# Organisational Approach to Government Digital Transformation: Comparing the UK and Sweden

# Irina Popova1, Chris Ivory1, Anna Uhlin2

# 1IMPACT Research Centre, LAIBS, Anglia Ruskin University, Cambridge, UK

# 2School of Business, Society and Engineering, Mälardalen University, Västerås, Sweden

[irina.popova@anglia.ac.uk](mailto:irina.popova@anglia.ac.uk)

[chris.ivory@anglia.ac.uk](mailto:chris.ivory@anglia.ac.uk)

[anna.uhlin@mdh.se](mailto:anna.uhlin@mdh.se)

# Abstract

This article considers the emergence of e-government in the UK and Sweden by conducting a structured document analysis of relevant government reports. The aim of the research was to examine differences in management planning practice – i.e. how change was planned and executed differently in both states. The key finding was that the focus of digital transformation shifted over time from digitalizing services to digitalizing internal departmental work processes. Both governments enacted change by identifying and supporting new roles and agencies deemed able to drive change. In so doing, both actively sought to balance macro-social and micro-social shaping forces. However, the ‘macro’ rationales and micro-level practices for digitalizing services also showed some differences of focus in each case.

**Keywords: digital transformation, digital government, eGovernment, comparative analysis, document analysis, organisational transformation, digitalisation**

# Introduction

National contexts are important factor in the shape that different eGovernment projects take (Tinholt et al., 2016; Lee et al., 2005). Digital transformation is viewed as a key modernizing force in both the public and private sectors. Digital technologies are viewed a key to efficiencies, competitiveness and innovation (Andriole, 2017) and transforming business operations, products/services, processes, organisational structures and management concepts (Matt et al., 2015). Organizational transformation is not automatically a consequence of technology, however, and requires concerted management effort that drive, shape and govern those transformations; a digital transformation strategy ‘that serves as a central concept to integrate the entire coordination, prioritization, and implementation of digital transformations’ (ibid.: 339). In contrast to IT strategies, digital transformation strategies come from a business-centric perspective. That is, they focus more broadly on the transformation of products, processes and related organizational arrangements. It is generally accepted also that IT strategies (Henderson and Venkatraman 1993) and digital transformation strategies (Matt et al., 2015) need to be aligned with other business strategies.

Our focus in this paper is on the way in which digital transformation is enacted by governments in terms of the adoption of new and re-shaping of old organisational arrangements, roles and tasks. This paper, using a structured analysis of government policies via Nvivo, examines the differing approaches that have been taken by the Swedish and British national governments toward digitalisation of services and digital transformation from 2010 to the present.

# Literature review

## Drivers of government digital transformation and reform

E-Government initiatives are fundamentally part of political reforms and organisational transformations (Nita, 2015). They can be regarded as New Public Management-inspired reform, driven by a broader neoliberal agenda. Despite national variation in the scope and depth of transformations, ‘NPM reforms originate in similar economic theories and normative values, placing economic efficiency and budgetary control as priorities for government’ (Eakin et al., 2011: p.440). At the same time others (Flinder and Tinkiss, 2016) have established that the previous coalition government in the UK (as well as governments across North America, Western Europe and Australasia) demonstrate what they call ‘post-NPM’ trends. That is, ideas that seek to ‘respond to the coordination dilemma by redefining relationships, limiting discretion, increasing controls, reasserting the position of the principal and shifting back towards a hierarchy-based model of agency governance (almost pre-NPM)’ (ibid.: 511).

Wise (2002) has already established that there are sometimes competing drivers of change in public management reform which operate alongside established discourses of efficiency and market-based reforms. Sometimes reforms indicate mimicry associated with external pressures. An example would be the case of US pension reforms, where the drivers were exogenous policy popularity in other states thus creating contagion pressures (Thom, 2017). Similarly external pressures have been found by Krause (2013) that lead the adoption of, for example, computerised budgeting, civil service restructuring without actually achieving the intended function of those reforms. Andrews et al. (2012), however, have argued that ‘isomorphic mimicry’, adopting organisational forms that are considered best practice elsewhere, do not result in positive outcomes. Others have focused on the role of agents (institutional entrepreneurs) and agency in institutional reform literature and have proved that institutional reform requires both macro- and micro-level engagement in politics (Brinkerhoff, 2015).

## Impact of technology on organisational structure and processes

Kraemer and King (2006) explore the relationship between IT and administrative reform. The claim that e-government will change structure, citizen engagement and performance is, they suggest, unlikely of itself and that IT is an enabler of reform, but other factors are important too. They argue that IT implementation has had little effect on organisational structure and actually yields greater centralisation in already centralised organisations supporting existing organisational arrangements. Contrarily other studies in the public sector demonstrate how newly introduced mobile ICT has the potential to shape organisational structure (Scholl, 2014) and ‘advisory information artefacts can enable front-office staff to ‘become expert advisors and eventually provide citizens with superior advisory services’ (Giesbrecht et al., 2016: 669). Previously it has been established that E-Government projects impact government business processes and lead to BPC (business-process change) (Scholl, 2005b). Hence the authors have acknowledged that BPC private sector literature had been relevant in terms of finding concepts and approaches - strategic approaches, objectives, motives and focal areas in e-government BPC (Scholl, 2005a). However different principles of governance in the public sector require higher degree of consensus among stakeholders and sharing of burden. These lead to longer completion and thus determine the more complex nature of the BPC project.

Likewise organisational transformation as a result of digital technologies has been explored widely in the public and private sector (Doherty et al., 2006; Fountain, 2001; Gil-Garcia, 2012; Luna-Reyes et al., 2005; Orlikowski, 2000). Studies of organisational transformation in response to technology can be grouped in two main categories – those that assume that external forces lead to organizational change and those that focus on the internal bottom-up responses of the organisation to introduced technology.

Barley (1990) has referred to these broad categories as macro-social forces (top-down perspective) and micro-social forces (bottom-up perspective). In his influential 1990 paper he argues that the two perspectives need to be combined for a fuller understanding of organisational change in relation to technology. Current public sector reform (PSR) literature has already focused on different aspects at the micro level and its importance for the success of public sector reform. However studies about the direction of PSR in relation to technology have not been done yet.

The structures of organizations are related to the technologies employed by them (See Barley 1990). Moreover, there is a close relationship between technology, organisations and institutions (Luna-Reyes and Gil-Garcia, 2014). However, the precise relationship between the two is not clear. Barely (1990) notes that earlier approaches to the relationship between organisations and new technology (such as automation) assumed a one-way relationship which determined the shape that organisations took. Marxist theories of technology change, for example, assumed that technologies were shaped as a consequence of (capitalist) ideology which put the design focus on sub-dividing and controlling labour to reduce its costs to industry, those would be in line with NLP or other macro discourses present in the digital transformation strategies.

Countering the macro-social 'top down' approach to technology and organizational structure alignment is the idea that neither workforces not organisations are passive in the face of broader technology change and will themselves play a key role in shaping how technology is used in practice (Grint and Woolgar, 1997; Leonardi and Barley, 2010; Barley, 1990). Those who privilege the social (Bijker et al., 2012; Jackson et al., 2002) state that groups and organisations decide which technology to use and how, which is a result from contextual, organizational and institutional, characteristics from each locality (Fountain, 2001; Gil-Garcia, 2012). Moreover, technology is introduced for a variety of reasons, not all which sought increased control over the workforce or how work was done (Bain and Taylor, 2000; Whalley, 1984; Spell, 2001). Thus, the particular context within which technology change is taking place is important.

A 'middle ground' approach assumed that both micro- and macro-social forces are implicated in the alignment of technology and organisational structure (e.g. Barley, 1990; Scholl, 2014). Firstly, Barley assumes that macrosocial forces *do* exert a degree of common influence on individual action, organizational structure, and technological design - such that the design, selection, and implementation of new technologies is indeed constrained by established ideologies, entrenched interests and institutional arrangements. However, once in place, new technologies, in collusion with micro-social interactions, he argues, give rise to new roles and patterns of communication that 'reverberate up' through the organisation giving rise to new unanticipated organisational structures. He notes, with respect to the introduction of radiography into hospitals, for example, the need for technicians to be more skilled and more active in diagnosis (than their counterparts operating X-ray equipment) led to new relationships between technicians, clinicians and administrators, the creation of new roles and ultimately to new organisational structures. In this unified view implementation of a new technology may result in changes in the social structures, which in turn may lead to technology changes (Baxter & Sommerville, 2011; Luna-Reyes et al., 2005; Orlikowski, 1992).

In following the response of both the Swedish and UK public sectors we do not replicate Barley's (1990) approach but instead use it as a template for studying strategic responses – accordingly our analysis examines the new roles and structures that formed the strategic response of both nations as they attempted to re-shape their public sectors in light of emerging digital technology.

Research questions

Aim: To explore and analyse the organisational approach to digital transformation of government in the UK and Sweden

1) What is intended to be transformed (foci)?

2) How is digital transformation planned to be enacted?

To identify new structures/arrangements planned to enable digital transformation

To identify new roles regarding digital transformation

To identify tasks each department plans to perform regarding digital transformation

To identify new skills that are needed

3) What is the direction of digital transformation of governement? Top-down or bottom-up?

To identify whether government introduces new structures that lead to new roles and activities which then require change in existing technology/implementation of new technology

To identify whether government introduces new technology that modifies tasks and skills and then these changes create opportunities and pressures for changing organizational structure and processes

# Methodology

This research aims to explore the way digital transformation was planned and organised in the UK and Swedish governments inductively. The comparative research strategy was chosen as the two countries are at different stages of their digital transformation and eGovernment maturity which will enable learning in terms of how the transformation was approached. Document analysis of the two cases was chosen as an approach to exploring the strategic intent and the related tasks, roles and structures as planned and executed by the two governments. See table 1 for selected and analysed groups of documents. The selected documents explore the direction and alignment of technology and organisational structures as described in the digital transformation strategy documents published in both countries.

**Table 1:** Secondary data analysed

|  |  |
| --- | --- |
| UK Documents | Swedish Documents |
| Government Digital Strategy 2013  Government Transformation strategy 2017 | Government Digital Strategy 2012: *Med medborgaren i centrum: Regeringens strategi för en digitalt samverkande statsförvaltning.*  Budget proposition 2017  Budget proposition 2018 |

The focus of this paper is on planned digital transformation as outlined in the official documents of the UK digital strategy policy. As such the study does not reflect any processes or change from an emic perspective but compares what was intended to happen organisationally in the UK and Sweden. The research team used NVivo 11 Pro to analyse the data. The data analysis proceeded in three phases related to the research questions (table 2).

**Table 2:** Data analysis procedure

|  |  |
| --- | --- |
| **Phase** | **Description** |
| 1 | Initially open coding took place by looking for any references to what was (intended to be) transformed: the focus of digital transformation. The parent node *focus of digital transformation* (DT) was created with a number of child nodes such as: *services, communication, processes* etc. where content was coded which identified the transformation of that particular aspect of government due to digital transformation. |
| 2 | The second round of analysis included identifying and coding for the tasks for digital transformation in each department as well as specific *new structures, roles, skills and arrangements related to DT*. These child nodes were aggregated under the digital transformation approach parent node. |
| 3 | Identifying the direction of the transformation: Here the researches coded for *direction of DT* (parent node) creating two child nodes *macrosocial forces - top down* and *microsocial forces - bottom up*. The analysis here indicates whether discourse in policy documents focused on technology and organisational structure alignment from a microsocial or macrosocial perspective. Documents are coded for references to microsocial forces or macrosocial forces. |
| 4 | Finally the coding of the UK and Swedish documents was thoroughly discussed and research findings checked in terms of understanding the higher level analysis of identifying the direction of DT in Sweden and the UK. |

As indicated in the table the dimensions of comparison are focus of the digital transformation (this is related to the first research question), organisational structures, roles, tasks and skills used in the digital transformation (related to the second research question) and finally direction of the transformation – initiated by macro- or microsocial forces.

# Findings

## National contexts

Sweden

Sweden is one of the leading nations in e-Government together with the other Nordic countries (Joseph and Avdic, 2016; Tinholt et al., 2016). Sweden has with high penetration of digital services and digitalisation of service delivery and is an exemplar of a successful process of innovation enabling the exploitation of opportunities offered by ICT. Sweden belongs to 'Group 5' together with other high income countries with small populations - highly educated and very much inclined to use banking services and e-commerce; well-developed infrastructures; high level of centralisation of services; and low perceived levels of public sector corruption.

UK

The UK is characterised by a high level of penetration in terms of internet use but a low-level of digitisation – automated services. According to the X report the UK is something of a laggard, it appears in group 2 together with other countries with the largest and aging populations with only European Union average level of education; infrastructure maturity and take-up of internet. Public administration processes are not efficient or cost effective. Sweden, during the research period (2010-2017) was located in the progressive (for e-Government) cluster in 2012/2013 and had moved to the mature cluster in 2014/2015. The UK has not made any progress in terms of eGovernment maturity performance.

## The foci of transformation

*UK:* In 2013 the main focus was on redesigning services handling over 100,000 transactions each year. The focus on front-end transformation included discourse around transforming user/customer experience, communications and information provision. In 2013 the focus was on opening up data for access by users through digital technology whereas in 2017 the focus was on sharing APIs both internally and externally to open up services, building national data infrastructure of registers, transforming the storage and management of data repositories.

Another focus of transformation in 2013 was legislation which was related to services as the need for ‘departments to remove legislative barriers which unnecessarily prevent the development of straightforward and convenient digital services’ (p.37). Laws were made before the digital age and thus could constrain development of digital services. In 2017 focus was placed on ‘modernising legislation to enable data access for defined public interest purposes within government’ (p.49).

A major difference between 2013 and 2017 in the UK was the emphasis on back-end operations and processes in 2017. It includes internal processes, as well as services offered to users:

‘[Transformation] is in essence a change of working, of culture and of disposition - changes that are made possible by digital technology. That technology is not change itself; it enables the change that is so transformative… this strategy charts the direction of the total transformation of government - in how we work, how we organize ourselves and how we serve our citizens’ (p.4).

There was a strong emphasis on collaboration across boundaries, joint-up whole, transformation plans being interwoven and developed collaboratively, collaboration across professions and departments as well as coordination. Not only services but also internal transformation is needed to digitally transform government as ‘digital can no longer be a ‘bolt-on’ to the side of an organisation. It is now having a profound impact on the internal structures of departments’ (p.26).

*Sweden:* In Sweden both documents from 2012 and 2017 focus less on services than in the UK. Both discuss the update and uptake of services generally. Moreover the focus is on ‘improved coordination across authority borders with e-government project and increased focus in developing more e-services, has been concluded’ (2018, p. 97).

In Sweden all documents communicate a stronger focus on processes and internal operations:

‘In order to be able to do this, the coordination of the development work in terms of agency common digital services needs to be reinforced’ (2012, p. 7)

‘There is a great need for cooperation and coordination between governmental authorities, municipalities and counties in order to be able to, through horizontal authority processes, meet the needs of individuals and corporations’ (2017, p. 116)

In the 2012 strategy the focus on processes is related to the services the authorities provide, which is no longer the case in the 2017 and 2018 documents.

The discourse related to legislation is not related to enabling the digitisation of services but to internal processes such as cooperation. In 2012, ‘the government has reinforced the coordination of e-identification’ (p. 17) and ‘an appointed investigator will review the so called registry legislation, and thereto connected issues, in order to create legal conditions for a more efficient e-government’ (p. 19). The E-delegation and the Digitalization commission ‘have in reports acknowledged the need to review certain legislation to enable the development of digital services in cooperation’ (2017, p. 101) and ‘The government will review the proposals from the investigation of legal conditions for a digitally cooperative government (dir. 2016:98) by the need to remove unnecessary legal obstacles for digitalization and cooperation’ (2018, p. 98).

## Approach to digital transformation

### Roles:

*UK:* In 2013 each department was planned to appoint a digital leader to direct the transformation and also ‘experienced and highly skilled managers (often called product managers in the commercial world)’ (p.23) to deliver high-quality digital services. In 2017 those were in place – ‘new digital professions are now established across the public sector’ (p.5). The intent was to continue to grow them developing reward structures and consistent career paths. In addition to that in the last document a new Chief Data Officer was indicated to be appointed including ‘the creation of new senior roles with a wider government mandate’ (p.14) to increase the comprehensiveness of the digital approach.

In addition to creating new roles in 2013 it was recognised that as a result of channel shift to accessing services online the role of front-line staff would change and evolve as digital take-up increases. In the second strategy document they expand that all roles will include some sort of digital technology: ‘professions which will adopt digital tools and techniques as the way that they work’ (p.38).

*Sweden:* There is no explicit reference to new job roles being created in 2012. That is implied through the new structures being created (see below) as ‘it could be appropriate to identify further development areas and agencies that would be given coordination responsibilities for these areas’ (p.15).

The change of current job roles was also discussed in the Swedish documents from 2018 implying changes to the current job roles within the affected authorities. That was attributed to the automation of decision making processes. That is related to digitalizing internal processes rather than digitising services as in the UK.

### Skills:

In 2013 the emphasis in the UK was on embedding digital skills ‘into our organisational DNA’ (p.2) and developing digital capabilities such as ‘specialist technical architecture, development, design and analytics skills’ (p.20).

In Sweden digital competences (2017 and 2018) are discussed in relation to the ability to lead and govern:

‘Access to digital competence is central in order to manage the digital transformation in an efficient way’ (2017, p. 102)

‘There is a continuing need to strengthen the ability to lead the digital development within governmental authorities, municipalities and counties’ (2018, p. 98)

### New structures:

*UK:* Embarking upon a digital transformation the UK coalition government established the Government Digital Service (GDS), as a new central structure with the main objective to ‘provide user-focused, cost effective and maintainable digital services’ (2013: p.47). They were tasked with transforming services and implementing the strategy supported by the following structures: ‘digital leaders’ network of senior civil servants, the Digital Advisory Board and the Government Communication Network’ (ibid.). The primary focus then was digitising services. In 2017 the GDS was embedded permanently into government by becoming one of the 10 corporate functions, broadening the focus to include more than just services but everything digital: ‘to support, enable and assure government digital initiatives’ (p.65).

In addition to the GDS, the greater focus on data use and management led to the establishment of the Data Advisory Board in 2017 in order to ‘make best use of data across government’ (p.10). Finally not only formal structures were being created to enact the digital transformations. In 2017 there was an indication for more informal structures, cross-government communities of practice, benefit to foster capability across government in order to keep up with future need and be agile in doing so.

In 2017 the focus on collaborative and coordinated action across UK governmental structures was enabled through digital technology:

‘We have also taken promising first steps in moving towards a more fundamentally digital government - one where we share code, patterns, platforms, components and best practice for approaching common technological and design problems across government. Cross government platforms and cross-government services are the future.

We have built a number of shared components and platforms (such as GOV. UK Verify for online identity verification) but we also use commodity commercial products where these are supported by open standards.’ (p.53)

Consequently new ways of working collaboratively are underpinned by those shared digital structures and tools and that is what is meant by digital government.

*Sweden:* In 2012 agencies have been commissioned different tasks in terms of digitalization in Sweden. In addition, a coordination of e-identification has been reinforced by ‘the establishment of a committee for e-identification’ (p. 17). In 2017, the establishment of ‘an e-government: Digital first – a program for digital renewal of the public Sweden 2015-2018’ (p. 101) and ‘a council for the digitalization of the public Sweden’ (p. 101) display a centralization of the management of digitalisation of the public sector in Sweden. In 2018, ‘the government makes a long term investment in order to strengthen and make the coordination of the digitalization in the public sector more effective, e.g. through the establishment of a new agency with the task to coordinate and support the overall government digitalization’ (p. 98). The newly established structures in Sweden are thus not related to digitally transforming services but to internal processes and internal operations.

### Tasks:

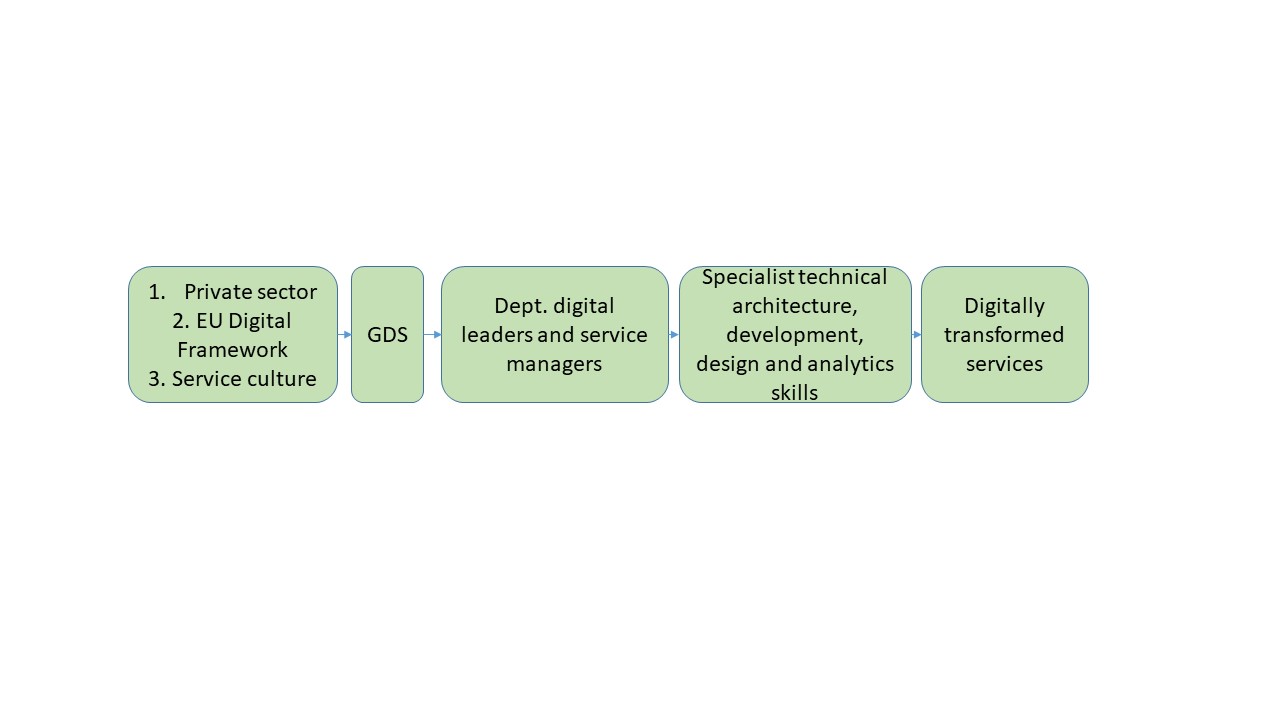
In 2013 the UK government outlined 16 action points related to digitalising services and establishing the structures, roles and skills to enable the digital transformation of services. There is no action related to the internal or back-end processes whereas in 2017 the five objectives relate to activities that include internal processes and business transformation. The focus on services has decreased but the overall digital transformation is emphasised.

No specific tasks were explicitly identified in the Swedish documents.

## Direction of Digital Transformation

### Top-down:

*UK:*In 2013 the transformation was driven by the aim to catch up with the practices in the private sector as ‘use of digital public services lags far behind that of the private sector’ (p.2). The idea was that government needed to move to ‘service culture’ as well as to comply with and excel at digital maturity as measured by the European Digital Capability Framework. Government set the ambition to reach level 5 in this framework, making ‘progress in all departments towards the highest levels of strong, agile, responsive and, above all, user-centred digital service provision’ (p.21). The GDS as a central organisational structure was set up to lead the transformation of services. In turn locally each department was to employ a digital leader and service managers. The direction of alignment of technology and organisational structure is top-down (see figure 1).



**Figure 1:** Top down transformation of services (2013 UK)

Comparatively in 2017 there were very few indicators to the same drivers for the top down transformation of government, only keeping pace with the private sector and the service culture.

*Sweden:* There are very few sections where macrosocial forces are indicated. The drivers are mainly the citizens’ needs as ‘if we are to have a civil service that is up-to-date, that meets the citizens’ needs of simple and user friendly services, we must take advantage of the possibilities given by digitalization’ (2012, p. 3). In 2017, *societal challenges* was indicated as a macrosocial force:

‘The societal challenges that the public Sweden encounters demand that the possibilities of digitalization are handled in the best of ways’ (2017, p. 109)

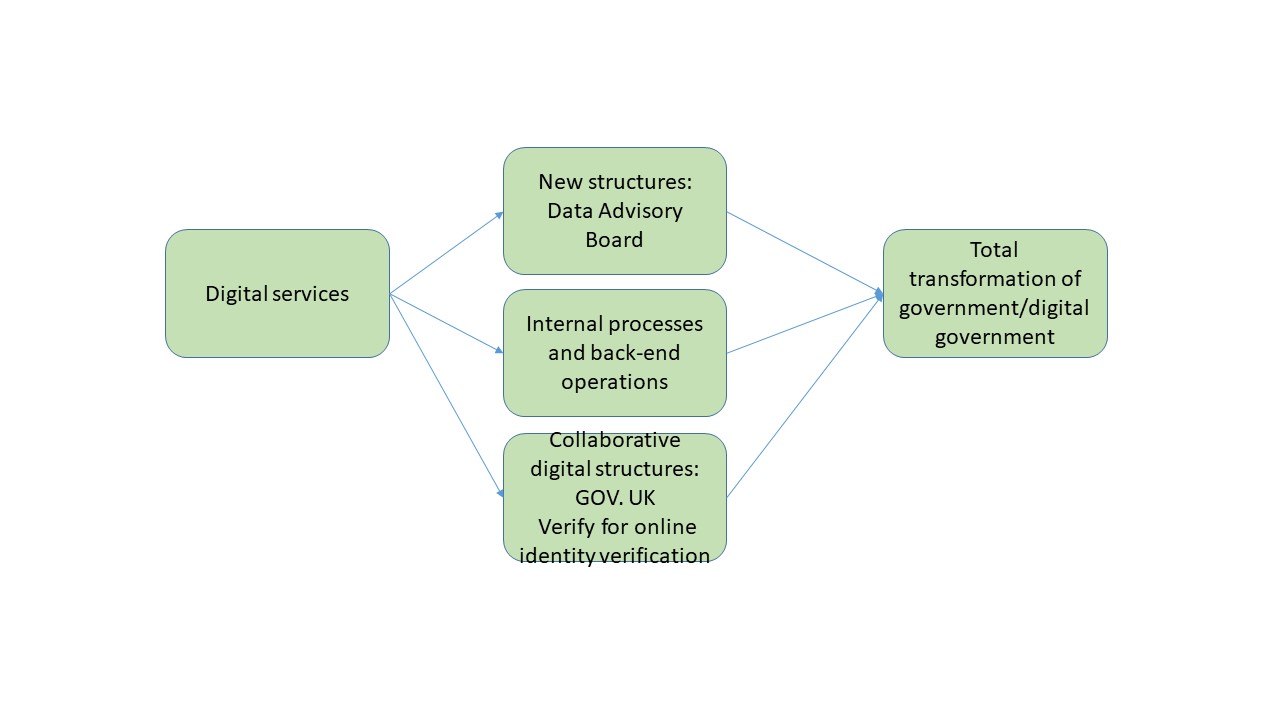
Overall macrosocial forces were indicated in the Swedish context however there were no clearly indicated structures, roles or tasks associated with the top-down direction of transforming services.

### Bottom-up:

*UK:* In 2013 there is only one aspect of bottom-up change that was indicated in the strategy which related to changing the policy making process: ‘digital also provides ways to improve the broader policy making process, through better engagement and consultation’ (p. 40). However in 2017 there were a lot of references to bottom-up digital transformation which included other aspects of the organisation:

‘[Transformation] is in essence a change of working, of culture and of disposition - changes that are made possible by digital technology. That technology is not change itself; it enables the change that is so transformative… this strategy charts the direction of the total transformation of government - in how we work, how we organize ourselves and how we serve our citizens.’ (p. 3)

The greater focus on data use and management in 2017 as pointed out earlier has led to the establishment of the Data Advisory Board in 2017 – a structure which clearly emerged bottom-up from the need to manage the data generated by the newly digitised services. Total transformation of government includes bottom-up change (figure 2). A fundamentally digital government also includes the implementation and use of collaborative digital structures/platforms such as gov.uk.

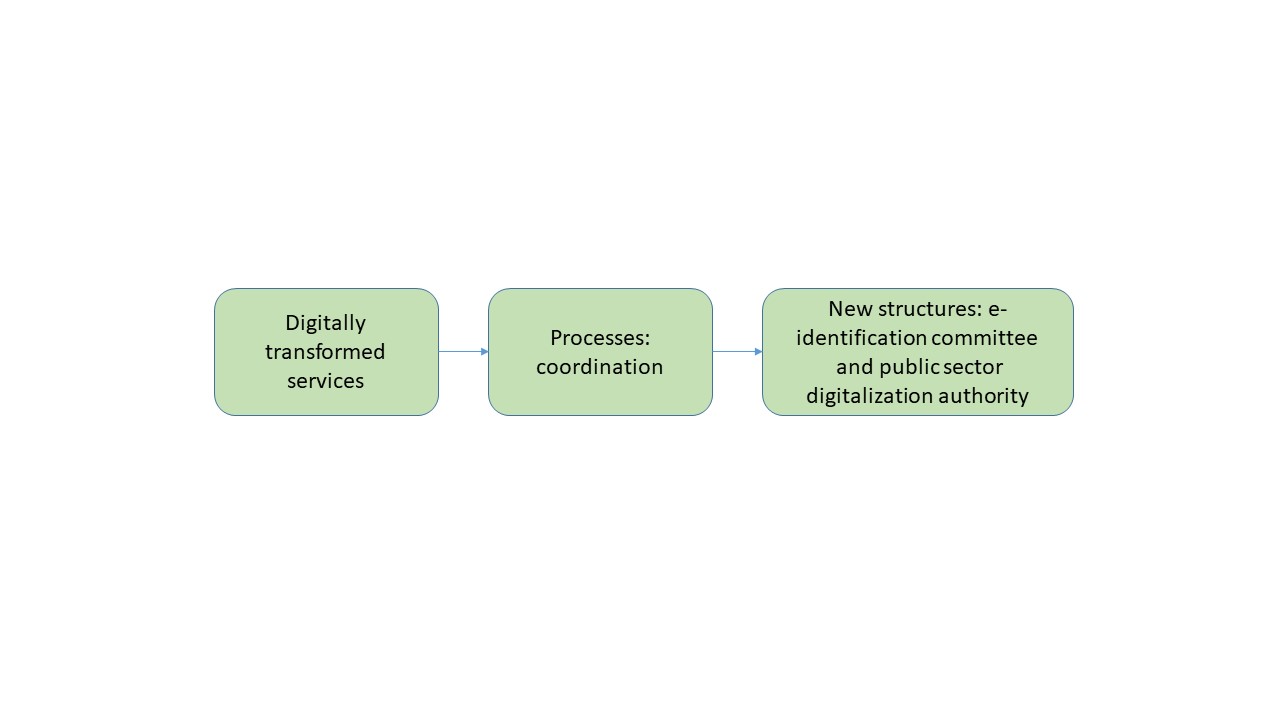


**Figure 2:** Bottom up transformation of internal processes and operations (UK 2017)

*Sweden:* Microsocial forces (bottom-up transformation) were indicated throughout all three documents. New structures emerged as a result of the need for coordination of digital services:

‘The government has reinforced the coordination of e-identifications by the establishment of a committee for e-identification’ (2012, p. 17).

In addition the efficiencies that IT created in 2012 together with the opportunities for simplification indicate a microsocial force instigated by technology – bottom-up. A council has been established in order to ‘coordinate the agency common services’ (p. 15). In 2018 the need for ‘increased management and coordination and, in addition, a clear goal for the national digital infrastructure’ (p. 96) underpinned ‘the establishment of a new agency with the task to coordinate and support the overall government digitalisation’ (p. 98). The newly established organisational structures in Sweden were established as a result of the need to coordinate specific digital services across government and the digitalisation of government as a whole (figure 3).



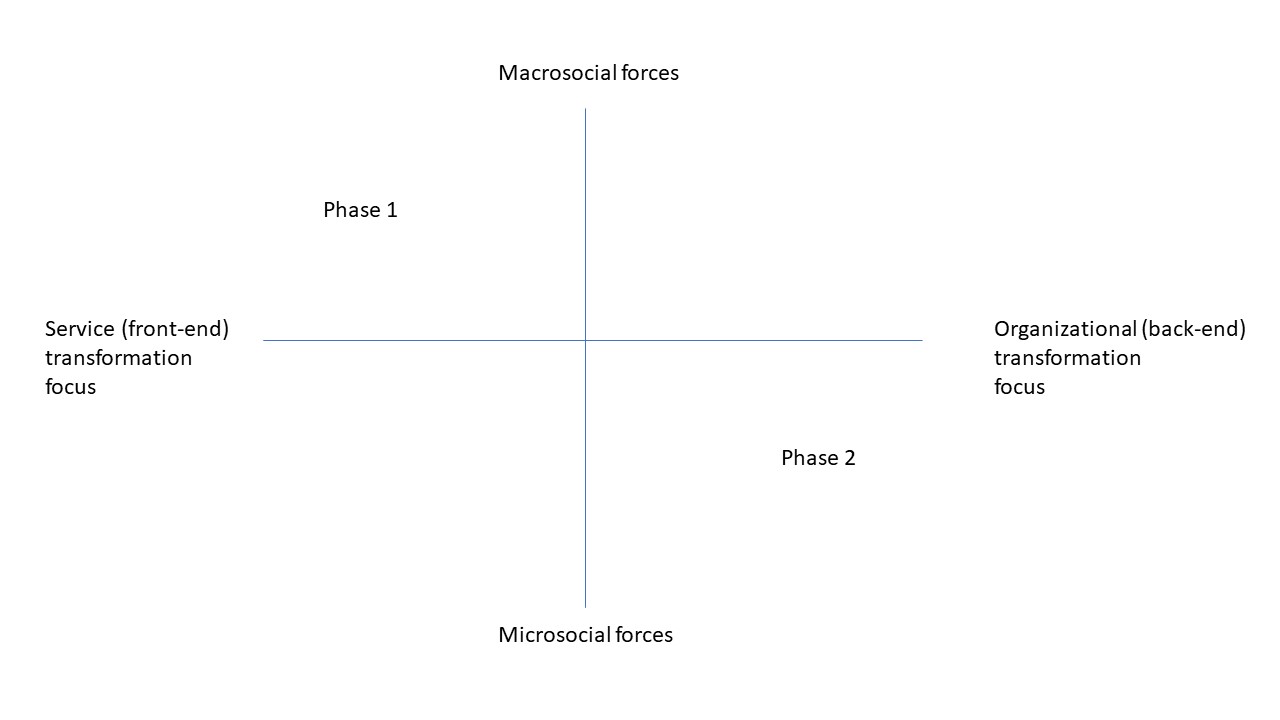
**Figure 3:** Bottom up transformation (Sweden 2012 & 2017/18)

# Discussion

The findings of this paper indicate that the focus of digital transformation was different in the UK and Sweden. Sweden’s digital transformation focus in 2012 was already on internal processes and operations (back-end transformation) rather than on front-end transformation – services as in the UK at that time. That can be explained with the different level of e-Governement maturity of both countries in 2012/2013 (Tinholt et al., 2016).

There are two clearly identified phases in the UK digital transformation of government. Phase 1 in 2012 focused on service digital re-design and was shaped by macrosocial forces - mimicking private sector, increasing digital maturity (EU framework) and developing a service culture. The findings support what was already established in the public sector reform literature (Andrews et al., 2012; Thom 2017; Wise, 2002). Those discourses in the strategy documents align with the isomorphic mimicry, external pressures and the market-based values of NPM. New institutional arrangements, the GDS in this case, lead to roles and skills change which in turn changed the technology used in service provision – the digital transformation of services (figure 1). Phase 2 in 2017 focused on transforming back-end operations and internal processes, driven by microsocial forces. We therefore agree with Barley (1990) that both macro- and micro-social forces need to be considered in explicating alignment of technology and organisational structure. This finding is contrary to Kraemer and King (2006) as digital technology and services have clearly affected organisational structure, roles and skills. On the other hand these strategy document findings support other public sector empirical studies where the impact of technology on organisational structures (Scholl, 2014) and roles (Giesbrecht et al., 2016) has recently been demonstrated.

We further extend Barley’s work and include another dimension that needs to be considered in organisational structure and technology alignment studies. Apart from the top-down (macrosocial) & bottom-up (microsocial) dimension we add ‘focus of digital transformation’ as another important dimension which enhances our understanding of organisational digital transformations (figure 4). This theoretical contribution can guide practice and empirical research in future digital transformation studies both in the public and private sector.

In the Swedish context digital transformation of services (Phase 1) was mostly completed prior to the issue of the 2012 strategy, hence macrosocial forces were indicated in the documents but no underpinning organisational structures, roles or tasks were clearly identified. It is possible that such organisational elements were created prior to that period and hence were out of the scope of this study. The higher level of maturity of digital government was reflected in the focus of the strategy documents – on processes and coordination (Phase 2). The emphasis was on the bottom-up direction of digital transformation. Organisational structures emerged as a result of microsocial forces (drivers) and their function was to coordinate processes. We can thus draw another theoretical insight from the data. Higher level of digital maturity is demonstrated in the dominance of microsocial drivers. eGovernement maturity is underpinned by prevalence of bottom-up processes of digital transformation and microsocial forces (technology) being the main drivers of technology and organisational structure alignment in digital transformation initiatives.

**Figure 4:** Digital transformation dimensions and phases matrix

# Conclusion

We have demonstrated that higher digital government maturity (Sweden) level is associated with microsocial forces as drivers of digital transformation whereas low digital maturity (the UK) is associated to top-down digital transformation with macrosocial drivers for change. The former is a characteristic of the second phase of an organisation’s digital transformation where focus is on changing and re-design of internal processes and back-end operations and the main drivers are microsocial (technology). In phase 1 the focus is on digitising services and the drivers are predominantly macrosocial. This led to the development of a horizontal scale related to the focus of the transformation (see figure 4) in addition to the vertical drivers scale (Barley, 1990). This additional dimension contributes not only theoretically to the understanding of technology and organisational structure alignment, but also practically to management of digital transformation initiatives in terms of aiding planning, assessment and evaluation. The digital transformation journey is initiated by macrosocial forces and focus on the front-end operations of an organisation. There are two possible routes to Phase 2 – from the top-left to the top-right quadrant in the matrix or from top-left to bottom-left. Further empirical research on digital transformation is needed to investigate that transition (longitudinal ethnographic case studies approach) in the public and private sectors. Nevertheless this preliminary document-based study has enabled us to develop the theoretical insight related to the dimensions of digital transformation in terms of direction and scope. One of the limitations of this paper is the scope of the study which included strategy documents issued after 2010 by the two governments. This was necessary as the first digital transformation strategy policy document was issued in 2012/2013 in the UK. Yet the selected documents enabled the comparative analysis of government digital transformation across different maturity clusters.

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