

# Learning in the Context of Entrepreneurial Marketing

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## **Abstract**

The paper examines the learning processes and the development of business competence in micro-level high technology firms. Drawing on the theories of entrepreneurial learning and entrepreneurial marketing, we defined in what ways do micro-level ICT firms explore and exploit knowledge. An empirical data consisting of four case firms and eight in-depth interviews shed more light on the researched issue.

The results indicated that technological information, competitor information, customer information and information on new products and markets were seen most valuable. Internet was mentioned as the most important source of technological information, followed by university courses, written material, seminars, new employees and networks.

We illustrated the information gathering process in the entrepreneurial firm in the model adapted from the previous work on the field of entrepreneurial learning. It takes into consideration the importance of prior knowledge both to the choice of information sources and also to the transformation process of information to knowledge and to wisdom. Knowledge is information that is in the public domain, whereas wisdom is cumulative competence based on prior knowledge and therefore only available for individual person.

## **Keywords**

entrepreneurial learning, entrepreneurial marketing, explorative learning, exploitative learning, competence, knowledge

## **Introduction**

Usually marketing and sales are mentioned to be the pitfalls of small businesses. This point of view is well grounded, because in every business sales volume is the ultimate measure of success and in this sense, marketing is critical for the continuity and growth of SMEs.

Scholars have begun to question the validity of even assuming that the classical marketing theories could be transferred into the SME sector, because these theories are most often empirically tested in large firm context (Chaston, 1997). Marketing campaigns and marketing research are often beyond the financial resources of small businesses. Marketing in small firms tend to be informal, unplanned, chaotic, non-linear and at odds with general framework of marketing, which depends heavily on linear, stepwise responses to uncertainty (Fillis, 2002).

Especially in high technologies, products and markets are complex and therefore hard to understand and predict (Boussoura & Deakins, 1999). High technology start-ups and technology-based firms in general have received a lot of research interest in recent years partly due to their extreme business environment; high technology industry can be characterized by high levels of information asymmetry and uncertainties. In addition, research in this area has accumulated due to the importance given to high technology firms as a source of job creation and economic growth (Park, 2005).

There is a common concern for understanding the process dynamics of entrepreneurial learning (Harrison & Leitch, 2005). Organizational learning theories have been created in the context of large organizations and therefore cannot explain entrepreneurial learning process in micro firms. (Deakins & Freel, 1998) Entrepreneurs have to maintain their technological capabilities up-to-date, develop new or existing products and serve customers all at the same time. Business skills, including marketing, are developed through experiential, first-hand learning process through trial and error. (Björk et al., 2004) In this process networks offer external sources of competence, but they also involve costs in both time and money.

This study focuses on the explorative and exploitative learning in micro-level ICT firms. In explorative learning, entrepreneurs search for new information through discovery, novelty, innovation, and experimentation from networks and other sources of information. Exploitative learning, on the other hand, means the use of knowledge in the processes of refinement, routinization and production. On the basis of literature and the general objectives regarded pertinent to this research, the research questions for the study were formulated. The main question is, in what ways do micro-level ICT firms explore and exploit knowledge and competence. And the sub-questions are: what sources of information are used, what kind of information gathering processes can be found and how systematically the information is used for the purposes of innovation, opportunity recognition and risk management. The paper first gives an overview of the researched phenomenon, then, in the second section, theoretical background is presented. Following a description of the research methodology, the empirical results from the case study analysis are discussed. Thereafter conclusions are drawn and finally, some limitations of the study and suggestions for further research are provided.

## **Literature review**

The paper is founded on the premise that conventional textbook marketing techniques and descriptions are often inappropriate in the high technology small firm context. Therefore entrepreneurial marketing literature (e.g. Collinson & Shaw, 2001; Morris et. al, 2002) and entrepreneurial learning literature (e.g. Taylor & Thorpe, 2004; Deakins & Freel, 1998; Harrison & Leitch, 2005; Politis, 2005) were seen to provide a very interesting and appropriate theoretical foundation for this paper.

## **Entrepreneurial marketing**

Entrepreneurial marketing is a construct, which has been often associated with marketing activities of small and resource-constrained firms, which therefore must rely on creative and unsophisticated marketing tactics (Morris et al. 2002). As Stokes (2000) defines, entrepreneurial marketing has an emphasis on adapting marketing to forms that are

appropriate to small and medium-size enterprises and acknowledges the likely pivotal role of entrepreneur in any marketing activities.

The entrepreneurial process includes dimensions such as autonomy, innovativeness, proactiveness and risk-taking (Bjerke & Hultman, 2002). These behavioral elements can be combined with theories of marketing, which traditionally concentrate on the interface between companies and markets, not entrepreneurs and customers. The extent of marketing activities in micro-level companies is different from corporate-level businesses both in terms of planning and also resources available. In the model of Morris et al. (2002), the construct of entrepreneurial marketing has been divided in seven dimensions. Four of these dimensions, proactiveness, calculated risk-taking, innovativeness and opportunity focus are based on the work on entrepreneurial orientation of the firm. Resource leveraging has its roots in both entrepreneurial and marketing literature. Last two dimensions customer-intensity and value creation are derived from the marketing orientation of the firm. Proactive entrepreneur creates new products and markets, whereas market-driven or reactive entrepreneur follows customers and competitors. According to Morris et al. (2002) opportunity focus means learning from market experiments and continuous search for new product and markets regardless of resources controlled.

### **Entrepreneurial learning**

Research on learning processes in entrepreneurial ventures is still in an early stage although the importance of learning processes in successful ventures is widely recognized. Learning occurs when entrepreneurs accumulate and organize knowledge and information within and across developmental stages in firm.

Following the scheme of Hooley, Broderick and Möller (1998), we understand competences as being the glue that binds assets (e.g. investments, location, plant, equipment) together and enables them to be deployed advantageously. Competences are complex bundle of skills and the result of organizational and entrepreneurial learning process. Thus, competences relate to entrepreneur's ability to identify and interpret environmental trends and industry events. Boussoura and Deakins (1999) state, that regarding technology-based entrepreneurs, the most important factors explaining learning and entrepreneurial development are dealing with customers, developing products and design. Also direct contact with suppliers, employees and other stakeholders was ranked high. Naturally, entrepreneur's prior knowledge about customers, markets and ways to serve markets will improve possibilities to identify competences and competitive advantages (Shane, 2000).

According to Shane (2000) an entrepreneur must discover technological changes and opportunities that lead to new processes, new products and new ways of organizing, in other words to the establishment of a venture. All individuals are not, however, equally likely to recognize a given entrepreneurial opportunity, because people's prior knowledge about markets and customer problems will influence the discovery of which markets to enter and how to use a new technology to serve a market. People can and will discover entrepreneurial opportunities without actively searching for them. The prior knowledge about markets may have been gathered up in a role of user, supplier, manufacturer, researcher or consumer. Manion, Hills, Lumpkin & Shrader (2000) recite that the prior knowledge consists of education, related work experience, previous start-ups and related hobbies. Years of education

and work experience (up to 25 years) significantly improves the chance of survival in new businesses, together with industry-specific experience, self-employment experience and self-employed father (Brüderl, Preisendörfer & Ziegler, 1992).

Relevance of a specific kind of experience may vary in different contexts, such as in different industries. In some industries it is possible to purchase firms, whereas in others, success cannot be encapsulated in the firm. Previous experience in management, in the industry and number of previous start-ups are the most important factors, because they prepare entrepreneurs to for ownership, further development needs and capitalization on the experience they do have. (Dyke et. al., 1992) Entrepreneur's prior knowledge usually concentrates on technological competence and this may lead to R&D or production oriented business models, instead of market orientation. This influences both entrepreneurial decision making and also learning processes.

Thus entrepreneurial learning is an ongoing negotiated process within a complex network of domestic, voluntary, commercial and professional relations. (Taylor & Thorpe, 2004) Entrepreneurs learn from their decisions, mistakes, experiences and networks (Deakins & Freel, 1998). They learn what works, and more importantly, what does not work in practice (Harrison & Leitch, 2005). Entrepreneurs also learn how to discover and exploit opportunities and how to overcome the liabilities of newness. (Politis, 2005) Related to that Torres and Anderson (1994) also suggest that in most cases small businesses should use incremental growth that is based on firm's financial performance in the past, because otherwise the cost of growth may risk the company's survival.

### **Explorative and exploitative learning**

The conceptual distinction between exploration and exploitation has been used as an analytical construct in a wide range of management research areas (He & Wong, 2004). In the study we will also use this categorization. Explorative learning is characterized by search, discovery, risk-taking and innovation. It creates variety in experience by organic structures, path breaking, emerging markets and technologies and invention of a new technology. Exploitative learning is equally important, but for different purposes, because it creates reliability in experience by refinement, implementation, efficiency, production and selection. Exploitation is associated with mechanistic structures, path dependencies, stable markets and technologies; refinement of an existing technology. (March, 1991) Explorative learning is also one dimension of the concept of germinal marketing, in which market development consists of experiential knowledge, internal learning and gradually permeating the market. (Björk et al., 2004) Sinkula (1994) offers interesting point of view by arguing that success actually inhibits learning, if it is based on market information alone, because there is also a need for proactive, explorative learning.

According to Smallbone, Leig & North (1995) company size, age or sector do not limit growth, instead the entrepreneurial commitment is the most important factor explaining growth. Another interesting finding was that entrepreneur needs to be able to delegate operational responsibilities, in order to focus on strategic decision making. According to Manion et al. (2000) this planning process is more often based on intuitive information search rather than formal analysis. Sahlman (1997) notes that even a business plan cannot guarantee

success without four critical factors included: people (entrepreneur, employees and networks), opportunity (business idea), context (regulatory and financial environment) and risk/reward.

Technological change and the advantages of specialization encourage small firms to inter-firm co-operation and also large firms to deintegrate into smaller units. The power of optimal networking against competitors can be captured, if members of network are committed to co-operation (Szarka, 1990). Resource leveraging refers to doing more with less. It means that a firm should only specialize on core processes and non-imitable competencies and use creative methods to outsource, borrow, rent or share everything else (Morris et al., 2002). The division of work between companies relates to specialization in learning processes. Networks offer remarkable external sources of competence. Personal and network-wide trust makes connections informal and tied to particular person. These personal connections are capitalized on business venturing to knowledge and competence, as well as to social and financial resources (Johannisson, 2002). Furthermore, Gilmore and Carson (1999) state that networking itself is a competence or skill that can be learned refined and developed.

## **Research methodology**

The empirical part of the study consists of data, which was collected using a qualitative case study approach from four micro-level Finnish ICT firms with the total of eight key informants (owner-entrepreneurs). The sample was drawn according to the parameters of industry sector, locality and size. The sample varies in firm age and in the opportunity recognition origin. One criterion was that all firms should have different business-to-business customer base and markets. (See more detailed description of the case firms in Appendix 1)

The literature presented in previous chapter was a starting point in formulating the guide for the semi-structured in-depth interviews. The interview guide had separate sections and each section was divided in questions asked in pre-interview questionnaire or by interviewers. The interviews included questions concerning following thematic areas:

1. Entrepreneurs' personal characteristics and background
2. Earlier and current business operations
3. Information gathering processes and use of information in marketing strategy

Data collection process was completed and the tapes were transcribed in June 2005. Each interview was content-analyzed together with the other interview from the same case firm. After all the individual interviews were analyzed, we compared them in a cross-case analysis to find similarities and differences between firms and entrepreneurs (Eisenhardt, 1989). Multiple case studies allow replication and contrasting observations from different setting and it is also considered to enhance generalizability, as the construct can be applied in several configurations (Miles & Huberman, 1994).

As Fillis (2003) states multi-method triangulation approach combining biographical and contemporary data can be appropriate in determining the motivations and behavior of individual entrepreneurs. Attention was paid to personal and historical information given in the interviews, since one of the purposes in this study was to describe the story of each firm from the opportunity recognition origin to date and its effects on the development of

marketing practices in each firm. Even without written company histories, each interview was considered as a personal narrative about a firm and about an entrepreneur. We also used all the available secondary data on case firms from Internet.

## **Case analysis and results**

All the chosen firms were operating in software industry. Two of the case firms had already established income, customer base and products and two others started to build customer base and networks last year. Five of the interviewees were founders and three of them had joined the company later. All the founders were fairly young at the time, ages ranging from 19 to 30 years. Firm A was founded because of the demand for programming skills for Macintosh in the 1980's. Over the years they developed a complete ERP and production management system. Firm B has concentrated on web database design. Firm D was founded to commercialize copyright management software developed in a university research project and Firm C was a dormant company searching for a business idea until they decided to develop audio-visual, non-medical pain-killing solution for dental care. (See Appendix 1).

## **Needs and sources of information**

Our first research question concerned the sources of information. Main results from the case analyses are summarized in Table 1. Before proceeding to elaborate on the used information sources, categorization variables need to be explained. In the interview, informants were asked to describe the areas in which they consider the need for information to be most critical. The key words that emerged from the data analysis were technological information, competitor information, customer information and information on new products and markets. Rationales for these information needs can be easily understood, if we explore the opportunity recognition origin or trigger for start-up in the case firms. Since all the four firms were founded based on technological competence, keeping the technological capabilities up-to-date is of critical importance. This also explains the need of information on new products and markets. Industry characteristics of high technology software business provide another rationale. Software products are often, and in this case too, developed in a close co-operation with customers. Software markets are also highly competitive. In order to differentiate their software products in the eyes of customers, firms need to be aware of competitors' offerings.

Table 1. Needs and sources of information

<b>Technological information</b>	<ol style="list-style-type: none"> <li>1. <b>Internet</b></li> <li>2. <b>University courses</b></li> <li>3. <b>Written material</b></li> <li>4. Seminars</li> <li>5. <i>Networks</i></li> <li>6. New employees</li> </ol>
<b>Competitors (price and quality)</b>	<ol style="list-style-type: none"> <li>1. <b>Internet</b></li> <li>2. <i>Networks, customers</i></li> <li>3. Media</li> <li>4. Competitors' courses</li> <li>5. Bidding</li> </ol>
<b>Customers, (needs, investment policy and decision making)</b>	<ol style="list-style-type: none"> <li>1. <i>Personal contact and sales</i></li> <li>2. Market research</li> <li>3. Customer feedback form</li> </ol>
<b>New products and markets</b>	<ol style="list-style-type: none"> <li>1. Market research</li> </ol>

Internet was mentioned as the most important source of technological information, followed by university courses, written material, seminars, new employees and networks. These results reflect the life cycle stage of the venture and the recruiting policy of the firms. In the early phase, when financial resources are scarce, emphasis is on inexpensive sources of information (such as Internet, university courses). University students were used both as permanent and occasional or part-time employees in the researched firms. They have the most recent knowledge in technological development and furthermore they have easy access to university courses to update expertise. Competitor information was also searched from the Internet. In addition networks and especially customer networks offered information on competitors. Customer information was gained mainly through personal contacts and personal selling activities, which is a typical in a small firm context. As Bjerke and Hultman (2002) state access to customer information in a small firm is better, because of its closeness to the customers. Few organizational layers make the links between the actual information and the final decision maker short. This also opens up a capability: flexibility towards customer. One source of information on new products and markets was also mentioned to be market research, although a doubt may arise whether these answer were given based on what "should be said" or what is the reality. In general, start-up firms rarely use formal market research.

### **Information gathering process**

Information gathering process in micro firms is based on entrepreneurs' prior knowledge about information sources in a specific industry. Markets, networks, media and personnel all offer information. The reliability of information varies, as well as, entrepreneur's ability to use information. Changes in markets, technology and business environment affect the future of the firm, but due to limited resources, only a fragment of information is available for strategic planning. We have adapted the following model (Figure 1) based on the work of Kolb 1984, Reuber et al. 1990, Shane 2000, Björk et al. 2004 and Politis 2005. Internal learning process involves a specific fragment of information available for the firm. Most of the information is acquired from informal experiences with customers, social and business

networks and other occasions. Part of this information is transferred to knowledge and even smaller part to what we call wisdom. We want to differentiate knowledge and wisdom, because while both are important for the business, some essential disparities can be found.

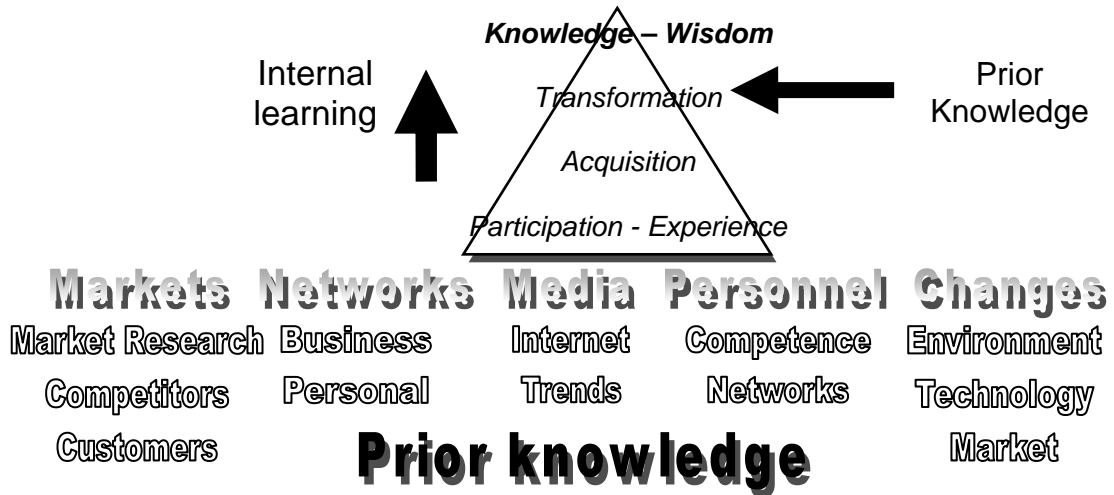


Figure 1. Information gathering process

Knowledge can be acquired through exploitative learning. It includes technological, management and marketing skills, industry-specific knowledge and measurable intangible assets. This model is further presented in Table 2. Information gathering process can also yield wisdom, which refers to personal and intuitive (business) competence. This tacit knowledge is acquired through explorative learning. It consists of personality, creativity, opportunity recognition and networking and it influences entrepreneurial decision making. All of these competences are highly personal and almost impossible to transfer or to be copied unchanged. To conclude, knowledge is in the public domain, whereas wisdom is cumulative competence based on prior knowledge and therefore only available for individual person.

Table 2. Knowledge / Wisdom

<b>Knowledge (Exploitative)</b>	<b>Wisdom (Explorative)</b>
<b>Technological skills</b> <ul style="list-style-type: none"> <li>• Proficiency</li> <li>• Research &amp; development</li> <li>• Project planning</li> <li>• Technological changes</li> </ul>	<b>Personality</b> <ul style="list-style-type: none"> <li>• Courage, risk-taking</li> <li>• Achievement</li> <li>• Intuition</li> </ul>
<b>Management skills</b> <ul style="list-style-type: none"> <li>• Business planning</li> <li>• Risk management</li> <li>• Human resources</li> </ul>	<b>Innovation, creativity</b> <ul style="list-style-type: none"> <li>• Learning by doing</li> <li>• Learning from mistakes</li> </ul>
<b>Marketing &amp; sales skills</b> <ul style="list-style-type: none"> <li>• Customer needs</li> <li>• Markets, pricing</li> </ul>	<b>Opportunity recognition</b> <ul style="list-style-type: none"> <li>• Evaluation</li> <li>• New products and markets</li> <li>• Decision to exploit</li> </ul>
<b>Industry-specific knowledge</b> <b>Measurable intangible assets</b>	<b>Networking</b> <ul style="list-style-type: none"> <li>• Business</li> <li>• Personal</li> </ul>

In general, all the firms were based on technology as core competence. They either had a business idea that was based on their prior technological knowledge or they decided to exploit their technological expertise. Some companies had higher levels of knowledge management than others, but we can argue that in all case firms, information gathering processes relating software development were systematical and documented. Intangible assets were divided to employees and entrepreneurs, which in some cases risked schedules and continuity. In some case firms, customers were exposed to high risks related to entrepreneurs' key role in technological expertise. In case relationship between entrepreneurs and the customer would end for some reason, it would take a long time before key software in client firms could be maintained or developed. Another competence risk was related to low commitment on employees' intellectual capital. One case firm used students as an endless source of flexible, part-time employees. This hindered project schedules and in the long-run strategic planning.

We were able to find two types of work distribution from the data analysis. Even in the smallest firm the division between sales and after sale operations could be found. Most often the owner-managers were responsible for sales and new customers, while employees or partners took care of after sales. Another division, although not as clear as in sales, could be found in R&D vs. production. Usually those, who worked with sales and new customers, were also responsible for R&D and those, who implemented and fixed software, were involved with existing customers.

## Discussion and conclusions

We were able to identify the main needs and sources of information in micro-level software firms. The Internet was the most important source of information about new technology and competitors. Also personal networks were important for the case firms. These findings may

have been different, if we had studied more traditional companies. Especially the importance of university courses and students, as well as Internet, may have been lesser. In the future we will widen our perspective to traditional industries as well.

We were also interested about the orderliness of the use of information for the purposes of innovation, opportunity recognition and risk management. We found that these firms had systematical knowledge management concerning the software development, but they did not use information systems significantly for business development, even though some of them have untapped information databases. Only those firms, that have been forced to build business plans for financiers or business incubators, had written plans for the future. In concordance with Thornton and Flynn's (2003) argument, business incubators offer shelter from the market turbulences. In our study both earlier work experience and education seem to explain, why some companies neglect this aid and others tap all possibilities. In the firms C and D the learning process of marketing skills was strongly influenced by local science park.

To answer our main research question, what ways do micro-level ICT firms explore and exploit knowledge and competence, we would like to conclude that exploitive learning is clearly present in every case firm. We illustrated this in our model of the information gathering process in the entrepreneurial firm. The model is adapted from the previous work on the field of entrepreneurial learning and it takes into consideration the importance of prior knowledge both to the choice of information sources and also to the transformation process of information to knowledge and to wisdom. In our case firms, the emphasis was on exploitative learning and especially technological information that is available also to all competitors. Explorative learning was manifested clearly only in one case firm. It could be noticed when the interviewees described that continuing evaluation process of their current business idea, as well as other possible ideas. Personal background and goals of the interviewed entrepreneurs concerning the future of their ventures and especially anticipated growth differed significantly. Personality and ambition can be connected to the entrepreneurs' willingness and commitment to learn. We can conclude that small firms manifest the personality of their founder or owner-manager in the realm of learning.

Entrepreneurs seemed to rely on marketing messages transmitted through the grapevine and they saw that personal selling is the only affordable and reasonable form of marketing communication. Concordant with the previous research (e.g. Fillis, 2002) the use of own creativity seems to offer entrepreneurs the first and often sole solution to overcome marketing resource constraints. The understanding of customer needs is high as relationship with customers is very close. Customers have role in both technological and business development in each case firm. Also the business and customer relations are strongly personified to owner-manager. Tacit knowledge and personal relationships with current customers offer competitive advantage, but also make knowledge management more complicated. The entrepreneurs in the case firms had not yet fully understood the possibilities of marketing in a broader sense. Thus, it can be concluded that there is definitely a call for learning more entrepreneurial thinking and ways of marketing.

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## Appendix 1. Case firm information

<b>Product</b>	<b>Employees *</b> Inc. owners	<b>Customer Base</b>	<b>Sales **</b>	<b>Business Plan</b>	<b>Goals</b>
<b>A Original (1987)</b> Programming skills	3 full-time	<b>Current:</b> 30	<b>2004</b> 150 000 €	Drawn 1995, never followed.	<b>Original</b> No plans, fame, career
<b>Current:</b> Own software	<b>Needs:</b> Programming, sales	<b>Target:</b> +8 every year	<b>2006</b> 250 000 €		<b>Current</b> Regular income
<b>B Original &amp; Current (1999 - )</b> www-database design web design	1 full-time 5 part-time	<b>Current:</b> 30	<b>2004</b> 50 000 €	Never drawn	<b>Original</b> No plans, fame, career
	<b>Needs:</b> Programming, sales	<b>Target:</b> +10 new and 5 old projects	<b>2005</b> 75 – 100 000 €		<b>Current</b> Regular income, less hours, work in the region
<b>C Original (2002)</b> Education www-design	1 full-time 2 part-time	<b>Current:</b> 10	<b>2005</b> 100 000 €	Drawn in 2004 for incubator and followed since.	<b>Original</b> No plans, extra-work, taxation
<b>Current (2004 - )</b> Own physical product	<b>Needs:</b> Programming, sales	<b>Target:</b> + 70–100 every year	<b>2006</b> 150 000 €		<b>Current</b> Competence, achievement, short-term sales
<b>D Original &amp; Current (2004 - )</b> Own software	8 full-time	<b>Target:</b> + 50–70 every year	<b>2006</b> 200 000 €	Drawn and followed from 2004.	<b>Current</b> Competence, long-term, 3-5 years