# “Managing knowledge resources”


| | |
|---|---|
| **AUTHORS** | Hanne Stokvik<br>Daniel J. Adriaenssen<br>Jon-Arild Johannessen<br>Helene Sætersdal |



| | |
|---|---|
| **ARTICLE INFO** | Hanne Stokvik, Daniel J. Adriaenssen, Jon-Arild Johannessen and Helene Sætersdal (2016). Managing knowledge resources. *Problems and Perspectives in Management*, *14*(1), 105-116. doi:10.21511/ppm.14(1).2016.12 |
| **DOI** | http://dx.doi.org/10.21511/ppm.14(1).2016.12 |
| **RELEASED ON** | Wednesday, 02 March 2016 |
| **JOURNAL** | "Problems and Perspectives in Management" |
| **FOUNDER** | LLC “Consulting Publishing Company “Business Perspectives” |

| NUMBER OF REFERENCES | NUMBER OF FIGURES | NUMBER OF TABLES |
|---|---|---|
| 0 | 0 | 0 |



© The author(s) 2026. This publication is an open access article.

Hanne Stokvik (Norway), Daniel J. Adriaenssen (Denmark), Jon-Arild Johannessen (Norway), Helene Sætersdal (Norway)

# Managing knowledge resources


## Abstract

This article discusses the development of the type of knowledge held to be crucial for creativity and innovation, and which is referred to here as hidden knowledge.

The research question investigated is: How can organizations develop hidden knowledge?

The first purpose of the article is to bring forth a type of knowledge which can give some foundation for knowledge management and innovation. The second objective is to give some foundation for the HR-department, in order to bring knowledge management theory to practical use. The authors develop five propositions concerning a mini theory for the development of hidden knowledge. A descriptive framework of "knowledging" is also developed at the individual, team and organizational levels, for tacit, implicit, explicit and hidden knowledge, which can be used of the HR-department to increase innovation in the organization.


**Keywords:** knowledge management, HR-department, tacit knowledge, hidden knowledge, explicit knowledge, implicit knowledge, knowledging.
**JEL Classification:** L26.

## Introduction

How knowledge resources can influence organizational performance, for instance innovation, is demanded from among others (Minbaeva, 2013, p. 378).

Knowledge is often divided into two main categories: explicit (codifiable) and tacit knowledge (Collins, 2010). Explicit knowledge can be relatively easily formulated using words, figures and symbols, and it can be digitized (Nagy, 2010). This type of knowledge can also be relatively easily communicated to others using ICT. Tacit knowledge is rooted in action (practice) and is related to specific contexts (Polanyi, 2009). It is difficult to communicate this type of knowledge to others in the form of information, because it is difficult to codify or digitize. Tacit knowledge is often an organization's most important strategic resource, because it is difficult for others to acquire and use it, and because it is rooted in the specific problems an organization has to solve. Tacit knowledge can thus be described as an important strategic capability of organizations (Hamel & Prahalad, 1996; 2010). In addition to these two types of knowledge, two other types are also important: hidden knowledge (Kirzner, 1973, 1982; Grant, 2003) and implicit knowledge (see Biack, 2005).

Hidden knowledge is "what we don't know we don't know", which many claim constitutes the basis for creativity and innovation (Kirzner, 1982, p. 273). It has also been described as "the management of ignorance", which is "the key issue for companies as it is for society" (Grant, 2003, p. 222), and has been referred to as "previously unthought-of knowledge" (Thomsen, 1992). Kirzner states explicitly that this type of knowledge provides opportunities for developing something that is creative and new, saying "people do not know what it is that they do not know" (Kirzner, 1982, p. 273).

Implicit knowledge is the knowledge an organization possesses, and which is spread throughout various departments, but which is not utilized or put into productive practice, because knowledge boundaries prevent integration of what an organization knows. It may also be difficult to integrate this knowledge into the larger social system, because there are academic, social, economic, professional and cultural boundaries that inhibit this. The lack of integration of organizations' stores of implicit knowledge results in organizations being "dumber than they need to be".[1]

This article focuses on hidden knowledge and its relationship with HR-practices at the organizational level, i.e. here innovation (Ulrich et al., 2012). This article asks: **How can organizations develop hidden knowledge?**

First we describe the methodology used. Then we develop three assumptions and five propositions concerning the theory for the development of hidden knowledge.

© Hanne Stokvik, Daniel J. Adriaenssen, Jon-Arild Johannessen, Helene Sætersdal, 2015.
Hanne Stokvik, Research Fellow, Nord University Business School, Norway.
Daniel J. Adriaenssen, Research Fellow, Department of Psychology, Århus University, Denmark.
Jon-Arild Johannessen, Ph.D., Professor (Full), Kristiania University College, Norway and Nord University Business School, Norway.
Helene Sætersdal, Associate Professor, Kristiania University College, Norway.

[1] We would like to thank Professor Arnulf Hauan, Nord University Business School, Norway, who coined the frame.

## 1. Methodology: conceptual generalization

Here we will very shortly present the methodology used. For further investigation into the methodology named conceptual generalization we recommend the paper by Adriaenssen & Johannessen (2015), and Bunge (1998).

Research falls into two main categories: conceptual generalization and empirical generalization (Bunge, 1998, pp. 3-50, 51-107, 403-411). Conceptual generalization is an investigation whereby the researcher uses other researchers' empirical findings in conjunction with his or her own process of conceptualization in order to generalize and identify a pattern. This contrasts with empirical generalization, where the researcher investigates a phenomenon or problem that is apparent in the empirical data, and only thereafter generalizes in the light of his or her own findings (Bunge, 1998, pp. 403-411). The starting point for the researcher in the case of both empirical and conceptual generalization will be a phenomenon or problem in the social world.

Conceptual generalization and empirical generalization are strategies that are available for answering scientific questions. Which of these strategies one chooses to use will be determined largely by the nature of the problem and "the subject matter, and on the state of our knowledge regarding that subject matter" (Bunge, 1998, p. 16).

Conceptual generalization, which is the subject of our investigation here, is "a procedure applying to the whole cycle of investigation into every problem of knowledge" (Bunge, 1998, p. 9).

## 2. Assumptions

By theory here we mean assumptions and the system of propositions and their supposed consequences (Bunge, 1977; 1985). When assumptions and propositions are developed, the next stage is to develop hypotheses which can be empirically tested. In this paper we develop system of propositions.

Leaders are not aware of the direction or outcomes of developing hidden knowledge, because this is an unknown magnitude. However, what we do know is that analysis is seldom helpful when developing hidden knowledge, because there is no data or information that can form the basis for this kind of analysis (Kirzner, 1982, p. 273).

We choose to call our preferred method of uncovering and developing hidden knowledge the "Columbus Strategy". The analogy with Columbus seems appropriate here because he "didn't know what he didn't know" when he set out from Europe to discover what he thought was the sea route to India. First, the Columbus Strategy focuses on learning through action, reflecting on action and developing knowledge through action and reflection (Argyris, 1993). The second element of the Strategy − to continue the analogy − is that Columbus was motivated by social response, which we relate here to Asplund's motivation theory (Asplund, 2010). The third element of the Columbus Strategy is that people act in response to the system of rewards in the social system which they are a part of, which we relate here to North's action theory (North, 1968; 1981; 1990; 1993; 1994; 1996; 1997).

**Assumption 1:** Hidden knowledge constitutes the basis of creativity and innovation.

**Consequence:** If an organization wishes to develop creativity and innovation, it should first develop hidden knowledge.

**Assumption 2:** The Columbus Strategy aims at identifying and developing hidden knowledge.

**Consequence:** If organizations wish to develop hidden knowledge, they should first organize and design an organizational learning system, which focuses on learning through action.

**Assumption 3:** The Columbus Strategy relates to Argyris's reflection through action method, Asplund's motivation theory and North's action theory.

**Consequence:** If organizations wish to develop hidden knowledge, they must:

- Embed learning systems in the organization that ensure reflection through action.
- Facilitate social responses in relation to activities that promote creative thinking.
- Design a system of rewards within the organization that promotes creative thinking.

When we operate in the domain of hidden knowledge, it is reasonable to assume that it is largely our beliefs and expectations that guide our actions. The Columbus Strategy is a strategy of discovery, because one journeys into the realm of the unknown without any certain knowledge. One is not even aware of which results one wants to achieve. There is no map of the terrain. A "compass" is no help either except for holding a steady course – but a steady course towards what?

Nevertheless, there is still a great deal of planning involved in projects where the result and the targets are unknown, because we know some of the resources we need, and we have some fundamental knowledge. In reality, however, much of the learning will come while we act, because we must constantly reflect on our actions and what we have learned. We will then be able to react on the basis of what the action resulted in. The pattern is thus: action, reflection, reaction.

In the scope of opportunities, it is assumed that "the new" will emerge, i.e. something which did not exist before it was created. This process is analogous to how an artist works (da Vinci, 2006): the new knowledge that emerges creates unique combinations and new opportunities (reflection), and a new direction is chosen in light of the new combinations that emerge (reaction). The assumption is that hidden knowledge emerges within the scope of opportunities.

The distinction between exploring new knowledge and exploiting existing knowledge (March, 1991) is not relevant with regard to the domain of hidden knowledge. This is because we are both exploring new knowledge and exploiting existing knowledge simultaneously – uncovering and creating what we don't know we don't know. The knowledge that the organization, as a unified system, does not even know that it does not know exists as a potential for value creation. This type of knowledge cannot be codified or transferred to others as information. Hidden knowledge must be uncovered and created in relation to a practical context (i.e. in the process of action, reflection, reaction). This is a form of systematic learning through action, constantly changing course on the basis of the social responses that occur (Asplund, 2010).

In the knowledge society, and especially for the HR-department, knowledge becomes more important in relation to value creation (see Mitra & Gupta, 2006; Ulrich, 2013; 2013a; Wright & Nishii); consequently, managing knowledge resources becomes critical for any organization, regardless of what it does (Wright et al., 2011). Management of knowledge activities within an organization will largely involve developing a culture that promotes the development of the different types of knowledge (Drucker, 2007; Ulrich et al.; 2008; Ulrich et al., 2008a). Some knowledge already exists at the level of the individual (tacit and explicit), while other types of knowledge emerge through interaction in workshops and teams (tacit and explicit). Some knowledge is spread throughout the organization (implicit knowledge), and then there is also hidden knowledge, or not even knowing what we don't know. Hidden knowledge belongs to the creative domain, and must consequently be created through "voyages of discovery", not unlike an artist's explorations, as mentioned above. The act of "discovering" that we describe here is related to four areas:

- **Ideas**: The ability to develop an innovative and entrepreneurial mindset. We describe here eight techniques for what we designate "ideas management".
- **Systematic learning** through action: Acting first, and then systematically reflecting on the way forward. We present five methods for systematic learning through action.
- **Uniqueness factor**: "Developing the difference which makes a difference" for the organization. We describe here a method for organizations to develop a crucial uniqueness factor, by focusing on the distinction between value creation activities and non-value creation activities for customers.
- **New framework**: We focus here on needs, basic values and intentions, not just demands, stated values and behavior. This is done using the method called idealized system design.

Tacit, explicit and implicit knowledge can be mobilized, integrated and coordinated to promote value creation (Ulrich & Smallwood, 2006; 2007). Hidden knowledge, however, must be discovered, identified or created before it can be mobilized, integrated and coordinated. The framework for the Columbus Strategy is shown in Figure 1. The article will elaborate on each of the elements of the Columbus Strategy as shown below.

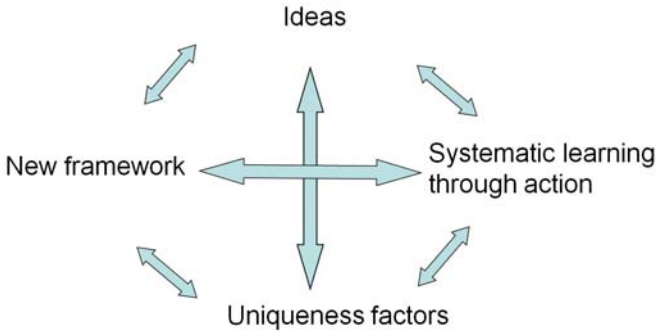


**Fig. 1. Framework for the Columbus Strategy**

## Ideas

The ability to develop ideas is important, amongst other things, because organizations are constantly competing to create new business models, new production processes, new products, new services and other types of innovations (Lengnick-Hall & Lengnick-Hall, 2003). New business models, can, for instance, be discovered by benchmarking, but only to a limited extent, because global competition

quickly eliminates innovation based on imitation. New business models must therefore be created by individual organizations, based on knowledge that is not so readily copied. This applies both to tacit and hidden knowledge, because these two types of knowledge are not as readily copied as explicit knowledge.

Hidden and tacit knowledge are difficult to imitate, so utilizing these types of knowledge will increase an organization's competitive position. If organizations focus on competitive advantages along the axes of tacit and hidden knowledge, and productivity, and to a lesser extent along the cost parameters in the global knowledge economy, this will improve their competitive position. This is because high-cost countries will never be able to compete on cost with low-cost countries such as China and India in the foreseeable future (Sirmon et al., 2007).

**Proposition 1:** Hidden knowledge is developed through idea management.

**Consequence:** According to Hammel's innovation law (Hamel, 2012), only 1-2 percent of ideas become innovations, so it is necessary to manage idea-generation, idea-selection and the nurturing of selected ideas. It is a myth that innovation comes as a result of spin-of projects; it happens, but most innovation comes from structured processes.

Creative thinking is here understood as being synonymous with what McGrath & MacMillan (2000) call "the entrepreneurial mindset".

Ideas in our context are assumed to develop from creative thinking in an organization. How the creative leader organizes and leads this process is essential for uncovering hidden knowledge. Of course, the first thing that springs to mind in this context is that it is not possible to organize and lead something that one does not know exists! However, it is not the hidden knowledge that should be organized and managed, but rather the process of creating new ideas, which can lead to discovering hidden knowledge. This is analogous to the process tacit knowing which leads to tacit knowledge (Polanyi, 2009).

Some questions of practical relevance can help an organization to find out whether it has the necessary tools to discover and develop hidden knowledge (Johannessen et al., 1993; 1993a):

- Has the organization established procedures to deal with ideas that spontaneously arise in the organization?
- Do individuals who contribute ideas receive feedback?
- Is the management committed to providing a reasoned response concerning rejected ideas within a certain time limit?
- How is the ideas process organized within the organization?

These are key questions concerning the procedures used for identifying and developing hidden knowledge. The usual answers that are given when organizations are asked such questions are either related to the formal decision-making process in an organization, or are answers of the type: "– …we had some sort of program; – I am not sure whatever became of it" (Tucker, 2002, p. 79).

If the process of developing ideas is not organized and managed, given the same status as core business processes, and consequently not emphasized, the organization will lose access to value creation potential. Idea management should be the company's "eye toward the future" (Beer, 1994; Ackoff, 1999; Miller, 1978); it should bring to light ideas that already exist in the organization, connect these together into an integrated whole, and create new business opportunities based on them. This should or could be the main focus of the HR-department of the future (Ulrich, 2013; Wright & Nishii, 2013; Wright & Snell, 1998; Wright et al., 2001; Wright & Younger, 2013).

The purpose of idea management is to make innovation of a core process in an organization, because without innovation most organizations will not survive in the global knowledge economy (see Cairncross, 2002, p. 23; Ulrich, 2013a). Tucker (2002, pp. 80-96) describes eight different models for idea management, which in our view can all be used as aspects to uncover hidden knowledge.

**3.1. The suggestion box.** The well-known and proven suggestion box is perhaps past its prime in most organizations. One of the reasons that the suggestion box does not work as intended is that feedback is often poor, and management often has no obligation to provide feedback to individuals in an organization who propose ideas. An improvement on the traditional suggestion box is to commit management to providing reasons for any rejections of ideas within a given time, for instance within a fortnight (see Johannessen et al., 1993; 1993a).

**3.2. Continuous improvements.** Continuous improvements have, as a rule, two focus areas: cost savings and quality improvements. Japanese companies have carried out many such programs and call them Kaizen. Toyota is a good example of how Kaizen has been particularly successful (see Liker, 2008).

**3.3. The open-door model.** This model allows those who have ideas to go beyond bureaucratic processes and discuss ideas directly with the relevant manager. It is used in many organizations to "open doors" to

information and communication channels. For instance, Disney uses this model in an interesting way: three times a year, individuals with ideas have an opportunity to "sell their ideas" directly to the top management (see Tucker, 2002, p. 89).

**3.4. Team for new business ideas.** This model focuses on launching and obtaining funding for unconventional new products, services or facilities. In practice, such teams work independently of functional areas in an organization. When new ideas are developed, they are analyzed for future potential, and then sold to the management (Kahan, 2013; Unterberg, 2013).

**3.5. Incubator model.** This model has gained recognition in universities and research centres that seek to foster new enterprises based on the knowledge that exists and develops in these environments. The incubator model became popular in the 1990s as a result of the dot-com boom. There are also many examples where this model has been successful, such as Xerox's PARC (Palo Alto Research Center). The PC mouse, for instance, is a result of PARC's activities. Paradoxically for Xerox, it was other organizations that profited from ideas developed at PARC. If organizations are to use this model, then the experience of Xerox should be taken into consideration, so that it is the parent company that profits when new businesses are started up. If not, it is reasonable to assume that those who invest resources in incubator environments will lose interest.

**3.6. Democracy model.** Often we see that idea development is something that is left to senior management and the various forums they participate in. The democracy model is based on ideas that are evenly dispersed throughout an organization, and not reserved for management at various levels.

There are many different types of democracy models. The most extreme type is the one that allows the person with the idea to present it to all the employees, or everyone in his/her department. The ideas with the most votes will then go on to the next screening level. Another variation of the democracy model is where representatives of the department or the entire organization make up a team that evaluates the ideas that are presented to them.

**3.7. Innovation team.** This model requires an organization "to set up a company-wide network of people with demonstrated skills in innovation and give them very clear marching orders: Go out and find some new ideas that have promise" (Tucker, 2002, p. 93). However, this model excludes people who lack specialized innovation knowledge, but who could contribute that little extra that was needed to create something new; research shows that using experts and novices together often provides the best solutions (Surowiecki, 2005).

**3.8. Innovation catalysis.** This model uses the same reasoning as in the incubator models with a significant exception − the ideas do not leave the organization. The ideas are tested in each department of the organization, and then are either shelved or proceed to the next step in the evolutionary process.

There are many other models that may prove useful in the idea management process, such as action models, expert-novice models, committed-feedback models, cross-functional teams, etc. The point is that an organization should be conscious of the idea development process, so that ideas are systematized and structured in an appropriate manner, and new knowledge may be developed.

**Proposition 2:** Idea management is a necessary but not sufficient condition for the development of hidden knowledge. The sufficient condition is that people with ideas in an organization are given an adequate social response. If social feedback does not exist, it will be difficult to develop and uncover the hidden knowledge in an organization.

**Consequence:** If organizations implement various models of idea management, they have developed a system to enable the fostering of new ideas. These systems however have to be based on a leadership philosophy where the management is obliged to give rationale explanations within a decided timeframe for the neglect of the use of the idea.

## 4. Systematic learning through action

This section will show how to use learning through action in a systematic and structured way (Broshyk & Dilworth, 2010) in order to get to grips with hidden knowledge.

We will briefly describe five methods that support learning through action in order to uncover hidden knowledge. These methods are: the falsification method; the input method; "the art of stumbling" method; the anti-flocking method and the judo method.

Just as Columbus could measure progress by navigating by the stars, it is important when learning through action to find fixed anchor points against which progress can be measured. McGrath & MacMillan (2000, p. 267) use hypotheses for projects where uncertainty is high and there is little factual information available. Hidden knowledge satisfies these two requirements. However, it is important to find some anchor points so that

deviations may be measured, in the same way that Columbus used the stars, even though he did not know where he was, and had no concrete information about where he was going. However, he had a hypothesis, which we now know was not correct. Anchor points act as psychological support to reduce the perceived level of uncertainty.

When facts are sparse and hypotheses are largely tentative, projects will be mainly guided by expectations. Expectations may serve as a future indicator for controlling activities in the here and now, which we also find in positive psychology tools (Lewis, 2015, pp. 331-338; Ko & Donaldson, 2015).

If one formulates expectations and assumptions into hypotheses one can act on, then these hypotheses can either be disproved or confirmed. In this way, learning will emerge through action. This structured method for measuring progress may be termed **the Falsification Method**.

Another way to measure progress when assumptions are very tentative and there is little factual information is to use input factors as performance indicators. For instance, this may be carried out in relation to the specific use of resources, which can be measured over a certain period of time against results that are achieved. This will provide a sense of progress that can be psychologically important for the parties involved (Joseph, 2015, pp. 11-13). This may be called **the Input Method** in systematic learning through action.

Most projects will involve working in teams when solving specific problems. If assumptions are large and the knowledge base is small, it will be possible by trial and error to move forward slowly building up the knowledge base. As the team learns more about the key drivers of the project, team members will also learn more about themselves and the others in the team. This is a slow process whereby one gains an understanding of the other members' unique expertise (Bouskila-Yam & Kluger, 2011).

Unexpected findings, side effects and "spin-offs" may be just as important results as whatever you set out to develop in the first place. This may be described as "the Art of Stumbling". For instance, some of the world's greatest things have come about "by chance". Scientists and others often start out by investigating one thing, and then discovering something completely new and different. Electro-magnetism (1820) was discovered in this way, as well as dynamite (1866), acetanilide (1886) − a fever-reducing agent − X-rays (1895), cornflakes (1898), penicillin (1928), antabus (1945), post-it notes (1974), Viagra (1991), the American continent by Columbus (1492), and much more. Learning how to check for side effects and spinoffs requires an essential expertise in order to discover and develop what we don't know we don't know. The progress of the project can then be measured by the success of the side effects and spinoffs, and not necessarily in relation to whether the main objective of the project was reached. However, generally only a prepared mind can exploit such unforeseen events, coincidences and "spin-offs" (Porras et al., 2008, pp. 163-165; Buckingham & Coffman, 2001). This procedure is referred to here as the **Art of Stumbling Method** in relation to systematic learning through action.

When there is a great deal of turbulence in the business world, and uncertainty and complexity are great, it is important, without exception, to focus and simplify. A measure of success when using the Columbus Strategy will be the degree of simplification in what one intends to communicate. Any type of communication, expertise or actions is based on complex underlying structures. To use an analogy, it is not necessary to know how the processes in the brain work, how the nerves operate in the arm, or how the muscle fibres function, when one reaches out to greet a person in a meeting and say "how are you?". Similarly, one does not need to know about the fundamental drivers of a Columbus project. It is often enough to know that any discovery may be useful in some context, although it may be used in useless and destructive ways by others. This requires simplifying what one wishes to communicate, so everyone is able to relate to it at their respective levels.

Complex knowledge structures may also be simplified into a coherent pattern. For instance, although the market may be stable for a period of time, a situation will often develop whereby some actors start to take high risks – the system seems to have omnipotence attributed to it. This results in the market becoming unstable and difficult to predict, and sooner or later the instability will be perceived as chaotic. To protect themselves in this chaos most will follow the "lead sheep", and so a "bubble" develops in the market (Shiller, 2005). Of course, at the end of the chaos the bubble will burst (or result in a "crash landing"). After this, people will be involved in the process of reconstruction, in which a few informed individuals lead in order to build up the market and surrounding social structures again.

What the development of bubbles may be understood as a type of social flocking process, analogous to the behavior of a flock of birds. In a flock of birds in flight each bird will try to match the direction of the birds around it that it can detect. When the bubble bursts in the market, "the flock" becomes a collection of autonomous individuals.

The flocking behavior after the chaos will slowly but surely lead to a re-stabilization of the market and surrounding social structures; the results are often creatively better than before the chaos. This line of reasoning is related to Schumpeter's concept of creative destruction (see Jonscher, 1999).

It seems reasonable to assume that the six elements in the pattern – stability, omnipotence, instability, flocking (bubble), chaos (crash landing) and new-flocking behavior – repeat themselves throughout history. If this is correct, then the whole pattern is dynamic. This means that each of the variables will occur in all social systems at different levels and with variable force and effect.

Concerning the development of knowledge in the Columbus Strategy it is important to be aware of where one is located within the pattern, and have an idea about when the next element will occur, assuming that one's insight is correct. From a knowledge perspective, the main insight is to act differently than the others do, because you will then be able to profit where others will not. The implication for action in what we choose to call the **Anti-flocking Method** is to know where you are, and to act differently from the majority. It is under these conditions that hidden knowledge may emerge.

Being different is the difference that really makes a difference, if we are to move into the unknown, if the goal is to discover what others are unable to. This method may be called **the Judo Method**. Always looking to see what others are doing, learning from them and then acting distinctly different from how they act is the core of this process, not unlike the Anti-Flocking Method. However, the Judo Method (Yaffi & Kwah, 2001) differs from the Anti-Flocking Method in that Judo Method makes use of others' skills and expertise. In the Judo Method new phenomena develop as a result of a dialectical process.

The underlying techniques in the Judo Method are as follows (Yaffi & Kwah, 2001, pp. 4-15):

- not to use force against the other's strength
- to move away from the other
- to block in order to find intervention points
- intervention points always occur within the other's area, in relation to his/her resources, partners, suppliers or competitors

**Proposition 3:** Hidden knowledge is developed through an organization's conscious relation to systematic learning through action.

**Consequence:** If companies implement various methods for systematic learning through action, they will be able to cultivate emerging ideas and spin-offs.

## 5. Uniqueness factors

Porras et al. (2008) provide a perspective that can constitute a basis for discussing what it means to be unique. Imagine that you are wholly concerned with developing the perfect products and services, and you do so with passion, perseverance and dedication. This will be experienced by customers, users, etc. as something positive, whatever the outcome, because they will feel that the organization in question has their needs, wishes and preferences in mind (Brown & Ryan, 2015). To strive for perfection as Porras et al. express means to be constantly looking for opportunities to uncover hidden knowledge, so that new products and services can be provided to customers, users, etc.

However, the catch with continually striving for "the perfect" is that customers are often more interested in something that works and satisfies than in something perfect (Simon, 1997). If the perfect creates no significant added value for the customer, and is also more expensive, then it is reasonable to assume that the customer will not be interested. The question is always whether the organization in question is able to stand out in areas which the customer perceives as representing added value. We call this the uniqueness factor. In other words, in relation to the view of Porras et al., developing hidden knowledge is not necessarily useful to the customer if it does not result in added value.

The uniqueness factor says something about what makes a service or product unique in relation to what competitors are able to deliver. It is an objective element in the sense that customers are tested for perceptions in areas that lead to added value. In other words, the uniqueness factor addresses whether or not there is added value for customers, while a "perfect" product does not necessarily provide any added value for customers.

Tests to detect any uniqueness factor are twofold and relatively simple. First, it is important to identify what is important to customers related to what the organization delivers. Then the deliverable's uniqueness is tested in relation to others that provide the same service or product, in those areas which are most likely to result in added value for the customer; in this context, it is important to have a high degree of uniqueness, i.e. a difference that makes a difference (Bateson, 1972, pp. 271-272).

An easy way to get to grips with hidden knowledge related to the uniqueness factor may be to consider

what is described as NVA (non valued-added) (Liker, 2008). By focusing on NVA, and then eliminating all activities that do not result in added value for customers, the uniqueness factor will increase.

Creating added value for customers is objective in the sense that it can be tested by analyzing the customer experience. It is the individual experience where the customer participates in determining NVA, thereby creating the pre-condition for developing new products and services.

VA (value added for customers) and NVA (non value added) can be specifically examined along three dimensions with specified variables; this is similar to LaSalle & Britton (2003, p. 13). For each of the variables in Table 1, two questions are asked:

1. How can VA be promoted?

2. What can be done to remove NVA?

By asking these two questions of the variables in Table 1, hidden knowledge may be discovered, uncovering what we don't know we don't know.

Table 1. Domains and variables[2] for VA and NVA aimed at uncovering hidden knowledge

| Variables | Domains | | |
|---|---|---|---|
| | Emotional | Emotional | Emotional |
| 1 | Well-being | Well-being | Well-being |
| 2 | Personal growth | Personal growth | Personal growth |
| 3 | Caring | Caring | Caring |
| 4 | Relationships | Relationships | Relationships |
| 5 | Status | Status | Status |
| 6 | Self-esteem | Self-esteem | Self-esteem |
| 7 | Belonging | Belonging | Belonging |
| 8 | Identity | Identity | Identity |

If the variables are used in a workshop focusing on determining NVA, this may be calculated by systematically reviewing the variables in the three domains, or as a result of considering the relationships between the variables in the different domains; the latter method results in 552 combinations (n (n-1)).

The first step in discovering hidden knowledge, using Table 1 and the two questions related to the variables, is to consider the answers to the questions. The second step is to evaluate the importance of NVA and VA in relation to what emerged in the first step. The third step is to select the hidden knowledge that creates the greatest uniqueness factor for the organization. The fourth step is to integrate the selected hidden knowledge in the business model. The fifth and final step is to create added value for the customer in relation to the hidden knowledge selected.

**Proposition 4:** Hidden knowledge is developed when using value added (VA) and non value added (NVA) questions, in relation to the domains and variables in Table 1.

**Consequence:** If an organization wishes to increase its degree of uniqueness, it should eliminate all activities that do not create added value for customers (NVA).

**5.1. New frameworks.** In cases of emerging events, which may be coincidences or something occurring by pure chance, one way to interpret and understand them is to frame the organization's activities in a new way. For instance, we can frame arbitrary events in a market so that we understand them as a sub-segment of the market. For example, a "housing bubble" may be framed in such a way that it only applies to the housing market. A "tulip bubble" (Dash, 2010) may be framed so that it only applies to investments in tulips. An "IT bubble" may be framed so that it only applies to investments in IT companies' stocks, etc.

It will be possible to envision new and emerging skills as constituting a future core competence. For instance, cultural resources may be framed so that certain norms and values are valid while others are not. We will also be able to frame our understanding of leadership, in order to focus on specific competencies which a leader in the knowledge society should have (Bolman, 2013). The purpose of using a new framework is to give meaning and legitimacy to a change of course, Normann argues (2001).

One framework that has proved useful in several contexts is framing a potential market in terms of the customer's needs, rather than customer demands. For example, Amazon.com uses such a strategy: by analyzing customer demand – a customer's purchasing history – Amazon establishes a customer profile which is used to predict the customer's needs with an eye to stimulating the customer's future purchases, offering the customer specific products on the basis of his/her past purchasing profile.

People's actions may also be framed in relation to intent and behavior. In psychology, action is often defined as intention plus behavior. What we often do in practice is to interpret people by their behavior. However, if we frame in an understanding of the customer in relation to intention rather than just his/her behavior, then

[2] These domains and variables are adapted from LaSalle & Britton (2003, p. 13).

other possibilities may emerge. The new elements that emerge may be used as intervention points in analyzing his/her needs, wants and preferences.

By framing customers in relation to the needs they express, their basic values and their intentions, then it is possible to get to grips with hidden knowledge concerning the customer, which can help an organization to re-design and re-define both its business model and market.

Using a new framework is appropriate when an organization is at a "point of no return" and incremental improvements will not lead to future success. In such a situation, it is reasonable to assume that it will be breakthrough strategies that promote success.

In order to get to grips with hidden knowledge in the context of a new framework, idealized design (see Ackoff et al., 2006) is a conceptual tool that may help to uncover what we don't know we don't know.

Idealized design can quite simply be defined as imagining how the future ideal solution would have been today, and then mentally working your way backwards to the point where you actually are today. This is what Karl Weick calls "Future Perfect Thinking" (Weick, 1979). The point of focusing on what the ideal solution would have been today and not, say, in five years, is that: "…we know that where we say today we would like to be five years from now, is not where we will want to be when we get there. Thing will happen between now and then that will affect our goals and objectives. By focusing on what we want right now, we can eliminate that potential source of error" (Ackoff et al., 2006, p. 36).

Idealized design as a method may be formulated as a stepwise process (Ackoff et al., 2006, pp. 5-25). First you define the problem-complex the organization finds itself in. Then you imagine what the ideal situation would have been in the present. Then one realizes the desired present situation, by uncovering which resources that would have had to exist in the present, in order for the ideal situation to manifest itself.

In idealized design schemes, then, ideally all affected persons should participate in the development process, because this increases the range of ideas that can be explored in relation to discovering and developing hidden knowledge in an organization. The duration of such an idealized design process will be over five to six days, say Ackoff et al. (2006, p. 31). There are three rules that the process should bear in mind (Ackoff et al., pp. 33-36):

- A burning desire should resonate in the process, not just decisions based on existing resources.
- All stakeholders should be brought into the process.
- Only positive contributions should be accepted; critics and realists must limit their enthusiasm.

**Proposition 5:** Idealized design is an effective method for developing hidden knowledge.

**Consequence:** If an organization chooses idealized design in order to develop hidden knowledge, it must follow the processes and guidelines this method is subject to.

**5.2. Theoretical policy implications – knowledging.** Nonaka & Takeuchi (1995) and Nonaka and Kono (1998) have developed the SECI model (socialization, externalization, combination and internalization). This model is mainly oriented towards epistemology. Hidden knowledge relates to the intellectual, emotional and creative domains, and is therefore located between epistemology and ontology.

The epistemological dimension includes and distinguishes between tacit knowledge, explicit knowledge and implicit knowledge. The ontological dimension is here understood as hidden knowledge, because this knowledge has not yet become a part of our consciousness; it has not yet become part of our epistemology, but is part of the ontological dimension, even if we don't know where to look for it. We believe that knowledge can be developed by individuals, teams and organizations. Individuals develop and transfer tacit knowledge and explicit knowledge (Grant, 2003). Teams develop and communicate implicit and hidden knowledge. Organizations mobilize, coordinate and integrate hidden, tacit, implicit and explicit knowledge. Several authors have discussed the knowledge process by distinguishing between levels – individuals, teams and organizations – as well as making distinctions between epistemology and ontology (see Hedlund, 1994; Nonaka & Takeuchi, 1995; Zollo & Winter, 2002; Nonaka & Konno, 1998).

We use the term "knowledging" to describe the connection between epistemology and ontology at the individual, team and organizational levels. If knowledge creation is a learning process, we can distinguish four processes each operating on three levels (individual, team, organizational) that use the four knowledge domains (tacit, explicit, implicit and hidden). The four processes are knowledge development, mobilization, integration and coordination (Sanchez, 2001). We illustrate the various processes in Table 2. For pedagogical reasons, we have not included the processes that run between levels, nor have we considered the knowledging that

occurs between the organization and the external world, so as not to further complicate the processes. Table 2 should therefore be understood as a descriptive model of knowledging.

Table 2. Knowledging at the individual, team and organizational levels

| Knowledge types | Knowledging | | | |
|---|---|---|---|---|
| | Development of knowledge | Mobilization of knowledge | Integration of knowledge | Coordination of knowledge |
| Tacit knowledge | Practical contexts | Mentoring | Master apprentice relationships | Organization |
| Explicit knowledge | Systematic cognitive processes | Clear intentions | Experience transference | Results focus |
| Implicit knowledge | Structural relations | Networks | Multi-disciplinary teams | Clear aims |
| Hidden knowledge | Columbus strategies | Innovation processes | Entrepreneurship | Incentives |

## Conclusion

The research question was: How can organizations develop hidden knowledge? The mini theory consisting of three assumptions and five propositions that have been developed is the answer of the research question. For further research the mini theory should be operationalized with hypothesis. Case studies should be developed to investigate the knowledge creation process behind innovations, in order to uncover hidden knowledge.

## References


1. Ackoff, R.L. (1999). *Recreating the Corporation*, New York, OUP.
2. Ackoff, R.L., Magidson, J. & Addison, H.J. (2006). *Idealized Design, Wharton School Publishing*, New Jersey, Pennsylvania.
3. Adriaenssen, D.J. & Johannessen, J-A. (2015). Conceptual generalization: Methodological reflections in social science, A systemic viewpoint, Kybernetes, *The international journal of cybernetics, systems and management sciences*, 44 (4), pp. 588-605.
4. Argyris, C. (1993). *Knowledge for Action*, San Francisco: Jossey Bass.
5. Asplund. (2010). *Det sosiale livets elementære former*, Stockholm: Korpen.
6. Bateson, G. (1972). *Steps to an ecology of mind*, New York: Ballantine Books.
7. Beer, S. (1994). *Diagnosing the System for Organizations*, New York: John Willey & Sons.
8. Bicak, K. (2005). *International Knowledge Transfer Management*, Aachen: Shaker Verlag.
9. Bolman, L.G. (2013). *Reframing Leadership, The Leaders Guide to the Four Dimensions of Organizational Life*, London: Jossey Bass.
10. Bouskila-Yam, O. & Kluger, A.N. (2011). Strength based performance appraisal and goal setting, *Human Resources Management Review*, 21, pp. 137-147.
11. Broshyk, Y. & Dilworth, R. (2010). *Action Learning: History and Evolution*, London: Palgrave Macmillan.
12. Brown, K.W. & Ryan, R.M. (2015). A Self-determination theory perspective on forstering healthy self-regulation from within and without, in Joseph, S. (Ed.). Positive Psychology in Practice, New York: Wiley, pp. 139-159.
13. Buckingham, M. & Coffman, C. (2001). *First break all the rules*, London: Simon & Schuster.
14. Bunge, M. (1977). Treatise on basic philosophy. Vol. 3. Ontology I: *The furniture of the world*. Dordrecht, Holland: D. Reidel.
15. Bunge, M. (1985). *Philosophy of Science and Technology*, Dordrecht, Part I, Reidel.
16. Bunge, M. (1998). *Social Science under Debate: A Philosophical Perspective*, Toronto: University of Toronto Press.
17. Cairncross, F. (2002). *The Company of the Future*, Boston: Harvard Business School Press.
18. Collins, H. (2010). *Tacit and Explicit Knowledge*, Chicago: University of Chicago Press.
19. Dash, M. (2010). *Tulipomania*, London: Phoenix.
20. da Vinci, L. (2006). *Leonardo da Vinci: The Complete Works*, New York: David & Charles.
21. Drucker, P.F. (2007). *Management Challenges for the 21st century*, New York: Butterworth-Heinemann.
22. Hedlund, G. (1994). A model of knowledge management and the N-form corporation, *Strategic Management Journal*, 15, pp. 73-91.
23. Grant, R.M. (2003). The knowledge-based view of the firm, in Faulkner, D.O. & Campell, A. *The Oxford Handbook of Strategy*, Oxford: Oxford University Press, pp. 203-231.
24. Hamel, G. (2012). *What matters now: How to Win in a World of Relentless Change, Ferocious Competition, and Unstoppable Innovation*, New York: John Wiley & Sons.
25. Hamel, G. & Prahalad, C.K. (1996). *Competing for the Future*, Boston: Harvard Business School Press.
26. Hamel, G. & Prahalad, C.K. (2010). *Strategic Intent*, Boston: Harvard Business School Press.
27. Johannessen, J.-A. & Olaisen, J. (1993). The information intensive organization: A study of governance, control and communication in a Norwegian shipyard, *International Journal of Information Management*, 13 (5), pp. 341-354.
28. Johannessen, J.-A., Olaisen, J. & Hauan, A. (1993a). The challenge of innovation in a Norwegian shipyard: facing the Russian market, *European Journal of Marketing*, 27 (3), pp. 23-39.
29. Jonscher, C. (1999). *The Evolution of Wired Life*, New York: John Wiley.
30. Joseph, S. (2015). Forword, in Joseph, S. (Ed.). *Positive Psychology in Practice*, New York: Wiley, pp. 11-13.
31. Kahan, S. (2013). *Getting Innovation Right: How to Turn Ideas into Outcomes*, London: Jossey Bass.
32. Kirzner, I. (1973). *Competition and Entrepreneurship*, Chicago: University of Chicago Press.

33. Kirzner, S. (1982). The theory of entrepreneurship in economic growth; in Kent, C.A., Sexton, D. L. & Vesper, K.H. (Ed.). *Encyclopedia of Entrepreneurship*, Prentice Hall, Englewood Cliffs. N.J.
34. Ko, I. & Donaldson, S.I. (2011). Applied positive organizational psychology: The state of science and practice, in Donaldson, S.I., Csikszentmihalyi, M. & Nakamura, J. (Eds.). *Applied positive psychology*, New York: Routledge, pp. 137-154.
35. LaSalle, D. & Britton, T.A. (2003). *Priceless: Turning Ordinary Products into Extraordinary Experiences*, Boston: Harvard Business School Press.
36. Lengnick-Hall, M.L. & Lengnick-Hall, C.A. (2003). *Human Resource Management in the Knowledge Economy*, San Francisco, BK.
37. Lewis, S. (2015). Bringing Positive Psychology to Organizational Psychology, in Joseph, S. (Ed.) *Positive Psychology in Practice*, New York: Wiley.
38. Liker, J. (2008). *Toyota Culture: The Heart and Soul of the Toyota Way*, New York: McGraw Hill.
39. March, J.G. (1991). Exploration and exploitation in organizational learning, *Organizational Science*, 2, pp. 71-87.
40. McGrath, R. & MacMillan, I. (2000). *The Entrepreneurial Mindset*, Boston; MA: Harvard Business School Press.
41. Miller, J.G. (1978). *Living Systems*, New York: McGaw-Hill.
42. Minbaeva, D. (2013). Strategic HRM in building microfoundations of organizational knowledge based performance, *Human Resource Management Review*, 23, pp. 378-390.
43. Mitra, A. & Gupta, A. (2006). *Creating Agile Business Systems with Reusable Knowledge*, Cambridge: Cambridge University Press.
44. Nagy, K.H. (2010). *Transforming Government and Building the Information Society*, Berlin: Springer.
45. Nonaka, I. & Konno, N. (1998). The concept of BA: Building a foundation for knowledge creation, *California Management Review*, 40 (3), pp. 40-54.
46. Nonaka, I. & Takeuchi, H. (1995). *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford: Oxford University Press.
47. Normann, R. (2001). *Reframing Business: When the Map Changes the Landscape*, London: John Wiley & Sons.
48. North, D.C. (1968). Sources of productivity change in ocean shipping 1600-1850, *Journal of Political Economy*, 76, pp. 953-970.
49. North, D.C. (1981). *Structure and Change in Economic History*, New York: Norton.
50. North, D.C. (1990). *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
51. North, D. (1993). Nobelforedraget. Available at: http://www.nobelprize.org/nobel_prizes/economics/laureates/1993/north-lecture.html#not2. Accesed on 4 May 2012.
52. North, D.C. (1994). Economic performance through time, *American Economic Review*, 84, pp. 359-368.
53. North, D.C. (1996). Epilogue: Economic performance through time; in Alston, L.J., Eggertson, T. & North, D.C. *Empirical studies in institutional change*, Cambridge: Cambridge University Press, pp. 342-355.
54. North, D.C. (1997). Prologue, 3-13 in J.N. Drobak & J.V.C. Nye, *The frontiers of the new institutional economics*, New York: Academic Press.
55. Pfeffer, J. & Sutton, I. (2000). *The Knowing-Doing Gap*, Boston: Harvard Business School Press.
56. Polanyi, M. (2009). *The Tacit Dimension*, Chicago: University of Chicago Press.
57. Porras, J.; Emery, S. & Thompson, M. (2008). *Success Built to Last*, San Francisco: Jossey Bass.
58. Sanchez, R. (2001). *Knowledge Management and Organizational Competence*, Oxford: Oxford University Press.
59. Shiller, R.J. (2005). *Irrational Exuberance*, Princeton: Princeton University Press.
60. Simon, H.A. (1997). *Administrative Behavior: A Study of Decision-making Processes in Administrative Organizations: A Study of Decision-making Processes in Administrative Organizations*, London: The Free Press.
61. Sirmon, D., Hitt, M. & Irelanf, R. (2007). Managing firm resources in dynamic environments to create value: looking inside the black box, *Academy of Management Review*, 32 (1), pp. 273-292.
62. Surowiecki, J. (2005). *The Wisdom of Crowds*, New York: Abacus.
63. Tucker, R.B. (2002). *Driving Growth through Innovation: How Leading Firms are Transforming their Futures*, San Francisco: Berrett-Koehler Publisher.
64. Ulrich, D. (2013). Forword, in Ulrich, D., Brockbank, W., Younger, J. & Ulrich, M. (eds.), *Global HR Competencies: Mastering Competitive Value from the Outside in*, New York: McGraw Hill, pp. 5-21.
65. Ulrich, D. (2013a). Future of Global HR: What's Next?, in Ulrich, D., Brockbank, W., Younger, J. & Ulrich, M. (eds.), *Global HR Competencies: Mastering Competitive Value from the Outside in*, New York: McGraw Hill, pp. 255-268.
66. Ulrich, D., Younger, J., Brockbank, W. & Ulrich, M. (2012). *HR from the Outside in: Six Compeencies for the Future of Human Resources*, New York: Mcgraw Hill.
67. Unterberg, B. (2013). *Crowdstorm: The Future of Ideas, Innovation, and Problem Solving is Collaboration*, London: John Willey & Sons.
68. Yaffi, D.B. & Kwak, M. (2001). *Judo Strategy*, Boston: Harvard Business School Press.
69. Zollo, M. & Winter, S.G. (2002). Deliberate learning and the evolution of dynamic capabilities, *Organization Science*, 13, pp. 339-351.
70. Weick, K.E. (1979). *The Social Psychology of Organizing*, London: John Wiley.

71. Wright, P.M. & Nishii, L.H. (2013). Strategic HRM and Organizational behavior: Integrating multiple levels of analysis, in Paauwe, J., Guest, D.E. & Wright, P.M. (2013). *HRM & Performance: Achievements & Challenges*, London: Wiley, pp. 97-110.
72. Wright, P.M. & Snell, S.A. (1998). Towards a unifying framework for exploring fit and flexibility in strategic human resource management, *Academy of Management Review*, 23, pp. 756-772.
73. Wright, P., Dunford, B. & Snell, S. (2001). Human resources and the resource based view of the firm, *Journal of Management*, 27, pp. 701-721.
74. Wright, P.M., Boudreau, J.W., Pace, D.A., Libby Sartain, E., McKinnon, P., Antoine, R.L. (Eds.). (2011). *The Chief HR Officer: Defining the New Role of Human Resource Leaders*, London: Jossey-Bass.
75. White, J. & Younger, J. (2013). The Global Perspective, in Ulrich, D., Brockbank, W., Younger, J. & Ulrich, M. (eds.); *Global HR Competencies: Mastering Competitive Value from the Outside in*, New York: McGraw Hill, pp. 27-53.