The current issue and full text archive of this journal is available at
www.emeraldinsight.com/1059-5422.htm

Measuring organizational renewal capability: case training service business

Jaana Junell
Business Solutions, Nokia Siemens Networks Oy, Espoo, Finland, and
Pirjo Ståhle
University of Turku, Helsinki, Finland

Abstract

Purpose – The purpose of this paper is to provide a quantitative measure for organizational renewal capability which would enable inter-firm comparison and external communication. To make the tool more concrete for the reader, a case organization with the measurement results and conclusions is described.

Design/methodology/approach – A method of how renewal capability can be shown on an organizational level and measurement is demonstrated. The approach is based on systems thinking, but it also has boundary surfaces with the knowledge-based theory of the firm, dynamic capability approach, and intellectual capital (IC) research. A tool for analyzing and measuring organizational renewal, called KM-factor®, and the theoretical model behind it, is presented.

Findings – The preliminary analysis indicates that the indexes of KM-factor® correlate strongly with the future financial success of the company. Thus, the results refer to the fact that companies with (system based and strategy connected) renewal capability have more competitive advantage than others. It is crucial for the organization to understand the required change direction in renewal capability to achieve sustainable competitive advantage.

Originality/value – The topic of renewal has been increasingly dealt with by the research traditions of IC, knowledge management and strategic management. However, even if several relatively consolidated theories about the composition of IC or competitiveness have been presented – renewal being one of the components – the operational and measurement perspectives of continuous renewal have mainly been neglected. This paper demonstrates a quantitative and practical implementation of organizational renewal capability measurement.

Keywords Change management, Organizational development, Organizational innovation, Continuing development, Strategic change

Paper type Research paper

Introduction

To achieve a competitive advantage in the global (and often turbulent) business environment, companies must have capability for continuous adaptation to the markets and for renewal capability. Recently, the topic of renewal has been increasingly dealt with by the research traditions of intellectual capital (IC), knowledge management (KM) and strategic management. During the last decade, the focus of these research traditions has changed from technology and process development to the overall agility and self-renewal capability of companies (Hong and Ståhle, 2005). However, even if several relatively consolidated theories about the composition of IC or competitiveness have been presented – renewal being one of the components – the operational perspective of continuous renewal has largely been neglected. Most of the research on renewal

Competitiveness Review: An International Business Journal
Vol. 21 No. 3, 2011
pp. 247-268
© Emerald Group Publishing Limited
1059-5422
DOI 10.1108/10595421111134840

المنارة للاستشارات
www.mana

capability is based on case studies, and there is a lack of quantitative measures that would enable inter-firm comparison and external communication (Pöyhönen, 2004).

Renewal has been recognized to be an increasingly important element of IC and companies' competitive advantage, but the function and dynamics of organizational renewal has had little consideration. In addition, the operational meaning with respective measures has usually been missing. There are only two academically documented measurement methods for organizational renewal: KM-factor® (Ståhle *et al.*, 2003) based on a systems approach, and a survey instrument for measuring organizational renewal capability by Kianto (Pöyhönen, 2006) that analyzes organizational performance from six different renewal-related dimensions.

In this paper, we present KM-factor® as a measurement tool for organizational renewal capability and describe the theoretical approach behind it. To make the tool more understandable for the reader, we also describe a case organization with the measurement results and conclusions. (In addition to this case, hundreds of other companies and organizations have also been measured by different versions of KM-factor®):

There are three main questions to be answered in this paper:

(1) What is organizational renewal capability and what are the antecedents for it?

(2) How can renewal capability be measured in a reliable and meaningful way?

(3) How can a company benefit from the measurement of renewal capability?

What is organizational renewal capability?

Organizational renewal has mainly dealt with three research perspectives: IC, KM and strategic management. IC and KM researchers have studied renewal both as a static asset and as a dynamic capability; several measurement models of the latter have been presented (Edvinsson and Malone, 1997; Roos *et al.*, 1998; Sveiby, 1997). Pöyhönen (2004) analyzed the models from the renewal perspective and concluded that all the models seem to focus on the proxies and outcomes of renewal instead of dealing with the accurate renewal capability of the organization. Within strategic management literature, renewal has been at the core of such approaches as knowledge-based theory of the firm and the dynamic capability approach (Teece *et al.*, 1997; Teece, 1997). Even if the approach has created much interest it also has been criticized for the confusion and emptiness of the concept (Pöyhönen, 2004; Ferdinand, 2004). The dynamic capability approach has nevertheless increased understanding of renewal dynamics in organizations, and it also has many similarities with the systemic view for organizational renewal as presented in this paper (Ståhle *et al.*, 2003).

Organizational renewal as a concept has been characterized from various different perspectives from maintenance to radical innovation. The main focus has shifted over the time from strategy formation, knowledge processes and organizational routines. Also, the theoretical roots of the approaches vary from cognitive social psychology to systems theories (Pöyhönen, 2004; Table I).

In the systemic view of organizations as presented by Ståhle and her colleagues, the definition of renewal consists of the following:

- Renewal is a multifaceted concept consisting of three dimensions of renewal referring to either maintenance, adaptation or innovation type of change (Ståhle and Grönroos, 2000; Ståhle *et al.*, 2003; Pöyhönen, 2004).

المنارة للاستشارات
www.mana

Renewal capability conceived as	Key assumption	The main focus	Type of renewal considered	Theoretical roots	Representative author(s)
Knowledge conversion capability	Renewal is achieved by knowledge conversion between tacit and explicit knowledge, which takes place in various ba's	Process of knowledge conversion	Incremental development	Polanyi's idea of tacit and explicit dimensions of knowledge; organizational theory	Nonaka and Takeuchi (1995), Nonaka and Konno (1997), Nonaka *et al.* (2000)
Continuous replenishing of core capabilities	Constant updating of core capabilities via knowledge-building activities keeps organizations renewing	Core capabilities and supporting knowledge-building activities	Radical innovation	Organizational theory, especially technology management and new product development	Leonard-Barton (1992a, b, 1995)
Mindfulness of the organizational system	Mindful operational mode enhances organizational capability to repair and replenish system functioning and contain change	Collective enactment of organizational processes supporting mindfulness	Maintenance	Cognitive social psychology	Weick (1996), Weick and Sutcliffe (2001)
Strategic capability for containing and creating change	Semicoherent strategic direction and its implementation by means of semistructures, links in time and time pacing	Strategy formation and implementation	Incremental development	Strategy, complexity and evolutionary theory	Brown and Eisenhardt (1997, 1998), Eisenhardt and Brown (1998)
Systemic power of the organization to form knowledge environments which support its strategy	Dynamics of the organizational system create knowledge environments within the organization, each of which leads to different type of renewal	The capability of the organization to function as a coherent knowledge system according to its strategy	Maintenance, incremental development and radical innovation	Systems theories	Ståhle (1998), Ståhle and Grönroos (2000), Ståhle *et al.* (2003)
Continuous innovation	Continuous innovation requires synergistic combination of operational effectiveness, and strategic flexibility	Routines for innovation and learning	Incremental development and radical innovation	Industrial process management	Boer (forthcoming), Boer and Bessant (forthcoming)

(*continued*)

Table I. Overview of models on renewal capability of organizations

www.manaraa.com

Table I.

Renewal capability conceived as	Key assumption	The main focus	Type of renewal considered	Theoretical roots	Representative author(s)
Understanding and supporting the autopoietic nature of the organization	The sensory function of organizations enables creation of new knowledge, while the memory function enables maintenance of existing knowledge; both are needed for continuous self-production of the organization	Autopoietic nature of organizations	Maintenance and radical innovation	Theory of autopoietic systems	Maula (1999)
Dynamic capability	The organizational capability to leverage, develop and change its competences is the key to success in rapidly changing environments	Firm-specific routines and capabilities	Incremental development and radical innovation	Resource-based and capability-based views of the firm	(Teece *et al.* 1997, Eisenhardt and Martin (2000))
Ability to manage the organizational renewal cycle	Crisis, value-based leadership and creative networking are necessary for radical organizational renewal	Renewal cycle	Radical innovation	Organization theory, ecology	Hurst (1995)

Source: Pöyhönen (2004)

المنارة للاستشارات
www.mana

- Organizations are hypothetically seen as three dimensional systems with mechanistic, organic and dynamic features[1]. The quality of organizational renewal capability depends on the bias of these features (or organizing principles), e.g. mechanistic systemic bias leads to rigid knowledge and action processes that support more maintenance than innovativeness (Ståhle, 1998; Ståhle *et al.*, 2003).
- The main focus of renewal is the organization's capability of functioning as a coherent system according to its strategy. This means, for instance, that organizations aiming at efficiency must have completely different organizational dynamics (internally organizing principles) than organizations aiming at innovations or radical change. For efficiency, organizations need to emphasize their function as mechanistic systems and for innovation or radical renewal as dynamic or self-organizing systems.

In Ståhle's model, organizational renewal is seen as a three-dimensional phenomenon that covers three types of performance within the organization:

(1) effective standardization, replication, routines, implementation and maintenance of the existing knowledge base and activities;

(2) continuous, feedback based and incremental development of knowledge base, processes and service; and

(3) enhancement and invention of radically new knowledge, modes of action and innovations.

Each of these types of performance requires distinct operational modes and management processes, and thus the question of prioritization among them is essential from a strategic point of view. Organizational renewal capability is dependent on:

(1) the ability of the organization to implement the knowledge processes from replication of existing know-how to quantum-leap innovations; and

(2) the balance of the three processes according to the strategic intent of the organization as well as the external demands posed by its environment (Ståhle *et al.*, 2003).

As renewal capability is a multi-dimensional concept consisting of three types of renewal activities, this is also reflected in its measurement. The extent to which an organization needs each type of renewal depends on the strategy of the organization and, therefore, renewal capability is always a strategy-related issue. This means that the measurement of renewal capability must be able to recognize various strategic foci and the implications of these to the optimal combination of maintenance, development and radical types of renewal within the organization.

The systemic view has also been widely spread over the last decade in management and organization research (Appelbaum, 1997; Benoit and Ramanujam, 1999; Sanchez, 1997; Sanchez and Heene, 1997). The approach of complex adaptive systems has been emphasized by Hamel, 1998, as well as Eisenhardt and colleagues (Eisenhardt and Tabrizi, 1995; Brown and Eisenhardt, 1997; Eisenhardt and Brown, 1999; Maula, 1999). In the context of renewal systems, theoretical roots are presented especially by Brown, Eisenhardt and Maula, as Table I shows. However, in IC and KM literature, the systemic approach has been rather neglected.

المنارة للاستشارات

www.mana

The systemic research traditions, approaches, and theories adhere to a wide spectrum of approaches and concepts formulated by scientists representing diverse disciplines. Even the definitions of the constituents of a system vary a great deal depending on the point of departure of the given author. Ståhle (1998) showed in her analyses that various systems approaches contain not only different and controversial definitions but also three distinct paradigms:

- closed or mechanistic;
- open or organic; and
- self-organizing or dynamic.

For example, from the viewpoint of mechanistic tradition, systems are regarded as orderly and regularly functioning entities, while within the dynamic paradigm they are portrayed as complex, turbulent and self-organizing. Even if the qualifications and function of the three systems are more or less different, each of these system views is internally consistent, In conclusion, different kinds of systems exist but behave differently and are capable of different kinds of performances and objectives according to their internal nature.

Thus, organizational renewal can have different, even contradictory, meanings depending on the circumstances and targets of the company. Organizational renewal capability is gained by different kinds of systemic dynamics within the organization. Table II clarifies these dimensions of renewal and systemic function.

In recent literature, the systemic view emphasizes the complex and self-organizing features of systems (dynamic), while the earlier approaches focused more on internal feedback (organic) and regulation processes (mechanical) (Ståhle *et al.*, 2003).

How to measure organizational renewal capability

The measurement of renewal capability is an underdeveloped issue in the existing literature, and there have been only rare attempts in the area. Most scholars have concentrated on theory building, and the methodological emphases have been on case studies rather than on quantitative indices. Also, even if the renewal has been measured, the indicators tend to be oversimplified or lack ability to grasp the dynamics of renewal. For instance, no matter how much money has been spent on ICT (which has been used often as an indicator of renewal in these measurements), there is not necessarily any evidence on how capable the company is to renew itself (Pöyhönen, 2004).

One of the most difficult challenges concerning renewal capability is practical, e.g. how to concretize it. The work of Ståhle and Grönroos (2000) and Ståhle *et al.* (2003) offers a method called KM-factor®, for understanding, analyzing and measuring an organization's renewal capability from a systemic perspective. KM-factor® is an analytic tool for measuring renewal capability based on the interpretation of organizations as differently functioning knowledge systems as described above. The systemic methodology of KM-factor® has a well-grounded theoretical background and it has been developed in close collaboration with practitioners over a period of eight years. Hundreds of organizations have been measured by it.

In KM-factor® analyses, the organization is examined as consisting of three interrelated knowledge environments (systems) that form a basis for organizational knowledge creation. The mechanistic environment represents value creation from standardized operating models and processes. The organic environment is the

المنارة للاستشارات
www.mana

Table II. Characteristics of organizational renewal in different market environments

	Mechanical	Organic	Dynamic
Market definition	Predictable	Predictable change	Unpredictable change
Pace of change in the market environment	Stable markets	Constantly changing markets	Highly turbulent markets
Nature of organization	Production oriented organizations	Customer service organizations	Innovative organizations
Ultimate goal	Constant quality and effectiveness	Adaptive and managed development	Radical renewal and change
Nature of organizational renewal	Maintenance	Incremental development	Radical innovation
Operational focus	Distribution, production, fixed product lines	Tailoring and development of service concepts	Innovative, radical renewal and/or growth
Strategic objectives	Building flawlessly functioning systems – maximizing the cost- and time-efficiency of systems	Quick reaction to customer needs and feedback – constant and systematic development of new services	Continuous innovation – quick reaction to changes in the market – support for creativity, risk taking and experimentation

Source: Pöyhönen (2004), originally based on Ståhle and Grönroos (2000)

المنارة للاستشارات

www.mana

platform for mutual learning and incremental development. The dynamic environment is the sphere where spontaneous information flows and potential knowledge is cultivated into radical changes and innovations.

Both the theoretical model of organizational renewal capability and hundreds of company measurements show that, in most organizations, all three types of renewal processes are in use. They can often be functionally separated so that, for example, research and service product development units focus on innovation capabilities, whereas service and product delivery functions might concentrate on effective distribution. In measurement, the organization is analyzed as a whole for finding renewal characteristics of all three; all of them are needed to support the right operational mode of the organization according to the stated strategy. Maintenance renewal is most efficiently achieved by a mechanistic hierarchical top-down management style and strictly defined organizational structures. Development renewal is based on dialogue and interactive, empowering organizational culture in organic environment. Radical renewal is based on mastering of complexity, and it is characteristic for dynamic organizations. According to the overall dynamics, we can identify different systemic functions and different knowledge environments within the organization (Table III summarizes their essential features).

Renewal capability in the systemic context can be defined as a company's ability to create and maintain different knowledge environments in line with the firm's strategic intent. In this theoretical frame, renewal capability can be measured by KM-factor®, which has been built on theory, modelling, and is questionnaire-based on the three dimensional systems view.

The data for the measurement are gathered with a web-based questionnaire that is based on the three dimensional systems view described above. The questionnaire contains 72 statements, and the response format is a five-point Likert scale anchored by "I totally disagree" (1) and "I totally agree" (5). The statements reflect the four system components: knowledge, information flow, relationships and management – both at the present and the goals of the respondents in the same areas. Based on these four perspectives, any organization can be analyzed as a system[2]. The data that depict the systemic function of organizations is then analyzed further, and the results are described both in graphs and indexes.

The basis for the KM-factor – questionnaire is a two-dimensional model that contains characteristics of the three system classes (A, B and C) and four system constituents (1-4). Together, they form 12 intersections, i.e. system components[3] (A1-C4). Each component is a set of three basic statements (connected to system classes and system constituents) concerning the participants' estimates of:

- the present situation; and
- a preferable target situation Table IV.

Every organization is a mix of the three system classes, and, thus, the system characteristics of an organization include mechanical, organic and dynamic features. The balance between the three kinds of system characteristics can be visualized in a systemic profile. The systemic profile in Figure 1 shows a company that fulfils quite coherently its organic customization service strategy in its performance by its different units (subsystems).

المنارة للاستشارات
www.mana

Table III. The characteristics of the organizational system classes and constituents

Organization as 3D system	Mechanical	Organic	Dynamic
Objective	Cost efficiency on rather stable markets	Gradual development Adaptation to the changes of the market	Continuous innovation Proactive creation of new markets
Knowledge	Defined, explicit, documented	Experiential, hidden, tacit, dialogue based	Intuitive, potential future oriented
Relations	Determined by the organizational hierarchy	Reciprocal, trust based, organized by the target	Spontaneous, networked, multidimensional expertise
Information flow	One-way, top down	Multi-way, horizontal	Complex and chaotic
Management tool	Formal authority	Self directive teams, common agreements, self-assessment	Portfolio-based, network-based resources, visionary
Leadership method	Prescriptive	Coaching style	Power transfer, individual support

Source: Based on Ståhle and Grönroos (2000)

المنارة للاستشارات
www.mana

The mathematical analysis of the data results in ten indexes, i.e. figures that describe and depict the behavior and potential of the organization as a system. In a systemic mathematical analysis, the focus is in coherence and relations more than on the total amounts. Renewal capability is concretized into ten measurable indexes (Table V). Each index is reported by a number ranging from 0 to 200. Together, these indexes form the so-called DIC-index (= dynamic IC or renewal capability; the latter is used in the Finnish version), which illustrates the organization's systemic coherence and overall renewal capability. Indexes 1-5 form the first sub-index of renewal capability, labelled strategic capability. These indexes show the systemic coherence of the organizations and how well its systemic function is in line with the chosen strategic focus. Indexes 6-10 form the second sub-index, power to change, which brings supplementary information to system-based data, e.g. level of motivation and networking indexes[4].

The results of a measurement do not provide much information unless they are compared against a benchmark. For this reason, the KM-factor indices are presented as relative figures that depict renewal in relation to:

- other firms with a similar strategic focus, i.e. external comparison (100 = overall average of all measurements in KM-factor® databank); and
- previous measurement results of the same organization, i.e. internal change.

In other words, the average of measured companies is taken as a yardstick, e.g. renewal-index 120 means that the level of renewal capability of the organization is 20 per cent higher than the average of the comparison group. In the report of results of KM-factor®, all the renewal indices are scaled in this way.

In the report of results, there are the indices for the renewal capability of the organization. These are further demonstrated with graphs illustrating renewal indices of management and personnel. The report also includes tables that pinpoint the areas with the biggest problems.

Table IV. The basic systemic efficiency or SE-matrix as the bases of the KM-factor® questionnaire

SE matrix	A. Mechanical	B. Organic	C. Dynamic
1. Competence	A1	B1	C1
2. Information flow	A2	B2	C2
3. Relationships	A3	B3	C3
4. Management	A4	B4	C4

Source: Ståhle *et al.* (2003)

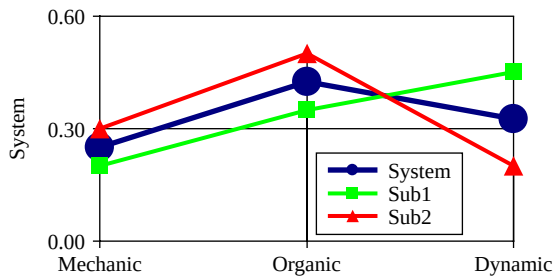


Figure 1. An example of a system and its subsystems that emphasize organic and dynamic characteristics

المنارة للاستشارات
www.mana

Basic index	Interpretation and main parameters used
1. Unanimity regarding the current situation	Low standard deviation of items concerning present within components High consistency within components
2. Unanimity regarding objectives	Low standard deviation of items concerning targets within components High consistency within components
3. Strategic fit of objectives	High consistency between constituent- and class-averages Low standard deviation of change compasses[a]
4. Strategic fit of operational profiling	High consistency of strategic foci stated in all constituents Low standard deviation of correlated change compasses
5. Sensitivity to weak signals	High standard deviation of present items Low standard deviation of target items
6. Challenge presented by the target level	High gap level High consistency between present and target items within components
7. Innovation potential	High gap level on high level of present High standard deviation of targets High levels of innovation questions
8. Commitment to objectives (management <–> staff)	High consistency between management and staff
9. Internal networking	High double contingency High levels of networking questions
10. Motivation level	High levels of motivation questions

Notes: [a]The change compasses illustrate the gap between the strategic foci of an organization and its actors goals; their calculation is explained in Ståhle *et al.* (2003)

Table V. The calculation principles of KM-factor indexes

In the following example, we describe how KM-factor® was used in a training service unit of an international company.

The case organization

The case corporation operates in the mobile communications industry. In the strategic statements of the company, the customer is seen as the top priority. The case organization's business group provides network infrastructure, communications and network service platforms, as well as professional services to operators and service providers. The case organization belongs to the services business unit under the business group that focuses on customer training services. The training organization's service product portfolio consists of training services, coaching services, e-learning and published materials services as well as competence planning, evaluation and testing services. The strategic intent of the case organization is "to enable all our customers to gain the maximum performance from their people, through investment in our innovative learning solutions". The focus of business development is to change from "off the shelf" course-centric offerings to customer-centric solutions.

The case organization is global with a staff of about 200 employees, and it is divided into different geographical areas that have the business responsibility of their regions.

المنارة للاستشارات

www.mana

In addition, there is one global development unit, which is responsible for the portfolio, processes and tools development. The successful business and strategy implementation requires the right functioning balance between these units, especially when the training services business is in the strongly competitive market concerning generic technology and training support products. The pressure to remain cost-competitive in the eyes of customer and maintain operational efficiency in the own organization is huge. At the same time, the case organization is looking for a change towards innovative solutions delivery, which requires costly and time-consuming investments for developing totally new innovation capabilities and competencies. Over the long run, operational pressures may jeopardize the strategic capability of the organization if the organization is not able to act as a coherent system towards its strategy.

Measurement

During autumn of 2006, the case organization conducted KM factor® measurement to get insight into the current status of the organization's renewal capability. In order to further analyze dissimilar functions, five operational units of the organization were analyzed. The units differed from each other by global location, customer segments and expectations. In the end, there were four different group results and the results for the organization as a whole. To share the results of the measurement, discussion sessions were arranged both for the management team (12 persons) and for the rest of the organization. In addition, detailed interviews were arranged for the current and previous heads of the organization. Finally, the summary of the results was provided to everybody interested in the organization in order to increase awareness and understanding of renewal-related findings of the case organization.

The questionnaire was addressed to about 200 people. The common reply rate was 56 per cent (management 87 per cent, personnel 50 per cent). The total reply rate between units varied from 74 to 43 per cent.

The total renewal capability analysis (the report of the results) of the whole organization and all units consists of:

- strategic focus of the organization;
- operations emphasis for current and target situation;
- strategic capability indexes;
- power to change indexes; and
- change compass for management and personnel, that shows how well the organization operates (as a system) according to its strategy on the four areas of performance (competence, information flow, relationships and management/leadership).

The organization's strategic focus defined by management is colored areas in Figures 2 and 3. The preliminary focus was stated as flexible organization focusing on service concepts and customization (organic). The secondary focus was stated as innovative organization capable of managing radical renewal and/or growth (dynamic).

The operation profiles show the organization's emphasis on production, service and development at the current and target levels (Figure 2). Management strategy emphasis visualizes the management's target orientation, i.e. where the organization should go.

المنارة للاستشارات
www.mana

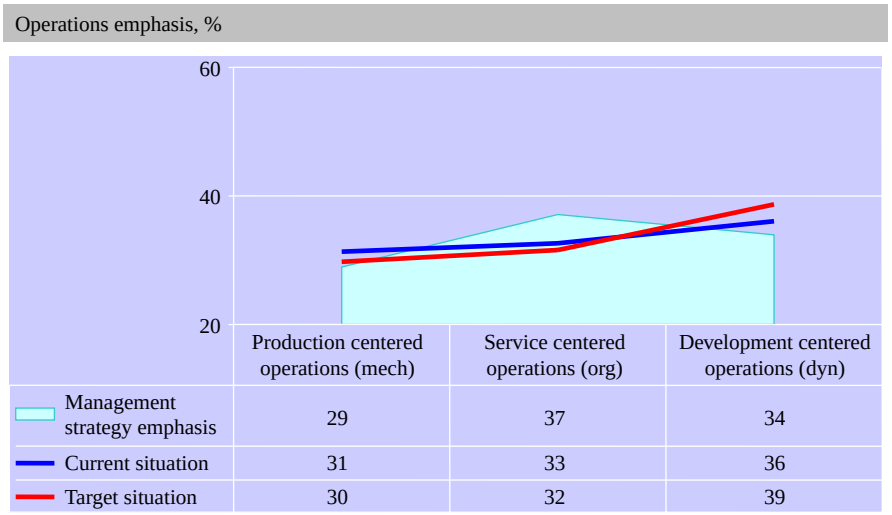


Figure 2. Current and target orientation of organization's performance in accordance to the stated strategic focus

Current situation shows both employees and managers' operational focus at the moment, i.e. how the current action and operation is being emphasized in daily work.

Figure 2 shows that the current state of the organizational operation is not quite in line with the strategic focus. According to the strategy, service-centred (organic) operations should be emphasized more than the developmental (dynamic) orientation of behavior.

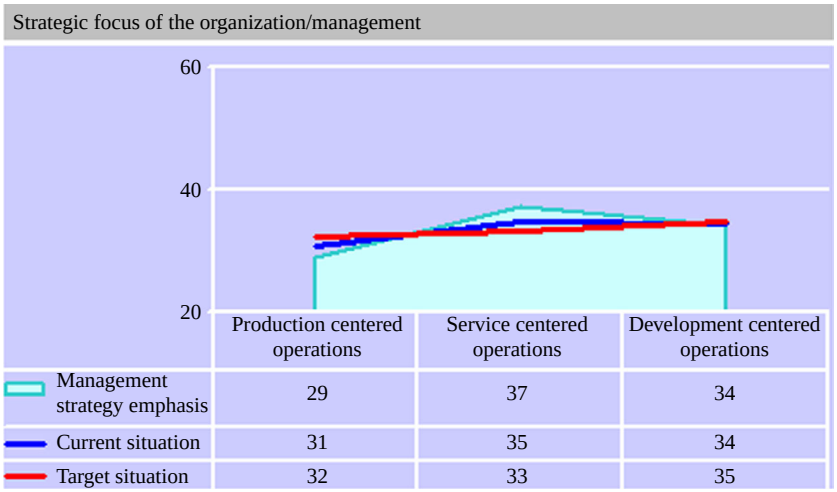
When looking at the profiles separately for management and personnel, we notice that the personnel act in the current situation largely by dynamic orientation (Figure 3). The orientation of the management is more emphasized on organic behavior – although according to the aimed strategy, organic action should be even more emphasized, which means that there is still too much bias on production-based mechanistic orientation.

According to the stated strategy, operational emphases of the organization should be on service-centred operations. This means capability of continuous and incremental development of processes and products according to customer needs and market changes. In the current situation, too much emphasis on development (as personnel has done) means a loss of business effectiveness and resources. Too much emphasis on production (as management has done) makes the organization too slow for adaptation. In the case of organization, the situation for management is more in line with the strategy than it is for personnel.

Renewal capability

To understand the renewal capability of the case organization, strategic capability and power to change indexes need to be viewed in more detail. These indexes are calculated as shown in Table VI. Strategic capability includes the indexes 1-5 and power for change includes the indexes 6-10. Renewal capability is the composite index based on these two. The key ratios of all indexes are percentages that scale the results to the

المنارة للاستشارات
www.mana



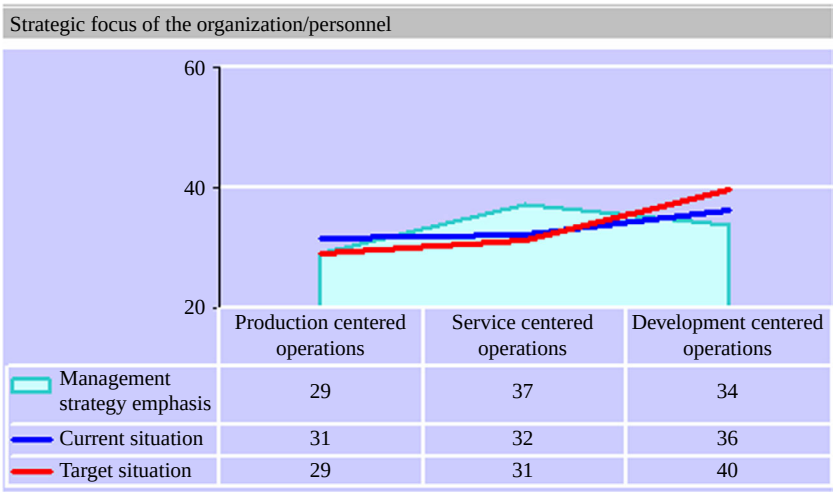


Figure 3.
The comparison between management and personnel

average of the comparison group, which are always 100. The comparison group consists of the data bank of the all previously measured organizations having the same strategic focus than the case organization. If the index ratio of the case organization is under 100 per cent, the organization's performance is weaker than for the reference group. If the value is 100 per cent, the ration is the same as the average value of measured organizations.

According to KM-factor®-analysis, the case organization's Renewal capability is 115, strategic capability 110 and power to change 120. These general results of the organization as a whole indicate comparatively good ability for renewal and show that the general level of renewal capability is 15 per cent higher than that of the reference group. The ability to change is embedded in the organization; basically the good result

المنارة للاستشارات
www.mana

Renewal capability	*115*
Strategic capability	110
Unanimity regarding the current situation	120
Operational profiling according to strategy	109
Unanimity regarding objectives	104
Strategic fit of development challenges	96
Sensitivity to weak signals	112
Power to change	120
Challenges presented by target levels	144
Innovation potential	109
Level of motivation	108
Commitment to objectives (management <– > personnel)	129
Internal networking	108

Table VI. The total scores of sub indexes for renewal capability of the case organization

refers to the systemic capability of the whole organization, e.g. how people work together in line with the stated strategy. The sub-indexes for strategic capability and power to change are as presented in Table VII.

The organization's detailed results are above the average level of the benchmark group and contain no significant weaknesses. However, strategic fit of developmental challenges is below the average level (96 per cent). This result indicates that the future

	Competence	Information flow	Relationships	Management
Management				
Unanimity regarding the current situation	92	139	129	125
Operational profiling according to strategy	*89*	118	93	98
Unanimity regarding objectives	114	110	122	109
Strategic fit of development challenges	*86*	109	97	87
Sensitivity to weak signals	114			
Personal				
Unanimity regarding the current situation	99	123	117	139
Operational profiling according to strategy	99	132	113	138
Unanimity regarding objectives	90	*86*	117	*89*
Strategic fit of development challenges	*86*	114	99	92
Sensitity to weak signals	112			

Notes: The key ratios of strategic capabilities given in tables are percentages that scale the results to the average of comparison group. If the figure is under 100 per cent = key ratio is weaker than in reference group, 100 per cent = same as the average value of measured organizations, etc; skills/management the master and development of management and leadership work; skills/personnel the master and development of one's own work; information flow the availability and exploiting of information; relations co-operations, responsibilities and influence channels; management the support systems of technology, processes and employees; the tables present the weaknesses of strategic competence in sectors (skills, knowledge flow, relations and leadership). Italicized values represent weakest areas (index <90 and max. five areas)

Table VII. The strategic capability of the organization

المنارة للاستشارات

www.mana

challenges and targets of the organization should be discussed more widely and thoroughly in the whole organization, since people's orientation does not totally fit with the aimed strategy of the organization. In this organization, management wants to emphasize more cost efficiency and mechanistic mode of operating, and the personnel is too oriented in innovative development of their work (Figure 3, target situation). According to the stated strategy, they both should be focusing on continuous and client-centered development of services. This means organic operating logics, e.g. applicative (re)use of knowledge and competence, increased co-operation both within the organization and with the clients, flexible relationships and responsibility sharing, as well as coaching type leadership and empowerment.

Strategic capability

The strategic capability of the organization consists of five indexes. The results show management, personnel and comparison results in relation to four areas of organizational behavior (system constituents): competence, information flow, relationships and control (management/leadership) (Table VI). The indexes in the strategic capability area describe both the skills of the organization to perceive its current situation consistently and to act coherently according to the strategy. The indexes in the table are built by comparison with the benchmark group, as explained earlier.

The challenge in the case of organization seems to be the area of competence. For both management and personnel, the stated development challenges do not fit very well with the aimed strategy. According to the strategy, the organization should emphasize the capabilities and competences needed in client-centred service, but instead the orientation of the organization is directed to innovative problem solving (personnel) and cost effectiveness of production (management) as shown in Figure 3. For management, the problem also concerns current operative action: its use of managerial competence does not support the organization's performance in service in the best possible way (See the coloured areas in Table VII, the column on competence.).

The results suggest that management and the personnel could consider using some mechanisms to evaluate the function of leadership together with management, work in the light of the stated strategy, and also consider using a more flexible and systematic development. Service-centred strategy requires empowering and coaching type leadership to support the organization to manage customer service both flexibly and effectively. Mechanistic, production-based management orientation is not the best way of developing the needed capability in the organization. This should be taken into consideration for organization, otherwise there is a threat for the strategic bias getting worse, i.e. creative, *ad hoc* problem-solving mentality of the personnel decreases cost-effective behavior. As a counterpart, the management may increase emphasis on authoritarian production-based leadership.

Power to change

Power to change consists of five different indexes. The indexes measure the resources that the organization uses to archive and maintain change and renewal. Based on the results in this area, the organization shows high capability for change and flexibility and no clear weaknesses exist. Clearly, the highest score from the whole measurement was Challenges presented by target levels (144 per cent, Table VI). Indeed, the whole

المنارة للاستشارات
www.mana

organization's emphasis on the target setting based on current challenges and the information, management of setting targets and supporting systems are in place. The whole organization is also very committed to objectives; information about objectives is on hand, management, processes and responsibilities in relation to objectives and setting are very good. Innovation potential and internal networking ability are clearly above the average level of the benchmark group (Although a more detailed analyses shows some challenges in the area: personnel and management concerning the area of relationships, indicating that more trust and effective co-operation and organizational support are needed across hierarchical and unit boundaries.).

The change compasses of KM-factor® suggest that discussion, communication and interaction mechanisms should be further developed for the whole organization, within and between the units and management/personnel to achieve better unanimity for organizational goals. Level of motivation is on a good level and gives a good starting point for organizational change; change resistance is not expected to be high since the organization has an excellent built-in ability to change. In fact, renewal is one of the company's core values, and it shows in the results.

Comparison between units

The comparison between different units provides further details for overall scores (Table VIII).

Overall, strategic capability shows good total results in all the units. However, the indexes of strategic fit of development challenges is below or near 100 in most units. Based on these results, improvements could be made including proper and more influential co-operative discussions about the strategic goals and targets inside and between different units.

The unit scores in the area of power to change are also very good. As an example, there is an interesting ratio between different customer markets and organization's innovation potential. For example, the extraordinary market in the area of unit 1 creates innovation pressure since there is a need to invent continuously new solutions for the

	All clustered	Unit 1	Unit 2	Unit 3	Unit 4	Average
Renewal capability	115	114	108	108	105	109
Strategic capability	110	107	105	112	102	106
Unanimity according the current situation	120	101	116	124	110	113
Operational profiling according to strategy	109	101	103	118	100	106
Unanimity regarding objectives	104	110	96	92	99	99
Strategic fit of development challenges	96	112	97	100	94	101
Sensitivity to weak signals	112	120	105	106	104	109
Power to change	120	122	111	105	108	112
Challenges presented by target levels	144	171	134	118	121	136
Innovation potential	109	146	110	80	94	108
Level of motivation	108	98	103	105	109	104
Commitment to objectives (management <– > personnel)	129	88	106	113	114	105
Internal networking	108	109	103	108	101	105

Note: Owing to missing information unit 5 is part only in the clustered results

Table VIII. The index summary of all the units

المنارة للاستشارات

www.mana

customers. Simplified markets in the area of unit 3 do not expect new innovations and, therefore, these will not come up. Different results of the innovation potential may indicate that customer interface and expectations directly influence the innovation capability of the serving organization.

Conclusions

The main strategic focus of the case organization was defined by management as flexible organization focusing on service concepts and customization, i.e. organic focus. There was a difference between the action mode of the personnel and management according to the current operational focus of the organization. There seems to be too weak of emphases on service orientation and too much emphases on production based on effectiveness in management's behavior, while personnel emphases in the current situation is mainly development-centred action. This contradiction may affect understanding and implementing the strategic development goals of the whole organization.

The case organization received very good results for both sub-indexes, strategic capability and power to change which describe the overall renewal capability. In general, the case organization did not have significant weaknesses in its renewal capability. Figure 4 shows a high-level summary of development directions in relation to different elements inside the three knowledge environments. There is a clear need to direct organizational renewal capability more towards incremental development and towards customer service operations.

Competencies and skills or capability to develop either own work (personnel) and leadership (management) towards the required strategic direction is clearly the area to be developed.

The processes, new methods and solutions taken into use in the units must be more applicable, having collaborative development and implementation focus. Competence development should be driven by customer input, performance evaluation and reporting results. At the same time, more focus should be put into skill and competence development, making it a continual and systematic process.

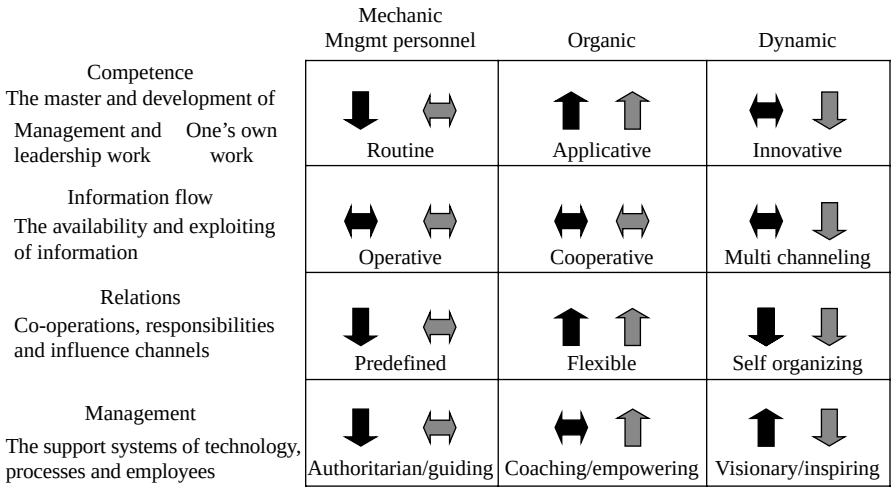


Figure 4.
The summary of the change directions of the case organization

المنارة للاستشارات
www.mana

The measurement results also indicate that efforts must be made to improve the interaction and co-operation of both the management and employees inside and between units. The case organization must concentrate on having a clearer understanding of the role of each member for the operations as a whole and activate co-operation, i.e. inspire people to work together and make continual evaluation and development of operations possible.

Clearly, especially for personnel, increasing development focus towards organic knowledge environment is needed. The feeling and operations for the personnel in the dynamic environment is overemphasized when compared to strategic direction. For the management, the stress for cost-efficient production should be reduced. Organization should move to increase the dynamics to support better customer service-centric operations by delegating power and supporting self-directedness of the organization. However, it is good to remember that all the different operational modes are needed in the organization. The key is to find the right balance between these operational modes and address the right renewal needs and the means to support the aimed strategy.

As a next step, the case organization should focus on developing the processes and dynamics to support capability building, management, and leadership, as well as relational issues for more flexible, empowered, and applicative direction. Luckily, there were no critical alarms according to the survey; therefore, the first concentration point could be to achieve better strategic fit and understanding of development challenges in strategic development projects. It is recommended that the pilot development project concentrates on studying and developing mechanisms in key areas, such as leadership, communication and information sharing and transformation, interaction formation, and authorizing and empowering project members.

Although the personnel answering rate was a bit low, the overall reply rate for the survey (56 per cent) provided a good basis to analyze the case organization further. For future research in the area, the personnel needs to be better committed to the survey. The case organization got very valuable information about its renewal capability. The differences between strategic and operational focuses of the management and personnel require sharpening strategy message. Dissimilar customer markets got distinct results from each other, guiding local organizational development accordingly. Detailed change directions gave valid input to plan the required change programs of the case organization, and, for example, the results in the area of competence development challenges were a real eye opener. The organization is going to continue with the measurement and consider using it as one-key performance indicator for capability development efforts.

Reflections

KM-factor® has been developed in close co-operation with academic and industrial parties originally to support enterprises' competitiveness in knowledge and innovation economy. Hundreds of organizations have been measured with different versions of the method during the past eight years and not only companies but also public organizations have been interested in using it.

KM-factor® is based on the following hypotheses:

H1. The core of organizational renewal is three functional: maintenance, adaptation and radical change. The importance of each for a company's competitiveness depends on the aimed strategy.

المنارة للاستشارات

www.mana

H2. The organizational renewal capability is a systemic characteristic. When the organization acts as a coherent system, the more its systemic mode of operation fits with its strategy, and the more renewal capability it has.

H3. Organizations can be analyzed as three dimensional systems according to their operational mode and function. The data gathered by the questionnaire (that identifies the modes of operation based on three dimensional systems view) can be refined by mathematical analyses to numerical indexes describing the renewal capability of the organization.

Scientific validation of these hypotheses is difficult, since the measurement concerns complex reality with many influencing variables. This is the reason why KM-factor® has been developed over the years in close connection with companies' practices, and its usefulness and advantage for organizations has been the first goal of validation. So far, KM-factor® has passed the constructive validation, since its theoretical basis is solid and hundreds of organizations have been measured by it, and the benefit has been evident in practice. The preliminary analyses also indicate that the indexes of KM-factor® correlate strongly with the future financial success of the company (Pöyhönen *et al.*, 2004). Thus, the results refer to the fact that companies with (system based and strategy connected) renewal capability have more competitive advantage than others. However, the correlation analyses must still be further studied and conclusions must be scientifically reported in detail to be able to draw reliable conclusions. And even after the validation has been reliably conducted, the conclusion can only culminate on the fact that KM-factor® and the systemic view it is based on, is only one beneficial possibility to concretize and measure organizational renewal. It can probably be conducted on other kinds of theoretical and empirical bases as well.

Notes

1. The hypothesis is based on analyses of systemic research traditions. The analyses resulted in characterization of three systems paradigms and the functional antecedents of dynamic systems (Ståhle, 1998).
2. For a full development of this argument, see Ståhle *et al.* (2003).
3. Every organization can be analyzed as a system based on these four dimensions, even though other dimensions could be chosen.
4. For a full description of the methodology, see Ståhle and Grönroos (2000).

References

Appelbaum, S.H. (1997), "Socio-technical systems theory: an intervention strategy for organizational development", *Management Decision*, Vol. 35 No. 6, pp. 452-63.

Benoit, M. and Ramanujam, R. (1999), "Through the Looking glass of complexity: the dynamics of organizations as adaptive and evolving systems", *Organization Science*, Vol. 10 No. 3.

Brown, S. and Eisenhardt, K. (1997), "The art of continuous change: linking complexity theory and time-paced evolution in relentlessly shifting organizations", *Administrative Science Quarterly*, Vol. 42 No. 1, pp. 1-35.

Brown, S. and Eisenhardt, K. (1998), *Competing on the Edge: Strategy as Structured Chaos*, Harvard Business School Press, Boston, MA.

المنارة للاستشارات
www.mana

Edvinsson, L. and Malone, M. (1997), *Intellectual Capital: Realising Your Company's True Value by Finding its Hidden Brainpower*, Harper Collins, New York, NY.

Eisenhardt, K.M. and Brown, S.L. (1999), "Patching: restiching portfolios in dynamic markets", *Harvard Business Review*, Vol. 77 No. 3, pp. 72-83.

Eisenhardt, K. and Martin, J. (2000), "Dynamic capabilities: what are they?", *Strategic Management Journal*, Vol. 21, pp. 1105-21.

Eisenhardt, K. and Tabrizi, B. (1995), "Accelerating adaptive processes: product innovation in the global computer industry", *Administrative Science Quarterly*, Vol. 40, pp. 84-110.

Ferdinand, J. (2004), "Power, politics and state intervention in organizational learning", *Management Learning*, Vol. 35 No. 4, pp. 435-50.

Hamel, G. (1988), "The challenge today: changing the rules of the game", *Business Strategy Review*, Vol. 9 No. 2, pp. 19-27.

Hong, J. and Ståhle, P. (2005), "The co-evolution of knowledge and competence management", *International Journal of Management Concepts and Philosophy*, Vol. 1 No. 2, pp. 129-45.

Hurst, D. (1995), *Crisis and Renewal: Meeting the Challenge of Organizational Change*, Harvard Business School Press, Boston, MA.

Leonard-Barton, D. (1992a), "The factory as a learning laboratory", *Sloan Management Review*, Vol. 34 No. 1, pp. 23-38.

Leonard-Barton, D. (1992b), "Core capabilities and core rigidities: a paradox in managing new product development", *Strategic Management Journal*, Vol. 13, pp. 111-25.

Leonard-Barton, D. (1995), *Wellsprings of Knowledge: Building and Sustaining The Sources of Innovation*, Harvard Business School Press, Boston, MA.

Maula, M. (1999), "Multinational companies as learning and evolving systems: a multiple case-study of knowledge-intensive service companies: an application of autopoiesis theory", doctoral dissertation, Helsinki School of Economics and Business Administration, Helsinki, p. A-154.

Nonaka, I. and Konno, N. (1998), "The concept of 'Ba': building a foundation for knowledge creation", *California Management Review*, Vol. 40 No. 3, pp. 40-55.

Nonaka, I. and Takeuchi, H. (1995), "The knowledge creating company", Oxford University Press, New York.

Nonaka, I., Toyama, R. and Konno, N. (2000), "SECI, Ba, and leadership: a unified model of dynamic knowledge creation", *Long Range Planning*, Vol. 33, pp. 5-34.

Pöyhönen, A. (2004), *Modelling and Measuring Organizational Renewal Capability*, Vol. 200, Lappeenranta, Acta Universitatis Lappeenrantaensis, Digipaino.

Pöyhönen, A. (2006), "Development and validation of a survey instrument for measuring organizational renewal capability", *Proceedings of the 7th International CINet Conference 'Continuous Innovation and Sustainability: Designing the Road Ahead', 8-12 September, Lucca, Italy*.

Pöyhönen, A., Ståhle, P. and Ståhle, S. (2004), "The link between a company's dynamic intellectual capital and business performance", *Proceedings of the International IC Congress: Interpretation and Communication of Intellectual Capital, 2-3 September, Helsinki, Finland* (CD-ROM).

Roos, J., Roos, G., Dragonetti, N.C. and Edvinsson, L. (1998), *Intellectual Capital: Navigating in the New Business Landscape*, New York University Press, New York, NY.

Sanchez, R. (1997), "Strategic management at the point of inflection: systems, complexity and competence theory", *Long Range Planning*, Vol. 30 No. 6, pp. 939-46.

المنارة للاستشارات

www.mana

Sanchez, R. and Heene, A. (1997), "Reinventing strategic management: new theory and practice for competence-based competition", *European Management Journal*, Vol. 15, pp. 303-17.

Ståhle, P. (1998), *Supporting a System's Capacity for Self-renewal*, Yliopistopaino, Helsinki.

Ståhle, P. and Grönroos, M. (2000), *Dynamic Intellectual Capital, Knowledge Management in Theory and Practice*, WSOY, Helsinki.

Ståhle, P., Ståhle, S. and Pöyhönen, A. (2003), *Analyzing Dynamic Intellectual Capital: System-based Theory and Application*, Vol. 152, Lappeenranta, Acta Universitatis Lappeenrantaensis, Digipaino.

Sveiby, K.E. (1997), *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*, Berret-Koehler, San Francisco, CA.

Teece, D.J. (1997), "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, Vol. 28 No. 13, pp. 1319-50.

Teece, D.J., Pisano, G. and Schuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18, pp. 509-33.

Weick, K.E. (1996), "Educational organizations as loosely coupled systems", *Administrative Science Quarterly*, Vol. 21, pp. 1-19.

Weick, K. and Sutcliffe, K. (2001), *Managing the Unexpected: Assuring High Performance in an Age of Complexity*, Wiley, San Francisco, CA.

Further reading

Hansen, M., Nohria, N. and Tierney, T. (1999), "What's your strategy for managing knowledge?", *Harvard Business Review*, March-April, pp. 106-16.

Hussi, T. (2003), "Reconfiguring knowledge management – combining intellectual capital, intangible assets and knowledge creation", Discussion Papers No. 849, The Research Institute of Finnish Economy, ETLA, Helsinki.

Kogut, B. and Zander, U. (1992), "Knowledge of the firm, combinative capabilities, and the replication of technology", *Organization Science*, Vol. 3 No. 3, pp. 383-97.

Sanches, R. (2004), "Understanding competence-based management, identifying and managing five modes of competence", *Journal of Business Research*, Vol. 57, pp. 518-32.

Spender, J.-C. (1996a), "Making knowledge the basis of a dynamic theory of the firm", *Strategic Management Journal*, Vol. 17, pp. 45-62.

Spender, J.-C. (1996b), "Organizational knowledge, learning and memory: three concepts in search of a theory", *Journal of Organizational Change*, Vol. 9 No. 1, pp. 63-78.

Ståhle, P. and Grönroos, M. (1999), *Knowledge Management – Tietopääoma yrityksen Kilpailutekijänä*, WSOY, Porvoo.

Ståhle, P., Pöyhönen, A. and Kyläheiko, K. (2003), "Towards operationalization of dynamic capabilities", in Hosni, Y. (Ed.), *Internet Economy: Opportunities and Challenges for Developed and Developing Regions of the World*, Elsevier, Amsterdam.

To purchase reprints of this article please e-mail: **reprints@emeraldinsight.com**
Or visit our web site for further details: **www.emeraldinsight.com/reprints**

المنارة للاستشارات

www.mana

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

المنارة للاستشارات

www.manaraa.com