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ABSTRACT

Whilst the early stages of e-government focused on e-enabling customer-facing services, the latter stages of e-government is focused towards transformational change in public sector agencies. However, public sector agencies are struggling to successfully achieve the transformational stage of e-government due to various strategic, organisational and technical challenges. To realise the transformational stage of e-government, local authorities will need radical changes in core processes across organisational boundaries, in a manner that has not been seen before in the public sector. In particular, the bitter lessons that were learnt by many private sector organisations during the business process reengineering (BPR) era should provide a stern reminder of the challenging and complex nature of transformational change efforts. This paper seeks to explore the key strategic, organisational and technology challenges that local government will face when implementing the transformational stage of e-government in UK local councils and contributes a conceptual frame of reference for transformational stage e-government.

KEYWORDS: Transformational government, e-government, Business process re-engineering, local government

INTRODUCTION

Like Business Process Reengineering in the 1990's, some argue that more than 70% of e-government initiatives have failed to meet the initial transformation objectives in the early stages of e-government implementation (Gandhi and Cross, 2001; Beynon-Davies and Martin, 2004; Di Maio, 2006). Most of these failures can be attributed to the inability of governments to change business processes in response to the e-government model (Joia, 2004; Davison *et al.,* 2005; Ferlie *et al.,* 2003). Therefore, these early failures have resulted in an even more pressing need to integrate the front-end and back-end systems and processes (West, 2004; Kim *et al.,* 2007; Jas and Skelcher, 2005). Given this context, analysis of a range of e-

government efforts suggests that incorporating lessons learnt from the BPR era can provide an insight into what is needed to achieve the transformational stage of e-government (Fagan, 2006). Also, significant social, organisational and technical challenges will need to be considered and overcome in those efforts that strive towards achieving governmental transformation (Affisco and Soliman, 2006; Horton and Wood-Harper, 2006). Consequently, success will require the ability to rethink processes in a cross-functional way as championed by BPR approaches; while this has proven difficult in the private sector, research suggests that government entities face even greater challenges (Fagan, 2006; Tan and Pan, 2003).

The modernisation agenda of public services in the UK is termed "transformational government", which aims to place technology at the centre of the agenda to improve services from technological investment through business process reengineering and re-designs (Cabinet Office report, 2007). This research aims to explore the key organisational, information systems and technology challenges that local government will face when implementing the transformational stage of e-government in UK local councils. To achieve this aim, this paper is structured as follows. The next section offers a brief review of literature on the research theme, transformational e-government, followed by an outline of how it is applied in practice in the UK. Next, the conceptual background used in the research is discussed followed by an empirical study of transformational change in UK local government. Thereafter, the literature and empirical findings are synthesised to formulate a conceptual frame of reference for transformational e-government. Finally the paper concludes by highlighting the key research findings, identifying the limitations and proposing areas for future research.

REALISING TRANSFORMATIONAL STAGE E-GOVERNMENT: A LITERATURE PERSPECTIVE

The definitions offered for e-government by various researchers differ according to the varying e-government focus and are usually centred on technology (Zhiyuan, 2002), business (Wassenaar, 2000), process (Bonham *et al.,* 2001), citizen (Burn and Robins, 2003), or a functional perspective (Seifert and Peterson, 2002). What these different schools of thought distinguish is that there is no universally accepted definition of the e-government concept (Yildiz, 2007). While we appreciate the aforementioned schools of thought, in the context of transformational government however, e-government implies broader organisational and socio technical dimensions which include fundamentally changing the structures, operations and most importantly, the culture of government (O'Donnell *et al.,* 2003; Ramaswamy and Selian, 2007). Given this context, we propose an alternative definition that encapsulates a wider perspective of the transformational aspects of e-government. The new definition is as follows: "*e-government is the ICT-enabled and business-led transformation of government operations, internal and external processes, structures and culture to enable the realisation of citizen-centric services that are transparent, cost effective and efficient*".

Many researchers have suggested that governments should be willing to change their business processes in order to reap the full potential of an e-government initiative (Kim *et al.,* 2007; Andersen and Henriksen, 2006; O'Donnell *et al.,* 2003; Swedberg and Douglas, 2003). In particular, to achieve the transformational stage of e-government and the associated benefits, government departments and agencies need to actively co-ordinate and align with one another through integration of processes and IS/IT systems (Murphy, 2005; Andersen and Henriksen, 2006). The transformational stage of e-government will enable government services to be fully integrated (vertically and horizontally) and citizens can expect to have access to a variety of services through a single portal (one-stop-shop) (Gil-Garcia and Martinez-Moyano, 2007). However, governments find it difficult to reach mature stages of e-government and a superior customer-focus as joined up service delivery will require a considerable level of integration of back-end information systems such as electoral registers, land and property systems, council tax systems and benefits systems (Beynon-Davies and Martin, 2004; Holmes, 2001; Sarikas and Weerakkody, 2007). Therefore, ultimately, transformational e-government will require the ability to rethink processes in a cross-functional way as championed by BPR approaches (Champy, 2002; Fagan, 2006). Whilst this has proven difficult in the private sector, research suggests that local authorities will face even more severe challenges in the bureaucratic, functionally oriented, legacy systems driven environment of the government (Weerakkody *et al.,* 2007; Fagan, 2006).

THE UK AGENDA FOR REALISING TRANSFORMATIONAL GOVERNMENT

The transformational government (t-government) strategy in the UK aims to place technology at the heart of the agenda to transform public service delivery and sets out a six-year improvement journey for public services in the UK (Cabinet Office report, 2007). The t-government phrase describes the process of improving services by leveraging the benefits from technological investment through business process reengineering and re-designs (www.improvementnetwork.gov.uk; Caldwell, 2005).

Therefore, it is arguable that t-government is seen by many as the second phase of e-government, which focuses upon cost savings and service improvement through back-office process and IS/IT change. The t-government vision will require three key transformations, which firstly includes services enabled by ICT that are designed around the citizen and not the provider. Secondly, governments must move towards a shared services culture, thus eliminating data duplication and integrating and reengineering back-office processes. Thirdly, there must be broadening and deepening of government's professionalism in terms of planning delivery, management and governance of IT-enabled change (www.cio.gov.uk; Palanisamy, 2004). In this context, the UK government is attempting to fundamentally change the way in which information technology is used, in order to achieve joined up working between different parts of government and providing new, efficient and convenient ways for citizens and businesses to interact with government and to receive services (McIvor *et al.,* 2002; Beynon-Davies and Martin, 2004). Furthermore, the UK government has set an ambitious target for reaching the transformational stage of e-government, which aims to be fully complete by the end of 2011 (Cabinet Office report, 2007).

CHALLENGES FACING THE TRANSFORMATIONAL STAGE OF E-GOVERNMENT

In order to better understand the challenges facing transformational change in public sector, this section examines more recent e-government literature and BPR literature from the 1990's and outlines the key themes impacting transformational change.

Challenges facing transformational change in the public sector: lessons from e-government

Many scholars and practitioners have identified challenges that are facing e-government efforts and in particular in reaching the transformational stage of e-government (Mansar, 2006; Gupta and Jana, 2003; Fang, 2006; West, 2002; Margetts and Dunleavy, 2002; Reffat, 2003; Palanisamy, 2004; Weerakkody et al., 2007; Sarikas and Weerakkody, 2007). This research draws upon the normative literature on electronic government in order to distinguish the key challenges affecting governments' progression onto the transformational stage of e-government or t-government. The key challenges identified in the e-government literature can be broadly classified under four key themes which capture the organisational, process change, socio-cultural and IS/IT integration aspects (Lee, 2005) (Table 1).

Challenges Affecting Transformation Efforts in E-government	Source
Organisational Challenges *Reluctance to embrace change*	Mansar (2006); Beynon-Davies and Martin (2004)
Bureaucratic organisational structure	Hu *et al.,* (2006); Altameem *et al.,* (2006); Fang (2006); Kraemer and King (2005)
The lack of leadership in change efforts	Beynon-Davies and Martin (2004); O'Donnell *et al.,* (2003)
Process Change Challenges *Confusing existing processes*	Wimmer (2001); Gouscos *et al.,* (2006); Altameem *et al.,* (2006)
Information fragmentation	Gouscos *et al.,* (2006)
Incremental and modest change	Beynon-Davies and Martin (2004)
Cultural and Social Challenges *Organisational culture*	Montagna (2005); Ebrahim and Irani (2005);
Unwillingness to share IS/IT systems and processes	Ebrahim and Irani (2005); Murphy (2005); Conklin (2007)
Employee resistance to change and fear of change	Robinson and Griffiths (2005); Murphy (2005)
Data sharing and data protection laws	Murphy (2005)
IS/IT Integration Challenges *Inflexible and incompatible legacy systems*	BCS (2006); Gichoya (2005); McIvor (2002) ; Sarikas and Weerakkody, 2007)
Existing legacy systems increase costs	Dhillon et al., 2007); Ezz & Papazafeiropoulou (2006); Ebrahim and Irani (2005)
Lack of technology and BPR skills by IT staff	Holden *et al.,* (2006); Ramaswamy and Selian (2007)

Table 1 Challenges Affecting Transformational Change: An E-Government Literature Perspective

The complexity of transformational change (table 1) in the public sector is reflected in the fact that only 4% of e-government initiatives are in fact aiming to reach the transformational stage of e-government (Balutis, 2001; Conklin, 2007). This is reminiscent of the BPR era during the early 1990's, where many private sector organisations failed in their transformation efforts with BPR type changes (Willcocks, 1995; Hazlett and Hill, 2003; Coram and Burnes, 2001; Motwani *et al.,* 2004; Hammer and Champy, 1993; Peters *et al.,* 2004). Given this context, analysis of a range of e-government efforts suggests that incorporating lessons learnt from the BPR era in the private sector can provide valuable insights into what is needed to achieve transformational e-government efforts (Gandhi and Cross, 2001; Heeks and Bailur, 2007; Larsen and Klischewski,

2004; Fagan, 2006; Dhillon et al., 2007; Wimmer, 2001; Hazlett and Hill, 2003; Dhillon *et al.,* 2007).

Challenges facing transformational change in the private sector: lessons from the BPR era
Modern day organisations are faced with fierce competition and engage in the practice of continuous transformation of their processes and systems to improve the business they conduct on a regular basis (Lorenzi and Riley, 2003; Davydov, 2001; Ellis, 2004; Fagan, 2006). In this context, many private sector organisations have undergone organisational transformation efforts such as BPR (Kotter, 1995; Willcocks, 1995; Davenport, 1993; Harrington, 1991).

In practice, the UK government is transforming the delivery of public services using technology and BPR techniques (Cabinet Office report, 2007; www.localtgov.org.uk). According to Fagan (2006) the inspiration of reengineering through technology is critical in reaching the transformational stage of e-government. Local authorities need to automate the old, exhausted processes of government (Fagan, 2006; Hu *et al.,* 2006) and BPR provides a systematic, business-oriented method of implementing projects involving the use of ICT to transform the way in which local authorities deliver services to citizens (Fagan, 2006; Altameem *et al.,* 2006). However, before starting the redesigning of processes, practitioners need to identify the factors/change barriers that will challenge their efforts (Weerakoddy *et al.,* 2007a). The most commonly encountered change barriers/factors affecting transformational efforts include limited implementation time (Tennant and Wu, 2005), poor information systems architecture (Edwards and Peppard, 1994; Willcocks, 1995), limited funds (Sutcliffe, 1999), lack of managerial support (Hill and McNulty, 1998; Willcocks, 1995), lack of top management commitment (Tennant and Wu, 2005; Attaran, 2004; Chan and Choi, 1997) and employee resistance (Mansar, 2006; West, 2004). However, practical attempts in the past of applying BPR type changes in the public sector have resulted in failure, thus the need to research further in this context (Choudrie *et al.,* 2005). More so in the case of e-government where public sector organisations will need to be transformed from a closed functionally oriented state to an open, online, real-time, e-enabled state (Champy, 2002; Weerakkody et al., 2007).

As with e-government literature, the change barriers affecting process transformation (i.e. BPR) efforts in private sector organisations can also be broadly classified into four themes, which capture the organisational, process change, socio-cultural and IS/IT integration challenges (Table 2).

Table 2: Change Barriers Affecting Transformational Change

Change Barriers affecting Transformation Efforts	Literature Sources
Organisational Challenges *Lack of management commitment*	Tennant and Wu (2005); Hill and McNulty (1998); Al-Mashari *et al.,* (2001); Chan and Choi (1997); Barber and Weston (1998); Sutcliffe (1999); Attaran (2004); Willcocks (1995)
Misunderstanding the BPR concept	Chan and Choi (1997); Attaran (2004); Tennant and Wu (2005); Davenport (1993); Earl (1994)
Unrealistic expectations	Chan and Choi (1997); Sutcliffe (1999); Edwards and Peppard (1994); Barber and Weston (1998)
Insufficient training and skills	Tennant and Wu (2005); Al-Mashari *et al.,* (2001); Barber and Weston (1998); Harrington (1991); Higgins (1993)
Lack of strategy	Attaran (2004); Willcocks (1995); Harrington (1991); Higgins (1993); Remenyi and Heafield (1996)
Organisational structure	Barber and Weston (1998); Sutcliffe (1999); Al-Mashari *et al.,* (2001); Hill and McNulty (1998)
Business mistakes	Tennant and Wu (2005); Higgins (1993); Harrington (1991); Remenyi & Heafield (1996)
Lack of courage in changing processes	Al-Mashari *et al.,* (2001); Sutcliffe (1999); Barber and Weston (1998); Willcocks (1995)
Process Change Challenges *To much focus on new technology*	Tennant and Wu (2005); Chan and Choi (1997); Mumford (1994); Sahay and Walsham (1996); Stickland (1996); Whittaker (1995)
Unrealistic objectives from BPR	Attaran (2004); Edwards and Peppard (1994); Sahay and Walsham (1996); Whittaker (1995)
Lack of change in existing work patterns	Willcocks (1995); Attaran (2004); Whittaker (1995); Stickland (1996); Chan and Choi (1997)
Cultural and Social Challenges *Organisational culture*	Halachmi and Bovaird (1997); Tennant and Wu (2005); Barber and Weston (1998); Al-Mashari *et al.,* (2001); Hill and McNulty (1998)
Failing to recognise the significance of people in change efforts	Chan and Choi (1997); Hill and McNulty (1998); Halachmi and Bovaird (1997)
Failing to plan for organisational resistance	Sutcliffe (1999); Mansar and Reijers (2005); Schwartz *et al.,* (1995); Whittaker (1995); Willcocks (1995); Sahay and Walsham (1996)
Fear of information technology	Teng and Kettinger (1995); Lu and Yeh (1998); Barothy *et al.,* (1995); Attaran (2004); Harrington (1991); Stickland (1996)
Failing to gain support for BPR/ change	Willcocks (1995); Barber and Weston (1998); Kohli and Hoadley (2006); Grant (2002); Sutcliffe (1999
IS/IT Integration Challenges *IS/IT infrastructure unable to support BPR*	Sarker and Lee (1999); Tennant and Wu (2005); Al-Mashari *et al.,* (2001); Sutcliffe (1999)
Lack of alignment between corporate planning and IT planning	Chan and Choi (1997); Hill and McNulty (1998); Halachmi and Bovaird (1997); Grant (2002); Harrington (1991); Willcocks (1995)
Inability to integrate existing (or new systems) into a holistic system	Attaran (2004); Barber and Weston (1998); Moreton (1995); Stickland (1996); Harrington (1991)
IS/IT staff and management lack knowledge in BPR efforts	Earl (1994); Tennant and Wu (2005); Sarker and Lee (1999); Harrington (1991); Stickland (1996); Remenyi and Heafield (1996)

While table 1 and 2 outline the challenges to transformational change from a literature perspective, in order to better understand the issues affecting t-government, it is imperative to draw upon not only theoretical perspectives but also practice experiences of the change barriers affecting local authorities in reaching the transformational stage of e-government.

RESEARCH DESIGN

In order to explore the practical experiences of local authorities in reaching the transformational stage of e-government, this research pursued a case study based qualitative research approach using semi-structured interviews in a local authority in London (Walsham, 1995; Ruyter and Scholl, 1998; Yin, 2003; Creswell, 2003). The formal interviews lasted approximately one and a half to two hours and were undertaken in a meeting room of the council buildings. This allowed the researchers and respondents to build the necessary rapport and privacy for the required questions. The interviews were audio recorded with the consent of participants as this allowed an easier analysis of the information and allowed the participants to be quoted when writing the results of the research (Crane, 2005). Further, to validate and verify that the results were true and accurate transcripts of the interviews were sent back to the respondents and followed up with brief telephone and email exchanges.

The data analysis was done by transcribing the information onto a document and later analysing the document using a thematic analysis process (Boyatzis, 1998). Furthermore, data triangulation was used by comparing and contrasting the interview findings with observation results and document reviews as it was necessary to validate and verify the findings of the primary data with secondary information (Saunders *et al.,* 2002; Mingers, 2003). This ensured that no bias emerged from either the participants or the researcher, thus the findings and conclusion made from the cases are valid (Yin, 2003).

CHALLENGES FACING THE TRANSFORMATIONAL STAGE OF E-GOVERNMENT: AN EMPIRICAL ANALYSIS

In this section we discuss the results of a case study accounting the practical experiences of a local authority (referred to as Council A) that is in the process of reaching the transformational stage of e-government. Council A is situated in North London and is home to a vast population of 221600 ranging vastly from different cultures and nationalities (Council A Report, 2007). The council has been ranked a three star council amongst other councils in London by the Audit Commission performance scorecard (www.CouncilA.gov.uk). Council A has a collection of e-government services including online council tax payments, payments of housing benefits, request for pest control, planning permission applications and licenses to name a few (www.CouncilA.gov.uk).

In terms of e-government development, Council A is seen as a leader and good practice implementer in London. Council A went live with e-government services in 2001 and since then it has made rapid progress in the 'National Use of Resources' league table, moving from 137th to 27th place nationwide and 4th position within London. Furthermore, Council A have agreed an office accommodation strategy that will bring together back-office services of each directorate in a single site and create up to four first stop shops and joint service centres to provide front-office services. The Council has implemented an enterprise resource planning (ERP) system as its corporate information system, in order to collaborate with its finance, human resources and payroll and procurement departments.

Interviews were conducted in Council A with its CIO (Chief Information Officer) and Head of Information and Customer Services (ICS), E-government Officer (EO) and the Corporate Services Manager (CSM). The key findings from these interviewees are summarised in table 3.

Table 3: Key Factors Influencing Transformational Change at Council A

Key Findings No.	Description
Involvement of key stakeholders in process transformation	The head of ICS suggests that Council A is using a "*service-oriented architecture approach to its transformational government agenda and he also highlights that it is an ideal approach to use*". On the other hand, the corporate services manager highlights that "*some key services are integrated with other services, however most services were re-modelled from scratch like for example HR, payroll and procurement*". In order to do this Council A involved key stakeholders in the process of re-modelling functions from scratch and used the (SAP) ERP system to integrate the various functions with each other.
IT as an enabler for citizen-centric services	The EO highlighted that "*a one-stop-shop concept is mainly up to the citizen to decide if they wish to use one channel for all public services*". IT must be used as an enabler so that when a citizen wants to access services through the channels they prefer. Otherwise you go back to the old approaches of local government where there are restrictions on how citizens can request services. So ultimately citizens should have a choice of what channel of communication they best prefer to communicate with the council.
Cross organisational collaboration and integration	The head of ICS suggests that he is interested in the partnership and sharing of information between local authorities and external voluntary agencies and private sector agencies. 'Council A Direct' is the first point of contact for citizens online. Currently, the EO is "*working on finding what citizens' want out of the e-government concept and services are being designed around the citizens' needs, in order to support the transformational government agenda*".
The significance of changing organisational culture and the breaking down of silos mentality in local authorities	In terms of reaching the transformational stage of e-government, cultural change took place throughout the organisation even with management. Now people are more accountable and motivated towards their work and the front line people are working differently. Conversely, "*the trust issue is a challenge because when you start sharing; some people say that it belongs to me mentality, however the culture has changed to this belongs to us as a whole and not individual departments*". As a result this is what is "*opening up departments towards sharing*". Culture is a big change barrier in the transformational government agenda. The head of ICS states that "*it's about changing people's attitudes towards the change and seeing it as a positive advantage for the organisation as a whole. We are breaking down the silos of cross departmental sharing*"

Training incentives and support in change efforts are crucial to getting people involved	The head of ICS pointed out that we have had problems in the past with our CRM system but we know where the barriers are and we are dealing with them. We are coming closer to understanding and building upon the relationship of collaboration in the context of e-government. However, we still have a long way to go. "*In terms of getting people within the organisation involved in the change initiative we offer training and support. We explain why we are making the changes to people in the organisation so that we can get them on side*". "*Council A was a poor performing council and this actually helped in changing work practices, as people within the organisation needed change*". Part of the change initiative in Council A called for restructuring and in some cases even dismissals and redundancies had to happen.
Understanding what people want out of e-government services is the key to achieving transformational e-government	"*Council A left behind all mainframe legacy systems in 2002*". Part of the strategy at Council A is to replace computer hardware every three years and by collaborating with voluntary agencies the council shares information and recycles old systems so that people in the community such as elderly people that haven't got access to computers and the Internet can benefit from e-government services. "*Ultimately, as a council we must offer a range of methods of interaction for citizens to engage with the council. We have to measure the take up of what we propose to change in the organisation, in order to be successful*". In terms of best practice, "*councils need to understand their population and see what people want out of e-government services and design services around them, thus this is the key to achieving transformed services in our experience*".

A FRAME OF REFERNCE FOR TRANSFORMATIONAL E-GOVERNMENT

The key challenges for implementing transformational stage e-government found from the empirical research can be incorporated together with the literature findings to propose a conceptual frame of reference for understanding transformational stage e-government. It is arguable that many of the challenges distinguished from theory (literature) are similarly distinguished in practice, thus they are complimenting each other. Therefore, this further justifies the complex nature of reaching the transformational stage of e-government in practice. However, some of the challenges distinguished in practice are not identified in theory. In particular, in the broad theme of organisational challenges *political support* was identified as a change barrier affecting the transformational stage of e-government. The issue of *political support* suggests that central government are not providing enough support to local authorities in their efforts towards implementing the transformational e-government. Furthermore, the issue of *change management* was not explicitly identified in the e-government literature but was in the practical context. In figure 1, we present a conceptual frame of reference, which encapsulates the key t-government drivers and change barriers. The change barriers from the empirical findings are presented in italicised text.
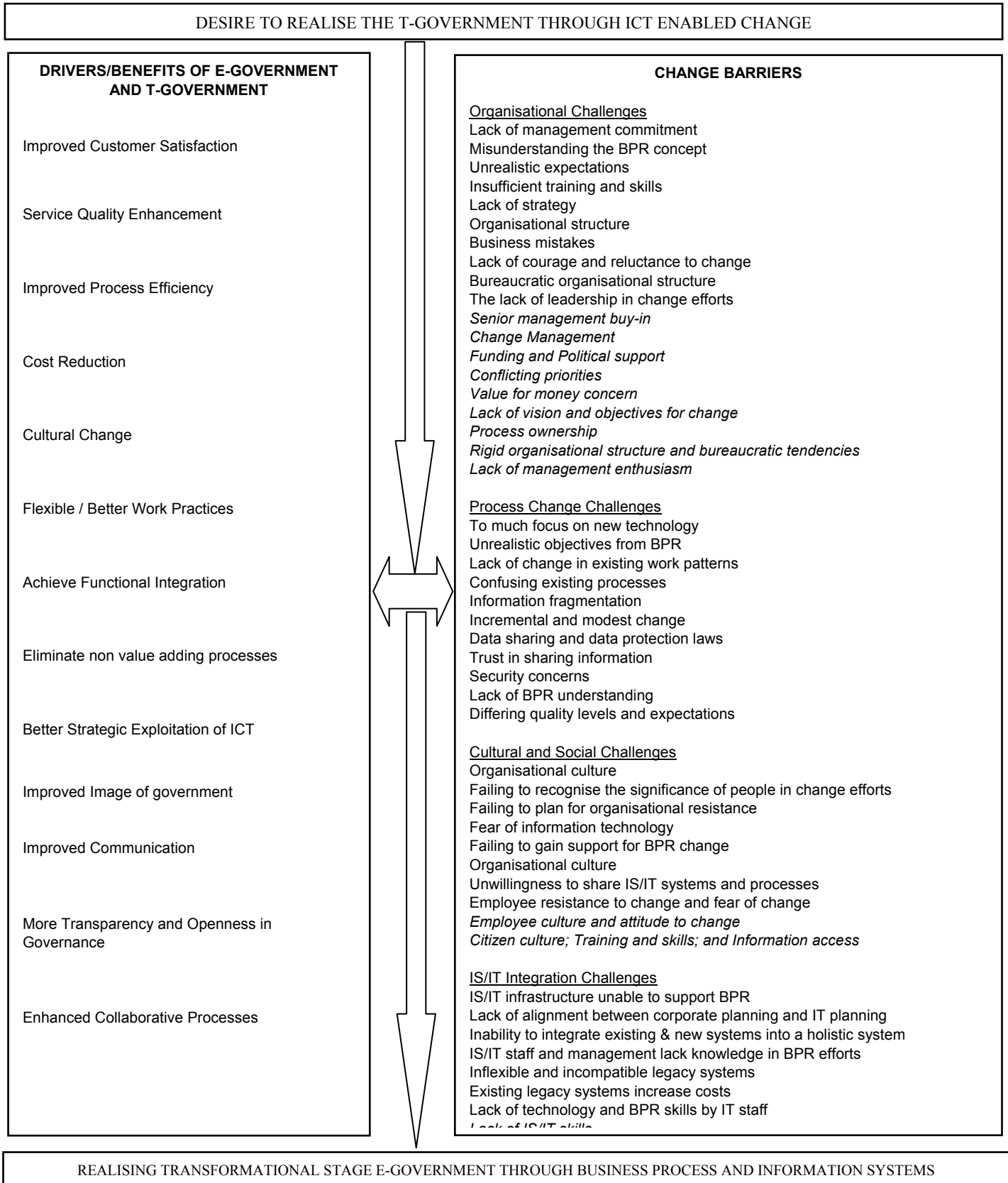
DESIRE TO REALISE THE T-GOVERNMENT THROUGH ICT ENABLED CHANGE

DRIVERS/BENEFITS OF E-GOVERNMENT AND T-GOVERNMENT

Improved Customer Satisfaction

Service Quality Enhancement

Improved Process Efficiency

Cost Reduction

Cultural Change

Flexible / Better Work Practices

Achieve Functional Integration

Eliminate non value adding processes

Better Strategic Exploitation of ICT

Improved Image of government

Improved Communication

More Transparency and Openness in Governance

Enhanced Collaborative Processes

CHANGE BARRIERS

Organisational Challenges
Lack of management commitment
Misunderstanding the BPR concept
Unrealistic expectations
Insufficient training and skills
Lack of strategy
Organisational structure
Business mistakes
Lack of courage and reluctance to change
Bureaucratic organisational structure
The lack of leadership in change efforts
Senior management buy-in
Change Management
Funding and Political support
Conflicting priorities
Value for money concern
Lack of vision and objectives for change
Process ownership
Rigid organisational structure and bureaucratic tendencies
Lack of management enthusiasm

Process Change Challenges
To much focus on new technology
Unrealistic objectives from BPR
Lack of change in existing work patterns
Confusing existing processes
Information fragmentation
Incremental and modest change
Data sharing and data protection laws
Trust in sharing information
Security concerns
Lack of BPR understanding
Differing quality levels and expectations

Cultural and Social Challenges
Organisational culture
Failing to recognise the significance of people in change efforts
Failing to plan for organisational resistance
Fear of information technology
Failing to gain support for BPR change
Organisational culture
Unwillingness to share IS/IT systems and processes
Employee resistance to change and fear of change
Employee culture and attitude to change
Citizen culture; Training and skills; and Information access

IS/IT Integration Challenges
IS/IT infrastructure unable to support BPR
Lack of alignment between corporate planning and IT planning
Inability to integrate existing & new systems into a holistic system
IS/IT staff and management lack knowledge in BPR efforts
Inflexible and incompatible legacy systems
Existing legacy systems increase costs
Lack of technology and BPR skills by IT staff
Lack of IS/IT skills

REALISING TRANSFORMATIONAL STAGE E-GOVERNMENT THROUGH BUSINESS PROCESS AND INFORMATION SYSTEMS

Figure 1: A Conceptual Frame of Reference for Managing the Transformational Stage of E-government

CONCLUSION, RESEARCH LIMITATIONS AND FUTURE DIRECTIONS

This research has demonstrated through the normative literature and empirical data that reaching the transformational stage of e-government is the ultimate stage of e-government that would ensure significant efficiency and effectiveness in government services. However, as mentioned before few countries have excelled in reaching the transformational stage of e-government, thus emphasizing the complexity of reaching this high level of maturity for e-government initiatives. Given this context, many academics and practitioners have identified change barriers and challenges affecting the transformational stage of e-government such as the lack of compatible IS/IT infrastructures, lack of standardised data definitions, management commitment, bureaucratic organisational structures, employee resistance towards change to name a few.

On the other hand, Lee *et al.,* (2005) and Norris and Moon (2006) have found that local e-government efforts remain primarily informational (i.e. offering basic online services) and seldom are they achieving joined up service delivery or the potential positive impacts claimed by its most dedicated advocates. Given this context, authors such as Kraemer and King (2005) have also argued that e-government is not transformational [as implied by Hammar and Champy (1993) in the case of BPR], but is incremental [for instance as suggested by Davenport (1993), Harrington (1991) or Carr and Johansson (1995)]. Kraemer and King (2005) further predict that the path of local e-government efforts that have been observed to date (i.e. incremental change) is likely to continue into the foreseeable future. Even though many governmental entities have built one-stop-shops to streamline the efficiency of services, the basic paper-based forms are continuing to rule the day (Conklin, 2007). Therefore, it is arguable that many e-government initiatives are focusing on incremental improvements that are commonly being branded as transformational.

The research carried out at Council A distinguished that some councils are making an active step towards the UK's transformational government agenda. In particular, Council A has re-modelled and integrated some key services around the citizen's needs. In terms of challenges faced in reaching the t-government agenda, the council has had difficulties dealing with the organisation's culture, people and structure. In particular, the council overcame the resistance to change by getting employees within the organisation involved in the change initiative by offering them training and support and justifying to the employees the rationale for making the change. Conversely, the council has redesigned their business processes to support a newly implemented ERP system thereby aligning business processes with IS/IT. Overall, findings from this council suggest that understanding the citizen's needs from e-government services and designing services around them is the key to achieving transformed services.

The main limitation of this research is that transformational government, is a fairly new concept and therefore literature about the subject area was limited. Furthermore, the conceptual frame of reference presented in this research is not completely exhaustive and only offers high level factors that need to be considered for achieving the transformational stage of e-government. Nonetheless, this research paves the way for academics and practitioners to investigate this area of research that has been relatively overlooked since the advent of e-government in the late 1990's. The change barriers and challenges identified are relatively high level and future research can be conducted to exhaustively satisfy all key challenges affecting the transformational stage of e-government by incorporating more case studies and practical experiences. Furthermore, the researchers believe that a greater share of quantitative research methods could be used in future in combination with qualitative techniques.

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