HOLISTIC KNOWLEDGE MANAGEMENT

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After a short introduction into holistic management approaches in general, the problem area of knowledge management, and some basic definitions of key terms a holistic process model – the K2BE® Roadmap – is discussed as a guideline for the implementation of knowledge management. The four sections and phases of the K2BE® Roadmap are described shortly. At last the core lessons learned are outlined.

1   Introduction

Relating to knowledge management – the buzzword of the 21st century – the question is still unanswered if it can keep its promise helping firms to accomplish and extend their business excellence by managing the knowledge of their personal in a professional manner in order to achieve product leadership, customer intimacy, and operational excellence as well. Many different management concepts have been used till now to reach this objective. Some of them only consider partial aspects of an organisation, some try to take into account some more of the whole organisation. The most successful ones seem to be the holistic strategical management concepts [6]. Knowledge management may also be introduced in a holistic and strategic manner. In the following besides knowledge management two additional holistic management concepts are outlined and compared to each other.

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Looking at the development of holistic strategical management concepts over time which reached a nameable pervasion in organisations (see Figure 1: Overview on Holistic Management Concepts, [3]) the total quality management (TQM) concept is to be mentioned first. The overall objective of TQM is to introduce quality thinking throughout the whole organisation. The focus was and still is to accomplish business excellence by total quality orientation. An example of a process model in this area is the European Foundation for Quality Management (EFQM) Excellence Model (see [2] for details).
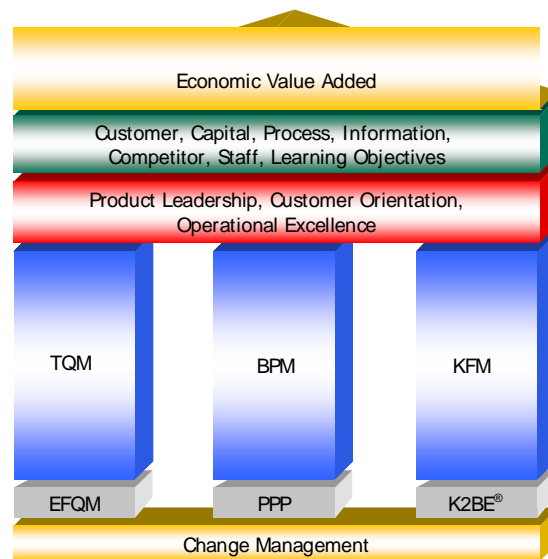

Figure 1: Overview on Holistic Management Concepts (clipping)

The second is the Business Process Management (BPM) approach. It aims mainly at improving operational excellence by aligning the business processes to the customer ones. A set of tools and techniques for this purpose is "Participative Process Prototyping" [8] which includes instruments for all phases of BPM.

Knowledge management (KM) installed in a holistic manner targets the methodical management of all intangible resources of an organisation. This approach of knowledge management is based on the understanding of knowledge as a strategical resource of an organisation found in the core competencies of all of its members. The challenge concerning knowledge management is that the actual situation is unique in every organisation. That means every company has to find its own way. Nevertheless there are some elements in common which have to be taken into account. The K2BE[®] roadmap (see [3], [9]) is a process model for installing professional knowledge management.

The three outlined holistic management approaches have in common their orientation towards business excellence. The difference is mainly found in their focal points. The TQM approach focusses on improving the quality of processes and products, whereas BPM looks after the customers and their business processes in order to harmonize them with the company's ones. The main focus of knowledge management are all persons in an organisation and their expertise as individual as well as as a group or team or the organisation as a whole.

2   Definition of Key Terms

First of all the key term *knowledge* has to be clearly defined first. Hearing the word "knowledge" many people first think of expertise which is an important but not the only puzzle stone of what knowledge is all about. Knowledge forms a framework out of experiences, expertise (based on skills and abilities), values, rules and context information for judging and integrating new experiences and information (see Figure 2: Puzzle Stones of Knowledge). Formation and usage of knowledge takes place in the brain and is therefore bound to individuals. Knowledge is both a process and a stock. Knowledge is drawn one third out of documents and two-thirds get across by personal contacts like formal training or informal talks [1].
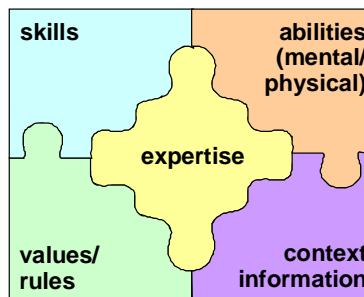

Figure 2: Puzzle Stones of Knowledge

A good explanation model for the meaning of knowledge and knowledge management in a company is the "Knowledge Staircase" (see Figure 3: The "Knowledge Staircase", [10]). Knowledge relies to a certain extend on data, codified tokens without interpretation of their meaning. They are the raw material for the creation of information which reaches as a message the receiver for whom the content causes a change (world picture, self-conception) and helps him to get a new insight accepted. The usage of knowledge leads to ability of the person who acts willingly. If one acts

correctly in the context one could speak of competence in this knowledge domain which leads to competitiveness in the long run.
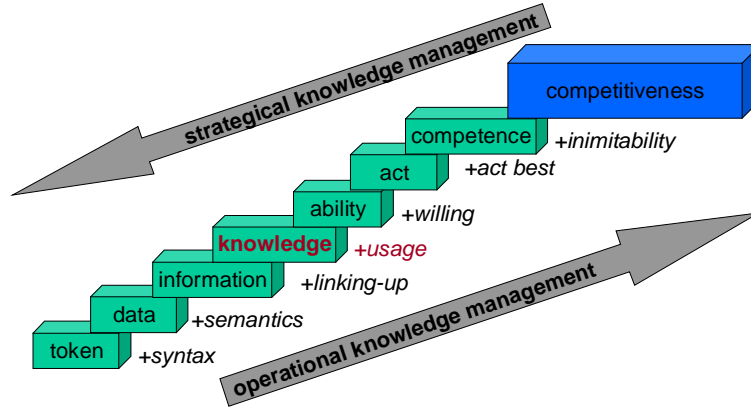

Figure 3: The "Knowledge Staircase"

Knowledge may be available in *individual* form bound basically to a person. Knowledge in *collective* mode may be found in processes, routines, practices and rules of an organisational unit or working group. Another knowledge form essential for knowledge management is *implicit* and *explicit* knowledge. Implicit knowledge is the individual knowledge base of a person which cannot be easily communicated, whereas explicit knowledge is methodical, systematical, and is available in articulated mode. It may be disseminated with aid of information and communication technology. The root problem of knowledge management is the transition of implicit knowledge to explicit ones. Only explicit knowlegde is at call for the organisation usable for all its members. Knowledge may exist *internally* or *externally* at consultants or co-operation partners of the company (see Figure 4: The "Knowledge Cube" for illustration, [7], [14]).
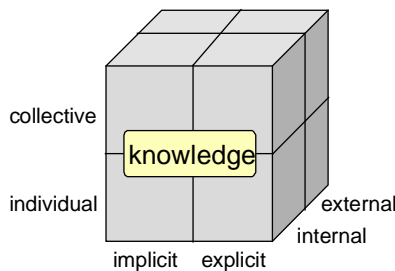

Figure 4: The "Knowledge Cube"

The next key term to be defined is ***knowledge management*** itself. Knowledge Management includes all social and technical oriented interventions and measure sets within an organisation for

optimizing the generation, distribution, sharing, and application of knowledge with aid of knowledge goals and evaluation (= knowledge management process, see Figure 5: The Knowledge Management Process, [9]), for *mobilizing* the individual and collective knowledge stocks, and for *changing* the learning processes and *improving* the knowledge potential [13].
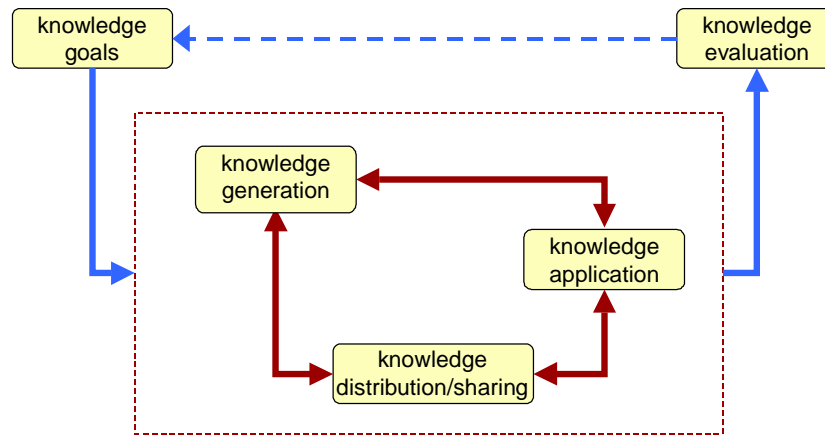

Figure 5: The Knowledge Management Process

According to Probst [11] knowledge management forms an integrated concept of interventions serving the configuration of the organisational knowledge base.

3 K2BE® – Holistic Process Model for Introducing Knowledge Management

K2BE® stands for *Knowledge Management to Business Excellence* and is a roadmap for introducing knowledge management in an organisation. K2BE® is a brand held by the five main contributors of the roadmap. It is based on the process model VEM (German acronym for "A process model for strategy-oriented implementation of executive management information systems") developed by Erhart [4] and Häntschel [3], the essentials of organisational learning and knowledge management contributed by Mittelmann and Wienerroither (see [7], [8]) and last but not least the basics of the roadmap itself worked out by Hahn [5]. The theoretical concept of the K2BE® roadmap has been empirically proved by replicated case studies. This research strategy enables the prototyping-oriented development of the K2BE® roadmap where in every development cycle the roadmap is empirical proved and refined according to the insights.

It consists of four fundamental sections and five phases (see Figure 6: Sections and Phases of the K2BE® Roadmap). The first section *Awareness Creation* contains the phase **Check-In** in which senior management should become aware of problems which might be better solved by using systematically knowledge management techniques and tools. The second section *Strategy Development* consists of the two phases **Start-Up** and **Line-Up** where the enterprise-wide and long-running planning for the professionalization of knowledge management takes place. The aggregate conception determinates the focus and timing of the implementation process. Depending on the available ressources and the risk readiness of the organisation the aggregate conception will be devided into steps accordingly. The forth section *Strategy Implementation* consists of the phase **Take-Off** where the stepwise implementation takes place. The forth section *Strategy Evaluation* includes the phase **Stop-Over** where all knowledge management activities so far are consolidated and evaluated.

The sections and phases of the K2BE®-Roadmap represent a logical but not necessarily a chronological sequence of activities. One phase cannot be seen as a sequence of single activities which are delimited sharply with no return. The activities overlap each other and form a network. This is the reason why only a rough structure and a fundamental procedure is shown. The detailed structure of every acitivity is defined and scheduled during project planning. The result of the project planning – the situational adaption of the roadmap – depends on the organisation-specific context in which the implementation of knowledge management takes place. Although every company-specific planning result will be unique, every organisation may use the K2BE®-Roadmap as an implementation guide.
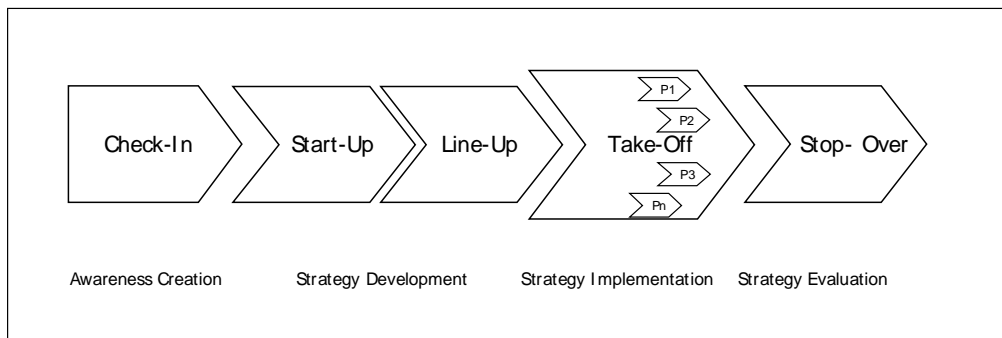

Figure 6: Sections and Phases of the K2BE® Roadmap

The names of the five phases are aeronautical terms which describe the job steps preparation of the flight, the motoring of the aircraft engines, the rolling of the aircraft on the runway, the lift-off of

the plane, the alighting (before motoring the aircraft engines again, a.s.o.). Analogously these activities reflect the ones executed during the implementation of knowledge management. Each phase is separated from the next by a "Point of Clearance" (PoC, see Figure 7: The Five Phases of the K2BE® Roadmap). The term "clearance" has a special meaning for the air traffic controllers and the pilots. The air traffic control center as the central controlling station issues the clearance of specific flight phases. The most familiar clearance "Cleared for Take off" signalizes the pilot that the runway is released and that the plane is allowed to take off.
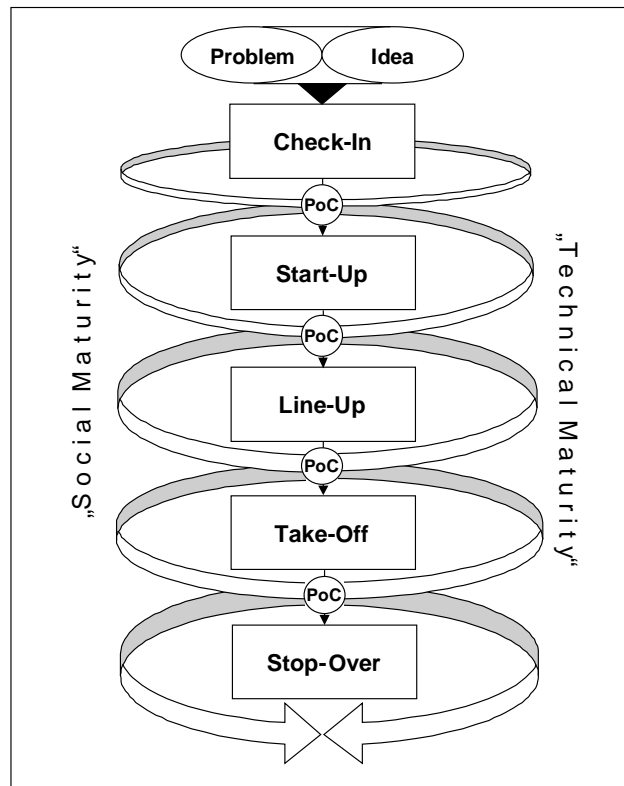

Figure 7: The Five Phases of the K2BE® Roadmap

Roughly the phases include the following activities:

- *Check-In*
  Initialization; sensitization of the managers; campaigning for a holistic system approach and a participative top-down-strategy; establishing a lobby

- *Start-Up*

  Developing and dovetailing the knowledge management goals; surveying the actual state; building the call for action

- *Line-Up*

  planning of sub-ordinate targets; planning and prioritizing the projects; generating the knowledge management project portfolio

- *Take-Off*

  putting single projects into practice based on chosen process models; ongoing adjustment of the planning to changing structural as well as cultural general conditions

- *Stop-Over*

  Merging and consolidating the results of the single projects; evaluating the previous activities; surveying the new actual state

At every "Point of Clearance" of the K2BE®-Roadmap an explicit reflection of the previous project progression and of the results is provided. The results are presented to senior management who decide on the ongoing knowledge management activities (continuation as planned, change or stop) based on this information.

According to the organisation of the company the affirmations of the senior management for the ongoing activities are required. These affirmations can only be expected if the decision-makers trust in the success of the suggested activity. During the progression of the activity phases beside the "technical maturity" of the results (product and process quality) the maturity of the acceptance of the decision-makers is essential. Because this maturity level depends on the trust in and acceptance of the planned activities it is spoken of the "social maturity" or "social maturity level". A continuous and successful progression of the implementation process of knowledge management can only be expected, if the "technical maturity level" as well as the "social maturity level" is further developed with the same carefulness and intensity. A too low "social maturity level" may lead to substantial resistance and denial of the realization of a structural solution.

4   Core Lessons Learned

According to Schneider [12] there are "7 Mortal Sins of Knowledge Management". If one follows the "instructions" outlined in the following, the failure of the implementation of knowledge management is guaranteed.

1.   What knowledge is, is clear or there is no need for definitions.

2.   Knowledge is a stock, which should be preferably documented independently from heads.

3.   Knowledge may be seperated from its application.

4.   Humans are able of learning out of knowledge surrogates.

5.   The management of the resource "knowledge" may be delegated.

6.   Intellectual capital may be directly measured.

7.   Knowledge friendly cultures attune by incentives and evocation formulas.

Obeying the advice of the K2BE® roadmap IT- "snapshots" are prevented, because the IT-question is integrated into the overall planning. Cost explosion will not take place because of the "Point of Clearance" approach, which devides the whole process into reasonable steps with clear decision making breaks. Last but not least the risk of the "7 mortal sins of knowledge management" is avoided because following the K2BE® roadmap leads to clearly defined terms and definitions of knowledge and knowledge management throughout the organisation, cares for a balanced development of the social and technical maturity of the knowledge management process, and enables a resource sparing implementation of professional knowledge management. All in all the K2BE® roadmap promotes goal and solution orientation, utilization of synergy potentials, safe investments, and the deliberate, continuous ("sane") constitution of professional knowledge management.

The K2BE® roadmap recommends a strategical holistic approach. This is the reason why the planning phase is rather time consuming. Other concepts start with some pilot projects all over the organisation. The problem with them is that sooner or later there will be a need to reintegrate all activities which may be more resource consuming or even wasting than planning longer first.

5   Conclusion

Holistic knowledge management seems to be a promising management concept helping firms to accomplish and extend their business excellence by managing the knowledge of their personal in a professional manner. The future will show if it is worthwhile for prosecuting. Some examples show encouraging results. In depth research is still needed in order to prove the results over time.

Abbreviations

BPR   Business Process Reengineering

EFQM   European Foundation of Quality Management

IT   Information Technology

K2BE®   Knowledge Management to Business Excellence

PoC   Point of Clearance

Px   Project x

PPP   Participative Process Prototyping

TQM   Total Quality Management

VEM   German acronym for "A process model for strategy-oriented implementation of executive information systems"

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