it reflects firm's commitment both with social and environmental issues.

***INSERT TABLE 4 HERE**

In total, 163 indicators were identified to reflect the map of the intellectual capital of a firm. These indicators are distributed in three main areas: human capital, relational capital and structural capital. It is also necessary to indicate the existence of different types of indicators, highlighting the following ones: numerical (example, no. of alliances with business schools), percentages (example, % of updated documents on the intranet), and monetary units (example, investment on R+D+I projects).

Finally it is important that executives know that not all indicators have the same value. Thus it is important that they classify these indicators, for example, among two dimensions: value and uniqueness. According to this typology, there are four types of indicators of human, relational and structural capital. First, *idiosyncratic indicators* of intellectual capital refer to all knowledge that is company-specific but not necessarily useful for creating customer value. Second, *ancillary indicators* describe knowledge that is neither really instrumental for creating customer value, nor is it particularly unique. Third, *core indicators* describe knowledge that provides the company with a valuable and a unique

resource. Finally *compulsory indicators* hows the knowledge that creates customer value but is not particularly company-specific.

IMPLICATIONS FOR MANAGEMENT

Executives are well aware of the fact that current information systems do not offer full information on firm's intangible resources and therefore, it hinders the decision-making. Thus it is necessary to have a map of the organizational knowledge-based resources as the first step towards its management.

Accounting norms and principles that regulate the registration of firm's tangible and intangible resources. However, the restrictive accounting norms and principles only allow registering a small number of intangible resources, like the good-will. For this reason, most firms do not make any effort towards the measurement of these intangible resources. However, can firms disregard information about these resources in their decision making process just because simply the accounting laws have not elaborated yet norms in this field?

The answer is "no" and thus is acting a group of pioneer firms at international level in measuring and reporting intangible resources, like intellectual capital. Like this, these firms are a good example of how business practice is going ahead of theory, and how these executives decided to take the initiative and include information on intellectual capital in their corporate reports time ahead accounting laws had built specific norms and principles for these resources.

In particular, there is group of pioneer firms from Asia and Europe in measuring intellectual capital and building the intellectual capital report, a new type of corporate report that complement the information offered by the traditional annual report, thus showing an accurate image of the assets of the firm.

How is this innovative report built? Basically these accounts are based on the intellectual capital model of the firm, and using sets of indicators that measure each component of intellectual capital (human capital, relational capital and structural capital) as well as dimensions of these components.

As shown by our case study among 20 firms from Asia and Europe, in total 29 categories of indicators and 163 indicators were identified to reflect the map of intellectual capital of a company. These indicators are distributed into 3 major areas: human capital, relational capital and structural capital. We found 8 categories of indicators and 58 indicators for human capital, 9 categories of indicators and 47 indicators for relational capital, and finally, 12 categories of indicators and 58 indicators for structural capital.

These indicators are built with information gathered through internal and external sources. Another question is when and how should this report be published? Most firms elaborate this report annually at the same time of the release of their traditional annual report and the rest of firms publish it as an independent report.

On the other hand, executives indicate that the building of intellectual capital reports generates profits, both internal and external ones. Regarding internal benefits, these reports contribute to the improvement of organizational efficiency, and the coordination and allocation of resources. They also have an impact on the motivation of employees towards the achievement of organizational goals. With regards to external benefits, the publication of intellectual capital reports generate profits in terms of an improvement of the public image of the firm, of its labor market as well as its value in the capital markets. For example, this report helps to improve firm's capacity to attract strategic human capital through the dissemination of information about professional development plans designed by the firm.

CONCLUSIONS

Let us close this paper not by repeating what has already been said before and also discussed in the *Implications for Management* section but indicating major conclusions, avenues for further research and limitations of this paper.

Most information systems in organizations do not provide full information on firm's intangible resources and therefore, it hinders the decision-making. Clearly executives need to have map of the organizational intellectual capital as the first step towards its management.

To elaborate this map, it is needed to measure and report intellectual capital of the firm. This provides a description of the knowledge-based resources and thus can identify several dimensions for each component of intellectual capital, that is, human capital, relational capital and structural capital. For all reasons stated above, executives must learn from pioneer firms in measuring and reporting intellectual capital order to build a map of their strategic resources.

In this paper we described the case study we performed among 20 world's pioneer firms -from Austria, Denmark, Germany, India, Spain, Sweden and UK- in measuring and reporting intangible assets. In total we analyzed 42 intellectual capital reports elaborated by these firms during the period 1994-2003, and found 163 in total indicators of intellectual capital distributed in three major areas: human capital (8 categories, 58 indicators), relational capital (9 categories, 47 indicators), and structural capital (12 categories, 58 indicators). These indicators help managers to have a clear map of knowledge-based resources of the firm and thus allow a better management of this stock of resources.

On the other hand, executives must know that not all knowledge-based resources have the same value for the firm. So these indicators should be classified along to two

dimensions (value and uniqueness) into four categories: core (high value, high uniqueness), ancillary (low value, low uniqueness), idiosyncratic (low value, high uniqueness) and compulsory (high value, low uniqueness) indicators.

Managers state they obtain both internal and external benefits from these practices of measuring and reporting. Among the most cited benefits is a better coordination and allocation of resources, identification of inhibitors of knowledge creation, increase in communication of knowledge creation, storage, codification and distribution, and also improvements in the public image of the firms and related effects in the market. All these benefits together allow firms to become more efficient and effective, thus gaining a competitive advantage through their intellectual capital.

Finally, there is a clear need to develop norms that guide the building of the intellectual capital reports in order to get relevant information about firm's intellectual capital and this information needs to be homogeneous and comparable. Some efforts have been made (Danish Agency for Trade and Industry, 1997, 2001; Meritum Project, 2002) but the harmonization of norms and principles regulating the reporting of these knowledge-based resources must be a priority for regulating bodies and firms.

Before concluding the presentation of conclusions and implications for management, it is necessary to highlight a limitation of this research. We performed the case study with 20 firms from different countries and these firms started to elaborate and publish IC Reports in different temporal moments from 1994 one of these firms to 2001 another firm. As avenue for further research, we would like to continue the analysis of IC reports and also study the initiation of publication of *Ethical and Environmental Accounts* published by a few pioneer firms so far.

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APPENDIX

Table I. Intellectual Capital Reports in Pioneering Firms

FIRM	SECTOR/ACTIVITY	INTELLECTUAL CAPITAL REPORT YEAR/S	COUNTRY
ARCS	Research organization	1999-2000-2001	Austria
Carl Bro	Consulting	1998-1999-2000-2001-2002	Denmark
Cowi	Engineering and related services	1999-2000-2001/2002	Denmark
Dieu	Course provider	2000/2001-2001/2002	Denmark
Systematic	Software development	1999-2000	Denmark
DLR	Aerospace research center	2001	Germany
Balrampur Chini Mills	Sugar producer	1996/97-1998/99/-1999/2000	India
Navneet	Publisher	1999/2000	India
Reliance	Various (finance, telecom, oil & gas, etc)	1997	India
Shree Cement Limited	Cement manufacturer	2000-2001	India
Bankinter	Banking	2000-2001	Spain
BBVA	Banking	1999-2002	Spain
BSCH	Banking	2000-2002	Spain
Caja Madrid	Banking	2002	Spain
Mekalki	Mechanized integral services	1998	Spain
Union Fenosa	Electricity	1999-2000-2001	Spain
Celemi	Learning Solutions	2000	Sweden
Skandia	Insurance	1994-1995-1996-1997-1998	Sweden
Telia	Telecom solutions	2001*	Sweden
EES Group	Provider of lighting and earthing	2002	UK

* The report of this firm that include the social dimension and actions taken to date in this area up to year 2001 is called "Telias Relations 2001", not intellectual capital report. This firm also elaborate the annual report and another report called "Telias Business 2001".

Table II. List of human capital indicators

HUMAN CAPITAL					
CATEGORY	INDICATORS	YEAR		GOALS	
		YEAR _{T-1}	YEAR _T	SHORT TERM	LONG TERM
EMPLOYEE PROFILE	• Total number of staff				
	• Distribution of staff Production Distribution IT Department Sales and marketing Administration Product development, environment and quality				
	• No. of managers				
	• % of research staff				
	• Age distribution				
	• Average age of employees				
	• Gender distribution Male Female				
	• No. of employees full time				
CAPACITIES TO WORK IN DIFFERENT ENVIROMENTS	• No. of employees who permanently work abroad				
	• No. of employees who have participated in international projects during the year				
STAFF TURNOVER	• Beginners				
	• Resigned				
	• Circulation % of personnel				
	• % of unwanted personnel circulation				
EDUCATION	• Unskilled personnel				
	• Skilled personnel				
	• Office personnel				
	• Trade personnel				
	• IT personnel				
	• Bachelors				
	• Academics				
	• PhD personnel				
	• Length of education				
	• Number of awards				
	• Professional publications per employee				
	• International experience (traveling activities)				
	• No. of employees fluent in English language				
	• Number of competence development plans				
• Number of carrier development plans					

COMMITMENT AND MOTIVATION	<ul style="list-style-type: none"> • % of individual goal achievement 				
	<ul style="list-style-type: none"> • Average seniority 				
	<ul style="list-style-type: none"> • Permanent contracts 				
	<ul style="list-style-type: none"> • % of staff with variable retribution/total staff 				
	<ul style="list-style-type: none"> • Employees with shares and convertible bonus programs 				
	<ul style="list-style-type: none"> • No. of award-winning employees 				
	<ul style="list-style-type: none"> • Suggestions systems (money prizes, point prizes) 				
	<ul style="list-style-type: none"> • % of promoted staff/total staff 				
	<ul style="list-style-type: none"> • % of staff feeling explicit recognition 				
	<ul style="list-style-type: none"> • % of staff feeling their opinion is taken into account 				
<ul style="list-style-type: none"> • % of staff happy about the working environment 					
PERMANENT TRAINING (Time, investment)	<ul style="list-style-type: none"> • % of employees who received training during the year 				
	<ul style="list-style-type: none"> • Training days per employee 				
	<ul style="list-style-type: none"> • Average number of training hours per employee/year 				
	<ul style="list-style-type: none"> • Ratio training hours/working hours (annual) 				
	<ul style="list-style-type: none"> • Training investment (employee/year) 				
	<ul style="list-style-type: none"> • Ratio training cost/ wages (annual) 				
	<ul style="list-style-type: none"> • Satisfaction index about training 				
	<ul style="list-style-type: none"> • Average index of application of the training received in daily tasks 				
	<ul style="list-style-type: none"> • Mentoring pairs 				
PERMANENT LEARNING THROUGH EXTERNAL AGENT RELATIONS	<ul style="list-style-type: none"> • No. of alliances and collaborations with academic institutions and research centers 				
RESULTS (positive, negative)	<ul style="list-style-type: none"> • Satisfaction with the opportunity for on-the-job skills development 				
	<ul style="list-style-type: none"> • Total satisfaction with the opportunity for on-the-job skill development 				
	<ul style="list-style-type: none"> • Employee satisfaction index 				
	<ul style="list-style-type: none"> • Absence due to sickness (days/employee) 				
	<ul style="list-style-type: none"> • Hourly paid workers 				
	<ul style="list-style-type: none"> • Officials 				
	<ul style="list-style-type: none"> • Personal injury with loss of working hours 				
	<ul style="list-style-type: none"> • Personal injury with minor personal injuries 				
<ul style="list-style-type: none"> • Costs attributable to external faults 					
TOTAL CATEGORIES	TOTAL INDICATORS				

8	58				
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Table III. List of relational capital indicators

RELATIONAL CAPITAL					
CATEGORY	INDICATORS	YEAR		GOALS	
		YEAR T-1	YEAR T	SHORT TERM	LONG TERM
CLIENT PROFILE	• Public clients				
	• Semi-public clients				
	• Private clients				
	• Clients abroad				
	• Number of contracts				
	• Points of sale				
	• First-time customers				
	• New stakeholders				
	• Clients' impression of the firm				
	• Customer loyalty index				
	• National/International market share				
	• Market share of closest competitor (both national and international)				
	• No of suggestions from customers				
	• No. of offices with customer satisfaction measuring systems				
	• Customer satisfaction index				
CUSTOMERS' PORTFOLIO					
	• 5 largest customers during the year				
	• Duration of existing customer relationships				
	• % of customers who would recommend our firm				
	• New strategic customers during the year				
	• Investment on relational marketing				
QUALITY OF CUSTOMER PORTFOLIO					
	• No. of clients from the same business sector				
	• Value perception				
	• Exposure to the media				
	• Spontaneous notoriety index				
	• No. of unsolicited applications, hourly-paid employees				
INVESTOR CAPITAL					
	• No. of contacts with investors and analysts				
	• No. of favorable recommendations from analysts				

	<ul style="list-style-type: none"> No. of solved consultations from shareholder's information office 				
INTEGRATION LEVEL WITH SUPPLIERS	<ul style="list-style-type: none"> % of material and service acquisition supported by the Supplier Integration System New products/services developed in cooperation with customers (customer panels) 				
NETWORKING	<ul style="list-style-type: none"> No. of business conferences attended 				
	<ul style="list-style-type: none"> Lectures at scientific conferences 				
	<ul style="list-style-type: none"> Sponsorship agreements 				
	<ul style="list-style-type: none"> Professional networks 				
	<ul style="list-style-type: none"> Employees involved in boards (business, political, scientific) 				
INTENSITY, COLLABORATION AND CONNECTIVITY	<ul style="list-style-type: none"> Number of operations done via phone 				
	<ul style="list-style-type: none"> Number of countries where the firm operates 				
	<ul style="list-style-type: none"> Average number of employees per office 				
	<ul style="list-style-type: none"> Number of commercial alliances 				
	<ul style="list-style-type: none"> Number of alliances with Business Schools 				
	<ul style="list-style-type: none"> Clusters 				
	<ul style="list-style-type: none"> Institutes and facilities 				
	<ul style="list-style-type: none"> Staff exchange within the business group 				
	<ul style="list-style-type: none"> Interdisciplinary cooperation 				
	<ul style="list-style-type: none"> Interdepartmental projects (%) 				
RESULTS (positive, negative)	<ul style="list-style-type: none"> Staff owing company's shares 				
TOTAL CATEGORIES	TOTAL INDICATORS				
9	47				

Table VI. List of structural capital indicators

STRUCTURAL CAPITAL					
CATEGORY	INDICATORS	YEAR		GOALS	
		YEAR _{T-1}	YEAR _T	SHORT TERM	LONG TERM
INFRASTRUCTURE (Office, computer capacity, phone service)	• m ² office space				
	• Investment in premises and office equipment				
	• Investment in computer equipment				
	• PCs per office				
	• IT expenses per employee				
	• No. of employees connected via email				
	• No. of servers per worker				
	• No. of hits on web-site per day				
	• Average number of homepage hits per month				
	• Reliability of hardware and software				
	• Employees with the option of teleworking				
	• Employees with corporate mobile phone				
	• Employees with corporate laptop				
KNOWLEDGE-BASED INFRASTRUCTURE	• No. of best practices on the intranet				
	• No. of employees with intranet access/total staff				
	• Shared documents on the intranet				
	• % of updated knowledge documents on the intranet				
	• No. of databases to which the firm has access				
	• No. of employees with Internet access/total staff				
	• No. of shared knowledge databases				
	• No. of participants in best practices processes				
	• No. of knowledge management projects				
	• Database searches				
CUSTOMER SUPPORT	• No. of national offices				
	• No. of offices abroad				
ADMINISTRATIVE PROCESSES	• Average response time for calls to switchboards				
	• % of inquiries handled within the same day				
INNOVATION	• No. of products/services				
	• No. of new products/services				
	• Volume of sells linked to new products/services introduced last year				
	• No. of shared ideas and experiences				
	• Average number of ideas per employee				

	<ul style="list-style-type: none"> Investment in product development Investment in process improvement Investment in I+D+I projects Total innovation % of group turnover Centers of Excellence Ongoing projects Average turnover project 				
AGILITY TO PROFIT FROM BUSINESS OPPORTUNITIES	<ul style="list-style-type: none"> % of annual growth 				
QUALITY AND IMPROVEMENTS	<ul style="list-style-type: none"> Accreditations and certifications (environmental and quality) Number of ISO-9000 certifications Number of quality committees Number of improvement groups Number of employees with participation in round tables Number of employees with formation on total quality Employee participation in internal improvement and technological innovation projects No. of improvement plans developed due to EFQM evaluations 				
MAXIMIZING BENEFITS OF LEADERSHIP AND COHESION	<ul style="list-style-type: none"> Average experience of executive team 				
SHARED ORGANIZATIONAL VALUES	<ul style="list-style-type: none"> No. of employees who received specific training on corporate values 				
BUSINESS AND ADVANCED MANAGEMENT MODELS	<ul style="list-style-type: none"> Investment in management models Number of own business models 				
SHARED STRATEGIC MANAGEMENT	<ul style="list-style-type: none"> No. of users of strategic planning system No. of employees who participated in the building of the organizational strategic plans 				
SOCIAL AND ENVIRONMENTAL COMMITMENT	<ul style="list-style-type: none"> Environmental investment in the business No. of labor audits to installations of the firm Investment in cultural support and solidarity projects 				
TOTAL CATEGORIES	TOTAL INDICATORS				
12	58				