

Process driven Competence Management: A Case Study at Hilti Corporation

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Abstract: In light of the focus on competence in Hilti's Champion 3C strategy (customer, competence and concentration)¹ and their lived process organization the following paper proposes a modeling method for a process driven competence management (PCM) approach that combines a process and a person-centered view on competences. Processes provide the context in which competences are identified, managed, evaluated and further developed. In the person-centered view identified competences are further defined and associated to job profiles and periodically assessed based on Hilti's Situational Leadership[®] model. Assessment results are linked to training and coaching initiatives to ensure that competence targets are met adequately and in consequence lead to better process performance. The implemented PCM prototype on ADOxx[®] is based on the application scenario for the customer service center at Hilti.

Keywords: *Process driven competence management, competence modeling method, business process management, meta modeling, ADOxx[®]*

1 Introduction – Competence management

Competence management (CM) is strongly anchored in Hilti's Champion 3C strategy (customer, competence and concentration) and is regarded as vital to compete in the highly dynamic international market. Competences are in general recognized as extremely important for the achievement of company goals [BH05] and can be considered as a key component of business excellence, therefore contributing to excellent business execution.

¹ All relevant terms including Hilti and its business strategy are protected by copyright.

Most definitions of competence highlight the importance of the specific context of the competence [CC05], [HR06]. As a process oriented company with well defined end-to-end processes and responsibilities, Hilti’s business processes provide this context. It is the business processes, for which currently required competencies are managed and future competencies are identified. Therefore we curtail and adapt the definition of [BH05] and define competence *as a way to put in practice the knowledge inside a process*.

CM is embedded in a field of similar disciplines. Hence, it cannot be regarded as solely definable concept, but needs to be carefully integrated with other domains of an organization (figure 1). In our approach process management and process performance management provide the context in which competences need to be managed. Human resource management (HRM) and knowledge management (KM) are closely connected to CM in a sense that CM identifies HRM and KM needs. HRM and KM on the other hand provide artifacts to improve competencies. Intellectual capital management, managing structural, human and relational capital [Ne09] can be seen as the embracing method.

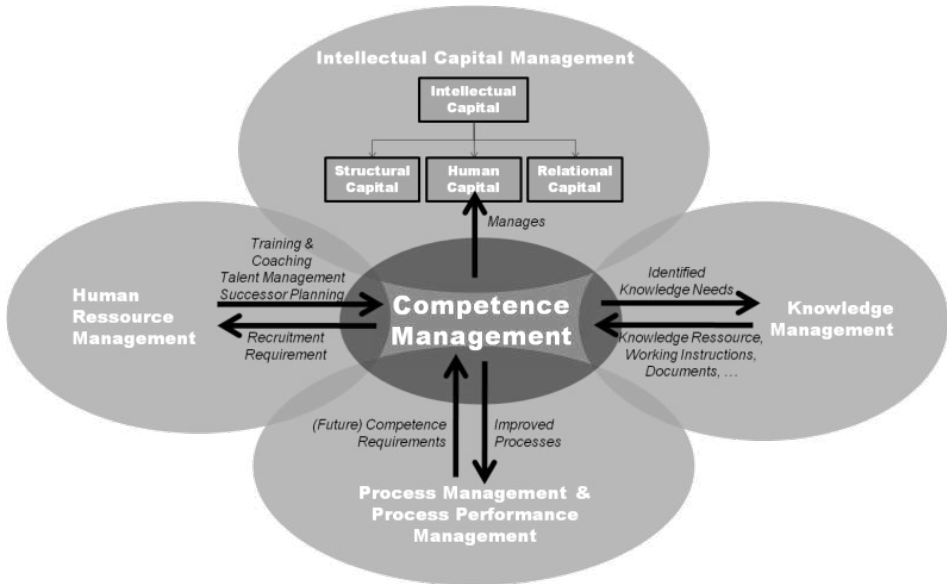


Figure 1. Competence management (CM) in the context of other management disciplines

Many proposed CM approaches support personal competence management in an HRM view by providing methods, e.g. for competence gap analysis on job profiles [Co07] or talent management [Ba99]. CM concepts that link to processes management [Va10] [BH05] are rare and don’t provide specific modeling methods. However, modeling methods do exist for process based KM (e.g. [GF06], [He06], [WK05]) that also cover parts of CM. Most of those approaches however are too detailed for the practical applicability required by the case study and therefore led to the conceptualization of the PCM modeling method and its prototypical implementation.

The concept presented in this paper has been elaborated in a cooperation project between the University of Vienna and Hilti Corporation and encourages a process driven competence management (PCM) that is described in the following section. The case study environment at Hilti and the application scenario *order tool via customer service center* are described in section 3. Section 4 shows a prototypical implementation of the PCM modeling method on the ADOxx^{®2} platform.

2 Process driven competence management method – Conceptual view

The process driven competence management (PCM) approach provides a modeling method that has been conceptualized according to the concepts of meta modeling and the M³ framework [KK02]. The M³ framework defines modeling methods as consisting of a modeling language, a process model and mechanisms & algorithms. The language and process model are described in the following, mechanisms & algorithms are subject to further research.

2.1 PCM modeling language

The PCM modeling language is related to the IEEE Draft Standard for Learning Technology [IE07] that defines a data model for reusable competence definitions (RCD) and shows how they integrate with competence data. An approach in developing a meta model for modeling competence gaps aligned with the IEEE definition has been presented e.g. by [Co10]. The PCM modeling method refines previous work by initiating the context of the IEEE model with *process*. Evidence is presented through defined *process indicators* and competences are expressed in terms of *proficiency level* as dimension (figure 2).

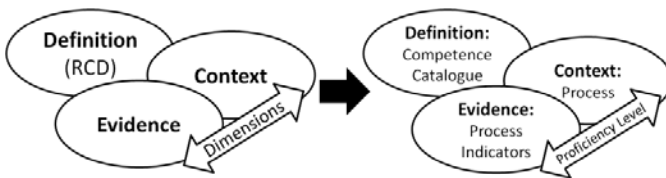


Figure 2. PCM instantiation of the IEEE Standard for Learning Technology

Additionally to these concepts the PCM meta model (figure 3) is extended by the elements *role*, *person* and *actions*. *Role* refers to required competences (to-be), *person* to possessed competences (as-is). *Actions* are introduced to improve competences. Actions can be *training/coaching* (mid- to long-term) or *on the job support* (short-term). Individual training and coaching roadmaps are based on the associated training actions for competences and the assessed competences of a person. Short-term actions (on the job support) are triggered according to predefined thresholds of process indicators.

² ADOxx[®] is a registered trademark by the BOC AG and can be used free of charge for developing modeling methods under the Open Models Initiative (www.openmodels.com).

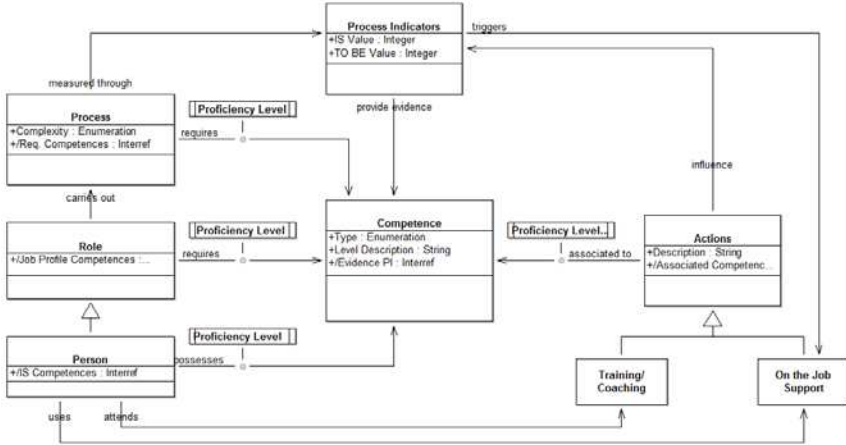


Figure 3. Meta model of the PCM approach: An overview

2.2 PCM process model

To define a process model for the PCM approach we streamlined the proposed competence processes of [BH05] and [HM05] resulting in a PCM process that can be divided in a process centered and a people centered view (figure 4). The overall CM is influenced by the general business strategy and business environment that both trigger changes in business processes and therefore changed competences. These changed competence requirements are managed in the person centered competence view. Finally, the CM process ends with an evaluation of the competence on the business processes.



Figure 4. The PCM process model

In the first step *competence identification*, required competences are identified based on business process models. Competences derived out of the business process have to be possessed by the employees carrying out a certain process and therefore job competence profiles have to be set up in the *competence definition* step to ensure that the staff fulfills the competence requirements for carrying out the processes. Through a *competence assessment* the actual competences of the current employees are assessed periodically, based on associated process indicators. *Competence analysis & action* focuses on analyzing the competence gaps and setting up actions to improve the individual and organizational competences. *Competence evaluation* is based on process performance that is seen as direct or indirect result out of the actions set in the competence analysis step.

3 The case study environment – A Hilti case

3.1 Hilti as production and direct marketing organization and the 3C strategy

The Hilti Corporation has been founded in 1941 in Schaan (Liechtenstein) and is the worldwide market leader in the area of fastening technologies with a revenue of 3.6 billion Swiss Francs in 2009. Hilti has got subsidiaries in more than 120 countries by applying its direct distribution model. The Hilti system solutions, services, and products are produced in eight Hilti plants whereas the vertical range of manufacture is high: Starting from basic research via product development up to manufacturing and distributing the products directly to the customer. Thereby, the daily number of customer orders is reaching 50'000 including more than 150'000 order lines. Typically a customer order is delivered within 24 hours of order reception to the respective customers. The Hilti sales force realizes more than 200'000 customer contacts per day, whereas the customer database comprises 12 million customer records.

Hilti's business strategy is named Champion 3C strategy, whereas the three C's are stemming from the main focus of the strategy: (1) *Customer*: Hilti aims to be the best partner for its customers, whereas the customers' needs determine Hilti's activities. (2) *Concentration*: Hilti is concentrating on products and markets, in which a leading position can be reached and maintained. (3) *Competence*: Hilti is known for its ground-breaking innovations, holistic quality, direct customer relationships and effective marketing.

3.2 The importance of competence management at Hilti

The importance of CM for the Hilti Corporation can be easily derived from the aforementioned business strategy. As based on the focus of selling and distributing Hilti products it is essential to have direct customer contact to be able to demonstrate and/or explain the offered system solutions, individual services and products directly to the customer. Hereby, the need for an efficient knowledge and competence transfer from the sales force towards the potential customer is of high importance.

Specifically, as based on the partly complex nature of the corresponding knowledge a high level of competence of the Hilti sales force is essential. Finally, a highly efficient and economically sustainable direct distribution strategy can only be maintained by highly competent employees. Therefore Hilti puts special focus on competence management and initiated a half-year project to design an approach for competence management and measurement. First results are described in this paper.

3.3 The application scenario – Order tool via customer service center

As application for the PCM method the process *order tool via customer service center* was selected due to its role as one of the key customer processes that has just been reengineered and rolled out into Hilti's country organizations. The business process consists of the following aggregated process steps: *preparing and accepting a call, consulting the customer, processing the order, ending the call and post processing* and has amongst others the following process indicators e.g. *number of entered orders received by phone, quality of order entry and incomplete sales orders*. Each activity of the process is linked to the responsible role. Literally, in this case the only internal role in the process is the *inside sales specialist*. Furthermore, the complexity of all activities within the business process has been rated on a three level scale (low, medium, high).

Step 1: Competence identification. Required competencies have been identified within the business process and associated to a certain proficiency level. The categorization of the competences follows a Hilti internal so-called *read thread guide* encompassing functional expertise, team work, self development and others. The respective ratings match to the development levels of the Situational Leadership Model® II³ from level D1 to D4 (low to high competence). For each defined competence, training and coaching actions are associated and process performance indicators linked as evidence for the competence assessment. Key competences (D4) identified in the use case business process have been e.g. *SAP order processing, available sector/product knowledge, telephone/questioning skills, active listening and positive language skills*.

Step 2: Competence definition. Based on the identified competences within the aforementioned business process, job profiles have to be streamlined for outlining the competence requirements. Therefore, roles are linked with the required competencies with a certain proficiency level.

Step 3: Competence assessment. At Hilti, annual discussions between team leaders and team members are institutionalized. Those discussions also include the competence assessment, where the team leader rates the as-is competences based on associated evidence and personal observations. In the use case a team member with the role *inside sales specialist* should have e.g. the *SAP order processing* competence on level D4.

³ Situational Leadership® is a registered trademark of Leadership Studies, Inc. It was created by Paul Hersey.

Step 4: Competence analysis & actions. In this step, actions to improve competences are planned. Based on the information before-hand, competences have clearly associated training and coaching actions, e.g. a *training on SAP order processing*. A competence performance report shows the current competence status of team members as well as actions to improve the respective competence.

Step 5: Competence evaluation. From the perspective of the business process and associated competence related process indicators the business process performance is evaluated in regards to excellent competence. The business process itself is continuously monitored to detect changed business needs and therefore changed competence requirements, triggering another cycle of the PCM process.

4 Implementation of the application scenario – The PCM prototype

Based on the above described use case the PCM approach has been prototypically implemented on the ADOxx[®] meta modeling platform. Other work done for developing modeling languages on this platform are e.g. provided by [BS10], [Sc10], [Li02], [Fi05]. PCM is based on the ADONIS[®] BPMS method [KK01] for business process management. It comprises the following model types: *competence catalogue model*, *company map model*, *business process model*, *job profile model* and the *working environment model* (figure 5). As outcome a *competence performance report* of team members is automatically generated by the system, providing an overview of competence gaps and easy access to training materials and actions to improve the competences.

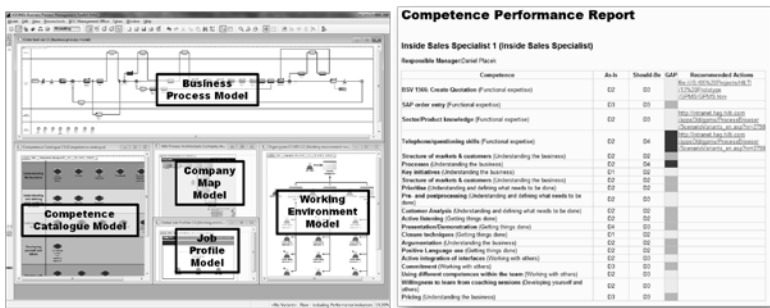


Figure 5. The PCM prototype: Model visualization and competence performance report

5 Conclusion and further research

Establishing CM as an integrative management approach has been identified as vital for further thriving towards business excellence. The PCM concept delivers a working approach in the form of a combination of a process and person centered view on CM in five steps. Further research will be done in refining the concept, especially in elaborating how to manage competence related measurements in the context of the PCM approach.

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