

COMPETENCE MANAGEMENT – A SMART STRATEGY-ORIENTED APPROACH

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ABSTRACT

Today, organizations are increasingly specialized in their activities and faced with turbulent markets. It is therefore becoming more and more important for organizations to manage competences internally, and a continuous competence development for employees and managers emerges as a key factor for achieving and maintaining an excellent organizational performance. Numerous approaches are already implemented in organizations worldwide. Since using a standardized, adoptable and strategy-oriented competence management approach has turned out to be the most efficient solution to support organizational objectives such as the transformation to digitalized workplaces, the "Fraunhofer Kompetenz-Kompass", which will be illustrated in this paper, was developed in order to give orientation how to implement competence management into an organization in a systematic and standardized way. The approach is conceptualized as a modular kit, including necessary steps and approaches, which then need to be customized to meet the specific requirements of different organizations. Precisely spoken, the approach consists of the following six modules, which have to be understood as sequent phases: (1) strategic context, (2) competence strategy, (3) competence model, (4) competence measurement, (5) competence development and (6) competence evaluation. Within this framework, necessary competences are derived from tasks, activities and processes which support the strategic needs of an organization. Therefore, the competence model can be easily adapted to new challenges and is able to actively flank organizational change processes. The groups addressed with this paper are managers of organizations as well as HR departments and applied research units.

Keywords: Competence management, competence framework, competence model, performance.

INTRODUCTION

Considering the tremendous transformation of the working environment and its consequences for employees, competence management has become an important

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issue for organizations in leveraging and sustaining their ability to compete (Erpenbeck & Sauter, 2015; Nienaber, 2007; Reinhardt, 2017; Sauter & Staudt, 2016; Wimmer, 2014).

The modern working world is faced with change, uncertainty and intensive competition fueled by advancing globalization of business activities and technological progress (Lohmann-Haislah, 2012; Schäfer et al., 2013). Workload is often increasing, demanded pace of work is accelerating, tasks are getting more complex and the requirements with regard to abilities, skills and knowledge alter constantly (Ahlers, 2016; Lohmann-Haislah, 2012; Wohlers & Hombrecher, 2016).

More than ever, they need competent and motivated employees willing to pursue lifelong learning (Kolb, 2010). Erpenbeck & von Rosenstiel (2005) even supposed that the war of competition will increasingly become a war of competences. Sengupta et al. (2013) came to the conclusion that competence management is seen as a strategic approach for competitive advantage in future-oriented organizations. Thus, regarding the contribution of competence management to master the challenges of a modern working environment, it appears to be a promising concept for facing the need of change (Erpenbeck & Sauter, 2015; Reinhardt, 2017; Stevens, 2012).

There are different opinions in research and practice about how a competence management approach should be designed (e.g. Ennis, 2008; Bauer & Karapidis, 2013). The scope here ranges from more generic frameworks such as those derived from DIN PAS 1093 (Stracke et al., 2009) to concrete and detailed competence catalogues directly serving as a set of objectives for competence development measures (Heyse & Erpenbeck, 2009). Despite the multiplicity of approaches, the findings of the Fraunhofer study "Competence management in German companies 2012/2013" with a sample of 518 companies from different branches emphasize that competence management is a key topic in organizations (Bauer & Karapidis, 2013).

Therefore, to spotlight on competence management and to show the benefits for organizations to implement an appropriate solution systematically is the major aim of the paper. Out of this perspective, the different notions and concepts of competence management are illustrated as a first step. In a second step, major challenges to implement competence management are put in concrete terms and a solution to them is offered in the next step. In the end, conclusions will sum up the findings.

NOTIONS AND CONCEPTS OF COMPETENCE AND COMPETENCE MANAGEMENT

Since the competence term is subject of numerous scientific disciplines such as Psychology, Vocational Education and Business Administration, many different perspectives have evolved over time and the scope of definitions is rather high (Arnold & Schüssler, 2001; Zaugg, 2006). While Psychology focuses on cognitive and motivational competence facets based on the groundworks of Chomsky (1965) and White (1959), Vocational Education is engaged with aspects that enable persons to meet their job requirements (Bernien, 1997; Grote et al., 2006).

The management of competences combines the individual with the organizational level and the main goal is to steer the competence portfolio within an organization. It goes beyond conventional education and training instruments by harmonizing the individual development objectives of employees with the strategic targets of an organization. Further, it aims to make individual and organizational competences tangible and visible in order to employ existing competences efficiently and to develop

new competences needed for emerging challenges (North et al., 2013; Zaugg, 2006). Hence, competence management strives to align the strategic and the operative level (Sauter & Staudt, 2016) and does not only focus on maintaining the currently required competence inventory but is also concerned with updating competences to master future demands (Hamel & Prahalad, 1995).

To implement competence management in an organization successfully, a systematic and standardized approach offers the chance to reduce complexity (Grote et al., 2006). Therefore, Stracke et al. (2009) developed the "DIN PAS 1093" which provides a generic framework for systemizing competence management. Within this framework competence management activities need to be adapted to the respective context of an organization.

Based on these findings the Fraunhofer approach aims to help organizations to manage their competence inventory and detect competences on individual and organizational level in order to employ and develop them systematically in a strategic and goal-oriented manner to enhance competitiveness. Before starting to explain the Fraunhofer approach in chapter 4, the next chapter is to depict the challenges which need to be addressed when conceptualizing competence management.

CHALLENGES OF COMPETENCE MANAGEMENT

The objective of competence management is to increase the organization's performance by coping with new and changing conditions for organizations more quickly (Karapidis, 2008). When competence and training activities are connected to corporate strategies, an organization is better positioned to improve today's performance and meet tomorrow's challenges (Mulder, 2012). According to the study about competence management in the field of management practice, published by the Fraunhofer IAO (Bauer & Karapidis, 2013), a high impact of competence management on the overall success of an organization is significantly more likely to be made when competence management is run systematically and applied to the entire organization. By using a standardized competence management approach, the learning and training efforts can be optimized (and often also reduced) by systematic processes in order to reveal learning needs (Liebenow et al., 2014). However, inside an organization there are often differences between strategical needs and operative demands (Reinhardt, 2007). For example, a strategical need to strengthen offshore activities can be a contradiction to operative demands for "every-day" and situational work processes and work tasks (Getha-Taylor et al., 2016). To overcome these issues, strategical needs and operative demands have to be synchronized within an organization (Lo et al., 2015). But, there is a lack of approaches to align operative needs and strategic demands systematically (Bauer & Karapidis, 2013), which leads to the first challenge.

Challenge 1: Strategical and operative objectives of an organization often collide at least up to a certain extent. This circumstance decelerates the organization's performance and seems to be an antagonism. Unfortunately, there are only a few competence management approaches being able to tackle this issue.

As stated before, another purpose of competence management is to make competences tangible and visible within an organization pursuing the goal to employ

existing competences appropriately and to develop further competences, if requirements change (North et al., 2013; Zaugg, 2006).

Challenge 2: The management might not be fully aware of competences required and competences available in order to run the business processes successfully. As a consequence, performance slows down or even fails.

Moreover, a deficit in aligning training offers with business needs derived from strategic decisions is a common reason for unsolved performance gaps. According to the gap displayed in Figure 1, competence management enables an organization to leverage employees' performance measures through adequate training. The important lesson to be learned from this gap, is that simply having all jobs occupied is not enough (Wittorski, 2012). In addition, they have to be filled with employees who exhibit the necessary competences. Unfortunately, current employees do not fully meet all the competence requirements (Maran et al., 2016).

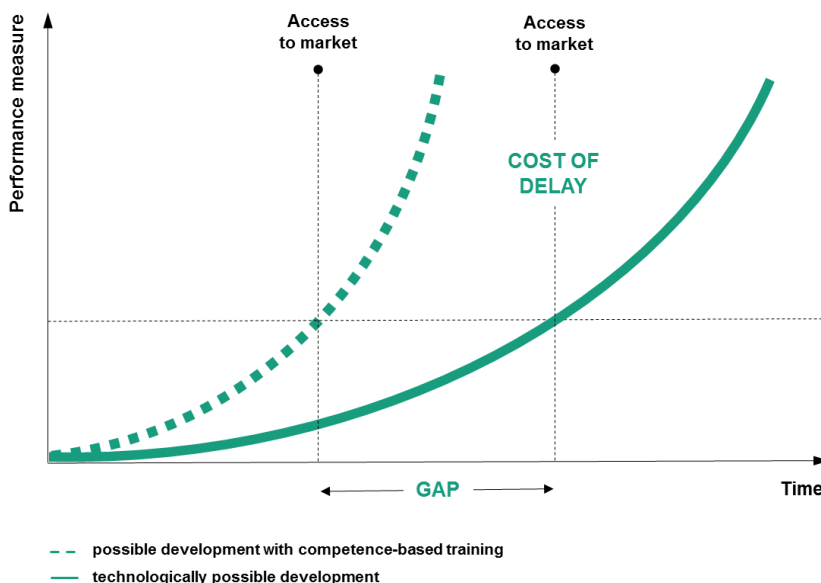


Figure 1: Training effect on performance-time-curve

Since economic competitiveness is closely linked to the value of human capital, the quality of an organization's workforce and its ability to adapt to changes can play an important role in business improvement efforts, thus calling for a continuous investment in human resource development (Balaguer et al., 2006). Aligning individual training with business priorities emerges as a key challenge for modern organizations (Sauter & Sauter, 2013).

Challenge 3: Gaps in performance often result from a non-integration of learning and business needs. The supply in training and learning does not fit actual business needs, and/or staff development measures are initialized too late.

Taking into account the challenges described in this chapter, the Fraunhofer IAO has developed an overall competence management approach, which will be further illustrated in the following section.

STRATEGY-ORIENTED COMPETENCE MANAGEMENT – FRAUNHOFER APPROACH

Challenge 1: A strategy-oriented competence management approach

The “Fraunhofer Kompetenz-Kompass” (Figure 2) was developed in order to give hints how to implement and operate competence management in an organization in a systematic and standardized way. It is conceptualized as a modular kit, including necessary steps, instruments and methods, which then needs to be customized to meet the specific requirements of different organizations (Bauer, Dworschak & Zaiser, 2017).

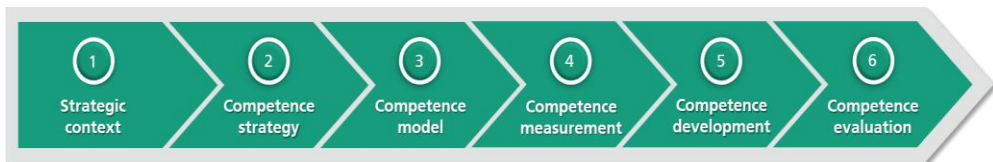


Figure 2: Competence framework “Fraunhofer Kompetenz-Kompass”

The first phase „strategic context” identifies the general conditions of an organization’s context. The described procedure requires an analysis involving all responsible stakeholders, including for instance the top management and department leaders of divisions, departments or teams.

The main goal of this procedure is to expose future demands considering the competences needed to meet the strategic targets (see also Jochmann, 2007; Lebreuz, 2017; Weissenberger-Eibl & Kölbl, 2006).

Within the second phase “competence strategy” the competence management activities to steer the competence portfolio have to be aligned with the demands identified in the first phase under consideration of the specific organizational context regarding corporate culture, existing structures and systems, etc. Prior to formulating the competence strategy, it has to be determined to which strategic requirements the competence management should contribute (see also Jochmann, 2007; North et al., 2013; Sauter & Staudt, 2016; Weissenberger-Eibl & Kölbl, 2006). To define and implement the competence strategy successfully, all steps selected from the competence framework, as well as concrete instruments, methods and processes elaborated in the following steps should be recorded in detail, leading to a competence roadmap.

The third phase “competence model” forms the core of a strategy-oriented competence management approach (see also Lebreuz, 2017; Sauter & Staudt, 2016). One solution can be seen in the “one-size-fits-all-plus” method developed at Fraunhofer IAO and already implemented in several organizations (see Figure 3). The elements of the competence model are valid for the entire organization or parts of it involved in competence management activities. To develop such a model cost- and time-efficient, methodical, social and personal competences are formulated as generic competences (“one-size-fits-all”). In addition to that, the professional competences are

formulated subject-specific and have to be adapted to the particular demands of business units. Whereas the generic competences, also called key competences, are most suitable for controlling and supporting strategical needs, the specific professional competences display the demands on operative level (the “plus” component). So, both, the demands of the operative level as well as the needs of the strategic level, are considered.

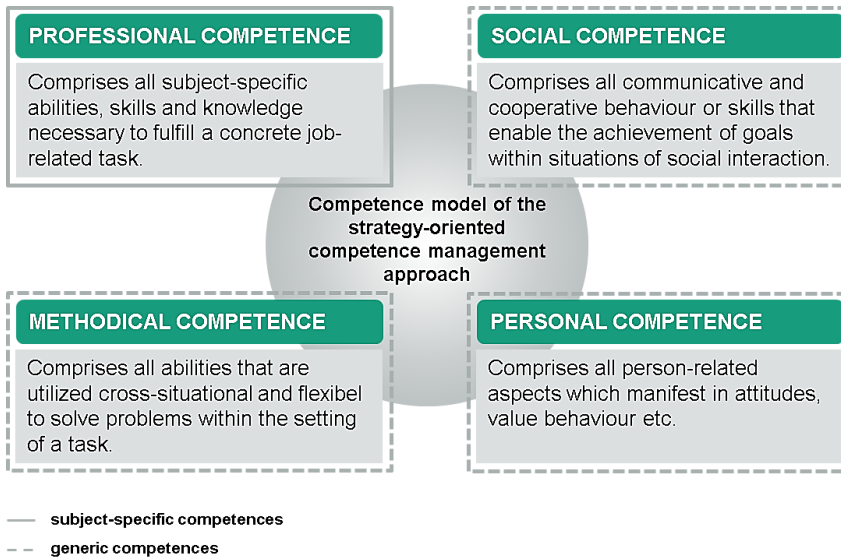


Figure 3: Competence model “one-size-fits-all-plus”

By using the “one-size-fits-all-plus” method for the core architecture of a resilient competence management approach to satisfy different needs and demands in an organization, competence management also needs to have the ability to be adaptive to future needs. Even if not all threats that may occur in future can be overseen, competence management and a competence model should be chosen in a way that

- supports actual and future strategic demands,
- new competences can be added easily,
- existing competences can be neglected or erased,
- competence classes can be enlarged,
- new relationships between competences and activities can be drawn,
- upcoming processes and work task changes can be integrated in the model, and that
- the competence model has the feature to be adopted to other competence management activities within an organization or between organizations in a location, in distributed locations or even cross-border (at least to some extent).

Within the competence classes, specific competences have to be chosen which are critical to meet the organization’s strategic demands. To describe them in detail, it is recommended to work out corresponding observable and measurable acting behaviors (Sauter & Staudt, 2016) which reflect different levels of maturity of the specific competence, e.g. basic, advanced and expert level (e.g. North et al., 2013).

The fourth phase “competence measurement” is engaged with measuring and evaluating the existing competence portfolio in order to identify competence gaps and development needs, but also to display the intellectual DNA of an organization. Since it is not possible to measure competences directly, they have to be assessed in the course of defined performed actions (compare Erpenbeck & von Rosenstiel, 2007; North et al., 2013). To measure those behaviors, a variety of methods exists and often several methods are combined (Sauter & Staudt, 2016). One such combination could for example be measuring competences through self-assessments on the one hand, and on the other hand through external assessments by managers, e.g. during performance reviews, to secure a higher objectiveness (North et al., 2013).

Finally, the competence portfolio should be evaluated in respect of whether the present competences are sufficient to accomplish the strategic objectives (see also challenge 2). If not, activities which seem to be most expedient to synchronize the operative and strategic level have to be compiled, since the synchronization can be performed in various ways (Jochmann, 2007). Whereas the personnel development of competences focuses on building up competences internally, the personnel selection concentrates on acquiring competences externally. Another way is to employ the existing competences adequately within the organization through efficient personnel planning (Lebrenz, 2017; North et al., 2013; Sauter & Staudt, 2016).

The “competence development” phase is concerned with building up, developing or further enhancing the employees’ competences with regard to meet the strategic targets by selecting and implementing appropriate development measures (see also Frieling et al., 2009; Ledergerber & Meyer-Ferreira, 2010). Fraunhofer IAO has designed a process, which will be further explained in the solution for challenge 3. But, no matter which measures are applied, it needs to be considered that they have to be chosen focusing on both, organizational and individual development objectives (Kauffeld & Grote, 2011; Reinhardt, 2017; Sauter & Staudt, 2016).

Within the last phase “competence evaluation”, all selected steps, activities, instruments, methods and processes have to undergo an evaluation, and, if necessary, adequate optimizing measures should be conducted to increase the efficiency of the competence management (see also North et al., 2013) and/or to better achieve the defined goals (see also Jochmann, 2007). Since the “Fraunhofer Kompetenz-Kompass” framework is based on a cyclical logic, a continuous process of monitoring, controlling and improvement needs to be implemented. Environmental conditions which mark the starting point of the competence management process have to be reviewed periodically. If the requirements alter, all phases of the competence management have to be adapted.

To examine the competence management measures on the operative level, the competence development activities should be assessed directly after being operated regarding their impact on the organizational performance, e.g. using different evaluation models derived from Kirkpatrick & Kirkpatrick (2006) and specific data analysis methods (see also Behrend et al., 2017).

Challenge 2: Competence atlas

This section focuses on the question of how to tackle that the management often is not fully aware about the competence portfolio available within the organization and which solution competence management can provide. So, knowing the organization’s

competence portfolio gives the management a better decision certainty and reliability when decisions concerning human resources topics have to be made, for example:

- Where are the competence gaps located?
- Does the organization have the right competences to implement a new business model? And, if not, is it able to build up competences with the existing workforce or should new employees be hired (make or buy)?

A solution, how to collect, foster, and visualize competences within an organization, is to build up a “competence atlas” (see Figure 4), as it is provided in the Fraunhofer competence management approach “Fraunhofer Kompetenz-Kompass”.

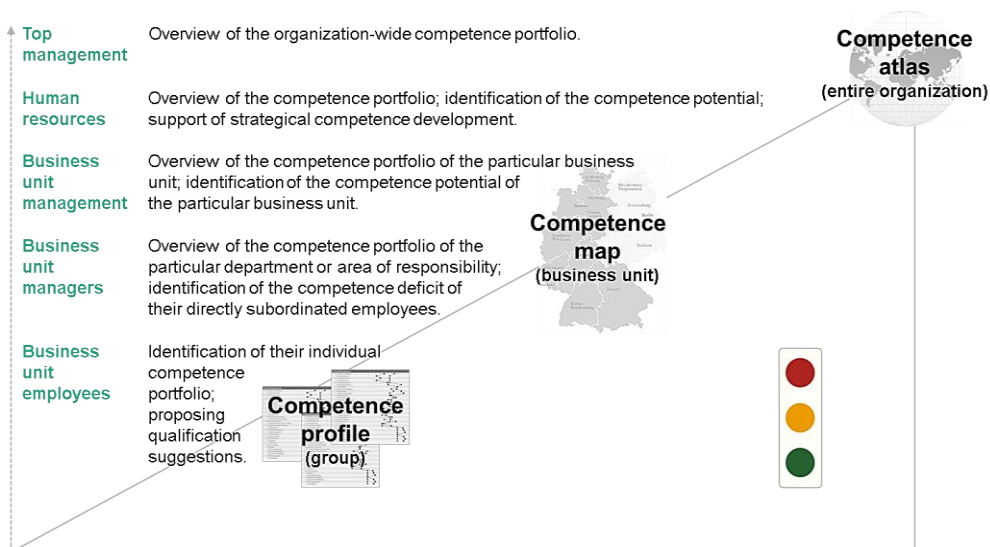


Figure 4: Competence atlas architecture

To get an appropriate overview of the competences within the organization, first, competences have to be collected in a systematic way on the different hierarchical levels of an organization, from the bottom to the top, respectively by the managers of the superordinate hierarchical level. The data thus generated can be gathered with the help of Excel-lists or other software tools, resulting in so called “competence profiles” on individual level and the “competence map” on the business unit level. To avoid misuse of the data in the individual competence profiles, data protection directives have to be established in advance, which determine the access permissions of the different hierarchical levels. Therefore, the business unit management and the human resource department only receive anonymized insight in the entire “competence atlas”, allowing them, to get an overview of the competence portfolio and competence potentials in the entire organization. Hence, the competence atlas enables different stakeholders to oversee competences and to analyze them for specific needs and purposes, e.g.:

- detect competences available in an organization
- determine proficiency levels to identify the quality of competences to solve specific work tasks or processes
- operate data evaluation algorithms to identify similar-sounding competences as hints for “partly-fitting” groups or teams as competence owners

Challenge 3: Aligning training to competence gaps

This section illustrates how to close the competence gaps (Figure 5). The mechanism has already been successfully implemented in several organizations by Fraunhofer IAO and is a part of the competence management approach "Fraunhofer Kompetenz-Kompass" referring to the phase "competence development". It is mainly concerned with the following objectives:

- Decision of closing a competence gap or not,
- identification of feasible and adequate learning strategies/methods to close the competence gap and
- tailoring adequate training methods and learning strategies specified to bridge competence gaps.

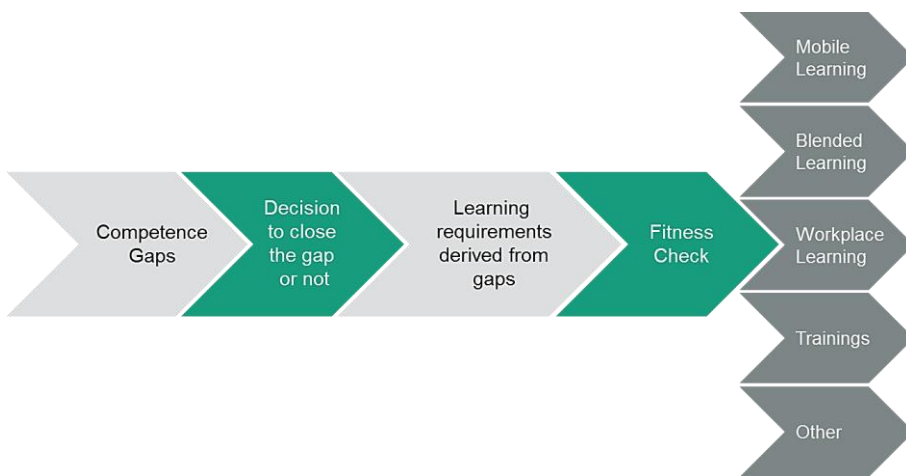


Figure 5: Process for aligning development measures to competence gaps

After revealing competence gaps within the phase of measuring competences, the decision maker (e.g. the management) should decide if a competence gap will be closed or not. To do so, the different competence gaps identified are reported and weighted according to their importance. In this respect, criteria of the organization and/or the decision maker, like time, cost and quality, take an important role in deciding, whether a competence gap should be closed or not, even if the competence gap is critical for success in coping with a specific work situation. In the phase of deriving learning requirements from competence gaps, the competence gaps and how to bridge them are in the major focus. Based on different working situations, different types of competence gaps can occur. So, the identification opens a portfolio of how and to which extent a learning strategy and appropriate learning methods can cover the competence gap. Within the fitness check, the potential of the different learning strategies, learning and training methods are evaluated to give answers on which learning strategy and learning method fits most to cover specific competence gaps. First, it needs to be checked if appropriate training measures are already available. Second, based on criteria like time, cost, quality, adequateness and/or other measures, the suggested learning strategies and training methods are being assessed, and finally,

it must be decided which training measures will be executed until when and who will and can be responsible for the whole process.

CONCLUSIONS

The aim to synchronize strategic and operative demands in organisations can be solved by using and configuring the steps of the "Fraunhofer Kompetenz-Kompass" framework, which can be described as a systematic, future-oriented and robust competence management solution for successfully coping with a constantly changing working environment. The value added resulting from the application of this approach comprises the strategic level as well as the operative process level. On the strategic level, the main advantages are generated by enhancing the relationship between high performing employees and the organization they are working in, in order to avoid shortage of skilled staff and by fastening implementation processes for new or modified strategies. Competence management with its different phases, methods and instruments seems to be an appropriate tool, since it provides a standardized approach to reveal competence needs and interlinking them with appropriate training. It has the potential to be adoptable for all training and learning needs – spanning a range including relevant strategic issues, processes and work tasks.

Besides, the "Fraunhofer-Kompetenz-Kompass" follows a modular logic which offers the possibility for organizations to select or emphasize the phases as needed, depending on the different corporate context and can therefore be implemented to whatever industry and regardless of organization size. Due to the flexibility of this approach, it enables organizations to successfully cope with changing demands and to flank change processes efficiently. Furthermore, through implementing competence management as recommended in this paper, organizations will be able to gain a better transparency over their specific competence portfolio, to identify critical competence gaps and to steer the competence portfolio accurately.

Solution 2 therefore illustrated an approach to get an overview about competences in an organization. By using the "competence atlas", subject-specific and generic competences become transparent on all organizational levels, but constrained by the architecture of access permissions and of rights on the usage, which can be differently distinctive in different organizations.

The alignment of learning objects and competences still seems to be fuzzy in many organizations. By using the solution provided for the challenge 3, competence gaps can be aligned more appropriate to learning activities. So, competence development is much more focused on the competence gaps instead of focusing on aggregated learning objectives not aligned to the individual learners' aims. Based on this approach, aligned development measures tailored to competence needs can be provided. Compared to conventional training activities, the chance to have well trained employees for specific work tasks or work processes within an organization has proven to be much higher using the described process. Furthermore, learning strategies and learning methods can be executed in a shorter period of time.

Nevertheless, conceptualizing, piloting, rolling out and sustaining competence management activities in organizations is not easy to perform. When configuring non-appropriate phases, methods and instruments or not establishing a common view of what is understood by competence management and which goals competence management should focus on, the entire process could collapse, even if a systematic process has been chosen. Moreover, the solutions provided in this paper always need

to be adapted individually for an organization in order to meet the requirements of the different organizational conditions. But, what applies to all organizations is, that measures should be implemented within the competence management concept, which proof the performance of competence management activities, allow for early and timely detection of competences needed, ensure the commitment of all stakeholders and help to support strategic demands and change processes.

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