

Temporality and Institutional Logics
in a Case of Organisational Digital Transformation

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Abstract

The role of time and temporality has been an essential element in management and organisation research. However, it has always been looked at in a solely objective manner, and its other side, i.e., the subjective side, which might affect many organisational processes, has been neglected. Recent research on time has shown an increased interest in exploring this mysterious aspect of time, which has remained unexplored for so long. Current researchers in the field are trying to unpack and explore this aspect of time through various lenses. This research utilises in particular an institutional logics lens to explore how different temporalities coexist and interplay in organisations undergoing digital transformation and institutional complexity.

In Saudi Arabia, where this research was carried out, public organisations are government owned organisations that operate according to specific state logic. Currently, there is an imposed digital transformation program in many organisations, which has caused an interruption to this existing logic and has placed these organisations in a situation of institutional complexity. Underlying this situation, this research tries to discover the ambitemporality that is hidden beneath the actions and reactions of organisational members who operate according to the logics they have been trained in. The situation that organisations fall into when there are multiple temporalities enacted within the organisation has been recently identified as “ambitemporality” (Reinecke and Ansari, 2015). Institutional complexity is a profound concept in the institutional logics literature and describes situations in which an organisation encounters incompatible prescriptions from multiple institutional logics.

Adopting a qualitative methodology and a grounded approach (Strauss and Corbin, 1990, 1994), this research investigated the perspectives of two types of actors who were engaged in an organisational digital transformation that was imposed on

them as part of a country-wide institutional reform. The two types of actors varied significantly in their backgrounds and characteristics, and in the institutional logics they were acting according to. The data collected explored how these distinctive characteristics and logics influenced each type of actors' involvement and engagement with the transformation the organisation was going through. It also revealed the conflicts that stemmed from three sources and that were diffused through three layers of interruption to the existing organising logics: strategic, technical and sociocultural. The data also discovered the practices and processes through which those actors were able to operate and organise with the conflicts they faced. These processes were derived from the same three sources of interruption.

To relate the research of time and institutional logics with the specific type of organisational change the organisation was going through, i.e., digital transformation, an analysis of was carried out of the technology and digital tools that were utilised in orchestrating the transition from the dominant logic to the new logic, and their relation to this situation of ambitemporality. Examining the technology used was essential and revealed an evident relationship between time and technology in transforming contemporary organisations. Results of this research provided important insights about how seriously time and temporality in organisations should be taken and its relation to institutional logics, especially when contested logics exist within an organisation.

Contents

Acknowledgements	iii
Abstract.....	iv
Contents	vi
List of Tables	ix
List of Figures.....	x
List of Images	xi
List of Appendices.....	xii
Chapter 1: Introduction	1
1.1 Overview.....	1
1.2 Research Questions.....	5
1.3 Research Objectives.....	6
1.4 Thesis Structure	7
Chapter 2: Literature Review.....	8
2.1 Introduction.....	8
2.2 Time and Temporality in Organisations	10
2.2.1 Key Characteristics and Dichotomies of the Time Concept.....	12
2.2.2 Bridging Different Time Views and Their Value for Organisations	19
2.2.3 Conclusion on Time and Temporality in Organisations and Summary of Research Gaps.....	22
2.3 Organising IT-Mediated Change through Time and Temporality.....	24
2.3.1 Organisational Change and Different Temporal Orientations and Choices.....	24
2.3.2 Organisational Change and IT	26
2.3.3 IT and Time in Organisation Studies.....	29
2.3.4 IT and Temporality	31
2.3.5 Conclusion on Research Overview of Technology Related to Organisational Change, Time and Temporality.....	35
2.4 Institutional Logics	35
2.4.1 Institutional Logics and Temporality.....	36
2.4.2 Logics in Different Organisational Contexts and Sectors.....	39
2.4.3 Conclusion on Research Overview of Institutional Logics and Their Relations to Time and Temporality.....	43
2.5 Conclusion	43

Chapter 3: Contextual Background: The Transformation Program of Governmental Public Organisations in Saudi Arabia.....	45
3.1 Overview.....	45
3.2 Introduction to the Change Context of the Public Sector in Saudi Arabia	46
3.3 Conclusion	56
Chapter 4: Research Methodology.....	58
4.1 Introduction.....	58
4.2 Research Approach and Philosophy	59
4.2.1 Research Approach	59
4.2.2 Research Philosophy	61
4.3 Research Design and Method	64
4.3.1 Research Design: Case Study	64
4.3.2 Research Methods.....	66
4.4 Data Analysis.....	77
4.4.1 Research Analysis and Procedures: Grounded Approach	79
4.5 Ethical Considerations	86
Chapter 5: Findings	87
5.1 Introduction.....	87
5.2 Key Actors and Their Logics in the GovOrg Organisation Undergoing Digital Transformation.....	89
5.2.1 Key Actors' Social Backgrounds and Organising Principles in GovOrg	89
5.3 Unpacking the Role of Temporalities and Technologies in Multiple Logics.....	101
5.3.1 The Organising Temporalities of Distinct Actors' in GovOrg	101
5.3.2 The New Technology Framing in GovOrg.....	106
5.4 Conflicts and Their Key Organising Processes in Institutional Complexity, Ambitemporality and Digital transformation.....	122
5.4.1 Sources of Interruptions to Current Organising Logics.....	122
5.4.2 Key Conflicts Occurring from Interruptions to the Existing Logic	130
5.4.3 Key Organising Processes Enabling the Coexistence of Different Logics and Temporalities.....	135
5.5 Conclusion	143
Chapter 6: Discussion	144
6.1 Introduction.....	144
6.2 Theoretical Contributions	153
6.2.1 Contributions to Research on Institutional Logics.....	153

6.2.2 Contributions to Research on Organisational Temporality	162
6.2.3 Contributions to Research on Digital Transformation.....	168
6.3 Implications for Practice	172
6.4 Limitations of the Study and Future Research.....	173
6.5 Conclusion	175
References.....	177
Appendices.....	188

List of Tables

Table 1.1	<i>Thesis Structure</i>
Table 2.1	<i>Summary of Main Terms Used to Describe Different Views of Time</i>
Table 3.1	<i>Initiatives of One Public Organisation as Shown in Official Documents</i>
Table 4.1	<i>Four Questions Leading to the Adoption of a Case Study Approach</i>
Table 4.2	<i>Breakdown of Interviews by Participant Group and Level</i>
Table 4.3	<i>Data-Planning Matrix: Research Questions with Data Collection and Analysis Details</i>
Table 5.1	<i>Organising Principles and Assumptions and Source of Legitimacy of the Main Actors</i>
Table 5.2	<i>Key Operating Temporalities and Technology Framing of Main Actors</i>
Table 5.3	<i>Summary of the Main Logics within the Organisation</i>
Table 5.4	<i>Key Layers of Interruptions and Their Description</i>
Table 5.5	<i>New Periodic Meeting and Reporting Scheme</i>

List of Figures

- Figure 1.1 *Components of the Literature Review*
- Figure 2.1 *Two Main Dichotomies of Time and Temporality and Related Terms*
- Figure 2.2 *Logics Multiplicity Framework*
- Figure 3.1 *Structure of Relationship between the Vision and Organisational Plans*
- Figure 3.2 *Examples of External Reorganising of Public Organisations
Participating in the Transformation Program*
- Figure 4.1 *Summary of Research Methodological Choices*
- Figure 4.2 *Data Collection and Analysis Phases and Steps Following the Grounded
Approach*
- Figure 4.3 *Second-Order Themes*
- Figure 4.4 *Integrating Second-Order Themes into Aggregate Dimensions*
- Figure 5.1 *Timeline of Main Events Preceding and Succeeding Launch of the
Program*
- Figure 5.2 *Examples of Reorganising/Restructuring and Establishment of Some
Related Government Agencies*
- Figure 5.3 *Temporality Framing Instantiated by GovOrg Change Agents*
- Figure 5.4 *Technology Framing Instantiated by GovOrg Change Agents*
- Figure 5.5 *Key Layers of Interruptions and the Conflicts Resulting from Them*
- Figure 5.6 *Intersectionality of GovOrg's Organisational Goals and Responsibilities
with Its Sister Agencies*
- Figure 6.1 *Process Model of the Subjective–Objective Temporalities Dialectic*
- Figure 6.2 *Model for Organising with Institutional Complexity in a Situation of
Ambitemporality*

List of Images

- Image 5.1 *The VRO Office*
- Image 5.2 *Watani Application*
- Image 5.3 *Watani Application Features*
- Image 5.4 *Screenshots of the Dashboard Used and Updated by Change Agents*
- Image 5.5 *The Unified Electronic Procurement System Etimad*

List of Appendices

- Appendix 1 Information Sheet Given to Participants
- Appendix 2 Consent Form Given to Participants
- Appendix 3 The interview protocol used for change agents
- Appendix 4 The interview protocol used for the employees
- Appendix 5 Data Structure
- Appendix 6 Supporting Evidence for Aggregate Dimension: Technology as an
Underlying Mechanism
- Appendix 7 Supporting Evidence for Aggregate Dimension: Shift of Logics in
Public Organisations
- Appendix 8 Supporting Evidence for Aggregate Dimension: Temporalisation of
Organisation Activities
- Appendix 9 Supporting Evidence for Aggregate Dimension: Minimising the Gap
between Strategy and Practice

Chapter 1: Introduction

1.1 Overview

In today's world, contemporary organisations are undergoing organisational change, which is complex in nature, and which often goes beyond internal organisational initiatives to bring about change. This change entails multiple ongoing processes, such as leveraging the capabilities of information technology (Dhurkari, 2017; Leonardi, 2007); strategic corporate change (Pettigrew et al., 1992); and innovation (Van de Ven and Poole, 1995). More specifically, contemporary environments are characterised by heterogeneity and multiplicity of actors, often operating according to different logics, pervasive digital transformation, and increasing dynamism and complexity. This complexity often requires organisations to adapt and change in multiple directions and processes to be able to respond to highly dynamic, intersectional and complicated work environments. In particular, previous studies have shown that processes of contemporary organisational change often occur alongside digital transformation and the engagement of multiple logics.

However, not only has the nature of organisational change itself been altered over the years, but so have the other elements that are crucial for such change. For example, the concept of time has changed significantly. Even though time and temporality have been useful in theory building (George and Jones, 2000), and has been always an important concept in the study of organisations and organisational change, signifying the “sociotemporal order which regulates the structure and dynamics of social life” (Zerubavel, 1981, p. 2), these theories do not explicitly integrate time and temporality as an essential element. Rather, they tend to treat it as a boundary condition, resulting in

remarkable ambiguities and conceptual gaps in the literature. As much extant research has been devoted to studying time-related concepts while neglecting notions of human agency, we know less about how different temporalities interplay and particularly how organisations and their employees might transition effectively from one temporality to another. We also lack knowledge about the processes which drive the processes of complex organisational change, which proceeds according to multiple dimensions, including that of temporality.

This research thus aims to address these shortcomings in the existing literature by examining how organisations change when undergoing digital transformation and operating according to multiple institutional logics and temporalities.

In the management field, the theorisation of time dates back to Frederick Taylor's studies in the 1880s (Harper and Mousa, 2013), and thereafter, the concept has been predominantly studied from a Newtonian perspective. Recent studies have started to challenge this dominant view, building on the Einsteinian view of time, which has also migrated into the domains of management and organisational studies (Sahay, 1997; Lee and Liebenau, 2000; Dawson and Skyes, 2016). Crucially, such a viewpoint has prompted researchers to discuss diverse temporalities and their implications on a wider variety of organisational life aspects. Although temporality is a relatively contemporary concept, it can be described as the version of time that emphasises the role of actors who socially and constantly construct time, which Langley et al. (2013) argue that much of the extant management literature tends to ignore; where it is considered, it is viewed as an external independent variable.

Although research on temporality is gaining momentum, it also reveals inconsistent and diverse findings concerning the effects of temporality on different organisational processes and functioning. This could be traced back to temporality being treated in the same way that time has been treated in research, best described by Saunders and Kim as “a silent visitor to the research” (2007, p. iii). In other words, time and temporality are both usually applied in the background of the research, instead of being positioned on the main stage. Some might argue that time and temporality cannot be studied in isolation from other organisational phenomena, highlighting that “we cannot understand time by looking at it alone but rather by analysing the ways people are involved in everyday life” (Horning et al., 1999, p. 293). Yet, this still does not justify time and temporality being notably understudied in management and organisation research.

The case of the digitalisation of a public organisation in Saudi Arabia, which forms the empirical base of this research, provides an ideal setting to examine how organisations change when undergoing digital transformation and operating according to multiple institutional logics and temporalities. It provides a setting of institutional complexity, where the organisation confronts incompatible prescriptions from multiple institutional logics stemming from the implications of the digitised organisational change. This change process comes with its own complexities and intertwined situation by taking place within a profoundly bureaucratic public organisation, which is forced to change according to a larger agenda of country-wide reforms aiming at developments and cultural change. The change falls under the umbrella of Saudi Arabia’s Vision 2030 initiative, designed to usher in a new era in the country. Unlike in the private sector, these

kinds of transformation programs in the public sector tend to be part of bigger comprehensive reform agendas (Ejersbo and Greve, 2017), which add to their complexity. The Vision 2030 umbrella encompasses several Vision programs, which need to be functional to achieve the Vision. In this research, the focus is on the National Transformation Program (NTP), which focuses on changing how government organisations used to work, bringing in a more vibrant environment through the adoption of technology and work practices similar to those found in the private sector. In bringing about this change, it was not enough to import technology and practices; people from the private sector also had to be imported to migrate the proposed changes into the public sector. Many scholars have pointed out the paucity of investigations into the public sector, especially in terms of research initiatives concerning digital transformation, which have tended to focus on the private sector (Plesner et al., 2018; Pick et al., 2015; Bejerot and Hasselbladh, 2013).

In societies usually labelled as traditional and conservative, like Saudi Arabia (Al-Turki and Tang, 1998), individuals in the workplace tend to follow established norms and routines without questioning them (Hofstede, 1997). When a contemporary organisation undergoes organisational change that alters the environment to a more hybrid one “that combine[s] institutional logics in unprecedented ways” (Battilana and Dorado, 2010, p. 1419) and finds itself in a situation of ambitemporality – that is, one where the organisation needs to “accommodate seemingly contradictory temporal orientations” (Reinecke and Ansari, 2015, p. 620) – it can be said that the organisation is facing institutional complexity. The literature on time and temporality in organisations highlights two dominant temporalities or temporal orientations: objective and subjective.

While objective temporality builds on an understanding of time through events that are perceived as static and “discrete” from each other, subjective temporality builds on an understanding of time by assuming an active role played by the actors in the present and by assuming that the past and future are “dimensions” of the present (Hernes, 2014).

Recent research has established that the temporality according to which organisations operate provides critical implications for strategy, for decision-making and for the ability to change. Such organisational activities and processes commonly imply a future-oriented direction for organisations (Wenzel et al., 2020). Hence, this future orientation requires actions to be made in the present which are built on the past, emphasising temporality as a suitable lens to examine these actions and processes.

1.2 Research Questions

To obtain a better picture of how organisations change when undergoing digital transformation and operating according to multiple institutional logics and temporalities, the research problem can be divided into two research questions. These are as follows:

- How do different temporalities coexist and interplay in organisations undergoing digital transformation and institutional complexity?
- What types of conflicts and resolution processes are used in organisations undergoing digital transformation and institutional complexity?

The first question will allow us to describe the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality, illustrating how technology/ digital transformation, combined with different temporalities and multiple logics, leads to specific organisational states. The second question will allow us

to understand the types of conflicts that arise from the different logics coexisting according to different temporalities and the underlying processes used to organise and orchestrate the transition from one temporality to another and from one logic to another, in a situation characterised by ambitemporality and institutional complexity in public organisations undergoing digital transformation.

1.3 Research Objectives

As previously discussed, time and temporality are not well captured in management and organisational research in general, or in understanding complex organisational change in particular. Therefore, the main aim of this research is to reduce this remarkable conceptual gap in the literature through conducting an inductive qualitative study to explore, understand and describe the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality, and to understand the processes used by public organisations experiencing conflict of logics in a situation of ambitemporality and institutional complexity while undergoing digital transformation. The study will focus on the context of public organisations which have been forced to undergo organisational change, and where the process of change is not initiated by the organisation itself, causing the organisation to face institutional complexity combined with ambitemporality. This research will hopefully contribute to knowledge by narrowing the gap between the literature on time and temporality, multiple institutional logics, and digitised organisational change.

1.4 Thesis Structure

This thesis is divided into six chapters as shown in Table 1.1.

Table 1.1

Thesis Structure

Chapter	Content
Chapter 1	Introduction of the research, its rationale, questions and objectives
Chapter 2	Review of the literature on time and temporality and of other relevant literature: institutional logics, organisational change and technology
Chapter 3	Contextual background of the research
Chapter 4	Research methodology
Chapter 5	Research findings
Chapter 6	Discussion: research contributions, implications, limitations, and future directions

Chapter 2: Literature Review

2.1 Introduction

As illustrated in Chapter 1, this research aims to understand how organisations change when undergoing digital transformation and operating according to multiple institutional logics and multiple temporalities. This chapter provides a comprehensive review of the literature related to three main areas: (i) time and temporality, on which this research has drawn as background information; (ii) organisational change triggered by technology; and (iii) institutional logics.

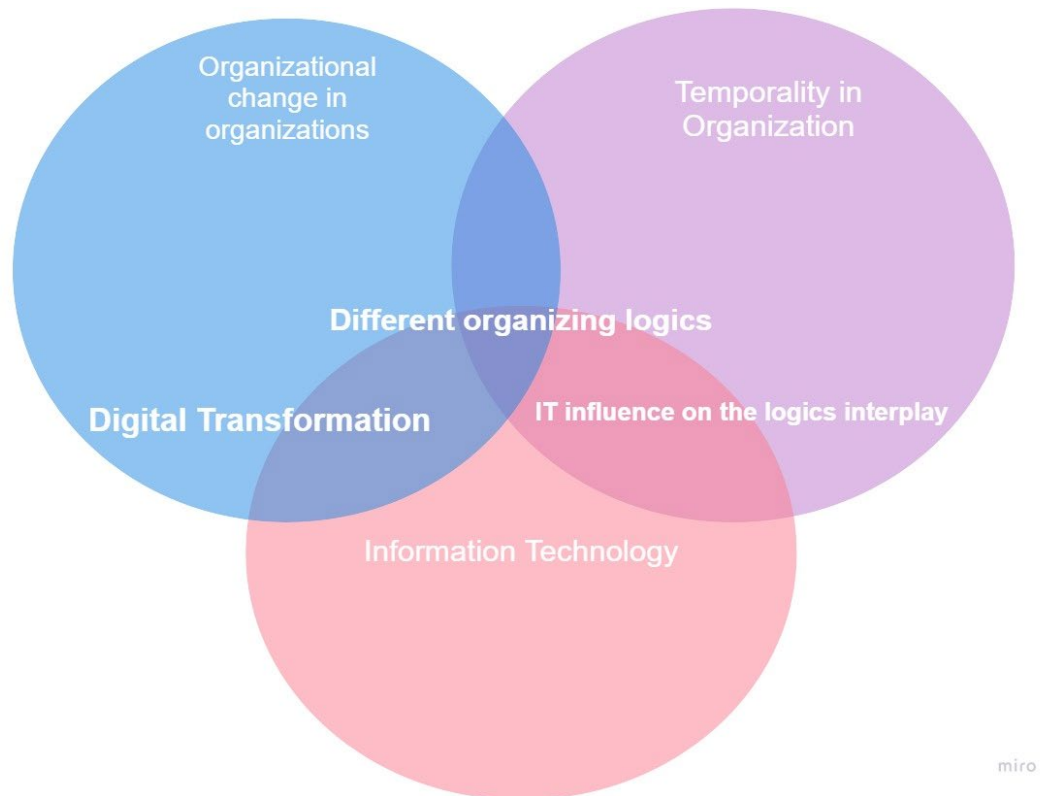
The above combination of the literature review areas was largely inspired by both the theoretical gaps, outlined above, and the research context. In particular, within the studied context, two temporalities coexist. In studying how these two temporalities (i.e., organisational future desire temporality and employees' past practices temporality) can be reconciled, the notion of “ambitemporality” was proposed by Reinecke and Ansari (2017). Reinecke and Ansari suggest that organisations could utilise the concept of ambitemporality to control the conflict resulting from this situation. Particularly, they suggest that ambitemporality allows organisations “to accommodate nonlinear development processes while maintaining linear timelines of progress desired” (2017, p. 12). Adding to this complexity, two logics also coexist, causing the organisation in this study to be in a state of what literature calls “institutional complexity.” This situation is best described by Greenwood et al. (2011, p. 318), who explain, “Organisations face institutional complexity whenever they confront incompatible prescriptions from multiple institutional logics.” Organisations experiencing such situations of complexity are also referred to as “hybrid organisations” (Battilana and Dorado, 2010). This situation is

“likely to trigger internal tensions that may generate conflicts among organisation members, who are ultimately the ones who enact institutional logics” (Battilana and Dorado, 2010, p. 1420). At the same time, while the literature review focus was inspired by the research context, it was also theoretically justified: as discussed and specified in the following sections, existing research offers limited insights to understanding complex organisational change driven by digital transformation and proceeding in a context of institutional complexity and ambitemporality.

Therefore, in order to understand how different temporalities coexist and interplay in public organisations undergoing digital transformation and institutional complexity, and to explain the processes that allow organising under conflicting logics and temporality modes, this chapter is composed of the aforementioned three main areas, which are divided into discrete sections here. The following section (2.2) provides a comprehensive review of time and temporality in organisations. This is followed by a section (2.3) on organisational change triggered by technology. The chapter concludes with a review (2.4) of the literature on institutional logics. Figure 1.1 shows a Venn diagram illustrating the components of this literature review and how they intersect.

Figure 1.1

Components of the Literature Review



2.2 Time and Temporality in Organisations

The concept of time is not new to organisational and management studies. Looking back at the historical appearance of time in the literature in general, Newton thought that time was not affected by any external factors (Rynasiewicz, 2008). Dawson (2014) finds that the Newtonian conception of time has long been the basis of research on time in organisations. This Newtonian conception views time as quantifiable and measured, and does not allow for consideration of the *experience* of time. This was true until Einstein proposed the relativity of time and suggested that time differs based on the individual's

position. As his focus was on natural sciences, it is probable that he was discussing the physical position of individuals. However, his theory of relativity led to a shift in the conceptualisation of time from an absolute entity to a more relative entity (Sahay, 1997). This idea of the relativity of time is transferable to organisational and management studies, in which the discussion has moved from the physical position of individuals to the temporal one (Lee and Liebenau, 2000). This explains why Biesenthal et al. (2015) clearly attached Newtonian time to the objective view of time and Einsteinian time to the subjective view.

Time appeared as an explicit focus in the works of the father of scientific management, Frederick W. Taylor, in the 1880s, though his time and motion studies were focused on finding efficiency in conducting human-related tasks and activities in a factory (Harper and Mousa, 2013). However, it was not until relatively recently that organisational research started examining the complex interplay associated with time and temporality. There have been many debates related to the conceptualisation of time in organisations. Time has been viewed as a crucial element in organisational studies but has been neglected and not studied as the primary focus of the research, as a number of scholars have noted (Dawson, 2014; Clark, 1985; Bluedorn and Denhardt, 1988; Burrell, 1992; Butler, 1995). In their research review in *MIS Quarterly*, Saunders and Kim (2007) describe time in the period 2005–2007 as “a silent visitor to the research,” adding that “The researcher implicitly suggests that a change occurs over time, but does not explicitly discuss the role of time” (p. iii). This statement acknowledges the absence of time from research as the main object of study. Even now, when time is receiving increased attention and is being reconsidered, research papers on time tend to be theoretical in

nature; there is less empirical work on the subjectivity of time and relevant dimensions and implications of it in organisational contexts (Onken, 1999).

In sum, time has been taken for granted as a linear abstract concept, while its social construction dimension has remained under-theorised. As Sahay (1997) points out, the treatments of time in organisation studies as objective and abstract “do not involve the human actor as central, and their conceptions are not dependent on how individuals conceive of time” (p. 239). This view has dominated the literature. More recently, however, the coexistence of these two contradictory conceptions of time has been acknowledged (Cuganesan, 2021), but questions about how the different temporal orientations of actors influence their involvement with the temporal structuring of activities in their organisations are still to be answered (Vaagaasar et al., 2020).

The following subsections build on this introduction to time and temporality in organisations to discuss various definitions and properties of time and temporality in more detail.

2.2.1 Key Characteristics and Dichotomies of the Time Concept

The way time and temporality have been defined and studied in management and organisational literature varies among scholars. Table 2.1 supports this point and highlights the main terms used in the literature to describe different views of time. This section reviews the different conceptualisations of time among organisational and information systems (IS) scholars. Since this research intends to examine how organisations change, particularly when undergoing digital transformation and operating according to multiple institutional logics and temporalities, it was essential to consider

views of time and temporality in the fields of both management and IS. It is clear that in the literature, time and temporality are often used in an interchangeable manner; in other words, a clear distinction between the two is still missing. However, some scholars have attempted to make this distinction. For example, Schultz and Hernes (2013, p. 1) define temporality as “the ongoing relationships between past, present, and future,” while Hussenot and Missonier (2016) in their study of temporality as being embedded in events define it as “the perception of the continuum of reality” (p. 9) and suggest that “[o]ntology of organisation is anchored in its temporality” (p. 9). These definitions imply that “time” could be used to refer to the objective view, as is the dominant use in the literature, while “temporality” could refer to the subjective view. However, the literature does not provide a clear account on this distinction. Therefore, this research uses the two terms, “time” and “temporality,” interchangeably and attaches the objective/subjective notion to differentiate between the constant and the ongoing temporality.

Table 2.1

Summary of Main Terms Used to Describe Different Views of Time

Dichotomies in the Concept of Time	Short Definition	References
Objective (<i>chronos</i>) vs subjective (<i>kairos</i>)	Linear component that can be measured quantitatively by specific units	Orlikowski and Yates, 2002; Biesenthal et al., 2015 ; Shen et al. 2015; Ciborra, 1999
	Socially constructed measured by the human activities and goals achieved	
Clock time vs process time	Allows the present to be isolated from its past and future	Reinecke and Ansari, 2017
	Identifies social events and views present, past and future as one single construct	
Periodic temporality vs ongoing temporality	Events are perceived as static and “discrete” from each other	Hernes, 2014
	Assumes an active role of the actors in the present and that the past and future are “dimensions” of it	

The rest of the section reviews the key dichotomies related to the concept of time and their characteristics, as discussed in the literature.

2.2.1.1 Objective vs subjective time

The dominant view of time presents it as a linear construct that can be measured; this is most widely referred to as objective time, or *chronos*. The other, less-researched, view is the subjective view of time, which is referred to as *kairos*, and which presents time as a

social construction (Biesenthal et al., 2015; Roe, 2008; Orlikowski and Yates, 2002; Ciborra, 1999). Orlikowski and Yates (2002) further explain the difference between the *chronos* and *kairos* views of time, saying that *chronos* refers to the time we can measure quantitatively by specific units, not by its purpose, while *kairos* is measured by the human activities and goals achieved. The objective view of time sees time as very linear, where past, present and future are separate and unrelated; this contrasts with the subjective view, where individuals link past, present and future and draw a comprehensive image from the three parts (Vesa and Franck, 2013; Dodd et al., 2013).

Moreover, the objective view of time is conceptualised as independent of the actors involved, or of any other influencers. Clocks and calendars are considered essential components and tools that are used in measuring time objectively. Hence, objective time can be referred to as “planned” and subjective time as “experienced” (Biesenthal et al., 2015). Ciborra (1999, p. 86) states that “[people] take for granted that time is a quantity which can be measured, allocated and cut in a controlled, structured and planned fashion.” Graham (1981) refers to this “linear-separable” (objective) view as the “European-American” or “Anglo” perception of time, where time can be divided into discrete units, and where these units then are assigned to specific tasks to be accomplished. In this perception, he suggests, people treat time as money and therefore use the same words to describe time as they use to describe money. So, they can “save,” “spend” and “waste” time according to the allocated tasks of each unit of time. In this view, past time is seen as something that has already happened and that cannot be repaired or revisited.

Additionally, Graham (1981) suggests that people holding this perception of time prefer to perform only one task at a time, according to the tasks allocated to each time unit; Onken (1999) refers to this as “polychronicity.” According to Onken (1999, p. 231), “Polychronicity is one of the temporal elements of an organisation’s culture [in which] members value organising activities by scheduling two or more events at one time.” This polychronous nature can be more profound in some cultures than in others. For example, Zerubavel (1981) explains, “Unlike many non-Western civilizations, where events and activities are temporally located in a relatively spontaneous manner, we tend to ‘schedule’ them; that is, routinely fix them at particular prearranged, and often standard, points in time” (p. 7). This aligns with Hall’s (1959) conclusion that polychronic culture is more predominant among Middle Easterners than among northern Europeans. Blount and Janicik (2001) consider this nature when discussing how culture (among other factors) affects the process by which people choose their temporal referents. As such, this objective (clock) time is valued more strongly in the North American and northern European nations while Latin American, Native American and southern European nations value event-based time.

While the objective view of time, as discussed above, seems to be more precise in that events have a clear and specified beginning and ending, the subjective view of time can be more flexible. The subjective view emphasises actors who socially construct time; in other words, subjective time needs actors in order to happen. Almost 20 years ago, Horning et al. (1999, p. 293) stressed the importance of considering this view of time in organisation studies by stating, “We cannot understand time by looking at it alone but rather by analysing the ways people are involved in everyday life.” Hence, they describe

time as a “social entity” that is formed by the organisational members in a collective social effort and engagement. Durkheim (1915) was one of the first sociologists who stressed the social *rhythms* element in how people collectively experience time. This is described as the intersubjective nature of time, where individuals share a similar sense of experiencing time due to their involvement in common events and activities; these can be similar to the events actors are involved in at the organisational level. Reinecke and Ansari (2017), therefore, explore time from this perspective as internal subjective rather than as external objective because they think the concept of time differs among different individuals, different organisations, and different cultures and societies.

2.2.1.2 Clock vs process time

Alongside organisation studies, process scholars in particular realised the absence of time and temporal theorising in their field (George and Jones, 2000). Langley et al. (2013), for example, in a special issue on process research in the *Academy of Management Journal*, pointed out the criticality of time and temporal theorising, and at the same time acknowledged its absence and clear exclusion. Process scholars started theorising temporality and the issue of time in organisations from a process perspective, where the mysteries of organisational continuity and change may be discovered. In support of this view, which is similar to Reinecke and Ansari’s (2017) view of time as process time (or event time), George and Jones (2000) propose that it is not possible to separate the past and future from the present using objective units due to their involvement in the present, which implies the existence of another type of time (i.e., subjective time). Earlier scholars supported this perspective as well; for example, Medlin (2004) suggested that present

time is actually shaped by the experience of past and future time, while Whipp (1994) criticised the dominant view of time as “clock time” because it fails to capture how different contexts perceive time. Moreover, Ciborra (1999) elaborated on the interplay of the two views of time by saying that “clock time, and our experience of it in the everyday life gets ‘temporalised’ by our Being-in-the-world” (p. 89), which Reinecke and Ansari (2017) call process time; they link it to *kairos*, which is event time. They refer to it as event time because this perspective focuses on identifying particular social events rather than meeting deadlines, which Lee and Liebenau (2000) define as the “temporal start and stop points, and can be external or internal to the task, or both” (p. 160).

2.2.1.3 Periodic vs ongoing temporality

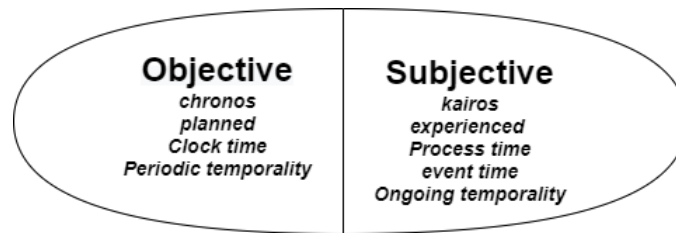
Contemporary process theory scholars have also shown interest in other dimensions of time and temporality and what is sometimes referred to as an event-based understanding of time. For example, Hernes (2014) introduces the notion of “ongoing temporality” to refer to this event-based time, which differs from what Schultz and Hernes (2013) call “periodic temporality,” which is when the “temporality is represented as periods of time where a state of affairs is assumed to remain relatively stable over that period of time” (p. 36). Periodic temporality is sometimes associated with “inert” temporality, where the events are perceived as static and “discrete” from each other. This is related to what Graham (1981) refers to as the “Anglo” perception of time, as discussed earlier, where time is divided into discrete units. However, Hernes (2014, p. 37) indicates that discrete events mean that the events can be related to each other, but they are not “constitutive.”

2.2.2 Bridging Different Time Views and Their Value for Organisations

It can be concluded from the previous review sections on time and temporality in organisation studies that there are two main dichotomies that remain nascent but that are gaining momentum. These two main dichotomies are represented in Figure 2.1.

Figure 2.1

Two Main Dichotomies of Time and Temporality and Related Terms



Heidegger (1982) acknowledges these two dichotomies, objective and subjective experiences of time, and suggests that these could coincide at some point. Therefore, it is essential to understand how time is paradoxically objective, external and fixed, while people can also experience it as subjective, internal and fluid (Reinecke and Ansari, 2017). Reinecke and Ansari (2017) emphasise that organisational processes happen in and over time, and hence, temporality represents a suitable lens to study these processes, such as organisational change, innovation and decision-making. The origins of this perspective come from an epistemology that views the organisation as an ongoing and becoming entity (Hussenot and Missonier, 2016; Tsoukas and Chia, 2002) instead of a stable entity. This perspective represents the dominant mindset that most process research scholars have (Tsoukas and Chia, 2002; Langley et al., 2013). The dynamic nature of

emergent processes that unfold over time does not need to be studied through a static epistemology. Therefore, temporality seems to be a suitable lens that is able to capture what occurs in between the static moments of change (Langley et al., 2013; Hernes, 2014). Langley et al. (2013) believe that most studies in the management literature tend to ignore time, and if considered, it is considered as an external independent variable. Process studies and research, as discussed above, are currently examining time in depth and treating it as an essential part of the studied processes, and not as the usual embedded element, in an attempt to address this gap. Hernes and Maitlis (2010) point out a challenging issue in process studies of temporality: choosing how exactly to capture time. The main options include tracing time back to the past or following it forward to the future (Langley and Tsoukas, 2010, p. 11); these do not have to be mutually exclusive, as both could be done at the same time. However, these process scholars believe that time cannot entirely be experienced subjectively because it is a social construct and would be intersubjective instead, which is in line with Horning et al.'s (1999) suggestions about the need to consider both views simultaneously.

To summarise the above sections, both objective and subjective time are important for organisations, holding both advantages and disadvantages. For example, objective time provides organisations with a common tool to plan, organise and operate collective action, as well as to control and motivate organisational actors (Clegg et al., 2006). In addition, entitative constructs are easier to handle and control than social ones, which is why managers tend to consider them more (Reinecke and Ansari, 2015). Objective time also is still an essential resource for organisations as a way to advance and compete with rivals through time-based efficiencies (Cunha, 2009).

Subjective time on the other hand, although currently under-theorised (Hernes and Maitlis, 2010; Pettigrew et al., 2001; Huy, 2001; George and Jones, 2000; Das, 1990) could enable scholars to better understand how organisational actors experience and make sense of time. However, the subjective view alone neglects the stability of time's effect on human actions (Orlikowski and Yates, 2002). Reinecke and Ansari (2015) believe that objective time has been examined extensively in the management literature, so it is time to shift the focus to subjective time. Yet, objective time cannot totally be ignored as Orlikowski and Yates (2002) suggest. Therefore, some scholars find it meaningful to examine how the two times actually develop and interplay together, especially given that the complexity of organisational processes requires deeper analysis than can be provided by simple, straightforward constructs.

This has encouraged scholars to find ways to tackle this dilemma of time and temporality dichotomies. For example, Hussenot and Missonier (2016) point out in their study of events that it is difficult for scholars to study empirically the flow of events in organisations (where they have identified temporality as embedded in the events) due to the dominated sequential view of events. To circumvent this difficulty, they propose their events-based framework. This framework is based on the reconfiguration of past and future during present events and the opening of these events to new interpretations, through going back and forth in reshaping the past and future with every current event. In this framework, Hussenot and Missonier (2016) combine both the stability and the novelty of organisations as two sides of the same event. They examine events in organisations with their interrelating events that can be either past or anticipated to illustrate the coexistence of the stability and the novelty of organisations. Furthermore,

the objective view of time neglects the human role in how time is experienced.

Orlikowski and Yates (2002) have tried to overcome this by providing an alternative way of looking at how time is understood, in addition to the classical dichotomy of objective and subjective time views discussed above, by using a practice lens. They suggest that time can be sensed in organisations using temporal structuring through daily practices of actors with their surrounding environment. They have presented temporal structuring with reflecting on previous empirical research through a practice lens to explain how temporal logics can be shared and enacted through the practices of the organisational members. Temporal structure, as they see it, is taking neither an objective nor a subjective view of time because it is thought of as being both independent and out of the actors' control as well as constructed by human behaviours. Hernes et al. (2013) also agree with this view of seeing temporality as part of humanity in that it affects, and is affected by, our daily actions, something Orlikowski and Yates (2002) suggest in their practice perspective of temporality.

2.2.3 Conclusion on Time and Temporality in Organisations and Summary of Research Gaps

Despite numerous research calls to take time seriously in organisational research (Ancona et al., 2001; Clark et al. , 1990; Das, 1990), few studies have focused primarily on the temporal aspect of change. One example is Wiebe's study of how managers use time to understand organisational change, which he calls "temporal sensemaking" (2010). In particular, our understanding of the role of time in organisational change remains underdeveloped. Although research has acknowledged that multiple (e.g., objective and

subjective) times are important in organisational processes, such as organisational change, decision-making and innovation (e.g., Wiebe, 2010; Tsoukas and Chia, 2002; Huy, 2001), research has focused on the objective/planned view of time and has neglected the role of the subjective/experienced view (Shen et al., 2015; Biesenthal et al., 2015; Orlikowski and Yates, 2002; Bluedorn and Denhardt, 1988). Das (1990) asserts that time as a social concept has been understudied in the organisational and management research, and even when it has been involved in the research, it has been assumed to be linear and objective only.

The contrast between these continuous calls and existing knowledge has been an important motivation for this research. The goal of this study is to find out how actors in organisations undergoing major organisational change perceive time and act upon this perception to make sense of the changes, and how this experience of time helps or hinders them from achieving their desired imposed goals of IT-mediated transformation. In particular, I argue that there is little knowledge in either the organisational studies or the IS literature about coexisting temporalities or temporal logics resulting from them, their interplay and organisational implications. Furthermore, as the following subsection illustrates, while there is an increasing number of studies about time and IT, little is known about the interplay between these temporalities in the context of IT-driven organisational change, creating gaps that need to be addressed.

2.3 Organising IT-Mediated Change through Time and Temporality

2.3.1 Organisational Change and Different Temporal Orientations and Choices

Different temporal assumptions have been discussed in the context of planned change (Huy, 2001), and this clearly states that time is one of the most important constructs of change, and one that can be seen in the definition of change itself. Yet, as has been emphasised by many researchers, time has been neglected and under-researched and is usually embedded in the management literature, instead of being studied as the main element and influencer in organisational change literature. One of the few studies that have focused primarily on the temporal aspect of change was conducted by Wiebe (2010). In this study, he acknowledges the shortcomings in the organisational change literature, although the whole idea of change is well connected to temporality. However, he focuses on the managers' individual sensemaking of change, rather than extending it to a collective sensemaking, suggesting that studying the interactions of individual sensemaking could contribute to a wider understanding.

Another consideration for different temporal orientation is the nature of projects itself within organisations, which might affect people's perception of time. For example, Bakker and Janowicz-Panjaitan (2009) found that people in temporary organisations (for example, projects) tend to be present-oriented. Graham (1981) refers to this present-oriented conception of time as "circular-traditional" (p. 336), which views time as a circular system in which events occur and are repeated in a cyclical pattern. Hence, tasks are not necessarily associated with clock time. This perception of time, according to the author, does not place a significant emphasis on the future; rather, it focuses on the present. Such orientation, therefore, could increase the level of innovation for the current

or present project, but does not hold this innovation and knowledge for future purposes (Bakker and Janowicz-Panjaitan, 2009) and might have a negative impact on knowledge sharing and management for organisations (Bakker et al., 2013).

Additionally, temporal orientations could be of greater influence in some fields than in others. Reinecke and Ansari (2017) think that in the strategy and innovation fields especially, clock time is not always the most suitable option. For example, an innovation that is not adapted at some point of time could be widely and aggressively accepted at another time, which is then considered the “right” time. In this regard, Graham (1981) talks about what he calls “the procedural-traditional” perception of time or “American Indian time.” This perception does not really emphasise time itself but focuses more on performing actions when the “time is right,” which depends on the event itself rather than the time (p. 337). Indeed, cultural differences among different societies and subsequently different organisations have an effect on the temporal orientation choice. Wiebe (2010), for example, approaches organisational change from a western temporal perception, where different values might affect how time is perceived and experienced.

Additionally, one of the assumptions about time that Huy (2001) makes is an individual’s time perspective. It is suggested that people’s current actions are affected by the future, especially when they know that their current actions can affect the results of that future. The choice of action for people depends on whether they have a short-term perspective (which refers to the present) or a long-term perspective (which refers to the future). Another temporal assumption made is the conception of time, that is, time being quantitative versus time being qualitative. As other scholars have similarly claimed, quantitative time refers to clock time and is subject to unitary interpretations, while

qualitative time refers to the event trajectories and is subject to multiple interpretations (Huy, 2001).

2.3.2 Organisational Change and IT

Over the years, organisations have been concerned with accomplishing successful implementation of change programs designed to increase their efficiency. In doing so, they have tried to utilise all possible resources, including IT, which has always been regarded as an enabler of change. Many scholars agree that IT plays an important role in achieving the objectives of organisational change (Turner, 1998; Hammer, 1990; Earl, 1989; Drucker, 1988).

2.3.2.1 Digitisation, digitalisation, digital transformation, and IT organisational change

Digitisation, digitalisation, digital transformation, and IT organisational change are all related terms that are often used interchangeably in the management and IS literature when discussing organisational changes related to or empowered by the use of IT (Alenezi, 2021; Bloomberg, 2018; Gobble, 2018). However, they do not precisely mean the same thing. While digitisation constitutes the first step with transforming the paper forms and documents into electronic files that can be saved and retrieved in computers, digitalisation takes this further to add more value by allowing the manipulation of these files through making them available in online forms for example (Gobble, 2018).

Although both digitisation and digitalisation can be considered as helpful steps that aims at increasing efficiency and reducing human involvement and errors, these steps are still not enough to achieve the true purpose of utilising IT in business. This purpose that lies

in transforming the way business is conducted or in other words, in changing the business model and delivering value is what the digital transformation all about. Therefore, it can be said that digital transformation has a more disruptive and holistic feature over the other steps that leads to it. IT organisational change on another note is just one type of the many types of organisational change that involve utilisation of IT in any form. IT organisational change often involve changes in the organisation's structure, strategy, culture, and so on. However, these different organisational changes are intertwined and can lead to each other (Greenan, 2003). In summary, for the purpose of this research and the scope of the case study used here, the digital transformation is the IT organisational change referred to, that goes beyond digitisation and digitalisation simple initiatives to a more multidisciplinary process (Kääriäinen et al., 2020) of various structural, strategic, and technological changes (Alenezi, 2021; Rodríguez-Abitia & Bribiesca-Correa, 2021).

Organisations undergoing digital transformations, in particular, need to dramatically alter their processes and practices. Such change processes have attracted the attention of management and organisation scholars, who are particularly interested in studying their success and failure factors. Dhurkari (2017) finds it traditional for scholars studying change processes to include IT as a major concern in the process. Leonardi (2007) also argues that the informational capabilities of IT are necessary for organisational change to take place. The nature of these change programs is that they usually have a bounded timeframe, and thus, time has been considered in studying these programs. Organisational actors' different perceptions, logics and values have been another central issue that affects the organisational digital agenda (Flak and Rose, 2005). For a successful alteration of an organisation's processes and practices, organisational

actors need to not only acquire new skills but also to change the pace and *rhythm* of their work as well as their organising logics, (i.e., their social and historical practices, driving rules and assumptions, and organising time and space differently) (Thornton and Ocasio, 1999). Understanding organisational digital transformations thus implies a necessity to focus on human agency in order to understand how change is carried out by actors who are moving from one driving logic and temporality to another. However, a hidden piece of time has been overlooked and has only received attention in recent years.

Extant research on IT organisational change in the public sector has largely focused on the non-human factors that hinder the transition of the organisation, such as inconsistent maturity levels of ICT between different public organisations and the lack of required integration between them (Alghamdi et al., 2014). Despite the ever-growing number of studies on IT-mediated organisational change, studies have only recently started exploring how time and IT-related processes and practices might relate to and influence each other (Shen et al., 2015). This is the case, even though Garvin (1998, p. 40) argued that change processes are “intertemporal” twenty years ago. Change processes, in particular, are unique compared to other processes in that they are dynamic rather than static. However, as Garvin (1998) states, “Change processes answer the question: How did x get from here to there?” (p. 41). This implies that research captures change in a retrospective manner only and focuses on change as a past event that has occurred and ended, rather than as an ongoing approach. Such a retrospective approach embraces the dominant traditional view of past events as dead ones that cannot be revisited.

Organisations undergoing digital transformation are in a problematic situation as a result of the existence of different temporalities (Cunha, 2004). This situation occurs when the actions these organisations take in everyday work life are associated with and depend on linear time (objective) while planning for those activities tends to revisit and review the past (subjective). As summarised by Cunha (2004, p. 288), “Time is seen as linear and cyclic, with both past and future allocated to the present.” This is, therefore, why the discussion needs to be in an intersection between IT-mediated organisational change and time and temporality in organisations. This is discussed in the next section.

2.3.3 IT and Time in Organisation Studies

Within IS research, the relationship between time and IT has been considered primarily in the context of IT-mediated teams (Shen et al., 2015; Massey et al., 2003). For example, there is a long history of research on the role of IT in facilitating distributed work (Cummings et al., 2009) and in restructuring the temporal and spatial boundaries in teams’ decision-making processes (Dennis et al., 2010). In addition, IT objects (e.g., mobile phones) can allow time to be stretched and offer a double or even triple life for time by allowing actors to perform multiple actions at the same time (Andersen et al., 2020; Whittington, 2015). This means that IT objects use the same objective time, hence redefining the social conception of time altogether (Fortunati, 2002). However, it should not be taken for granted that IT is used only to extend time because “technologies do both: they constrain, and they enable, they irritate and provoke new time practices” (Horning et al., 1999, p. 305). Within the IS field, research on time has been somewhat ignorant in focusing only on established or dominant time dimensions, such as linear,

abstract and quantitative variable (e.g., clock) views of time (Boland et al. 2004; Shen et al. 2015).

Further, IS research has focused on how technology is bridging the problems of temporal distance (Dennis et al., 2008; Cummings et al., 2009; Espinosa et al., 2015) and hence can play a significant role in altering the temporal and socio-spatial boundaries faced by individuals within the organisation. In Dennis et al. (2010), for example, team members adopted instant messaging (IM) technology that was not purposely designed for decision-making in a collective manner, which made this usage a norm among the members. Although the same conversation using IM could have taken place before or after the meeting, the use of IM during the meeting in particular altered individual behaviour and hence had an impact on the decision-making process. This example provides evidence of the potential role IT could play in altering the temporal boundaries faced by teams. Traditionally, these boundaries, in traditional meetings for example, lengthen the decision-making process due to necessary phases, such as gathering relevant information, sharing said information with members, discussing the information, and then reaching a collective decision. However, Dennis et al. (2010) illustrate how the use of IM enabled members to perform these phases simultaneously.

It has, therefore, been argued that IT can shape actors' perception and behaviour associated with time (Ivaturi and Chua, 2016), and that it has a potentially dramatic impact on time-related organisational phenomena, including team work and coordination (Shen et al. 2015); decision-making and entrainment (Dennis et al., 2010; O'Riordan et al., 2013); the design and synchronisation of organisational routines and practices; the design and use of work activities; and organisational communication (Ivaturi and Chua,

2016; Massey et al. 2003; Pavlou and ElSawy, 2006). However, scant research has been conducted on the subjective view of time and the coexistence and interplay between the two views of time.

2.3.4 IT and Temporality

As discussed earlier, research in the field of IS has focused much attention on how technology is bridging the problems of temporal distance (Dennis et al., 2008; Cummings et al., 2009; Espinosa et al., 2015), providing us with vast knowledge on objective time and how IT objects relate to it. Yet, when it comes to the subjective view of the coexistence and the interplay between the two views of time, research remains nascent (Orlikowski and Yates, 2002; Saunders and Kim, 2007). Therefore, digital technologies and digitalisation are essential factors that need to be considered when examining the role of time within the phenomenon of large-scale organisational change.

When discussing IT and its relation to time in the IS literature, there has been a tendency to mainly associate IT with speeding up business processes (Sarker and Sahay, 2004; Lee and Liebenau, 2000; Lee, 1999). However, there is a clear paucity of research on the relationship between IT and time that goes beyond speeding up the processes. Fortunati (2002) points out that the simple “abstract, uniform and unitary time of the clock” (p. 517) is no longer satisfactory on the social level, allowing researchers to include the subjectivity of the time experience using different IT artefacts. Given this, Sahay (1997) reveals that after having been dominated by the positivistic paradigm for decades, in the late 1990s the IS field witnessed the acceptance of the interpretivism paradigm as a shift in IT research in organisations. Such acceptance, he argues, should

enable a better investigation of the role of time in defining the social context and shaping the interpretations of IT in organisations.

The interpretive approach allows for an examination of the subjective meaning that actors attach to IT. A vital consideration in this approach is that there is no single cause for a particular result. Rather, it is the interplay between IT artefacts and the human agency dealing with them (Markus and Robey, 1988). Sahay (1997) indicates that interpretive research projects aim particularly to study the subjectivity of different problems. When actors interact with IT within a specific organisational context, they attach a particular shared meaning to the technology away from technology's technical properties (Walsham, 1993; Orlikowski and Gash, 1994; Robey and Azevedo, 1994). Butler (1995) tried to develop a model of organisational time based upon the socially constructed notion of a "timeframe." However, Sahay (1997) thinks that he failed because he still viewed time as unproblematic and a measurable concept only. This view hinders a deeper and more complex analysis relating to the social construction of time. However, Lee and Liebenau (2000) criticise Sahay (1997, 1998) for lightly touching on the relationship between IT and time without asking how IT *affects* time.

However, since that time, progress has been made in the IT field in the examination of the relationship between IT and time. Fortunati (2002), for example, argued that IT objects (mobile phones) can stretch time and offer a double or even triple life for those who utilise these objects by allowing them to perform multiple actions using the same objective time and hence redefine the social conception of time. Massey et al. (2003) also provided an empirical example of how teams used IT to bridge temporal and spatial boundaries in communicating with team members in other countries. Bridging the

temporal and spatial boundaries moved beyond team members to be between the individual's own work and personal life, as examined by Pauleen et al. (2015). Ivaturi and Chua (2016) also emphasise the significant role IT plays in altering the perception of time for those who deal with and use IT in their daily lives. Such redefinition and alteration of perception are changing the framework in which society operates today and play an important role in the digital transformation of time and space.

However, the link between the coexisting temporalities and IT in the context of organisational change is still ambiguous. Horning et al. (1999) say, "Time, as we know it, does not exist as such. It must be continuously made in the production and reproduction of society, of which technology is a part" (p. 305). As in organisational studies, it is noticeable that IS research favours the objective view of time. Shen et al. (2015) state that the IS research in most cases neglects the subjective experience of time although the time experience varies from one team to another in the context of IT-mediated teams, for example. This oversimplification in dealing with the different temporalities that could exist within IT-mediated teams makes it difficult to assess the real implications and complexities of having coexisting temporalities functioning at the same time.

Dennis et al. (2008) point out that simply having IT capability available is not a guarantee that it will be utilised in the way intended. This could be mainly because people differ in their perception of time and of how to use their time (Graham, 1981). For example, some people favour polychronic work where they multitask and do many things at the same time, whereas others favour monochronic work (Lee, 1999). Hall (1966) describes monochronicity as performing tasks in a serial way, one task after another, whereas polychronicity can be described as performing the tasks in a

simultaneous way. The example mentioned earlier from Dennis et al. (2010) on the use of instant messaging (IM) in the decision-making process is clear evidence of such different possible usages of IT according to various groups of people. Orlikowski (1992) also states that technology in organisations is challenging because, in many cases, it is not developed and used by the same agents; it could be designed by one organisation, built by another and used in practice by a third.

In addition to polychronic and monochronic views of time (Lee, 1999; Hall, 1966), Ivaturi and Chua (2016) suggest a new dimension of time that is generated through the use of mobile and social media, which they call “mobichronic” time. They acknowledge that most of the research on IT and time has focused primarily on how technology bridges temporal distance. Examples of IT that are used to bridge this distance discussed in the literature can be divided mainly into either synchronous or asynchronous technologies. Dennis et al. (2008) explain how high-synchronicity technology, such as teleconferencing and videoconferencing, helps in bridging temporal distance, while others (e.g., Cummings et al., 2009; Espinosa et al., 2015; Massey et al., 2003) focus on asynchronous technologies, such as email. However, some new technologies cannot be thought of as fully asynchronous or fully synchronous. IM can be considered as an example of these due to the higher capabilities and speed of the internet. Ivaturi and Chua (2016), therefore, assert that the relationship between IT and time needs to be re-examined in light of these new IT artefacts due to their ability to change the perceptions and behaviours of people regarding the experience of time.

2.3.5 Conclusion on Research Overview of Technology Related to Organisational Change, Time and Temporality

Based on the purpose of this research – to obtain a better picture of how organisations change when undergoing digital transformation and operating according to multiple institutional logics and temporalities – this chapter has provided a general overview of how IT relates to organisational change and to different temporalities and time orientations. Through discussion of the literature, this chapter has shown that IT has always influenced the organisational change process and has always been associated with this process. It has also shown the missing link between the subjective view of time and IT, and has outlined the long association between objective time and IT, as seen through the IS literature. Based on the above review, it is essential to next review the literature on institutional logics in order to understand the organising logics that could enable the interplay of different temporalities and the impact of this interplay during and throughout the complex realities of IT-driven organisational change.

2.4 Institutional Logics

Based on the objectives of this research, which include describing the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality, it is essential to understand the roots of this institutional complexity. This chapter provides an overview of how multiple logics, combined with different temporalities, can lead to such organisational states. The review of institutional logics is also essential to understand the types of conflicts that can arise from the coexistence of these different logics according to different temporalities and to understand the

underlying processes used to organise and orchestrate the transition from one temporality to another and from one logic to another in a situation of ambitemporality and institutional complexity in public organisations undergoing digital transformation.

2.4.1 Institutional Logics and Temporality

As discussed earlier, time and temporality in organisation literature is still a debated topic. In most cases, it has either been completely ignored or only implicitly mentioned in studies (Dawson and Sykes, 2016). This research utilises the concept of institutional logics to establish a discussion of the possible connection between temporalities and different logics within an organisation. Hernes (2014) notes that time and temporality within organisations is a rich field that deserves a devoted conceptual and theoretical consideration. Dawson and Skyes (2016) point to the profound gap caused by institutionalising time in organisations as objective and taken for granted, while organisational actors experience subjective notions of time and affect their sensemaking more specifically in organisational change settings.

The use of the concept of institutional logics to explore this area might pose some challenges. For example, some scholars might suggest that organisations are not the same as institutions, and hence, using institutional logics might not be a suitable lens through which to view them. To address this issue, it is essential to illustrate how organisations can actually be regarded as institutions; this might explain why “institution” and “organisation” are two words that are notably dealt with interchangeably, either implicitly or explicitly in the literature. North (1990, p. 4) refers to institutions as “any form of constraint that humans devise to shape human interaction.” Later (2004, p. 361), North

states that “Organisations are made up of groups of individuals bound together by some common purpose to achieve certain objectives.” Harries (2012) supports the importance of these constraints that bound the concept of institution by setting three elements that must be present before something can be called an institution. These are (i) formal and explicit rules; (ii) informal values; and (iii) sanctions that can enforce the rules. Hodgson (2006, p. 2) reinforces this view of institutions as a bundle of rules in his definition of institutions as “systems of established and prevalent social rules that structure social interactions.”

Greenwood et al. (2014), in their rethinking of the intertwined association between institutions and organisations, conclude that organisation and management scholars have heavily used institutions and other institution-related processes and concepts at the field level. Instead, a more helpful use of these concepts would be to investigate how and why organisations act in a certain way under different circumstances, or while certain phenomena are taking place. Friedland and Alford (1991, p. 244) agree; in their seminal work on institutional logics they assert the strong association for studying organisations through the institutional lens:

The approach seems to assume that formal attributes of organisational fields can be specified independently of the institutional arena in which they are located. It is the content of an institutional order that shapes the processes by which organisations are able to conform or deviate from established patterns.

There are various definitions of “institutional logics” in the literature. This research borrows Thornton and Ocasio’s widely used definition as “the socially constructed, historical pattern of material practices, assumptions, values, beliefs, and rules by which

individuals produce and reproduce their material subsistence, organise time and space, and provide meaning to their social reality... [They] are both material and symbolic” (1999, p. 804). Scott’s definition (2001, p. 139) sees institutional logics as “the belief systems and related practices that predominate in an organisational field.” This is also relevant to this research and to the discussion of the link between institutional level and organisational level. Building on this view of institutional logics, some scholars have positioned organisational logics as a meso-level construct that “is related to but is also conceptually and empirically distinct from a higher-order institutional logic” (Spicer and Sewell, 2010, p. 914). In reference to the distinctive nature of this meso level, Hinings (2012, p. 99) points out that “at the organisational-level, multiple logics may operate as subcultures.”

Building on the above debate, it could be valuable for organisation and management research to migrate some existing significant and well-established concepts, such as institutional logics, from institutional higher order to organisational level. Hinings (2012) notices that although most studies focus on the shift from one logic to another, there is a clear recognition that different institutional logics do coexist (e.g., Lounsbury, 2007; Zilber, 2008; and Reay and Hinings, 2009). At the current stage, it can be noticed that temporality is embedded within the phenomenon of organisational logics; it has never been the focus of research and has been either neglected or only implicitly mentioned. Therefore, it might be time to devote some effort to understanding the implications of this phenomenon on organisations and their actors as they deal with a flux of logics. In doing so, this research adopts the concept of institutional logics as a suitable practical lens (Cloutier and Langley, 2013) and expands it so that it is still derived from

the higher-order institutional level but is also used to study temporalities within an organisation.

2.4.2 Logics in Different Organisational Contexts and Sectors

As seen in the current literature on temporalities in organisations, it can be noticed that both temporalities and institutional logics share the characteristic of multiplicity and coexistence within the organisation. This suggests that there could be a link between the two, and that studying this link would be beneficial in studying organisational change in particular. Hence, this investigation assumes this link as a starting point in exploring how different temporalities coexist and interplay in contexts of organisational change. This is especially important given that in today's world, governments and public organisations have shown increased interest in learning lessons from the private and corporate sector and in embracing some of this sector's practices. The United Nations Economic Commission for Europe (2017), for example, published a report about innovation in the public sector, in which they emphasise the significant role public sector organisations play in today's digital economy "despite the common belief that the public sector is not amenable to innovation" (p. 6). The report elaborates on the fact that innovation programs all over the world are being implemented or are related in some way to the advancement in IT, and are contributing to the digital economy. Additionally, the report calls attention to the value, influence and involvement that can be added through collaboration between the public and private sectors in this field.

This desired collaboration and rapprochement can be seen in some approaches that have gained momentum in the last two decades, such as public-private partnerships

(PPP) (Hodge and Greve, 2007) and new public management (NPM) (Thomann et al., 2016; Hood, 1991). The emergence of such concepts provides an indication that the public sector has been striving to imitate the best practices of the private sector. A rich example is the field of strategy including strategic concepts, tools and models that first evolved and matured in the private sector before being transferred to the public sector despite the fundamental differences between the two sectors; this constitutes an implicit recognition of the differences (Alford and Greve, 2017). Being cognisant of the distinctive nature of the sector is essential in order to properly understand “the way a particular social world works” (Thornton and Ocasio 2008, p. 101) or, in other words, to understand the institutional logics the organisation follows. The differences between the public and private sectors are looked at from various levels, including the organisational, managerial and employee level. One example is the issue of greater red tape, which appears more often in the public and government sector compared to the private sector (Baldwin, 1990; Bozeman et al., 1992). Another issue concerns employees’ motives to achieve and fulfil their tasks. Van Der Wal et al. (2008) suggest that certain pattern of values are seen to be appreciated more in one sector than the other. For example, they imply that private sector employees can be driven more by financial incentives, while public sector employees are concerned more with impartiality.

Consequently, striving to import some private sector best practices into the public sector has created a hybrid atmosphere; the combination of hybrid institutional logics may or may not be in conflict and thus may shape the ways in which the organisation acts and reacts. Drawing on the discussion above in regard to the different nature of the two sectors, it can be assumed that public or government organisations usually follow “state”

logic, while the private sector usually adhere to “market” logic. Both belong to the seven ideal types of institutional orders as suggested by Thornton et al. (2012), namely: family, religion, state, market, profession, corporation and community.

The degree to which logics conflict differs based on each logic’s source of legitimacy (Besharov and Smith, 2014). The legitimacy of state logic, for example, is derived from the concepts of democratic participation (McMullin and Skelcher, 2018) and equity, which are usually enacted in bureaucratic ways (Thomann et al., 2016). On the other hand, the legitimacy of market logic is derived from competing in the market in order to sell more products and services and retain more customers in an efficient and effective way; the ultimate goal is to maximize market share, which and eventually leads to greater profit (McMullin and Skelcher, 2018; Thomann et al., 2016; Besharov and Smith, 2013; Thornton et al., 2012).

In this research, the focus is on the interaction between change agents and employees because each of them represents a different logic. The study attempts to understand how these two categories of actors perform their day-to-day work when the competition between the two logics is expected to last for a lengthy period of time due to the nature of long-term governmental reforms.

One way to examine the existence of two different logics within the same organisation is seen in Besharov and Smith’s (2014) framework, which identifies the types of logic multiplicity within organisations. In this framework, Besharov and Smith identify four ideal types based on the degree of centrality and the degree of compatibility between the logics. The framework is shown in Figure 2.2.

Figure 2.2

Logics Multiplicity Framework (Reproduced from Besharov and Smith, 2014, p. 16)

Degree of centrality	High Multiple logics are core to organisational functioning	Contested <i>Extensive conflict</i>	Aligned <i>Minimal conflict</i>
	Low One logic is core to organisational functioning and other logics are peripheral	Estranged <i>Moderate conflict</i>	Dominant <i>No conflict</i>
		Low Logics provide contradictory prescriptions for action	High Logics provide compatible prescriptions for action
		Degree of compatibility	

An overall understanding of the two logics, including what each of them represents and the key sources of their legitimacy, is essential for this investigation because institutional logics are the lens through which organisation actors shape their meanings of the worlds around them, as well as their practices and behaviours (McMullin and Skelcher, 2018; Marquis et al., 2011). Furthermore, understanding the logics and their underlying drivers is especially significant when logics conflict occurs. This happens when the actors are in situations where they have to draw on two logics that are incompatible in terms of their drivers or core values (Thomann et al., 2016). Skelcher and Smith (2015, p. 441) suggest, “Tensions between logics are apparent in the public sector, for example in public–private partnerships.”

2.4.3 Conclusion on Research Overview of Institutional Logics and Their Relations to Time and Temporality

I will now move on to the case to examine how these two logics exist, whether or not actors have been in situations experiencing conflict in logics, and the implications of these two logics on the sensemaking of the actors in these situations. In principle, it is now known from the literature that conflicts and tensions are highly anticipated in organisations where change is on the agenda (Thornton et al., 2005), and that institutional logics are essential in shaping actions and reactions (Greenwood et al., 2011).

2.5 Conclusion

This chapter has provided a general overview of the key areas that informed this research: time and temporality in organisations; IT-mediated organisational change; and institutional logics. The main aim of this research was to develop an understanding of how organisations change when undergoing digital transformation and operating according to multiple institutional logics and temporalities. Further aims were to capture the conflicts that might arise in such periods of transition and to assess the interplay between different logics and different temporalities and their organising processes.

As such, it was important to review the literature related to these three areas, starting with reviewing how time and temporality have been treated in previous literature. Through this review, it has become evident that there are substantial gaps in understanding the implications of time and temporality in organisations. It is evident in the literature that even a clear distinction between the two terms is still missing. The

second part of the literature review focused on the IT literature and its relation to time in organisations. This is because the form of change taking place in organisations is largely a digital transformation that claims to be rooted in and dependent on technology.

However, since time and temporality are tricky concepts that cannot be captured alone, it was important to examine them through some kind of lens. This led to a review of the literature on institutional logics, as this was considered the most appropriate lens for this research. This is because the organisation under investigation is going through a transformation characterised by situations of institutional complexity situation (i.e., multiple logics).

However, it is still unclear how organisations are transitioning from one logic to another. Therefore, this general overview of the three areas enabled me to conduct this inductive research to explore the role and implications of different temporalities in a specific organisation, its relation to institutional logics, and the role of IT in smoothing or perhaps hindering this process of transition from one logic to another and from one temporality to another.

Chapter 3: Contextual Background: The Transformation Program of Governmental Public Organisations in Saudi Arabia

3.1 Overview

This study is based on GovOrg organisation (a pseudonym), a public organisation owned and run by the government of Saudi Arabia. This organisation is a typical bureaucratic public organisation¹ in the Middle Eastern country of Saudi Arabia, employing around 10,000 employees spread over 13 regions in the country, with the organisation's headquarters in the capital city of Riyadh. It has existed for more than 60 years now (since 1960). Its main decisions are made, and its procedures and policies are established in the Riyadh headquarters, and these are followed and implemented by the branches in the 13 regions as per official circulars.

The case organisation was selected based on purposeful sampling strategies (Patton, 2002). In looking for a suitable case to carry out this research, several predetermined criteria were considered. The case organisation had to be part of a bigger comprehensive country-wide reforms program; the transformation of the organisation had to be an ICT-driven process, i.e., the organisation had to be undergoing a digital transformation process; and finally, it was essential for this study to secure a gatekeeper who believed in the importance and usefulness of this study and its outcomes for the organisation.

¹ "Public sector consists of governments and all publicly controlled or publicly funded agencies, enterprises, and other entities that deliver public programs, goods, or services." (The Institute of Internal Auditors, 2011)

3.2 Introduction to the Change Context of the Public Sector in Saudi Arabia

The context of digital transformation of a public organisation in Saudi Arabia is particularly well-suited for understanding digitally enabled organisational change that builds on shifts in the driving logics and temporalities. The public sector as a specific context for change has been underexplored in research. Recently, a number of scholars have acknowledged this shortcoming and ignorance of the public sector in ICT research, since most studies focus on the private sector (Plesner et al., 2018; Pick et al., 2015; Bejerot and Hasselbladh, 2013) and have called for an examination of the implications of digital transformation on daily work life for public sector employees and their response to the change. In addition, these kinds of transformation projects in the public sector tend to be part of a bigger comprehensive reforms agenda (Ejersbo and Greve, 2017). In this regard, Plesner et al. (2018, p. 1180) precisely state that digital transformation in the public sector “is not just a question of implementing new digital technologies, but implies political ideas, ambitions and interventions aimed at fundamentally rethinking and reshaping the organisations.” This fits perfectly with what was found in our case, where the digital transformation process is not a simple organisation-owned initiative but part of a bigger program that aims at reorganising the public sector under the umbrella of Vision 2030. Moreover, Lee et al., 2019 state, “Though the two sectors are operated by different logics with respect to goals and objectives they share the access to similar infrastructures and the same capabilities of advanced information technologies (IT)” (p. 370). Thus, this context of digital transformation provided an opportunity to study the institutional complexity of the organisation confronting incompatible prescriptions from multiple institutional logics. This complex situation and combination of multiple institutional

logics challenge the bureaucratic government culture that has prevailed in the organisation for so long. Al-Shehry (2009) claims that any ICT-based projects in this specific culture include challenges related to the behaviour of government employees. Middle Eastern countries like Saudi Arabia are characterised as traditional and conservative societies (Al-Turki and Tang, 1998), which has implications for the ways in which people in work environments behave and adhere to established norms and routines (Hofstede, 1997).

The story of transformation in this organisation officially began in April 2016 as part of a bigger and more comprehensive reform agenda named Vision 2030, which was imposed on all government and public organisations. It all started when the whole nation was waiting for a TV interview with the Crown Prince that was scheduled to take place; some important news about a “transformation” was announced, without any further details. From that day on, the country would be labelled informally as the “new” Saudi, and any changes taking place in public organisations would be linked to that transformation agenda (Al-Ruithe et al., 2017). The disclosed motivation of this transformation agenda was to reduce the country’s dependence on oil through economic diversification, to promote a vibrant society, to develop the public service sectors, and to transform the economy to a more diversified knowledge-based and IT-intensive economy (Saudi Vision 2030 Policy Document, 2016). This contextual section introduces some data that provides the background of the case and its relevance to this research. Data used in this chapter helps to conceptualise the case and the aims of the digital transformation initiative. According to this policy document (2016, p. 42):

Diversifying our economy is vital for its sustainability. Although oil and gas are essential pillars of our economy, we have begun expanding our investments into additional sectors. We understand that there are complicated challenges ahead but we have long-term plans to overcome them.

This official announcement was synchronised with the publication of official documents that support the plan and provide more details by, for example, outlining the main public organisations essential in changing the future of the country. The supporting documents also provide a list of organisational initiatives that contribute to the Vision Realization Programs (VRPs) that were developed by external entities to deliver the strategic objectives specified in the documents and are known for the organisations. Vision 2030 is the bigger umbrella that announced a new era. Under that umbrella come several Vision Realization Programs that need to be functional to achieve the Vision, and under each program, each organisation has its own plans and initiatives that aim at fulfilling the objectives of that program (see Figure 3.1 for details).

Figure 3.1

Structure of Relationship between the Vision and Organisational Plans



For the purpose of this research, the focus is on one of the Vision Realization Programs, specifically, the National Transformation Program (NTP). The NTP focuses on changing the work environment and practices of old school government organisations into more vibrant versions.

The NTP was developed to help fulfil Saudi Arabia's Vision 2030 and to identify the challenges faced by government bodies in the economic and development sectors. The program establishes strategic objectives that are based on the Vision and addresses its challenges through 2020 in accordance with specific targets. The program identifies each year the initiatives necessary to achieve such goals and devises detailed plans on the basis of interim indicators that measure and monitor performance. In its first year, the program was launched across 24 government bodies, and there are plans to expand its coverage annually. As explained in the policy document (2016):

The National Transformation Program aims to develop the necessary infrastructure and create an environment that enables the public, private and non-profit sectors to achieve the Kingdom's Vision 2030. This will be accomplished by achieving governmental operational excellence, supporting digital transformation, enabling the private sector, developing economic partnerships, and promoting social development, in addition to ensuring the sustainability of vital resources.

The documents list all government organisations to which the NTP has been applied; a total of 24 organisations participated in the program's first year, with plans to expand to more organisations annually. The organisation's participation was prioritised and allocated to different stages throughout the program. Subsequently, organisations that

were considered extremely essential to boost change at the beginning of the transformation were listed in the first stages. There were many reasons behind this prioritisation, including the size of the organisation, its contribution to the economy, its urgent need for reform, and its significance and influence on services provided by other public organisations. An example of what initiatives for a participating organisation looks like in the Vision 2030 official documents is provided in Table 3.1. These are just examples and do not reflect the complete or final numbers.

Table 3.1

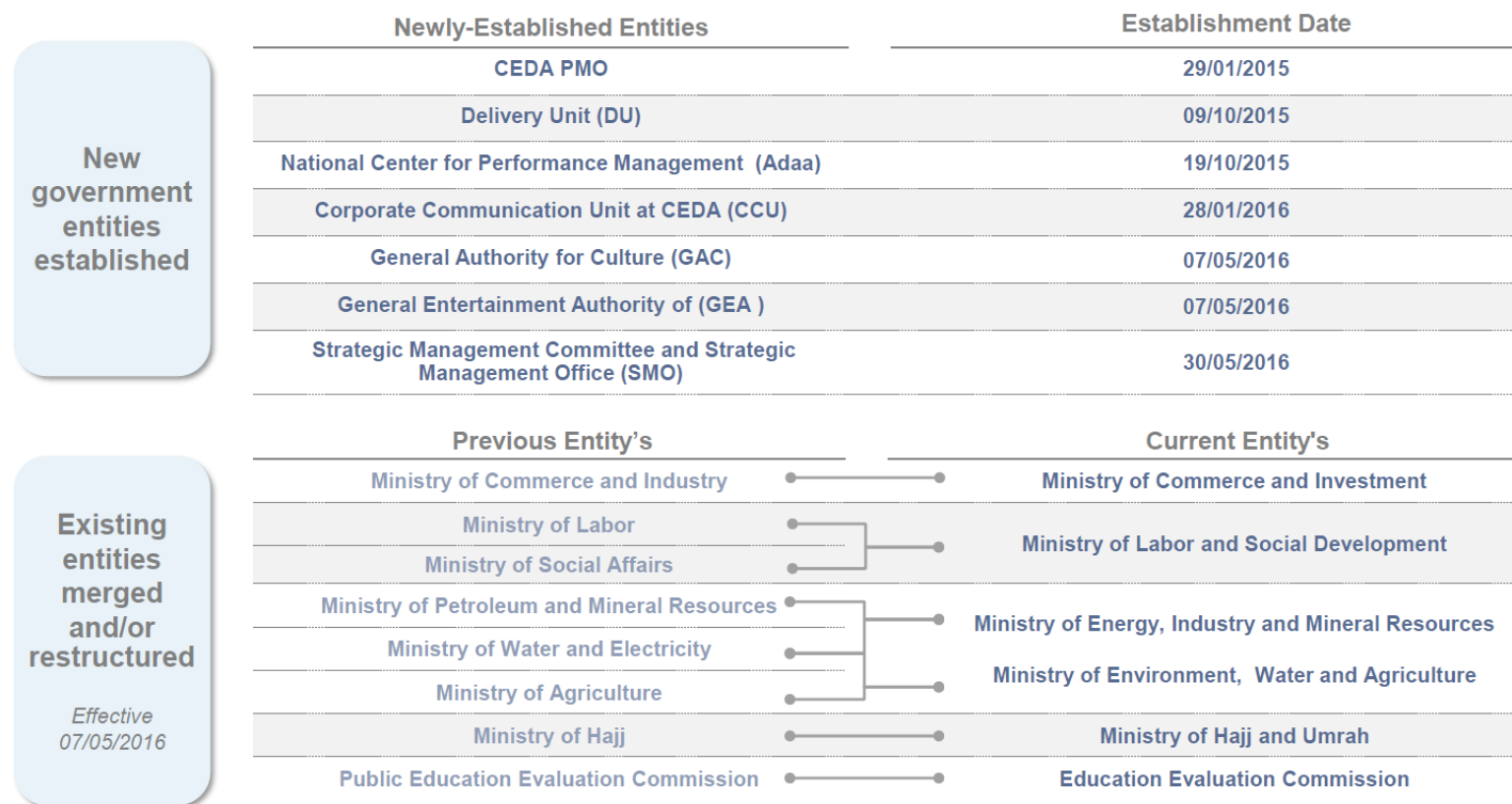
Initiatives of One Public Organisation as Shown in Official Documents

		Numbers in Thousands
No.	Initiatives	The total cost of initiative for five fiscal years from 1437/1438 to 1441/1442, which will be borne by the government (numbers does not include the contribution of the private sector in the initiative costs)
Ministry of Education		24,365,842
1	The comprehensive framework for continuing professional development for teachers and educational leaders	2,000,000
2	Shifting to digital education to support student and teacher progress	1,600,000
3	Community clubs' entertainment and educational programs	2,017,632
4	Improving the safety and security in school buildings	1,555,900
5	Reducing the administrative burdens of teachers and education leaders to ensure that they focus on the educational process and to improve the quality of support services.	750,000
6	Encourage private sector to invest in public education in KSA (including KG)	11,030
7	Establish a Transformation Office at the Ministry level to support the National Transformation program	170,000
8	Apply the Ministry of Education's new operating model	180,000
9	Develop a national strategy to upgrade the teaching profession by raising the professional level of teachers, improving the profession's ecosystem and raising the quality of services provided to teachers	500,000
10	Improve the quality of primary education	250,000
11	Development of nurseries and kindergarten programs and the expansion of their services to cover all KSA regions	2,246,878
12	Improve international study scholarship program and improve its efficiency	48,000
13	Develop core life and employability skills and integrate it with curricula and extra-curricular activities	959,000
14	Establish King Salman University for Technical & Vocational Education	2,900,000
15	Develop student-centric education model	1,028,400

Although the Vision and the reforms associated with it were announced in April 2016, it was not a surprise for the organisation's top management team, as they had participated in articulating the strategic objectives for the organisation through engaging in intensive workshops months ahead of the official announcement of the Vision. The main aim of these workshops was to evaluate the organisation's capabilities and current performance to help in setting their strategic goals. As a result of these preliminary workshops, new organisations were established, and some existing organisations were merged or restructured (see Figure 3.2 for some examples).

Figure 3.2

Examples of External Reorganising of Public Organisations Participating in the Transformation Program



This reorganising activity took place on both levels, external and internal. An external activity that took place during these workshops allowed the participating organisations the chance to meet under one roof and discuss their intertwined initiatives that fulfil their distinguished strategic goals prior to announcing the transformation program. Simultaneously, an internal activity inside the organisation allowed the organisation to establish a necessary social order represented by the Vision Realisation Office (VRO). For the purpose of this research, the focus was on the reorganising of the social order inside the organisation. This internal-level reorganising took place to make room inside the organisation for a new level that would represent the future-oriented direction of the organisation and to lead to the implementation of the rest of the initiatives. In Table 3.1, for example, this essential activity appears as initiative no. 7: “Establish a Transformation Office at the Ministry level to support the National Transformation Program.”

This office, the VRO, was established as an administrative unit that directly reports to the CEO of the public organisation. The aim of establishing this office was to support the organisation through planning, following up and removal of all possible obstacles that might hinder the organisation from achieving its initiatives, and to ensure the implementation and integration of all the initiatives. This means that they work internally with the organisation’s employees and externally with relative agencies and organisations that either have shared responsibilities in some initiatives and goals or that monitor the organisation’s progress in their achievement of the planned goals that serve the Vision. The establishment and existence of VRO can be described as a significant step towards accomplishing the transformation program, as the name implies: “Vision

Realization Office” leaves an impression of its intended role. VRO people are seen by top management as change agents, who can visualise a future that is drawn by the top management and translate that to organisation employees who are still in the past. In doing so, the VRO needed to have the ability to look at things from both perspectives, to understand, and to speak both languages. This is similar to the role and responsibility of institutional entrepreneurs (Garud et al., 2007), who are described as actors who work to influence their institutional contexts and create a whole new system of meaning that ties the functioning of disparate sets of institutions together. Assuming the role of champions, they energise efforts towards collective action and devise strategies for establishing stable sequences through strategies and high technical skills.

3.3 Conclusion

From this research perspective, the establishment of the VRO was a symbol of the creation of a new temporality inside the organisation – a new temporality that counts time precisely through the use of Gantt charts and schedules, by checking the progress of activities, and by setting specific deadlines that are connected to the performance monitoring systems. All these tools were representations of the characteristics of the objective view of time (measured quantitatively by specific units). Therefore, I propose that this organisation, which is participating in the Saudi Vision 2030 and is part of the National Transformation Program, can be considered a suitable case for this research in particular as it operates in very complex conditions that create institutional complexity and the struggle to work with multiple logics forced into the organisation in a situation of ambitemporality. These include the implications of digitised organisational change; the

implications of being part of a bigger comprehensive reforms agenda in the public sector (Ejersbo and Greve, 2017); and the implications of having to deal with internal and external stakeholders at the same time.

Researching a Saudi Arabian government public organisation, which is a profoundly bureaucratic organisation forced to change according to a bigger agenda of country-wide reforms, allowed me to explore, understand, and describe how organisations change when undergoing digital transformation and operating according to multiple institutional logics and temporalities. It, therefore, provided insightful findings related to temporality, institutional logics and organisational change. Following this overview of the case contextual background, the following sections present the empirical work starting with the methodology.

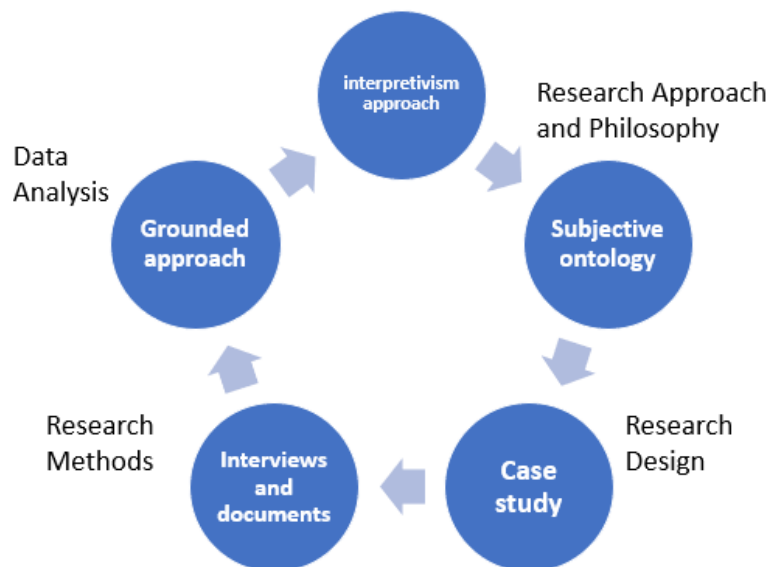
Chapter 4: Research Methodology

4.1 Introduction

Given the exploratory nature of this research, this work adopted an inductive approach. There was a need to gain an in-depth understanding of the logics coexisting within the organisation. This included how each category of actors perceived this coexistence and interacted with each other based on their logics, and the underlying processes they used. This research follows an interpretivist research paradigm and uses a qualitative research methodology utilising a case study design to examine these dynamics. Data was collected mainly through interviews, accompanied by an examination of archival data and documents in addition to information from published news and reports. The research methodologies are shown in Figure 4.1.

Figure 4.1

Summary of Research Methodological Choices



The use of several methods is to ensure the triangulation of the data. Qualitative researchers especially have used triangulation as a strategy to test the validity of the data through cross verification from different sources (Carter et al., 2014; Silverman, 2013; Rothbauer, 2008). Data analysis has mainly followed the grounded theory-building approach (Strauss and Corbin, 1994). The investigation of such a dynamic phenomenon would benefit greatly from qualitative methodologies that are flexible enough to consider the perspectives of social actors, and that focus on social processes (Blaikie, 2010). Consequently, the use of qualitative methods is consistent with this research approach and philosophy, and is appropriate in answering these research questions and fulfilling the objectives of the study.

This chapter discusses the research methodology that was used to carry out this research. The philosophical approach that underpins the choice of methodology will be discussed next, followed by the research design, which is described along with the data collection methods. The main ethical considerations related to this research are discussed in the final part.

4.2 Research Approach and Philosophy

4.2.1 Research Approach

In terms of the research approach and the choice of research method, it is essential to fully understand the philosophical traditions in order to select the most suitable path that underpins the research (Knox, 2004) and that supports the researcher in choosing appropriate research methods and design (Easterby-Smith et al., 2012; Blaikie, 2010).

According to Grix (2001, p. 26):

Different scholarly traditions embedded in fundamentally different cultural contexts can have diverging views of the world and differing assumptions underpinning their particular approaches to social enquiry.

The way in which an individual researcher decides whether to conduct their research as quantitative, qualitative or mixed methods depends on that researcher's philosophy.

However, following a specific philosophy also depends on the purpose of the research.

For example, research that aims to test existing theories would probably follow a deductive approach, while research that aims to explore a phenomenon and discover its undiscovered parts would be more likely to follow an inductive approach (Blaikie, 2010).

As indicated previously in Chapter 1, the main objective of this research is to explore, understand and describe the situation of institutional complexity in public organisations undergoing digital transformation and experiencing a situation of ambitemporality, and to understand the processes used to organise, given a conflict of logics and a situation of ambitemporality and institutional complexity, in public organisations undergoing digital transformation. Therefore, this research aims to capture the institutional complexity in a situation of ambitemporality in public organisations and explain its dynamics rather than testing a hypothesis aimed at producing generalisable assumptions. Unlike quantitative research, which starts with a clear hypothesis that needs to be tested for validation and then generalisation, qualitative research depends heavily on the data set, which the researcher analyses to discover patterns in order to generate theories and concepts (Silverman, 2011; Blaikie, 2010). While positivism is considered the backbone of the objective ontology and supports the use of objective and quantitative research methods to measure and test theories and hypotheses about the world, interpretivism is the basis of

the subjective ontology; this paradigm is helpful in investigating human actions in social science (Benton and Craib, 2011). Using such a paradigm, the researcher is able to inquire about actors' involvement with the investigated phenomenon and their role in, and interpretations of, their environment (Saunders et al., 2009; Carson et al., 2001).

According to Ritchie et al. (2014), interpretivism has been accused of inevitably being influenced by the subjectivity of both the researcher and the participants in interpreting and giving meaning to events. On the other hand, positivism does not encourage the researcher to have any thoughts on the study (Easterby-Smith et al., 2012). This research uses an inductive approach, which according to Yin (2011), allows theories to emerge from the data and gives the researcher deep insights about the investigated phenomenon. Consequently, the inductive research approach is the most suitable one for this research. This approach prioritises understanding the studied phenomenon through first collecting data and then describing this data and relating it to the studied phenomenon and to the research questions (Blaikie, 2010). Hence, the inductive research approach is the most suitable to answer these research questions and accomplish the objectives of the study.

4.2.2 Research Philosophy

In order to answer any research question, the researcher needs to choose the most appropriate research approach. Research approaches differ significantly in their philosophical standpoints, and consequently differ in their methods of social inquiry (Blaikie, 2010). Research philosophy refers to how the researcher views reality by connecting its parts (Guba and Lincoln, 1994). Deciding which philosophy the researcher

follows requires an understanding of the philosophy's essential components, such as the ontology and epistemology the researcher holds. It is important first to understand what is meant by these two concepts. While ontology refers to how the researcher views the nature of the social world (Saunders et al., 2009; Benton and Craib, 2011; Hudson and Ozanne, 1988), epistemology refers to how the researcher could possibly acquire knowledge about the world (Maxwell, 2013; Saunders et al., 2009; Carson et al., 2001).

Ontology can be further divided into two broad categories: objective and subjective ontologies. This study adopts a subjective ontology because the investigated phenomenon is explored on a social level and is based on actors' perceptions, interpretations and experiences (Saunders et al., 2009). The two notable epistemological views that represent objective or subjective ontologies are positivism and interpretivism. Positivism is considered the backbone of objective ontology and supports the use of research methods that measure and test theories and hypotheses about the world. On the other hand, underpinned by subjective ontology, interpretivism is the paradigm used to investigate human actions in social science (Benton and Craib, 2011). Using such a paradigm, the researcher can inquire about actors' involvement with the investigated phenomenon and their roles in, and interpretations of, their environment (Saunders et al., 2009; Carson et al., 2001).

Knowledge is seen as socially constructed by interpretivism (Burrell and Morgan, 1979) and appreciates looking at the world subjectively from human actors' own experiences and viewpoints. Thus, this research, which falls under the interpretivist paradigm, "attempts to understand phenomena through accessing the meanings participants assign to them" (Orlikowski and Baroudi, 1991, p. 5). Interpretivists

researchers look at reality as a socially constructed system of meanings (Dyson and Brown, 2006) that can be understood through interaction with the research participants (Guba and Lincoln, 1994) to fully capture their social experience and interpretation (Creswell, 2014). Hence, the quality of research produced within the interpretivist research paradigm differs significantly from that of research produced within the positivist paradigm (Lincoln and Guba, 1985). Positivist researchers appreciate the generalisation of results, while interpretivists value an understanding that is compatible with participants' perceptions (Glaser and Strauss, 1967). Positivists believe that social reality exists outside individuals and has an observable existence similar to that of the laws of natural science (Sayer, 2000; Guba and Lincoln, 1994).

As stated in Chapter 1, this research seeks to describe the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality, and to describe the processes used to organise with conflict of logics in a situation of ambitemporality and institutional complexity in public organisations undergoing digital transformation. With this in mind, the participants' perceptions and socially constructed meanings are essential to create an understanding and reconstruction of this reality (Guba and Lincoln, 1994) that answer the research questions. As the investigated phenomenon is more perceived than measured depending on the individual's perceptions and positions (Bryman, 1998), this research needed to follow the interpretivist research paradigm and use the qualitative research methodology (Dyson and Brown, 2006).

4.3 Research Design and Method

4.3.1 Research Design: Case Study

Given the exploratory nature of this research, a single interpretivist qualitative case study approach (Walsham et al., 2007) was adopted to examine how different temporal logics co-existed and interplayed during the organisation's digital transformation process, and how actors transitioned from one temporal logic to another. Interpretivist case studies are well-established sources for building theory in IS research (e.g., Orlikowski, 1991; Walsham, 1993). They have been helpful in studying organisational processes and exploring the behaviours of organisational actors within their natural settings through their stories, experiences and actions that can be interrogated; these are essential to understanding the composition and decomposition of the phenomenon (e.g., MacKay and Chia, 2013; Denis et al., 2001; Gioia and Chittipeddi, 1991).

According to Stake (2000), case studies are considered one of the most common methods for qualitative research. They are used to provide an understanding of real life through the presentation of a rich holistic description and analysis of a specific unit with specific boundaries in a specific context; the in-depth understanding thus gained can be used in similar real-life situations (Merriam, 2009). Case studies are featured for their ability to answer "how" and "why" questions (Myers, 2009). They are especially helpful in studying some processes and exploring the behaviours of a group of people within their natural setting (Stake, 2000). In the organisational change field, case studies have been a prominent method for study (e.g., MacKay and Chia, 2013; Denis et al., 2001; Gioia and Chittipeddi, 1991). In order to evaluate my choice of case study as being the most appropriate approach for this research, I followed the tips provided by Benbasat et

al. (1987, p. 372), who suggest answering four questions to determine whether the case study is the right choice (see Table 4.1). Based on my answers, the case study approach seemed to be an appropriate approach for this research.

Table 4.1

Four Questions Leading to the Adoption of a Case Study Approach

Questions	Answers Based on This Research
1. Can the phenomenon of interest be studied outside its natural setting?	1. Time, temporality, and institutional logics experience cannot be studied outside of its natural setting.
2. Must the study focus on contemporary events?	2. The research focuses on contemporary events.
3. Is the control or manipulation of subjects or events necessary?	3. The control or manipulation of subjects and events is not applicable.
4. Does the phenomenon of interest enjoy an established theoretical base?	4. The theoretical frameworks regarding the phenomenon provide a good start. Yet, they are immature and not completely convincing.

The selection of the GovOrg organisation (a pseudonym) was based on purposeful sampling strategies (Patton, 2002). In looking for a suitable case to carry out this research, several predetermined criteria were set, namely: (i) the case organisation must be one that has mandated change through a comprehensive program; (ii) the change must be IT-driven, i.e., the organisation must be undergoing a digital transformation process; and (iii) there must be a gatekeeper who believes in the importance and usefulness of this study and its outcomes for the organisation. The gatekeeper in qualitative research is a crucial person of contact whose role is to facilitate gaining and maintaining access to the

research setting (Clark, 2011). Usually, they have enough power to grant access to the researcher to meet with participants of interest in the organisation (De Laine, 2000). The engagement of the gatekeeper in the study and its relevance and importance to the organisation is an essential element to ensure meeting the right participants who can fulfil the research purposes (Clark, 2011). For this research in particular, with a bureaucratic government organisation in the transformation phase being the research setting, the gatekeeper role was even more important. This is because of the ongoing restructuring taking place within the organisation. Therefore, the gatekeeper needed to be someone who is in power, in great knowledge about who is responsible of what, and who could see a value in the conducted research.

The selected organisation is a public organisation owned and operated by the government of Saudi Arabia. This organisation is a typical bureaucratic public organisation in the Middle Eastern country of Saudi Arabia, employing around 10,000 employees spread over 13 regions in the country, with the headquarters in the capital city of Riyadh. It has existed for more than 50 years (since 1960). Its main decisions are made, and procedures and policies are established in the Riyadh headquarters, and these are implemented and followed in the branches in the 13 regions as per official circulars. Hence, all the interviews were conducted in the Riyadh office, which is in charge of the overall executive duties of the organisation and where the Change Office is located.

4.3.2 Research Methods

4.3.2.1 Primary data: Interviews

As discussed previously, investigating institutional complexity in public organisations undergoing digital transformation, and the processes used to organise with conflict of logics in a situation of ambitemporality, is closely associated with individual and social construction of meanings. Accordingly, capturing these meanings from participant perspectives is essential in creating an understanding of the phenomenon (Blaikie, 2010) and developing theories based on these constructed systems of meanings. This is reflected in the research questions that mainly address how and why actors' actions and processes emerge, develop, grow or terminate over time. This is also consistent with the process research lens in particular (Langley et al., 2013; Van de Ven and Poole, 1995; Van de Ven and Huber, 1990), which typically yield emerging patterns and themes throughout the research (Charmaz, 2008; Stake, 1995).

Qualitative research relies on several data collection types, including interviews, documents analysis and observation (Creswell, 2014), which vary in their usefulness for the phenomenon under investigation. Interviews could be considered the primary source of data in qualitative research (Easterby-Smith et al., 1991) and especially in case studies, including those driven by the positivist paradigm (Yin, 2009). This method of data collection carries even more value for case studies that follow the interpretivist paradigm because it gives the researcher a space to customise the questions and add follow-up questions based on the interviewees' responses (DiCicco, Bloom and Crabtree, 2006). According to Kvale and Brinkmann (2009, p. 33), a researcher who chooses interviews as their main source of evidence does so because the researcher "initiates and defines the

interview situation, determines the interview topic, poses questions and decides which answers to follow up.”

In addition, as the investigated phenomenon is an dynamic one, interviews seem to be the main method to collect data (Eisenhardt and Graebner, 2007). Seidman (2013) argues that the main purpose of conducting interviews in qualitative research is not to obtain answers to questions; rather, it is to gain understanding of the participants’ experiences and stories about the setting. Also, Easterby-Smith et al. (2002) suggest that management research tends to be distinctive from other social sciences in many ways that influence the choice of data collection method. For example, although observation might provide the researcher with an explicit view of the phenomenon as it occurs (Creswell, 2014), scheduled interviews would be more appropriate with managers than observation as managers have tight schedules. Hence, interviews are the most appropriate source of data to answer the research questions of this study and fulfil its objectives as they provide rich data conveying the participants’ perspectives on their actions and reactions (Kvale and Brinkmann, 2009).

4.3.2.2 Interview procedures

The interview arrangements included providing the research participants beforehand with the research information sheet that explains the main objectives of the research; the participants’ rights to participate/withdraw at any time; data confidentiality; and data management and usage procedures, including the use of pseudonyms and the anonymisation of any personal data that might identify the individuals. A consent form

was also provided to the research participants beforehand and was signed by both the participant and the researcher.

In this research, the primary method of data collection was semi-structured interviews with members of the organisation whose work had been influenced by or interrupted by organisational change. The goal was “to understand the meaning of central themes of the subjects’ lived world” (Kvale and Brinkmann, 2009, p. 29). This was achieved through asking the participants questions that focused on events, changes in everyday work life, changes in used language, and time interpretations within the organisation and by the other actors. Although, in semi-structured interviews, there is an interview protocol (see Appendix 3 and 4) that contains a list of themes and questions that are prepared beforehand, the questions are composed as open-ended questions (Creswell, 2014), in such a way that allows participants some room to explain, elaborate and interpret the events and changes they have experienced. Meanwhile, new questions are constructed during the interviews based on the interview context and the participants’ conversation flow. Given the research questions of this study, the use of open-ended questions in the interviews was appropriate. The interview protocol was revised based on the emerging data collected from participants during the initial interviews and early analysis phase (Section 4.4.1 Research Analysis and Procedures: Grounded Approach) as part of the iterative process of actively engaging with the data.

Each interview started by thanking the participant for their time and voluntary participation, and by introducing the research aims and objectives and the importance of the interview in informing this research. The participants were made aware of the interview being recorded for transcription and analysis purposes, and they were given the

freedom to choose not to be recorded if they would feel more comfortable. An interview protocol containing a list of themes and questions that had been prepared beforehand was used during the interview.

The interview protocol was developed around broad themes based on a review of the literature and initial analysis of secondary documents, such as official announcements and published reports and documents that were available online. In developing the protocol, the work of Myers and Newman (2007) was used as a guide. Different interview protocols were employed because this research needed the perspectives of actors from different hierarchical levels inside the organisation as well as those of external actors who were related to the studied phenomena (Carter et al., 2014; Silverman, 2013; Rothbauer, 2008). Hence, different participant groups needed different interview protocols. While these themes and questions from the interview protocol were used, the semi-structured approach allowed some space for new themes and questions to emerge during the interviews through the interactions with the participants. As Fetterman explains, interviews should help “explain and put into a larger context what the ethnographer sees and experiences” (2010, p. 40).

In total, 24 semi-structured interviews were conducted with members of the case organisation as well as with some external participants, as illustrated in Table 4.2. Interviews ranged from 30 to 120 minutes with an average of 45 minutes per interview. The reason for this variation in interview duration is that some interviews included some sort of presentation by the participant, in the form of showing the researcher some data on their computer screen that could not be shared or extracted because of its sensitivity. Interviews were recorded and transcribed according to the interviewees’ agreement (not

all interviews were recorded; almost 45% of interviews were recorded due to individual participants' desire for privacy and their sensitivity to the use of a voice recorder). In the case of unrecorded interviews, I took notes. Being aware of this sensitivity, a salient issue in Middle Eastern culture, I took detailed notes, including quotes, and did so as accurately as possible in an interactive way with the participants. Selecting interviewees was based on purposeful sampling strategy that focuses on identifying participants who the researcher thinks could have valuable insights about the investigation, which is very common practice in qualitative research in general. The participants' inclusion criteria contained a variety pool of measures which sometimes were contrasting but at the same time necessary for the purpose of this research. This is because this research tries to understand the transformation journey through the eyes of two groups of actors in the organisation. For example, there was a need to interview participants who worked in the organisation before the transformation program began and also to interview participants who were recruited and joined after the program. The varying perspectives of these two contrasting groups were essential to understand how the transformation was perceived differently among them. Additionally, not everyone's work was affected by the transformation at the same degree. Therefore, the researcher focused on participants who were in direct contact with the transformation program through their daily work activities. Also, it was essential of course to interview participants from different organisational levels but who work relatively within the same project or at least have acceptable knowledge about it to be able to offer insight into the research investigation.

Table 4.2

Breakdown of Interviews by Participant Group and Level

Participant	background	role in the organisation	level in the hierarchy	Group
1	IT/Business	Business Development Advisor	Senior managers	Directors
2	IT/Business	Shared Services assistant director	Senior managers	
3	Business	Customer Services and Support manager	Middle managers	Change agents
4	Business	Operational Excellence manager	Middle managers	
5	IT/Business	Program manager ²	Middle managers	
6	IT/Business	Project manager	Middle managers	
7	Business	Governance consultancy specialist	Middle managers	
8	IT/Business	Process Transformation Engineer	Employees	Employees
9	Business	Strategy and Planning specialist	Employees	
10	IT	System Analysis Engineer	Employees	
11	IT/Business	Delivery Management specialist	Employees	
12	IT/Business	Performance Specialist	Employees	
13	Business	Project Coordinator	Employees	
14	IT/Business	Business Analyst	Employees	
15	IT	Service integration coordinator	Employees	
16	Business	Business Development Specialist	Employees	
17	IT/Business	Digital and Customer Experience	Employees	
18	IT	Operations analyst	Employees	
19	IT	Business Process Analyst	Employees	
20	Business	Customer Services and Support	Employees	
21	Business	Customer Services and Support	Employees	
22	Business	Customer Services and Support	Employees	
23	Business	Customer Services and Support	Employees	

² Interviewed twice

4.3.2.3 Secondary data

While interviews were the main source of evidence for this research, they were complemented by document analysis, which served the purpose of increasing the rigour of the research through the use of secondary data (Gioia et al., 2012). Documents are usually regarded as valuable because of their formality and accuracy (Yin, 1994). The use of documents is helpful in acquiring comprehensive knowledge about the phenomenon and the setting; it adds legitimacy to the study (Yin, 1994); and it provides the researcher with flexible and convenient access to some data (Creswell, 2014).

Although documents could not be the main source of evidence for the purpose of this research, they were helpful to use before and after the interviews. Prior to the interviews, documents were used to prepare the interview protocol; after the interviews, they were used to examine the outcomes of interviews and to complement what had been captured during the interviews from the actors' own perspectives and to maintain the reliability of the evidence (Duffy, 2005). The use of secondary data included reviewing relevant internal and external documents such as project reports, official announcements, meeting minutes (Myers, 2009) and presentations (Maimbo and Pervan, 2005). Such documents are essential tools because "they provide some evidence that may allow you to build a richer picture than can be obtained by interviews and fieldwork alone" (Myers, 2013, p. 151).

The use of several methods of data collection is an effective strategy to ensure the triangulation of data which qualitative researchers especially need to enhance the validity of data (Carter et al., 2014; Silverman, 2013; Rothbauer, 2008). Using multiple methods

also provides a more holistic perspective (Roulston, 2011), validates the data and enables each method to compensate for the shortcomings of the others (Jick, 1979).

As a summary of the research design and method section, Table 4.3 displays the research questions that were outlined in the Introduction (see Chapter 1), the purpose of each question, level of analysis, area of contribution, and the research methods adopted to fulfil those research questions.

Table 4.3

Data-Planning Matrix: Research Questions with Data Collection and Analysis Details

Research Question	Purpose	Level of Analysis	Area of Contribution	Data Sources
How do different temporalities coexist and interplay in public organisations undergoing digital transformation and institutional complexity?	<ul style="list-style-type: none"> • To analyse the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality situations • To analyse the interplay of objective and subjective times within an IT-mediated organisational change context of Vision 2030 	Organisation	<ul style="list-style-type: none"> • Temporality theorisation • Social construction of time • Temporal interplay in change in situation of institutional complexity • Describing the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality situations 	<ul style="list-style-type: none"> • Employee interviews (from different organisational levels) • Public records (e.g., social media, reports, official announcements, newspapers)
What processes are used to organise with conflict of logics in situations of ambitemporality and institutional complexity in public organisations	<ul style="list-style-type: none"> • To analyse how actors create and use processes to organise with conflict of logics under ambitemporality situation and 	Organisation	<ul style="list-style-type: none"> • Technology and temporality theorisation in institutional logics (unpacking the role of temporalities and 	<ul style="list-style-type: none"> • Employee interviews (from different organisational levels) • Public records, (e.g., social media, reports,

undergoing digital transformation?	institutional complexity in public organisations undergoing digital transformation		technologies in multiple logics) <ul style="list-style-type: none">• The organising processes (strategic/technological/ sociocultural) that enable organising in situations of ambitemporality and institutional complexity	official announcements, newspapers)
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4.4 Data Analysis

Interviews were transcribed word-for-word and anonymised to protect the privacy of the participants. These transcripts were then analysed to detect the general preliminary themes, and then they were organised according to the identified themes. This step was essential in understanding the emerging phenomena (Bisit, 2003). The next step was coding the data, which also included coding the secondary documents. Special emphasis was placed on the words actors used to talk about time and experience. The data from interviews and documents was coded and analysed until data saturation was reached and no new themes appeared (Boeije, 2002). The main analysis technique built on the grounded theory-building approach, which is “a general methodology for developing a theory that is grounded in data systematically gathered and analysed” (Strauss and Corbin, 1994, p. 273).

Given the exploratory nature of this research, adopting the inductive qualitative approach seemed the most appropriate choice in that it allows theories to emerge from the data (see, for example, Orlikowski, 1991; Walsham, 1993) and gives the researcher deep insights about the investigated phenomenon (Walsham et al., 2007). Hence, the data analysis was heavily iterative, meaning that I kept moving back and forth between data and emerging theory and revisiting the relevant literature. The use of relevant literature during the data analysis stage was essential as suggested by Silverman (2005, p. 152), who advises qualitative researchers to “analyse your own data as you gather it.” This iterative process is also essential to understanding emerging concepts as suggested by grounded theory, which was utilised for this research (Strauss and Corbin, 1994). Although the exploratory nature of this research suggested an inductive research

approach, whereby the researcher enters the field to explore a social phenomenon without prior knowledge (Blaikie, 2010), this could not be strictly followed for this research. This research was a PhD research project that was bounded by some requirements that constrained me as a researcher. This is explained by Dunne (2011), who discusses the issue of how and when to engage with existing literature when employing the grounded theory for analysis:

This is particularly true for Ph.D. students, whose research funding, ethical approval and progression through the doctoral process may all be heavily dependent upon producing a detailed literature review prior to commencing primary data collection and analysis. (2011, p. 115–116)

In the data analysis stage, I started by developing a chronological summary of the main events (See Figure 5.1 in Chapter 5) related to the change program, starting with events that took place before the official commencement of the program, which began in 2015. In doing so, I included events shaped by narrative provided by all levels and categories of actors, including narrative by change agents, employees, and senior managers, who at the beginning were in the foreground as initiators, but who later fell into the background of the developing story by diffusing their power to the change agents, who became some of the major actors in the story. Second, the analysis focused on evaluating whether there was any serious inconsistency in existing temporal structures between the two main conflicting actors (the change agents and the employees), and how such inconsistencies, if any, impacted the change program, either by advancing the change process or slowing it down. Third, the attention of the analysis moved to how the change agents dealt with temporal inconsistency. In doing this, three categories of

orchestration processes were identified, which sometimes overlapped. However, during their overlap, their intensity was not maintained over time. Some processes were stronger at the beginning, and gradually lost this intensity. Others might have the opposite, that is, they were used lightly at the beginning but then became denser over time. The reasons behind this variation were also considered in the analysis.

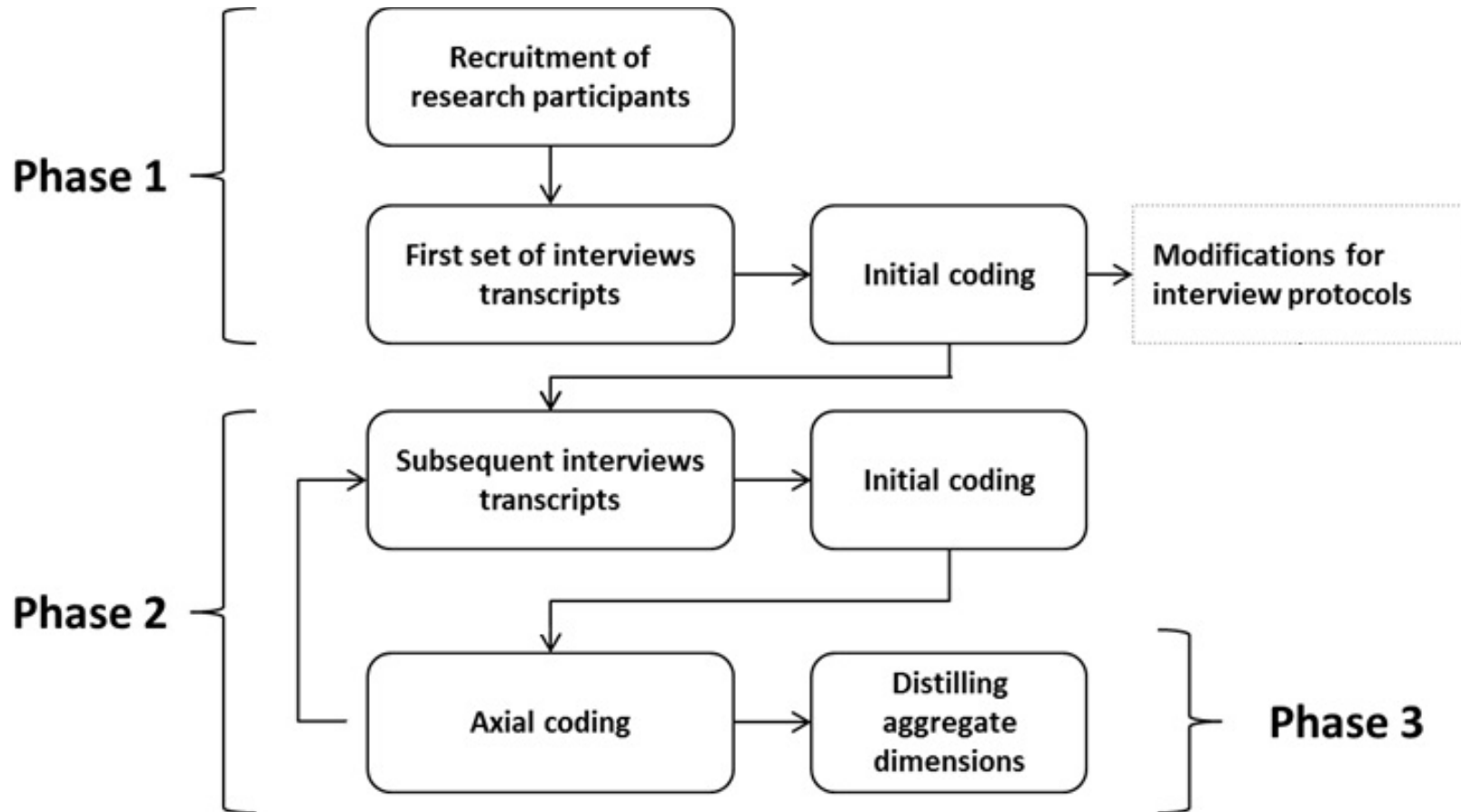
4.4.1 Research Analysis and Procedures: Grounded Approach

As mentioned at the beginning of this chapter, data analysis mainly followed the grounded theory-building approach (Strauss and Corbin, 1994), defined as “a general methodology for developing theory that is grounded in data systematically gathered and analysed. Theory evolves during actual research, and it does this through continuous interplay between analysis and data collection” (Strauss and Corbin, 1994, p. 273). In this approach, the iteration between data and literature is emphasised as essential for theory development. Although grounded theory has been used since the mid-1960s (Glaser and Strauss, 1967), it has undergone many alterations and revisions. However, there are several accepted principles that underpin this theory, including the emphasis on iterative data collection, theoretical sampling, constant comparison with the literature, and the explicit coding and theory-building feature (Gurd, 2008).

This research used grounded theory procedures to discover the links between the different temporal orientations and institutional logics, and the processes used to organise with this flux of logics in a situation of ambitemporality. The discovery of these links can be attributed to focusing on the “reciprocal changes in patterns of action/interaction and in relationship with changes of conditions either internal or external to the processes itself” (Strauss and Corbin, 1994, p. 278), that is, provided by the grounded approach. Figure 4.2 provides a summary of the phases and steps following the grounded approach to analyse data in this research.

Figure 4.2

Data Collection and Analysis Phases and Steps Following the Grounded Approach

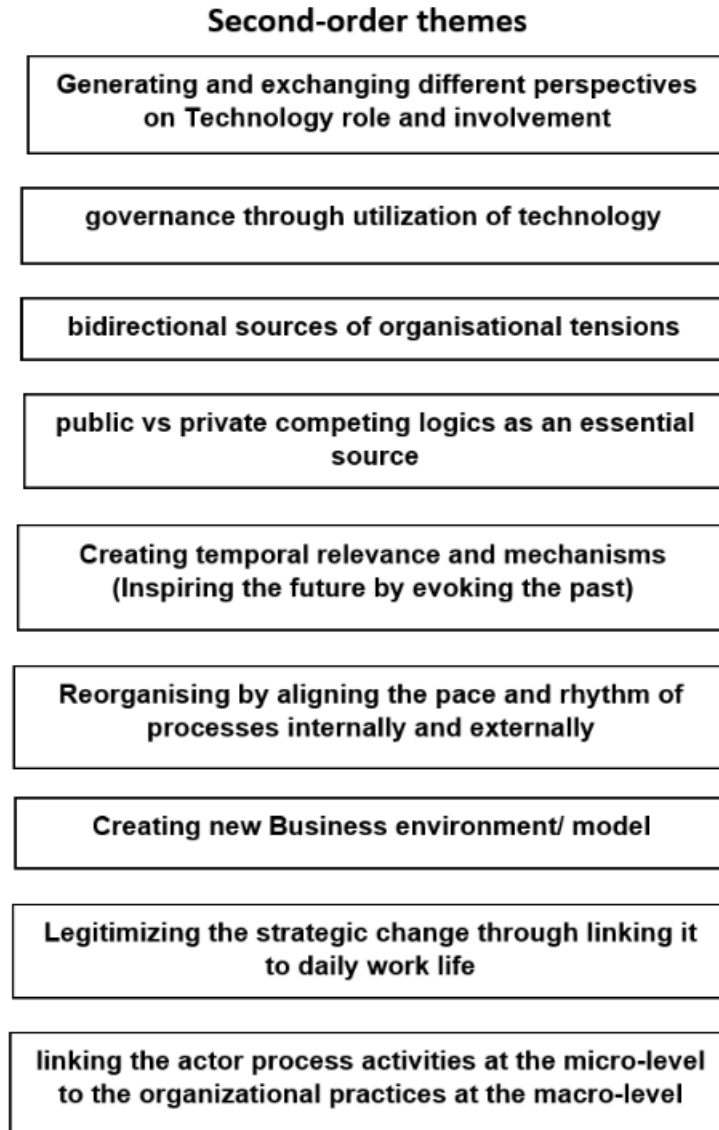


As suggested by the grounded approach, there are three main phases of coding: initial or open coding, axial coding and selective coding (Strauss and Corbin, 1990; 1998). The first phase, initial or open coding, refers to the process of generating initial codes or concepts from data related to the research questions. In this phase, the generated concepts can be helpful in modifying the interview protocol and its themes. The next phase, axial coding, focuses on developing higher conceptual categories and linking the initial concepts from the first phase to these categories. In this step, the number of codes or categories are noticeably lower than those from the first phase. The final phase, selective coding, involves generating a more concentrated and conceptual abstraction of data through purifying the aggregate dimensions of the categories from the previous phase. In this phase, the relationships between the different concepts become clearer and fit into a theoretical framework. In the end, the main aim of coding in qualitative research is “taking [data] apart to see what they yield before putting the data back together in a meaningful way” (Creswell, 2015, p. 156).

As stated previously, this research aims to describe the situation of institutional complexity in public organisations undergoing digital transformation and experiencing ambitemporality, and to describe the processes used to organise with conflict of logics under this situation by analysing the interplay between different temporal orientations and different institutional logics under the same roof. Following the grounded approach (Strauss and Corbin, 1998), the first step was to write down some initial codes during the interviews and the revision of documents. This was followed by transcribing the data. While transcribing, I also wrote down some initial codes, read through different transcripts and compared the codes from one transcript to another. This initial stage of

analysis, open coding, yielded a huge number of initial codes (more than 100 first-order codes initially), which mostly depended on the exact words and terms used by the participants themselves. Later when I constantly went back and forth between the data, the research questions and the literature, they were reduced to 37 initial codes.

The next phase was axial coding, in which I tried to group the initial codes generated in the previous step into categories. I tried to find ways that these could relate to each other and to the research questions by finding similarities and differences between them. This phase involved going back and forth between the data and the literature, paying particular attention to concepts relating to time and different temporal orientations of different actors in the organisation, and to how these relate to their logics using their own narratives. This step resulted in the second-order themes, as shown in Figure 4.3.

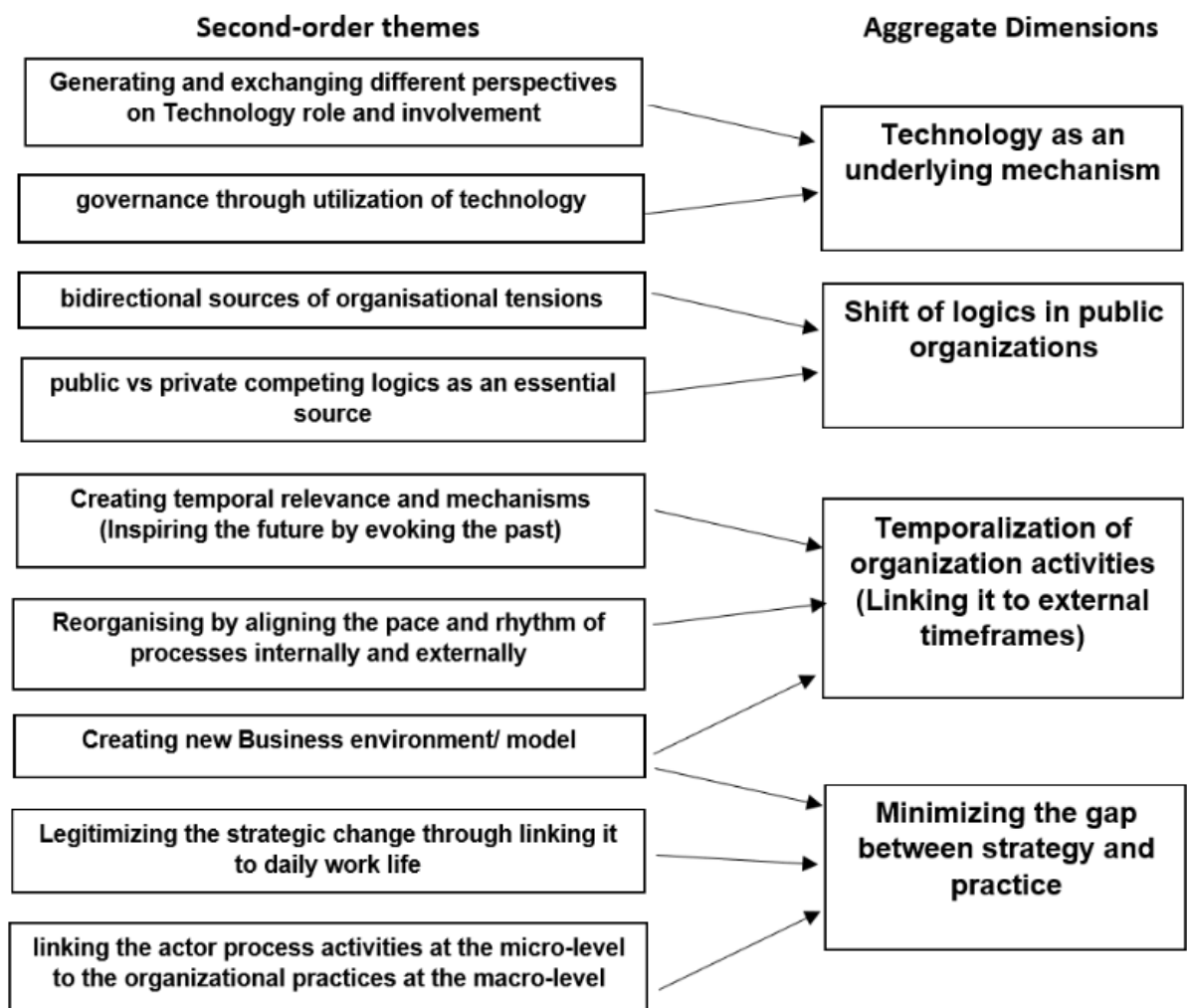
Figure 4.3*Second-Order Themes*

Based on the results of this phase, I moved to the selective coding. Here, I tried to distil the aggregate dimensions from the second-order categories into a higher conceptual level by identifying the relationships between these different categories and linking these aggregate dimensions to the story that was appearing. In this phase, the number of codes

became reasonable and hence could fit into a theoretical framework that could explain the research phenomenon. This step resulted in the second-aggregate dimensions shown in Figure 4.4.

Figure 4.4

Integrating Second-Order Themes into Aggregate Dimensions



4.5 Ethical Considerations

This research was conducted after obtaining ethical approval from the University of Leeds Research Ethics Committee. Following the university's Code of Practice was essential to ensure that all ethical considerations were thoroughly maintained, including anonymising data, ensuring data protection, and guaranteeing participants' confidentiality. All collected data and materials were treated as confidential and were anonymised as an ethical research practice (Longhurst, 2009). It is essential for a social researcher to commit to such a practice (Burns, 2000) because it has a significant impact on the research conclusions (McQueen and Knussen, 2002). Storing and accessing data was also in line with the Code of Practice principles in that the researcher's drive provided by the University of Leeds was used to maintain the data.

Participants were made fully aware of the research aims and objectives through the research information sheet that was provided to them prior to participation in the research (May, 2011). They were also made aware of their rights (Berg, 2007) to participate voluntarily, to withdraw, to refuse to answer any questions or to decline to be recorded.

The next chapter will describe and discuss the research findings building on this data structure.

Chapter 5: Findings

5.1 Introduction

In this chapter, I present my findings, which show that multiple institutional logics were identified, which the organisation was facing as a result of the transformation program. Underlying these distinct logics, two opposing temporal orientations existed, namely, objective and subjective temporalities. To understand the relationship between institutional logics and different temporalities, this chapter unpacks the social realities behind the different actor logics. The extant literature on institutional logics has shown us how different logics are key contributors in the creation of social realities across time and situations in organisations. However, those created social realities are usually pushed to the background of the logics story. Extant literature on time and temporality social reality, which remains nascent, has acknowledged these theoretical concepts but has not examined them in empirical settings.

Through the data, I identified the instantiation of the new logics brought by the change agents which were conflicting with the existing logics held by the employees. For example, the clear shift to the project-based approach that was adopted by change agents was a major disruption to the existing logics that were based on continuous mode of working with no clear beginning and ending for tasks. This approach could be seen as one of the first signs for new logics emerging in GovOrg. Accompanying this approach, was the adoption of new related logics such as new Information technology application, new time related application, and even the need to adopt a new calendar that was more precise and fixed. All of these constituted a new set of logics establishing in GovOrg to support the transformation agenda. Therefore, the employees were forced to let go their

old logics and replace them with the new way of working, i.e. the new logics brought by the change agents.

The main question now is how different individuals within the organisation managed the coexistence of these logics and their underlying temporalities along with the ongoing organisational digital transformation. In order to answer this question, there is a need first to unpack these logics by understanding their existence in the organisation. I do this by identifying the different logics and then identifying the groups which operated according to each logic. In particular, I divide the actors in the organisation into two main categories: *change agents* and *employees*. While both categories faced challenges and tensions in reconciling their own logics with the current dominant organisation logic, both also utilised different processes to coexist with the flux of conflicting logics.

In the coming parts of this chapter, I describe the old logics, the new logics, and how was the journey between the two based on the data. To do this, I divide this chapter into two main parts. The first part consists of subsection 5.2, which explores the key actors and their logics in the GovOrg organisation undergoing digital transformation, and subsection 5.3, which unpacks the role of temporalities and technologies in multiple logics. The second part consists of subsection 5.4, which explores the processes used to organise with conflict of logics in a situation of ambitemporality and institutional complexity in public organisations undergoing digital transformation. In these two parts, I analyse narratives from documents and participant interviews related to the two categories of organisational actors (i.e., change agents and employees), whose stories about their interaction with each other and their perspectives on key events have led to the basic assumption of them operating according to different logics within the same

organisation. This is followed by an analysis of the major interruptions and conflicts under institutional complexity, ambitemporality and digital transformation. Finally, building on my understanding of these logics and their underlying temporalities, in Chapter 6 I discuss the interplay of these logics by analysing the processes used by each category of actors to coexist and probably dominate the organisation.

5.2 Key Actors and Their Logics in the GovOrg Organisation Undergoing Digital Transformation

5.2.1 Key Actors' Social Backgrounds and Organising Principles in GovOrg

The findings revealed the existence of two main categories of actors operating differently in the organisation (i.e., according to varying logics) namely, *change agents* and *employees*. Although both were current employees in the organisation, they differed in some key properties. It can be determined from comments made by the participants that each of the two categories of actors labelled the other category and referred to its members repeatedly as “they/them,” which implies some sort of segregation between the two groups, despite both being employees of GovOrg. Identifying the change agents as a category separate from the other employees can be traced back to their existence in the first place as a main event in the organisation, which employees constantly referred to when talking about change. In many cases, change agents were considered a primary source of tension to others. As to their official establishment in GovOrg, the change agents' office was defined as follows:

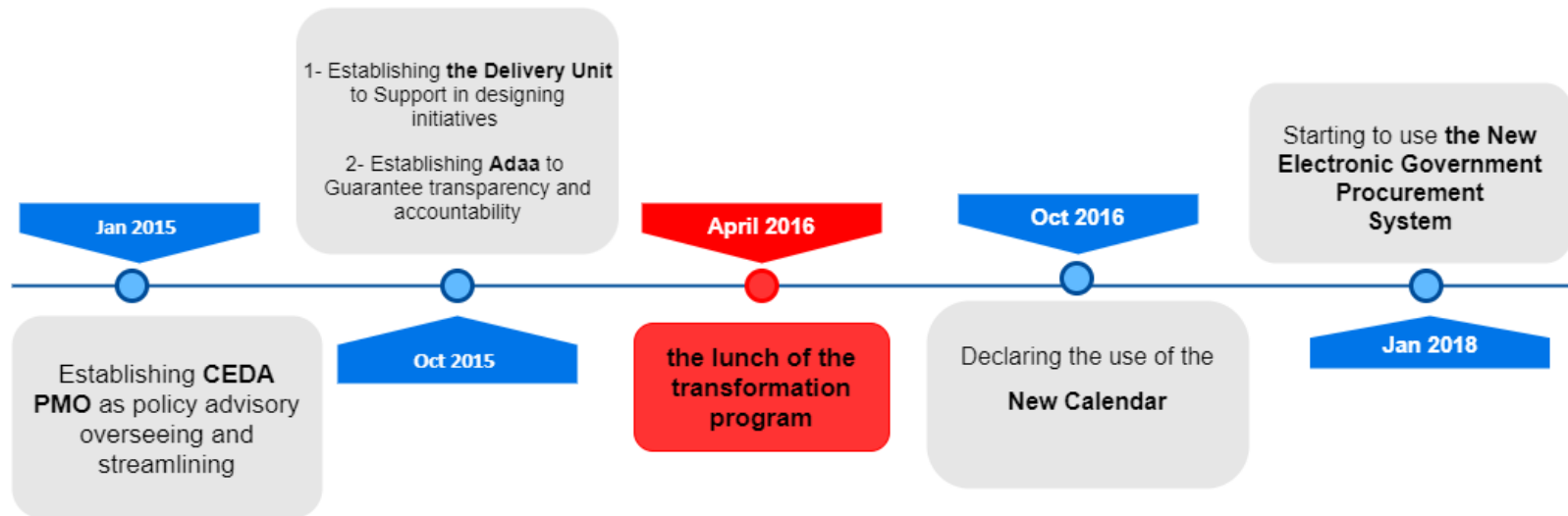
An administrative unit that reports to the CEO and is responsible for supporting planning and achieving the strategic impact, pushing forward the implementation

of initiatives that fall within the priorities of the reform program and overcoming the associated obstacles, in addition to empowering internal stakeholders, managing change and communicating within the entity and the related agencies associated with it regarding the priorities of the reform program. (Document 1)

Following the timeline of the main events that preceded and succeeded the launch of the transformation program, it can be identified that the establishment of the Change Office was not an arbitrary incident. On the contrary, it came as a result of a chain of events (see Figure 5.1).

Figure 5.1

Timeline of Main Events Preceding and Succeeding Launch of the Program



5.2.1.1 Reorganising and restructuring prior to the launch of the transformation program

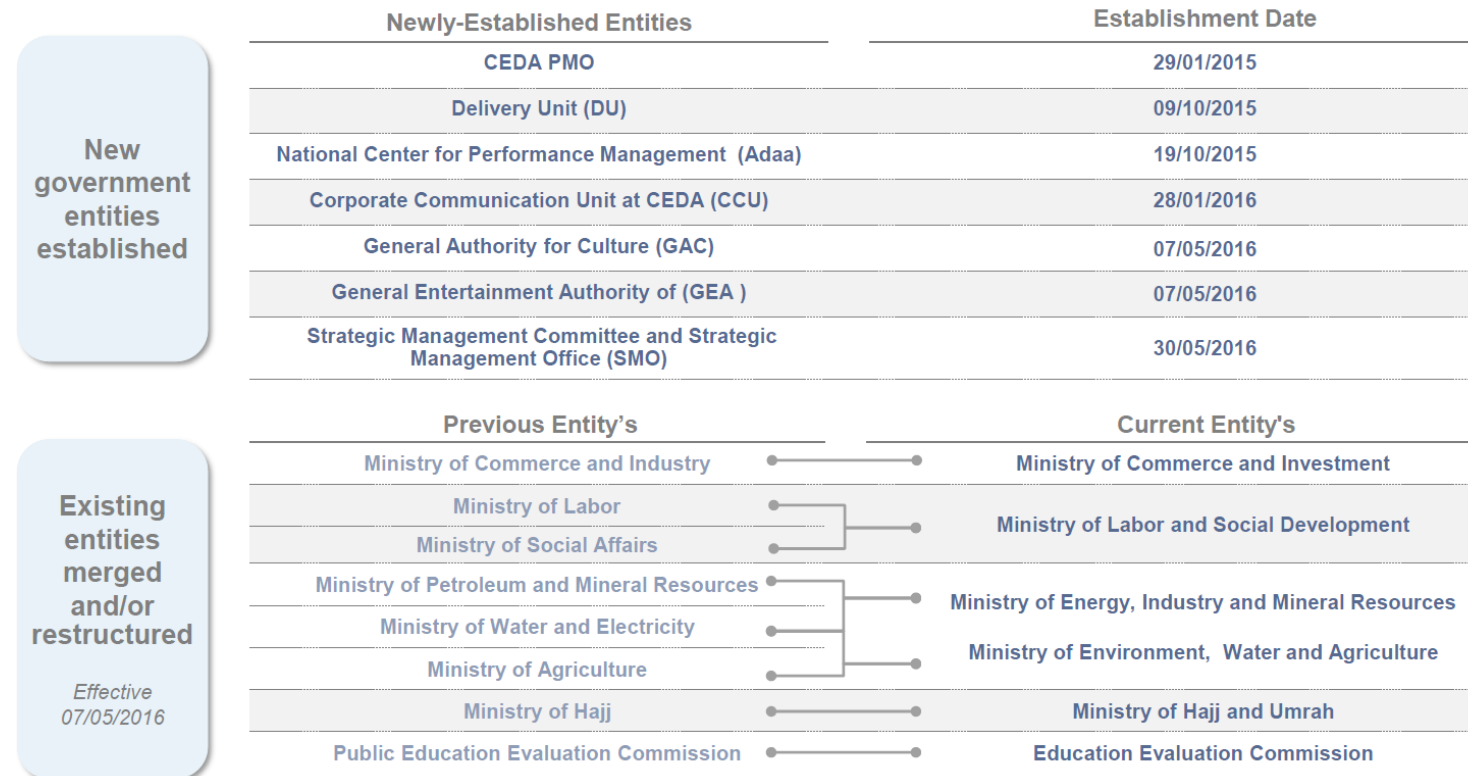
In these events, the top management was not responsible for initiating the change program itself, but they were required to be a key part in the planning phase that took place before the official announcement of the transformation program. Some of the informants who were involved directly in the preparation for the transformation program mentioned that the preparation was done over a period of six months, through intensive meetings and workshops that involved top management from all participating organisations. One senior manager, who had been part of this preparation period, described his experience and the tools they used:

The aim of these intensive workshops was to enable the top management to assess the organisation's current situation through the use of different strategic planning techniques, such as SWOT analysis, to help us in identifying the organisation's strengths, weaknesses, opportunities and threats. (Senior manager)

As a result of these meetings and workshops, an initial restructuring and reorganising took place for some of the organisations that participated in the preparation. This restructuring took place in the period between October 2015 and April 2016, as illustrated in Figure 5.2. During that period, there was an intensive organised gathering for all organisations under one roof, through teams from top management of the different organisations and were required to have conversation about their interrelated responsibilities and processes.

Figure 5.2

Examples of Reorganising/Restructuring and Establishment of Some Related Government Agencies



5.2.1.2 Change office background

In conjunction with the official announcement of the transformation program, the Change Office was established in April 2016 (see Image 5.1). The office started recruiting individuals from outside the organisation; most often, they were deliberately recruited from the private sector, and, more specifically, from multinational corporations such as Oracle and Microsoft, which have an extensive background and vast experience in IT fields. Such a step of selectively recruiting individuals with similar sets of qualifications and prior experience implies that those individuals differed from individuals who had already existed in the organisation for many years. This movement could be an indication of the necessity of different forces in the organisation who had the ability to push forward the implementation of initiatives. The need to hire those special types of individuals, and possibly the need to employ their special IT skills, was highlighted in the transformation program policy document (2016):

We will partner with the private sector to develop the telecommunications and information technology infrastructure (p. 57).

Image 5.1*The VRO Office****5.2.1.3 Employees' background***

In contrast, the other category consisted of the employees who had been part of GovOrg before the transformation program began. They were government employees, who typically have lifelong employment and would most likely retire from the same organisation they were recruited into. They strictly adhered to government policy directives, rules and regulations. For them, following procedures is preferred over performance. Additionally, they don't believe these procedures are changeable. The

main justification for this belief seems to be the nature of government organisations being all connected under one unchangeable fixed system and bureaucracy, as Employee 1 noted:

Even the minister didn't have the authority to change it [the current system] himself before because this system is not for our ministry only. (Employee 1)

5.2.1.4 Changes taking place after the establishment of the Change Office

Soon after the Change Office recruited the staff they needed, the office started to bring to the organisation work practices and work modes that were completely new to the typical government employees. One of these practices that was very evident to the employees was the adoption of a more projects-based approach. However, this approach needed some strategic-level support. Hence, the adoption of such an approach was complemented by the establishment of a Project Management Office (PMO) inside GovOrg. The establishment of the PMO was in synchronisation with the establishment of the Strategic Management Committee (SMC) and the Strategic Management Office (SMO) in May 2016 and is shown in Figure 5.2. The SMC and SMO are both external agencies to GovOrg, which operate under the Council of Economic and Development Affairs (CEDA), the highest entity that the transformation program belongs to. It is one of the Change Office's responsibilities to synchronise such changes with the internal structure of GovOrg. Change Agent 1 explained this urgency to shift to this work practice and divergent work mode because of the tight timeframe and deadlines they had:

The government, as you see, is moving toward a more project culture now, part of that is because we have the Vision kind of deadline you can say. So, we have a commitment, and everyone knows about it. By everyone I mean the citizens and also, I would say, the outside world. This creates pressure of

course because we are responsible, and we will be held accountable. Also, we don't want to fail the others, I mean other ministries. (Change Agent 1)

He also pointed to the collective responsibility they had with other agencies in accomplishing some shared goals:

Don't forget that we work jointly with them [other agencies] on some projects, we have to do our parts in order for them to do theirs. It is one big puzzle. So, we need these projects, otherwise we will be behind the deadline. (Change Agent 1)

And to the need to show achievements against time:

The number of projects increased a lot since the Vision announcement due to the need for achievement. (Change Agent 1)

The distinctive nature of the Change Office in GovOrg as an integral part of the organisation with internal power and external official connections with the related agencies added to its legitimacy. This loose coupling between the change agents and the organisation secured them the appropriate legitimacy to implement government policy directives, rules and regulations, but in their own way and with room for flexibility in the implementation that had not previously been available to GovOrg. This powerful position and its privileges were implied by Change Agent 2, who stated:

Of course, power and positions is something to be considered. Here [in government] we cannot enforce directly, which is different to the private sector, where decisions are taken faster, but we've got other tools to bring these up. (Change Agent 2)

Importing those special change agents who could potentially reorganise the organisation to implement the new set of rules and reinforce the use of new technologies, was essential to connecting the dots between the desired future of the

transformation program and the current version of GovOrg. Their aim to achieve integration with necessary partner agencies could be seen as the first indication of GovOrg trying to move away from state logic. The intention was to move towards market logic, whose core values are about performance, effectiveness, competition and efficiency.

The change agents themselves implied the existence of such distance between the two logics they and the other employees held by distancing themselves from the employees and emphasising their mission to change the organising logic of GovOrg. This is clearly evident in Change Agent 1's description:

We are changing into a corporate mindset; this has never been done in the government. So, people who are still using the past old mentality... and... cannot cope with change... will have to be replaced because we do not have time to stop and convince them. (Change Agent 1)

Similarly, the employees continuously recognised this distance that existed between them and the change agents. Employee 2 said:

They brought people from the private sector, got over high positions, they gave them attractive packages. (Employee 2)

He added:

I feel like they want us to be more of a private sector mindset. The government sector used to be a service provider, regardless of the cost. Now it is not. Every project has to generate profit or return, which forces you to prioritise the projects. (Employee 2)

It was clear that those special change agents were faster and more present-oriented than employees. For GovOrg, as a governmental organisation that strictly follows state rules and regulations, the change had to occur in a top-down manner. In such state logic organisations, actors tend to be past-oriented, which means they are slow in

responding to change and can easily find reasons for not coping with it. For example, employees kept problematising the change by questioning why they had to abandon their work practices, which to them had proven effective and had worked just fine for many years. Such problematisation was clear in Employee 3's statement:

This has been the way for doing work and everything works just fine before even most of the VROs were born and now suddenly they become the wrong way? I mean how? (Employee 3)

Other employees, including those who were generally enthusiastic about the idea of the transformation, were still reluctant about the amount of work needed to get it done. Employee 4 said:

I think the Vision idea is brilliant, but the implementation is not, because the infrastructure is not ready, and we don't have the capabilities... I need tools that I don't have but I have to find a way because it is imposed by the top, so we have to implement; we have no other choice. (Employee 4)

At the same time, they felt that there was no hiding from it anymore because it had been imposed as a top-down change. Employee 4 added:

But the thing is I feel the train is moving either we ride or not, they will still move with whatever we have. No time for falling behind because everyone else is moving too. (Employee 4)

As part of describing the situation of institutional complexity in public organisations undergoing digital transformation and ambitemporality, the above section has identified the key actors in opposition in the organisation and provided an overview of the characteristics of the two main groups those actors represent and operate according to the group's logic. Table 5.1 provides a summary of the different organising principles and assumptions and source of legitimacy of those distinct actors.

Table 5.1

Organising Principles and Assumptions and Source of Legitimacy of the Main Actors

Main Actors and Their Organising Logics	Organising Principles and assumptions	Source of legitimacy
<p>Employees</p> <p>State Logic</p>	<ul style="list-style-type: none"> • High bureaucracy environment in terms of decision-making and changes • Changes in procedures are not allowed - nationwide procedures are followed across the organisations • Absent motive for change due to government processes complexity 	<ul style="list-style-type: none"> • Strict adherence to government policy directives, rules and regulations. • Procedures are preferred over performance
<p>Change agents</p> <p>Market Logic</p>	<ul style="list-style-type: none"> • High flexible environment in terms of decision-making and changes • Following the rules and regulations of their international parent companies or their competitors • Operating a subsidiary but in the national context • The motive for changing and enhancing is high due to high competition and changes in the market 	<ul style="list-style-type: none"> • Loose coupling relationship between the change agents and the organisation • Top position guaranteeing them legitimacy to enforce new rules • External connections with other agencies guaranteeing them flexibility

Unpacking those actors' backgrounds in the organisation, their existence, and organising principles that underpin their logic is essential in answering the main inquiry of how different individuals within the same organisation manage the coexistence of different and perhaps competing logics. The next section will unpack their underlying temporalities, technologies and other related organising principles.

5.3 Unpacking the Role of Temporalities and Technologies in Multiple Logics

5.3.1 The Organising Temporalities of Distinct Actors' in GovOrg

5.3.1.1 Project-based approach

The change agents' relationship with time was particularly interesting. They continuously expressed their opinion that time is short and limited, and they referred to timeframe boundaries and deadlines and related these to their work. Change Agent 3 said:

In the transformation journey, you have to learn skills such as you have to be fast in analysis, fast in planning and fast in implementation. (Change Agent 3)

Their work approach was to divide the big projects into smaller ones and finish them gradually. This is a practice that emphasised some properties of the objective temporality that treats time as discrete specific units, divides tasks according to these units, and allocates specific chunks of time to each task. Change Agent 4 championed this objective temporality and the project-based approach. In his case, he felt responsible for dividing the tasks into these time chunks:

The project should not be one huge project. Of course, you have this one big project, but then it is your role to divide it into stages. You need fast delivery. (Change Agent 4)

This approach was essential for the change agents as it provided a sense of accomplishment and delivery for both internal and external stakeholders. Change Agent 4 justified the need for this approach, saying:

What I mean is that your customer needs to see the achievement your team has accomplished. Not only your customers, even your team. They need to see and realise that they have accomplished something from their work. They need to see the results and feel that they are progressing, and then you can repeat the process. (Change Agent 4)

Employees, on the other hand, were not happy with this approach of smaller projects and tasks being allocated to specific units within a specific timeframe as it opposed what they were used to, which was greater flexibility with unlimited deadlines. They continuously problematised this new approach and considered it the outsiders' approach (i.e., the approach of the change agents). Employees were against moving too quickly to implement the change. They distanced themselves from this approach and somehow linked the fast-paced rhythm to weak and delicate outcomes that represented an opposing organising logic to their sober and robust one. As explained by Employee 1:

The problem is that those people coming from the private sector [...] want rapid change, they want to see rapid results, focusing on quick wins, and they want that to get the credit and to show off in front of the officials. (Employee 1)

On the other hand, the change agents justified this fast-paced rhythm and the urgency to shift to smaller projects and linked it to their backgrounds and past expertise.

Change Agent 5 stated:

I think I learned this through my background in programming, what we call fast programming, where we plan, program, and come out with a version of

the program and let the users test it, and then you can enhance and update your program based on their review. (Change Agent 5)

He continued by implying the impracticality of the previous practice used in GovOrg and its slow-paced logic:

This is what we are doing, learning by doing. I don't think the big bang approach for example is practical, a three- or four-year project is not suitable for us. I think the ideal project should be six months maximum and should have clear milestones. This is my approach. (Change Agent 5)

5.3.1.2 New calendar

It was clear that this new approach of breaking down projects into smaller ones was central to the change agents, and they saw an opportunity to legitimise it for GovOrg. However, they faced an issue with the official calendar, the Hijri calendar, which is less precise and could create problems with setting deadlines for the tasks. To resolve this issue, from October 2016, the official calendar, used for the governmental payroll system, was changed from the Hijri calendar to the Gregorian calendar, the most widely used calendar around the globe, in a step towards aligning government organisations with the outside world. With the approval of this temporal shift, change agents felt relieved that they were able to continue with their plan of shifting the temporal logic of GovOrg, and they started scheduling GovOrg activities and tasks according to the new calendar. While the change agents pushed to explicitly adjust GovOrg's temporal structure so that it was aligned with their future goal of transformation, the other employees were still attached to the old calendar. There were many reasons behind this attachment, perhaps most importantly that the new calendar reinforced the imposed western change agenda on them. This included imposing the outsiders as well as importing the outsiders' digital transformation tools,

their calendar, and to add to the tension, their own ways of reinforcing their new temporal structure. Employee 5, who had been appointed as an initiative owner and was directly responsible to the change agents, explained this tension as follows:

The problem is if I am behind schedule by 10% only, their system still shows my initiative with yellow colour, and if it is 20%, it will turn to red, which is the worst. (Employee 5)

He added and showed his anger towards, and rejection of, this new imposed IT-enabled temporal shift in accomplishing tasks as follows:

Everyone can see this with my name in red next to it. All of this pressure for nothing; I am not paid more money for being an owner. Unlike those who got recruited [change agents], they were paid very competitive packages, so honestly I have decided not to accept any initiative assignments now and they can't force me to. (Employee 5)

The old calendar represented the subjective temporality culture that dominated GovOrg before the transformation program was imposed. It fit with the typical model of subjective temporality being more flexible in planning, scheduling events, and setting deadlines, and in minimising the precision of time. This is because the Hijri calendar is based on the monthly cycles of the moon's phases, yielding months with 29 days and months with 30 days, but most importantly, without having a precise fixed specific duration for the month. This was irritating to change agents, who were used to scheduling their activities around very strict and specific time slots. However, it is still a government organisation that must follow a state logic, and the official holidays are based on this calendar. Therefore, they had to keep using both calendars, with the new calendar being used for planning the organisational activities. Figure 5.3 depicts this new temporality framing that was instantiated by the change agents and

its possible implications. Change Agent 1 explained the dilemma faced because of the used calendar and the importance of adopting the new calendar by stating:

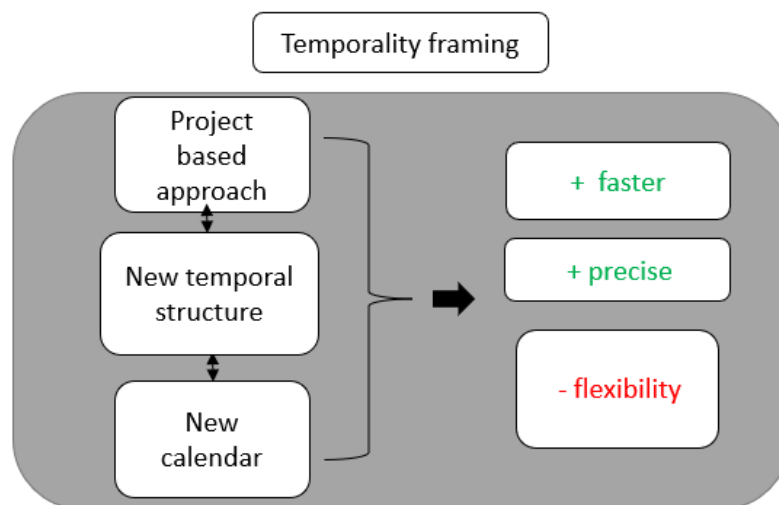
We simply cannot work with the Hijri calendar because we can't rely on the dates and use them in the system; they keep changing every month. (Change Agent 1)

The shift in the dominant temporal structuring was crucial for change agents in reorganising the work inside the organisation. However, they actually did not have enough power to impose it directly on employees; it had to go through the policy makers in upper management outside GovOrg (CEDA), who the change agents had direct access to through their periodic meetings and reporting scheme. One change agent explained:

It wasn't us who changed it. We raised the issue along with many other issues with the current government work and procedures in our periodic meeting with other VROs from all the other organisations and raised it to the policy maker, who responded. (Change Agent 5)

Figure 5.3

Temporality Framing Instantiated by GovOrg Change Agents



To help them in imposing their logics and new objective temporality, the change agents relied heavily on IT and digital tools. Although GovOrg was not a totally primitive organisation, the way employees understood and used the existing digital tools was primitive. The next section reviews the technology framing in GovOrg after the change agents joined the organisation.

5.3.2 The New Technology Framing in GovOrg

In order to understand the technology framing generated in GovOrg after the transformation program began, it is important to understand the common background of each social category within the organisation. This will help in understanding their motives in operating according to a particular logic. The organisational goal was to transform the way work had been done over the years, and an essential part of this was moving as many operations as possible to an electronic system, thereby allowing many procedures to be diminished or merged. Prior to using new technology and digital tools, the manual processing of requests often involved face-to-face interactions between employees and customers, and the many steps involved resulted in bottlenecks and delays that customers could not understand. Employee 6 recalled:

Our work back in the days [before IT changes] was very slow. Everything was manual, and everything was paper. Many human unintentional errors can happen, but of course, your connections can help you with finishing everything easily. (Employee 6)

The transformation program aimed to reduce the red tape³ that is common in public organisations and to move away from a slow, bureaucratic environment to one

³ Bozeman (1993) defines red tape as “rules, regulations, and procedures that remain in force and entail a compliance burden for the organization but have no efficacy for the rules’ functional object” (p. 283).

that was more agile, that could respond quickly to challenges and opportunities, and that could monitor and evaluate its progression and change on an ongoing basis. This goal was clearly admitted by actors and was written in many documents. One of the Change Office key objectives was “Monitoring transformational initiatives, tracking the progress of implementation plans, and continuously assessing the level of performance and quality”. Hence, IT was identified as a major player that could help to change the status quo, which was clearly described as of a bureaucratic nature in the transformation program policy document (2016, p. 7):

We will expand the variety of digital services to reduce delays and cut tedious bureaucracy. We will immediately adopt wide-ranging transparency and accountability reforms and, through the body set up to measure the performance of government agencies, hold them accountable for any shortcomings. We will be transparent and open about our failures as well as our successes and will welcome ideas on how to improve.

Consequently, IT was intended to accelerate and advance the process and increase the efficiency of the organisation. In other words, the use of IT would help in shifting the organisation to an environment based on market logic. However, this change in the temporal arrangements in the organisation does not necessarily mean that state logic was supposed to diminish completely. The dilemma lay in the fact that GovOrg would continue to be a government organisation, which meant that some aspects of state logic would remain fundamental to the organisation’s existence and operations. For example, the source of legitimacy would always come from the government, which is consistent with state logic. However, other aspects, such as measuring performance against outcomes and beneficiary satisfaction with services, implied that GovOrg was taking a step towards a more market logic-based organisation.

This step was enabled through new technology framing with some rearrangements with other external agencies, such as engaging with the newly established National Center for Performance Measurement, Adaa, which was established in October 2015 prior to the launch of the transformation program. Adaa was created to be responsible for institutionalising IT tools that would enable the change agents to achieve their objective of continuous monitoring and reporting internally and externally. In the transformation program policy document (2016, p. 81) this key rule was described as follows:

We adopted the principle of performance measurement and made sure it is properly used in our evaluation of all government agencies, their programs, initiatives and executives. We established the Center for Performance Management of Government Agencies to institutionalize these efforts for the long-term and built performance dashboards to promote accountability and transparency.

Change Agent 1 described some details of the new technology framing that constituted a new organising logic. In particular, the organisation adopted two digital tools, the Watani application and the mystery shopper program:

This is done through several tools such as the mystery shopper, and the Watani application [see Images 5.2 and 5.3], which allow beneficiary to rate the organisation services and give feedback and suggestions, these data are accessed by both us [change agents] and Adaa through real time dashboards.

(Change Agent 1)

For these digital tools to be fully operational, mutual data access and cooperation with other governmental organisations is needed to carry out the processes. Change Agent 1 explains that these data are shown in real time for them, as change agents, who monitor from the internal side of the organisation, and from Adaa, who monitor from

the external side. The change agents prepare reports based on these data, which are then discussed in their scheduled meetings with Adaa according to the periodic meetings and reporting scheme mentioned earlier. The system integration between GovOrg and the related organisations was not a luxury but rather a necessity, but it made the decision-making process more complicated because of the interconnectivity between these different organisations. The transformation program policy document (2016, p. 81) points out this interconnectivity and its potential implications for the decision-making process:

The Kingdom's agencies are currently undergoing a wave of reforms and transformation. To manage this momentum and ensure all efforts are coordinated, we adopted an effective approach to project management and established expert project management offices (PMOs) in the Council of Economic and Development Affairs and many other government agencies. We also set up a central Delivery Unit.

Image 5.2

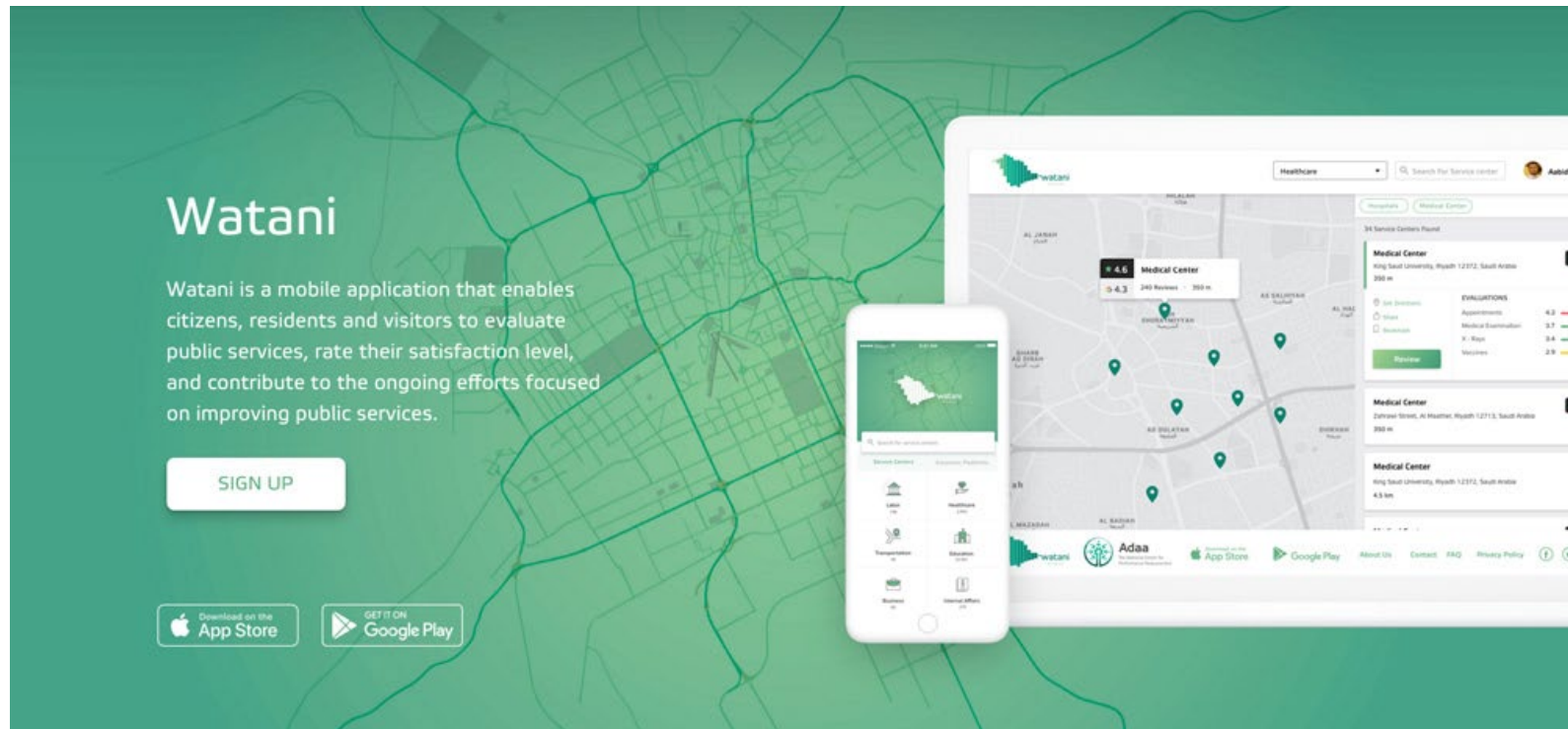
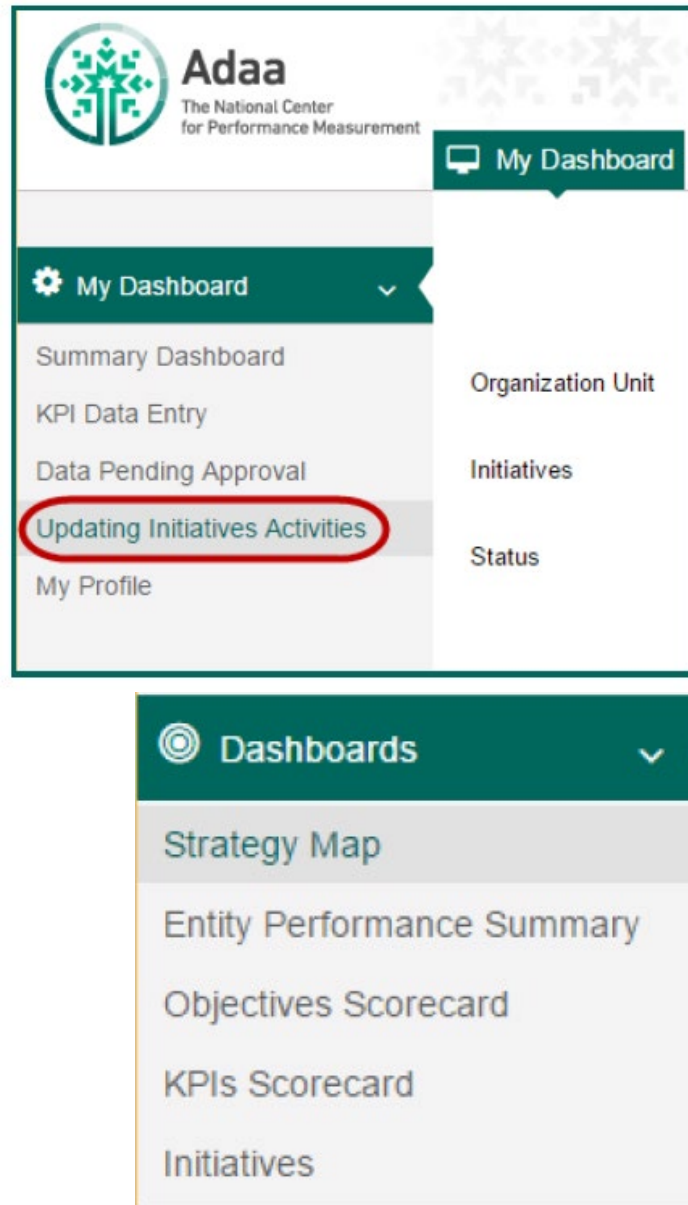
Watani Application

Image 5.3

Watani Application Features

Image 5.4

Screenshots of the Dashboard Used and Updated by Change Agents



5.3.2.1 The electronic procurement system Etimad

As mentioned previously, one feature of GovOrg is that its source of legitimacy stems from the fact that it is governed by a set of pre-existing and established rules and procedures that apply to all governmental organisations in its category. This constitutes a distinguishing feature between the state logic and the market logic that are in opposition in dominating GovOrg's main organising logic. For example, there are pre-existing and established rules and procedures for initiating a project, which involve external proposals. GovOrg follows these rules and procedures and has no hand in changing them. However, to keep pace with the current accelerated change, these rules were modified, implying a significant and necessary shift away from the state logic that focuses on following precise rules and procedures to a more agile one that allows for faster implementation in order to meet the results-based logic (i.e., market logic). Yet, the procedural nature still dominates, but with some modifications that have made these procedures more agile and flexible. This took place through the government's unified electronic procurement system, known as Etimad. Etimad (see Image 5.5) was an essential digital tool that was developed to give a boost to the way government organisations work.

Image 5.5

The Unified Electronic Procurement System Etimad

Etimad is an electronic financial services platform created by ministry of finance in Saudi Arabia to serve around 380 governmental sectors like ministers and civil sectors even private enterprises.

B2B

اعتما
Etimad



Etimad

Specifically, by the end of January 2018, almost a year and a half after the announcement of the transformation program, the old procedure for initiating a project for approval in GovOrg had changed. Employee 7 explained the old procedure before using Etimad, which involved announcing the project in the country's official newspaper *Um AlQura* for exactly 30 days. He pointed out that the delay in projects was a result of this strict and useless procedure that was a relic from the past:

The delays in projects mainly came from following the procedure that made no sense for a long time. (Employee 7)

He further explained:

The newspaper sometimes delays the announcement for 10 or 15 days due to the huge number of announcements they have. So, basically, we are in a real queue to publish the project details. (Employee 7)

When they were fortunate enough to publish the project in the newspaper, they had to wait for 30 days to receive all bids, and could do nothing about the project during this time. However, other complications were also in place. He explained:

If, for example, any mistake happens, for example, if we open the bids before the 30 days are over, we have to cancel the project with the approval of the minister and redo the whole process again, beginning with a new announcement in the newspaper. (Employee 7)

Starting to use the new system for GovOrg was a significant step because this was a major classic procedure that followed very strict governmental rules and was never open to discussion or questioning by employees, although they knew that it was an issue hindering their projects. Employee 7 explained this transition, elaborating on their state logic that prevented them from challenging the status quo:

Our minister knew that the system was an obstacle for us in all projects but never tried to change it. He is not blind, he says this is a government procedure that has always been like this; no one can change it. (Employee 7)

He continued with his surprise at being able to shift to the Etimad system:

And suddenly it changed! I don't know who changed it, I only know that the minister didn't have the authority to change it himself before because this system is not for our ministry only, but it has changed now, not only for us, but it is also for all ministries. (Employee 7)

This new system gives the impression that the strict mode of governance, which is bureaucratic and based on laws, rules and directives as portrayed in the state logic, was

terminated and replaced after a year and a half with the electronic platform that is faster and accelerates the process. The desired results from this were increased effectiveness and efficiency through minimising time needed to get the project published by cancelling the standardised 30 days of announcement and hence cancelling the project queue. Some projects are announced for 10 or 12 days, depending on the size and scope of the project.

However, this was not a straightforward process. It took them a year and a half to adapt to the new norm, during which time the tension increased between the organisational actors who were familiar and comfortable with their old way of doing work and those change agents coming from the divergent culture. Conversations, discussion and confrontations between the two took place. Table 5.2 summarises the key operating temporalities and the technology framing of the distinct actors.

Table 5.2*Key Operating Temporalities and Technology Framing of Main Actors*

Main Actors and Their Organising Logics	Key Operating Temporality (General Summary, Temporal Depth)	Technology Framing and/or Skills (General Summary, Decision-Making Authority, Interconnectivity)
<p>Employees</p> <p>State Logic</p>	<ul style="list-style-type: none"> • Use of Hijri “Islamic” calendar • Long-term orientation • Broad and flexible timeframes • Time is continuous 	<ul style="list-style-type: none"> • Computers are used internally but there is a disconnection between the business processes of the organisation and the beneficiaries • Computers create a false sense of digital transformation for employees • Much confusion between digitisation, digitalisation and digital transformation • Paper forms are filled by beneficiaries’ hand and submitted in person to the employee, who then enters the information in the closed system (i.e., can only be accessed inside the organisation and by its employees) in the computer

<p>Change agents prior to joining the organisation</p> <p>Market Logic</p>	<ul style="list-style-type: none"> • Use of Gregorian “western” calendar, widely used on an international level • Short-term orientation • Specific and fixed timeframes • Time is discrete 	<ul style="list-style-type: none"> • Advanced technologies and levels of automation are in place from early days • Business models are incorporated with technologies through the digital transformation • Dependence on market research for new technology adoption • Use of technologies that are used in their parent companies or their competitors • High level of accountability, traceable and enabled through IT tools
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The change agents came to GovOrg with the goal of transforming the way the organisation worked. In order to do so, they utilised what they are best at, which is technology and digital tools. The new technology framing they instantiated in the organisation was designed to change the business model entirely, which goes beyond reducing the use of paper and automating processes. It focused primarily on the integration between the GovOrg system and other related agencies. In order to make this move workable, the element of continuous monitoring was essential in both directions, both inside and outside the organisation, to allow rapid intervention when needed. This integration of systems was necessary to allow the flow of information between GovOrg and related agencies. Figure 5.4 depicts the technology framing that was instantiated by the change agents and its possible implications. The next part of the findings reviews the interruptions and conflicts that resulted from the above-described institutional complexity, ambitemporality and digital transformation.

Figure 5.4

Technology Framing Instantiated by GovOrg Change Agents

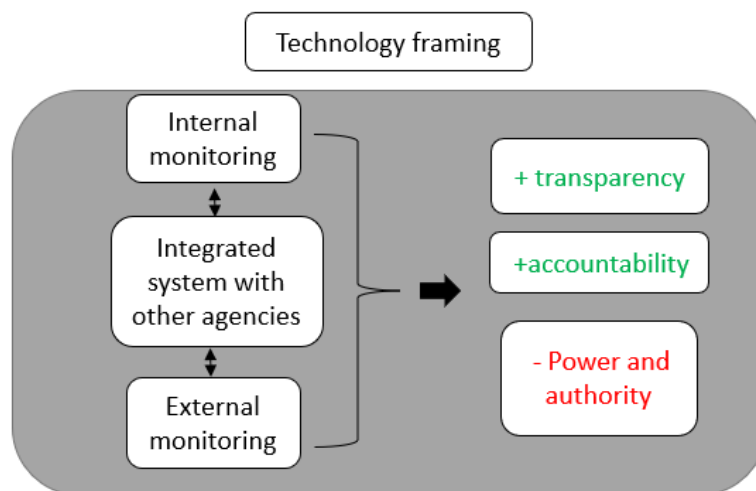


Table 5.3*Summary of the Main Logics within the Organisation*

Main Actors and Their Organising Logics	Organising Principles and Assumptions	Source of Legitimacy	Key Operating Temporality (General Summary, Temporal Depth)	Technology Framing and/or Skills (General Summary, Decision-Making Authority, Interconnectivity)
<p>Employees</p> <p>State Logic</p>	<ul style="list-style-type: none"> • Highly bureaucratic environment in terms of decision-making and changes • Changes in procedures are not allowed; nationwide procedures are followed across the organisations • Absent motive for change due to government processes complexity 	<ul style="list-style-type: none"> • Strict adherence to the government policy directives, rules and regulations • Procedures are preferred over performance 	<ul style="list-style-type: none"> • Use of Hijri “Islamic” calendar • Long-term orientation • Broad and flexible timeframes • Time is continuous 	<ul style="list-style-type: none"> • Computers are used internally but there is a disconnection between the business processes of the organisation and the beneficiaries • Computers create a false sense of digital transformation for employees • Much confusion between digitisation, digitalisation and digital transformation • Paper forms are filled by beneficiaries’ hand and submitted in person to the employee, who then enters the information in the closed system (i.e., can only be accessed inside the organisation and by its employees) in the computer

Change agents prior to joining the organisation	<ul style="list-style-type: none"> • High flexible environment in terms of decision-making and changes 	<ul style="list-style-type: none"> • Loose coupling relationship between the change agents and the organisation 	<ul style="list-style-type: none"> • Use of Gregorian “western” calendar, widely used on an international level 	<ul style="list-style-type: none"> • Advanced technologies and levels of automation are in place from early days
Market Logic	<ul style="list-style-type: none"> • Following the rules and regulations of their international parent companies or their competitors • Operating a subsidiary but in the national context • Strong motive for changing and enhancing due to high competition and changes in the market 	<ul style="list-style-type: none"> • Top position guaranteeing them legitimacy to enforce new rules • External connections with other agencies guaranteeing them flexibility 	<ul style="list-style-type: none"> • Short-term orientation • Specific and fixed timeframes • Time is discrete 	<ul style="list-style-type: none"> • Business models are incorporated with technologies through the digital transformation • Dependence on market research for new technology adoption • Use of technologies that are used in their parent companies or their competitors • High level of accountability, traceable and enabled through IT tools

5.4 Conflicts and Their Key Organising Processes in Institutional Complexity, Ambitemporality and Digital transformation

5.4.1 Sources of Interruptions to Current Organising Logics

The conflict between the opposing perceptions of change and the different temporalities was especially evident when the change agents came back from external meetings, bringing back with them to GovOrg some new rules and decisions. They regularly attended these meetings with related organisations to meet and collectively discuss common issues faced by Change Offices in those organisations. It appeared that these meetings constituted a main trigger for conflicts with employees. Every time the change agents came back and presented the new regulations and decisions to be put into practice, the employees started problematising and challenging different aspects of these decisions. Thus, employees referred to the shortage in capabilities, interruption to already perfectly working ways, and challenges such as senior citizens finding it hard to deal with new ways of service. As stated by Employee 8:

I think the minister himself sometimes is away from reality. He approves projects that serve the Vision goals without acknowledging our scarce capabilities and that leaves us, the implementers, fighting for resources. The result, we approve the project and are held accountable for it while we are in deep fear of falling behind. (Employee 8)

In reference to subjective temporality, the change agents opposed all alleged problematisation by the employees and ironically resorted to subjective temporality in some instances to justify their opposition and the need to act quickly even with minimal capabilities and support among employees. Their main reason was that they thought

employees were not able to imagine the future of work, where the change agents felt they were coming from, because those employees had never experienced that future. Change Agent 1 stated:

The employees are not used to this. They used to finish the work whenever they finished. They did not use to have clear specific deadlines for the tasks. The nature of work was easy-going in the government, relaxed mode mostly. (Change Agent 1)

Therefore, employees' inability to reflect on that future is justifiable because their current judgments regarding the changes were based on their current experience. Change agents argued that employees did not understand what this transformation was fully about because of their limited exposure to such environments. Change Agent 5 said:

People here tend to mix terms [about digital transformation] and use them interchangeably, which is not precisely right. (Change Agent 5)

He further explained the importance of bringing everyone onto the same page about what digital transformation in GovOrg is about:

Digitisation, digitalisation and digital transformation are related terms but at the same time differ significantly. While digitisation, digitalisation are important, what really matters to us is to achieve digital transformation. (Change Agent 5)

Some department heads frequently proposed taking more time to understand employees' concerns and to prepare them for the change, although they could not specify for how long, advocating for subjective temporality. Change agents, on the other hand, insisted on continuing with the plan, reinforcing their objective temporality. They emphasised the importance of adhering to the calendar and resisted compromising their imposed deadlines. Change agents justified this adherence as it was not their choice because they

were to be held accountable in front of all other sister organisations, as well as the collective responsibility they felt towards others. Change Agent 1 explained this as follows:

You are being watched, you are being held accountable by the officials and by the public, your customers, by you and others. Your goals are published in the official Vision 2030, so you cannot hide anymore; your deadline is ahead of you and your goals are in front of everyone. You've got to fix your problems and move on. (Change Agent 1)

The change agents insisted on sticking to the timeframe they had established and to the objective temporality they represented. Change Agent 1 compared what they were doing to a juggling act in the circus. He said:

You want to balance all the dishes you have, and make sure none get crashed. You are required urgently and immediately to participate in the Vision Realization Programs and its targets. At the same time, you have to provide quick service to your customers to get some acknowledgement and credit by your customers. At the same time, you also have to reorganise and rearrange your interior house, your own organisation. (Change Agent 1)

The interruption to the current organising logics can be divided into three categories: strategic, technical and sociocultural (see Table 5.4), from which the conflicts in GovOrg resulted. While the strategic and technical layers are where the interruptions themselves occurred, the impact of these interruptions manifested as conflicts at the sociocultural level.

Table 5.4*Key Layers of Interruptions and Their Description*

Key Layers of Interruptions	Description
Strategic	The more general factor that constitutes the umbrella of the program under which the other factors fall
Technical	The tools in which the program can be monitored and restricted
Sociocultural	Where all these factors meet and the chaos and conflicts resulting from them occur

5.4.1.1 Strategic interruptions to GovOrg ecosystem

As seen previously, the preparation for the transformation program that took place prior to the official launch in April 2016 involved many interruptions to GovOrg's ecosystem. For example, new supporting government entities were established, which would have particular roles in guiding and helping GovOrg (and other participating organisations) in achieving their goals and transformation to the desired future. Some entities were emerged and/or restructured, as shown in Figure 5.2. At this level, other decisions were made regarding new practices, such as new meetings and reporting schemes. The change agents established an internal periodic meeting scheme and were keen to align it with the external meeting scheme that they already had with the related external agencies, such as Adaa. Table 5.5 summarises the established periodic meeting and reporting scheme in GovOrg.

Table 5.5*New Periodic Meeting and Reporting Scheme*

	Meetings	Reports	
Weekly	<ul style="list-style-type: none"> Weekly follow-up meetings that involve VRO and the initiative owner from the concerned departments for each initiative (project) Weekly meetings to evaluate the current risks and challenges facing the implementation of the project 	<ul style="list-style-type: none"> Update of workflow according to the detailed plan Update of risk and challenges records 	Internal
Monthly	<ul style="list-style-type: none"> Meeting with the Minister Meeting with the VROs from sister agencies to discuss performance and obstacles in their shared responsibilities 	<ul style="list-style-type: none"> Internal monthly report for the organisation use Pushing achievement and overcoming obstacles report Organisation monthly report for external use 	Internal and external
Quarterly	<ul style="list-style-type: none"> Internal quarterly meeting Quarterly meeting with the external monitoring agency to discuss performance 	<ul style="list-style-type: none"> Internal quarterly report Organisation quarterly report 	External

5.4.1.2 Technological interruption to the mode of governance of the logic

To allow the transition from sovereign bureaucratic governance based on laws, rules and directives towards customer-centric, efficient and effective systems, technology was exploited. The use of technology would influence this contractual governance to one based on objectives/targets, results, performance measures and management tools in a competitive environment. As seen previously, GovOrg's transformation process was governed and audited by higher outside agencies, such as the Council of Economic and Development Affairs (CEDA). For this purpose, CEDA established the National Center for Performance Measurement, Adaa, to be its external monitoring eye. This, along with the imposed bounded timeframe for the transformation, created a crucial need for the organisation to find more effective technical solutions and to embrace an active role for technology that would contribute to monitoring the progress and increase accountability inside the organisation. So, they started imposing the use of digital tools such as dashboards and scorecards, along with other business activity measurements such as key performance indicators (KPIs). As explained by Change Agent 1:

This system was introduced as a solution to a business problem. Previously, before we implemented the system, we could not keep an accurate record of how many cases a particular employee handled. (Change Agent 1)

He added:

They used to take much more time than what the cases require. We were not able to monitor their performance accurately, but now, I have these specific KPIs and specific SLAs [service-level agreements], bringing on this system helps me in tracking and therefore specifying a specific time or number of days for finish a specific task. (Change Agent 1)

The National Digitisation Unit (NDU) representative, who worked closely with all Change Offices across the participating organisations, including GovOrg, noted:

The Integrated e-Government Program is an essential pillar for the national digital transformation strategy leading to smart government, but it needs joint efforts and coordination between the governmental organisations. This cannot be done without the optimal usage of ICT and the simplification and streamlining of government-related procedures and systems. (NDU Representative)

5.4.1.3 Sociocultural impact on the organising rhythm in GovOrg

As shown in previous sections, the Change Office mainly recruited change agents from the private sector. Change Agent 1 talked about the differences between working in the private sector and in a government organisation:

The private sector has more pressure, it is mostly a money-driven sector. In government it is the opposite: I am the government, I am the one who spends, I am the one who invests in people. (Change Agent 1)

He added:

The private sector is not capable of giving opportunities to unproductive people.

The government, as opposed to that, has the capacity for that and maybe that is what created the relaxed mode of culture in the government. (Change Agent 1)

Although change agents officially became part of the organisation, they were always treated by employees as outsiders and as a special group inside the organisation. They represented a specific cultural background that symbolised a divergence from the common culture within the organisation. Change Agent 4 said:

The government culture is very different. Part of the Vision as I see it is to change this culture. It is very difficult to change those people suddenly from the government relaxed mode to more productive employees. (Change Agent 4)

He added:

I am not saying that all government employees are in relaxed mode, not at all, there are very enthusiastic and productive people – but let us say it, not like the private sector. (Change Agent 4)

The establishment of the Change Office was not a choice made by the organisation but was a mandate imposed by the change agenda. The change agents' role, power and association with other sister organisations outside their organisation were all specified in the official guidelines imposed on the organisation in order to align all Change Offices in all organisations to work collaboratively. These constituted a sociocultural interruption to the organising rhythm in GovOrg, triggered by the creation of this new social order which represented the future. Employee 13 talked about the disengagement between the employees and the change agents:

When they [the Change Office] first came, they said they will be involving all organisational units and employees. The Change Office should be small in size and not perform repetitive tasks within the organisation. Work with a clear and specific agenda, and recruit dedicated, full-time staff and attract high-potential talent from both the public and private sectors. (Employee 13)

The office position at the top of the hierarchy, reporting to the minister, and at the same time reporting directly to external entities who are responsible for the comprehensive country-wide reforms program, was a distinct feature exclusive to them. This put the Change Office in a powerful position not only to impose and request, but also to recruit

the human resources they needed or wanted. They had full authority to bring more outsiders into the organisation because they felt these outsiders from the private sector were faster and more helpful in implementing the initiatives. Change Agent 2 emphasised the necessity for these outsiders to help GovOrg in its transformation. He said:

Since the announcement of the Vision, the organisations knew that they need rapid intervention and help. The pressure is huge, and who would be better in dealing with pressure than the private sector? [...] I came from Microsoft with a good technology background to help in the digital transformation. (Change Agent 2)

However, he elaborated on the importance of the local expertise of GovOrg as well in the transformation:

Of course, I could not move forward with a team that is fully outsiders; we needed the old people, our colleagues who worked here for so long. They know a lot and we needed them in order to reorganise. (Change Agent 2)

Change Agent 4 also emphasised this common feature change agents shared as being skilful outsiders as a crucial factor in this transformation process:

I came from the private sector. As you may know, with the Vision, the government recruited a huge number of private sector professionals in most ministries. [...] I believe part of this movement was to change the culture and mentality to be more like the private sector in a shorter time. (Change Agent 4)

5.4.2 Key Conflicts Occurring from Interruptions to the Existing Logic

This continuous confrontation and disengagement between the change agents representing the future and the employees clinging to the past caused several conflicts to

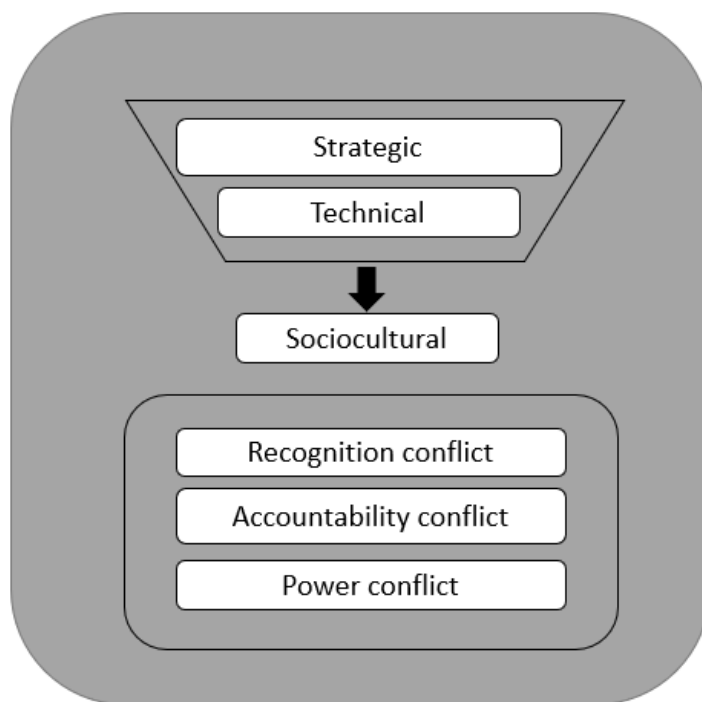
occur, and increased the level of tension around the new decisions and practices.

Although official documents clearly stated that “[T]he Change Office does not add an additional administrative layer between departments and the CEO” (VRO Policy Document, 2018), it can be seen that it eventually did. Their establishment not only added an additional layer but also marked a separation from the past, which was apparent through the constant comparison made by the employees between the past and the current practices emphasising their continuous conflict and problems with the change agents.

Figure 5.5 shows the main conflicts captured during this research (the transformation program has still not been completely realised).

Figure 5.5

Key Layers of Interruptions and the Conflicts Resulting from Them



One conflict was that of recognition, which occurred because the employees disapproved of the idea of change agents specifying an initiative owner. To them, this practice meant the initiative owner was the one taking the credit for their work. The increased accountability that was on the change agents shoulders' led to them ignoring the insiders and showing a lack of recognition for their work. The employees, who were part of the team but were not the main responsible personnel whose names appeared on the dashboard, felt ignored and used. Employee 11 brought up this issue by stating:

I have been working closely with the VRO, I mean they dealt a lot with me. They require me to submit data, they require me to help them in putting the strategies, but at the end my name will not appear, and I will get no reward, so why should I do that? Wasting my time for nothing while the credit goes to the initiative owner.
(Employee 11)

The resistance to, and disapproval of, the Change Office was evident. Employee 9 recalled his problem with change agents, saying they lacked the awareness and experience needed for government work because of their identity as outsiders:

My problem with VRO people in general is that these are young people mostly, and they come from outside the ministry. Therefore, they do not really understand how we operate and then they request unrealistic things. They live in a pink world. They use theoretical concepts that don't apply to my real-life obstacles and problems. (Employee 9)

Another employee, Employee 3, referred to the lack of capabilities compared to where the change agents had come from, as well as referring to the lack of credit he got from

them, He also thought of the transformation as involving extra work that he did not have to deal with. He noted:

The VRO wastes my time with their continuous requests regardless of the fact that my IT system is sterile. In addition to that, this is extra work that is not part of my job and still I am required to do it and cooperate, I am not paid for this. They take my time that I should use focusing on my project to supply them with data I do not have and data that I even need more time to collect. (Employee 3)

This employee was hiding behind the blanket of subjective temporality, pointing out that this transformation could not be done within the given timeframe by saying:

I can't keep a record of the data without having a system like in the private sector. I am bored with their continuous endless requests and forms. This is the accumulation of years, can't be suddenly organised. It needs a long-term plan. (Employee 3)

Although at the beginning, most initiative owners were from the Change Office, the Change Office gradually started to diffuse this role to others (i.e., to employees) in an attempt to resolve this conflict. However, another conflict subsequently occurred which was related to accountability. This conflict occurred when employees were appointed as initiative owners of some initiatives. Being an initiative owner meant that the employee was specified as being held accountable. The employee was treated as a project manager but without that title.

As seen in previous sections, time has always been an important factor in change programs in general, but in this case, it was a crucial issue because of the timeframe and the collective responsibility of many public organisations towards this timeframe. The combination of working according to a specific timeframe and taking part in a

comprehensive program requiring the collective effort of many organisations contributed to an increase in tension inside the organisation because of accountability towards both beneficiaries and other organisations participating in the change agenda. Such accountability belongs to the market logic mode of governance, which is a contractual governance based on monitoring specific objectives and targets, and achieving results through the use of performance measures and management tools in a competitive environment. Employee 14 explained this interconnectivity between change agents in GovOrg and other related organisations, which led to increased accountability and hence created this conflict and tension between the change agents and the employees:

Most ministries have VRO, which I would say an entity or department [...] I mean the Vision programs themselves could be shared by multiple ministries to achieve the goal of that program. (Employee 14)

Change Agent 5 elaborated on this idea of imposed accountability, which was facilitated through imposing collective goals on them and the interconnectivity between change agents in GovOrg and the other related organisations:

The goal can be shared between multiple ministries, but the initiatives are mostly owned by one ministry. The goals are actually imposed on us, we don't set them, but the initiatives are ours. We come up with them to achieve that goal or to achieve the part of the goal that belong to us. (Change Agent 5)

The third conflict captured by this research was a power conflict. This conflict occurred as the power and authority of employees were reduced by the change agents. As shown in previous sections, one of GovOrg's ambitions was to change the status quo by reducing the well-established red tape through the electronic transformation of operations. The goal was to transform GovOrg from its slow, bureaucratic work mode to

a fast environment where progress could be continuously monitored and evaluated, and where intervention could occur as needed. As this was done, and particularly, as procedures were automated and human intervention eliminated through the use of digital technologies, a power conflict was born. Employees had used their power to provide faster services to their relatives and friends in order to take credit and receive appreciation; it was normal in government organisations to provide such favours because of the employee's position and vital role in the process. The reduction of many procedures and the monitoring of progress meant that these powers were taken away. Change Agent 1 explained this issue when talking about the resistance they faced and its reasons. He said:

Resistance has many reasons not only usual things such as age and computer experience but there are deeper reasons, I did not want to mention this but imagine that I am a senior official in such an important government organisation, and you know our community, people would need my favours a lot, and they would appreciate me. With implementing this system, you are taking away some authorities and advantages of being here. (Change Agent 1)

The following section shows the main organising processes used by the change agents to mitigate the conflicts they encountered with the employees.

5.4.3 Key Organising Processes Enabling the Coexistence of Different Logics and Temporalities

The ongoing disagreement between employees and change agents regarding the new ways of working was still a dominant force. The change agents were aware that they needed to mitigate these issues and the resulting conflicts in order to achieve the goals of

the transformation, although, as Change Agent 1 pointed out, this was not their responsibility:

I don't think we are [VROs] by book required to be deal with resistance. There should be another department responsible for selling the idea of the transformation and listening to the employees' issues, but we don't have it yet.
(Change Agent 1)

However, he thought they would have to deal with these issues to be able to continue with their mission of transformation:

We try to sell the value, though. But I think my main goal is to make sure that I am moving forward with the project to meet the deadline and within the project budget... I know that the change will be a problem. So I try to be proactive to fix it. (Change Agent 1)

By focusing attention on the ways in which the two groups began working together, I have identified three processes that allowed them to coexist although they continued to be influenced by different institutional logics and guided by different temporalities. These processes are derived from the same sources of interruptions that caused the conflict to arise in the sociocultural level, namely, strategic and technological processes.

5.4.3.1 Strategic clarity: Engaging employees in the strategic activity of GovOrg

For the employees, even talking about the new strategy and new strategic directions and goals of the organisation constituted a new norm. Employees used to be very detached and separated from any strategic conversation in the organisation. With state logic still dominating, this also affected their perspective on strategy. Less emphasis on details and

missing specific links of strategy to daily activities was associated with the strategy in this logic, which resulted in strategic ambiguity for employees. Change Agent 2 described this situation of strategic ambiguity that dominated the organisation as follows:

The strategy used to be a typical five-year plan document, which is very vague and very general, which is stored in the drawer, and taken out at the end of each year, in order to change the date stamp and present it to get the yearly budget approved by the government. It was more of a requirement for budget purposes than a necessity to work with. (Change Agent 2)

Contradictorily, employees actually seemed to enjoy this strategic ambiguity as it protected them from being held accountable for specific outcomes. For them, a threat was posed by the emphasis on details and the linking of strategy to practice through the mapping of each project to a specific initiative, in turn mapped to a particular Vision program. Employee 7 explained his dissatisfaction with the new direction GovOrg was taking:

Working and reporting to many entities at the same time is distracting, you work with the ministry of finance, the ministry of planning, the IT and communication, etc. [...] Your activities are interrelated with them, and this is a headache. If it was only inside GovOrg, it would be easier, but with the comprehensive thing, the escalation level is more and riskier. (Employee 7)

On the other side, the change agents, who were used to strategic clarity, could not work with that level of strategic ambiguity. To them, working by the book and the precise mapping of strategy to goals was their norm according to their market logic. However, they still understood that this was not the case in government, as Change Agent 5 stated:

The whole idea of the Vision and its initiatives and the projects is not something government employees are familiar with. (Change Agent 5)

As such, change agents started to push the employees towards strategic clarity as, in their view, it was an essential factor for success. This was largely because the change agents were primarily responsible for building the organisational plans that constituted the building blocks of the Vision Realisation Programs (VRPs), which in turn, served the Vision. Change Agent 4 described the significance of strategic clarity in their transformation journey as follows:

We have the strategic goals and then we come up with initiatives that serve that goal. Right? Then for each initiative, we come up with programs. For each program, we come up with several projects that need to be implemented. So now we got a strategic general goal to be achieved through certain steps. These steps are the initiatives. (Change Agent 4)

He elaborated on the time issue, stating that strategic clarity correlated with saving time and adhering to the timeframe:

These specific details will save time and help me to decide from where I have to start and help me to build more reliable and precise initiatives that achieve the goals. (Change Agent 4)

Building on the important connection between the strategic goals and core values of the new organising logic desired for GovOrg, as well as linking it to external monitoring, Change Agent 2 stated:

As VRO, we need to supervise this whole process and make sure that any initiated project is in alignment with the initiatives and that it participates in achieving the goals because at the end, Adaa will question the VRO. They will

come and request the list of initiatives we proposed to achieve the goal, and then we will be held accountable for them. (Change Agent 2)

It became obvious through making the precise mapping of GovOrg's new initiatives to the strategic goals visible to employees. This strategic direction started influencing the logic vision, mission and decision-making in the organisation. For example, change agents took the responsibility of explaining to employees the vital collaborative role GovOrg played in achieving the country-wide vision. Figure 5.6 was taken from a presentation the change agents organised in this effort. This presentation, along other workshops, was conducted as a way to increase the visibility of the strategy and the strategic direction of GovOrg. Figure 5.6, for example, shows how the connection between the organisation goals and initiatives constitutes the base for the Vision.

Figure 5.6

Intersectionality of GovOrg's Organisational Goals and Responsibilities with Its Sister Agencies



However, when the change agents involved employees in the meetings, they still used tools that were completely unfamiliar to employees. For example, some of the tools they used in the phases of planning and analysing for reengineering the processes included Issue Tree, Cause and Effect Analysis, Sufficiency Analysis, Value Chain Analysis and Trajectories based on different scenarios, which caused some discomfort among employees. As Employee 4, a team leader, explained:

Those people come from another world, they talk about things like KPIs (key performance indicators) and Output Indicator and expect my employees to speak that language? You request thing from government employees which you consider basics and common sense and keep me suffering with my employees? They don't know what KPI is, and even if I translate that term to the Arabic word, they still don't understand the meaning. (Employee 4)

He went on to elaborate on the gap between the two groups:

These are traditional people who have no clue about these concepts. Don't come with your private sector culture and expect the government to accept it. In this case, I need to employ people from the private sector in order to be able to extract these from them. (Employee 4)

5.4.3.2 Expanded technological utilisation

To be able to implement the plan, map the initiatives to the strategy, monitor their progress and take corrective steps when they needed to stay within temporal boundaries, the change agents had to utilise digital technologies. It has been observed from the previous section of the findings that the change agents had been granted more power through positioning them at the top of the hierarchy compared to employees, which to

some extent, gave the change agents the upper hand in influencing the process. Despite this unequal distribution of power, it was noticeable that the change agents still engaged in some activities that indicated their acknowledgement of the existence of another temporality and its influence on how employees reacted. Particularly, when change agents needed a truce from the ongoing conflict with employees, they utilised the subjective temporality to dissipate employees' doubts and objections over the timeframe against the goals. For example, although change agents tended to schedule all activities in a very precise way, with the help of objective temporality tools such as calendars and IT planning and following up of artefacts, they still resorted to subjective temporality when they faced absolute resistance from employees.

At the same time, the employees also found a way to pass their subjective temporality when faced with the rigour of objective temporality through its static temporal boundaries. They knew that having less power in influencing the change process meant they needed to develop an alternative approach to beat this rigorousness while avoiding further conflict. So, for example, when they finished more tasks than had been determined by a specific deadline, they only submitted what was required. A main reason for this was related to the reward and punishment system empowered by the traffic light system of the dashboard for the following up of project milestones.

This system treats the temporal boundaries of activities through only three levels: green indicating being on schedule, yellow indicating a slight delay that requires escalation, and red indicating a significant delay that requires major escalation and reporting. The employees who were forced into this rigorous system found that they could cheat the system by using any slack time they had to their advantage; they

benefitted from the fact that the change agents were outsiders who could not fully assess the time needed to complete specific tasks. Employee 6 explained this as follows:

The problem is that the plan was distributed over time. They [VRO] would come at the end of the day asking, “What have you achieved up to this date?” or “What have you accomplished?” So what I do sometimes, if I am a little bit ahead of the plan, I don’t give them the result that I have actually achieved; I give them a lower result. I leave something for next week or month, because they are pushing me to achieve a goal, and I am faced with a system that is pushing me back, you push me forward and the [procurement] system complications push me backward... Asking me for tasks in a certain period of time without knowing what could affect these dates is nonsense. (Employee 6)

5.5 Conclusion

Although change agents seemed to have the upper hand in this whole story, with all the power and support they needed, they still, in some instances, enacted aspects of subjective temporality, for example, reinforcing the importance of getting things done and get out the system for use by employees and customers even with the minimal capabilities to be able to get feedback and suggestions to refine it. They constantly supported this approach of testing the system by users because they were used to it in the market logic-based organisations they came from. They were also eager to conduct guiding workshops for employees to help them in using the new system in parallel with working on changing the system. This parallel mode also supports some aspects of subjective temporality.

Chapter 6: Discussion

6.1 Introduction

The extant studies on different temporalities and multiple logics in organisations vary in their conclusions with regard to positive and negative effects on organisations. While some studies have shown that multiple logics can be destructive to organisations, causing tensions and conflicts that can eventually lead to the failure of the organisation (Tracey et al., 2011; Battilana and Dorado, 2010), others have shown that the multiplicity of logics can be beneficial to organisations, helping them to respond to externally posed challenges and eventually leading them to be adaptive and more innovative (Jay, 2013).

Therefore, an overarching aim of this research was to inductively explore this phenomenon of contested institutional logics manifested in organisational functioning and change in the conditions of ambitemporality, the notion that Reinecke and Ansari (2015) have proposed to describe the situation that organisations fall into when multiple temporalities are enacted within the organisation, or more specifically, “where organisations accommodate seemingly contradictory temporal orientations” (Reinecke and Ansari, 2015, p. 620). Shedding light on the different temporalities associated with different logics in cases of organisational change that claims to be empowered by digital technologies as the role of time might explain how and why actors act and react in certain ways, causing specific conflicts to take place, and hence also causing actors to utilise specific processes to deal with these conflicts. To do so, this study addressed two research questions:

- How do different temporalities coexist and interplay in organisations undergoing digital transformation and institutional complexity?

- What types of conflicts and resolution processes are used in organisations undergoing digital transformation and institutional complexity?

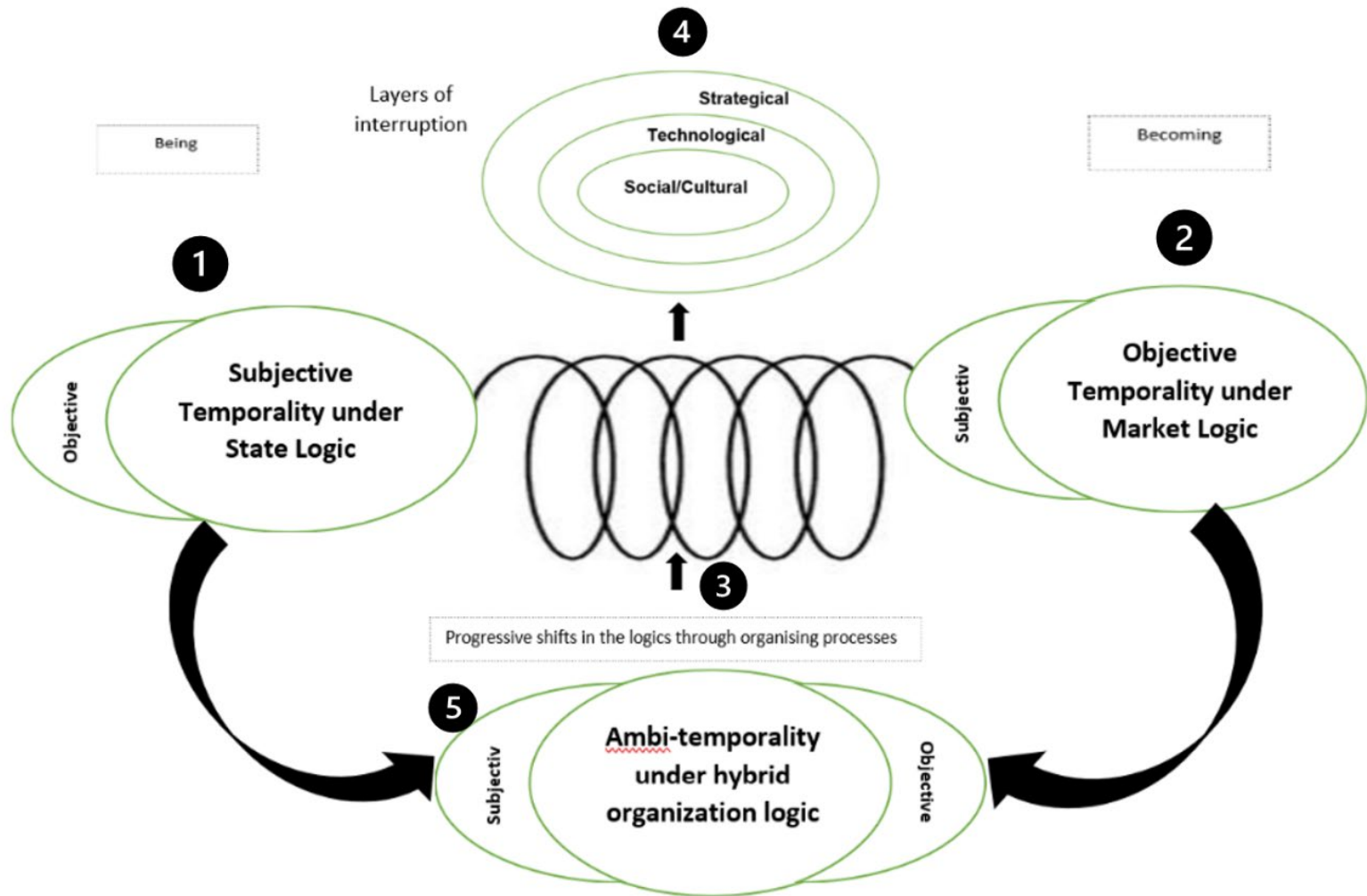
This research focused on the actions and reactions of employees and change agents by comparing these actions to what is expected from actors operating according to the dominant logic (state logic) and the emerging logic (market logic) in the organisation. Through a micro-level focus, the aim to unpack the contesting logics found within the organisation determined that state logic was associated with employees and market logic with change agents. I looked at these logics by analysing their characteristics, which were previously identified in the literature, and used these as a basis to compare different logics, such as different organising principles and sources of legitimacy (Thornton and Ocasio, 2008). To connect these contesting logics to the situation of ambitemporality, the underlying temporality of each contesting logic was also added as an identifier for comparison. In addition, and because this transformation was IT-enabled, the IT component and digital tools used in facilitating this transition from one logic to another had to be considered also.

The existence of these contested logics in the organisation was seen to have an impact in three layers of interruptions identified in this research. Of these three layers, two (the strategic layer and technological layer) are where the conflicts started to accumulate and take shape. As such, I considered these layers as sources of interruption to the existing logic of the organisation. The third layer, the sociocultural layer, consisted of the impact or the result of strategical and technological decisions made and directions taken in the other two layers, and caused this interruption. Only through the sociocultural layer can the contesting logics and the competition over dominating the organisation be

realised. Through examining the interactions of the two groups of actors, who each represent a distinct logic, I was able to identify key conflicts that threatened the smooth transition between logics and the achievement of the transformation. These key conflicts, which were an accumulation of the decisions made in the other two layers, are the accountability conflict, the recognition conflict, and the power conflict.

Based on the findings, I propose a process model of the subjective–objective temporalities dialectic (*Figure 6.1*). The model underlines two opposing logics in organisational change setting, recognising the hegemony of the subjective temporality for employees who have been forcibly moved by the objective temporality champions. The model illustrates the organisation’s journey from being to becoming, or as Tsoukas and Chia (2002) conceptualise, the organisation as “an emergent property of change” (p. 570). This conceptualisation underpinning the model treats the organisation as an emergent social structure that is continuously changing and being enacted by actors (Tsoukas and Chia, 2002). According to this conceptualisation, organisational change can be seen as an “ongoing process” (Tsoukas and Chia 2002, p. 569) that requires actors’ continuous enactment and sensemaking efforts, i.e., “a performance enacted in time” (p. 572) and a “temporarily structured state that is constantly in the processes of construction and reconstruction” (Hernes and Weik, 2007, p. 260).

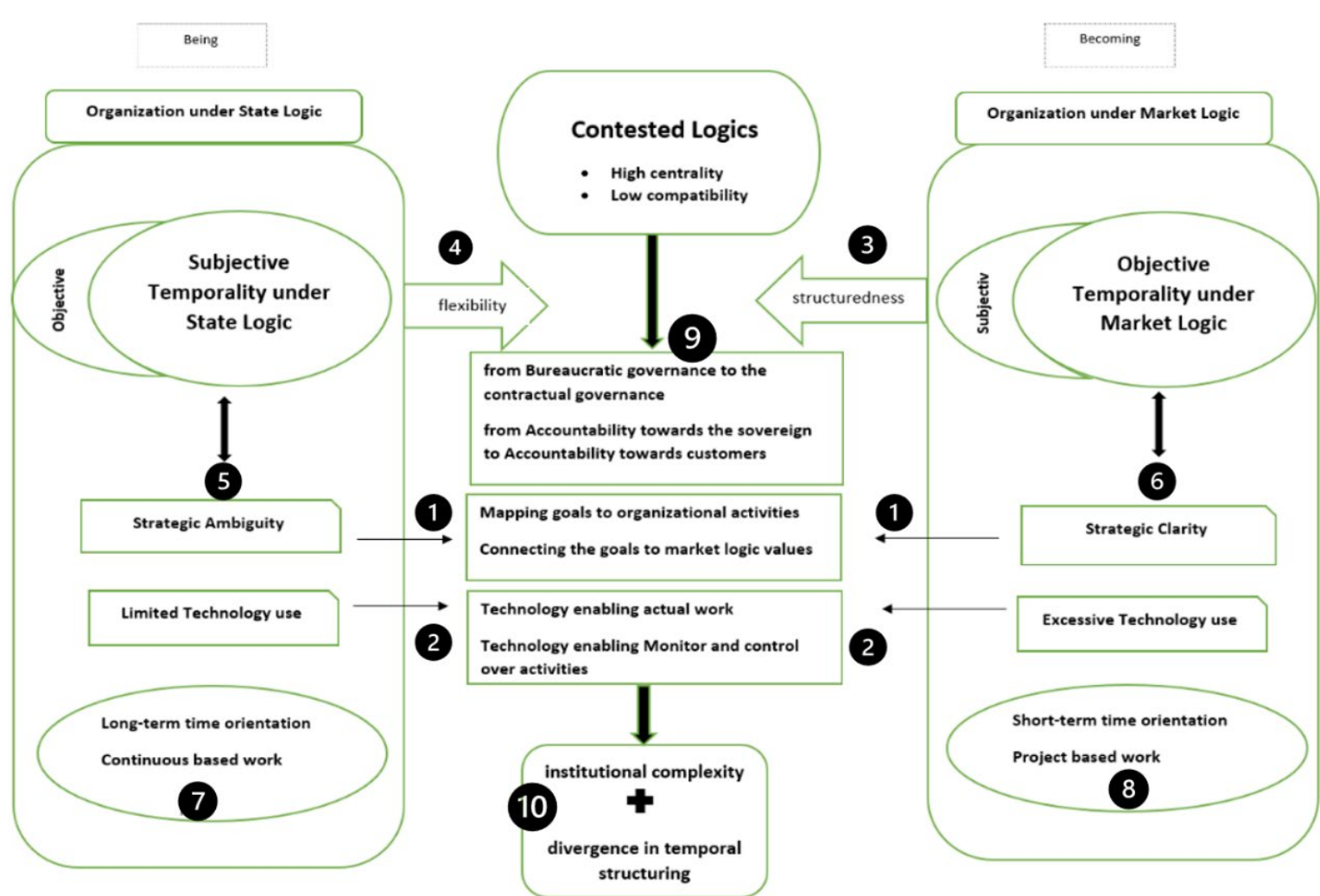
Figure 6.1 *Process Model of the Subjective–Objective Temporalities Dialectic*



Through this journey, the organisational actors prior to the imposition of the transformation agenda on them, enacted their activities using the subjective temporality as the dominant conception of time under state logic. During this period, the objective temporality existed, but only in the background. This coexistence and dominance of the subjective temporality can be seen c in *number 1*. The change agents came as *institutional entrepreneurs* and immediately started creating new temporal structures (Reinecke and Ansari, 2015), which were future-oriented as opposed to what already existed in the organisation. Yet, they were not able to completely eliminate the subjective temporality, so they tried to push it back to the background and focused on advocating for the objective temporality. This can be seen on the right-hand side of the model in *number 2*. They wanted to influence the organisation's balance with the use of processes they had acquired through the position and support they had. These processes can be seen in the middle of the model in *number 3*. These processes were supported by a combination of strategic powers and influence, in addition to the technological superiority they possessed over organisational actors as can be seen in the middle upper hand side of the model in *number 4*. As such, these processes were used to facilitate the transition of the organisation from being dominated by one logic to reach a balanced situation where both temporalities exist and the organisation function under a hybrid logic that combines characteristics of the two logics. This can be depicted in the middle lower hand side of the model in *number 5*. To summarise and highlight these organisational processes that were used in the transition and based on the findings from this study, I propose another model for organising with institutional complexity in a situation of ambitemporality (*Figure 6.2*).

Figure 6.2

Model for Organising with Institutional Complexity in a Situation of Ambitemporality



As Figure 6.2 illustrates, two processes from the strategic level were essential to the building of new temporal structures by the change agents. First, they started by identifying the strategic goals and mapping them to the organisational activities. Second, they connected the goals to the values of market logics through KPIs and other strategic planning and monitoring tools. These processes can be seen in the middle of the model in number 1. To reinforce these new temporal structures in the making, and sustain their existence in the organisation, the change agents utilised technological processes to control the current activities that are present-oriented. As a second step, two technological processes were essential to reinforce and sustain these temporal structures in the organisation. First, they utilised technology enabling the actual work of the organisation (e.g., new systems that automated the work done by employees and eliminated unnecessary paperwork). Second, they utilised technology enabling the monitoring and control over the progress of the employees' activities (e.g., dashboards and scorecards). These processes can be seen in the middle of the model in number 2. Both of these types of technology utilisation were essential and in a relationship of mutual dependence to make sure that the employees were functioning according to the new strategic options and that decisions were made and monitored according to the predefined specific timeframe.

Drawing on previous literature on time in organisations, it is known that time has long been linked to performance in the workplace; it often constrains activities against specific units of time (Nicholson, 2019) which supports the objective temporality that dominates western societies and organisations (Jones, 1990; Clark, 1985). Imposing these objective temporality tools on the major activities contributes to strengthening Zerubavel's (1985) suggestion to add some structure and order to the sociocultural aspect of actors' lives as can be seen in *number 3* in

the model. However, rethinking performance itself in contemporary organisations today, some theorists suggest that performance cannot be solely linked to objective time but is also related to subjective time (Whipp et al., 2002), mainly because it adds the element of flexibility to the rigid nature of time which is depicted in *number 4* in the model.

Resistance to altering the temporal orientation of the organisation was expected, although this resistance was not evident at the beginning because the employees did not fully utilise their understanding of the implications of the strategic options and decisions made by the change agents and upper management in the first step. It can be said that they were still enjoying the strategic ambiguity that dominated the organisation under the state logic and its underlying subjective temporality that can be depicted in *number 5* at the left-hand side of the model. However, this started to change when technology was introduced into the process, mandating these strategic options and decisions which caused a more strategic clarity to appear in the organisation under the market logic and its underlying objective temporality that can be depicted in *number 6* at the right-hand side of the model.

Only at that time did conflicts start to appear more clearly, and the temporal orientation of the organisation started to shift from the long-term time orientation and the continuous based work as appears in *number 7* at the left-hand side of the model to a short-term time orientation and the project-based work as appears in *number 8* at the right hand side of the model. As time went on, and as mandates increased and covered more and more of the employees' activities and outcomes, conflicts increased and became more prominent at the sociocultural level, where both groups of actors engaged in covert actions to enable expedient temporal settlements with the two logics contesting in a competition to shift from the bureaucratic governance towards contractual

governance and from accountability towards the sovereign to accountability towards customers (*number 9* in the middle of the model).

The model (*Figure 6.2*) shows that when the change process was initiated, the objective temporality was pulled from the background (left hand side of the model) and brought to the forefront more clearly and aggressively by the change agents with the help of the IT tools they used in market logic-oriented situations, thereby causing subjective temporality to be contested and dwarfed (right hand side of the model). With the continuous conflict between the two groups enacting contested temporalities and wanting to operate according to their familiar logics, they engaged in some role-exchanging activities where proponents of objective temporality resorted to the use of some subjective temporality practices, while proponents of subjective temporality, knowing that their temporality was no longer dominant, tried to cheat the system by passing their temporality practices through the tools of the dominant temporality, the organisation was found in a institutional complexity situation with divergence in the temporal structuring (*number 10*). The two models are indeed relating to each other. Essentially, this model (*Figure 6.2*) takes the two main elements from the previous model (*Figure 6.1*) which are the subjective temporality under state logic and the objective temporality under the market logic and analyse the processes that take place between them (*number 3* in *Figure 6.1*).

6.2 Theoretical Contributions

The findings of this research and the proposed models make several contributions to studies on institutional logics, temporality and digital transformations, specifically within public or governmental organisations.

6.2.1 Contributions to Research on Institutional Logics

Logics guide actors' actions and behaviours, as noted by Thornton and Ocasio (2008), who explain that "institutional logics shape rational, mindful behaviour, and individual and organisational actors have some hand in shaping and changing institutional logics" (p. 100). At the same time, actors have some influence over how these logics are constituted and developed within their organisations. This "mutually constitutive relationship between logics and action," as Besharov and Smith (2014, p. 366) call it, can be facilitated through the processes actors utilise. In this research, it has been shown that change agents, who were specially selected for the transformation mission, seem to be faster and more present-oriented. This is in line with and typical of what Bakker and Janowicz-Panjaitan (2009) describe for people who work in projects as an example of temporary organisations. The Change Office could be considered a temporary organisation inside the organisation, having its own values and mission, empowered by its hierarchical position. Although the employees recognised some benefits of the norms brought by the change agents as positive, they were still denying, either intentionally or unintentionally, that this positive progress was made by the change agents, and kept challenging their roles and existence.

6.2.1.1 Contributions to Institutional Complexity Studies

In this study, two logics and their underlying temporalities were analysed borrowing some elements from Besharov and Smith's (2014) framework on multiplicity of logics and the

change in their instantiations over time. Looking at the characteristics of the two highlighted logics in this study, these logics can be classified as contested logics which create extensive conflict because they fulfil two conditions. First, the two logics have low compatibility with each other, which means they provide contradictory prescriptions for action for their members. Second, the two logics have high centrality, which means both of the logics are core to organisational functioning.

Greenwood et al. (2011) argue, “Organisations face institutional complexity whenever they confront incompatible prescriptions from multiple institutional logics.” (2011, p. 318). This research confirmed this argument, showing that the low compatibility dimension of the two logics caused the organisational members to behave according to their own values and expectations regarding organisational goals and how to appropriately achieve them. The problematisation of fundamental aspects of the organisation that in normal situations should be socially agreed upon within all organisational members contributed to the continuous conflict over such aspects as organisational mission, strategy, structure, power, resources and identity. The high centrality dimension assumes that the two logics are core to organisational functioning. The official documents, as well as the change agents themselves, stressed that they could not achieve their goals without benefiting from actors’ experience in state logic. In this regard, the selective hiring process of the change agents presented an early sign that the organisation was moving towards complexity by combining the incompatibility of logics and high centrality dimensions. This was done through deliberately allowing a specific type of actors, with similar experiences and backgrounds, to be created as a subgroup holding similar values, beliefs and characteristics, and advocating for the logic in which they had been trained and from which they had been selected (i.e., market logic) within an organisation operating according to state logic. The low compatibility of organising logics, therefore, was a main source of conflict that jeopardised the organisation’s stability. It is unclear whether

these conflicts were created on purpose to destabilise the organisation in order to allow a new logic to come to the forefront through its underlying temporal orientation and technologies. However, the intensive recruitment of those distinctive change agents who qualified as institutional entrepreneurs suggests that there is some truth to this argument. It is consistent with the way in which Garud et al. (2007) described those institutional entrepreneurs as the ones who “must break with existing rules and practices associated with the dominant institutional logic(s) and institutionalize the alternative rules, practices or logics they are championing” (p. 962). This, in turn, can explain why the change agents relied on the same sources of interruption and conflicts as their sources for the organising processes to engage and contain the other social group’s problematisation. Such framing could help in mobilising the dominant logic in the organisation through exposing the conflicts and consequently putting forward the new logic as a solution to these problems. Garud et al. (2007) say, “Through particular frames, new practices can be justified as indispensable, valid, and appropriate” (p. 962).

6.2.1.2 Contributions to Studies on Conflicts in Institutional Logics

Although it was obvious that the change agents advocated for market logic, in which they were skilled, they were aware of the fact that their transition to the public sector required them to not adhere purely to market logic but to recognise the state logic that emphasised formal rules and regulations over efficiency and effectiveness. With their transition, they imported private sector measures that created a competitive environment, while the organisation’s state logic emphasised environmental stability; this was a source of increased tension at the beginning. Soon after, when it was clear that their work was interdependent with those strongly advocating for state logic, the need to increase the logic compatibility became evident and essential (Smets et al., 2012). Hence, the combination of low

compatibility and high centrality led to contestation between the former change agents and the employees.

The extant research on conflicts arising from multiple logics in organisations, either internal (Glynn, 2000) or external (Purdy and Gray, 2009), emphasised the importance of understanding the roots of these conflicts. Conflicting logics cannot be discussed without discussing the concept of organisation hybridity because of the mutually constitutive relationship between the two. While some studies suggest that organisation hybridity forces actors to interact with multiple and conflicting logics under the same roof (Svenningsen-Berthélem et al., 2018; Besharov and Smith, 2014), others imply that hybrid organisations could emerge as an outcome of the coexistence of multiple logics (Haveman and Rao, 2006). The findings of this study demonstrated that the creation of the Change Office was a trigger to instantiate a new logic in the organisation, supporting the creation of a hybrid organisation through the creation of a new logic. Scholars have defined hybrid organisations in many ways, but they tend to link it to institutional logics. For example, Battilana and Dorado (2010) define hybrid organisations as “organisations that combine institutional logics in unprecedented ways” (2010, p. 1419), and (Svenningsen-Berthélem et al., 2018) define it as “organisational settings characterised by multiple institutional logics” (2018, p. 1306).

The findings of this study revealed that three general areas constituted the main triggers and sources for the logics conflicts and affected the layers of conflict throughout the change process, namely, strategic, technological and sociocultural factors. The three factors are intertwined, and the degree to which they influence each other differs. Strategic factors, for example, seem to have a greater effect on the other two than they have on it, as strategy is usually the umbrella under which all of the organisation’s activities are organised. Some organisations consider institutional logics as a strategic resource to justify their strategic directions and choices (Durand et al., 2013). Thornton et al. (2012), for example, affirm this

connection between institutional logics strategy research, arguing that “much more could be done to flesh out how logics may provide resources to cultivate new kinds of frames and categories that form the basis of new resource niches and competitive strategies within and across organisations” (p. 182). The finding reveals that the ecosystem of the organisation was instrumentally built around the strategic factor to support the new activities as part of the bigger strategy of the transformation program. The group of governmental organisations that surrounded the organisation, and that had direct connections and contact through the change agents, was a clear sign of the importance of this ecosystem in the change process. By tracing the activities and interaction between employees and change agents, the process is depicted by which change agents strategically facilitate the enactment and interplay between market and state logics to instantiate and institutionalise a new hybrid logic, which that can be sustained and advanced, based on the values of both market and state logic.

However, the enactment and interplay between market and state logic was not a straightforward process; rather, it created many conflicts that varied in their degree. Looking at the degree of conflict between employees and change agents’ activities, it was noted that conflict increases when the activity contains more market logic elements than state logic elements.

In this research, the clear hierarchical variation between the change agents and the employees constituted a strong influence on this matter. Through the influential position of the change agents, with direct contact to the policy makers inside and outside the organisation, they were in a middleman position to influence the logic vision, mission and basis of strategy. They were allowed to practise their strategic-level powers and, at the same time, transfer their practices to the operational level. Exerting such influences on other organisation members is enabled through rules and regulations, normative prescriptions and social expectations (Scott, 2001). However, such power stemming from position and granted

authority and tools could vary and change over time through their interplay and functioning with the other two factors (Dacin, 1997). Understanding the new social order and the resulting organisation social restructuring formed by the existence of change agents is significant in understanding their influence on the process. The process perspective, hence, was more useful here as it allows for the continuous nature of change to flow over stability (Tsoukas and Chia, 2002). Although Pache and Santos (2010) are variance-based researchers, they assert the practicality of adopting the process perspective in such dynamic settings, saying, “Understanding the dynamic process through which organisational responses shape organisational structure, which in turn influences subsequent responses, is an important next step in uncovering the complexity of institutional processes.” (p. 473). In looking at how the change agents exerted their strategic influences on the other organisation members, it has been found that this was done in two main ways: first, through their mission to precisely map each project to an executive program and map the programs to one or more initiative, which emanates from the strategic goals imposed on the organisation; and second, by placing an emphasis on connecting the strategic goals to the core values of market logic, which they represent, such as performance, effectiveness, competition and efficiency.

The first part of the strategic factor, regarding the alignment of all these components and mapping them to reach the strategic-level goals, can be seen as a strategic process used by change agents, serving as middlemen, to guide the employees in connecting the two layers together. Using the mutual relationship between actors and logic (Besharov and Smith, 2014) and according to Thornton and Ocasio’s (2008) suggestion that “institutional logics shape rational, mindful behaviour, and individual and organisational actors have some hand in shaping and changing institutional logics” (p. 100), the Change Office started manipulating the logic interplay by using their own logic tools in planning the change in their processes as an effort to diminish the old logic and replace it with their own. In this process, the change

agents used many strategic planning and analysis tools. They purposely increased the intensity and frequency of meetings and reports, for example. The use of such tools and practices in the organisation was new and was a clear indication of the new normative prescriptions of logic in the organisation.

The second part of the strategic factor was the emphasis on the connection between the strategic goals and core values of market logic, such as performance, effectiveness, competition and efficiency. Scott (2001) notes that the degree to which conflicting institutional logics can be avoided or contested is dependent on the core values they rest on. Emphasising this connection to the core values of market logic created the demand for an organisation regulatory system that was consistent with these values as internal demands, as well as with the ecosystem in which the organisation operated as external demands. Internal demands are usually communicated through internal stakeholders, such as the change agents in this case, who “adhere to and promote practices, norms, and values that they have been trained to follow or have been socialized into” (Pache and Santos, 2010, p. 458). In other words, change agents enacted and promoted the market logic practices and values that they believed were necessary practices to achieve the initiatives that ultimately accomplished the strategic goals (Scott, 2001).

External demands on the other hand, as argued by Pache and Santos (2010), “emanate from an organisation’s broader regulatory, social, and cultural environments” (p. 458). They noted that organisations “are likely to comply with what these stakeholders expect from them to secure access to these key resources” (p. 458). In our case, the organisation’s regulatory system that was found to enable the continuous monitoring and control measures was a resource secured by those external stakeholders in the ecosystem. Pache and Santos (2010) describe those external stakeholders as “exercising compliance pressures on organisations by means of resource dependence relationships” (p. 458). However, this compliance and

consistency discussed by Pache and Santos (2010) was on the change agents' side to promote the market logic by allowing more controlling and advanced processes for monitoring progress.

By combining these two parts of the strategic factor – the precise mapping of each project to an executive program, and then mapping the program to one or more initiative which emanates from the strategic goals imposed on the organisation, and the emphasis on connecting the strategic goals to the core values of market logic, which they represent, such as performance, effectiveness, competition and efficiency – it can be said that change agents pushed towards reducing the general atmosphere of strategic ambiguity that dominated the organisation before the start of the transformation program. The other organisation members (i.e., employees), who had been trained to follow and had been socialised into state logic, preferred and enjoyed this strategic ambiguity because it broadened the room for interpretations and added flexibility to goals and objectives, removing the burden from their shoulders. It fit perfectly with their state logic-based standards and values, where achievement of goals and specific numbers are not linked to their existence and success in the organisation. The change agents, on the other hand, undoubtedly preferred clearly defined strategic goals because, based on these clear goals, they were able to prepare initiatives, the programs serving each initiative, and ultimately the projects needed to fulfil the programs, while adhering to the market logic they had been trained to follow (Pache and Santos, 2010). It can be concluded from this that conflict between the two logics tended to increase in intensity when there was a general strategic clarity, unlike when strategic ambiguity was prevailing within the organisation.

The other two layers were also important. Thornton et al. (2012) identifies disruptions to the technological and social aspects of organisations as part of trying to reach a balance between competing logics. Henri (2006) reinforces this view by adding the strategic element

through identifying performance measurement systems that support strategic decisions and legitimate management actions in his search for balance between the organisational dilemma of control and flexibility. Thus, the findings of this research emphasise the relationship between strategies, technologies and sociocultural elements that together create conflicts from competing logics and, at the same time, constitute the sources of processes that can be used to overcome these conflicts. However, the sociocultural level can be treated in a special manner because this level reflects the decisions and options made regarding strategic direction and the technology supporting it. This supports the view that “there is an inherent inseparability between the technical and the social” (Orlikowski and Scott, 2008, p. 434), which also supports the idea that “the social and the material are constitutively entangled, and inextricably related” (Orlikowski, 2007, p. 1437). Hence, looking at the role of technology without looking at its implications and eco on the sociocultural level would not make any sense to understand organisational actors. The implications and complications of the previous two layers become more evident and apparent at this layer. The actions, interactions and communications between the two groups of actors take place at the sociocultural level (Thornton and Ocasio, 2008). Only at this level can the different temporal orientation underlying each logic be witnessed. The other two layers allow for the interaction that makes the different temporalities which are “frequently hidden organisational dimensions” (Heracleous and Bartunek, 2021) visible for analysis by analysing the conflict over the decisions and options made in the first two layers.

6.2.1.3 Conclusion

Through the literature, it has been known that institutional complexity is a situation that organisations face when they confront incompatible prescriptions from multiple institutional logics. This multiplicity of logics could take many forms such as contested, aligned, estranged, and dominant (Besharov and Smith, 2014) in which each of these forms has its

own distinctive relationship between the confronting logics. In this research, I tried to shed light on a specific two logics I found confronting in the organisation which depicts a typical bureaucratic public organisation in a Middle Eastern country. The findings suggested that the two logics (i.e. state logic and market logic) in this particular context constituted a typical institutional complexity situation with two contesting logics that organisational members behaved according to especially when faced by situations of conflict over organisational mission, strategy, structure, power, resources and identity. Although the two logics here constituted a typical institutional complexity situation as the ones informed by the literature, yet through this research I found that unlike the western studies on institutional complexity where organisations can operate under state logic and objective temporality at the same time, organisations that operate under state logic also operate according to subjective temporality. This research shows that reaching this conclusion would not be possible without having the lens of organisational temporalities underlying each logic as a new possible way to examine institutional logics and that could lead us to explore new arenas and know more about institutional logics in different contexts.

6.2.2 Contributions to Research on Organisational Temporality

Prior research treated time in organisations as one kind of temporal orientation that is linear, quantifiable and bounded by tools such as calendars and deadlines. Recent research has identified another temporal orientation that is experienced by actors in organisations and that drives their behaviours and reactions (Reinecke and Ansari, 2015; Biesenthal et al., 2015; Shen et al. 2014; Orlikowski and Yates, 2002; Ciborra, 1999) as potentially helpful in explaining what objective orientation was unable to explain. Prior research also suggested that this temporal orientation could explain a lot of the mystery around how and why things don't work out in the way they were planned, and how and why things emerge in

organisations in a certain way (Langley et al., 2013; Hernes, 2014). Consequently, this created an enormous need to push the discussion of such different temporal orientations from debated ideas and potential theoretical concepts to their application in empirical settings in order to gain further and detailed implications. Many studies suggest that the dominant temporal orientation in western societies and its organisations is the objective temporality, or the “European-American” perception (Cuganesan, 2021; Graham, 1981). The subjective temporality as experienced and socially organised, on the other hand, can be found to be enacted routinely in different non-western cultures and societies (Zerubavel, 1981). As expected from objective temporality advocates, the change agents, they were seeking to speed up the time through eliminating unproductive times from the process and that was with the support of reorganising activities (Whipp et al., 2002) and the utilisation of technology. They also needed to add the element of controlling this speeding-up process through performance measurement processes. They made use of new temporal technologies that supported their strategic directions, such as project scheduling software (Mazmanian et al., 2015), and they modified existing temporal structures like calendars (Orlikowski and Yates, 1998) to meet the precise work pace and rhythm they sought, although in reality, the objective and subjective temporalities cannot be separated (Jaques, 1982). The objective temporality was witnessed in the organisation through the new temporal structures that the change agents created.

Temporal structures occur in organisations according to how actors schedule and plan their activities, such as beginning and ending of events, meetings, and stages of projects and milestones (Orlikowski and Yates, 2002). These objective temporal structures were manifested in a project-based approach that depends on dividing projects into smaller tasks and allocating them to specific time slots in the new calendar they adopted in order to orchestrate their internal activities, and in the digital tools they adopted to enforce these new temporal structures. The coexistence of two temporalities within the same organisations

where actors enact the temporality that aligns with their goals, cultures and habits is unlikely to happen without continuous conflict and confrontation (Cuganesan, 2021), which points to why conflicts kept occurring with these new temporal structures. In this study, this conflict was evident between change agents, who were trying to impose their objective temporality that is reflected in the market logic they brought to the organisation against the subjective temporality that dominates how employees approached their work through their state logic. From this study, there is some evidence that, unlike in western societies where organisations can operate under state logic and objective temporality at the same time, organisations that operate under state logic also operate according to subjective temporality. This is not surprising as “clock time is the most common way of describing the continuum in Western society” (Ancona et al., 2001, p. 514).

Western	non-Western
State	State
Objective temporality	Subjective temporality

The emergent findings of this research stress the importance of acknowledging the existence of multiple temporalities in organisational change settings and the implications for this multiplicity. This recognition is considered a first step towards a clear understanding of temporalities underlying actors' behaviours as guided by their logics. It shows a bridging of the gap between the different logics around actors' engagement with time, which creates tensions and conflicts hindering change processes. As the findings revealed, actors engaged in subjective temporality for a long time would try their best to avoid involvement and participation in objective temporality indicators or tools, such as calendars (Orlikowski and Yates, 2002) and digital planning and monitoring tools. While actors with objective

temporality pushed the use of skilful practices and advanced digital tools to solidify their logic and to show the value of embracing their temporality and how it influences the desired change positively, those with subjective temporality tried to problematise this value. They opposed the instantiation of the new logic, using undeliberate practices trying to influence the decisions made and actions carried out by those of the objective temporality.

The situation in the organisation resembles what Vaagaasar et al. (2020) describes as temporary organisations and projects, in which there is a determined restricted timeframe that specifies the beginning and end of the organisation (Halbesleben et al., 2003). However, the difference in this research is that the timeframe does not mark the end of the organisation's existence, but marks the reaching of the biggest milestone for the organisational actors and is linked to achieving specific goals. This makes actors "mentally travel through, perceive, and interpret time" (Jansen and Shipp, 2021, p. 2) because the existence of this timeframe affects how actors organise their activities to achieve these specified goals (Janicik and Bartel, 2003) by the deadline. For the success of such settings with predetermined timeframes and outcomes, a future vision is essential (Pinto et al., 1998).

Temporal multiplicity

The extant literature on temporal multiplicity in organisations shows that much of this work is focused on trying to find ways to orchestrate the different temporal rhythms within the same organisation. A main issue that could arise with subjective temporality is that it relates to the experience of time, which might promote individual experience. This could be in opposition to the collective experience that is needed and bounded within organisational work, or as Shipp and Richardson (2021) say, "can be individually perceived as well as socially constructed". Sharma (2014) elaborates on this idea, arguing that reimagining time

should be “as uncompromisingly tethered and collective” (2014, p. 150) in order for subjective temporality to be considered to develop theory of time.

The link between institutional logics and temporality

In keeping with the existing literature on temporality, it can be seen that temporality is a tricky concept to capture and analyse within organisations. This is why there was a need to examine it through a suitable lens, such as that of institutional logics. They provide an opportunity for the underlying temporalities to become visible for analysis through the conflicts that arise when their containing logics collide in the social events experienced by the organisational member. This is in line with what was suggested by Orlikowski and Yates (1998), who argue that “the pattern of events is neither fixed nor regular but is more dynamic varying by conventions and norms” (p. 686). Gümüşay et al. (2020) emphasise the use of institutional logics because “logics are firm but malleable, we can use them to analyse large-scale institutional transformations” (p. 7). Orlikowski and Yates (2002) describe the hidden nature of temporality as the “embodied, embedded and material aspects of human agency in constituting particular social orders” (p. 685) when developing their notion of “temporal structuring” in an attempt to study temporality in organisations. They emphasise, “Temporality is both produced in situated practices and reproduced through the influence of institutionalized norms” (Orlikowski and Yates, 2002, p. 685). The findings indicate that a disruption made at the strategic level had to be mirrored in the other two layers in order to make sense for employees. While the technological level is where IT plays an essential role of implementing and reflecting the change decisions and options made at the strategic level, the sociocultural level is where the conflicts started to become more apparent. Accordingly, the new social order, which was established in the organisation to leverage the change effect, started to take shape at this level. The position of the Change Office at the top of the

hierarchy and its direct reporting privileges not only implied the establishment of a new administrative layer but it also marked the start of a new era, which symbolised somehow an “explicit separations from the past” (Angehrn and Atherton, 1999, p. 4). Angehrn and Atherton (1999) consider this one of the fundamental aspects of instigating change strategies.

However, the findings of this study also support previous research on subjective temporality, in that the organisation was seen to be treating time as passing from past to present to future (Hellström and Hellström, 2002) and as enacted in the events that were defined and experienced by the organisation’s actors (Clark, 1985). The dilemma here is the existence of the change agents, and this transformation program created what Hellström and Hellström (2002, p. 408) call “Future orientation or vision of the future,” in which “all human action is directed at some perceived possible future.” In terms of time orientation, the difference between the change agents’ long-term orientation and the employees’ short-term orientation is reminiscent of Hofstede’s (1993) cultural analysis. The discrepancies between the two logics to which the change agents and employees adhered posited a great challenge and became clearer in the social interaction between the two groups of actors.

The findings show that the normal organising rhythm of the organisation, dominated by the subjective temporality underlying a clear state logic, was interrupted by (i) the introduction of a new social order represented by change agents with all their power, strategy tools and technology tools; and (ii) subsequently forcing the objective temporality as a new temporal structure that employees’ activities and tasks had to adhere to. The change agents imposed their temporal structures through the use of deadlines, and reinforced them with the use of technology in an attempt to control employees’ behaviours with regard to time, as noted by Perlow (1998), and to change their perspective towards the future as defined by the transformation agenda. Shipp and Richardson (2021) in a recent study suggest that employees can create their own temporal structures; this is supported by the findings, which show that

employees were trying to create additional temporal structures that could cope with those provided and created by the change agents.

6.2.2.1 Conclusion

The poor treatment of time and temporality was clearly evident in the literature that informed this research. This research has shown that management and organisation research has focused solely on objective temporality and neglected the subjective one for so long. Not until recently that scholars have paid attention to the importance of exploring this field and the possible consequences it could hold in explaining what objective temporality stood helpless in front of. This research actually confirmed this argument and moreover suggest through its findings that time and temporality differs significantly between the west and the east. The outer cultural element as well as the inner cultural element in which the organisation operates affect how its actors behave and make sense of the surrounding where the multiple logics operate as subcultures within the organisation. Seriously acknowledging the existence of subjective temporality and the active interplay between it and the objective temporality can be considered as the first step toward understanding the mystery the objective temporality left behind in the literature. This research acknowledged this temporal multiplicity and based on the findings suggests a link between the institutional logics found in the organisation and these temporalities.

6.2.3 Contributions to Research on Digital Transformation

There is no doubt in contemporary organisations that “Technology has arguably become an integral aspect of most business operations” (Orlikowski and Scott, 2008, p. 434). As seen previously, the decisions made at the strategic level led eventually to technological factors that represented the second level of factors causing conflicts to arise. The role of technology in institutional logics research, where actors find themselves guided by two competing logics,

has generally been under-researched (Busch, 2018). However, Pozzi et al. (2014) argue that actors enact technologies based on the institutional logic they have been trained to follow or have been socialised into. The powerful position of the change agents positioned them as the group benefiting from the implementation of technology, whereas the employee group were disfavoured by it. Due to their upper hand, the change agents were allowed to migrate their strategic arrangements from a state of being very theoretical and only understood by the elite members of the organisation to a state of application and functioning, which influenced the logics mode of governance. Importing technology and putting it into practice facilitated the mission of moving away from the state logic, more specifically, through adopting the market logic technologies. This allowed the change agents to influence the logic mode of governance by (i) reducing bureaucratic governance, which is based on laws, rules and directives, and moving towards a contractual governance based on customers' centric efficiency and effectiveness, and identifying objectives/targets, results and performance measures; and (ii) moving from accountability towards the sovereign to accountability towards customers and stakeholders.

The employees, on the other hand, in trying to challenge this shift from their own logic, preferred the status of weak engagement with technology that dominated the organisation. This was not only because this is what they had been trained to follow or what they had been socialised into (Pozzi et al., 2014). There are other reasons for this preference that led to undesirable implications for the employees, but first there is a need to elaborate on the different types of technologies introduced in the organisation as part of the transformation. In some IS research, which has used an institutional logics lens to examine how opposing logics influence actors' behaviours in situations of technology adoption, the role of technology has appeared passive (Marschollek and Beck, 2012; Sandeep and Ravishankar, 2014). Technology has taken a more active role in other research, which has

looked at how technology influences logic (Addo and Avgerou, 2020) or actors' behaviour (Hultin and Mähring, 2014). The findings of this study showed that the technologies used can be divided into two main types. The first relates to the core functions and processes of the organisation and the services it provides to its customers, and the second relates to monitoring activities and progress of what was planned and mapped at the strategic level. The first type took time to be built and integrated with the organisation's old procedures; however, the second type was easily imported and supported by external stakeholders.

The failure of IT implementation in the context of developing countries has been well documented in the IS literature (Walsham and Sahay, 2006), especially in the public sector (Heeks, 2003). In relation to the bureaucratic governance based on laws, rules and directives of the state logic that guides the actors in this organisation, Avgerou (2008), for example, precisely attributes the difficulties and conflicts to "rigidities of centralised public sector organisations of developing countries" (2008, p. 137). Heeks (2003) also emphasises this gap between the two worlds of public and private conflict, represented in this research case by the two underlying logics respectively: state and market. He describes the use of market logic IT in the state logic environment as "a classic case of square pegs and round holes" (2003, p. 5), which leads to discrepancies and conflicts, as seen in this study. However, there are some novel approaches to managing public organisations in developing countries, such as New Public Management (NPM), that started to influence the organisation's values, integrating some market logic values and practices such as efficiency, transparency, identifying targets and monitoring performance "for more responsive public services" (Addo, 2016, p. 4). Through examining an ICT initiative that combined actors from both public and private sectors under one roof and guided by two different institutional logics, (Addo, 2016) concludes that the "technology's effectiveness in rationalising depends on the compatibility of logics" (2016, p. 13–14). Logics compatibility in this research was low because both the

change agents and the employees had their own logic values and expectations regarding organisational goals and how to appropriately achieve them (Besharov and Smith, 2014).

It has been seen that misunderstanding the use of technology and its implications on everyday work was a main trigger of conflicts between the change agents and the employees. While the former, who had been trained to follow market logic had a detailed understanding and a framework of digital transformation and what value it would add to the organisation, the latter considered the essential preliminary steps towards digital transformation as the destination. Heeks (2003) takes a nonbiased position in this matter, considering these simple steps, such as automation of some procedures, as progress and a step “to institutionalise new technology in a particular aspect of public sector operations” (2003, p. 11). By combining the above-discussed two parts of the technological factor – (i) moving from bureaucratic governance towards contractual governance; and (ii) moving from accountability towards the sovereign to accountability towards customers – it can be concluded that one trigger of conflict was the introduction of these technologies, while the employees preferred weak engagement with technology. This is because it limited the power and involvement over the procedures that they used to possess, it increased the level of transparency, and it consequently added the element of accountability, adding a further burden to them. On the other hand, the change agents robustly pushed for the adoption of specific types of technology because these processes increased their capacity to impose their logic values and practices, not only by monitoring performance against the targets they had set and the KPIs and milestones they had created, but also by addressing the issues they faced in a prompt manner, thereby supporting their objective temporal orientation. They migrated the principle of performance measurements, such as different types of KPIs that were mapped to their initiatives and goals. Technology tools, such as performance dashboards and scorecards, were mandated as essential and mandatory in monitoring these performance measurements.

6.2.3.1 Conclusion

This research showed that there is no agreement among stakeholders about the true meaning of digital transformation in the organisation. This argument has been brought to attention in the literature of management and organisations that is concerned with IT and how it affects organisations' processes such as IT-mediated organisational change process. Although there is a sort of agreement that such change processes aim at increasing efficiency of the organisations, yet the confusion comes from the different perspectives the various actors hold based on the logics they act according to. This research showed how the absence of this mutual understanding and perception on the transformation could inform the logics and be informed by the logics at the same time adding to the conflict. Hence, the huge investment in Technology that leaders hope to transform the organisations into a more successful, agile, and productive ones cannot be solely attributed to how advanced the technology is. The technology's effectiveness in the transformation process goes deeper to depend also on the compatibility of logics actors operate according to.

6.3 Implications for Practice

Although the main purpose of this study was to navigate the institutional complexity situation the organisation was forced into because of the time bounded digital transformation program through the temporality lens as discussed in the theoretical contribution above, there are also implications for practice that could be useful for the organisation and practitioners. This research will hopefully contribute to practice by informing the institutional entrepreneurs (i.e. change agents) about the potential subcultures they are about to create when introducing the organisation with a new logic that confront the existing one. Organisations can leverage from being aware of the potential conflicts that arise in the three layers revealed through this study: sociocultural layer, strategic and technological by designating a team or department that is

solely responsible for promoting collaboration within the subcultures that follow different logics. This could be regarded as a necessary proactive step rather than waiting conflicts to take place and complicate the transformation agenda. This research also would inform organisations moving toward digital transformation about the existence of a digital dilemma that is created as a result of the misconception different actors of different organisational logics hold.

They need to understand that the digital transformation cannot be solely dependent on the technology part with ignoring the human agency and how they understand and value these technologies. The technology alone would be a passive part without the active part of humans and the processes they engage in to make these technologies work in the proper way. Without fully understanding this combination, it would be a great the loss of efforts and investment. The whole world witnessed the importance of digital transformation recently during the COVID-19 pandemic. This would be a great opportunity for practitioners in this field to show their opposing actors in the organisation the value of such transformation.

6.4 Limitations of the Study and Future Research

Several limitations can be recognised in this research. First, although studying the change as it is occurring can be an advantage in capturing lived phenomena, it also constitutes a major limitation for this study. This is because the studied phenomenon is still ongoing, and some events could carry different meanings when studied retrospectively. Second, since this research was part of a time-bound PhD program, the data collection period was limited to only a few months. This lack of longitudinal research precluded the acquisition of insights into how events and actions change and develop over time. Additionally, this study explored a governmental organisation in Saudi Arabia, specifically with a National Transformation Program that has distinct characteristics. As with any other specific characteristics, this might

affect the generalisation of the findings to other kinds of organisations and other change programs that have different characteristics. Finally, because of the above-mentioned limitations, this research took a very narrowed down perspective of the whole story of the transformation which is more holistic and comprehensive. Hence, the focus was more on the interaction between the employees and the change agents purposely disregarding the other factors and other actors from associated agencies and other concerned organisations who might have a significant impact on the process due to their involvement.

To counter these limitations, future studies should include longitudinal approaches that allow the researcher to capture the change phenomenon as it occurs, as well as in a retrospective manner. Future studies would also benefit from an ethnographical approach, which allows extended observations of the change and the events from inside the organisation in addition to capturing the phenomenon through the eyes and perspectives of the organisation members. Future research should also examine the findings of different types of organisations and contexts, which might encounter different logics from those found in this study, which were limited to state and market logics. Additionally, future research should examine other actors who are involved in the transformation process but are external to the organisation. In this research and setting in particular, where the transformation is part of a bigger governmental reform agenda, the transformation process is not solely organised and carried out by the organisation and its members. On the contrary, it is a shared agenda with many stakeholders working together from inside and outside the organisation. Therefore, and for this particular setting and program, there is a need for future research agenda that explore all those involved in the transformation individually and then combined together. This will allow the research to be more valuable and discover arenas that cannot be seen from only one perspective.

6.5 Conclusion

In order to understand the coexistence of different temporalities and their interplay in organisations undergoing digital transformation and institutional complexity, this research was divided into two parts. The first part tried to unpack the characteristics and properties of institutional logics that were found in the organisation. This was important in providing a description of what institutional complexity situation looks like in ambitemporal organisation settings. In understanding this coexistence, this research identifies three layers of interruption to the existing logic guiding the organisation, which caused several conflicts to arise. To mitigate these conflicts, the same sources or layers of interruption also constituted the sources for the organising processes that the institutional entrepreneurs used within the changing organisation to facilitate the transition from the dominant logic to the new logic.

Through examining the case of digital transformation in this research, I was able to detect the existence of what I might call a digital dilemma that is faced by organisations claiming or hoping to digitally transform their way of doing business. This digital dilemma in this case in particular was caused by the coexistence of two confronting institutional logics that different groups of actors within the organisation were guided by and acted according to. Underneath each of these logics, there were opposing temporal orientations affecting the logics and worked as motors for them especially with the transformation being bounded by a narrow and specific timeframe. In order to understand this coexistence of different temporalities and their interplay in organisations undergoing digital transformation and facing institutional complexity, this research was divided into two parts. The first part tried to unpack the characteristics and properties of institutional logics that were found in the organisation (i.e. state logic and market logic). This was important in providing a description of what institutional complexity situation looks like in ambitemporal organisation settings (i.e. objective and subjective temporal orientations). In understanding this coexistence, this

research identifies three layers of interruption to the existing logic guiding the organisation, which caused several conflicts to arise. To mitigate these conflicts, the same sources or layers of interruption were found to constitute the sources for the organising processes that the institutional entrepreneurs (i.e. change agents) used within the changing organisation to facilitate the transition from the dominant logic to the new logic hoping to dominate the organisation with their new logic. In conclusion, this research can be seen as a first step toward building a bigger research agenda that hopefully takes time and temporality in organisations on a serious note acknowledging how they have possible significant association with the institutional logics which actors are guided by. This is especially important in studying organisational change and cases of transformation which with no doubt is essential in this era especially after what the world witnessed during the COVID-19 pandemic. We all have seen how many organisations and companies around the world were forced into digital transformation. Now more than ever, this area needs more attention and collaboration between scholars and practitioners to be explored and understood.

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Appendices

Leeds University Business School



Information Sheet Sample

UNIVERSITY OF LEEDS

Dear *(Participant name)*,

This letter is an invitation to consider participating in a study I am conducting as part of my PhD degree in the Management Division at Leeds University Business School under the supervision of Dr Aljona Zorina. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

As you may be aware, the Kingdom of Saudi Arabia has established its roadmap to the future with its countrywide transformation plan, "Vision 2030" in April 2016, according to which, in particular, all government organizations will need to adapt their processes and ways of doing work to meet the anticipated goals by the specified time frame.

This research aims to understand how you perceive the change, and the factors that are involved in achieving your anticipated goals by the specified time. Questions you will be asked will involve you describing the changes you have encountered at work, the progress/delay you are having.

Participation in this study is totally voluntary. You are free to decline to answer any of the interview questions if you wish so and you are free to withdraw from this study at any time, and for any reason by contacting the researcher either by email [bnfyfa@leeds.ac.uk] or by calling [+447873982421] before the data collection periods end (**expected to be by 01/04/2019**).

Upon your approval, the interview will be audio recorded to help the researcher to transcribe and analyse the data. All personal data such as names, addresses, organizational positions, etc will be anonymized to make sure that no one can be individually identified.

All data gathered from you will be saved in a secure place and your personal information will remain anonymous. Your name will not appear in the thesis or any paper resulting from this study. However, anonymous quotation may be used. Data collected from this study will be retained for three years after the data collection in my account at university's server and only the researcher associated with this project will have access to it.

If you have any questions regarding this study, or would need any further information, please do not hesitate to contact me at +447873982421 or by email at bnfyfa@leeds.ac.uk. If you wish so, you can contact my supervisor, Dr. Aljona Zorina at +447425315360 or email a.zorina@leeds.ac.uk.

Finally, this research will be ethically guided by University of Leeds Research Ethics Committee and will strictly follow University of Leeds Code of Practice and University of Leeds protocols regarding consent, anonymizing data, and data protection to maintain its ethical standing.

I hope that this research will be of help to the related community and organizations to understand the co-existence of temporalities in organization during the imposed organizational change process and its related affecting factors, in order to use this resulting knowledge to enhance individuals, organizations, and nations organizational change and transformation projects.

I look forward to meeting you and thank you in advance for your participation and support in this project.

Yours Sincerely,
Yasmeen Aldhafiri
Lead Researcher

Appendix 1. The information sheet given to the participants

Consent form**UNIVERSITY OF LEEDS****Consent to take part in a study of****How Saudi Arabia governmental organizations use time to respond to the nationally imposed "Vision 2030" IT-driven transformation.**

Add your initials
next to the
statement if you
agree

I confirm that I have read and understand the information sheet dated on explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. Contact number of lead researcher: +447873982421	
I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the paper or papers that result from the research.	
I agree for the data collected from me to be stored and used in relevant future research in an anonymised form.	
I understand that relevant sections of the data collected during the study, may be looked at by individuals from the University of Leeds or from regulatory authorities where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change.	

Name of participant	
Participant's signature	
Date	
Name of lead researcher	
Signature	
Date*	

*To be signed and dated in the presence of the participant.

Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form, the letter/ pre-written script/ information sheet and any other written information provided to the participants. A copy of the signed and dated consent form should be kept with the project's main documents which must be kept in a secure location.

Project title	Document type	Version #	Date
How Saudi Arabia governmental organizations use time to respond to the nationally imposed "Vision 2030" IT-driven transformation.	Consent form		

Appendix 2. The consent form given to the participants

Semi-Structured Interview protocol (Change agents)

Part 1:

- Introduce myself, research purpose, and the interviewee's part and rights.
- Handle the **information sheet** and the consent form.

<i>Research Question1</i>	<i>Research Question2</i>
<i>How do different temporalities coexist and interplay in organisations undergoing digital transformation and institutional complexity?</i>	<i>What are the types of conflicts and their resolution processes used in organisations undergoing digital transformation and institutional complexity?</i>
<i>The main concepts: Time, logics, Technology.</i>	<i>The main concepts: Conflicts, issues , resolution mechanisms (processes).</i>
<i>Interview Questions</i>	

Part 2: *this is a conversational start in order to put the interviewees at their ease:*

Before we begin, it would be nice if you could tell me some background about yourself in GovOrg. How long have you been here and what is your role in the organisation?

If already-existing employee: Do you think your work here has changed since the transformation program began?

If Yes, Can you give some examples of the major changes you encountered?

If newly recruited employee: Why do you think the organisation hired you in this office?

Part 3: *how interviewee perceives and make sense of the change:*

WOW, that's fascinating; OKAY, could you please describe in much detail as possible the major assignments/ tasks in your position?

OKAY, What about you colleagues from the organisation (the employees)? Do you engage with them? What kind of engagement do you have?

HMMM, that is really interesting, what do you think are the main reasons that led you and your colleagues to feel and think differently?

Ask: did he/she have issues and conflicts with the employees. If yes, What did he/she tried to do about it?
.. etc

Why do you think that you had these issues with them?

Ask: could be this related to your different backgrounds (e.g. experience, education)?

Could you please explain to me some situation where you felt the differences were really evident and affected the organisation change agenda?

In terms of technology used in the organisation, did you change anything? *If yes, why was that?*

How comfortable the employees were when introducing these technologies?

Ask: Did it increase/decrease your feeling of uncertainty, confusion?

What did you do about it?

What does the digital transformation of the organisation mean to you? And do you think it means the same to the employees?

In terms of time and timeframe used in the organisation, did you change anything? *If yes, why was that?*

OKAY, in your opinion, what do you think are the problems or obstacles faced because of this imposed timeframe?

Part 4 (finalising the interview):

Finally, THANK YOU FOR YOUR TIME. Do you have any questions that you would like to ask of me?

Appendix 3. The interview protocol used for change agents

Semi-Structured Interview protocol (employees)

Part 1:

- Introduce myself, research purpose, and the interviewee's part and rights.
- Handle the **information sheet** and the consent form.

<i>Research Question1</i>	<i>Research Question2</i>
<i>How do different temporalities coexist and interplay in organisations undergoing digital transformation and institutional complexity?</i>	<i>What are the types of conflicts and their resolution processes used in organisations undergoing digital transformation and institutional complexity?</i>
<i>The main concepts: Time, logics, Technology.</i>	<i>The main concepts: Conflicts, issues , resolution mechanisms (processes).</i>
<i>Interview Questions</i>	

Part 2: *this is a conversational start in order to put the interviewees at their ease:*

Before we begin, it would be nice if you could tell me some background about yourself in GovOrg. How long have you been here and what is your role in the organisation?

Do you think your work here has changed since the transformation program began?

If Yes, Can you give some examples of the major changes you encountered?

Part 3: *how interviewee perceives and make sense of the change:*

WOW, that's fascinating; OKAY, could you please describe in much detail as possible the changes you encountered in your daily work activities?

Ask: did he/she felt confused? uncertainty? If yes, What did he/she tried to do about it? .. etc

OKAY, What about you colleagues from the change office? Do you engage with them? What kind of engagement do you have?

HMMM, that is really interesting, what do you think are the main reasons that led you and your colleagues to feel and think differently?

Ask: did he/she have issues and conflicts with the change agents. If yes, What did he/she tried to do about it? .. etc

Why do you think that you had these issues with them?

Ask: could be this related to your different backgrounds (e.g. experience, education)?

Could you please explain to me some situation where you felt the differences were really evident and affected your work?

In terms of technology used in the organisation, did you encounter any changes?

How comfortable are you when using these technologies?

Ask: Did it increase/decrease your feeling of uncertainty, confusion?

What does the digital transformation of the organisation mean to you?

In terms of time and timeframe used in the organisation, did you encounter any changes?

OKAY, in your opinion, what do you think are the problems or obstacles faced because of this imposed timeframe?

Part 4 (finalising the interview):

Finally, THANK YOU FOR YOUR TIME. Do you have any questions that you would like to ask of me?

Appendix 4. The interview protocol used for the employees

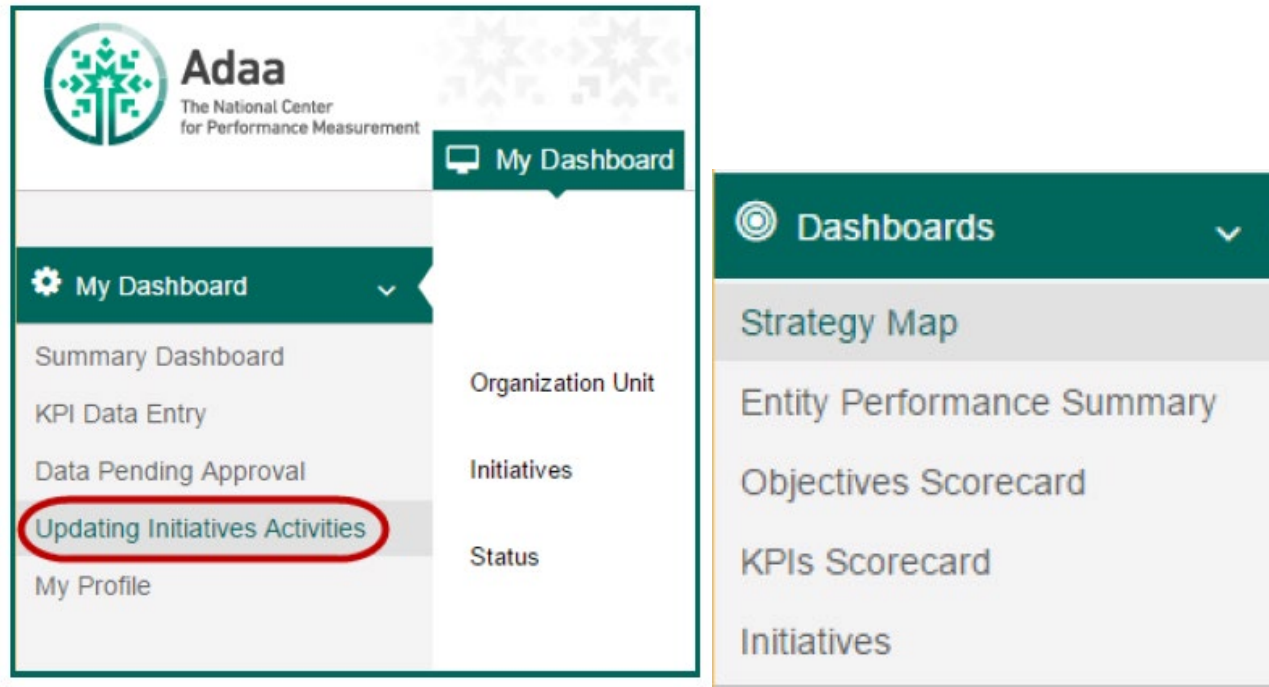
Appendix 5 Data Structure			
	First Order codes	Second Order themes	Aggregate Dimensions
1.	Understanding the difference between digitization and digital transformation is key. Going paperless is just a first step, not the transformation itself IT enabled organisational transformation VS digital transformation Shifting the focus from solely inner organisational context to include outer organisational context (i.e. partner organisations, regulatory external units, etc) IT as an enabler differs from the strategic alignment needed in digital transformation	Generating and exchanging different perspectives on Technology role and involvement	Technology as an underlying mechanism
2.	IT is allowing visibility of work progress, assigning responsibility	governance through utilization of technology	
3.	Reorganising the activities and keeping track of them through continuous supervision and control measures		
4.	Employees are satisfied with the status quo and wish to maintain it They don't see benefits of change They see the obligations and increasing duties	bidirectional sources of organisational tensions public vs private competing logics as an essential source	Shift of logics in public organisations
5.	No mutual understanding		
6.	Change agents are well educated and experienced in IT related issues but they lack knowledge of public services sector and related regulations		
7.	Employees engagement was not from an early stage		
8.	Internal capabilities problems – time problems		
9.	Redefining the roles for employees		
10.	Lack of participation in the strategy making		
11.	The disruption of current organisational routines and the need for an updated set of routines created ambiguity		
12.	High organisational bureaucracy		
13.	Constant comparison between the government work and the private sector		
14.	Team from outside the organisation with profit driven background was much needed		
15.	Time is a critical issue due to timeframe and the collective responsibility toward it		
16.	Constant comparison of the past and the current practices		

17.	Orchestration via envisioning the future	Temporal oriented processes mapped to the bigger picture	Temporalization of organisation activities (Linking it to external timeframes)
18.	Developing a story envisioning the future of the organisation and relating all activities and events to that story		
19.	The envisioned future mapped to and aligned with a bigger future which is the countrywide new vision, and envisioned as playing an essential participant (through discourse)		
20.	Reengineering most the existing business processes to cut down redundancies and allow automated data retrieval	Inspiring the future by evoking the past	
21.	Non cooperative people will be pushed back, you either ride the train or we will leave you behind	Creating temporal relevance	
22.	The need to start from scratch in many cases	Reorganising by aligning the pace and rhythm of internal processes with external ones	
23.	The interdependencies of our processes with external entities is a challenge		
24.	Leadership support allowing power diffusion		
25.	The new hierarchical position created for change agents at the top directly reporting to the CEO and the power they have given them the needed legitimacy to impose the change		
		Bidirectional communication authority (internally and externally)	
26.	The interdependencies of our processes with external entities is a challenge	New Business environment	
27.	Leadership support allowing power diffusion		
28.	The new hierarchical position created for change agents at the top directly reporting to the CEO and the power they have given them the needed legitimacy to impose the change		
29.	Reworking processes leads to changing the business model	new business model	
30.	Using strategic concepts in emails, announcements, meetings, discussion, and workshops	Legitimizing the strategic change through linking it to daily work life	Minimizing the gap between strategy and practice
31.	Discourse can take many forms including verbal meetings, written reports, wall posters and displays, and presentations.		
32.	Building new set of routines as a driver of organisational change		
33.	Introducing new evaluation system, bonuses, and incentives change		

34.	Training programs involving strategic terms and tools	linking the actor process activities at the micro-level to the organisational practices at the macro-level	
35.	Use of Quick wins as a way to gain support and establish confidence of what is being deployed		
36.	Engaging current employees as initiative owners		
37.	Engaging in a Sensemaking process to create and maintain an intersubjective temporal logic		

Appendix 6 Supporting Evidence for Aggregate Dimension: Technology as an underlying mechanism	
Second Order themes	Detailed Quotes
	CA: Change Agent, E: Employee, T, Top Manager, D: Document
Generating and exchanging different perspectives on Technology role and involvement	<p>“With digital transformation as the main agenda behind our work here, we have to make sure that everyone understands exactly what that means and what change is expected based on that, because we have seen that people here tend to mix three terms and using them interchangeably which is not precisely right. Digitization, Digitalization, and Digital Transformation are related terms but at the same time differ significantly. While the first two are important, what really matters to us is to achieve digital transformation.” CA</p> <p>“When we talk about digital transformation in government, you need to know that we talk about employees who are not used to use email. they have emails by default, but it is not activated by them, their work never required them to employ it, I don’t blame them for that, it is the way they are used to for many many year and that’s what we are changing now and that’s a challenge ” CA</p> <p>“Digital transformation is an advanced step that involves rethinking the business model and transforming customer experience.” CA</p>

**Governance
through
utilization of
technology**



Screenshots of the dashboard, used and updated by the change agents. They gather the data from employees, but they are the one responsible for updating them. They use them to monitor the progress of the organisation's initiatives and to produce reports that they present for the CEO and to the related external agencies.

Appendix 7 Supporting Evidence for Aggregate Dimension: Shift of logics in public organisations		
Second themes	Order	Detailed Quotes
bidirectional sources of organisational tensions		CA: Change Agent, E: Employee, T, Top Manager, D: Document
		“We are changing into a corporate mindset; this has never been done in the government. So, people who are still using the past old mentality... and... cannot cope with change... will have to be replaced because we do not have time to stop and convince them.” CA
		“The change agents are not helping. They request many forms and documents. I am busy and I have so many other responsibilities, and they keep requesting data from me, data that I don’t even have. Most of the change agents come from the private sector where they have excellent IT system to keep their updated data. Here we don’t, and they don’t appreciate that and give us even enough time to gather data they request. They require some data by tomorrow or 2 days maximum, assuming that I can extract such data by pushing one button such in the private companies. This is not the way we operate in government, and this can’t be changed in a year or two.” E
		“The role of technology is not limited to providing devices and their accessories and related software or systems, but the human element plays the major and fundamental role in directing and adapting technical devices and supporting programs” CA
		“Yes now it has changed(some procedures). We have always been told that this is a government procedure that have always been like this, no one can change it. And suddenly it changed! I don’t know who changed it honestly, I only know that the minister didn’t have the authority to change it himself before because it is not for our ministry only, but it is changed now, not only for us, it is for all ministries.” E
		“The problem is that those people coming from the private sector want rapid change, they want to see rapid results, focusing on quick wins and they want that to get the credit and to show off in front of the officials.” E

	<p>“The VRO does not add an additional administrative layer between departments and the minister / head of the entity.” D</p>
<p>public vs private competing logics as an essential source</p>	<p>“Those people come from another world, they talk about things like KPIs (key performance indicators) and Output Indicator and expect my employees to speak that language? You request thing from government employees which you consider basics and common sense and keep me suffering with my employees? They don’t know what is KPI and even if I translate that term to the Arabic word, they still don’t understand the meaning. These are traditional people who has no clue about these concepts. Don’t come with your private sector culture and expect the government to accept it. In this case, I need to employ people from private sector in order to be able to extract these from them.” E</p> <p>“This has been the way for doing work and everything works just fine before even most of the VROs were born and now suddenly they become the wrong way? I mean how?” E</p> <p>“I personally came to the ministry from Microsoft, I think the government want to change the mentality by recruiting us. I mean not only me, there is a HUGE recruitment from the private sector, I have never seen this movement before in the government.” CA</p> <p>“One way to help in that, which maybe I would say became a trend if you have noticed in the government organisations. Since the announcement of the vision, the organisations knew that they need rapid intervention and help. The pressure is huge and who would be better in dealing with pressure than the private sector? So here we went. A huge recruitment movement happened; I was one of the outsiders who got recruited to help in this too. I came from Microsoft with great technology background to help in the digital transformation. I recruited many from private sector too. I needed their expertise. However, of course I could not move forward with a team that is fully outsiders, we needed the old people. Our colleagues who worked here for so long. Those knows a lot and we needed them in order to reorganise” CA</p>

“We needed the team to be with such mixed experiences. People I hand-picked from the private sector as well as people who knows exactly how things have been done here for so long to guide us to understand the processes. However, even knowing who from the old team could be the most helpful to me was a challenge. We don’t have accurate data about them. The thing is, in government, the annual performance evaluation used to be a courtesy. If you look at the evaluation of your employees, you find that 90% or 95% of your employees are evaluated as outstanding, and when you look at reality, you find that their performance is barely satisfactory. This is how things used to be, but I heard this will change? I heard that the Civil Service System is updating soon. This was a challenge to me because you are relying on inaccurate data, we don’t have a real profile that reflects the employees, but I think in the next two years this will be solved.” CA

“Of course, in the current environment in which we are now, government employees are not familiar a lot with the idea of the vision and the initiatives and the projects in it” T

“There is a great challenge in this part ... and it is part of change management and organisation culture and how do we change it. But it has its limit for this change, so that it is very difficult, that between day and night, people are thrilled to become more productive than before .. But for your information, not all government employees are on relaxed mode. There are so many are doing great job with whatever available to them. The whole environment maybe doesn’t encourage and support them. They do their best but let’s say it is not as efficient as the private sector.” CA

“I worked in both sectors, the private sector has certainly more pressure .. mostly because of its money driven nature .. In the government sector no, the government is the one who spends and is the one who invest in citizens and is the one who pays. But in the private sector No, the company has no willingness to waste its time with someone who falls short in a certain part. The government is open to it, It bears and gives opportunities .. Here the challenge is there, but with the existing leadership of the country, direction and support .. and the way in which the vision was formulated and presented to people.. It had an impact on people .. The excitement and wanting to see their country growing and competing with the rest of the world” CA

	<p>“Hire dedicated, full-time employees and attract high potential talent from both the public and private sectors” and should avoid making the VRO work a “part-time work for the current Ministry employees”. D</p>
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Appendix 8 Supporting Evidence for Aggregate Dimension: Temporalization of organisation activities (Linking it to external timeframes)		
Second Order themes	Detailed Quotes	
	CA: Change Agent, E: Employee, T, Top Manager, D: Document	
Temporal oriented processes mapped to the bigger picture	<p>“My issue with these new timeframes is that I feel things are bigger than to fit in them and they are not realistic. It is basically the same project that we would normally work on but they only changed how it looks like. So instead of having this project as an independent one as usual, it became part of a bundle of projects that serve under one big initiative and appoint an owner or a manager for each initiative to coordinate these projects. I have been appointed once and I left that position. It is a headache with no reward, just adding to my responsibilities” E</p>	
Inspiring future evoking past	the by the	<p>“In the transformation process, we have many challenges and the main thing we are trying to do to do this right is to prioritize. This is the biggest challenge any leader in government now is facing I would say. Think about it as the juggling act they do in the circus. You want to balance all the dishes you have and making sure none get crashed. You are required urgently and immediately to participate in the vision realization programs and its targets. At the same time, you have to provide quick services to your customers to get some acknowledgement and credit by your customers. At the same time, you also have to reorganise and rearrange your interior house, your own organisation. Notice that while you have to do all of this, you are being watched, you are being held accountable by the officials and by the public, your customers, by you and others. Your goals are published in the official vision 2030, so you cannot hide anymore, your deadline is ahead of you and your goals is in front everyone. You got to fix your problems and move on.” CA</p> <p>“I think I learned this through my background in programming what we call fast programming where we plan, program, and come out with a version of the program and let the users test it and then you can</p>

Creating temporal relevance	<p>enhance and update your program based on their review. This is what we are doing, learning by doing.” CA</p> <p>“In the transformation journey, you have to learn skills such as you have to be fast in analysis, fast in planning and fast in implementation.” CA</p> <p>“Not only your customers, even our team. They need to see and realize that they have accomplished something from their work. They need to see the results and feel that they are progressing, and then you can repeat the process.” CA</p> <p>“If you told me that I would be working from 8 to 8 in government back in 2014 you are crazy, now this is normal” E</p>
Reorganising by aligning the pace and rhythm of internal processes with external ones	<p>“The initiatives we have, each follows or serves one of the vision’s executive programs. So, the programs authorities or head are supervising us in the initiative that serves them, so we report to them our progress in that initiative in the part that serves that program. What I mean is that some initiatives serve 2 programs as the same time, so not all projects in that initiative are reported to one program. We specify exactly which project in that initiative serves which program.” CA</p> <p>“For example, when revising our processes to find where we can improve we found out that some information in these documents are can be replaced using electronic connection with the other organisations, so we can get the information directly from the connected organisation, the customer does not need to provide that info anymore. Another case is that we found out this information actually is not used or not needed. It was there just because it was there forever.” E</p> <p>“I know what you mean by purely automation, part of this is true and part is not. Let me explain. The full automation that includes our internal processes depends on other things rather than only on us. What I mean is that, many of our processes are dependent on other organisations. Either we need some information from them or we need a certain approval from them in a particular part. The challenge here in how well connected our own platforms with other organisations (the ones that we need to carr9y out a certain process) together. This part is not fully developed and this is what I meant when I said we are building our capabilities.” E</p>

Bidirectional communication authority (internally and externally)	<p>“We at the Change office have a direct connection with Adaa “The National Center for Performance Measurement”, they basically monitor the progress externally. We monitor it internally, the tools for monitoring and escalating were provided by them as the government body that supervise the flow of the initiatives. Of course we have to use what they provide us with because it is their way to keep all organisations at the same pace of movement as we share some initiative with others. However, we also can use other tools internally additional to what they provided if we feel the need to.” CA</p> <p>“Those people come from another world, they talk about things like KPIs and Output Indicator and expect my employees to speak that language? You request thing from government employees which you consider basics and common sense and keep me suffering with my employees? They don’t know what is KPI and even if I translate that term to the Arabic word, they still don’t understand the meaning, that’s not easy for them. These are traditional people who has no clue about these concepts. Don’t come with your private sector culture and expect the government to accept it. In this case, I need to employ people from private sector in order to be able to extract these from them.” E</p>
New Business environment new business model	<p>“The problem with not acknowledging the achievements is that we know that we have problems with the infrastructure. These problems hold us back. So, we needed to work on building our infrastructure that allow us to enhance and be productive. This is a reason behind why our numbers are in the KPIs are not reflecting the hard work we do. The numbers can not show what we do now because simply we are investing in building the capabilities, investing money, time, efforts, human resources and so on. Although the KPI does not reflect, our performance does.” CA</p>

Appendix 9 Supporting Evidence for Aggregate Dimension: Minimizing the gap between strategy and practice	
Second Order themes	Detailed Quotes
	CA: Change Agent, E: Employee, T, Top Manager, D: Document
Legitimizing the strategic change through linking it to daily work life	<p>“Correction always comes from the top. Changing the leadership and replacing them give the new leadership the advantage and power for reorganising the house and setting up the right policies and procedures for the team. I mean, If the director himself is not interested, the employees below his leadership will not care. On contrary, if he is interested, then the goal is linked to him, that he as a leader wants to achieve. The result is that he will be enthusiastic about this and will do whatever it takes to achieve it.” CA</p> <p>“When the strategy is approved, whether by the Council of Economic and Development Affairs or the Council of Ministers, there is a clear agreement that performance indicators are reviewed and built with Adaa” CA</p> <p>“The world of indicators, performance measurement and performance indicators is very wide with so many types. For example, input indicators and output indicators are internal operating indicators. These are for us in the organisations, while with Adaa we deal with indicators that are called outcome based KPIs and these are the ones that appear in their dashboard while our dashboard contains these and in addition our own internal operational indicators. In simple words, they don’t care what should we do to achieve the target, they care about the target itself while we struggle with whatever it takes to achieve it” CA</p> <p>“We conducted and keep conducting many workshops and seminars about the concepts of ‘strategy’ and ‘strategic plans’ to help people understand why we ask them to do things in a new way or why we are adopting the new system because at the end of the day they are the one most effected and them not getting what and why things are happening will not help.” CA</p>

linking the actor process activities at the micro-level to the organisational practices at the macro-level	<p>“Leading change management processes and internal communication to introduce Vision 2030 and the programs that fall under it in a way that supports the achievement of the required goals” D</p> <p>“Building and managing relationships with centers of excellence and entities within the Vision 2030 system and Coordinating with the concerned departments to ensure building partnerships with the aim of enabling and advancing achievement, for initiatives ... by identifying areas for improvement, and finding solutions for their development” D</p>
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