Importance of Knowledge Continuity in Business Continuity Management

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Abstract: At present, the real generator of wealth in society, as well as in the economy as a whole, is knowledge. Knowledge that is critical and precious for an organization (whose loss would represent a threat for the organisation) and that is valuable for competitors needs to be treated with care. Knowledge continuity management is, also, applied to preserve critical knowledge in an organisation in situations where its holder leaves to join a competitor or to retire. The article aims to identify the level of business continuity ensuring in organisations with an emphasis on knowledge continuity. Without employees with the necessary knowledge it is not possible to ensure business continuity. The article contains recommendations for anticipating threats and the elimination of their effects on human resources through knowledge continuity. The article is prepared on the basis of the evaluation of results of research conducted in organisations in the tertiary sector in the Czech Republic. The results show that the majority of organisations do not ensure knowledge continuity as a part of Business Continuity Management, which leads to a threatening of key processes in organisations. One of the conclusions of the article is that, by systematic ensuring of business continuity, it is possible to support the continuity of individual activities in organisational processes and, thus, support Business Continuity Management.

Keywords: Business Continuity Management · Knowledge Continuity · Employee · Organisations

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1 Introduction

It is considered that people are the most important asset of an organisation (Hroník, 2006; Koubek, 2007; Bělohlávek, 2009; Banfield & Kay, 2008; Plamínka, 2010), therefore since the 1990s emphasis has been placed on new approaches to reach a competitive advantage based on knowledge. Knowledge has specific characteristics, because it can be acquired, shared, utilised and kept in an organisation. Knowledge is useful for many processes that take place in organisations as well as in the external dynamic environment (Massingham, 2010; Münter, 2010).

The knowledge base, experience, skills and proficiency of employees are of growing importance and help to achieve success and competitiveness in an organisation. It is necessary to take care of human resources because their knowledge base is important. Every employee can have knowledge, but only some have knowledge, which is critical for an organisation. The loss of critical knowledge could threaten an organisation. Therefore, it is essential to safeguard the knowledge base in an organisation, because otherwise it could be lost from the organisation (Eby et al., 2010; Wong, 2009; Beazley et al., 2002). This could be achieved by implementing knowledge continuity management, which involves the transfer of critical knowledge between generations of employees during changes in personnel (the most frequent occurs at retirement or redundancy); in other words, transferring knowledge from a departing employee to an incoming employee. This is a branch of knowledge management.
Nowadays, organisations recognise that the most important competitive advantage is knowledge. Because knowledge is involved in all processes, it is also important in business continuity management. Organisations, which apply or want to apply the Business Continuity Management Model via well-established and certificated standards or related standards (norms) during an external threat, are able to use the valuable knowledge of their employees who are specialists and experts in their area and without whom the continuity of activity could not be ensured and carried out to eliminate external threats. It wouldn't be safe for the organisation to carry on working in this field without these key staff (Brodej & Tucker, 2012; Herbane, 2010).

The Business Continuity Institute sets out standards in the sphere of Business Continuity Management. Two basic standards currently exist to adjust the managerial process so that it is accessible to the management concerned with this area. They are dealt with under norm BS 25999-1 (folder of procedures) and BS 25999-2 (Specification), (RAC BCMS, 2012). These standards determine the basic Business Continuity Management principles for general application in any organization and, also, the requirements for certification of emerging organisations. Business Continuity Management Standardisation provides organisations with easier orientation for the development of their own Business Continuity Management plan. It presents ways of measuring ongoing changes in an emerging system, enabling assessment of the quality of established Business Continuity Management systems. This also provides proof that BCM is a current topic, concerned with a broad spectrum of organizations (Hiles, 2007). An effective Business Continuity Management system, including Knowledge Continuity Management, guarantees financial stability and legal responsibility for organisations and demonstrates that the organisation uses all available safeguards to protect their employees, business interests and investments (Blyth, 2009).

The aim of this paper is to identify the importance of Knowledge Continuity Management in the context of Business Continuity Management, with reference to the results of a survey of Czech organisations.

2 Theoretical background

All processes taking place in the current environment can be said to swing between two extremes; between periods of crisis and periods of stability and development. The success of an organisation in the marketplace depends, among other things, on their ability to adapt to these swings. To resolve crisis situations it is necessary to admit that their occurrence may not be predictable, but they can be expected. Organisations often underestimate the need to prepare themselves for, and anticipate, crises; they often get caught out without warning and are unprepared when a crisis occurs. By this nonaction they incur significant losses of profit, which could have been avoided if the organisations had concerned themselves with the area of risk management (Münstermann, 2010; Blyth, 2009). The main elements in these processes are the people and the knowledge that they have within their organisation.

Business Continuity Management is a discipline that continues to develop over time (Elliott et al., 2010) and represents a management system supported by an organisation’s management that is able to identify potential and sudden incidents, accidents and stoppages and assesses their impact on a company’s crucial functions and vitality (BSI, 2010). To achieve high-quality processes, all organisational re-sources, of both a material and non-material nature, available to the organisation are used. All these resources need to be treated with appropriate care by the organisation. Business Continuity Management in organisations is governed by international standards and rules that provide guidelines on how to prevent threats from the outer and inner environments that would affect the organisation. Individual risks are analysed and described in detail in these standards. However, the area of preservation of employees’ knowledge in an organization is not covered sufficiently. It places emphasis on education and the transfer of knowledge among current employees, but
knowledge continuity ensuring during personnel changes and succession planning is only mentioned marginally and without stressing its importance, the possibilities of its ensuring, conditions of application or recommendations. The loss of key employees, however, represents one of the major threats for organisations in current society.

The sections of the paper provided below present the conception of Business Continuity Management and Knowledge Continuity and the importance of their interconnection in our present-day highly competitive environment.

**Business Continuity Management**

To achieve operational and business continuity, there needs to be a management process that addresses the processes and people that are critical to the survival of the organisation. This approach to ensuring the continuity of critical processes is called “Business Continuity Management” (BCM) as discussed in Randeree et al. (2012).

BCM is a managerial process that identifies possible events threatening the function of an organisation, prevents or minimises their occurrences and ensures there is a basic framework to enable the organisation to respond appropriately and successfully to a given event (Elliott at al., 2002; Herbane, 2010; Blyth, 2009; Graham & Kaye, 2006; Beazley et al., 2002). BCM is not only a professional specialist discipline, but also an issue that is business-owned and driven, unifying a broad spectrum of business and management processes. These include the following: management of risk, facilities, supply chain and quality; disaster recovery; security; crisis communication and public relations; and health and safety (Randeree et al., 2012).

The components of BCM include the following:

− Understanding the organisation – using business impact and risk assessment to identity the critical deliverables, evaluate recovery priorities and assess the risks that may lead to a disruption in service delivery.
− Determining BCM strategy – identifying alternative strategies available to mitigate loss, and determine their potential effectiveness to deliver its critical functions.
− Developing and implementing the BCM response – developing a response to business continuity challenges and creation of plans underpinning it.
− Maintaining and auditing BCM – ensuring that BCM plans are fit for purpose, kept up-to-date and quality assured.
− Establishing a BCM culture in the organization – the need to ensure that a continuity culture is embedded in the company by raising awareness throughout the key stakeholders, and offering training to key staff on BCM issues (Low et al., 2010).

The aim of BCM is to prevent interruption in business activities and to protect critical organisation processes against fatal impact and the consequences of: mistakes and significant errors; failures; disasters; the collapse of protective measures; the impact of violent, criminal and terrorist attacks aimed at an organization and, in particular, its assets, employees or management (Massingham, 2010; Hiles, 2007). A further objective of BCM is to ensure the continuity of the organisation’s mission by maintaining those critical processes, which are core to the business, at least at the minimum acceptable level (Randeree et al., 2012; Arduini & Morabito, 2010).

However, processes that are not critical also need to be recovered, but not necessarily within the same (often short) timescale. Their protection and recovery are also important, but may not necessarily come within the scope of BCM. Thus, a successful BCM process requires an organisation not only to identify its critical processes, but also to determine all resources that these processes depend upon (Randeree et al., 2012).
BCM requires an ability to plan and assign organisational resources to support key functions and organisational units (Wong, 2009). It is crucial to establish a good connection between organisational resource management and the result. The success of an organisation (in terms of profit) depends on decisions about the implementation of the strategies chosen. To achieve the required outcomes, some essential investment into material or nonmaterial (human) resources is required (Kildow, 2011; Wong, 2009).

Some important features of BCM, identified from existing definitions include:

- BCM activities should be prioritised with major attention directed towards critical business processes (Randeree et al., 2012).
- BCM covers both the prevention of disasters/disruption as well as the reduction of risk and reduction of the impact on business in cases when disaster/disruption strikes (Massingham, 2010; Munstermann et al., 2010). Hence, it has a preventive and corrective function (Randeree et al., 2012).
- BCM is an ongoing management process – not a one-off project. BCM becomes obsolete if not maintained or tested (Randeree, 2012; Arduini & Morabito, 2010).

The three major goals for implementing BCM are:

- To ensure business process contingency through a well-structured and comprehensive methodology.
- To provide greater confidence in identifying and managing fatal risks of disruption to essential business processes.
- A pre-arranged plan should be developed in four components – namely: policies; processes; people; and infrastructure – this is designed to accelerate the recovery and minimise the negative impact after the occurrence of a disaster (Low et al., 2010; Pheng et al., 2010).

Knowledge Continuity Management versus Business Continuity Management

With respect to the above, it is possible to say that business continuity is the strategic and political ability of an organisation to take into account accidents and interruptions of business activities and to respond to them in order to ensure the continuity of business processes at an acceptable and predetermined level (BSI, 2010).

A part of BCM is the protection of organisational resources (Wong, 2009). Organisational resources include people, as a production factor, without which organisations cannot function. They are carriers of knowledge, so the protection of those employees holding knowledge should be one of the priorities of an organisation. The term knowledge can be defined from several viewpoints. Most authors consider knowledge to be an important resource of a company (e.g. Cardoso et al., 2012), while Gao et al. (2008) describe it as business knowledge owned by the organisation and employee knowledge.

The importance of knowledge is best considered as having a dominant role in achieving a sustained competitive edge. Authoritative theorists in economics and business regard knowledge as the ultimate competitive edge for new organisations and as a key to their success. Thus, Knowledge Management (KM) and Knowledge Continuity Management (KCM) are directly related to the effectiveness of modern organisations, where knowledge plays a mediating role (Amirkhani et al, 2012).

KM provides an essential opportunity to access, maintain and improve the performance of the human workforce and to achieve a sustained competitive edge. The present study examines the hierarchy of knowledge management (data, information, analysis, knowledge and wisdom), descriptive and prescriptive models and different models of HR empowerment. Finally, the role of
knowledge management in the empowerment of human resources is examined (Amirkhani et al., 2012). Most knowledge management frameworks encompass the activities of identifying, acquiring, creating, storing and sharing knowledge and the utilisation of knowledge by individuals and groups in the organisation (Sun, 2010).

KM involves constant investment in human resources, aiming to prepare and support them so that they can participate more actively in KM, understand, be committed to, and accomplish its goals (Cardoso et al., 2012). On the basis of the above-mentioned factors it is possible to summarise by suggesting that KM is concerned with knowledge transfer among current employees, whereas KCM is concerned with knowledge transfer between generations of employees (Beazley et al., 2002).

KCM is specifically concerned with critical knowledge passed on by departing employees to their successors (Beazley et al., 2002). When employees leave, they take vital knowledge with them (Field, 2003). As a result, critical knowledge assets can easily be lost once a project is completed and the team is disbanded (Ajmal et al., 2010).

If an organisation wants to utilise its knowledge potential effectively, it is important to ensure that the continuity of transfer of knowledge, particularly inside the organisation, occurs at the latest when employees are departing the organisation. At that time, a successor, who should have the same critical knowledge necessary for the job as his/her predecessor, should be identified in the organisation. Without a process in place to capture that knowledge and transfer it to their successors, it can be lost forever. KCM focuses on passing critical knowledge from exiting employees to their replacements (Field, 2003).

In other words, by ensuring knowledge continuity, organisations are trying to ensure that the knowledge and experience of the leaving employee has already been transferred to his/her successor in order to prevent the loss of key knowledge that would threaten the organisation. The rule of linear proportion applies – the higher the balance between the knowledge of the leaving employee and his/her successor, the lower the risk of loss of knowledge and the better the situation for the organisation. It also applies that the higher the quality of the leaving employee, the more essential it is to ensure continuity. Based on the results of a quantitative and qualitative survey (Urbancová, 2012a, b), it can also be said that it is desirable for organisations to achieve the maximum possible level of knowledge continuity (i.e. 100%). The negative impact of knowledge loss can be minimised or eliminated by securing maximum continuity through Business Continuity Management (for example when an employee leaves to join a competitive organization, or there is a retirement or death of an employee).

On the basis of the above-mentioned research results, according to Urbancová (2012a, b), it is possible to summarise by saying that knowledge continuity is a crucial element of BCM. It leads to greater competitive advantage, greater effectiveness, better threat identification and improved decision making with reduced risk. If an organisation does not develop and implement KCM, it can also have an impact on business continuity, leading to a crisis situation in the organisation. Therefore, ensuring the continuity of knowledge and the implementation of KCM is crucial for the maintenance of the continuity of a business and its organisational performance.

It is also important to realise that managers have to pay attention to knowledge continuity in order to achieve the optimal level of BCM, since no business continuity may be ensured without those knowledgeable employees who have knowledge critical for the organisation. What is crucial is the support of top management, as well as anchoring BCM into the organisational culture to make all the employees aware of its importance.
3 Material and Methods

This article is based on the analysis of secondary sources (scientific books and papers from research databases concerned with Business Continuity Management, Knowledge Management and Knowledge Continuity Management) and assessment of quantitative research outcomes in organisations in the Czech Republic. In this work, methods of induction, deduction, analysis and synthesis were used.

Primary data were gained via a questionnaire survey, which took place in the period from August to October 2012. Questionnaires, in Czech, were distributed to Czech organisations using the LimeSurvey method. The questionnaires were duly completed by specialists and managers concerned with Business Continuity Management. 779 organisations were contacted and the questionnaire was completed by 105 respondents. The overall questionnaire return rate was 13.5 %. The companies were chosen according to particular selection criteria to represent organisations in the primary, secondary and tertiary sectors and, also, according to the size of the organization; all of which were registered with the Czech Statistical Office. Thus, 15 % of organisations were chosen from the primary sector, 15 % from the secondary sector and 70 % from the tertiary sector – while 65 % represented small organisations, 20 % medium-sized organisations and 15 % large organisations. The results were analysed using SPSS, supported by descriptive statistical tools. The following abbreviations are used in the article: BCM = Business Continuity Management; KM = Knowledge Management; KCM = Knowledge Continuity Management.

4 Results

The results of the survey carried out in this area are presented in this section. They are analysed and summarised and conclusions are formulated.

Utilisation of BCM in organisations

The research ascertained that the approached Czech organisations do not generally use BCM. This applies to a total of 86 organisations out of the 105 respondents in this selected set of organisations (13.5% response rate), corresponding to 81.90 %. The number of responding Czech organisations using BCM was in total 19 i.e. 18.10 % (Figure 1).

Figure 1 Level of utilisation of BCM in Czech organisations (expressed in %)

Source: authors’survey

Those Czech organisations using BCM (Figure 2) do so for key business processes (100 %), IT (89.47 %) and human resources (57.89 %). For this question, respondents were allowed to choose more than one correct answer. BCM is used by Czech organizations the least for human resources, despite the fact that Knowledge Continuity Management is the basic element of BCM and leads to higher competitive advantage, effectiveness, and better identification of threats and better decision making with lower risk (Urbancová, 2012a, b).
On the basis of the results presented in Figure 2 it is possible to state that, currently, those organisations utilising BCM in the Czech Republic use it primarily in the IT area. The results of the survey show that only about half of the responding organisations reported that they use BCM in the area of human resources. However, further detailed study showed that almost 70 % of such organisations do not use Continuity management consistently and systematically. It is only dealt with as an incidental activity, when needed, as a way of ensuring knowledge transfer between employee generations, in order to eliminate the risk of knowledge loss. These conclusions are confirmed by Figures 3 and 4.

**Replacement of human resources in terms of Knowledge Continuity in the Czech Republic**

BCM used in the area of human resources in Czech organisations is, mostly, focused on human resource replacement for selected positions (e.g. promotion to a senior post) for the purpose of knowledge continuity maintenance. Only one company stated that it does not ensure knowledge continuity maintenance for staff replacement (Figure 3).

**Figure 3** Utilisation of Knowledge Continuity Maintenance for Human Resource Replacement (expressed in %)

Source: authors’ survey

Organisations try to ensure knowledge continuity, so that the knowledge and experience of a departing employee is passed on to his/her successor. A direct ratio applies here, in that the more equal the knowledge between the departing worker and his/her successor, the lower the risk of knowledge loss and the better it is for the organisation. In total 31.57 % of respondents agreed that it is important to ensure continuity for all key staff.
On the basis of previous research (Urbancová, 2012a, b), it is now recognised that ensuring knowledge continuity depends on the size of the organisation ($p – value \chi^2$ test = 0.005, Cramer’s $V$ = 0.334; moderate direct dependence) and on the sector in which the organisation is involved ($p – value \chi^2$ test = 0.037, Cramer’s $V$ = 0.248; weak direct dependence). These results were further confirmed by the BCM survey, because it was found that BCM is utilised only in large organisations in the Czech Republic, such as banking and the financial sector.

Employee knowledge is now universally recognised as a critical competitive asset (Ajmal et al., 2010), therefore, due regard should be given to key critical employees who are knowledge holders. 52.63% of the Czech organisations among these particular respondents in the research set do not register critical employees in the pre-pensionable age; less than a quarter are registering employees (21.05%) and about a quarter of the set only shadows and supports knowledge transfer by various non-systematic means. When knowledge continuity management (KCM) is utilised in organisations, either systematic methods for recording information or non-systematic methods (such as shadowing) are used, as shown below (Figure 4).

**Figure 4** Level of registration of critical employees in companies in the Czech Republic (expressed in %)

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>52.63%</td>
<td>Registration of critical employees</td>
</tr>
<tr>
<td>21.05%</td>
<td>Registering employees</td>
</tr>
<tr>
<td>26.32%</td>
<td>Only shadows and supports knowledge transfer</td>
</tr>
</tbody>
</table>

Source: authors’ survey

Knowledge is now considered to be a major driving force in organisational change (Kazemi and Allahyari, 2010) and an organisation’s key resource (Cardoso et al., 2012). People are the main drivers of knowledge management (KM) projects (Kazemi & Allahyari, 2010). Nowadays, many companies approach the retention of key employees during disruptive periods of organisational change by offering financial incentives to senior executives, star performers, or other "rainmakers" (Cosack et al., 2010). The aim of BCM is to ensure the uninterrupted availability of all key resources required to support critical business activities in the event of business disruption and to facilitate a return to "business as usual" (Tammineedi, 2010).

On the basis of the foregoing, we can conclude that effective knowledge transfer among current employees in the whole organisation can help to solve some organisational problems and support success. However, transfer of knowledge between generations of employees is a complex task, which may lead to crisis. It involves serious difficulties because of its complicated structure (Szulanski, 2000). We recognise the importance of focusing on the informal transfer of knowledge in the area of KCM. This should aid, not only effective KCM, but also support BMC. Besides formal CM, it involves activities connected with many aspects of the life of the organisation and management practice. The various processes and factors in knowledge continuity that influence BCM can be affected by socialisation processes and IT development, which are leading and will continue to lead to an in-depth understanding of knowledge continuity and its influence on BCM. Currently, unfortunately, the area of knowledge continuity is seen only as a background to BCM and not as a methodological pre-requisite ensuring its implementation (Urbancová, 2012a, b).
Having the above in mind, it is possible to state that people and their knowledge are currently the most essential resource of organisations that want to achieve a competitive advantage and, therefore, they are also an important element in the area of business continuity management whose task it is to respond to unexpected events that may jeopardise the organisation. However, we should realise that the non-ensuring of knowledge continuity as an essential part of Business Continuity Management and the non-ensuring of substitutability of key personnel may not only endanger key processes, but also the organisation as a whole. That said, it is necessary to incorporate a methodological tool of knowledge continuity ensuring into the BCM conception. Without the right employees in the right positions and with the necessary knowledge (which may be achieved through knowledge continuity ensuring) it is impossible to support Business Continuity Management. Knowledge continuity ensuring may, therefore, be perceived as an important element of the BCM concept.

**4 Conclusion**

Business Continuity Management is currently viewed as an area of management, which is focused on identifying the potential risk of the impact of negative events which may threaten an organisation. BCM creates a framework for ensuring a degree of resilience and the ability to respond to unexpected circumstances and, by doing that, to protect, not only key functions of an organization, but also its interests, such as the value of its shares. The main areas of application of BCM include the security of employees, internal communications in an organisation, renewal and maintenance of critical processes and functions, and the effective management of risk and crisis management. Standards deal with the knowledge continuity area only marginally and there is no methodological background. The results of the survey conducted in organisations in the Czech Republic show that organisations do not pay sufficient attention to it; it is only an occasional activity. It is crucial to emphasise that the goal of the systematic ensuring of knowledge continuity is the continuity of an organisation’s development, the quality of managerial positions and decision-making continuity. Therefore, by ensuring the maximum continuity of knowledge within the BCM concept, it is possible to eliminate threats and the negative consequences of knowledge loss. Knowledge continuity ensuring is also a strengthening factor of an organisation’s performance.

On the basis of the results of this survey on the utilisation of BCM in organisations in the Czech Republic, we can conclude that Czech organisations (81.90 %) do not utilise BCM and, if they do, they do not adhere to KCM. Only 31.57 % of the sample of responding organisations implements a staff replacement strategy for all key personnel. Of the Czech organisations who do use BCM, 52.63 % do not register critical personnel, even though it is recognised that ensuring knowledge continuity supports working processes with the knowledge and these processes, in turn, support BCM. They collectively increase the capacity of an organisation to resist competition and, in the final analysis, achieve success on an organisational and individual level.

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