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Putting Intellectual Capital to work: Utilizing the Intellectual Potential Framework

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The critical point of strategy is making it happen. This paper is about putting strategies to work in the every day life of a company using the previously developed Intellectual Potential Framework. Four change management projects, in an International Engineering Company – Alfa Laval, are analysed. All cases involve designing and implementing strategies across the functional line organisation with the use of a process oriented approach. Results provide clear evidence of the advantage of applying strategies and performance measures to business processes rather than to the formal line organisation. Further the projects indicate business benefits measured as gross margin increases of the 40-70 M€ businesses in the range of 4-7M€. Finally the study indicates a lasting effect - the changes stick to the organisation after the project conclusion.

Field of Research: Strategy Implementation, Managing Change

1. Introduction

Much research has been done on Intellectual Capital and strategy, however there is still ample room for improvement when it comes to research concerning the art of strategizing (Starbuck, 1992), or in other words making strategies happen. Nilsson and Ford (2004) present an integrated model (called Intellectual Potential) using Intellectual Capital and Knowledge Management as the basis for a company's strategy implementation. The purpose of the study is to test the practical usability and utility of the Intellectual Potential Framework. The Intellectual Potential Framework rests on four cornerstones:

- Change Management, which is about transforming objectives into action.
- Strategy, which points out the direction of change.
- Process Orientation, since all activities in a business are linked together in processes irrespective of how the company is organised.
- Measurement Systems, which are needed to ensure over time that we are on the right track according to the strategy.

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First the theoretical foundation and the Intellectual Potential Framework itself is presented and the relevant literature reviewed. Then the research methodology is discussed. After that the findings concerning the three generic steps are analysed: 1, strategic direction, 2. the organisational structure (business processes and interfaces) and 3. the control system. Finally some general conclusions are drawn.

2. Literature Review

We link together four theoretical fields, all of which are significant for the development of new business models in knowledge-based industries. The four fields are chosen on the following logic:

i), Development by definition involves change and thus Change Management. Intellectual Capital seems to be a natural addition to Change Management in knowledge-based industries. ii) Strategy, likewise, is a natural component in a business model. We propose the Resource-Based View as the most promising strategy flavour for knowledge-based industries. iii) Furthermore we propose that a business model that is defined from customer needs may be more long-lived than one based on a company's internal structure. This implies looking at the business cross-functionally with a process perspective. iiii) Finally measurements are needed in order to control a business and much of the needed information can be found in the current Information Systems of the company.

The theoretical foundation for this article is thus:
1. Change Management and Intellectual Capital
2. Strategy and the Resource-Based View
3. Process Orientation and Cross Functionality
4. Measurement System

2.1 Change Management and Intellectual Capital

Change Management has a long history theoretically dating back substantially before Argyris and Schön (1978) noted the difference between espoused theories of practice contra theories-in-use. Mintzberg (1994) elaborates on planning versus emergence in strategies. The Change Management literature is vast, including Kotter's (1996) comprehensive 8-step framework for managing change processes. In practice Change Management seems to involve more management skills and action orientation than is commonly suggested by different frameworks, whether it is Kotter's or other's. Our experiences from successful change processes in industries have three things in common; senior management support, employee commitment with an internal project champion with a burning desire to deliver and orderliness. These factors point in the direction of Intellectual Capital.

One of the first attempts in making taxonomy for the Intellectual Capital was developed by Karl-Erik Sveiby (Sveiby, 1989). Sveiby's model of Intellectual Capital consists of three capitals; Human Capital (the talent base of the employees),

Structural Capital (the non-human storehouses of information) and Customer Capital (the knowledge embedded in business networks) (Bontis, 1998). Capital as a category has later been expanded to cover also other external relations such as suppliers and partners (Meritum Guidelines, 2001). The four categories are not the only possible way to "slice the cake" and much research effort has been put in to translating all capitals into monetary terms. This has so far had a limited impact in real life. Thomas Stewart, editor of the Fortune Magazine has been following the development of Intellectual Capital since 1991 and supports Sveiby's taxonomy of the three intellectual capitals complementing the financial capital of a company. We therefore use the following four capitals in the Intellectual Potential Framework:

- Human Capital
- Structural Capital
- Relationship Capital
- Financial Capital.

2.2 Strategy and the Resource-Based View

Strategic Management is well researched and a popular topic for scholars as well as practitioners. Strategy researchers can be split into different schools of thoughts based on their fundamental beliefs of what constitutes competitive advantage. Industrial Organisation (Porter, 1996) maintains the view that strategy and competition is about making choices, not about operational efficiency. Furthermore, Porter (1985) argues that the strategic agenda for a company can be found by analysing the competitive arena on which the company competes and there find its competitive position. The Resource-Based View (Barney, 1991) is in agreement with Porter's view that strategy is about making choices but differs on the origin of competitive advantage. According to the Resource-Based View (Barney, 1994), strategy is about making choices, however the strategic advantages should be sought after inside the organisation, not outside. Competitive advantage is about aligning the company's internal resources with the market needs. Strategy is a multi-faceted phenomenon, which cannot be comprehensively caught by a single model. Our opinion is that the Resource-Based View (Barney, 1991) on Strategic Management is more promising than Industrial Organisation promoted by Porter (1995) and others. Industrial Organisation is suitable for oligopolistic competition but may have passed its "best-before-date". Many of today's managers are trained with Porter's (1985) picture of the world, however we can see a transition amongst managers to a more diverse grounding in strategy, one of which is the Resource-Based View.

2.3 Process Orientation and Cross-functionality

To be useful, strategies need to be transformed into action. The people in the organisation make this transformation. The organisation can either be seen as a line organisation with a chain of command leading up to the CEO or it can be seen as a chain of connected activities aimed at satisfying the customer. Both views can add clarity to the question "How do we do what we do?" from different points of departure. The latter is called Process Orientation and rests on; system thinking (Copeland, 1981), a holistic view on business as well as on employees. The origin of all business processes is the customer. The customer is uninterested in your company and just vaguely interested in your product (Hammer, 2001). The customer is interested in

what your processes can do for him. This may seem to be a small change but to anyone who has been around an engineering company, whether it is around the coffee machine or in the boardroom, it is amazing how far away the customer is, and how close the nuts (and bolts) and technical solutions are. On the positive side there is great room for improvements. Better yet, processes are ideal constructs for managing, measuring and controlling business.

2.4 Measurement System

The relevance of both Intellectual Capital and Measurement Systems for business performance is well established (Edvinsson, 1997; Kaplan and Norton, 1996). Several researchers are aiming at bringing Intellectual Capital and Measurement System closer together (e.g. Sullivan and Sullivan, 2000), while others are addressing the relation between Strategy, Knowledge Management and Intellectual Capital (Nonaka, 1994; Barney, 1991). From another point of departure Hammer (2001) and Ljungberg (2002) see organisations as interrelated processes instead of hierarchies, thus making Process Orientation the preferred modus operandi for business. The way Intellectual Potential is designed and operate, processes are managed, measured and controlled, not functions or departments. The advantage of this is that we satisfy the customer; the disadvantage is that control systems usually work along the lines of the organisation.

3. Methodology and Research Design

The purpose of the study is to test the practical usability and utility of the Intellectual Potential Framework. First the theoretical foundation and the Intellectual Potential Framework itself is presented. The framework is partly content, the components, and partly a process, a change management process. The components, as described in chapter two, that constitute Intellectual Potential have been derived by a combination of theoretical deduction and serendipity. The selection criteria have been practical usefulness and theoretical robustness. The change management process is built from three principles of change management, induced by years of management consulting and project management. In order to achieve change in praxis a change management project needs:

- Top management support
- Employee commitment
- Orderliness

The principles are necessary but not sufficient in order to deliver a successful project.

In order to test the practical usefulness and theoretical robustness of the Intellectual Potential Framework four projects were run, all in the same company. Minor adjustments were made as insights were gained in the earlier projects; however the basic model stood up to the close encounter with reality. So much so that the model is now modus operandi for defining and rolling out strategies for defined businesses across the functional organisation in the case company. The overall objective of Intellectual Potential Framework in a business is to increase profitability. This is accomplished by focusing on three things: converting strategic objectives into measurable actions; clarifying the internal interfaces to optimise the business processes from a customer perspective and securing change with joint commitment across functions. The model is based on established strategy and organisation

theory, as discussed above, and is designed to help management teams address the future of their business in a structured way, prioritise strategic measures and develop their own skills and expertise in order to secure long-term profitability.

> *”Looking at our results describes our history. The Intellectual Potential is that which transpires tomorrow. It is like viewing our transactions through the wind-shield rather than through the back mirror.” Peter Norrby, Manager Alfa Laval in Alfa Laval Annual Report 2002, p. 28.*

The Intellectual Potential Framework provide the prerequisites needed to create a strongly committed team willing to look beyond individual objectives and short-term wins and instead focusing on what is best for the particular business as a whole. Nevertheless, early wins are not only appreciated, they are crucial for sustaining commitment to the change process. Action is therefore an integrated part of the model and we start focusing on implementing change practically from day one. Irrespective of the reasons for starting an Intellectual Potential project we can see substantial improvements of not only volume but also profitability in the projects that have been carried out at Alfa Laval so far. In the projects we have created the holistic view needed to achieve profitable growth, which is a more complex and challenging task than growth or profitability respectively. There is usually never a right time to start a change project; daily work and challenges are most often prioritised higher than strategic thinking and action. Therefore, we claim, the time is always right. Let us look at some examples.

When starting project White, the market had dropped 50 % due to new and tougher competition. During the twelve months of the Intellectual Potential project, the position as market leader was regained. Sales volume increased from 43 to 55,5 MEUR and during the same period gross margin increased with 4,2 MEUR, which was in line with and little above set objectives. For the newly appointed business unit manager, the Intellectual Potential project offered a great opportunity to get to know the business thoroughly and to sharpen focus internally for the issues they were facing. The main challenge for the project Indigo team was to handle the extensive market opportunities in the best possible way. Growth came more or less naturally but the team had to find ways of optimising the use of their resources to achieve profitable growth. In twelve months, volume increased with 6 MEUR (+ 19%), which was above an already aggressive objective. During the same period ROS (return on sales) increased from 4% to 9%, which was one percentage point above set objective. Positive results were achieved also in the project Orange, where the challenges included presence on the market and resource optimisation in a low frequent and technically demanding business. The first twelve months, during the actual project period, the volume increased with 15 MEUR (+ 50%). The year after volume increased with another 17 MEUR (+ 38%) and 7,2 MEUR in gross margin. Achieved results were well above set objectives.

> *”Intellectual Potential is an excellent way to show the strengths and weaknesses in our business processes. We can now evaluate some of the ‘soft’ values that otherwise would have been impossible to measure.” Claes Ericsson, Business Unit Manager Alfa Laval Annual Report 2002 p. 29.*

4. Discussion of Findings

The Intellectual Potential Framework provides a structured working model, aimed at ensuring that the business processes and measurements are aligned with the strategy. The model consists of three generic steps;

1. the strategic direction;
2. the organisational structure (business processes and interfaces) and
3. the control system

However, implementation must be adapted to the context of the particular business, which means that the model needs to be adjusted according to the people involved and the type of challenge the business is facing. Tools and working methods are carefully chosen in order to add value and increase the overall level of expertise in the company. The built-in flexibility is one of the major benefits of the Intellectual Potential Framework.

> *"The IP-project has put focus on the importance of cross-functional communication." Mikael Tydén, Factory Manager Alfa Laval.*

4.1 The Strategic Direction

In its simplest form, a strategy consists of three parts; 1, our present position: Where are we now? 2, our vision: Where do we want to go? and 3, the action plan: How will we get there? Using the Intellectual Potential Framework we seek the answers to the following questions: In 5-10 years, where do we want to be? How would we like to be perceived? What position should we strive for? This expresses our wanted long-term strategic position. In shorter terms, i.e. 2-3 years, we need to think about what we should strive for in terms of financial and non-financial objectives. In extension to these goals we need to prioritise what to focus our resources on, in order to reach our strategic objectives. We call this our strategic themes and actions. By involving the entire team and a group of key persons from other functions in defining the strategy, we make the issues visible to everyone and create strong commitment for change.

4.2 The Organisational Structure

When the mission and objectives are clear the focus is turned to structure and working routines to secure that the operational work is in aligned with the strategy. Most businesses are organised in different functions. Each function is usually responsible for its own financial result. Therefore the functional manager strives to optimise their own performance, which is not necessarily the best for the customers and the company as a whole. Products and services, however, flow in horizontal chains across organisational boundaries. At each point of transfer between functions there is a risk of efficiency loss. In the Intellectual Potential projects we are mainly focusing on these points of transfers, so called interfaces, between functions, searching for and mending weak links. The lubricating linking processes between the

functions are created in order to optimise the workflow for the customers of the particular business. This is done by re-using as much as possible from the established processes and routines within each function, focusing on smoothing out the points of transfer.

> *”Working with the IP-project has given me a deeper understanding of the importance of processes within an organization and the importance of the interrelationship of processes.” Mike Seifried, Portfolio Manager Alfa Laval.*

4.3 The Control System

The Measurement System of the Intellectual Potential Framework, the IP-Scorecard, is designed to tell us whether we have high confidence for the future or whether we feel that there is future at risk and that we thus must improve.

In relation to our strategy we ask:

- Do we have enough people where we need them and do they have the right competence?
- How well are we working together? Do we have clear processes, routines, IT-systems and tools to support the co-operation across functional boundaries?
- How good are we at developing our business and the way we serve our customers?
- How good are we at developing new and current relations with our suppliers, strategic partners and customers?

The answers to these questions are found within our business processes. In our processes we seek for business drivers, which describe what we need to be good at in order to achieve our strategic objectives. This is what is driving our business in the strategic direction so then we measure on the drivers to see where we are going. Lets take an example; for a business with a logistic based buying behaviour sales can be made through various sales channels. To increase sales we have to be good at developing relations with current and new sales channels. Thus “sales channel management” is our driver for the process called “generate inquiries”. How well we are performing this could be measured with the indicator “development of sales through sales channels”.

The IP Scorecard discloses the future healthiness of the business. Traffic lights indicate the main potentials for improvement. Green light indicates “high confidence for the future”. Red light, on the other hand, indicates “future at risk and must improve” and in between we have the amber light indicating “some things good, some to improve”. The red lights can be traced back to a business process, which is clearly not functioning properly and thus preventing us from moving in the desired strategic direction. Consequently, these red lights need to be addressed immediately and within the IP-team a clear ownership for action is designated to ensure that someone takes responsibility for corrective action.

> *“IP enables us to look at the broader aspect of the business to say: Is this a healthy business or not? You must define your processes and what the main drivers in these processes are, and then you measure on*

> *the drivers: Am I OK or not? And that is basically IP." Frode Lemvik, Market Unit Manager Alfa Laval*

The challenge when designing a measurement system is not to be over-ambitious. Experience show that we have difficulty in selecting the vital few drivers to focus on. In many cases we end up with an unwieldy scorecard with far too many drivers and indicators, which is contradictory to our ambition of designing an easy to grasp tool to help management teams steer into the future. We have learned from the four projects at Alfa Laval that the full team could handle not more than 15-20 indicators in a scorecard and still keep the strategic view of the business. Individuals were responsible for 2-3 on average.

5. Conclusions

"It is hard to make a prophecy, especially about the future." However it is tempting. In our crystal ball we see that the rate of change in business is increasing, as is the complexity of the business systems. If so it seems safe to assume that changes in businesses will happen more frequently and with a lesser degree of predictability. This in turn increases the demand, firstly on a more dynamic strategy process, and secondly on more flexible information system. All encompassing enterprise systems either need to be designed for facilitating strategic changes much more easily or run the risk of being surpassed by small flexible local systems that are integrated.

> *"IP enables us to look at the broader aspect of the business to say: Is this a healthy business or not? You must define your processes and what the main drivers in these processes are, and then you measure on the drivers: Am I OK or not? And that is basically IP." Frode Lemvik, Market Unit Manager Alfa Laval.*

In the extension of the increasing rate of business change, information architecture may be a coming star. Information architecture is about aligning the basic logical building blocks of the business with the Information Systems. This may become an important area of expertise as well as a prerequisite for successful management of business change. Theoretically we see that the difference between the theories of change practise that is promoted in management journals and the way change management works in real life is shrinking. The field of change management may then turn into a more wild and unstructured habitat for strategizing than what is the case currently. Management skills including instant action management may become even more valuable.

Alignment between Strategy and the Information Systems is crucial for success. This we all know. Some have learned it more painfully than others. In this article we have furthered the explanations and suggest that:

- The resource-based view is a more promising strategy flavour for knowledge-based industries.
- Process Orientation is a vehicle for commitment in strategic change projects.
- Measurement systems for business success should measure and control business processes, not functions.
- Action can and should go hand in hand with analysis in a strategic change project, as opposed to the common practise based on a sequential relation.

Each of these suggestions is rewarding to follow independently. Subscribing to all will release the Intellectual Potential in the direction of strategic change, thus creating a breeding ground for long-term success.

References

Alfa Laval 2002. Annual Report, Alfa Laval, Lund, Sweden.

Argyris, C. and Schön, D.A. 1978. Organizational Learning, Addison Wesley, Reading, MA.

Barney, J. 1991. Firm resources and sustained competitive advantage, *Journal of Management*, 17, pp. 99-120.

Barney, J. B. 1994. "Bringing managers back in: a resource-based analysis of the role of managers in creating and sustaining competitive advantage", in J.B. Barney, J.C. Spender and T. Reve (Eds.), Does management matter? On competencies and competitive advantage. (pp. 1-36). Lund, Sweden: Institute of Economic Research.

Bontis, N. 1998. Intellectual Capital – an exploratory study that develops measures and models, *Management Decisions*, Vol. 36, No. 2, pp. 63-76.

Checkland, P. 1981. Systems thinking, systems practice, John Wiley Chichester.

Davenport, T. H. and Prusak, L. 1998. Working Knowledge – How Organizations Manage What They Know, Harvard Business Press Boston, Mass.

Edvinsson, L. and Malone, M. S. 1997. Intellectual Capital – The Proven way to Establish your Company's Real Value By Measuring its Hidden Brainpower, Harper Business, New York.

Hammer, M. (2001), The Agenda, Business Books London.

Kaplan, R. S. and Norton, D. P. 1996. Using the Balanced Scorecard as a Strategic Management System, Harvard Business Review, Vol. 74, No. 1, Jan-Feb., pp. 75-85.

Kotter, J. P. 1996. Leading Change, Harvard Business School Press, Boston, Mass.

Ljungberg, A. 2002. Process measurement, *Int. Journal of Physical Distribution and Logistics Management*, Vol. 32, No. 4, pp. 254-287.

Meritum Guidelines 2001. *Guidelines for Managing and Reporting on Intangibles (Intellectual Capital Report)* available from: http://www.urjc.es/innotec/tools/MERITUM%20Guidelines.pdf [12 Feb. 2008].

Mintzberg, H. 1994. The Fall and Rise of Strategic Planning, *Harvard Business Review*, Vol. 72, No. 1, Jan-Feb., pp. 107-114.

Nilsson, C-H. and Ford, D. 2004. Introducing Intellectual Potential – the Case of Alfa Laval, *Journal of Intellectual Capital*, Vol. 5, No. 3, pp. 414-425.

Nonaka, I. 1994. A Dynamic Theory of Organizational Knowledge Creation, *Organization Science*, Vol. 5, No. 1, February, pp. 14-37.

Porter, M. E. 1985. Competitive Advantage - Creating and Sustaining Superior Performance, The Free Press, New York.

Porter, M. E. 1996. What is Strategy? *Harvard Business Review*, Vol. 74, No. 6, Nov-Dec, 61-78.

Starbuck, W. H. 1992. Strategizing in the real world, *International Journal of Technology Management*, Special Publication on Technological Foundations of Strategic Management, 1992, 8(1/2), pp. 77-85.

Stewart, T.A. 1997. Intellectual Capital - The New Wealth of Organizations, Doubleday/Currency, New York.

Sullivan, P.H Sr. and Sullivan P.H. Jr. 2000. Valuing intangible companies - An Intellectual Capital Approach, *Journal of Intellectual Capital*, Vol. 1, No. 4, pp. 328-340.

Sveiby, K-E. 1989. *The Invisible Balance Sheet.* available from http://www.sveiby.com/Portals/0/articles/denosynl.htm [12 Feb. 2008].