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ACHIEVING BUSINESS AND ITS ALIGNMENT IN THE DIGITAL SERVICE REDESIGN: A STUDY OF THE UK E-GOVERNMENT

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ABSTRACT

Prior research has shown that there are a variety of ways in which business-IT alignment (BIA) can help an organisation. BIA can increase the UK's e-government maturity level and can improve the quality of e-government and the service redesign process, and ensure the establishment of an integrated, coherent, user-centred, and agile digital culture. However, business-IT alignment is challenging when there are many organisations (central and local government organisations) involved in the process. This research aims to increase our understanding of the 'process of aligning', both vertically (between central and local government), and horizontally (across government agencies). Analysis of the data suggests that *decentralisation* is a barrier, whereas *communication* is a significant enabling factor. This study not only provides 'theory for explanation', making it scientifically useful, but also offers 'theory for design', for practical uses. It links alignment and e-government together, a connection which is not fully explored in the literature.

Keywords: Business-IT alignment, E-government, UK service re-design, Communication, Grounded theory

INTRODUCTION

Over time, government agencies are becoming more reliant on IT for their e-government initiatives and services redesign. The literature has recognised that alignment facilitates a strategic and more effective use of IT (Karpovsky and Galliers, 2015). The UK is continuously increasing its IT investments and re-shaping how it uses and buys technology (Bracken, 2015). Alignment can help maximise the return on those IT investments and ensure that those IT arrangements fit with the business strategy, goals, and needs of the services redesign.

This study aims to understand how alignment between business and IT strategies is being managed in the digital redesign of UK public services. The rationale behind this research lies in the belief that increasing business-IT alignment will enable the UK to reach the highest e-government maturity level which, according to the European Digital Capability EDC Framework, is to have a strong, agile, user-centred, innovative and responsive digital culture (Great Britain, Cabinet Office, 2013). This study argues that by illustrating and drawing on the importance of the factors influencing business-IT alignment, the UK government will be in a better position to increase their level of business-IT alignment.

Aim

To understand how business-IT alignment is being managed to facilitate the digital redesign of UK public services.

Objectives

1. To achieve a critical understanding of the literature on e-government and business-IT alignment, particularly e-government development and service redesign in the UK.

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2. To gain insights into the practice of alignment in the UK departmental and local government to support service redesign of public services.
3. To contribute to the academic literature on e-government services redesign and business-IT alignment in the public sector.

LITERATURE REVIEW

The history of e-government in the UK

During the 1990s, the U.S., Britain, Canada and Australia were amongst the first to adopt a basic informational web presence and to lead the development of e-government phenomena (Lee, Tan and Trimi, 2005). The UK e-government agenda was introduced in the *Modernising Government* White Paper in 1999. The central objective of this programme was "modernisation for a purpose, to make life better for people and businesses" (Great Britain, Prime Minister's Office and Cabinet Office, 1999, p. 7). Essentially, the programme focused on five commitments. These were policy-making for long-term change, citizen-centric responsive public services, high quality and efficient services, utilising new technologies to create an "information age government", and valuing rather than denigrating public services (Great Britain, Prime Minister's Office and Cabinet Office, 1999, p. 7).

In March 2000, the Prime Minster set the target of delivering all public services online by December 2005 (Great Britain, Prime Minister's Office and Cabinet Office, 1999). However, this target was not achieved entirely (Shareef, Jahankhani and Dastbaz, 2012), and a new target was set for all government dealings to be deliverable electronically by 2008. According to Margetts (2006), "by 2005 almost all government departments and agencies and local governments have a website" (p. 1). From the early stages, they considered the fact that some citizens and small firms may not have the advantage of accessing the web. Their solution was to enable them to communicate with public agencies through other means, and by providing cheap access to PCs, and connecting public facilities, such as libraries, to the web.

According to the *Government on the Web II* (2001-2002) report, the main force for the adoption of e-government was the rising demand from citizens and enterprises to be able to access government information, communicate and transact with the government electronically (NAO, 2002). Matching the success of the private sector was another motivating factor force and placed pressure on the UK government to modernise processes, cut spending, and increase efficiency (NAO, 2002).

In March 2004, the UK e-government successfully launched their official portal DirectGov (a replacement of the previous portal "UK online") (Shareef, Jahankhani and Dastbaz, 2012). DirectGov was the responsibility of the Cabinet Office Electronic Government Unit (eGU), which was a unit dedicated to supporting administrative changes of government and allowing electronic access to government services and information (Galindo, 2006). In addition, a 'transformational government' strategy was created in 2006, which focused on certain themes: customer-centric shared services and professionalism (Great Britain, HM Government, 2006).

In April 2006, a request was made by the Cabinet Office to move content to either the DirectGov website developed for citizens, or to the Business Link website developed for businesses. The considerable benefits of DirectGov were obvious. It facilitated access to, and delivery of, services and information in a faster and more effective way (Norton, 2008). Irani, Al-Sebie and Elliman (2006) argued that more transactions needed to be carried out online to gain the benefits of cost saving.

In October 2012, with the arrival of a new government in Westminster, the UK replaced DirectGov and Business Link portals with GOV.UK, which was designed and built

by the new Government Digital Service (GDS) (Great Britian, Crown, n.d.). GDS is not concerned with website design only, but also works with other government agencies in order to design public services that are: "digital by default, simpler, clearer and faster to use" (Great Britian, Crown, n.d.). It was stated in the Digital Strategy of October 2012 that the aim was to move all government departments and public agencies content to the GOV.UK website by March 2014 (Great Britain, Cabinet Office, 2015). However, resourcing difficulties resulted in a delay and this was not achieved until December. "The result is that almost all government information is now available in a single trusted place, making it clearer, simpler and faster for people to deal with government" (Great Britain, Cabinet Office, 2015).

Business-IT alignment

The concept of business-IT alignment (BIA) has been a well-known notion since the late 1970s (Luftman, 2000). Luftman (2000) defined BIA as "applying information technology (IT) in an appropriate and timely way, in harmony with business strategies, goals and needs" (p. 3). Another definition is "the degree of fit and integration between business strategy, IS strategy, business infrastructure, and IS infrastructure" (Henderson and Venkatraman, 1999, cited in Gotze and Jensen-Waud, 2013, p. 300). Campbell et al. (2005) defined alignment based on answers from focus group participants: "alignment is the business and IT working together to reach a common goal" (p. 662). Other terms or synonyms of business-IT alignment found in the literature include: harmony, linkage, fusion, and integration. It should be noted that business-IT alignment and IT-business alignment are considered the same, because the objective is to ensure that there is a harmony or linkage between the two (Luftman, 2000).

Henderson and Venkatraman (1993) identified a lack of frameworks to help with understanding the potential of IT in supporting business strategies or creating new business strategies. The authors therefore developed a model, named the strategic alignment model (SAM), consisting of four domains. Those domains are:

- Business strategy
- Information technology strategy
- Organisational infrastructure and processes, and
- Information technology infrastructure and processes.

The model also includes two strategic management characteristics: 'strategic fit' (representing the interrelationship between the internal and external components), and 'functional integration' (representing the integration between the business and functional domains) (Henderson and Venkatraman, 1993).

There are a number of researchers who have extended this concept and built new frameworks. However, Luftman (2000) stated that it is still not clear how to achieve and assess alignment. Therefore, the author has proposed a framework for assessing the maturity of business-IT alignment. It includes six criteria, which are: communication, competency/value measurement, governance, partnership, scope and architecture, and skills. He has also used the alignment enablers as elements for the evaluation or assessment of each criterion (Luftman, 2000). For example, communication consists of six scaling criteria; the understanding of business by IT, understanding of IT by business, organisational learning, style and ease of access, leveraging intellectual assets, and IT-business liaison staff (Luftman, 2003).

Alignment enablers and inhibitors

Once an organisation's alignment level has been identified, it is possible for there to be a focus on increasing the enablers and decreasing the inhibitors, and on maintaining harmony between business and IT (Charoensuk, Wongsurawat and Khang, 2014). Luftman (2000)

listed the alignment enablers, starting from the most important. These included senior executive support for IT, IT involved in strategy development, IT understanding of the business, business-IT partnership, well-prioritised IT projects, and IT demonstrating leadership. Charoensuk, Wongsurawat and Khang (2014) found that one of the most significant enablers is shared domain knowledge (SDK), which occurs when the business and IT units are able to understand and learn from each other. The authors added that communication facilitates SDK. Reich and Benbasa (2000) supported this view concluding that SDK is the only factor that produces long-term alignment. Weiss and Anderson (2004) identified the antecedents and found that there are four common themes when investigating organisations with a good level of business-IT alignment; "clear direction, commitment, communication, and cross-functional integration" (p. 7).

RESEARCH METHODOLOGY

This study provides a holistic view of 'alignment as a process' rather than 'alignment as a state'. It also provides 'theory for explanation', as it aims to increase our understanding of the 'process of aligning', both vertically (between central and local government), and horizontally (across government agencies), challenges and difficulties faced in aligning, and how it affects alignment in public services redesign. More specifically - and to expand on the literature - it moves beyond 'alignment in theory' and explores and explains 'alignment in practice'. The findings of this research reflect the practical reality and experiences of practitioners involved in the day to day activities of the UK public services redesign. It also offers 'theory for design', as it prescribes how e-government practitioners can enhance the level of business-IT alignment and overcome issues of misalignment.

A qualitative research approach and grounded theory method were used in the research. Semi-structured interviews were carried out with service managers, policy makers, digital leaders, and business and IT senior managers from government departments, such as the Cabinet Office, Government Digital Service (GDS), and local councils, including Oxfordshire County and its districts. Local authorities are part of the service redesign process of public services and deliver most of the UK's public services. It is therefore important to understand how alignment is being managed vertically from local to central government, and horizontally across local authorities. It is also important to gain an understanding of bodies supporting digital redesign (such as The Society of Information Technology Management (SOCITM), Nesta - The innovation foundation, LocalGov Digital, and Local Digital Coalition (LDC)).

Strauss and Corbin's (1990) grounded theory method was used to produce theory grounded in the data, and, most importantly, to ensure that the data was systematically collected and analysed. The main aim of Strauss and Corbin's (1990) coding stages is to distinguish a core or central category. Communication was therefore identified and treated as a core factor because it was found that all the major factors of the research are connected to it. This paper provides a theoretical model presenting the interrelation of key factors of alignment in UK services redesign. These are: standardisation, Shared Domain Knowledge (SDK) and decentralisation – in addition to the core factor, communication (Figure 1).

FINDINGS AND DISCUSSIONS

The data collected identified a number of factors which have been referenced in previous studies, as well as new findings. These factors influence alignment and are discussed in this study as 'enablers' or 'inhibitors' of alignment (see Figure 1). As mentioned previously, communication was identified as a core factor, and therefore this section will focus on the level of vertical and horizontal communication, and the interrelation of communication with other key factors.

Figure 1. Interrelation between key factors of alignment in UK services redesign
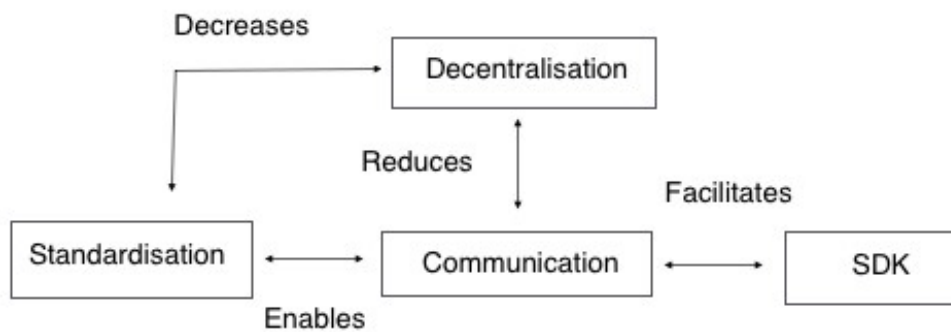
Level of vertical and horizontal communication between business and IT

The empirical findings have continuously shown communication to be an alignment enabler (Luftman, 2000), which specifically facilitates social alignment, as shown by Reich and Benbasat (2000). Additionally, this was expressed by one of the interviewees: "I admit that one of the reasons why we're not very well aligned is because we don't communicate". It was found from the data collected that there is less communication between central and local government than between local authorities or between central government departments. According to one of the interviewees, "there should be a clearer steer from central government by sharing what's best practice out there". On the contrary, there are local authorities that prefer to operate autonomously without communicating with central government or receiving any central government steering. This paper therefore argues that decentralisation is one of the main reasons for the lack of communication between local and central government.

There are local authorities which recognise the importance of communicating with central government and keeping abreast of the direction of travel in central government more than others. Such local authorities maintain some external networking forums. Unlike some other authorities, when developing a programme or a strategy, they will communicate with people in central government. It was found that those communications and discussions take place via bi-lateral contacts in GDS, and through conference circuits.

Additionally, they explained that organisations' forums were used to share interesting information which may have been heard from another local or central organisation and is relevant to their organisation. In most cases, these involve aspects and consequences that affect more than one person, division or team within the organisation. They illustrated that in those situations the process can often begin with informal communications, rather than formal communications such as meetings or project management boards.

Data collected has shown that local government's communication with central government usually happens through the Local Government Association (LGA), who is generally considered to be the chief spokesperson for local government. As also stated by the LGA (2018), "we are the national voice of local government, working with councils to support, promote and improve local government". However, the value of this was questioned

by one of the interviewees from a local council, who stated that their influence should not be overestimated.

Additionally, local government's communication with central government can be established through communication forums. However, these are not always effective. As explained by one interviewee, often when a new piece of legislation comes in (e.g., The Homeless Reduction Act), and in other situations where central government passes significant extra responsibilities and services onto local authorities, sufficient communication is rarely established beforehand. A major disadvantage stemming from this is that there is not usually adequate funding for the additional responsibilities. In this respect, the lack of communication between central and local government only serves to create further problems in an already challenging environment, and therefore makes alignment more difficult.

Nonetheless, the data collected has shown that central government deals with an array of issues. As a result, communication with local authorities may not be one of their priorities. There are around 418 local councils in the UK, meaning that communication with all of them is a difficult task. Another explanation for the lack of communication is that local government often operates differently from central government. This means that there is a lack of understanding and shared domain knowledge (SDK) between central and local government. According to an interviewee, "it's been very difficult to gain an understanding I suppose, perhaps from the cabinet or whatever group it is that needs to approve a project". The interviewee explained that often business cases are complicated, and therefore cannot be straightforwardly communicated with higher-level organisations. In this respect, it can be said that IT and the businesses from central and local government find it difficult to attain an understanding and SDK, which is empirically proven to be crucial for long-term social alignment (Reich and Benbasat, 2000). Moreover, this study also finds that communication between business and IT from central and local government will, over time, enhance understanding and SDK, which is also proven empirically by Charoensuk, Wongsurawat and Khang (2014).

Lack of communication between the business and IT in local government

The data collected has shown a lack of communication between people involved in local government business and IT departments. As mentioned by one of respondents from the local government business department, "communication is key and that's partly where we're weak". This weakness mainly stems from the failure to communicate messages to the right people or individual team members. Moreover, the right people may also not be involved in conversations or meetings. As pointed out by an interviewee from the local government IT department, "either the cascade doesn't work, or the actual forums are not working in keeping each other up to date".

Relationships between key alignment concepts or factors

Communication and standardisation

This section will seek to explain the relationships between different concepts, as shown in Figure 1. Standardisation is considered in this study as one of the enablers of vertical and horizontal alignment in service redesign. The aspects of standardisation which are believed to enable alignment include: adopting a common approach to services redesign, services redesign standards, and common open data standards.

An example of standardisation is the Digital by Default standard set by the Government Digital Service (GDS). It consists of 18 criteria to assess services before going live on GOV.UK website (gov.uk/service-manual/digital-by-default-26-points) (Great Britain, National Archives, 2018a). However, as stated by an interviewee from GDS, these are standards that "can be applied by an authority but there is no political power that says it must

be". There are also standards developed for local government by LocalGov Digital. Those standards are based on the principle that local agencies should be 'open by default and digital by design' (LocalGov Digital, 2016). A draft of the standards is available on their website (http://localgovdigital.info). Nonetheless, it is also found that many local councils are providing local services without adopting those standards, or any other clear common service redesign standards.

The data collected has shown that participants from IT are aware of the importance of standardisation more than participants from business. It also shows that there is more motivation and interest in standardisation in local government than in central government. This paper therefore suggests that communication between government agencies (centrally and locally) will increase awareness of the importance of standardisation, and the exchange of knowledge of standardisation (e.g., service redesign standards, and common platform or solutions). The level of standardisation will be higher when IT communicates their ideas for standardisation (e.g., by the use of story-telling and real-life examples) and demonstrates its benefits to the business over the use and adoption of a niche product or a siloed solution. Therefore, communication will enable a higher level of standardisation vertically and horizontally. Nevertheless, standardisation will also facilitate rapid and easier communication, flow and exchange of information and ideas across local authorities, and between central and local government.

Communication and shared domain knowledge (SDK) between business and IT

SDK has also been found to be a significant factor influencing alignment in UK service redesign. Communication is widely recognised in the literature as a facilitator of SDK, identified by authors such as Reich and Benbasat (2000) and Campbell, Kay and Avison (2005) as the only factor that produces long-term alignment. This study follows Reich and Benbasat's (2000) definition of SDK as "the ability of IT and business executives, at a deep level, to understand and be able to participate in the others' key processes and to respect each other's unique contribution and challenges" (p. 86).

The findings of this study have revealed that the failure to communicate could result from the lack of deep understanding between business and IT, which this study considers to be an element of SDK, and results in a lower level of alignment between the business and IT. This suggests that a deep understanding is required first, in order to communicate. This can be contrasted to the literature which argues that communication is a prerequisite or enabler of SDK and not also the other way around (Reich and Benbasat, 2000). This paper believes that a low level of SDK will make communication (between the business and IT horizontally and vertically) difficult: it is perceived that if there is no shared knowledge, then there is little or nothing to communicate about.

Nevertheless, according to one of the interviewees from the business, the business can establish a better understanding of IT when having an operational-based communication rather than a technical-based communication. A shared deep understanding with IT will not be established if the communication does not use a common language with the right people in the organisation. This is therefore in line with the literature that shows that communication comes before SDK (Reich and Benbasat, 2000). This paper suggests that communication between business and IT from central and local government will, over time, enhance understanding, and therefore increase SDK between the business and IT in service redesign. In addition, communication using an operational rather than a technical based language will help to maintain the interest of the business (or communication by translating and using a language that the business can understand) and will therefore create more SDK.

Communication / standardisation and decentralisation

There are many benefits to horizontal and vertical standardisation and communication, and it can certainly result in a higher level of business-IT alignment. However, decentralisation, or

the 'localism' agenda in the UK, has been found to be a barrier to both. The UK Localism Act was created in 2011 and is concerned with decentralisation by devolving power from central government to individuals, communities and local authorities (Great Britain, National Archives 2018b).

The localism agenda seeks to move power and responsibility to a local level. Local councillors tend to believe that their responsibility is to serve the needs of the local community who elected them and may find that the way to do this is by having increased control and ownership. As mentioned by a participant from IT, in regard to standardisation and communication, "the issue is the desire of individual local government to keep control of their own service". There will be a lower level of horizontal and vertical communication and standardisation if government agencies operate autonomously and focus on serving local needs without any outside influence. Therefore, decentralisation is seen to decease both standardisation and communication, as illustrated in Figure 1.

Nonetheless, this paper believes that when a government agency is experiencing a low level of communication with other government agencies (e.g., the type that allows for more standardisation), the potential disadvantages associated with decentralisation will increase (e.g., performing service redesign with minimum alignment). As a result, it is seen that communication can reduce many of the barriers linked to decentralisation (Figure 1).

One of the IT respondents pointed out that localism is a significant barrier to standardisation. It was stated that "you can see at least in theory, that the idea of having all councils using a common IT platform for delivery of things like council tax administration, you can see the attraction of it, but that is at odds with the localism agenda". In order to successfully achieve standardisation, local authorities must understand that it will not necessarily reduce their ability to serve local needs. Additionally, standardisation (e.g., common services redesign standards) can create more alignment, consistency and cohesion, by setting a common approach to services redesign across LAs, and between central and local government, and therefore can reduce barriers associated with decentralisation (e.g., siloed approach to service redesign). Therefore, standardisation can reduce the disadvantages associated with decentralisation, as shown in Figure 1.

There should be a shift in thinking from the perception that decentralisation means operating in a silo, or that communication and standardisation preclude autonomy. Rather, there should be an emphasis on the ways that communication and standardisation can best serve local needs, by creating more alignment between business and IT, across local authorities and between central and local government.

The paper argues that the creation of a platform by central government from which it is possible to communicate with local authorities will allow the barriers which come alongside decentralisation or localism agenda to be addressed. This will enable greater standardisation and SDK in the UK public services redesign.

Based on these findings, and as part of the 'theory for design' that this paper offers (for practical usefulness), it can be argued that alignment issues might be best addressed by adopting a *network* arrangement across government. Ideally, this would be a a goal-directed arrangement aimed at alignment in services redesign, and mandated or contracted by the UK government, rather than adopting a siloed approach to services redesign. The network would be comprised of a cross-functional team or a multi-disciplinary group from across the UK public sector, with a common purpose and goal of creating more alignment in public services redesign. Having a collective approach towards services redesign will enable them to align and achieve outcomes they wouldn't be able to achieve while operating in silos, and to minimise the inherit complexities of alignment. As posited by Provan and Kenis (2008, p. 2), network effectiveness compromises "the attainment of positive network-level outcomes that

could not normally be achieved by individual organisational participants acting independently".

Nevertheless, there are many benefits of networks for alignment and coordination, including reciprocity, efficiency and stability (Oliver, 1990, cited in Ebers, 1997). Reciprocity means the existence of a shared goal of increasing the level of business-IT alignment in UK services redesign. Secondly, an efficient and smarter decision making will help bring about a more productive use of resources (e.g., to reduce duplications and cost), and more efficient development of services (e.g., by increasing standardisation, and the development and use of shared services). A goal-directed network will also enable any concerns or uncertainty relating to stability and the ability to maintain alignment between the business and IT faced by organisations to be shared and communicated with other participating public sector organisations, and therefore addressed in a cooperative manner.

CONCLUSIONS

This paper focuses on the key factor and enabler of alignment, i.e., communication. It explains the level of horizontal and vertical communication in the UK public services redesign. This research provides a theoretical model to deepen our understanding of this phenomenon, and demonstrate the interrelation between communication and other key factors identified from data collected which are also found to produce more alignment (i.e., standardisation and SDK). It discusses the fact that decentralisation is an alignment inhibitor and explains how it negatively affects horizontal and vertical communication and standardisation in the UK services redesign.

Based on the findings, a network arrangement is proposed to increase the level of alignment, and to establish a collective approach and actions towards services redesign. It also provides government agencies with recommendations to improve their BIA, in order to support service redesign. It provides original concepts, ideas and insight by progressing and building on existing knowledge and understanding of business-IT alignment in the context of UK government digital service redesign.

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