Creating Intangible Value through a Corporate Employee Portal

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Abstract

Organizations create competitive advantage by creating more economic value than their rivals. Increasing business competition and information technology development have both led to huge corporate organizational changes and have raised the importance of intangible assets along the value chain. Value creation and the success of organizations increasingly depends on the leverage of knowledge available internally, as nowadays it has become essential to understand employee portals' business value and to build adequate change management programmes. The Balanced Scorecard (BSC) and Strategy Map (SM) show an organization's objectives, how they are achieved, and the link between the goals of the various sub-units and how these act together to produce the overall results. BSC and SM clarify how intangible assets are aligned with strategy, to create value for the organization. However, the concerns related to change management seem not to have been properly addressed. To conveniently deal with these matters, the authors propose a framework to map the cause-effect relationships that generates business value, as well as provides top management and decision makers with the information needed for a suitable top-down commitment and sponsorship, which is essential to bring about the appropriate change management and benefits' realization. SM and Benefits Dependency Network (BDN) were combined, resulting in a suitable framework to help organizations enhance their knowledge, mitigating the risk of investment failure or misuse, and a timely contribution to capture more value from investments in intangible assets. The developed framework helps organizations address their concerns related to value creation and change management, and it has been applied to this Employee Portal case study. This case study allows us to conclude that, although the promotion of organizational culture and corporate alignment are not usually frequent goals of organizations, and do not motivate investments in the development of employee portals, they are generally recognised as being essential tools for decision-making and value creation.

Keywords: intranet; employee portal; business value; knowledge management; strategy maps; benefits management; change management; corporate culture.

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INTRODUCTION

Today's increasing business competition and information technology development has led to huge corporate organizational changes and has placed intangible assets higher up the value chain. Much of corporate growth and shareholder value relies on a skilled workforce, patents and know-how, systems and technology, and in a strong commitment to relationships with customers, brands, projects and unique organizational processes, among others. (Lev, 2004)

In fact, these intangible assets may be just as real as other assets in their ability to generate value (Brynjolfsson & Yang, 1997). There is no universally accepted definition of intangible assets. Kaplan and Norton (2000, p.93) refer that "the learning and growth strategy defines the intangible assets needed to enable organizational activities and for customer relationships to be performed at an ever-higher level of performance".

The importance of developing an adequate corporate culture to promote collaboration, knowledge sharing and innovation is consensual among academics and practitioners alike. Bharadwaj (2000) describes knowledge management as being a social process that requires tremendous organizational change and that the creation of a culture of knowledge management involves both technological and social aspects, such as changing the organization structure, as well as control and communication systems and reward structures. Nowadays, companies contribute with different resources and technological capabilities that improve and complement a firm's innovation capabilities (Becker & Dietz, 2004; Miotti & Sachwald, 2003).

Enterprise portals are Web browser interfaces into a single point which are used within organizations to promote the collection, sharing and dissemination of information throughout their organization (Detlor, 2000). Employee portals are relevant informational assets which perform an important role in an organization's strategy. However, justifying returns from investments in these solutions is not an easy task, as their implementation demands large changes in culture, behaviour and processes.

Pickett and Hamre (2002, p. 39) describe an intranet portal as being a dynamic and personalised '*gateway to network-accessible resources*' that belongs exclusively to an organization. Known as corporate portals, enterprise portals, or employee portals, these intranet portals have evolved from web search engines to customisable, synchronised and real-time repositories of organizations' intellectual capital (Benbya et al., 2004). These portals improve employees' productivity by improving corporate information access (Aneja et al., 2000).

Although Employee Portal benefits are widely studied (Benbya et al., 2004; Dias, 2001; Lai, 2001), it is common sense to conclude that it is difficult to identify the return on investment from Information and Communication Technology (ICT) projects, especially as most of their benefits are intangible. In ICT projects, elements such as networks, computers and software are all just a small part of the total implementation costs. In these projects, the delivery of major business benefits comes from complementary investments (Ward & Daniel, 2006).

Brynjolfsson, Hitt & Yang (2002) point out that successful projects required careful attention to management, employee training and changes in areas that are apparently non-related to the business. Therefore, it is essential to understand how employee portals add business value and then build adequate change management programmes.

To understand how a corporate employee portal contributes to the intangible assets value creation process, and how can we can predict, measure and evaluate the impacts generated by these assets, we show in this paper how a corporate employee portal contributes to the intangible assets value creation process, and explain the relevant innovation and support processes involved and the changes required to guarantee benefits realization. The results show that an employee portal improves strategy communication and corporate alignment in the organization.

RESEARCH APPROACH

This position paper extensively addresses the reported concerns of organizations regarding unsuccessful ICT project implementations and focusses on Employee Portals. The methodology used in the research consisted of a case study with triangulation of the literature review, an extensive study of corporate information (communication with shareholders, annual reports, investors' day presentations, internal news magazines, intranet news, internal presentations, and knowledge of the employee portal roadmap), as well as semi-structured interviews with managers and employee climate surveys carried out over time.

This approach allowed us to develop a theoretical framework and to test the consistency of the findings obtained, allowing a clear understanding of how an Employee Portal contributes to the intangible assets value creation process and consequently for validating the framework.

LITERATURE REVIEW

According to Marr and Adams (2004), one of the major issues concerning intangible assets is that each author has their own framework (e.g. Andriessen & Tiessen, 2000; Bontis, 2001; Brooking, 1996; Edvinsson, 1997; Lev, 2001; Marr et al., 2004; Roos & Roos, 1997; Roos et al, 1997; Stewart, 2001; Sullivan, 1998; Sveiby, 1997). This myriad of approaches confuses practitioners who wish to apply it to organizations. The concept is discussed from various perspectives and with emphasis on different subjects, namely: accounting, human resources, information systems, and knowledge management, among others (Marr et al., 2004; Marr & Adams, 2004). The significant growth of intangible assets became clear by the changes seen within the tangible and intangible asset structure in modern organizations. Hall (1989, 1992) introduces the concept to the strategic management field. Itami (1991) refers to intangible assets as *invisible assets,* which include technology, consumer confidence, brand, corporate culture and management skills.

Kaplan and Norton (2004) clarify the content of the BSC perspective of *learning and growth*, citing that intangible assets include:

- Human capital (employees', skills, talent, and knowledge);
- Information capital (databases, information systems, networks and technology infrastructure);
- Organization capital (culture, leadership, employee alignment, teamwork, and knowledge management).

According to Armitage et al (2006), three of the most important aspects of organizational capital are: leadership, teamwork and communication. Together, these are responsible for the main changes necessary for implementing an organizational strategy.

Marr et al. (2004), following other authors, highlight the relevance of corporate culture, and state that it influences employee skills, and vice versa, and reinforces the achievement of overall goals and also provides a common and distinctive method for transmitting and processing information. The importance of developing an adequate corporate culture for the promotion of collaboration, knowledge sharing and innovation, is consensual among academics and practitioners alike. The use of collaboration practices in companies is the starting point for creating innovative processes, products or services that differentiate a company from its competitors (Nieto & Santamaria, 2007). To make these changes possible, companies must:

- Implement a culture of collaboration, trust, knowledge sharing and skills (Lai, 2001);
- Implement tools for exploiting collective knowledge, experience and communities (Martensson, 2000);
- Create the routine to use these tools (Martini et al., 2009).

The development of such skills and abilities is the foundation for the success of intranet initiatives and these demand both time and investment in communication and education, to modify behaviour and overcome existing barriers to non-use (Martini et al., 2009).

Intangible assets have been asserting themselves as a major source of competitive advantage and yet no tools have been designed to identify and describe the value they create (Kaplan & Norton, 2000).

The concept of BSC was introduced in 1992 to capture this value creation through the measurement of an organization's performance in four perspectives. The SM provides a common framework and language that can be used to describe any strategy (Kaplan & Norton, 2000). Reading the SM from bottom to top, one understands how employees need certain knowledge, skills, and systems – the learning and growth perspective, to innovate and build the right strategic capabilities and efficiencies – and an internal process perspective, to deliver specific value to the market, based on a customer perspective, which then leads to greater shareholder value from a financial perspective (Kaplan & Norton, 2000).

Armitage and Scholey (2006) propose a completed generic SM, which shows all three types of capital working together to help the company execute the various elements of the internal business perspective. Aligned learning and growth and internal business processes, i.e., deciding how we plan to accomplish it, help facilitate the achievement of customer and financial strategies, i.e., what we want to accomplish.

Information technology, by itself, does not create any benefits. On the contrary, it is business and organizational changes that produce most of the benefits (Ward & Daniel, 2006). According to Kaplan & Norton (2004), for this to occur, these changes need to be adequately aligned with the organization's strategy, and integrated programmes need to be implemented to enhance all intangible assets in a coordinated way.

Hughes and Morton's (2006) research shows that productivity earnings and competitive advantage can be gained from IT, not because of technology per se, but in the way that certain assets can lead to new products and processes, creating further sources of sustainable competitive advantage, examples being: organizational processes, embedded know-how, people skills and new organizational structure innovations.

Peppard et al. (2007) claim the existence of five principles to accomplish benefits through IS/IT investments:

1) Just having technology does not bring any benefit, nor create value;
2) Benefits arise when IS/IT enables people to do things differently;
3) Benefits result from changes and innovations in ways of working, whilst only involving people who can make these changes;
4) All IS/IT projects have outcomes, but not all outcomes are benefits.

5)   Benefits must be actively managed if they are to be obtained.

Intranet portals provide organizations and institutions with a single electronic access point to a large and diverse array of internal web-based information for authorised end-users (Schubert & Hausler, 2001). The implementation of intranet portals allows for shared information workspaces that extend and transmit organizational knowledge (Boersma & Kingma, 2006; Li & Wood, 2005). Intranets, central document repositories and knowledge databases are all important information capital assets, which perform an important role in a corporation's strategy when used effectively (Armitage & Scholey, 2006). These tools have evolved from a communication and information-sharing stage to a consolidated workplace, and they are essential for promoting communication, collaboration and the sharing of information within an organization (Urbach et al., 2009). Dias (2001), in an extensive review of the literature, identifies several positive characteristics of intranet portals, including:

- Enhanced information life cycle management;
- Greater pin-pointing of organization experts in particular fields;
- Ability to better meet individual users' information needs,
- Fostering of information exchange between employees, suppliers, resellers and customers.

A corporate portal enables organizations to provide users with a single gateway to the personalised information that they need to make informed business decisions (Shilakes & Tylman, 1998). Further along the evolution of these tools, according to some known maturity frameworks (Forrester Research, 2010; Hawking & Stein, 2003), intranets evolved to becoming portals, which are now much more complex solutions which provide other organizational objectives. A portal can be seen as being a way to access disclosed information within a company, which is stored in multiple and heterogeneous systems, using different formats. A portal is, therefore, a single point of access to internet resources and an integration platform that focusses on organizational business processes unification. Portals synchronise knowledge and applications, creating a unique vision for organizations which have evolved by integrating a variety of services (Benbya et al, 2004).

An Employee Portal provides employees with the in-time relevant information that they need to perform their tasks and to make efficient business decisions. Being one of the tools for communicating a new strategy, helping to get employees to use this common platform may lead companies to experience some of the following benefits, among others (Dias, 2001; Lai, 2001; Nieto & Santamaria, 2007):

- Improved corporate communication and greater opportunity for collaboration;

- Improved sharing of knowledge, which may be crucial for maintaining a competitive advantage over the competition, as technological collaboration and the sharing of information impacts positively on product innovation;
- Improved employee service/convenience in accessing information and services, with more autonomy for employees in managing human resources processes and information, which results in reduced costs, improved employee productivity, and an organization's competitiveness;
- Greater operational efficiency and improvement in decision quality. It is consensual amongst academics and practitioners that ICT investment should be carefully justified, measured and controlled (Milis et al., 2009), and yet a surprising percentage of enterprises fail to adopt fundamental best practices regarding portal sponsorship and governance.

The research strongly indicates that feasibility studies of capital investment in today's companies and organizations are mainly based on a financial cost-benefit analysis (Milis et al., 2009). This may occur because the responsibility for most ICT investment decisions still remains with finance managers, and also because capital investment-appraisal techniques are well known, understood and practiced (Milis et al., 2009). The benefits generated by the intranet not only serve the initial development, but also help ensure that the intranet becomes a tool that brings added value to the business (Cury & Stancich, 2000).

One of the most widely used and cited models outlining the scope and nature of Benefits Management (BM) is the Cranfield model. The BM approach was developed to enable organizations to improve the value realized from specific ICT investments, but it can also be used to formulate, manage and implement strategic change programmes, and also to help formulate and implement business strategies (Ward & Daniel, 2006). The purpose of the benefits management process is to improve the identification of achievable benefits, and to ensure that decisions and actions taken over the investment life-cycle lead to realizing all the expected benefits (Gomes & Romão, 2013; Ward & Daniel, 2006). The greatest value from IT comes from the business changes that it enables an organization to make. Investment is in *'IT-enabled change'*, not just technology, to achieve improvements in business and organizational performance through better processes, relationships and ways of working (Ward & Daniel, 2006). A benefits management governance framework is built on the existence of a business case for contrasting benefits behaviour with cost behaviour (Eckartz, 2012; Ward et al., 2008), which is usually the responsibility of the senior owner of this change. BM follows a process cycle of 5 steps (Ward & Daniel, 2006): (1) Identification

and structuring of benefits; (2) Benefits Realization Plan; (3) Benefits Plan Execution; (4) Benefits Review & Evaluation; (5) Potential for further Benefits.

BDN is a key output from the activity of determining both the changes required for the delivery of each benefit, and how ICT assets will enable these changes to come about (Peppard et al., 2007; Ward & Daniel, 2006; Ward & Elvin, 1999). The BDN provides a framework for explicitly linking both the overall investment objectives and the desirable benefits with the business changes that are necessary to deliver these benefits, as well as the essential IT functionality required to enable these changes to occur (Gomes & Romão, 2013; Peppard et al., 2007). There is a clear understanding that benefits only result from the active involvement of business managers in defining and owning these benefits, and in carrying out the changes that deliver them (Ward & Daniel, 2006).

OVERCOMING THE STRATEGY MAP LIMITATIONS

SMs are important tools for communicating strategy and for showing how intangible assets align with strategy to create value for an organization. However, this tool gives little evidence of the interrelationship between assets, the identification of support processes, the impact of internal processes on intangible assets, and the identification of strategic enabling changes (Mendes & Romão, 2013). Therefore, the model can be complemented and reinforced with these elements, which will in turn result in a stronger framework for helping organizations enhance their strategic knowledge, and reduce the risk of project failure, and also help capture real value from their investments. Therefore, some enhancements were made to the SM to overcome the identified limitations (Mendes & Romão, 2013).

The Strategy Map does not evidence an interrelation between assets

Many academics support the resource-based view of a firm, where different assets depend on each other to create value as they are interconnected (Marr et al., 2004). The contribution of a particular asset can rarely be expressed independently from other assets, namely: skills, expertise, or corporate culture (Marr et al., 2004). In SM, intangible assets are presented as separated categories, as they relate to value-creating processes independently, but are not related. Exploiting assets complementarily allows them to be used more efficiently to strengthen an organization's competitive advantage (Hughes & Morton, 2006). Marr et al. (2004) claimed that without understanding the interrelationships and interdependencies between assets, it is impossible to have efficient management of all organizational assets.

Kaplan and Norton (2004) argue that the value of intangible assets arises from their interrelationships, and cannot be measured independently. To

overcome this SM limitation, and based on the importance of identifying and communicating synergies amongst assets, the authors introduced the "*asset synergy*" concept in the proposed theoretical framework.

Lack of evidence of how internal processes positively impact assets

Ulrich et al. (2004) identify organizational capabilities (collective skills, abilities, and expertise) as relevant intangible assets to the value generation. These capabilities "are the outcome of investments in staffing, training, compensation, communication, and other human resources areas. They represent the ways that people and resources are brought together to accomplish work" (Ulrich, et al., 2004, p. 119). Casadeus-Masanell et al., (2007, p. 5) define a business model as "a set of choices and consequences", and identify intangible assets as consequences, rather than choices. They also describe virtuous cycles as feedback loops generated by a business model's dynamics that iterate and strengthen some components of the business model (Casadeus-Masanell, et al., 2007).

Another example of this kind of feedback regards the organizational change required to perform efficient knowledge management processes. It is known that SM does not show how internal processes impact assets. According to Norton and Kaplan (2000), value is created in organizations through the management of internal processes and the development of human, information and organizational capital. They group internal processes into four main clusters: *"operations management processes"; "customer management processes; "innovation processes,* and; *"regulatory and social processes"* (Norton & Kaplan, 2004).

Ulrich and Smallwood (2004) identify organizational capabilities as being relevant intangible assets for value generation. These capabilities are the outcome of investments in staffing, training, compensation, communication, and other human resources areas. They represent the ways that people and resources are brought together to accomplish work (Ulrich & Smallwood, 2004). However, creating a culture for knowledge management requires changes to intangible assets such as organization structure, information systems and reward structures (Bharadwaj, 2000). To overcome the described limitations in SM, the introduction of the *"virtuous process feedback"* concept is suggested in the proposed theoretical framework.

The BSC internal perspective does not consider support processes

In the BSC there is no focus on support processes. Examples of investments in human resources areas (Ulrich & Smallwood, 2004) include such organizational capabilities as: talent, speed, shared mind-set, coherent brand identity, accountability, collaboration, learning, leadership, customer connectivity, strategic unity, innovation and efficiency.

Social aspects related to organizational change need to be considered in the knowledge management processes (Bharadwaj, 2000) which are managed in organizations' support processes. Because they are not usually implemented, we have suggested the introduction of a *"support processes group"* in the internal perspective of the proposed theoretical framework.
A lack of detail on enabling changes
SM does not identify those enabling changes (e.g. training, new working practices, communication) required to foster benefits realization. These changes are prerequisites to achieve business changes, and they are essential for bringing the system into effective operation within an organization (Ward & Daniel, 2006).

Bharadwaj (2000) also highlights the difficulty for organizations to manage effectively both ICT and the social aspects of knowledge management. He states that this social process requires tremendous organizational change and identifies organization structure, control and communication systems and rewards structures as being the assets that are required to promote effective change (Bharadwaj, 2000). As seen before, the importance of adequate change management and sponsorship in guaranteeing the success of projects is a common theme among academics and practitioners, and SM does not appear to have an answer to this concern. To overcome this limitation, we have suggested the introduction of the "*enabling changes layer"* in the proposed theoretical framework.

Theoretical framework

The BDN from the BM approach maps the objectives, benefits and required changes, and shows the way to achieve those (Gomes et al., 2013). Although its main focus is to determine the changes required for the delivery of each benefit and how ICT assets enable these changes, BDN can be used as a complement to SM, helping to overcome some of the previously identified limitations. Ward and Daniel (2006) define *"investment objectives"* as being agreed organizational targets to be achieved from investments in relation to the drivers. These organizational targets can be related to either human or organizational capital.

Throughout the reviewed literature, examples of business benefits were found that consist of strengthening intangible assets. Value creation through fortifying such assets as knowledge, culture, loyalty, image, brand, collaboration and custom orientation is identified as being a benefit by Allee (2000) and Bharadwaj (2000). According to Ulrich and Smallwood (2004), organizational capabilities are the outcome of investments in staffing, training, compensation, communication and other human resources areas.

The *"enabling changes layer"* consists of the addition of a new layer in SM (Figure 2), which corresponds to the BDN-enabling changes layer (Mendes & Romão, 2013), shown in Figure 1.
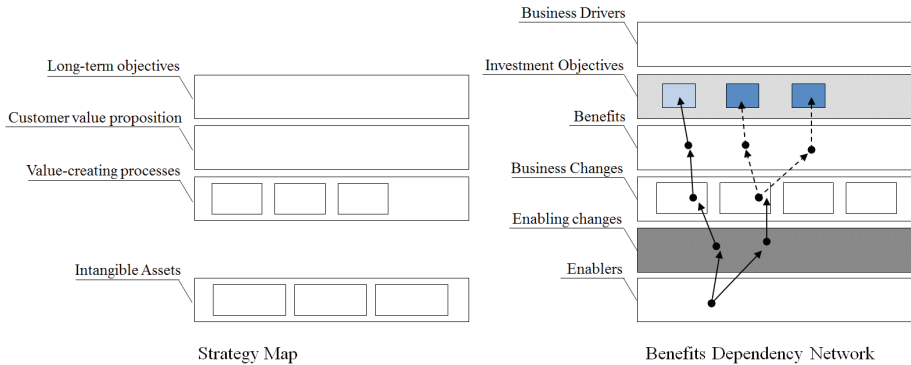
Figure 1. Enabling changes layer

Source: Mendes, Gomes & Romão (2016).

A *"virtuous process feedback"* should be addressed by the transposition of the BDN *"Investment objectives"* layer into the SM *"Intangible Assets"* and *"Long-term objectives"* layers (Mendes & Romão, 2013). *"Support processes group"* consists of the addition of this process group and the usage of BDN to identify all relationships.
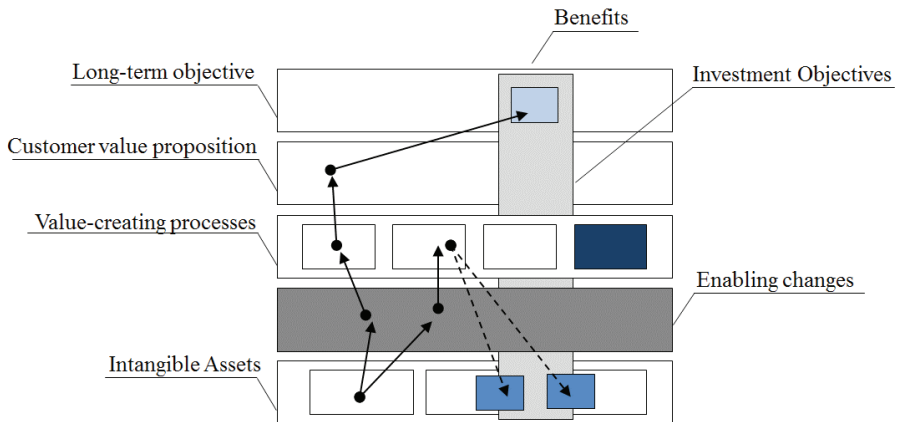
Figure 2. Virtuous process feedback

Source: Mendes, Gomes & Romão (2016).

"Asset synergies" consist of the visual representation of direct dependencies and interrelation between assets. As we explain later, there is evidence that the proposed framework has been revealed as being suitable for communicating organizational strategy, as it allows an understanding of how business value is generated and provides the information needed for an appropriate top-down commitment and sponsorship, which are both essential elements for the implementation of advisable change management and benefits management.
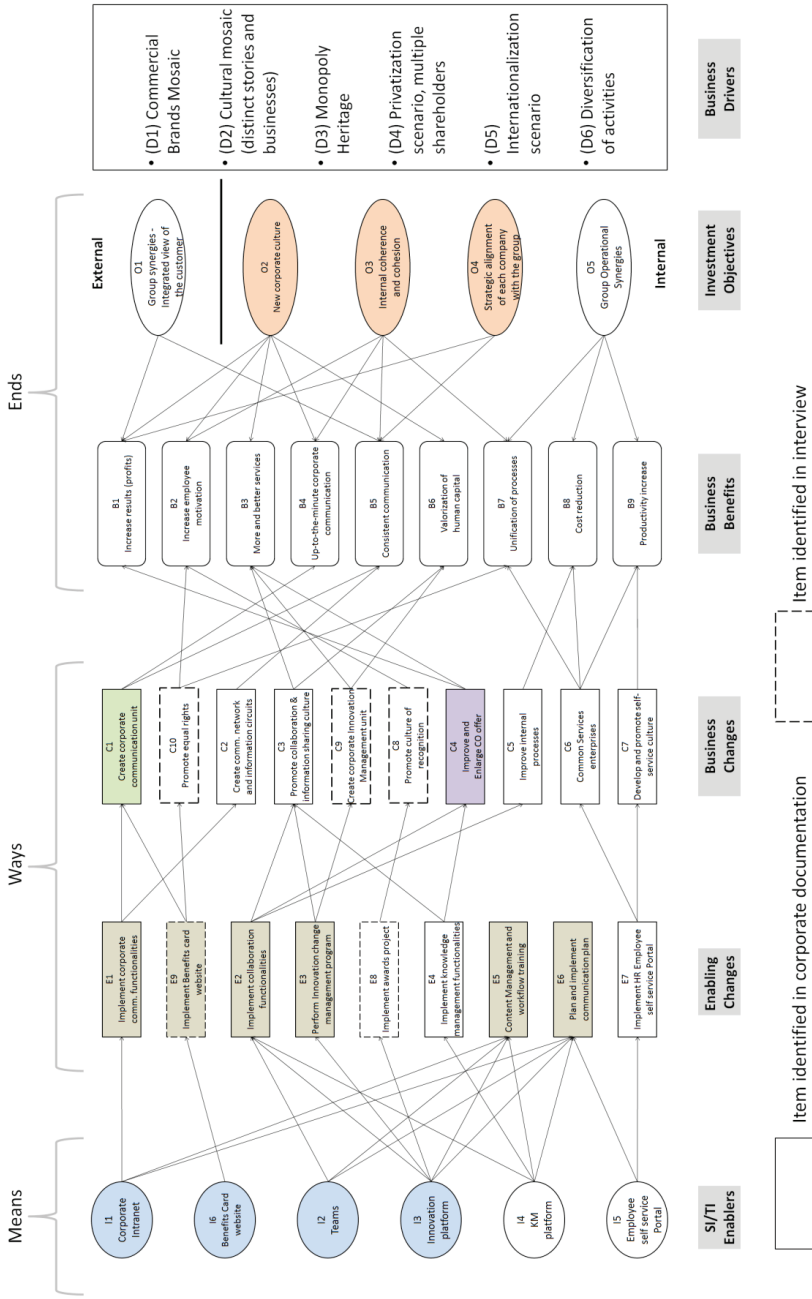
Case study

The Company (CO) used for the case study is one of Portugal's largest private businesses, and up until 2015 it had clients spread throughout various business areas around the world.

The research carried out was based on corporate documentation (communication with shareholders, annual reports, investors' day presentations, internal news magazines, intranet news and internal presentations), literature review and knowledge about the company, which allowed the development of the BDN. These intermediate results were then validated by two of the major stakeholders, according to the selected business changes, to validate their different perspectives. We applied the collected data to the developed theoretical framework and triangulated it with employee climate surveys data. We interviewed people involved in Corporate Communication and Innovation Management. We then analysed the employee climate survey results from 2002 to 2011, to triangulate and confirm the previously gathered data (no responses were received from more than 10,000 employees, with an overall adherence index that increased from 42% in 2002, to 65% in 2005, and continued to grow up until 86% in 2011). Careful analysis of the company Employee Portal timeline led us to conclude that its functional evolution is somehow aligned, but that there is no perfect match, as previous CO intranets were older than the corporate intranet, and they had their own evolutionary path. Analysis of corporate intranet versus maturity frameworks should take into consideration all intranets and the corporate intranet in an integrated viewpoint. We focussed on the full period when analysing alignment and teamwork, but only focussed on the last years when analysing culture. Innovation has always been a characteristic of this company, and its cultural transformation and change in mentality over the past few years has underlined its importance. We found evidence in the reviewed documentation that the employee portal was a tool for guaranteeing the accomplishment of strategic objectives related to culture and alignment.

The BDN depicted in Figure 3 was reviewed by the interviewed people to validate the linkages between the various components and to identify other components which, although relevant, were not so obvious in the evidence gathered. Accordingly, the internal perspective tier of the framework depicted in Table 2 considers those business changes identified in the BDN.

Table 2. Framework correspondence (Mendes, Gomes & Romão, 2016)

"Internal perspective" framework tier correspondence	
Internal Process (Figure 5)	BDN Business changes (Figure 4)
IP1 – Innovation processes	C4 – Improve and enlarge CO offer
SP1 – Internal communication support process	C1 – Create a Corporate Communication Unit with all the inherent communication processes and procedures
"Enabling changes" framework tier correspondence	
Enabling changes (Figure 5)	BDN Enabling changes (Figure 4)
E1 – Implement corporate communication functionalities	E1 – Implement corporate communication functionalities
E2 – Implement collaboration functionalities	E2 – Implement collaboration functionalities
E3 – Carry out an innovation change management programme	E3 – Carry out an innovation change management programme
E5 – Content management and workflow training	E5 – Content management and workflow training
E6 – Plan and implement the communication plan	E6 – Plan and implement the communication plan
E9 - Implement Benefits card website	E9 - Implement Benefits card website
"Learning and growth perspective" framework tier correspondence	
Intangible assets-Organizational capital (Figure 5)	BDN Investment objectives (Figure 4)
OC1 – Corporate culture	O2 – New corporate culture
OC2 – Strategic Alignment	O4 – Strategic alignment of each company with the group
OC3 – Teamwork and knowledge sharing	O2 – New corporate culture (based on CO corporate documentation, we considered culture to include "team spirit" and "information sharing"). The business change identified in BDN as C3 (promote collaboration & information sharing culture) also highlights the importance of this organizational capital intangible asset.
Intangible assets – Information capital (Figure 5)	BDN SI/TI enablers (Figure 4)
IC1 – Employee Portal (communication and collaboration functionalities)	I1 – Corporate Intranet
	I2 – Teams
	I3 – Innovation platform
	I6 – Benefits card website

Figure 3. Developed BDN
Source: Mendes, Gomes & Romão (2016).

The Enabling Changes tier of the framework was directly mapped with the identified enabling changes in BDN, which are related to the following selected communication and collaboration Employee Portal areas and functionalities. SM information capital matches the ICT enablers of BDN, and SM organizational capital internally matches the investment objectives of BDN. We focussed our analysis on two main investment objectives: *"new corporate culture"* and *"strategic alignment of each company with the group".*
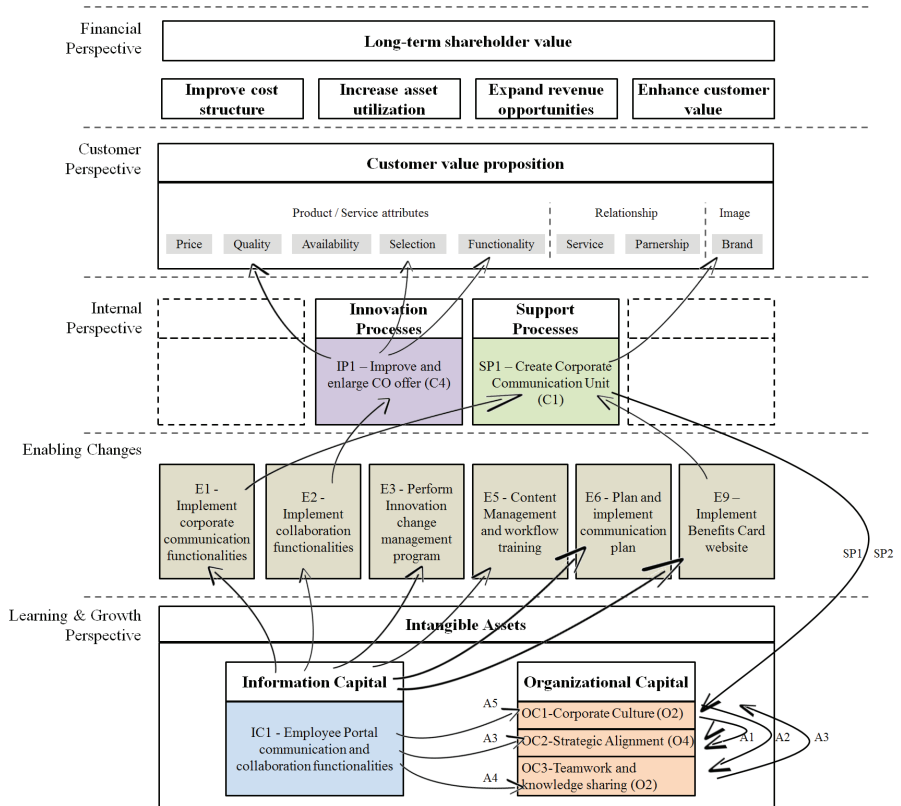
Figure 4. Framework linkage evidence

Source: Mendes, Gomes & Romão (2016).

The fluxes A1, A2, A3, A4, A5, A6, SP1 and SP2 identified in the framework (Figure 4) were identified from the BDN, and also the interviews performed and the employee climate surveys data.

RESULTS AND DISCUSSIONS

This chapter discusses the validity of the achieved results and whether they could be generalised to other domains. The discussion serves as the basis for our conclusions, which will provide an answer regarding the applicability of the theoretical framework. We cross-checked the information, triangulating it with the employee climate surveys results, and found that, in conjunction with the employee portal projects' timeline (Figure 5), it confirmed the previous statements.

However, despite all the validation and triangulation, we understood that CO went through a big cultural transformation with multiple initiatives and a large technological transformation with various distinct projects. The following results show the indicators analysis.
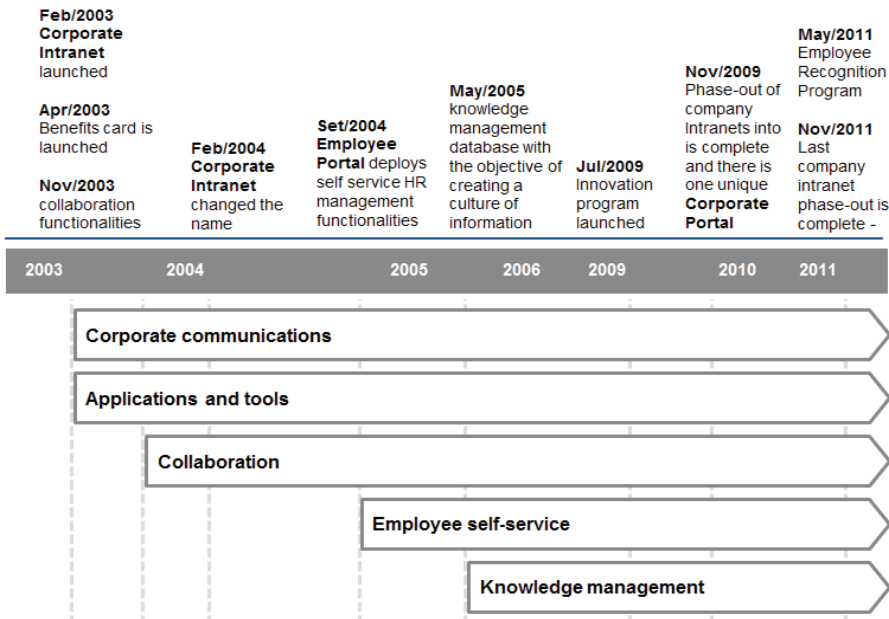

Figure 5. Employee portal projects timeline

Source: Mendes, Gomes & Romão (2016).

Corporate culture - The increase of these indicators during the successive employee portal phases is consistent with the literature (Table 3). These data are also relevant for benefits monitoring, and they evidence the achievement of one of the business objectives.

Alignment - We believe that the general increase of all alignment-related indicators (Table 3) is strong evidence that the employee portal is a tool for promoting alignment between internal communication and corporate strategy.

Teamwork - With regards to teamwork and the importance of the distinct factors that promote it, the interviews recognise that both the commitment and sponsorship of top management are essential aspects for promoting collaboration, and therefore its communication to employees is of major relevance. Considering the relevance of interrelationship between the different organization units of the company and the mechanisms for knowledge distribution, we analysed the following indicators which were evaluated by employees under the employee climate surveys carried out between 2002 and 2011 (Table 3).

Innovation - In 2008, the indicator "*CO invests in developing innovative products and services*" was introduced to the corporate employee climate surveys. From 2008 until 2011, this indicator recorded an increase of 16 points in the employee appraisal (Table 3).

The major intention of this study was to understand how employee portals contribute to intangible assets value creation. We found some evidence corroborating the literature review which establishes that an Employee Portal works as a strategic tool for promoting corporate culture and alignment through information and communication fluxes and teamwork through collaborative functionalities. These findings were identified in the corporate literature and interviews and were validated through the results of the employee climate questionnaires.

From the case study, we can also confirm that communication processes and practices are essential for the implementation of corporate culture, alignment and teamwork, and that corporate culture is very important for creating alignment and for promoting collaboration, sharing knowledge and innovation and teamwork, which can all help to reinforce corporate culture. These findings allow us to conclude that although *"promoting corporate culture"* and *"company alignment"* are not among managers' most frequently-expected outcomes or business drivers for Employee Portal implementations, it should, nevertheless, be strongly considered.

By analysing the Employee Portal implementations and Employee Climate Questionnaires, we have drawn the conclusion that Corporate Communication has positively impacted on alignment, which became even more evident when all company intranets were phased-out between 2009 and 2011.

Table 3. Indicators

	Period	Scale (0-100)
Corporate culture		
There is a common culture shared by the entire organization	2008-11	+17
I identify myself with corporate culture	2008-11	+11
I identify myself with the CO external institutional image	2008-11	+10
I'm proud to work in CO Group	2002-11	+11
Alignment		
There is good communication between the company and its employees	2002-05	+5
Management discusses and disseminates polices and business objectives	2002-05	+6
Business strategies are published in an understandable way with employees	2002-06	+8
My company informs me of the relevant business events before any other source	2002-05	+9
My company informs me of the relevant business events before any other source	2005-11	+19
I know the CO strategy	2008-11	+11
My team knows what is their contribution to achieving CO strategic objectives	2002-05	+1
Acknowledgement of my contribution to the achievement of CO strategic objectives	2005-11	+6
Teamwork		
There is a good functional interrelationship between different areas of the company	2002-05	+7
I can rely on the cooperation and involvement of other departments	2008-11	+5
I am able to get the information I need to perform my job well	2002-05	+4
I am able to get the information I need to perform my job well	2005-11	+11
Innovation		
CO invests in developing innovative products and services	2008-11	+16

We developed a framework that illustrates the path and flows of value-creation. The literature review chapter helped us identify some relevant aspects which we took into consideration when combining Strategy Map and Benefits Dependency Network. This case study allowed us to validate the importance of identifying strategic projects and change management initiatives as *"enabling changes"* and it also allowed the validation of the importance of integrating internal support processes that generate value to intangible assets – mainly organizational capital – into the strategy map

and the representation of flows of value-creation between the *"intangible assets".*

CONCLUSIONS

Many studies have highlighted that the main strengths of employees' portal are, namely its capabilities of categorisation, integration, content publication and management, integrated search, personalisation, goal-oriented interface and navigation and collaboration tools (e.g. Aneja et al., 2000). Others research sources found some weaknesses, which are mainly related to: content quality and change management (Norris & Duray, 2002); team management and integration (Roberts-Witt, 2000), and; security concerns (Rose, 2003). Employee portals are relevant information capital assets which perform an important role in an organization's strategy, and it is essential to understand the role performed by employee portals in organizations' strategies.

The major objective of this study was to understand how an employee portal fosters the creation of organizational value from its intangible assets. We found evidence corroborating the literature review, which establishes that an Employee Portal works as a strategic tool for promoting corporate culture and alignment through information and communication fluxes and also through the teamwork of collaborative functionalities. These findings were identified in the corporate literature and through interviews, and were validated through the results of the employee climate surveys. We confirmed that communication processes and practices are essential for the implementation of corporate culture, alignment and teamwork. Furthermore, corporate culture seems to be highly relevant for creating alignment and for promoting collaboration, sharing knowledge and innovation, and teamwork can definitively help reinforce corporate culture. We concluded that communication positively impacts on corporate alignment, which became even more evident in the case study we have presented.

The study also highlighted the importance of identifying strategic projects and change management initiatives. The importance of integrating internal support processes that generate value from intangible assets was validated in the strategy map, and the representation of flows of value-creation was made between the intangible assets.

These findings allowed us to conclude that, although the promotion of organizational culture and corporate alignment is not among managers' most frequently-expected outcomes, neither is it a business driver for the implementation of Employee Portals, and it should be explicitly considered as being a benefit that helps one understand the value realized from these

investments. To illustrate these challenges, we have shown how to combine SM and BDN in an extended framework that helps organizations enhance their knowledge usage, contributing to capture more value from investment in intangible assets.

Our research unfolds the application and validation of the framework in the above case study, and should be extended to other cases. Further research should include applying the framework to similar projects in the same company, or to similar projects in other companies of the same, distinct industry (e.g. industry and manufacturing, banking, or the public sector). Another possibility would be to evaluate completely different investment projects related to areas such as knowledge management, human resources, marketing or customer relationship management. Future research should also consider a quantitative approach towards the statistical validation of results and include performing workshops with experts to develop BDN.

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Abstract (in Polish)

Organizacje tworząc przewagę konkurencyjną, tworząc większą wartość ekonomiczną niż rywale. Rosnąca konkurencja i rozwój technologii informatycznych doprowadziły zarówno do ogromnych zmian organizacyjnych, jak i zwiększyły znaczenie wartości niematerialnych i prawnych w ramach łańcucha wartości. Tworzenie wartości i sukcesy organizacji w coraz większym stopniu uzależnione są od wykorzystania wiedzy dostępnej wewnętrznie, jako że w dzisiejszych czasach istotne znaczenie ma zrozumienie wartości biznesowej portali pracowniczych i budowanie odpowiednich programów zarządzania zmianą. Balanced Scorecard (BSC) i mapa strategii (SM) przedstawiają cele organizacji, ich osiąganie oraz związek pomiędzy celami różnych podjednostek z ich wspólnym działaniem w celu uzyskania ogólnych wyników. BSC i SM wyjaśniają, jak wartości niematerialne są dostosowane do strategii, aby tworzyć wartość dla organizacji. Jednak obawy dotyczące zarządzania zmianami wydają się niewłaściwe. Autorzy proponują ramy umożliwiające mapowanie związków przyczynowo-skutkowych, które generują wartość biznesową, a także zapewniają kierownictwu i decydentom informacje niezbędne do odpowiedniego odgórnego zaangażowania i sponsoringu, co jest istotne, aby doprowadzić do właściwego zarządzania zmianami i realizacji świadczeń. Mapa strategii SM i korzyści (BDN) zostały połączone, w wyniku czego powstały odpowiednie ramy ułatwiające organizacjom podniesienie ich wiedzy, złagodzenie ryzyka niepowodzenia inwestycji lub niewłaściwego wykorzystania, a także terminowy wkład w zdobycie większej wartości z inwestycji w wartości niematerialne i prawne. Opracowane ramy pomagają organizacjom rozwiązywać ich obawy związane z tworzeniem wartości i zarządzaniem zmianami. Niniejsze studium przypadku pozwala stwierdzić, że propagowanie kultury organizacyjnej i dostosowanie do potrzeb firmy nie są częstymi celami organizacji i nie motywują do inwestycji w rozwój portali pracowników, jednak są powszechnie uznawane za kluczowe narzędzia do podejmowania decyzji i tworzenie wartości.

Słowa kluczowe: *intranet; portal pracowników; wartość biznesowa; zarządzanie wiedzą; mapy strategii; zarządzanie świadczeniami; zarządzanie zmianami; kultura korporacyjna.*

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