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When the Map Is Wet, Navigation Still Depends on It:
Organizational Sensemaking and Digital Infrastructure Dependency

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Abstract

Title: When the Map Is Wet, Navigation Still Depends on It: Organizational Sensemaking and Digital Infrastructure Dependency

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Purpose: This study examines how individuals within organizations make sense of digital infrastructure dependency when the infrastructure they rely on to coordinate and respond to disruption is simultaneously the source of the problem. Motivated by growing geopolitical instability affecting U.S.-owned digital infrastructure, the study asks what sense organizational actors are currently making of this condition and how the meanings they construct shape what courses of action feel possible.

Methodology: Thirteen semi-structured interviews were conducted with IT managers, technical leads, consultants, and organizational decision-makers across Denmark, Sweden, and Norway. The data was analyzed using an interpretive, constructivist approach, treating interviews as sites of sensemaking and examining how participants extracted cues from their environment and assembled them into organizational narratives.

Theoretical Framing: The study draws on Karl Weick's sensemaking framework as its primary analytical lens, in combination with organizational change theory and technological change literature. This triangulation allows the study to address not only how meaning is constructed under uncertainty, but why recognized problems so consistently fail to produce action.

Contributions: Four organizational narratives are identified through which the same dependency is assembled into fundamentally different stances toward action. Across three of them, sensemaking produces accounts coherent enough to make waiting feel rational, extending Weick's framework by identifying successful sensemaking as a potential mechanism of inertia. The fourth demonstrates that this pattern is not inevitable, but depends on whether the interpretive framework itself is questioned.

Key Words: *Sensemaking, Digital Sovereignty, Organizational Change, Technological Lock-in, Digital Infrastructure, Geopolitical Disruption, Digital Dependency*

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Chapter 1: Introduction

1.1 Background

Digital infrastructure has become the connective tissue of modern organizational life. Over the past two decades, public institutions, private firms, and civil society organizations across Europe have increasingly migrated core functions onto platforms provided by a small number of US technology companies (Blancato, 2024, p.14). In the Nordic countries, this shift has been particularly pronounced with more than ninety percent of organizations in Denmark, Iceland, Norway, Finland, and Sweden now dependent on U.S.-based providers for their cloud services (Proton, 2025, n.p.). The dependency was rarely the result of a single strategic decision, accumulating gradually, one adoption at a time, until the platforms themselves became the infrastructure (Tilson et al., 2010, p.9). The geopolitical conditions that enabled this arrangement, including stable transatlantic relations, shared institutional norms, and a predictable rule of law in the provider's jurisdiction, were largely assumed rather than critically examined (Pohle and Thiel, 2020, p.9).

That assumption has become harder to sustain. In January 2026, the Trump administration renewed its push to acquire Greenland, applying direct pressure on a NATO ally in a manner that few in Denmark had anticipated (Roy and Masters, 2026, n.p.). The geopolitical shock prompted organizations across the Nordic region to reconsider dependencies they had previously treated as settled, drawing digital infrastructure into conversations that had previously been confined to policy circles. If the United States was willing to treat a close ally this way, what did that mean for the infrastructure those organizations depended on to function?

The question was not purely hypothetical. In February 2025, the Trump administration had sanctioned several officials of the International Criminal Court in response to its investigations into Israeli officials (Trump, 2025, n.p.). In August 2025, this was extended to several individual court officials, among them Nicolas Guillou, a French judge who had approved arrest warrants for senior Israeli officials (Hansler, 2025, n.p.). The consequences extended well beyond travel restrictions. Guillou's accounts with U.S.-based platforms were closed, and payment networks

whose processing runs through U.S.-linked infrastructure became effectively unavailable to him (Corlin, 2026, n.p.). He had been expelled from the U.S.-controlled layer that most of modern organizational and commercial life runs on, with no equivalent alternatives to fall back on.

The Guillou case is not an isolated incident. It demonstrates that shifts in U.S. foreign policy can translate, rapidly and without warning, into operational exclusion from the digital infrastructure that underpins organizational life. For European organizations, this creates a structural problem that goes beyond geopolitical uncertainty. The platforms now in question are the same platforms through which any organizational response would have to be coordinated. Switching is not a straightforward alternative due to decades of accumulated dependency meaning that the tools needed to plan and execute a migration are the tools at risk (Tilson et al., 2010, p.9). Building on Orlikowski's (1992, pp.410-411) argument that technology functions as the medium of human action, and Weick's (1988, pp.305-308) account of enacted sensemaking in crisis situations, we argue that the infrastructure is not merely compromised, it is simultaneously the only medium through which a response can be organized

1.2 Problem Statement and Research Question

The problem this thesis addresses is not dependency in itself. Organizations have always relied on external providers, and global technology platforms have delivered genuine value. The problem arises when that infrastructure becomes geopolitically compromised because at that point, the medium through which an organization would normally respond to any problem is itself the problem that requires a response. Available responses either deepen the dependency, name it without resolving it, or temporarily disrupt the organizational capacity they were intended to protect.

What makes this condition worthy of study is its consequences for the people navigating it. IT managers, technical leads, and organizational decision-makers are being asked to assess and respond to a geopolitical risk using frameworks designed for vendor management and procurement. These frameworks assume the problem is comprehensible and the tools are neutral, but none of those assumptions hold here. The gap between the frameworks available to these

actors and the situation they face is structural. These actors have no adequate map and when familiar frameworks fail, the question of how people construct meaning under uncertainty becomes an organizational necessity.

Drawing from the European Commission (2021, n.p.), we define digital sovereignty as the capacity of an organization to maintain meaningful control over its data and digital infrastructure without being subject to the legal, political, or commercial decisions of actors in foreign jurisdictions, which has become a loud conversation at the level of EU policy. Frameworks for strategic autonomy, data localization regulations, and digital infrastructure investment programs signal that European institutions recognize the structural nature of the problem (European Commission, 2021, n.p.) Yet, this policy discourse has operated almost entirely at the institutional level. Pohle and Thiel (2020, p.2) observe that digital sovereignty is understood more as a discursive practice in politics and policy than as a legal or organizational concept, a framing that leaves the IT managers and decision-makers who must operationalize it in practice largely outside the conversation. It is at this organizational level where understanding how actors construct meaning has the most practical and theoretical consequence.

The study is approached through Karl Weick's framework of organizational sensemaking (Weick, 1995, pp.1-15). Weick describes sensemaking as how people construct meaning when familiar frameworks fail and when the cues available in the environment no longer map onto existing categories and individuals must figure out what is happening before they can begin to decide what to do. The individuals in organizations are facing a situation they do not yet have adequate categories for, in which the normal signals of organizational life have become unreliable. Whether the threat will materialize, what form it will take, and what a response would even look like are all open questions. Sensemaking is the framework that addresses that prior moment when individuals come to understand what they are dealing with in the first place.

Rather than asking whether organizations should pursue digital sovereignty, or how they technically could, this study asks what sense they are currently making of the situation and how those accounts shape what courses of action feel possible. This leads to the central research question:

How do individuals within organizations engage in sensemaking when the infrastructure they rely on becomes the source of the problem itself?

1.3 Thesis Outline

To ground this question, Chapter 2 draws on a literature review spanning sensemaking theory, organizational change, and the emerging research on digital sovereignty and technological lock-in. Chapter 3 presents our methodological approach, an interpretive, constructivist design in which thirteen qualitative interviews with IT managers, technical leads, researchers, and organizational decision-makers across Denmark, Sweden, and Norway serve as the primary empirical material. The interviews are treated as sites of sensemaking in themselves, noting moments where interviewees were actively constructing meaning around a situation they were still working out.

Chapter 4 presents our analysis of how participants extracted dependency cues from their environment and assembled them into four distinct organizational narratives. The analysis shows that the same underlying condition, deep dependency on U.S. digital infrastructure, is made to mean fundamentally different things depending on the narrative resources available to the individual encountering it. Across three of the four narratives, awareness, critique, and intention each leave the structural relationship with U.S. vendors unchanged. The fourth narrative is the only one in the data in which sensemaking produces present-tense organizational change, a finding that points toward what conditions would need to be different for action to become possible.

Chapter 5 discusses these findings in relation to the theoretical framework, developing three connected arguments. The first concerns why digital infrastructure dependency is structurally harder to address than other forms of technological lock-in. The second explains why organizations that already recognize the problem continue to produce delay rather than action. The third argues that the mechanism sustaining that delay is sensemaking itself as a process that functions too successfully, producing narratives coherent enough to make action feel

unnecessary. This extends Weick's (1995) framework by identifying successful sensemaking as a potential mechanism of inertia, a condition the existing literature does not directly address.

Chapter 6 concludes by drawing out the theoretical and practical implications of these findings, and reflects on what kind of intervention, at the level of the interpretive framework itself rather than at the level of technical migration, would be required to produce a different organizational outcome.

Chapter 2: Literature Review

Understanding how organizations make sense of digital infrastructure dependency under geopolitical disruption requires drawing on three connected bodies of literature. Each addresses a different layer of the same problem explaining how people inside organizations interpret an uncertain situation and what that interpretation makes possible or forecloses. Sensemaking theory offers conceptual tools for understanding how individuals construct meaning when existing categories prove inadequate (Weick, 1995, pp. 4-6), making it a productive starting point for analyzing. Sensemaking provides the thread that runs through all three bodies of literature because it is central to understanding why individuals respond the way they do (Weick, 1995, p.4).

Once sensemaking has shown how individuals construct an interpretation of their situation, a different question comes into view, asking what happens when that interpretation does not translate into action. Understanding why individuals who recognize a problem remain anchored to existing ways of working requires engaging with organizational change theory, which examines how structures, routines (Oreg et al., 2011) and identity shape what courses of action become possible (Hay et al., 2020).

When the object of change is the infrastructure through which work itself is organized, a different body of literature becomes necessary. Technological change theory examines how deeply embedded infrastructure shapes and constrains what individuals find it possible to do, and why changing it is categorically different from other forms of organizational change (Orlikowski, 1992; Tilson et al., 2010). It is here, where the tool is simultaneously the medium of response and the object of change, that the three frameworks reach the limits of what they can collectively explain, and where the circular problem this study examines comes into view.

2.1 Sensemaking

Prior to an organization's response to a disruption, someone within it must first interpret what is happening, why it matters and what it means for them, and sensemaking theory is concerned

precisely with this step (Weick, 1995). Sensemaking connects individual interpretation with collective action (Weick, 1993 as cited in Maitlis, 2005, p.21-22) and operates in the space where uncertainty is highest and where the foundations for any organizational response are first established. Sensemaking explains how organizations begin to understand disruption, but it does not fully account for why their responses are constrained or why certain paths of action remain unavailable to them. This section introduces the theory of sensemaking and its role in situations of imposed change.

2.1.1 Theories of sensemaking

Sensemaking is a largely influential concept in organizational studies and often is used in interpretive research, focusing on how individuals in organizations make sense of unclear and ambiguous events and situations surrounding them (Colville et al., 2012, pp. 219-220). The idea of sensemaking has increasingly attracted attention from various academics and researchers who aim to understand and theorize how individuals create and shape their own realities (Colville et al., 2012). While there is not one agreed upon definition of sensemaking, Karl Weick is widely considered the “father” of sensemaking. He defines sensemaking as how individuals interpret ambiguous situations by constructing meaningful explanations that guide action. In this study, Weick’s definition of sensemaking provides the analytical foundation.

Weick (1995, pp.63-64) expresses that there is a difference in the act of everyday sensemaking and organizational sensemaking. In organizations, sensemaking is shaped by structures and constraints such as roles, routines, shared understandings and institutional rules. This differs from everyday sensemaking, which is more based on personal experience and interaction (Weick, 1995, pp.63-64). Furthermore, Weick et al., (2005, p.410) introduce the everyday sensemaking question of "what's the story here?", explaining that individuals try to construct meaning with the hope that it will be sufficient to guide their future actions. In contrast, the organizational sensemaking question of "what does this mean for coordinated action?" emphasizes how interpretations are shaped collectively and directed toward aligning actions across members within a structured system. This distinction matters for this study because the

disruption under examination affects both individuals personally, as well as challenges the shared interpretive frameworks through which organizations coordinate their responses to change.

Making sense of digital dependency under geopolitical disruption requires a theoretical lens that can account for the complexity of how individuals and organizations construct meaning under uncertainty. Weick's (1995, p.17) framework of sensemaking offers precisely this through seven properties that together explain where sensemaking is and why it breaks down. These properties are particularly useful here because disruption, especially the kind that is sudden and unexpected, creates the exact conditions under which sensemaking is most likely to fail (Weick, 1993, p.648).

The process begins with identity as sensemaking is grounded in i) identity construction, the ongoing question of "who am I?", which shapes how individuals interpret events around them (Weick, 1995, pp.18-24). In organizational contexts, this matters because external disruptions create ambiguity and destabilize existing understandings of organizational situations, requiring individuals to reinterpret events and ongoing developments (Maitlis, 2005, p.21). This is compounded by the ii) retrospective nature of sensemaking, that meaning is only made after action has already been taken (Weick, 1995, pp.24-30). Organizations responding to disruption are therefore always working backwards, constructing understanding from events already in motion. Through iii) enactment, individuals further shape the very reality they are trying to interpret, bracketing and structuring their environment through their own actions (Weick et al., 2005). This dynamic becomes especially consequential in digitally dependent organizations, where the technological systems through which actors enact their environment become increasingly taken for granted over time, narrowing the interpretive possibilities available to them (Orlikowski, 1992, p.419).

Sensemaking is also iv) inherently social, meaning that understanding does not emerge from individuals alone but through interaction and shared interpretation (Maitlis, 2005, pp.21-23). In organizational responses to digital dependency, this suggests that collective narratives will shape how the disruption is understood and acted upon. Because sensemaking is v) ongoing and never truly complete (Weick, 1995, pp.43-49), these narratives are continuously revised, making it difficult to identify a single moment of organizational response. The meaning that emerges

through this process is anchored by vi) extracted cues, specific details or signals that individuals single out from the flow of experience to make sense of their situation. These cues are selective and shaped by existing expectations, meaning individuals tend to notice what their prior experience has made them alert to (Weick, 1995, pp.49-54). This raises an important concern because if organizations have long normalized their dependence on U.S. digital infrastructure, the cues they extract may reinforce rather than challenge that dependence (Weick et al., 2005). Finally, sensemaking pushes toward vii) plausibility rather than accuracy (Weick, 1995, pp.55-61). They suggest that organizational responses to digital dependency may be driven less by a full understanding of the risk and more by the need to construct a narrative that is manageable and legitimate. Maitlis and Christianson (2014, pp. 62-68) develop this further, arguing that the stabilizing function of a plausible account can reduce an organization's sensitivity to incoming cues that would otherwise prompt reinterpretation. A narrative that is sufficiently coherent to coordinate action around may, for that same reason, become resistant to revision, narrowing the interpretive possibilities available to organizational actors rather than expanding them.

What these properties reveal together, is that sensemaking under disruption centers on constructing the most plausible interpretation rather than the most accurate one. Individuals construct accounts that are coherent enough to act on, shaped by prior experience and social negotiation rather than by a full assessment of the situation. As Gioia and Chittipeddi (1991, p.434) note, sensemaking processes are most prominent during the early stages of strategic change, when organizational actors attempt to interpret and negotiate an altered organizational reality. This positions sensemaking as a critical lens for understanding how organizations first encounter and begin to interpret the consequences of digital dependency when disruption forces it into view. The following section examines the gap between understanding and acting, and what happens structurally once disruption has been recognized.

2.1.2 Sensemaking During Imposed Change

Organizational sensemaking is most visibly activated by ecological change, defined by Weick (2005, p.414) as a break or discontinuity in the environment that disrupts the experienced flow of

organizational actors. In these moments, individuals can experience “thrownness”, a state in which they find themselves in the middle of unpredictable, ongoing flows where they cannot avoid acting and cannot step back to reflect with objectivity (Weick 1995, pp. 44-46). This is particularly relevant in the context of digital sovereignty, where organizations are confronted with a dependency they did not choose to examine and may not have the interpretive resources to address.

The primary trigger for sensemaking during a disruption is the interruption of ongoing projects or well rehearsed patterns of actions (Weick, 1995, pp.94-95). This interruption creates discrepancy between what is expected and what is actually experienced, often occurring when an expected event fails to happen or an unexpected one does (Weick, 1995, pp. 4-5). These disruptions produce cognitive shocks in the form of uncertainty and ambiguity, triggering “automatic arousal”, which can impair sensemaking by narrowing perception (Weick, 1995, pp.101-102). Under high pressure, individuals may focus on psychologically “central” cues while ignoring outlying contextual information that is often vital (Mandlar, 1984, p.256 cited in Weick, 1995 p.104). Drawing on Weick, with digital dependency, this narrowing may cause individuals to focus on immediate operational continuity rather than the underlying structural vulnerability.

As noted, sensemaking is grounded in identity, which can be destabilized by external disruptions such as downsizing or restructuring (Weick, 1995, p.17-18). This process is often reinforced by self-fulfilling prophecies, where external labels shape internal behavior (Weick, 1995, pp. 134). However, disruptions can turn organizations into arenas of competing narratives, where multiple interpretations of reality coexist and compete for legitimacy (Dawson and Buchanan, 2005, p.862). While official narratives attempt to present change as coherent and positive, they are often challenged by entrenched stories that stabilize meaning and can create inertia (Weick, 2012, pp. 143-144). This narrative competition is a central mechanism through which organizations either begin to confront their dependency or continue to normalize it (Dawson and Buchanan, 2005, pp. 851-852). Weick (1995, pp.55-61) also describes how individuals and organizations can maintain two plausible accounts simultaneously, deploying each in different situations depending on what that context requires. Rather than resolving competing

interpretations into a single coherent narrative, individuals may sustain both in parallel, drawing on whichever account is most useful in a given setting (Weick, 1995, pp. 55-61). This becomes particularly relevant when organizations face a disruption they recognize as serious but cannot yet act on, creating conditions in which a governance-oriented narrative and a deferral-oriented narrative can coexist without contradiction.

However, holding two narratives at the same time is not the same as questioning them. Argyris (1977, p.116) distinguishes between single-loop learning, which involves adjusting behavior within existing assumptions, and double-loop learning, which requires returning to interrogate the underlying values and goals that shaped those assumptions in the first place. Rather than cycling through the same interpretations, an individual engaging in double-loop learning returns to question why they made sense of a situation the way they did (Argyris, 1977, p.116).

As outlined in section 2.1, sensemaking prioritizes plausibility over strict accuracy, as locally plausible stories allow coordinated action and provide a framework for navigating ambiguity (Weick, 1995, pp. 55-61). Rather than seeking verified truth, individuals build the most coherent story available from the cues at hand (Weick, 1995, p.60). Sensemaking unfolds through the enactment–selection–retention (ESR) process: individuals act to generate cues (enactment), focus attention to make sense of these cues (selection), and retain interpretations that guide future action (retention) (Weick et al., 2005, p. 414). Effective adaptation relies on the ability to believe a story enough to act while retaining enough doubt to notice new cues and adjust interpretations (Weick, 1995, p. 49-50). When incoming data fails to align with an existing frame, sensemakers revise aspects of their situational understanding rather than abandon the story entirely (Klein and Pin, 2023, p.5). Sensemaking theory therefore provides the essential starting point for this study as it explains how meaning is constructed before any organizational response begins. What it cannot explain is why, once a working interpretation has been formed, certain responses remain unavailable. That question belongs to organizational change theory.

2.2. Understanding Organizational Change

Recognizing that change is necessary and actually producing it are not the same thing. Even when individuals in the organization realize that change is necessary, existing structures, routines, and habits can make it difficult to respond. Organizational change is the process by which organizations make changes to their structures, processes, technologies or culture in response to internal or external pressures (Cumming and Worley, 2015). Organizational change theories examine what happens structurally once that disruption has been recognized and a collective response is required.

2.2.1 Theories of Organizational Change

Organizations manage change in two main ways: planned or emergent (By, 2005, pp.373-377). The planned approach treats change as a deliberate transition from an unsatisfactory state to a desired one, moving through structured stages. Lewin's model is among the earliest formulations of this, mapping the forces that sustain the status quo against those driving change (Hussain et al., 2018, p.123). However, planned approaches assume that environments are relatively stable and that change happens in a linear way (By, 2005, p.374), which sits in tension with Weick's (1995) account of sensemaking as continuous and non-linear. Because of this, planned approaches have faced significant criticism (Burnes, 1996, as cited in By, 2005, p.374), and its limitations are especially visible when change is externally imposed, giving organizations little time to prepare and no ownership over the conditions that triggered it.

The emergent approach responds to this limitation by viewing change as continuous, open-ended, and unpredictable (By, 2005, p.374). Emergent change arises from interactions within the organization and with its environment rather than from top-down plans (Liebhart and Garcia-Lorenzo, 2010, pp.3-4). This approach aligns more naturally with the sensemaking framework, which treats interpretation and action as continuous and mutually shaping rather than sequential. Pettigrew (1990, pp.268-270) extends this perspective, arguing that organizational change unfolds over months or years and is shaped simultaneously by internal factors such as culture and structure and external factors such as economic or geopolitical developments.

2.2.2 Individual response to change

How organizations respond to external pressures ultimately depends on the reactions of the individuals within them (Bartunek et al., 2006, p.183). Sensemaking explains how those individuals arrive at an interpretation of their situation, but interpretation and action are not the same thing. Change recipients are not passive subjects of disruption but active participants whose responses, including their inactions, shape what the organization ultimately does (Bartunek et al., 2006, p. 203). Organizational change theory addresses what happens in the space between interpretation and action, examining why individuals who have recognized a problem remain anchored to existing ways of working and what shapes whether recognition translates into movement.

A central factor shaping individual responses is the personal cost people associate with change. Initiatives designed to empower employees often add new responsibilities to already demanding roles, and when individuals feel that change takes more from them than it gives back, their responses tend to pull the initiative away from its intended goal (Bartunek et al., 2006, p. 201). When change contradicts existing beliefs and expectations, individuals must reckon with that contradiction, and how they do so shapes whether they adapt or disengage (George and Jones., 2001, p. 424). When change threatens professional or organizational identity, many respond by withdrawing or leaving rather than adapting (Hay et al., 2020, p. 19). This is particularly relevant in contexts involving transitions away from deeply embedded digital infrastructure, where change is not only about learning new tools but also about shifts in the competences and expertise that are valued (Tushman and Anderson, 1986, p.374). Employees who have built their competence around existing infrastructure may experience a transition as a reduction in the value of their knowledge, even when they recognize the necessity of change (Hay et al., 2020). In such cases, resistance becomes a way of protecting professional identity rather than a simple refusal to adapt.

These individual responses compound quickly at the organizational level. When individuals recognize the need for change but remain behaviorally anchored to existing ways of working,

progress stalls collectively (Stensaker and Falkenberg, 2007, pp. 167-168). This gap between recognition and action is a structural feature of organizational life, and it becomes particularly consequential when the change in question involves not just new processes or roles, but the technological systems through which everyday work is organized.

2.2.3 The role of habits and routines in resistance to change

Resistance to change is influenced not only by how people consciously interpret situations, but also by stable thinking, feeling, and habit patterns that often operate automatically (Oreg, 2003). Individuals develop schemas, mental frameworks built through repeated experience, that allow rapid interpretation and decision-making without deliberate reflection (George and Jones., 2001, p. 421). Because schemas help people process information quickly, individuals tend to maintain them even when faced with contradictory evidence, dismissing challenges as isolated exceptions rather than updating their underlying interpretive framework (George and Jones, 2001).

This cognitive tendency is reinforced by a dispositional preference for predictability and stability, making disruptions to established patterns feel genuinely uncomfortable rather than merely inconvenient (Oreg, 2003, p. 681). Emotions and moods play a crucial role when a discrepancy between a schema and reality is encountered, as it triggers an emotional reaction that mobilizes attention and cognitive processing (George and Jones, 2001, pp. 438-439). However, even when such signals are present, a “short-term focus” leads individuals to concentrate on the immediate inconvenience of abandoning familiar ways of working rather than on the potential long-term benefits of change (Oreg, 2003, pp. 681-682).

At the organizational level, this resistance is amplified by embeddedness. Change is an ongoing feature of organizational life across all sectors (By, 2005), yet employees most strongly committed to existing routines are consistently the most likely to resist their removal, experiencing it not as a neutral adjustment but as a genuine loss (Oreg et al., 2011, p. 516). This is particularly consequential when routines have been built around the same digital infrastructure for years, as change may be perceived as a threat to established ways of doing things rather than a neutral organizational adjustment. (Oreg et al., 2011, p. 516). What makes this challenge

particularly hard to manage is that responses to change are rarely straightforwardly negative. Piderit (2000) argues that resistance is better understood as ambivalence, where employees may simultaneously hold positive cognitive beliefs about a change while experiencing negative emotional reactions to it, and while intending to behave in ways that do not fully support it (pp. 786-787). Because these mixed responses are difficult to articulate and express, particularly the emotional dimension, employees are more likely to wrestle with their ambivalence privately or avoid the subject entirely rather than signal their concerns openly (Piderit, 2000, p. 789). Over time, this quiet withdrawal can slowly reduce the momentum of a change initiative without ever being seen as clear resistance.

Organizational change theories therefore explain why recognized problems so often fail to produce action, and why the gap between understanding and moving is a structural feature of organizational life rather than an individual failure. The theories are built on an assumption that in most change situations the problem arrives from outside and the response is organized from inside (Burnes, 2004; By, 2005). The organization has a stable internal platform, its tools, communication systems, and coordination infrastructure, from which to manage whatever external pressure it faces. In the context of digital infrastructure dependency, that assumption does not hold. This is particularly evident in cloud-based digital infrastructures, where operational control and jurisdiction over organizational tools extend beyond the boundaries of the organization itself (Hildén, 2021, pp. 2, 5-6, 14-15). The inside and the outside are not separate. The problem does not arrive from outside and gets solved from inside as it is already inside, running through the same systems the organization would use to respond.

2.3 Technological Change

In increasingly digital organizations, technology plays a constitutive role in organizing work, routines and coordination. This means that technological change cannot be separated from organizational change more broadly as it directly shapes how individuals make sense of and enact change, and it introduces a layer of structural constraint that organizational change theories alone cannot fully explain.

2.3.1 Technology in Organizations

Early organizational studies often treated technology as a relatively neutral conversion system where inputs are processed and outputs are produced (Perrow, 1967; Thompson 1967). Perrow (1967, pp.194-197) classified technologies along two dimensions: task variability and problem analyzability, while Thompson (1967, pp. 54-58) showed that different forms of technological interdependence produce different coordination requirements within organizations. Woodward (1965, pp.50-75) demonstrated empirically that organizational structures tend to follow from the type of technology used. These frameworks were productive for their time but tended to treat technology as analytically separable from the people using it, implicitly positioning it as a tool that could be changed without fundamentally disrupting the organization around it (Leonardi and Barley, 2010, pp. 5-16). This assumption, as the following discussion argues, becomes unsuitable once technology is deeply embedded in organizational practice.

This assumption was challenged by Orlikowski (1992, p.405), whose structurational model argued that technology and human action are mutually constitutive. Drawing on Giddens (1984), Orlikowski (1992, p. 405) argued that technology is “created and changed by human action, yet it is also used by humans to accomplish some action,” meaning it is continuously produced and reproduced through use rather than existing as a fixed external object. Orlikowski (2000, pp. 404-410) later extended this argument into the concept of “technology-in-practice,” shifting analytical attention toward the situated enactment of technology by users in specific contexts, rather than treating technology as an external, stable object. Building on this, Orlikowski and Gash (1994, p. 175) introduced technological frames, meaning the assumptions, expectations and knowledge individuals and groups hold about a technology. This showed that when these frames diverge across groups, as they often do between IT professionals, end users and management, technological change generates confusion and conflict that goes beyond ordinary adjustment costs (Markus, 1983, p.433; Barley, 1986, pp. 78-84).

As technology becomes embedded in routines and practised over time, it gradually becomes invisible to those who use it (Star and Ruhleder, 1996, pp. 111-113). Star and Ruhleder (1996, , pp. 111-113) argue that infrastructure only becomes visible at the moment it breaks down,

meaning that organizations encounter the fact of their dependency precisely when they are least positioned to respond to it. The disruption that reveals the problem is the same event that activates the response deficit. Drawing on Heidegger's (1962, pp. 95-107) distinction between equipment that is ready-to-hand, functioning invisibly as an extension of practice, and present-at-hand, suddenly foregrounded as an object of conscious attention when it fails, when embedded technology breaks down, it shifts from the former to the latter, forcing explicit reflection on something that previously required none. Hutchins (1995, p. 12) showed that in organizational settings, cognition is not located in individual minds but distributed across people, tools and artefacts, meaning that when a key technological component is disrupted, the broader cognitive system through which the organization acts is affected. Critically, this suggests that the infrastructure being disrupted is not merely a tool the organization uses to respond but part of the apparatus through which it makes sense of what is happening at all.

This invisibility helps explain why technological disruption is particularly destabilizing. Individuals are required to make sense of aspects of their work that were previously taken for granted (Weick, 1995, pp.4-5), using cognitive and organizational resources built around the assumption that the tool would continue to work. This distributed character of organizational cognition means that technological disruption damages the sensemaking capacity of the organization as a whole (Weick et al., 2005, p. 418). This becomes especially significant, as this study argues, when the tool in question is the infrastructure through which coordinated action is made possible.

2.3.2 Technological Change

Once technology is understood as embedded rather than external (Orlikowski, 1992, pp. 402-411), technological change becomes considerably more complex than a simple tool swap (Leonardi and Barley, 2010; Pentland and Feldman, 2008). Tushman and Anderson (1986, pp. 439-442) made an influential distinction between competence-enhancing change, which builds on existing knowledge and skills, and competence-destroying change, which renders existing expertise obsolete. Competence-destroying change does not ask individuals to extend their competence but to abandon it, often producing resistance and anxiety that are difficult to address

simply through training or incentives (Tushman and Anderson, 1986, pp. 439-442). Henderson and Clark (1990, pp. 10-12) refined this further by distinguishing between component knowledge, meaning understanding of individual parts of a system, and architectural knowledge, meaning understanding of how those parts fit together and depend on one another. Architectural innovation is particularly difficult for established organizations because it disrupts architectural knowledge while appearing to preserve component knowledge. Organizations may believe they understand the new system because they recognize its components, while lacking knowledge of how those components are structurally integrated. This dynamic is directly relevant when organizations consider migrating away from deeply integrated digital infrastructure, where the visible application layer gives no indication of the structural dependencies beneath it (Henderson and Clark, 1990, pp. 10-12).

A further distinction concerns who drives technological change and under what conditions (Markus, 1983). Imposed technological change, driven by external pressure such as regulation or geopolitical developments, differs from emergent change that develops from within organizational practice (By, 2005, pp. 370-373). Imposed change often gives organizations less time to prepare, less ownership of the interpretive narrative surrounding the change, and less opportunity to build required competencies before the change arrives (Markus, 1983). Markus (1983, p. 433) showed that imposed technological change often produces resistance among those who lose power or competence as a result, and that this resistance is rational given what individuals stand to lose. In Weick's (1993, p. 633) terms, such conditions may produce dynamics associated with a cosmological episode, a situation in which individuals find themselves in the middle of an unfolding process they did not choose and cannot easily make sense of. This framing is particularly important for the digital sovereignty context, where organizations are confronted not only with an unfamiliar problem but with the realization that the infrastructure they rely on to solve problems may itself be part of the problem.

Digital sovereignty represents a specific and increasingly prominent form of imposed, politically driven technological change (Pohle and Thiel, 2020; Floridi, 2020, pp. 370-372). At its core, it refers to the capacity of an organization, state, or individual to maintain meaningful control over its own digital infrastructure, data, and technological dependencies (Pohle and Thiel, 2020).

Pohle and Thiel (2020) grounds the concept in informational self-determination, meaning the right and capacity to govern one's own informational environment, while Couture and Toupin (2019, p. 18) connect it directly to questions of organizational identity and trust, framing it as communities and organizations choosing tools that align with their values.

Pohle and Thiel (2020) present a distinction between sovereignty as autonomy, meaning freedom from dependency, and sovereignty as capacity, meaning the genuine ability to act independently. This distinction matters practically because organizations may achieve formal autonomy by switching providers while lacking the technical capacity to operate effectively without returning to previous dependencies. An organization that migrates its email infrastructure to a European provider but retains its data analytics, authentication, and coordination tools on U.S. platforms has changed its nominal dependency without changing its structural one (Pohle and Thiel, 2020, p.7).

The concept of digital sovereignty has gained significant traction in European policy discourse over the past decade, appearing in frameworks for strategic autonomy, data localization regulation, and public procurement reform (European Commission, 2021, n.p.). However, as Pohle and Thiel (2020, pp.11-13) note, policy-level articulations of sovereignty tend to address the regulatory environment rather than the organizational experience of dependency. Yet this regulatory orientation leaves largely unexamined how organizations themselves interpret and respond to sovereignty as an operational condition. This gap between the policy conversation and the organizational one is part of what this study addresses. Understanding digital sovereignty as an organizational sensemaking problem rather than primarily a regulatory or technical one requires a theoretical framework that can account for how individuals inside organizations interpret, narrate, and respond to a condition that policy frameworks describe from the outside.

Tilson et al., (2010, p.7) capture the organizational dimension of this challenge through the idea of installed base inertia, meaning the accumulated weight of existing systems, integrations, skills, and dependencies that makes even technically straightforward migrations organizationally costly and complex. Cohen and Levinthal (1990) showed that absorptive capacity is partly a function of prior related knowledge, meaning organizations that have not engaged with alternative

technological environments have a limited foundation for evaluating them. Zahra and George (2002, pp.185-190) extended this by distinguishing between potential and realized absorptive capacity, suggesting that an organization may understand intellectually that alternatives exist without having the realized capacity to implement them effectively. These dynamics help explain why digital sovereignty remains aspirational for most organizations even when the political and regulatory pressure to pursue it is genuine. The structural conditions for acting on that aspiration are themselves shaped by the dependencies organizations seek to overcome.

What the technological change literature does not fully address, however, is what happens when the infrastructure needed to respond to a disruption is itself part of what is being disrupted. The following section argues that the digital sovereignty situation is structurally different, and that this difference is what makes the existing frameworks insufficient on their own.

2.3.3 When the Tool is the Problem

What makes this situation categorically different from the technological change scenarios the literature addresses is the structural collapse of the boundary between inside and outside. The frameworks reviewed above address technological change as a disruption that arrives from outside the organization, leaving existing infrastructure available as a resource for response. This research argues that the situation examined here is structurally different. In the context of digital sovereignty, the tool itself becomes part of the disruption rather than a resource for navigating it. The threat does not stay outside while the response is organized inside. It is already in both places at once.

This condition has consequences that extend beyond organizational responses and affect how organizations make sense of what is happening in the first place. Weick (1988, pp. 306-308) addressed a related dynamic in his analysis of enacted sensemaking in crisis situations, arguing that in certain crises the normal assumption that action will produce a sensible and understandable outcome can no longer be relied upon. When individuals cannot fully trust the cues generated by the system whose reliability is in question, the sensemaking processes outlined earlier are directly undermined.

Organizations facing this situation often respond in one of three patterns, none of which fully resolves the problem. The first and most common is improvisation and workaround: creating adaptive practices to accommodate the problematic tool rather than addressing the tool itself (Orlikowski, 1996, p.64-66). Orlikowski (1996, p. 65) documented how workarounds became institutionalized over time, embedding the problematic tool more deeply into organizational practice and making it progressively harder to address directly. Alter (2014, p. 1060) reframed workarounds as rational organizational adaptations to a broken or inadequate tool. In digital sovereignty contexts, this pattern manifests as organizations that acknowledge dependency in principle while continuing to deepen it in practice. This is a form of symbolic action in which the performance of awareness substitutes for meaningful change (Orlikowski, 1996, p.78).

The second pattern is reframing: a sensemaking shift in which some actors begin to name the tool itself as the problem rather than adapting to it (Sonenshein, 2009, cited in Maitlis and Sonenshein, 2010, p.567). Not all individuals make this shift simultaneously, which produces competing narratives about what kind of situation the organization is in (Maitlis and Sonenshein, 2010, p.559). Maitlis and Sonenshein (2010, p. 561) argue that the most severe sensemaking breakdowns occur when people cannot agree on what kind of situation they face. This is likely when some individuals continue to treat the tool as functional while others see it as fundamentally compromised (Orlikowski and Gash, 1994, p.177). Dawson and Buchanan (2005, p. 847) show that competing narratives emerge from differing interpretations, political processes, and actor interests, while Brown and Humphreys (2003, p. 123) found that actors construct different stories about the same organizational events in ways that protect existing self-understandings against the threat of change.

The third pattern is changing the tool itself, which is the most disruptive response (Pohle and Thiel, 2020, pp.13-14). Henderson and Clark (1990) showed this is particularly difficult because of the disruption to architectural knowledge it entails. Pentland and Feldman (2008, pp. 245-248) argue that routines and technological artifacts are mutually shaping, meaning that technological change can alter organizational routines in ways that are difficult to fully predict or control

2.4 Chapter Summary

The situation this study examines is structurally circular. The infrastructure through which work is organized, coordination is maintained, and sensemaking unfolds is simultaneously the object of disruption. The problem does not arrive from outside and get resolved from inside. It is already inside, running through the same systems the organization would use to respond. This is a condition that sits outside what any of the three frameworks reviewed in this chapter was built to explain.

Each framework illuminates a different dimension of the problem without being able to see the whole of it. Sensemaking theory explains how meaning is constructed when familiar frameworks fail. Organizational change theory explains why recognized problems so often fail to produce movement and technological change theory explains why embedded infrastructure is categorically harder to replace than it appears. But each one assumes a stable platform from which individuals and organizations can interpret and respond to disruption. When the platform itself is what must change, the analytical ground these frameworks stand on gives way.

What the three frameworks together make visible, therefore, is the precise shape of the problem. The empirical chapters that follow examine how individuals inside organizations navigate that condition in practice. At the center of that examination sits a single question: *How do individuals within organizations engage in sensemaking when the infrastructure they rely on becomes the source of the problem itself?*

Answering that question requires a methodological approach capable of accessing how individuals experience and narrate this condition from the inside. The following chapter sets out how this study was designed to do that.

Chapter 3: Methodology

Chapter 3 explains how the theoretical framework established in chapter 2 was translated into a research design capable of generating the data needed to answer the research question. The chapter begins by articulating the ontological and epistemological assumptions that grounded the study, before presenting the qualitative research design and explaining why it was appropriate for this inquiry. It then describes the data collection process, sampling strategy and the approach taken to analyzing the interview material.

3.1 Ontology and Epistemology

This chapter rests on two foundational assumptions about the nature of the social world and how it can be known. These are assumptions that directly shaped what kind of answer the research question could produce (Prasad, 2018, pp.13-14).

Our research question is concerned with a condition in which the infrastructure organizations use to coordinate, communicate and respond to problems is itself the source of the problem. This circularity has direct methodological consequences because what organizations do when they encounter this condition cannot be read off from the structural features of the situation alone. Two organizations facing identical infrastructure dependency and identical geopolitical pressure may construct entirely different accounts of what their situation means and what it requires of them. Understanding why requires getting inside those accounts rather than measuring the conditions that surround them.

This reasoning led us to a constructivist ontology, which assumes that social reality is not a fixed objective structure but is continuously produced through the meanings individuals assign to their experiences (Berger and Luckmann, 1966, p.13). In our study, digital infrastructure was something that organizational individuals interpreted, assessed and made sense of differently depending on the narrative resources available to them. Rather than treating the variation we encountered across interviews as noise to be filtered out, our ontological position led us to approach it as analytically generative. Drawing on the interpretivist tradition, we understood

participants' accounts as reflecting the multiplicity of meanings that different individuals bring to any social situation, meanings that are "multiple and changing rather than fixed and shared" (Prasad, 2018, p. 22). This ontological commitment had direct implications for how knowledge about that variation could be produced, and for what kind of epistemological position the study required.

Our epistemology followed directly from this. If what organizations do with digital dependency is shaped by how they interpret it, then understanding those interpretations from the inside is the only way to access the sensemaking process our research question is concerned with. The interpretivist perspective positioned us as researchers seeking to understand the meanings participants constructed from their experiences, rather than as detached observers measuring behavior from outside it (Prasad, 2018, pp. 26-27). This meant the data needed to be rich enough to show not just what people believed about their digital dependency but how they assembled those beliefs from the cues available to them and what those beliefs made possible or impossible organizationally. Reaching the circular condition at the heart of the research question required understanding how actors experienced and narrated a situation in which the infrastructure they relied on to coordinate and respond was also what needed to change. That kind of data could not be generated through surveys or structured instruments but required extended conversations in which participants were given space to reason through their situation and arrive at interpretations they had not necessarily articulated before (Brinkmann and Kvale, 2015, pp. 3-4).

3.2 Interpretive Research Tradition and Analytical Framework

Consistent with the epistemological stance, our research aligned with the interpretivist research tradition as described by Prasad (2018, pp.14-16), which draws on phenomenology, hermeneutics and symbolic interactionism. This tradition holds that the task of social research is to understand how people make meaning of their world, and that such meaning can only be grasped from within the perspective of those who hold it (Prasad, 2018, pp.14-15). This positioned interpretivism as an appropriate framework for a study concerned with how individuals inside organizations narrate and make sense of digital dependency, since the phenomenon under examination was not an objective condition to be measured but an

experienced and interpreted one. What mattered was how dependency was understood, articulated and acted upon by the people navigating it.

Within this interpretivist orientation, we adopted narrative inquiry as a methodological approach (Riessman, 2008, p.23), on the grounds that sensemaking becomes visible precisely through the accounts individuals construct about their experiences. Narrative inquiry therefore directed analytical attention toward the accounts participants constructed rather than toward verifiable facts about their situations. This positioned Weick's (1995) sensemaking framework as our primary theoretical lens, as it aligns with the same processes that narrative inquiry aims to capture. As described, to Weick (1995, pp.55-62), sensemaking refers to how individuals construct plausible interpretations of ambiguous situations in order to act. It is retrospective, shaped by identity, socially produced and oriented towards plausibility rather than objective accuracy. Crucially, sensemaking became visible in how people articulated their experiences through talk, narratives and shared accounts (Weick, 1995, p.30). This examination focuses on two key mechanisms through which sensemaking unfolds in practice: the extraction of cues and the construction of narratives.

3.2.1 Cues and Narratives

Cues are typically simple and familiar, and a single cue is often treated as representing the whole experience it came from (Weick, 1995, pp. 49-50). Managing these cues begins with noticing and bracketing, where individuals extract discrete "texts" from the raw, continuous flow of experience, making them available for interpretation (Weick et al., 2005, pp.409-411). Weick (1995, p. 49-50) explains that cues are context-dependent, gaining meaning through the interaction between individual interpretation and the shared frame of reference within the organization. He describes that ultimately, meaning does not reside in the cue alone, but in the interaction of the frame (past experiences and socialization), the cue (present experience), and the connection constructed between them (Weick, 1995, p. 110). The transition from isolated cues to coherent understanding is achieved through narration, which he defines as the "symbolic presentation of a sequence of events connected by subject matter and related by time" (Weick, 1995, p. 128).

In practice, these two concepts directed our attention at different levels of the data. We used cues to identify the specific details, comparisons, and observations that participants singled out as significant. We focused on the moments where something was noticed, named, or set apart from the flow of experience. We then examined how those cues were assembled into narratives, noticing how participants sequenced events, assigned cause and consequence, and constructed accounts that justified particular organizational stances toward digital dependency. This dual focus allowed us to analyze what participants thought, as well as how those interpretations were built and what work the stories were doing organizationally.

3.3 Data Collection: Semi Structured Interviews

We selected semi-structured interviews because they provided the openness necessary to capture how participants narrated and made sense of their experiences, while still offering enough structure to keep the conversation anchored to the phenomena under examination. This aligns with Brinkmann and Kvale's (2015, p. 6) definition of the semi-structured qualitative interview as a method aimed at obtaining descriptions of participants' lived worlds in order to interpret the meaning of the described phenomena. Importantly, interviews were particularly well-suited to a sensemaking study, as the act of interviewing was itself a sensemaking occasion (Weick, 1995, p.30; Riessman, 2008, p.23). When asked to narrate their experiences, participants engaged in precisely the kind of retrospective meaning-making that Weick (1995, pp. 55-62) described through constructing plausible accounts of ambiguous situations through talk. This also aligned with the principles of narrative inquiry, which treats the interview not as an instrument for extracting pre-formed views but as a space in which participants actively construct and communicate meaning through storytelling (Riessman, 2008, pp.21-23). The interview guide was therefore designed to elicit stories about how digital dependency had been experienced, interpreted, and narrated from within their organizational contexts.

We chose not to share the interview guides in advance in order to access participants' immediate interpretive realities, eliminating the possibility of prepared responses (Brinkmann and Kvale, 2015, pp. 153-155). Each participant received a brief overview of the topics that would be

covered. Interviews were conducted individually, averaging 42 minutes, though durations varied considerably, ranging from one, unusually short, exchange of 18 minutes to one extended conversation lasting 66 minutes. Following Brinkmann and Kvale's (2015, pp.133-145), funnel structure, each interview followed a guide structure designed to move from broader questions about participants' organizational roles and general experience toward more specific topics concerning digital infrastructure and potential disruption. Follow up questions were used throughout to encourage elaboration, particularly where participants introduced cues or framings that could be analytically important. When participants used terms such as "risk", "dependency", or "sovereignty", we used follow up questions to invite them to unpack what they meant, rather than allowing shared vocabulary to cover potentially different underlying interpretation (Brinkmann and Kvale, 2015; Riessman, 2008, pp. 23-24).

All interviews were conducted online, recorded with participants' consent, and transcribed using Klang.ai, a GDPR-compliant service. Transcripts were reviewed and corrected for accuracy.

3.4 Sampling Strategy and Participant Selection

Our sampling strategy and logic followed the sensemaking framework, with the aim to understand how meaning was constructed and shared. Participants were recruited through a combination of professional networks and LinkedIn outreach. We also used snowball sampling, where early participants suggested additional contacts with relevant experience (Brinkmann and Kvale, 2015, pp. 113-114). The primary selection criterion was that participants held direct experience with digital infrastructure decision making or advisory work. We pursued variation across organizational roles and sectors in order to capture a range of sensemaking perspectives from people who made strategic decisions about infrastructure to those who worked at the operational level.

We therefore included senior IT decision-makers, such as Heads of IT, IT Managers, and Chief Technology Officers who held responsibility for digital infrastructure and operational decision-making and thus provided a strategic sensemaking perspective. We also conducted interviews with two academic researchers specialising in digital sovereignty, Tom and Alejandro, whose accounts offered broader conceptual perspectives on the field. Given that our research

question is concerned with how digital sovereignty is understood and experienced within organizational practice, these interviews were treated differently from those conducted with organizational participants. Tom's interview served an orientating function during the early stages of the study, helping to shape the analytical framework, and is not drawn on in the analysis that follows. Alejandro's interview, while also conceptual in nature, offered perspectives that were sufficiently grounded in organizational contexts to inform the analysis, and is drawn on selectively where relevant. Additionally, we included mid-level technical employees, such as engineers and product architects, to represent the operational perspective and to examine how sense was received, interpreted, and enacted further down the organizational hierarchy. Finally, we included consultants working in digital transformation, technology strategy, and IT advisory roles, as well as one participant operating a non-profit focused on digital sovereignty awareness. These participants contributed cross-organizational perspectives shaped by advisory work across multiple firms and sectors. This contributed a hybrid perspective that was able to bridge the practical experience with advocacy. Figure 1 illustrates the duration of each interview, their current position and how they contributed analytically.

Name ¹	Duration of Interview	Current Position ²
Jan	57 min	Head of IT
Bo	18 min	Mid-level Engineer
Dermot	29 min	IT Manager
Tom	46 min	Researcher and Lecturer
Alejandro	35 min	Researcher
Reinhold	28 min	Product Architect
Gar	35 min	Head of IT
Bertram	62 min	IT Consultant/Digital Sovereignty Non-profit
Berend	36 min	Management/Digital Transformation Consultant
Jörgen	34 min	IT Manager
Ina	43 min	Senior Manager
Steve	47 min	Chief Technology and Engineering Officer
William	66 min	Technology Strategy Consultant

¹ Note that the names of all participating employees have been changed to ensure their anonymity and protect their identities from other parties.

² To protect the anonymity of the interviewees, we anonymized their current positions.

Figure 1: Interview participants

We continued recruiting participants until we judged that the main perspectives relevant to the research question had been sufficiently explored. Interviews continued until theoretical saturation was reached, defined as the point at which new participants confirm and expand existing ideas rather than introduce fundamentally different perspectives (Glaser and Strauss, 1967, p.61). This occurred around the eighth interview, at which point new participants were mostly reinforcing patterns already identified in earlier interviews rather than generating new ways of understanding the dependency. Participants often described dependency as a mutually beneficial relationship, recognized forms of structural entrapment without identifying a clear way out, postponed action until a possible future crisis, and focused on managing exposure in the present rather than resolving the issue itself. These patterns appeared across participants from different sectors and organizational roles and new interviews added more detail and institutional variation to these themes, but the underlying sensemaking processes remained consistent. We conducted five additional interviews to confirm whether these patterns continued. Since no substantially new theoretical categories emerged and participants continued to reinforce rather than challenge the interpretive frameworks already identified (Glaser and Strauss, 1967, p. 61), we concluded that thirteen participants were sufficient for the analytical purpose of the study.

3.5 Data Analysis

In the first stage of our analysis, we worked through each script individually, coding segments of text that captured participants' efforts to interpret and respond to a situation. A segment was coded as sensemaking when participants moved beyond merely recounting events and instead engaged in interpretive work, for example, by identifying something as unclear, extracting a detail they treated as meaningful, assigning significance to it or linking it to a subsequent action or inaction (Weick et al., 2005, p. 409). This allowed us to distinguish sensemaking from descriptive background talk, where not every detail was treated as analytically relevant but only those participants used to construct a plausible understanding of what was happening. For instance, one participant explained that "the Greenland situation actually made people worried for real" but that this concern "only lasts as long as the media is putting this on the agenda." We coded the first part of this account as cue extraction, the geopolitical event functioned as a signal that briefly foregrounded digital dependency as a concern.

In the second stage, we moved from individual transcripts to identifying patterns across interviews, looking for similarities and differences in how participants interpreted and responded to the same underlying condition (Riessman, 2008, pp. 53-76). This is where the analytical sensemaking framework became central. We focused on recurring interpretive moves, such as how participants framed the situation in similar or different ways, which cues they treated as important, and how they described what responses seemed plausible or not (Weick, 1995, p.55). We focused on how interpretations formed around different ways of assembling the dependency cue into an organizational stance. This then became the basis for the narrative constructions developed in the third stage.

In the third stage, we identified the different narrative ways in which participants turned the dependency cue into distinct organizational positions (Riessman, 2008, pp. 53-54). We examined how the same underlying condition, deep organizational dependence on U.S. digital infrastructure, was understood in different ways depending on the narrative resources available to each participant and how they interpreted the situation. This allowed us to go beyond what was explicitly discussed and instead show how the same starting point could lead to comfort, critique, delay, or active governance.

To make the analytical logic of the study accessible, we use a recurring metaphor throughout the analysis. Organizations facing digital dependency under geopolitical disruption are like passengers on a ship that is taking on water, where the ship is simultaneously the only available means of response. The metaphor captures three features of the situation this study examines: that the problem is structural and shared, that awareness of it does not determine what people do with it, and that the infrastructure through which a response would be organized is the same infrastructure that must change. The four narratives documented in Chapter 4 each represent a different stance toward that condition, from not knowing the ship is taking on water, to naming the leak with precision but staying onboard, to putting on a life vest as a substitute for jumping, to beginning to build a lifeboat. Table 2 illustrates this analytical step by showing how the

dependency cue leads to different narrative constructions and what each of these makes possible or prevents at the organizational level.

Dependency Cues	Narrative Construction	How this cue is assembled	Analytical implication
Microsoft's European revenue relative to Denmark's GDP	The Calm Seas	Dependency is framed as safe because Microsoft is too financially invested to risk damaging the relationship	The participant makes continued dependence seem rational by converting economic scale into a structural guarantee of trustworthiness
Vendors gave products for free until habits formed, making exit difficult	Leaking but still Floating	Dependency is framed as deliberately designed rather than accidental, a trap constructed with the outcome already in mind	The participant names the mechanism of capture with precision yet assembles it into a stable belief that the situation is fixed rather than a reason to act
Organizations discuss exit strategies for two days and then never return to the subject	The Life Vest	Dependency is acknowledged and a response is assigned, but the moment of actual commitment is continuously deferred to a future crisis	The participant assembles the appearance of organizational engagement as a substitute for structural change, making waiting feel legitimate
Defining partial and full sovereignty as distinct operational risk states	The Lifeboat	Dependency is treated as a risk to be actively governed in the present tense rather than resolved or deferred	The participant assembles the same structural condition into a governance framework that produces present-tense organizational decisions rather than plausible accounts of why action belongs later

Table 2: Illustrative Examples

3.6 Researcher Positionality

As researchers, we approached this study as relative outsiders to both the technical field and the organizational contexts we examined. Neither of us has a professional background in IT infrastructure or digital sovereignty. As a U.S. and a French student studying in Sweden, we did not enter the field with prior experience of Nordic institutional culture or organizational norms and this position had important analytical implications.

On one hand, our distance from the technical subject matter meant that we were less likely to impose predefined interpretations on participants' accounts. Instead, we depended on interviewees to explain their experiences and perspectives to us, which may have encouraged

more detailed explanations than a technically specialized interviewer might have received. On the other hand, being outsiders, it is possible that certain culturally or technically specific nuances carried less weight in our interpretation than they might have for a researcher more embedded in Nordic organizational life, though we cannot fully know what those blind spots contain.

Our interest in the topic began through observing public debates about digital sovereignty in Europe during our studies at Lund University. This shaped our initial understanding of the issue as a question of organizational sensemaking rather than primarily a technical or policy problem. Throughout the research process, we remained attentive to how this starting point shaped our reading of the data, while accepting that the pre-understandings a researcher brings to interpretation can be reflected upon but never fully set aside (Prasad, 2018, pp. 34-35).

3.7 Use of Generative AI

Klang.ai, a GDPR-compliant AI transcription service, was used to produce initial transcripts of all interviews. These were subsequently reviewed and corrected by the research team to ensure accuracy. ChatGPT and Claude were used in a limited capacity to assist with grammar and language editing of the written paper. AI tools were not used at any stage for idea generation, analytical interpretation, or the drawing of conclusions. All intellectual and analytical work in this paper were the authors' own.

3.8 Chapter Summary

This chapter explained the methodological approach of the study. Using a constructivist and interpretivist perspective, the study explored digital dependency as something organizational actors interpret and give meaning to. Guided by Weick's (1995) sensemaking framework, the focus was on how participants understood and explained their organization's relationship with digital infrastructure. Thirteen semi-structured interviews were conducted with participants in strategic, operational and advisory roles across Nordic organizations. The data were analyzed in three steps: identifying sensemaking moments, grouping them into themes, and examining the

narratives participants used to explain them. These choices allow the study to show how digital dependency is understood in practice, rather than measure how common it is. The research design presented in this chapter was created to explore the central issue of the study. The aim was to understand how people make sense of a disruption they are fully immersed in, while relying on the same tools and systems that are themselves being questioned.

The analysis that follows focuses on two main issues. First, it examines whether people become aware of this dependency and how they recognize it. Second, it looks at how participants interpret and respond to that realization. The different ways participants answered this second question, and what these responses reveal about the link between sensemaking and inaction, are explored in Chapter 4.

Chapter 4: Analysis

The following chapter presents our analysis of how interview participants made sense of digital dependency and the possibility of disruption in their digital infrastructure. The analysis traces how cues were extracted from the environment and assembled into four distinct narratives, each representing a different organizational stance toward the same underlying condition of deep dependency on U.S. digital infrastructure.

The analysis begins below deck, where the question of digital sovereignty has simply never become a question. The dependency exists but has not been experienced as either a problem or a choice, and without an extraction of the dependency cue there is no occasion for narrative construction. For those who do extract the dependency cue, the analysis traces distinct narratives, each showing how the same underlying condition can be assembled into something different depending on the narrative resources available to the individual encountering it.

In the calm seas, the dependency cue is assembled into a structural guarantee that makes continued dependence feel rational rather than risky, producing inertia that is entirely coherent from inside it. In the leaking but afloat, the same cue is assembled into a recognition of coercive entrapment, producing articulate critique that nonetheless, arrives at the same practical destination. In the life vest, the cue is assembled into a succession of plausible reasons for deferral, where urgency dissolves, thresholds are set at the point of crisis, and responsibility migrates without settling anywhere that produces movement. In the lifeboat, the cue is assembled into a governance framework that treats dependency as a risk to be actively managed, producing the only narrative in the data where sensemaking generates present-tense organizational change.

The different narratives are not stages through which organizations pass consecutively, nor do they map neatly onto organizational size, sector, or role. They are distinct sensemaking stances, each internally coherent and each producing a different organizational output from the same underlying condition. What varies across them is the narrative resources available to the individual encountering the cue, and it is that variation which helps explain why awareness, critique, and intention are each insufficient on their own to produce action. Because the analysis

traces sensemaking processes rather than individuals, the same interviewee may appear across multiple narratives where their account engages with different cues or assembles the same cue differently depending on the organizational context in which it arises.

4.1 Below Deck

For some interviewees, the question of digital sovereignty had simply never become a question. Their organizations were deeply embedded in U.S. digital infrastructure, yet this embeddedness had not registered as a condition worth examining. This is what we call being below deck, a state in which dependency exists but has not yet been experienced as either a problem or a choice. The tools, platforms and systems in daily use feel like neutral features of the working environment rather than a structural condition requiring interpretation. Below deck is not a failure of sensemaking but a particular sensemaking outcome, one in which the existing framework of normal work is stable and complete enough that the raw material for a dependency cue produces no disturbance and therefore no occasion for extraction or interpretation.

Bo's account is the clearest illustration. Coming from a non-IT role, he had not encountered the concept of digital sovereignty before the interview began: *"Digital sovereignty? I'm actually not familiar with that term. What's that?"*. His response was not avoidance or disagreement but genuine unfamiliarity. The dependency was present in his working environment but nothing in that environment had created an occasion to notice it. Weick (1995, p.133) argues that sensemaking is continuous, and people are always interpreting their environment and constructing accounts of what is happening around them. Bo is no exception as he is making sense of his tools as functional, his environment as stable, and his work as proceeding normally. The dependency is present but already absorbed into a framework that reads it as unremarkable infrastructure, leaving no remainder that might pull the question of sovereignty into view.

Jörgen's situation is structurally similar, though for a different reason. Unlike Bo, Jörgen was personally familiar with the concept and could discuss its geopolitical dimensions with fluency. The invisibility in his case was not conceptual but organizational. When asked whether digital sovereignty had been discussed within his organization, he was direct: *"I don't think such*

discussions happened, or it being mentioned around me." The dependency was running through the same infrastructure he managed daily, yet nothing in his organizational environment had created a reason to examine it as a problem. His workplace had never produced an occasion that made it necessary to extract it. In Weick's (1995, p.4) terms, sensemaking is triggered by the moment when something in the flow of experience fails to match expectations and demands interpretation. For Jörgen, that interruption had never arrived. The infrastructure worked, the tools functioned, and the organizational routines built around them continued without disruption. Without an interruption there was no trigger, and without a trigger the existing narrative framework remained intact and sufficient. The dependency was invisible because nothing in his organizational environment had yet given him a reason to look.

In both cases, no cue is extracted in relation to their own organizational dependency, and no sensemaking process emerges that reclassifies this dependency as a problem. This is not the absence of sensemaking, but a specific outcome of it, where dependency is already fully absorbed into existing interpretations of normal work, leaving no remainder that demands further attention. Critically, because no cue is extracted, no narrative in the analytical sense defined in the methods can form. What Bo and Jörgen produce are baseline accounts of normal functioning, not narratives of dependency. The conditions necessary for narration, that is, an extracted cue available for sequencing, causal assignment, and organizational justification, are absent (Weick, 1995, p.50). Below deck therefore marks the boundary condition of the narrative analysis that follows. Bo therefore does not appear in the narratives that follow because the sensemaking process around personal dependency had not yet begun. Jörgen's case differs in one important respect. Although he did not extract cues concerning his own organization's dependency, his account engages in sensemaking about broader organizational patterns, which is why he reappears selectively in the analysis. For everyone else, the dependency cue had been extracted. The question then becomes what each person assembled it into and that is where the next narratives begin.

4.2 The Calm Seas

The calm seas narrative begins with partial visibility. The dependency cue has been extracted and these individuals know their organizations run on U.S.-owned infrastructure, and they do not dispute it. What their professional context does not make necessary is treating that fact as a problem requiring further deliberation. They are on the boat, they can see the hole, and they are aware of the water around them. What the calm seas narrative does is look at the conditions and conclude that the seas are too calm for enough water to come through. The hole is real but the surrounding stillness renders it insufficient to sink the ship. Rather than asking whether the relationship is safe, the narrative shifts the question to whether the other party has any reason to make it unsafe. Once that conversion is made, the dependency itself becomes evidence of stability rather than vulnerability. The arrangement works, the tools function, the commercial relationship is mutual, and there is no compelling reason to disturb it.

What makes this narrative particularly durable is that it requires only that the risk be assembled into something plausible enough to close the sensemaking loop. In Weick's (1995, pp.55-62) terms, sensemaking prioritizes plausibility over accuracy. What matters is not whether an account is coherent enough to allow organizational life to continue. The calm seas narrative supplies that plausibility efficiently, which is why it is the most comfortable position available once the dependency cue has been extracted. Jan extracts the most direct version of this cue:

"The earnings of Microsoft by trading with Europe was one and a half times the complete GDP of Denmark. So of course they take care of our data. It's far too much money to waste. And also they are making a lot of agreements with independent companies in Europe to run their services." - Jan

The GDP figure functions as a cue that Jan extracts from the environment and immediately narrates into a structural guarantee. In Weick's (1995) terms, this constitutes enactment, as Jan frames the financial relationship as one of mutual dependency and creates an environment in which the scale of the commercial relationship effectively replaces the need for trust. This is the plausibility principle operating as the first step. Rather than working through the question of

whether Microsoft can be trusted, the narrative bypasses it entirely by making untrustworthiness structurally implausible. Once the GDP comparison is in place as a cue, it closes the sensemaking loop. No further deliberation is needed because the narrative has already supplied its own answer. Dermot assembles the same stability from a different angle:

"It wouldn't be possible. It will have a big effect both economically and for the process, the way of working in the company, and it will include a very big risk as well. The transformation of the system from Microsoft to another system would be very risky. If you depend on important systems, it's really a risk you wouldn't like to take." - Dermot

The cue Dermot extracts is not the dependency itself but the cost of leaving it. His account moves immediately to economic disruption, process changes, and operational risk, each named with institutional specificity. The risks of staying are never extracted with the same concreteness. They remain theoretical and unanchored, which means they carry no interpretive weight in the sensemaking process. Around this particular cue, the narrative arrives at its conclusion without the other side of the equation ever having to be weighed. Switching becomes unthinkable not because staying was evaluated and found safe, but because it was never evaluated at all.

Where Jan grounds the calm seas narrative in financial incentives, Berend grounds it in the absence of any trustworthy alternative:

"Finding alternatives is difficult. Trusting those alternatives over Microsoft is equally as difficult. I mean, a lot of public organizations run Google. It's cheap. But I mean, why would you trust Google more than Microsoft?" - Berend

Berend is not defending Microsoft so much as neutralizing the entire category of alternatives. He extracts the untrustworthiness of alternatives as his central cue, selecting from the environment only what fits the existing interpretive frame (Weick, 1995, p.49). When no alternative is more trustworthy than what is already in place, familiarity wins by default. The evaluation happens but arrives at the same destination regardless of which alternative is considered. The dependency is never seriously examined because the conclusion was built into the cue from the start. Reinhold

arrives at the same position without either of those moves being necessary: *"I would start a new company tomorrow using AWS, Azure, Google and Jira. Works out of the box, zero startup costs."* Reinhold arrives at the same position as Jan through a different sensemaking route. The cue Reinhold extracts is operational availability. AWS, Azure, Google, and Jira are the tools that work, and working is sufficient. The dependency is partially visible as he knows his organization runs on these platforms but his enacted environment is entirely operational, which means the geopolitical dimension carries no threat. He assembles the cue into a straightforward account of functional reliability, leaving the political layer outside the picture entirely. The calm seas narrative in Reinhold's case requires no active conversion of risk into safety.

The calm seas narrative produces inertia that feels entirely rational from inside it. Four individuals, extracting different cues through different enacted environments, all arrive at the same organizational stance. Staying is not a failure to act because it is the only sensible conclusion the available cues allow.

4.3 Leaking but Afloat

The leaking but afloat narrative begins with full structural visibility. Where the calm seas narrative extracts the dependency cue and assembles it into a reason for stability, the individuals here see the same cue and arrive at a different interpretation. Interviewees describe their relationship with U.S. digital infrastructure as a system they neither fully chose nor can easily escape, with vendors intentionally maintaining this situation. These individuals see the water coming in, and can describe exactly where the holes are and how they got there, but they do not act. Ina arrives at this through the experience of trying to imagine a way out: *"Microsoft... it is a monopoly basically (...) it's like they interweave everything so you can't get out."* What Ina names is the ecosystem as a closed system rather than a practical arrangement. The cue she extracts is structural entrapment, where the interweaving is not incidental but the mechanism that makes exit impossible. Describing it as a monopoly is a sensemaking move that shifts the frame from acceptance to structural diagnosis, the ecosystem has no exits.

Bertram's account moves earlier in the timeline, explaining the sequence that created the entrapment Ina describes:

"What they [the vendors] have done beautifully, is that they have given everything for free for a little while until the habits stay. And then when the habit is there, when all the people are using it, it is really hard for IT alone to change anything at all because the resistance to change is hard." - Bertram

The cue Bertram extracts is the sequence that produced the dependency. His account moves through three stages, free access, habit formation, resistance, and assembles them into a single interpretive conclusion: the situation was designed to arrive exactly here. In Weick's (1995, pp.24-25) terms, retrospective sensemaking describes how individuals construct meaning by looking back at events already in motion rather than interpreting them as they unfold. Bertram is doing precisely this, looking back at a process that accumulated gradually and invisibly, and from that vantage point the outcome appears not just predictable but intentional. That retrospective clarity is what makes the trap feel structural rather than conditional. Naming the mechanism with this precision produces a stable interpretation that the situation is fixed and does not call for action.

Alejandro extends what Bertram identifies, through extracting a cue that reframes what the dependency actually permits:

"Whatever data you store on American IT providers can be asked for without us knowing. The U.S. has the CLOUD Act¹ and FISA 702² which means that any American company, wherever they are located in the world, can be asked to hand over data by the American government, and they are also forbidden from telling you that this has happened." - Alejandro

¹ The CLOUD Act is a U.S. law that allows American authorities to request access to data stored by U.S. companies, even if that data is located outside the United States. (Complior, 2021)

² FISA Section 702 is a U.S. law that allows intelligence agencies to collect foreign communications from non-U.S. persons located outside the United States, for the purpose of national security investigations. (INTEL.gov)

For Alejandro, the cue is a legal architecture that forecloses the possibility of knowing whether exposure has occurred at all. What he assembles from this cue is an interpretation in which standard governance mechanisms appear insufficient because important dimensions of dependency remain inaccessible to organizational verification. This reflects broader concerns in digital sovereignty debates regarding strategic autonomy under conditions of infrastructural dependency (Christakis, 2020). The sensemaking loop closes around this as a reason why the situation cannot be fully known, and what cannot be fully known cannot be fully acted upon.

Alejandro identifies what legally conceals the dependency and Jan, in turn, highlights how deeply embedded it is:

"Why can't we just use LibreOffice for instance? We could. That would be easy. But it would have no meaning at all because all our data will still be saved in OneDrive or Teams and all our activities will still be monitored by Microsoft products. So that's actually the main issue." - Jan

Jan encounters this cue in the moment he considers an alternative. LibreOffice is available, affordable, and technically straightforward to adopt, but as he follows that possibility forward, his attention shifts away from the application itself and toward the infrastructure beneath it to where the real dependency lives. What he assembles from this cue is an interpretation of dependency as architectural rather than surface level. Replacing a visible tool without changing the underlying data infrastructure would not meaningfully reduce exposure. For this cue, the sensemaking loop closes around this insight as a reason why action at the visible layer is insufficient and causes inaction.

William experiences the dependency as an immediate operational reality:

"If the U.S. threatens to turn off something, and they actually turn off some parts of this, everything will stop. We are like 90% American, basically. So even if they just shut down GitHub or GitLab, those build tools, we won't be able to ship anything." - William

The cue William extracts is the dependencies consequence under failure. His account moves forward to the moment of collapse. What he assembles from this cue is an interpretation of the infrastructure as non-negotiable, a setup where the work does not slow down without GitHub but simply stops. This represents sensemaking grounded in enacted experience rather than retrospective reconstruction (Weick, 1995, pp.30-31). William's understanding arises from inhabiting the infrastructure as a lived dependency in daily work, and the cue becomes clear because he has already felt its weight. William acknowledges the threat of dependency, but that acknowledgement does not open a path away from it.

Berend moves toward a broader interpretation of the relationship itself: *"We're all basically slaves to these large corporations and to the geopolitics that have sort of begun to make a difference for us."* The cue Berend extracts is not a specific service failure scenario, or architectural layer, it is the condition of the relationship as a whole. Berend steps back further and names the broader power structure that makes these forms of dependency possible in the first place. What he assembles from this cue is an interpretation in which dependency was never freely entered and cannot be freely exited. The interpretive frame Berend constructs leaves no position for action to be possible. Naming the condition is what acting looks like when the situation has been assembled as one.

Across these four accounts, the sensemaking moves differ in their starting point and direction, one traces a sequence backward, one follows an alternative forward, one projects a failure, and one names a condition, but they converge on the same result. Each assembles an interpretation in which the dependency is real, visible, and understood, yet produces no foothold for action. The next narrative retains the same level of visibility, yet response now functions as a substitute for transformation rather than a movement toward it.

4.4 The Life Vest

The life vest narrative is the most widely shared across the data. Unlike the previous narratives, visibility produces a response. Alternatives are evaluated, the conversation about switching has started internally, and the organization demonstrates that it takes the situation seriously. Yet that

seriousness never alters the structural relationship to the dependency. The organization assembles the problem into something that does not yet require a response.

Several accounts describe a genuine and growing sense that the foundations of current digital arrangements are becoming unstable. Familiar assumptions that vendors act predictably, that the U.S. remains a reliable partner, and that contracts will be honoured, are no longer treated as secure. Gar captures this shift directly:

"With Trump as president, things are really strange and we can't be sure of anything. It's a big concern for us because we don't know what he's going to do next. We used to be able to rely on a two or three-year roadmap from the U.S., but now everything is changing on a day-to-day basis." - Gar

For Gar, the cue lies in the disappearance of the conditions that made the dependency liveable, rather than in the dependency itself. Roadmaps, contracts, and predictable vendor behaviour functioned as interpretive anchors, and their removal changes what it is possible to assemble into structurally. Without those anchors, the same dependency that once felt governable can no longer be enclosed within a stable frame. The loss of the story that made the existing one manageable is why the life vest response is produced. Yet the urgency that the loss of stable anchors produces does not hold. William's account identifies why:

"The Greenland situation actually made people worried for real. But it only lasts as long as the media is putting this on the agenda. And now it seems like everyone forgot the Greenland thing at this point. It is like, oh, it is business as usual. We can create the features again. We can sort of have focus on our daily work." - William

The cue registers for William and the concern is genuine, but it does not become organizational because the external event recedes before interpretation can be acted upon. Enactment requires that a reading be translated into structures, decisions, and routines that give it material form and durability (Weick, 1995, pp. 30-38). The media cycle withdraws that possibility before it is ever reached. When the next salient event arrives, the same concern surfaces and dissolves by the

same logic. The organization is not building toward a shared understanding, it is repeatedly starting from the beginning.

William's account shows what happens when a cue arrives but cannot be held long enough to become action. Dermot and Jörgen reveal the next layer as organizations do not merely fail to act on cues, they actively construct reasons to wait. Both describe a crisis as the precondition for change rather than something to be anticipated. This orientation toward waiting becomes especially visible in Dermot's explanation:

"We have been joking about it. But it is completely impossible, I would say, at the moment. That's the way we look at it. It should really be an extreme crisis before we will start to enter that field at the moment." - Dermot

The joke is a framing device that allows Dermot's organization to acknowledge the dependency, register its implications, and then rationally suspend it from active deliberation. The issue enters organizational consciousness without entering the organizational agenda. What Dermot describes is not avoidance but a coherent organizational logic in which waiting is the proportionate response to a threat that has not yet materialized.

Jörgen extends this into something close to a generalizable pattern: *"Companies are going to wait until the last second, literally until they try to log in and get an 'access denied' message."* Jörgen is describing organizational rationality as it is actually practiced. The existing story, that the situation is manageable, the dependencies are known, and action can be deferred until conditions force it, remains intact precisely because no cue has yet been forceful enough to break it. The *"access denied"* moment functions in his account as the only cue forceful enough to override the existing narrative, the point at which Weick's (1995) ecological change interrupts the ongoing flow of organizational life so completely that the current story can no longer hold. The crisis is a structural outcome of how organizations will make sense of this situation, produced by the same rationality that made waiting reasonable.

The logic of waiting becomes even more consequential when the threshold for action is set so high that response itself becomes increasingly difficult. Reinhold makes the threshold logic explicit by naming its cost structure. To understand the scale of the dependency, he maps his own organization's application portfolio:

“We have three hundred and twenty-eight applications, both large and small, and I’m sure that most of them have some kind of anchor in the U.S. If there were some kind of legal conflict and everything we had located in the U.S was seized and locked, we would simply have to find an alternative.” - Reinhold

Reinhold does not deny the dependency or its risks. He assembles a situation where the threshold is set at the point where a reactive response is the only option remaining, which is also the point at which the organizational capacity to respond may already be severely compromised. The life vest is on, but the logic that determines when to use it may ensure it is never used in time.

The higher the threshold for action becomes, the easier it is for responsibility to be shifted elsewhere. When asked who should act on digital sovereignty, interviewees consistently shift, share, or redirect responsibility without it ever landing somewhere that produces movement. Dermot delegates upward to vendors and regulators, arguing that *“the only solution I see is for the major vendors to step up with a proposal.”* The implication is that the organization cannot reasonably be expected to act until the infrastructure of accountability is built by someone else. Berend arrives at a similar conclusion through a different route. He surveys the possible drivers of change and finds none of them sufficient:

“If someone in leadership felt strongly about owning that agenda, it could become a focus. But how do you establish basic IT services, like email, websites and CRM, without global suppliers? It's not impossible, but generally, there isn't enough competence or will to actually do something different.” - Berend

Each potential driver is introduced and closed off, producing an account in which inaction is the only plausible reading of the situation (Weick, 1995, pp.55-61). Legislation is the one cue

Berend identifies as forceful enough to override that account, stating that it “*stands as the number one factor in determining implementation priority.*” Until that cue arrives, responsibility does not sit with the organization because the organization has constructed a narrative in which it was never the appropriate holder. Jörgen reaches for a collective framing, but his account resists any clean assignment of responsibility. He argues:

“I can't see that there is going to be a specific authority that should take this kind of decision or that can actually make that. The change is definitely a more collective decision.” - Jörgen

The implication is that no single actor holds the lever, and without a clearly located source of responsibility, there is no actor positioned to generate or respond to a cue forceful enough to break the existing narrative. Responsibility shifts from organization to vendor, vendor to state, and state to collective, without ever settling anywhere that produces action.

What connects these narratives is what awareness gets assembled into. Across all previous narratives, visibility and even preparation leave the underlying dependency intact. The life vest narrative makes this condition explicit: organizations recognize instability and even begin to prepare for it, but this preparation stabilizes rather than transforms the existing relationship. Concern becomes organized, alternatives are discussed, and readiness is signaled, yet the dependency itself is left intact because action is still tied to an imagined point of breakdown. This produces a condition in which anticipation replaces transformation, and waiting remains rational even as uncertainty intensifies. This raises a question the previous narratives cannot answer. If the problem is not visibility, will, or planning, what would actually have to be different for action to become possible?

4.5 The Lifeboat

The last narrative is the least common in the data. Where the three preceding metaphors each produce a version of organizational inaction, the lifeboat produces something different as our participants do not construct exit as their goal and do not wait for a crisis to force their hand.

They have extracted the dependency cue and assembled it into a narrative that accepts long-term entanglement as a given while actively governing the exposure it creates. The dependency is treated as a risk to be managed in the present tense. The clearest expression of this narrative is Steve's formal distinction between partial and full sovereignty as distinct operational risk states:

"We did basically just a risk model. So we said, 'Where are we? We don't know anything, we know some things.' We had kind of put a score on what matters and what does not matter. We knew what to do. We defined these partial and full sovereignty definitions for us. Partial sovereignty was if we could keep running even if something bad happened" - Steve

Instead of treating sovereignty as simply present or absent, Steve constructs it as a continuum of operational states, each carrying different risk thresholds and decision criteria. Where the life vest narrative assembles dependency into something manageable until crisis forces action, Steve assembles the same dependency into a framework that makes graduated responses possible before that point is reached. Sovereignty becomes an operational category rather than a political one, and that reframing is what makes action possible earlier.

Steve also extracts a cue that none of the other interviewees assembles into an explicit narrative argument, namely that the interpretive frameworks underpinning the calm seas have been structurally invalidated:

"What was part of the new risk assessment is entirely new risks. Like, for instance, Trump saying 'Well, you can't use Azure anymore,' or 'You guys are terrorists,' or 'Denmark is a lousy country.' We've been used to working in a normal, rational, market-oriented risk assessment model. But what we have now is entirely new risks." - Steve

The frameworks Steve identifies as broken are the specific governance assumptions through which vendor dependency was previously understood as manageable. These assumptions include the idea that commercial relationships are governed by contracts, that state actors behave according to predictable market logic, and that geopolitical stability can be treated as a

background condition rather than an active variable. What distinguishes Steve's account from others in the data is that he does not attempt to absorb these disruptions into the existing framework. Instead, he recognizes that the emerging cues cannot be accommodated within it, and justifies replacing the framework itself. This is a double-loop move, where the unexpected cue does not trigger a corrective response within existing assumptions but a reexamination of the assumptions themselves (Argyris, 1977, p.116). The sovereignty classification he develops is a direct product of this reframing, creating the conceptual space through which new organizational categories and risk logics become possible.

Gar's account reveals the narrative's limits as well as its logic:

"Our database is based on Oracle databases, and on top of that we also have Microsoft Dynamics 365. But at the moment, it is on pause. We do not know if we are going to the cloud, because this president in the U.S. has given me gray hairs. So we are still figuring out what to do. Are we going to change our current Microsoft Dynamics system, or are we going to upgrade? It is a big question and a big issue." - Gar

The dependency cue has been extracted and connected directly to a named political source, yet the account does not resolve into a clear organizational direction. Instead it produces a suspended state, where action is paused because the frame through which the cue should be interpreted has not yet stabilized. The *"big question"* is not rhetorical. It marks the boundary of what the existing narrative can absorb. Yet, Gar also asks: *"If things go back to normal before we've changed everything, then what?"* This question shows that a second narrative remains active alongside the lifeboat. Weick (1995, p.6) argues that individuals routinely maintain multiple plausible accounts simultaneously, deploying different narratives in different contexts without experiencing them as contradictory. Gar's two narratives operate precisely this way. The lifeboat account governs security planning and board communication, where political risk is the salient cue. The life vest account governs procurement and budget decisions, where operational continuity takes over. Viewed against Steve's account, Gar's retained life vest narrative encounters the same political cues and produces present-tense organizational responses, but his question reveals that the governing assumptions of the prior framework remain partially intact. The reframing is incomplete and allows the second narrative to remain operationally active.

William extracts a similar cue from the political environment but assembles it differently. Rather than resolving the trust question toward either confidence or distrust, he separates it across two distinct layers of the same relationship.

"I have trust in my tech colleagues all over the world. I think there's a culture in tech where we have always been sharing. I've been to the U.S. many times, in tech conferences with Microsoft. I have friends at Microsoft. We've been building technology in the world together." - William

"My real worry is basically just the political leaders. When you have a president that can give orders, and we see from the press that the tech companies are following some commands. I think the worrying part is when we see the American president bring all the tech companies into the political landscape. This is new." - William

The cue William extracts is a structural change in the relationship between U.S. political authority and U.S. technology companies. What he selects from this cue is a reason to govern it differently. By constructing trust in the engineers as stable while constructing trust in the political layer as newly unreliable, he generates a narrative in which productive working relationships can continue while the political risk is treated as a separate governance problem. This is the lifeboat logic applied to trust as an active and differentiated management of uncertainty.

Alejandro highlights a development that most other interviewees have not yet assembled into their narratives. Where the life vest constructs collective European action as a future condition that justifies waiting in the present, Alejandro extracts evidence that it is already taking shape:

"An interesting driver of change and adoption is seeing how countries like Germany and the Netherlands have begun creating their own alternatives to Microsoft Office 365. By utilizing open-source building blocks, they are forming what is now emerging as the European Digital Infrastructure Consortium for Digital Commons." - Alejandro

Alejandro interprets a cue from the same environment that others experience as unstable or overwhelming, is motion rather than absence. By extracting the European Digital Infrastructure Consortium as a salient cue, he constructs a narrative in which the relevant question is not whether collective action is possible but whether organizations are positioned to participate in what is already moving. This orientation toward present momentum rather than future possibility is characteristic of the lifeboat narrative across all four voices.

The lifeboat produces a structure different from the outputs of the other narratives. Where the calm seas produce stable comfort, the leaking but afloat produces articulate critique and the life vest produces plans that substitute for transition, the lifeboat produces new organizational frameworks. Formal sovereignty classifications, crisis architectures, paused migrations and disaggregated trust assessments are not gestures toward change but changes themselves, even if they fall short of full digital independence. It is the only narrative in the data in which the sensemaking process produces present-tense organizational action rather than a plausible account of why action belongs elsewhere or later. The double-loop move visible in Steve's account offers a partial explanation for why this narrative alone produces that outcome (Argyris, 1977, p.116). Where the other narratives absorb cues into existing frameworks and generate plausible accounts of why action is premature or belongs to others, the lifeboat at its most developed treats the governing framework itself as the problem. That reorientation is what makes new organizational categories possible and, with them, present-tense action.

4.6 Chapter summary

Across all narratives, sensemaking unfolds in Weick's (1995, pp. 49-55) terms: actors are extracting cues, constructing plausible narratives and generating accounts that allow organizational life to continue. Each narrative absorbs the cues that might otherwise destabilize it and converts them into reasons to maintain the current stance.

What each interviewee assembled the dependency cue into is what separates the four narratives. Below deck sits prior to the four narratives entirely. The dependency cue was never extracted, and without an extraction there was no occasion for sensemaking around digital sovereignty to

begin. In the calm seas, the dependency cue is extracted and assembled into a structural guarantee, producing stable comfort and the absence of deliberation. In the leaking but afloat, the same cue is extracted and assembled into a recognition of coercive entrapment, producing articulate critique without a credible exit plan. In the life vest, the cue is extracted and assembled into a succession of plausible reasons for deferral. Urgency dissolves before it can become action, thresholds are set at the point of crisis, and responsibility migrates without ever settling anywhere that produces movement. The narrative generates plans, mappings and gestures that substitute for structural change. In the lifeboat, the cue is extracted and assembled into a governance framework that treats dependency as a risk to be actively managed in the present tense, producing organizational changes rather than accounts of why change belongs elsewhere. What the mapping reveals is that the output of each narrative is determined not by the cue itself, but by the narrative resources available to the individual encountering it. The same dependency, seen through different organizational lenses, produces fundamentally different relationships to action.

This points to the chapter's central finding. The obstacle to action lies in the conditions under which sensemaking occurs, rather than in individual awareness or organizational will. Individuals construct narratives from the resources their context makes available (Weick, 1995, p.62). For most interviewees, those resources were oriented toward stability, deferral, and the management of internal organizational risk rather than the governance of external structural exposure. Change becomes possible when the conditions change in ways that make a different narrative constructible, and when the narrative resources available to an individual include a framework for governing exposure rather than only for deferring it. However, this raises a broader question that the analysis alone cannot fully explain. If the main obstacle lies in the conditions in which sensemaking takes place, why are those conditions so resistant to change in the context of digital infrastructure? And why do organizations that recognize the issue, discuss it openly, and prepare for it still tend to delay action? These questions point to the deeper structure of the problem, which is explored in Chapter 5.

Chapter 5: Discussion

The analysis showed that awareness, critique, and intention do not in themselves alter the structural relationship with U.S. digital infrastructure. Instead, change depends on shifts in the conditions under which sensemaking occurs rather than on additional information or organizational intent. The question that follows is why those conditions are so difficult to shift, and what kind of intervention would actually be required.

This chapter develops that explanation in three sequential layers, each of which shows that the previous one is not sufficient on its own. The first asks what it is about digital infrastructure that makes it structurally harder to address than other forms of technological lock-in, arguing that three distinct features together constitute a single structural condition that standard organizational change logic cannot address. The second asks why organizations that already recognize those structural problems continue to produce delay rather than action, a question that the structural account alone cannot fully explain. The third asks what generates the narratives that sustain that delay so consistently and convincingly across different organizations and roles, a question that requires moving beyond organizational change theory and returning to sensemaking itself. Across all three layers, the lifeboat narrative serves as the critical counterpoint, demonstrating at each level what becomes possible when the governing framework itself is treated as the object of scrutiny rather than the lens through which the problem is viewed. Together, the three layers produce an explanation not only of why the problem persists, but also of what kind of intervention would actually be needed to shift it.

5.1 Why Digital Infrastructure is Analytically Special for Organizational Change

The literature review established that technology shapes how organizations work rather than simply serving as a neutral tool they can pick up or put down (Orlikowski, 1992), that installed base inertia makes migration costly (Tilson et al., 2010, p.7), and that structural knowledge disruption is particularly destabilizing (Henderson and Clark, 1990, pp. 10-12). The findings confirm that participants consistently described dependencies that had accumulated gradually and invisibly, precisely the dynamic Orlikowski's (1992, pp. 403-410) structurational model

predicts when technology becomes constitutive of practice. Tilson et al. 's (2010) installed base inertia is visible in Jan's recognition that replacing individual applications leaves the underlying infrastructure entirely untouched. The three preceding narratives map onto the organizational response patterns the literature review identified. The calm seas and life vest each function as workarounds in Orlikowski's (1996, pp. 64-66) sense, absorbing the problematic dependency into existing practice rather than addressing it directly, while the leaking but afloat represents the reframing move that names the tool as the problem without resolving it. What the findings add is an account of why each pattern stops where it does. Digital infrastructure dependency has three features that make it distinctive from other forms of technological lock-in, and together these features explain why standard organizational change models misjudge the strength of structural lock-in.

5.1.1 The Legally Unverifiable Nature of Exposure

The first feature is that the dependency is legally unverifiable. Alejandro's account makes this visible through his extraction of the CLOUD Act and FISA 702 as central cues. Organizations cannot know whether their data has been accessed, and vendors are legally prohibited from disclosing if it has (Christakis, 2020, pp.31-33). This confirms Weick's (1995, p.49) account of cue extraction under disruption, but with the addition that cues available here are structurally withheld. The literature described sensemaking as prioritizing plausibility over accuracy and the findings show that in this context, accuracy is legally foreclosed. The life vest narrative's durability is partly a consequence of this as there is no incoming cue that could disprove it. This removes a standard sensemaking resource, the ability to assess actual exposure, and makes the risk permanently abstract. Abstract risks are structurally easier to defer than concrete ones, which is part of why the life vest narrative can sustain organized waiting indefinitely. There is no moment at which the harm becomes visible enough to override the existing narrative, because the legal architecture is designed to prevent that visibility. The second feature compounds the problem further: even when organizations look directly at their dependency, much of what makes it structural remains outside the frame.

This has consequences that extend beyond the life vest narrative. The calm seas narrative derives much of its plausibility (Weick, 1995, pp. 55-61) from the assumption that commercial relationships are governable through contracts, financial incentives, and mutual dependency. Legal unverifiability undermines that assumption directly. Jan's invocation of Microsoft's financial stake in European markets and Berend's assessment of vendor reliability both presuppose that the relationship can be assessed and confirmed through available evidence. The CLOUD Act and FISA 702 remove that possibility at the architectural level. The calm seas narrative is not merely optimistic about the relationship, but is structurally prevented from accessing the evidence that would challenge it. This is a different and more consequential form of invisibility than the architectural kind identified in the following subsection, because it is not a product of how the technology is organized but of how the legal system governing it has been designed. Weick's (1995, pp. 55-61) account of sensemaking as oriented toward plausibility rather than accuracy takes on a specific form here. Plausibility is a structural necessity rather than a cognitive shortcut, since the legal architecture has foreclosed the possibility of accuracy altogether. This extends Star and Ruhleder's (1996, pp.111-113) observation that infrastructure becomes visible only at breakdown. In the juridical dimension of this dependency, breakdown may never become visible at all, and the organizations most confident in the stability of the relationship are precisely those the legal architecture has most effectively shielded from disconfirming evidence. Pohle and Thiel's (2020) distinction between sovereignty as autonomy and sovereignty as capacity is directly relevant here. Organizations may believe they retain meaningful control over their data relationships while lacking the legal capacity to verify whether that control has already been compromised.

5.1.2 Architectural Invisibility and the Component-Structure Gap

The second feature concerns what organizations can actually see when they look at their dependency. Architectural invisibility means that the structural layer of digital infrastructure produces no friction under normal conditions, leaving organizations with detailed knowledge of the components they interact with daily and almost no knowledge of the dependencies those components rest on (Henderson and Clark, 1990, pp.10-12; Star and Ruhleder, 1996, pp.111-113). Jan extracts this cue most sharply in the leaking but afloat narrative, when he

considers LibreOffice as an alternative and recognizes that replacing the visible application would leave the underlying dependency entirely intact. Henderson and Clark's (1990, pp.10-12) distinction between component and architectural knowledge maps directly onto this dynamic. What the findings add to Henderson and Clark (1990) is an explanation of why architectural knowledge remains invisible for so long. As the component layer is what participants interact with daily, and the structural layer produces no friction under normal conditions, the gap between what participants think migration involves and what it actually requires is a structural feature of how the dependency is organized. Organizations believe they understand what migration would involve because they recognize the components, individual applications and tools they use daily, while the structural dependency remains outside the frame. This is why the leaking but afloat narrative can produce a critique of the dependency without producing a credible exit plan. The individuals who see the problem most clearly are often seeing only the component layer, and the structure beneath it remains invisible. Crucially, this invisibility is not overcome by increasing awareness.

An organization can understand that it depends on U.S. infrastructure at the application layer while remaining entirely unable to see the architectural dependencies that would make migration genuinely transformative rather than cosmetic. This is also what makes the calm seas narrative so durable. The infrastructure functions smoothly, produces no friction, and therefore generates no cue that would challenge the account of stability it supplies. Star and Ruhleder's (1996, pp.111-113) observation that infrastructure only becomes visible at the moment it breaks down is confirmed by the findings where the dependency reveals itself precisely when the conditions for responding to it are most compromised. The third feature makes this invisibility particularly consequential by removing the stable external position from which organizations would normally manage a transition.

5.1.3 The Tool as Simultaneous Medium and Object of Change

The third feature is that the tool is simultaneously the medium of response. Weick et al. (2005, p.409) described enactment as individuals shaping the environment they are trying to interpret, but the literature assumed that the enacting tool itself remains stable. The findings show a

different condition because the infrastructure through which coordination occurs is simultaneously the object of the change being coordinated. Gar cannot pause the cloud migration and simultaneously use the cloud infrastructure to manage that pause. William cannot coordinate an exit from GitHub using GitHub. Pentland and Feldman's (2008, pp. 245-248) observation that routines and technologies co-evolve is directly relevant here. The routines built around the existing infrastructure are simultaneously what makes the organization function and what would have to be disrupted for the transition to proceed. Tilson et al. 's (2010, p.7) idea of installed base inertia captures part of this dynamic, but the findings extend it by showing that the inertia is not merely a product of accumulated habits and sunk costs. It is structurally reinforced by the fact that the tool through which a response would be organized is the same tool that must be replaced.

What makes this distinct from the two features already identified is not the circularity alone but the specific collapse of the boundary between inside and outside that it produces. Planned and emergent change models alike rest on an assumption that is rarely made explicit, that the organization retains a stable internal position from which to respond to external pressure (By, 2005, p.374). That assumption does not hold here. The infrastructure participants describe is owned externally, operated internally, legally accessible by the external actor generating the threat, and organizationally indispensable at the same time. These are four dimensions of a single structural condition in which the categories standard change logic depends on, inside and outside, tool and threat, and, resource and risk, no longer map cleanly onto the situation. Orlikowski's (1992, pp. 403-405) structurational model showed that technology and human action are mutually constitutive, but even that framework assumed the technology remained within the organizational boundary in a meaningful sense. What the findings show is a condition where that boundary has been dissolved from the outside in through legal architecture, ownership structure, and geopolitical authority, while remaining intact from the inside out through daily use, embedded routines, and operational indispensability.

This boundary collapse is what connects the three features into a single structural condition rather than three separate problems. The legal architecture established in 5.1.1 dissolves the boundary juridically, ensuring that external access to internal data requires no visible crossing of

organizational lines. The architectural invisibility established in 5.1.2 dissolves it cognitively, ensuring that organizations cannot see where the boundary actually runs. And the circularity identified here dissolves it operationally, ensuring that the infrastructure needed to defend the boundary is the same infrastructure through which it has already been breached. Each feature is consequential on its own, but together they produce a condition in which standard organizational change logic, which presupposes a stable and legible boundary between inside and outside, cannot get purchase (Weick, 1995, pp. 4-6).

What the three features together establish is that the problem forecloses the standard organizational responses to it, and this is where the lifeboat narrative makes its most important analytical contribution. The way through these features is not to solve them but to reframe what the question is. Steve does not name the tool as the problem, which is what the literature identified as the reframing move (Star and Ruhleder, 1996, pp. 110-113; Maitlis and Sonenshein, 2010, p. 567). He names the interpretive framework itself as inadequate, specifically the rational market model that treated geopolitical stability as a background condition and commercial contracts as sufficient governance mechanisms. This double-loop move creates the conceptual space in which new organizational categories become possible, and with them present-tense action within the existing dependency rather than contingent on resolving it first (Argyris, 1977, p.116-125). The structural features explain why the problem resists standard responses, and the double-loop reframing explains what kind of intervention would actually be required to generate action within those constraints. The structural features tell us why the problem is hard, but not why organizations that already recognize this continue to produce delay rather than action. That requires looking at the organizational processes through which responses to it are collectively constructed.

5.2 Organizational Change: The Structural Production of Inaction

The structural features of digital infrastructure dependency explain why migration is harder than it appears. However, they do not explain why organizations that already recognize the problem, identify it as a concern, and define a destination, continue to produce delay rather than movement. Existing organizational change research has long recognized that awareness of a

problem does not guarantee a response to it (Stensaker and Falkenberg, 2007). Oreg (2003), Piderit (2000, pp.786-787), and Bartunek et al. (2006) each locate the barrier to acting in individuals, in their schemas, identity investments, and short-term focus, respectively. The findings confirm that these mechanisms are present. Participants describe the cost of abandoning familiar systems in vivid and specific terms while the risks of staying are kept abstract. However, the findings also show that these individual-level processes operate within a narrative frame that organizational change literature does not directly examine, even though this frame does the most important work in shaping outcomes.

What the structural features identified in 5.1 add to this organizational picture is an explanation of why the abstract characterization of risk is not a cognitive failure but a structurally rational response to genuinely limited visibility. Architectural invisibility suggests that the full cost of staying is genuinely impossible to assess from the component layer (Henderson and Clark, 1990, pp. 10-12). The circularity of the tool as medium and object means that even motivated actors cannot establish a stable organizational platform from which to conduct a proper evaluation. These features suggest that installed base inertia (Tilson et al., 2010) is not merely a matter of accumulated habits and sunk costs, but is structurally reinforced by the fact that the most consequential aspects of the dependency are the ones most organizationally invisible.

The life vest narrative makes this especially clear. Resistance appears in a form different from disagreement or open refusal, which is what most existing research tends to focus on. Instead, what appears is organized waiting, where the appearance of engagement takes the place of real structural change. Piderit (2000) showed that responses to change are often ambivalent rather than openly resistant, with employees simultaneously supporting the idea of change while struggling to act in ways that fully advance it, and Stensaker and Falkenberg (2007, pp.167-168) showed that when people see the need for change but continue working in the same ways, progress slows down across the organization. The life vest supports both of these ideas but shows that the delay is both psychological and shaped by how the story itself is formed. Urgency rises with the news cycle and fades with it. Responsibility is everyone's in principle and no one's in practice. The moment for action is always just over the horizon, contingent on a crisis that has

not yet arrived. Each of these elements provides its own explanation, and together they create a form of organized waiting that is sustained collectively.

What makes this particularly difficult to interrupt is that Tushman and Anderson's (1986, p. 374) distinction between competence-enhancing and competence-destroying change becomes especially pronounced in this context. Moving away from deeply embedded digital infrastructure is not merely operationally disruptive but threatens the professional competence of individuals whose expertise has been built around the existing architecture. Employees who have spent years developing knowledge of Microsoft environments, cloud configurations, or GitHub workflows are not experiencing the proposed transition as a neutral upgrade but as a devaluation of accumulated capability. The identity threat this produces, identified by Hay et al. (2020, p. 19) as a trigger for withdrawal rather than adaptation, is compounded by architectural invisibility. Individuals who would be most capable of managing the transition are also the most invested in the systems being replaced, and they tend to see the component layer most clearly while the structural layer that justifies the transition remains harder to see.

This advances the organizational change literature in a specific way. Planned change models assume that recognition precedes and drives action, so once a problem is understood and a destination is defined, the remaining task is to execute the steps that lead there (Lewin, 1947, as cited in Hussain et al., 2018, p.123). Critics of planned change approaches argue that they rely on assumptions of relatively stable environments and linear processes (Burnes, 1996, as cited in By, 2005, p.374), and the life vest narrative shows why this assumption is inadequate. The organizations in that narrative already recognize the problem and already have a destination. What they produce instead is a succession of plausible accounts explaining why movement must wait. Emergent change theory is closer, treating change as continuous and shaped by interactions within the organization rather than by top-down plans (By, 2005, pp. 373-377; Pettigrew, 1990, pp. 268-270), but emergent approaches still treat inertia as the accumulated weight of routines and embeddedness rather than as something actively reproduced through narrative. Oreg et al. (2011, p. 516) showed that employees most committed to existing routines experience their removal as a genuine loss. The findings extend this by showing that in the life vest, this

attachment is not only felt but also narratively sustained, which closes off the dependency cue before it can generate a different response.

The lifeboat provides the critical counterpoint. These actors face the same structural dependencies and see the same cues, but interpret them differently, producing real and immediate organizational changes, such as formal sovereignty classifications, paused migration projects, and board-level crisis structures, rather than plans that substitute for action. It shows that organized waiting is not an inevitable outcome of the situation, but that breaking this pattern requires more than individual will or awareness.

This suggests the main challenge organizations face is not recognition, since most participants already believe change is necessary, a finding that contrasts with planned change models that assume recognition must come before action can begin. The real challenge is preventing organizations from producing convincing, shared explanations for why action should be delayed. The key intervention point is organizational, and the central question becomes what needs to change in the organization for action to actually start. If inaction is narratively produced, what is generating those narratives so consistently and so convincingly across different organizations and roles? The answer points back to the sensemaking process itself.

5.3 When Sensemaking Works Too Well

Organizational change theory can identify that narratives sustain inertia but does not have the conceptual tools to explain how those narratives are constructed and why they are so consistently convincing across different organizations and roles. That explanation requires returning to the sensemaking framework itself, not to examine where it breaks down, as most existing work does, but to examine what happens when it functions exactly as it should. Interviewees are making sense of their situation extremely well, and it is precisely that success that makes action unnecessary. Understanding why requires looking at what the sensemaking process produces when it goes right, rather than what goes wrong.

The literature review established that sensemaking under disruption is fragile. Cosmological episodes, thrownness, and cognitive narrowing under pressure were each presented as conditions under which the sensemaking process fails to produce coherent organizational response (Weick, 1993, p. 649; Weick, 1995, pp. 44-46, 101-104; Maitlis and Sonenshein, 2010, pp. 570-573). The findings confirm that geopolitical disruption does interrupt existing interpretive frameworks, as the literature predicts, and that individuals do extract cues from the environment and assemble them into accounts that allow organizational life to continue. What the findings do not confirm is the literature's implicit assumption that this process produces adaptive outcomes (Weick, 1995, pp.139-146). Across three of the four narratives, the sensemaking process functions as Weick describes, and it is this functioning that prevents action rather than enabling it.

The calm seas extracts disruption cues and immediately converts them into reasons for stability. This is not a failure of sensemaking but its precise operation. The GDP comparison Jan deploys, the switching cost calculation Dermot performs, and the untrustworthiness of alternatives that Berend identifies are each coherent and locally valid readings of available cues. What makes them work as inertia-sustaining devices is that they are assembled from features of the technological environment that are structurally real. Switching costs at the architectural level are genuinely high. The calm seas narrative is so durable precisely because it is grounded in the actual features of the dependency rather than in misperception. Star and Ruhleder's (1996, pp. 111-113) point about infrastructure becoming visible only at breakdown is directly relevant here. Under normal operating conditions, the dependency produces no cue that would challenge the account of mutual advantage and stability. The sensemaking process is working well because the environment it is interpreting is designed to appear stable.

The leaking but afloat produces the clear-eyed critique that Maitlis and Sonenshein (2010, p.567) associate with the reframing move, naming the tool as the problem, yet arrives at the same practical destination as the narrative it opposes. This outcome makes sense in light of Henderson and Clark's (1990, pp. 10-12) component-architecture distinction. The individuals in the leaking but afloat see the problem most clearly at the component level, which is where the critique is sharpest, while the architectural layer that would have to change for any exit to be meaningful remains outside what the available cues make visible. Bertram's retrospective account of how the

dependency was built, Jan's insight that replacing LibreOffice leaves the underlying infrastructure intact, William's projection of the failure scenario, and Berend's naming of the power structure are each valid readings of the situation. The sensemaking process is producing accurate descriptions. What it is not producing is a framework within which those descriptions can be assembled into an actionable response. The leaking but afloat is limited when the available narrative resources do not include a framework for governing exposure.

The life vest keeps deliberation formally open in a way that is consistent with Weick's (1995) account of sensemaking as ongoing and never fully complete, yet uses that openness systematically to ensure action never arrives. Three interlocking mechanisms produce this outcome. The first is urgency without stabilization, where the cue registers with force but the institutional conditions for translating it into organizational structure are withdrawn before that translation can occur, as William's account of the Greenland episode illustrates. The second is the threshold logic, where Reinhold's mapping of 328 applications and Dermot's invocation of extreme crisis as the precondition for action each set the bar for response at the point where a reactive stance is already the only one available. The third is responsibility migration, where the response obligation shifts from organization to vendor, vendor to state, and state to collective, without ever settling anywhere that produces movement. Each of these mechanisms is consistent with Weick's (1995) description of sensemaking as oriented toward plausibility and social coordination rather than accuracy. The narratives constructed through them are not implausible. Crisis thresholds are high, the cost of response is distributed across actors, and collective action problems in governance are real. What the sensemaking process produces is a set of accounts that are coherent enough to make waiting feel rational.

The theoretical extension the findings make possible is that sensemaking does not only help organizations respond to problems; it can also be the reason they do not. Weick et al. 's (2005, p. 414), ESR cycle assumes that retention serves future adaptation, that the narratives organizations hold onto are held because they have proven useful for navigating the environment. The findings extend Maitlis and Christianson (2014, pp. 62-68), showing that plausibility does not only enable coordinated action, it can foreclose it. The calm seas narrative is maintained by a reading of commercial incentives that is collectively reproduced as a structural guarantee. The life vest is

produced by three interlocking mechanisms, each of which is itself a collectively constructed organizational output. This is the social dimension of sensemaking that Maitlis (2005, pp. 21-22) identified, but operating as a mechanism of collective inactivity rather than collective adaptation.

The lifeboat is essential to this contribution because without it, the claim that sensemaking produces inertia would appear to hold universally in this context. The lifeboat shows that the same sensemaking process can produce a different outcome when the existing interpretive frame is itself treated as a cue requiring replacement. The literature review noted that Weick (1995, p.50) described cue extraction as shaped by existing expectations, raising the concern that organizations which have normalized dependency will extract cues that reinforce rather than challenge it. The lifeboat confirms this concern but also identifies the condition under which it does not hold. Steve does not update his risk assessment within the existing framework. He extracts the inadequacy of the framework as the central cue and uses it to justify replacing it entirely. This is consistent with what the literature review identified as reframing (Star and Ruhleder, 1996, pp. 111-113; Maitlis and Sonenshein, 2010, p. 567), but operates at a higher level. Where the literature described reframing as naming the tool as the problem, Steve's move names the interpretive framework itself as inadequate, specifically the assumption that commercial relationships are governed by market rationality and that geopolitical stability can be treated as a background condition. Sensemaking produces inertia when individuals fit disruption into the story they already have (Weick, 1995 pp. 4-6). When they instead extract the inadequacy of that story as the cue to be interpreted, a different outcome becomes possible. The difficulty is that the sensemaking process itself works against this move. Every successful use of an existing framework reinforces it, making dissonant cues more likely to be absorbed into the story than to register as a reason to replace it (Weick, 1995, pp. 225-230). The double-loop move requires extracting the framework's inability to accommodate it as the cue (Argyris, 1977, p.116). This is why it appears only once in the data, and why awareness alone cannot generate it in the other narratives.

5.4 Limitations and Future Research

This study has several limitations that point toward productive directions for future research. First, the study examined sensemaking at a particular historical moment, during a period of heightened geopolitical uncertainty and active public debate about digital sovereignty. The findings therefore capture organizational interpretations within a rapidly evolving political, technological, and regulatory environment rather than across a longer temporal trajectory. As European regulations develop, alternative digital infrastructures expand, and the relationship between U.S. political power and U.S. technology companies changes, the cues organizations use to interpret digital sovereignty are also likely to shift. This means that the narratives identified in this study should not be understood as fixed or stable categories, but as accounts shaped by a specific institutional context. The cross-sectional design also limits the ability to observe whether patterns such as the fading urgency described in the life vest narrative eventually produce different organizational outcomes over time. Future research that follows organizations longitudinally would be valuable for examining how these narratives evolve, stabilize, or disappear as the broader environment changes.

Second, the study focused on individuals' sensemaking accounts rather than on the organizational processes through which those accounts interact and compete. The competing narrative dynamics that Dawson and Buchanan (2005, pp. 845-847) and Maitlis and Sonenshein (2010, pp. 559-562) describe as central to organizational sensemaking were present in the data, but the study's design did not allow them to be examined at the level of intra-organizational interaction. Future research using ethnographic approaches or studies that follow organizations over time could examine how different narrative positions, such as calm seas and leaking but afloat, or leaking but afloat and lifeboat, encounter each other within the same organization and what conditions allow one to displace another.

Third, the interview setting should be understood as an occasion for sensemaking, where the interview itself can act as a cue that brings otherwise implicit dependencies into view. Participants were asked to reflect on digital sovereignty in a context already shaped by geopolitical disruption and public debate, which may have made some issues more visible and

more explicitly articulated than in everyday organizational practice. The narratives in this study therefore reflect accounts produced in response to this specific setting, rather than direct representations of routine organizational cognition. This is particularly relevant for the lifeboat, which requires explicit articulation of governance logic and may therefore be more likely to emerge when people are prompted to reflect in an interview context. Future research that observes organizations in their everyday work would complement these interview-based accounts by showing how similar sensemaking processes unfold without direct prompting.

5.5 Chapter Summary

Together, the limitations outlined above define the boundaries of what this study can claim rather than undermining what it has found. Within those boundaries, the discussion has developed three connected arguments that explain why digital infrastructure dependency is so resistant to the organizational responses that work elsewhere. First, dependency on digital infrastructure differs from other forms of technological lock-in because its structural characteristics, legal unverifiability, architectural invisibility, and the circularity of the tool as medium and object of change, make common organizational responses systematically ineffective and individually rational inaction a structural outcome. Second, the inertia those structures produce is actively maintained through narratives that convert genuine concern into acceptable reasons for delay, and those narratives are plausible because they are grounded in structurally real features of the dependency. Switching costs at the architectural level are high, the full cost of staying is impossible to assess from the component layer, and the threshold logic of the life vest is a rational response to a risk that cannot be concretely verified. Third, what sustains those narratives is not a failure of sensemaking but its success. The problem is that the sensemaking process, operating exactly as Weick describes, produces accounts that are coherent enough to make waiting feel rational, and that coherence is what forecloses action rather than enabling it.

These three arguments, structural, organizational, and sensemaking, reframe the problem as a question of what conditions would need to change for a different narrative to become constructible. The concluding chapter draws out what this means.

Chapter 6: Conclusion

This thesis began with a circular problem. The infrastructure through which organizations would normally respond to any disruption was simultaneously the object of the disruption requiring a response. There is no neutral ground from which to act, and no stable external platform from which to manage a transition away from the very tools being used to manage it. The central research question asked how individuals within organizations engage in sensemaking under that condition. The answer the findings produced is that they make sense of it extremely well, and it is precisely that success that prevents a different outcome.

The analysis documented four narrative patterns through which the same underlying dependency was assembled into fundamentally different organizational stances. Three of those narratives produced deferral. The fourth produced present-tense organizational change. What separated the lifeboat from the others was a different relationship to the interpretive framework itself. Where the other narratives absorbed dissonant cues into existing frameworks, the lifeboat treated the framework's inadequacy as the central cue requiring replacement. That double-loop move is what made new organizational categories possible and with them action that did not wait for a crisis to force it (Argyris, 1977, pp. 116-125).

6.1 Theoretical Implications

The findings carry three theoretical implications, each extending a different body of theory while remaining connected to the others. The first concerns technological lock-in. The findings suggest that digital infrastructure dependency has three structural features that make it categorically different from other forms of technological inertia. Legal unverifiability forecloses the standard sensemaking resource of assessing actual exposure (Christakis, 2020). Architectural invisibility ensures that the full depth of the dependency remains outside normal organizational awareness (Henderson and Clark, 1990, pp. 10-12). The circularity of the tool as a simultaneous medium and object of change collapses the boundary between inside and outside in a way that leaves organizations with no stable internal platform from which to manage a transition (Orlikowski, 1992; Tilson et al., 2010). Together these features suggest that the organizational responses that

work elsewhere systematically underproduce change here, extending Henderson and Clark (1990), Tilson et al. (2010), and Orlikowski (1992) in a specific and empirically grounded direction.

The second concerns organizational change. The findings suggest that inertia in this context is not passive but actively reproduced through three interlocking narrative mechanisms, urgency without stabilization, threshold logic, and responsibility migration. This extends Piderit (2000), Stensaker and Falkenberg (2007), and Oreg et al. (2011) by locating the primary obstacle not in recognition, which most participants already possessed, but in the narrative production of plausible delay. Both planned and emergent change models appear inadequate here because both presuppose a stable organizational platform that the structural features above have already dissolved.

The third and most significant implication concerns sensemaking theory itself. The findings suggest that across three of the four narratives, sensemaking was functioning exactly as Weick (1995, pp. 49-61) describes, and that functioning was what prevented action rather than enabling it. Plausibility does not only enable coordinated action. It can foreclose it. This extends the framework by suggesting that successful sensemaking can operate as a mechanism of organizational inertia, a condition the existing literature does not directly address. The double-loop move the lifeboat demonstrates, treating the framework's inadequacy as the cue rather than absorbing disruption into it, is rare because the sensemaking process is oriented toward continuity rather than toward questioning the assumptions that make a particular account plausible (Argyris, 1977; Weick, 1995, pp. 225-230). This extends Maitlis and Sonenshein (2010, p. 567) and Star and Ruhleder (1996 pp. 111-113) by suggesting that reframing in this context must operate at the level of the interpretive framework itself rather than at the level of the tool.

6.2 Practical Implications

The practical implications follow directly from the theoretical argument. If the primary obstacle is the interpretive framework rather than the information available to decision-makers, then the intervention point is the framework itself.

The most consequential reframing available to organizations is the shift from treating digital sovereignty as a migration problem to treating it as a governance problem. Migration logic asks how do we move away from this dependency, a question that immediately encounters the structural features above and produces the threshold logic of the life vest. Governance logic asks how do we manage our exposure within this dependency, a question that is actionable in the present tense without requiring the structural problem to be resolved first (Pohle and Thiel, 2020).

In organizational terms this reframing has concrete entry points. Dependency audits that map which functions would be most affected by interrupted access give leadership a basis for graduated risk decisions rather than abstract geopolitical concern. Formal sovereignty classifications distinguishing between partial and full operational continuity transform an overwhelming structural condition into a series of manageable present-tense decisions. Clear ownership of the dependency issue prevents the responsibility migration the life vest demonstrates, where concern is universally shared and therefore never anchored anywhere that produces movement. Governance frameworks that do not account for the juridical dimension of the dependency, specifically the structural removal of the inside and outside boundary by the CLOUD Act and FISA 702, are organized around an assumption the legal architecture has already made unavailable (Christakis, 2020, pp. 31-33).

None of these measures resolve the circular problem this thesis identifies. What they can do is create the organizational conditions under which a different narrative becomes constructible. As the lifeboat demonstrates, that is the necessary first step.

6.3 Closing Reflection

The organizational individuals that find a way through the condition this thesis describes are not those with the most awareness or the most resources. They are those that have begun to question whether the story they are telling about their situation is still the right one. A wet map is still a map. The question is whether anyone is willing to draw a new one.

References

- Alter, S. (2014). Theory of workarounds. *Communications of the Association for Information Systems*, 34(1) <https://doi.org/10.17705/1CAIS.03455>
- Argyris, C. (1977). Double loop learning in organizations. *Harvard Business Review*, 55(5), Pp.115-125.
- Barley, S.R. (1986). Technology as an occasion for structuring: Evidence from observations of CT scanners and the social order of radiology departments. *Administrative Science Quarterly*, 31(1), pp.78-108. <https://doi.org/10.2307/2392767>
- Bartunek, J.M., Rudolph, J.W., Rousseau, D.M. and Depalma, J.A. (2006). On the receiving end: Sensemaking, emotion, and assessments of an organizational change initiated by others. *The Journal of Applied Behavioral Science*, 42(2), pp.182–206. <https://doi.org/10.1177/0021886305285455>
- Berger, P.L. and Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Anchor Books.
- Blancato, F. G. (2024). The cloud sovereignty nexus: How the European Union seeks to reverse strategic dependencies in its digital ecosystem. *Policy and Internet*, 16(1), 12–32. <https://doi.org/10.1002/poi3.358>
- Brinkmann, S. and Kvale, S. (2015). *InterViews: Learning the craft of qualitative research interviewing*. 3rd edn. London: Sage.
- Brown, A.D. and Humphreys, M. (2003). Epic and tragic tales: Making sense of change. *The Journal of Applied Behavioral Science*, 39(2), pp.121–144. <https://doi.org/10.1177/0021886303255557>
- Burnes, B. (2004). Kurt Lewin and the planned approach to change: A re-appraisal. *Journal of Management Studies*, 41(6), pp.977–1002. <https://doi.org/10.1111/j.1467-6486.2004.00463.x>
- By, R.T. (2005). Organisational change management: A critical review. *Journal of Change*

- Management*, 5(4), pp.369–380. <https://doi.org/10.1080/14697010500359250>
- Christakis, T. (2020). *European digital sovereignty: Successfully navigating between the "Brussels effect" and Europe's quest for strategic autonomy*. Multistakeholder Cybersecurity Dialogue. <http://dx.doi.org/10.2139/ssrn.3748098>
- Cohen, W.M. and Levinthal, D.A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), pp.128-152.
<https://doi.org/10.2307/2393553>
- Colville, I., Brown, A.D. and Pye, A. (2012). Simplicity: Sensemaking, organizing and storytelling for our time. *Human Relations*, 67(2), pp.219-241.DOI:[10.1177/0018726711425617](https://doi.org/10.1177/0018726711425617)
- Couture, S. and Toupin, S. (2019). What does the notion of 'sovereignty' mean when referring to the digital? *New Media and Society*, 21(10), pp.2305-2322.
<https://doi.org/10.1177/1461444819865984>
- Corlin P. (2026). US sanctions turn International Criminal Court judge's daily life into a nightmare, 18 February. Available at:
<https://www.euronews.com/my-europe/2026/02/18/us-sanctions-turn-international-criminal-court-judges-daily-life-into-a-nightmare> (Accessed: 25 April 2026).
- Cummings, T.G. and Worley, C.G. (2015). *Organization development and change*. 10th edn. Stamford: Cengage Learning.
- Dawson, P. and Buchanan, D. (2005). The way it really happened: Competing narratives in the political process of technological change. *Human Relations*, 58(7)
DOI:[10.1177/0018726705057807](https://doi.org/10.1177/0018726705057807)
- European Commission (2021). *2030 digital compass: The European way for the digital decade*. Brussels: European Commission.
<https://eufordigital.eu/library/2030-digital-compass-the-european-way-for-the-digital-decade/>
- Floridi, L. (2020). The fight for digital sovereignty: What it is, and why it matters, especially for

- the EU. *Philosophy and Technology*, 33(3), pp.369-378.
<https://doi.org/10.1007/s13347-020-00423-6>
- George, J.M. and Jones, G.R. (2001). Towards a process model of individual change in organizations. *Human Relations*, 54(4), pp.419-444.
<https://doi.org/10.1177/0018726701544002>
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Cambridge: Polity Press.
- Gioia, D.A. and Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12(6), pp.433-448.
<https://doi.org/10.1002/smj.4250120604>
- Glaser, B.G. and Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Hansler, J. (2025). Trump admin imposes sanctions on more International Criminal Court officials, *CNN*, 20 August. Available at:
<https://edition.cnn.com/2025/08/20/politics/trump-international-criminal-court-sanctions>
 (Accessed: 26 April 2026).
- Hay, G., Parker, S. and Luksyte, A. (2020). Making sense of organisational change failure: An identity lens. *Human Relations*, 74(2), pp.180-207.
<https://doi.org/10.1177/0018726720906211>
- Heidegger, M. (1962). *Being and time*. Translated by J. Macquarrie and E. Robinson. New York: Harper and Row.
- Henderson, R.M. and Clark, K.B. (1990). Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. *Administrative Science Quarterly*, 35(1), pp.9-30. <https://doi.org/10.2307/2393549>
- Hildén, J. (2021). Mitigating the risk of US surveillance for public sector services in the cloud, *Internet Policy Review*, 10(3), <https://doi.org/10.14763/2021.3.1578>

- Hussain, S.T., Lei, S., Akram, T., Haider, M.J., Hussain, S.H. and Ali, M. (2018). Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change. *Journal of Innovation and Knowledge*, 3(3), pp.123-127.
<https://doi.org/10.1016/j.jik.2016.07.002>
- Hutchins, E. (1995). *Cognition in the wild*. Cambridge, MA: MIT Press.
- Klein, G., Snowden, D. and Pin, C.L. (2023). Anticipatory thinking. In: *Macro cognition metrics and scenarios*. Boca Raton: CRC Press.
- Leonardi, P.M. and Barley, S.R. (2010). What's under construction here? Social action, materiality, and power in constructivist studies of technology and organizing. *Academy of Management Annals*, 4(1), pp.1-51. <https://doi.org/10.1080/19416521003654160>
- Liebhart, M. and Garcia-Lorenzo, L. (2010). Between planned and emergent change: Decision makers' perceptions of managing change in organisations. *International Journal of Knowledge, Culture and Change Management*, 10(5), pp.147-162.
DOI:[10.18848/1447-9524/CGP/v10i05/49976](https://doi.org/10.18848/1447-9524/CGP/v10i05/49976)
- Maitlis, S. (2005). The social processes of organizational sensemaking. *Academy of Management Journal*, 48(1), pp.21-49. <https://doi.org/10.5465/amj.2005.15993111>
- Maitlis, S. and Christianson, M. (2014). Sensemaking in organizations: Taking stock and moving forward. *Academy of Management Annals*, 8(1), pp.57-125.
<https://doi.org/10.5465/19416520.2014.873177>
- Maitlis, S. and Sonenshein, S. (2010). Sensemaking in crisis and change: Inspiration and insights from Weick (1988). *Journal of Management Studies*, 47(3), pp.551-580.
<https://doi.org/10.1111/j.1467-6486.2010.00908.x>
- Markus, M.L. (1983). Power, politics, and MIS implementation. *Communications of the ACM*, 26(6), pp.430-444. <https://doi.org/10.1145/358141.358148>
- Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology*, 88(4), pp.680-693. <https://doi.org/10.1037/0021-9010.88.4.680>

- Oreg, S., Vakola, M. and Armenakis, A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *The Journal of Applied Behavioral Science*, 47(4), pp.461-524. <https://doi.org/10.1177/0021886310396550>
- Orlikowski, W.J. (1992). The duality of technology: Rethinking the concept of technology in organizations. *Organization Science*, 3(3), pp.398-427. <https://doi.org/10.1287/orsc.3.3.398>
- Orlikowski, W.J. (1996). Improvising organizational transformation over time: A situated change perspective. *Information Systems Research*, 7(1), pp.63-92. <https://doi.org/10.1287/isre.7.1.63>
- Orlikowski, W.J. (2000). Using technology and constituting structures: A practice lens for studying technology in organizations. *Organization Science*, 11(4), pp.367-472. <https://doi.org/10.1287/orsc.11.4.404.14600>
- Orlikowski, W.J. and Gash, D.C. (1994). Technological frames: Making sense of information technology in organizations. *ACM Transactions on Information Systems*, 12(2), pp.174-207. <https://doi.org/10.1145/196734.196745>
- Pentland, B.T. and Feldman, M.S. (2008). Designing routines: On the folly of designing artifacts, while hoping for patterns of action. *Information and Organization*, 18(4), pp.235-250. <https://doi.org/10.1016/j.infoandorg.2008.08.001>
- Perrow, C. (1967). A framework for the comparative analysis of organizations. *American Sociological Review*, 32(2), pp.194-208. <https://doi.org/10.2307/2091811>
- Pettigrew, A.M. (1990). Longitudinal field research on change: Theory and practice. *Organization Science*, 1(3), pp.213-337. <https://doi.org/10.1287/orsc.1.3.267>
- Piderit, S.K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of Management Review*, 25(4), pp.783-794. <https://doi.org/10.5465/amr.2000.3707722>
- Pohle, J. and Thiel, T. (2020). Digital sovereignty. *Internet Policy Review*, 9(4), pp.1-19. <https://doi.org/10.14763/2020.4.1532>

- Prasad, P. (2018). *Crafting qualitative research: Beyond positivist traditions*. 2nd edn. New York: Routledge.
- Proton (2025). Europe's tech sovereignty watch. *Proton for Business*.
<https://proton.me/business/europe-tech-watch#ireland> (Accessed: 14 April 2026).
- Riessman, C.K. (2008). *Narrative methods for the human sciences*. London: Sage.
- Star, S.L. and Ruhleder, K. (1996). Steps toward an ecology of infrastructure: Design and access for large information spaces. *Information Systems Research*, 7(1), pp.5-134.
<https://doi.org/10.1287/isre.7.1.111>
- Stensaker, I. and Falkenberg, J. (2007). Making sense of different responses to corporate change. *Human Relations*, 60(1), pp.137-177. <https://doi.org/10.1177/0018726707075287>
- Thompson, J.D. (1967). *Organizations in action: Social science bases of administrative theory*. New York: McGraw-Hill.
- Tilson, D., Lyytinen, K. and Sørensen, C. (2010). Research commentary: Digital infrastructures: The missing IS research agenda. *Information Systems Research*, 21(4), pp.748-759.
<https://doi.org/10.1287/isre.1100.0318>
- Trump, D. (2025). *Executive order on imposing sanctions on the International Criminal Court*. Washington, DC: The White House, 6 February. (Accessed: 13 April 2026).
- Tushman, M.L. and Anderson, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly*, 31(3), pp.439-465.
<https://doi.org/10.2307/2392832>
- Roy D. and Masters J. (2026). *The Trump Administration's Push for Greenland: What to Know*. Council on Foreign Relations, January 22
<https://www.cfr.org/articles/greenlands-independence-what-would-mean-us-interests>
 (Accessed: 13 April 2026).
- Weick, K.E. (1988). Enacted sensemaking in crisis situations. *Journal of Management Studies*, 25(4), pp.305-317. <https://doi.org/10.1111/j.1467-6486.1988.tb00039.x>

- Weick, K.E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38(4), pp.628-652. <https://doi.org/10.2307/2393339>
- Weick, K.E. (1995). *Sensemaking in organizations*. Thousand Oaks: Sage.
- Weick, K.E. (2012). Organized sensemaking: A commentary on processes of interpretive work. *Human Relations*, 65(1), pp.141-153. <https://doi.org/10.1177/0018726711424235>
- Weick, K.E., Sutcliffe, K.M. and Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, 16(4), pp.409-421. <https://doi.org/10.1287/orsc.1050.0133>
- Woodward, J. (1965). *Industrial organization: Theory and practice*. Oxford: Oxford University Press.
- Zahra, S.A. and George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), pp.185-203. <https://www.jstor.org/stable/4134351>

Appendix

Appendix A: Interview guide with an IT person

I. Introduction

1. Can you briefly introduce yourself and describe your current role?
2. How long have you been working in IT?
3. Do you work mainly in a team? Do you manage people or projects?
4. What are the main digital tools, platforms, or providers you use in your everyday work?

II. Professional challenges and evolution of the IT landscape

1. What are the main challenges you currently face as an IT professional?
2. Have these challenges evolved over time? How were they different earlier in your career?
3. To what extent do geopolitical, regulatory, or security issues influence your daily IT decisions today?

III. Understanding and perception of digital sovereignty

1. How do you personally understand the concept of digital sovereignty?
2. When did you first hear about digital sovereignty? In what context?
3. Do you think the importance of digital sovereignty has accelerated recently? Why or why not?
4. In your view, is digital sovereignty mainly a political concept, a technical challenge, or a business issue?

IV. Company level practices and strategic positioning

1. Are there discussions about digital sovereignty within your company? At what level (IT, management, board)?
2. Is your organization taking concrete steps to reduce dependency on non-European providers? If yes, which ones?
3. What would be the main barriers for your company to move away from major U.S. tech providers? (e.g., cost, performance, ecosystem lock-in, skills, regulation)
4. What incentives would make a transition toward more sovereign digital solutions attractive for your company? (e.g., cost advantages, performance improvements, regulatory clarity, availability of European alternatives)
5. Who would need to drive this change internally? (e.g., CIO, CTO, top management, regulators, clients)
6. How likely is it that such a shift would come from internal strategy vs. external pressure?
7. Do employees feel directly affected by these sovereignty concerns in their daily work? How?

V. Triggers and drivers toward digital sovereignty

1. What types of events or changes could realistically push your company to prioritize digital sovereignty?
2. Can you think of a “tipping point” where digital sovereignty would become a strategic priority rather than a secondary concern?
3. Would a specific external shock (e.g., geopolitical conflict, sanctions, data access restrictions, major cyberattack) change your company’s approach? How?

VI. Conclusion - feasibility and future

1. Do you think complete digital sovereignty is achievable for European companies / for the company you work at? Why or why not?
2. If achievable, what timeframe would be realistic? If not, what level of sovereignty is realistic?
3. What would most effectively support progress toward greater digital sovereignty? (e.g., government action, EU regulation, European cloud providers, open-source solutions, collaboration between companies)
4. What do you think would need to happen first for your company to seriously invest in digital sovereignty?
5. If nothing changes externally, do you see your company moving in that direction anyway?

Appendix B: Interview guide with a Change Manager

I. Introduction

1. Can you briefly introduce yourself and describe your current role?
2. How long have you been involved in managing organizational or digital change??
3. Do you work mainly in a team? Do you manage people or projects?
4. What are the main digital tools, platforms, or providers you use in your everyday work?

II. Professional challenges and evolution of change management

1. When introducing new ways of working or new tools, what are the most important factors in getting people on board?
2. There's increasing discussion around "digital sovereignty"—how much control organizations have over their data, tools, and dependencies. How do you interpret this concept in a business context?
3. In your experience, how aware are teams and leaders of where their tools and systems come from, and the implications of that?

III. Understanding and perception of digital sovereignty

1. How do you personally understand the concept of digital sovereignty?
2. When did you first hear about digital sovereignty? In what context?
3. Do you think the importance of digital sovereignty has accelerated recently? Why or why not?
4. In your view, is digital sovereignty mainly a political concept, a technical challenge, or a business issue?

IV. Company level practices and strategic positioning

1. Are there discussions about digital sovereignty within your company? At what level (IT, management, board)?
2. Is your organization taking concrete steps to reduce dependency on non-European providers? If yes, which ones?
3. What would be the main barriers for your company to move away from major U.S. tech providers? (e.g., cost, performance, ecosystem lock-in, skills, regulation)
4. From your perspective, what would make employees more willing to adopt sovereign or European digital alternatives?
5. Who would need to drive this change internally? (e.g., CIO, CTO, top management, regulators, clients)
6. Do you think change toward greater digital sovereignty would more likely come from internal strategy or external pressure?

V. Triggers and drivers toward digital sovereignty

1. What types of events or changes could realistically push your company to prioritize digital sovereignty?
2. Can you think of a “tipping point” where digital sovereignty would become a strategic priority rather than a secondary concern?
3. Would a specific external shock (e.g., geopolitical conflict, sanctions, data access restrictions, major cyberattack) change your company’s approach? How?

VI. Conclusion - feasibility and future

1. Do you think complete digital sovereignty is achievable for European companies / for the company you work at? Why or why not?
2. If achievable, what timeframe would be realistic? If not, what level of sovereignty is realistic?
3. What would most effectively support progress toward greater digital sovereignty? (e.g., government action, EU regulation, European cloud providers, open-source solutions, collaboration between companies)
4. From a change management perspective, what would need to happen first for your organization to seriously invest in digital sovereignty?
5. If external conditions remain stable, do you still see companies moving in this direction? Why or why not?
6. In your opinion, what role will change managers play in future discussions around digital sovereignty?

Appendix C: Artificial Intelligence Prompts

Is this sentence grammatically clear?

How can I rephrase this paragraph more academically?

How can I improve the flow between these paragraphs?

Translate the following text from French to English. Keep the tone and meaning accurate.

Can you explain this paragraph of the following paper more easily?