

Continuous Transformation of Public–sector Organisations in the Digital Era

Emergent Research Forum (ERF)

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Abstract

Public-sector organisations need to continuously transform to retain their legitimacy by meeting their obligations to citizens, central governments, and laws. Digital era brings new challenges for public-sector organisations who historically are slow in adoption of changes. This is significant as policymakers are concerned that unexpected disruptions could take away their governance power. This research in progress aims to clarify how public-sector organisations respond to digital transformation drivers. The literature review and expert interviews highlight that organisations require both existing and novel organisational capabilities to utilise digital technologies in order to respond to transformation drivers. This research highlights the gap related to organisational capabilities for existing and novel organisational forms.

Keywords

Digital Transformation, Digital Era, Public-sector Organisations, Organisational Capabilities.

Introduction

Organisations have become more like each other as they have been following the same industry-wide standards (Hinings et al. 2018). This has created the need for transformation to create a competitive advantage (Kotarba 2017). This need is not specific to digital era and has been observed in past industrial revolutions (Schwab 2017). Digital technologies have enabled organisations to get into other businesses easier. This means only companies that can adapt to technology changes to make them a business advantage can survive (Nadeem et al., 2018). The digital technology challenge is accompanied with other trends such as new customer demands, competitive landscape and availability of data requiring rapid innovation (Reis et al. 2018; Sebastian et al. 2017; Sia et al. 2016; Vial 2019). Therefore, digital innovation is key for organisations to get competitive advantage over others (Kostić 2018; Schwab 2017). The fourth industrial revolution has resulted in a new organisation transformation phenomenon, namely digital transformation, with an increase in research by practitioners since 2014 (Reis et al. 2018). Digital transformation is driving organisations to continuously transform their processes, services and products using digital technologies to remain a viable business (Kohli and Melville 2018). Once a need for transformation is detected (Teece and Linden 2017), organisational capabilities enable a respond considering the influencing factors. To respond, organisation needs to mobilise its resources to achieve desired outcome in the form of new or enhanced products, services or processes. Therefore, Digital technologies enable organisations to provide a response to the transformation driver (Vial 2019).

The public-sector has been transforming using technology with arrival of mainframes, personal computers, and wider use of the internet (Luna-Reyes and Gil-Garcia 2014). However, many public-sector organisations are still behind the private sector in technology adoption as they are influenced by different values and drivers. Public-sector organisations' policy making power could diminish as a result digital innovations (Misuraca and Viscusi 2014). Therefore, public-sector organisations should focus on digital

innovation to remain relevant (Carcary et al. 2016). In this paper, we review literature and pilot expert interviews to answer our research questions: ‘how do public-sector organisations respond to digital transformation’ and ‘what do they need to facilitate their responses’. The preliminary finding show organisations’ responses and required capabilities are situational, and depend on the digital technology and organisational form as described by Hinings et al. (2018).

Theoretical Model

Truex et al. (2006) discuss adopting a theory that fits the subject area and its historic context, guides the research method and has the capacity to be expanded by the research. Omar et al. (2016) conducted a systematic literature review of theories adopted in digitally enabled public-sector transformation research. They conclude that a fusion of institutional theory with technology related theories such as structuration theory is appropriate in this area. Therefore, we refer to Technology Enactment Framework (TEF), an extension to the institutional theory, as it considers developments in information technology adoption in the context of public-sector organisations. Specifically, it discusses Information Technologies (IT) organisational impacts which is core to digital transformation, and defines two organisational forms: bureaucratic and networks (Fountain 2001). The organisations forms use objective IT and are influenced by institutional arrangements, to create enacted technology resulting in outcomes. Enacted technology is the result of the organisation’s own thinking, process and culture in the adoption of the technology. We compared TEF to the model for digital innovation proposed by Hinings et al. (2018) which includes existing and novel digital organisational forms and technologies. They highlight that to make radical transformation through digital innovation, organisations require novel organisation form and novel technology capabilities. Also, we know from TEF, and experts that besides innovation, public-sector organisations continue to require existing capabilities to maintain their operation. Therefore, based on TEF, our proposition is that organisation forms (existing, novel) and digital Technologies (existing, novel) are core dimensions for continuous transformation in response to digital era disruptions (Figure 1).

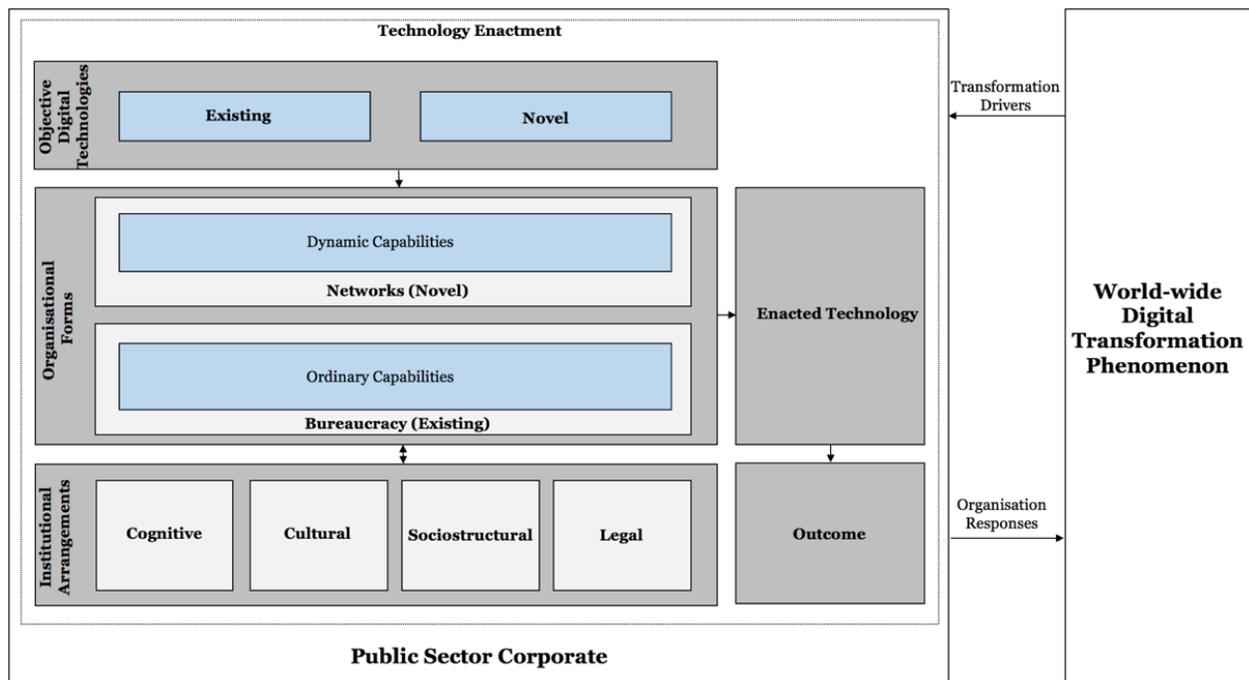


Figure 1 - Continuous Transformation Model (CTM) based on TEF by Fountain (2001)

Networks and Bureaucracy organisation forms are described in TEF. However, the organisational capabilities required to enable them are not specified. Based on the pilot expert interviews, both dynamic

capabilities and ordinary capabilities are required to enable a continuous transformation in the organisation while meeting the day to day operational need. Teece (2007)'s categorisation for organisational capabilities is used to align dynamic and ordinary capabilities with TEF. CTM will be updated as this field study investigation progresses further via Action Design Research (ADR) method.

Research Method

Guided by (Erfani & Abedin, 2018), a semi-structured literature review of over 80 well established journal articles and conference proceedings, as ranked by the Australian Business Deans Council (2019), was performed . Electronic databases were searched for ‘digital transformation’, ‘digital innovation’, ‘digital transformation strategy’, ‘digital business strategy’, ‘continuous transformation’. The literature review shows digital transformation is context-driven requiring more research using deep case studies. This is aligned with this research’s objectives as a public-sector financial organisation in Australia (referred here as PFO) engaged with the researcher to develop an organisation-specific model to guide its continuous digital transformation. PFO is a unique organisation that provides multiple services to the public, government agencies and financial institutions. The case is a scarce research area as not enough information about its similar organisations operation is available. PFO relies on complex technologies to achieve its goals creating a continuous transformation challenge. PFO is a risk-averse organisation that recently established an innovation lab to take advantage of modern technologies and working models. Following the literature review, an initial conceptual model was developed (Figure-1). We used CTM and research questions to form expert interview pilot questions. Meetings were organised for semi-structured interviews with three management staff in the area of digital innovation, information digitisation, and technology strategy at PFO. This was used to refine interview questions in preparation for external industry expert interviews, and to verify CTM. The process of conducting interviews is inspired by the work on a deep digital transformation case study by Chaniyas et al. (2018). Their work, and our pilot interviews confirm literature review findings that digital transformation requires more research using deep case studies. Therefore, we plan to use CTM as an initial artefact to conduct an ADR in PFO for a deeper understanding of transformation in public-sector organisations (Figure 2). Practitioners will be PFO senior staff involved in its digital transformation. Industry experts will be external to PFO to verify and enrich the findings. The expected research results are: 1) extension of TEF to generalize the findings and reflect organisational capabilities role in technology enactment 2) a PFO-specific continuous digital transformation model to provide a practical example for the extended theory 3) verified extended framework by industry experts.

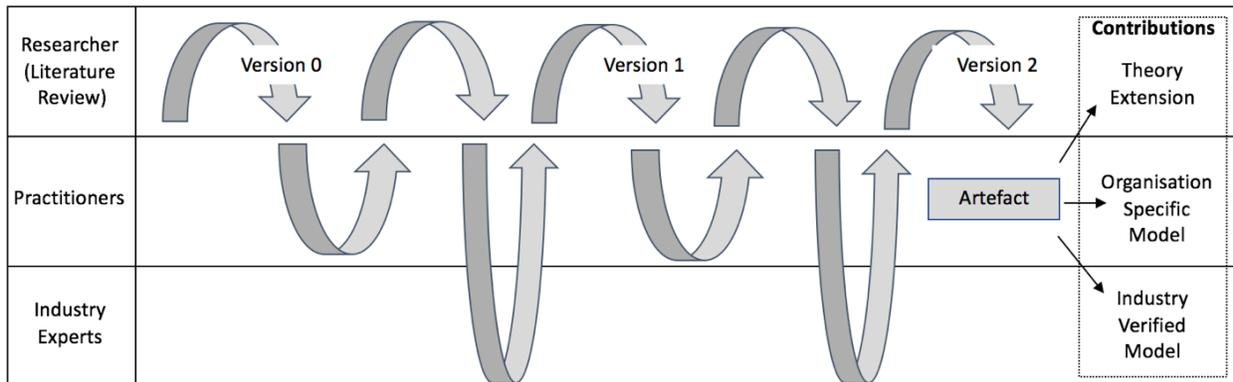


Figure 2 – Proposed ADR cycles based on Sein et al. (2011)

Preliminary Results

Responses to semi-structured pilot interviews are in Table 1. Two from three interviewees are interested to know if transformation is continuous. Also, two highlighted that true innovation is a rare phenomenon. Innovation often occurs in incremental form thorough experiments that come together for an improved and a novel outcome. Overall, the results show that PFO experts identify a need to have capabilities that enable responding to transformation drivers quickly. Also, it was highlighted that the existing ordinary capabilities for operation should not be left behind. This may mean public-sector organisations need to be 2-speed

organisations that are both dynamic and stable. This preliminary research shows expert interviews can reveal concepts that didn't stand out in the literature review. This is significant as interviews with public-sector financial organisations is scarce. For example, the interviews showed a confusion exists between digital transformation as a phenomenon and as an internal transformation. Literature shows that some studies refer to digital transformation as an organisational change, and some as a phenomenon (Hinings et al. 2018; Vial 2019). Additionally, results show the influencing factors are unique in public-sector. Therefore, this PhD research will investigate such topics further. This research extends the existing theoretical knowledge by providing practical input to extend TEF and subsequently institutional theory by considering the impact of digital transformation on institutions. The preliminary research results show that responses to digital transformation drivers rely on the organisational capabilities in the form of dynamic and ordinary. Nadeem et al. (2018) identified the core dimensions of the organisational capabilities related to digital transformation. However, a distinction is not made between the two types of organisation forms as identified in related research (Fountain 2001; Hinings et al. 2018), which this research will address.

What does digital transformation mean?
All interviewees indicated digital transformation is an abstract concept and needs to be described in context. They highlighted that digital transformation has a more radical change in everyday life compared to digitisation. An expert described it as democratisation of digital technologies creating additional dimensions in all aspects of our life. While change in business models is an expected outcome of digital transformation, an interviewee couldn't see how it impacts a public-sector organisation business model. Digital transformation may mean public-sector organisations ask bigger questions like, do we need to reinvent ourselves to remain relevant?
What are the potential responses of an organisation to digital transformation?
The responses range from doing nothing to providing opportunity for staff to learn and experiment, changing incrementally, or transforming radically. It was highlighted that public-sector organisations need to perform tasks quicker or will fall behind. Also, that organisations could use digital technologies to maintain, improve, experiment or innovate. The response shouldn't be chaotic but rather a repeatable process. The person responsible for innovation lab at PFO highlighted that the organisation needed to decide on being a first mover or fast follower when it comes to digital innovation. Therefore, organisations require capabilities that enables continuous decision making for digital disruptions.
What does an organization need to facilitate its responses to digital transformation?
Transformation requires a top-down approach. Strategic planning, sensing and response are the capabilities that help identify what is relevant. Organisations need a third category of cross-skilled leaders that can experiment and also turn them into operation. Public-sector leaders require incentives to transform organisations as they are less focused on profit making or competition. The interviewees raised transformation influencers in public-sector organisations as a research gap. People, culture, urgency and risk appetite are influencing factors that could act as barriers or enablers. One of the interviewees felt that the organisation may not be able to respond to new disruptions as it isn't as agile. Therefore, agility with fit-for-purpose governance facilitates responses to transformation drivers. A common theme raised was upskilling staff as lack of knowledge management, and reliance on prior knowledge to navigate the politics embedded in the culture makes it difficult to replace existing staff.

Table 1 – Expert Interview Pilot Questions and Answers

Conclusion and Future Work

Public-sector organisations need to continuously transform in the digital era to respond to digital transformation drivers. The literature and expert interviews identify digital technologies, organisational forms, and institutional arrangements (influencers) as core dimensions for a continuous transformation. This preliminary research identifies a need for a more detailed field study to understand the organisational capabilities required for a continuous transformation in the public-sector to enable a balance between dynamic and ordinary operations to respond to transformation drivers in the digital era. Moving forward, this research will conduct an ADR in PFO to better understand how public-sector organisations respond to drivers for continuous transformation in the digital era, what influences their responses, and what organisational capabilities are required to facilitate their responses.

Disclaimer

Views expressed in this paper are those of the authors and not necessarily those of the PFO. Use of any results from this paper should clearly attribute the work to the authors and not to the PFO.

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