

How to insource digital services in the public sector: lessons learned from the Italian case of Enel

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Abstract

Over the past three decades, outsourcing digital services has helped public organizations save money. However, most public organizations have recently complained about losing control over the outsourced digital services and facing increasing costs. As a result, some public organizations have started evaluating the insourcing of previously outsourced digital services to regain control and decrease costs. While the literature acknowledges these motivations, it lacks detailed guidance on how public organizations should insource digital services. This paper addresses this gap by examining how Enel, an Italian utility provider whose main shareholder is the Ministry of Economy and Finance, successfully insourced a digital service that had previously been outsourced to various suppliers. From Enel's study, this paper contributes to the literature by providing a comprehensive framework that explains how to execute the insourcing process.

Keywords: insourcing process; public sector; digital services; streaming platform.

1. Introduction

Public sector organizations have long relied on outsourcing strategies as a key driver for digital transformation and innovation (Bapna et al., 2022; Gambal et al., 2022; Koo et al., 2019; Lacity & Willcocks, 2017; Shivendu et al., 2020). However, in recent years, public sector organizations have gradually modified their sourcing strategy for information technology (IT) and digital services. Confronted with the mixed or negative outcomes of these outsourcing strategies (Hakansson & Axelsson, 2020; Von Bary & Westner, 2018), strategic decision-makers in the public sector have pursued the insourcing of IT and digital services. For example, in the United Kingdom, the Driver and Vehicle

Licensing Agency decided to completely insource its digital services, reporting a total saving of £60m (Flinders, 2015). Similarly, Germany's Federal Government terminated contracts with private providers to create its own public cloud system, "Bundescloud" (Baur, 2024). Reasons to insource IT and digital services include cost reduction, security and privacy concerns, and a commitment to reinforce public administration with the necessary digital skills (Wegmann, 2022).

The renewed adoption of IT and digital services insourcing strategies within the public sector has sparked academic interest in this phenomenon. The relevance of digital services insourcing in the public sector has been discussed, emphasizing its contribution to achieving digital transformation (Thunes & Kempton, 2023), ensuring workflow continuity and improving organizational reliability (Vestues et al., 2021), and achieving specific objectives such as reducing costs and increasing efficiency (Omar et al., 2016). Although valuable, these contributions primarily focus on the effects of digital services insourcing, but they do not explain how to insource a previously outsourced service.

Against this background, this paper aims to fill this gap by unveiling all phases and actions a public organization should follow to insource a digital service successfully. To achieve this goal, the paper addresses the following research question: *How do public sector organizations effectively insource digital services provision?*

In order to address this research question, the paper builds on a case study of insourcing digital services carried over by Enel (Ente Nazionale per l'Energia Elettrica), the Italian utility provider whose main shareholder is the Ministry of Economy and Finance. Findings from the case study provide empirical evidence to illustrate how digital services insourcing can be successfully achieved. Specifically, the case shows that insourcing a digital service requires two essential pre-conditions: the senior

management's political support for the initiative and the establishment of a team tasked to execute the insourcing process. Moreover, the findings illustrate that after an initial period of preparatory research, the team should follow a gradual process constituted by these main steps: 1) development of standard process 2) prototyping 3) scaling-up and diffusion of the digital service in the organization. Building on these findings, the paper provides two main contributions. First, it adds to academic literature by offering a theoretical framework for analyzing the digital services insourcing process. Second, the paper provides public sector managers practical knowledge to inform their digital services insourcing strategies.

2. Literature review

The IT and digital services insourcing processes, their reasons, impacts and consequences, have been predominantly discussed in the context of industry and the private sector (Lacity & Willcocks, 2017; Qu et al., 2010; Zimmermann et al., 2018). Despite the increasing insourcing in recent years, very limited attention has been devoted to IT and digital services insourcing in the public sector (Berlin et al., 2023; Thunes & Kempton, 2023; Vestues et al., 2021). Accordingly, findings of studies focusing on these insourcing strategies in the public sector will be discussed against the broad background of IT and digital services insourcing within organizations.

Extant literature on IT and digital services insourcing in the public sector accounts for the key reasons that underpin the choice to move from an outsourcing strategy to an insourcing one (Vestues et al., 2021). For example, one of the main concerns among public policymakers is that outsourcing strategies did not bring the expected results in terms of savings and efficiency (Omar et al., 2016). Recourse to external consultants and vendors has proven to be difficult and complex in terms of allocated resources and coordination effort required to align client expectations with the consultants' possibilities (Mergel, 2019). In this respect, the public sector's insourcing mirrors similar strategies pursued in industry: executives abandoned outsourcing when they realized that the limitations of this strategy in terms of social capital within the firm outweighed the cost reduction benefits (Zimmermann et al., 2018).

Insourcing digital services enabled public sector to increase the level of control on the key processes and activities and to avoid forms of lock-in on outsourced services (Thunes & Kempton, 2023). The improved control on digital services resulting from insourcing also allowed the public sector to secure better partnerships with external vendors (Benaroch et

al., 2010; Kempton et al., 2020). Furthermore, achieving IT and digital services insourcing allowed public administrations to enhance the governance of specific workflows (d'Estmael et al., 2020).

IT and digital services insourcing in the public sector has been crucial to let public organizations reintegrate knowledge and competencies previously outsourced along with the related IT and digital services (Bhagwatwar et al., 2011; Vestues et al., 2021). Relying on external vendors or consultants to provide digital solutions has impoverished organizations that lack knowledge about designing and delivering IT services (Pittaway & Montazemi, 2020; Tiwana & Kim, 2016). To modify their sourcing strategy, organizations must ensure their internal teams and units possess the necessary skills to reframe the digital services design and production necessary to the organizational needs (Thunes & Kempton, 2023). Managing in-house IT infrastructures often requires organizations to make significant efforts in terms of resources, time, and coordination (Ejodame & Oshri, 2018). In the context of the public sector, the lack of competencies is even more enhanced due to the massive recourse to IT and digital services outsourcing in recent years: for instance, the EU public sector has been found short of at least 1.7 million civil servants who possess the necessary digital competencies (Chinn et al., 2020). Against this background, rebuilding public administrators' digital skills (Cordella et al., 2024) is a paramount factor for the success of insourcing initiatives (Omar et al., 2016; Vestues et al., 2021).

Despite these valuable contributions, the academic debate on IT and digital services insourcing in the public sector is still scant and fragmented vis-à-vis its increasing relevance (Berlin et al., 2023). The literature review reveals that an holistic understanding of the IT and digital services insourcing process in the public sector has not received enough consideration, with studies focusing predominantly on motivations for insourcing or on specific aspects and preconditions of the insourcing process. Moreover, research on IT and digital services insourcing in the public sector has failed to provide adequate theorization to this phenomenon. A notable exception is the attempt by Thunes and Kempton (2023) to theorize the "targeted insourcing", defined as an approach to trigger more profound digital transformation processes within the public sector. This concept, however, captures how public organizations select outsourced services and decide to insource them (Thunes & Kempton, 2023). Despite being a relevant construct, we believe that it is not adequately framed into a more holistic and strategic perspective that explains how to plan and manage IT and digital services insourcing. Against

this background, the paper aims to fill this gap by providing a comprehensive framework encompassing the process that leads to the successful insourcing of previously outsourced IT and digital services services.

3. Research Design and Methodology

We adopted an exploratory case study methodology with an interpretive perspective to answer the above research question (Yin, 2018). The case study was exploratory because the process of insourcing was not fully known or understood when the research started, and it was interpretative because the research team studied the phenomenon through the interpretation and perspectives of the involved individuals (Walsham, 2006). This approach harnesses the depth of empirical data to provide new insights into the research subjects (Yin, 2018), offering a nuanced view of the decisions and activities of key actors in the organizational context (Baxter & Jack, 2012). Acknowledging the need for extensive and profound data collection (Monteiro et al., 2022), we conducted a comprehensive data collection lasting 16 months and covering the whole phase of the IT insourcing process, from inception to assessment. The case study of Enel has been selected due to the high relevance of the organization involved, with the research team granted unrestricted access to the organization.

3.1 Case study

Enel is a multiutility provider that serves 61 million users worldwide and a leader in the renewable energy sector. Enel's main shareholder is the Italian Ministry of Economy and Finance, and it operates in market conditions. After the outbreak of the COVID-19 pandemic, the organization decided to insource the web streaming services, previously outsourced. This decision aimed to ensure the constant alignment and update of the 61,000 employees spread worldwide, many of whom were mainly working remotely. The streaming service collects audio-video signals, encodes them, and broadcasts via a dedicated web portal as figure 1 shows.

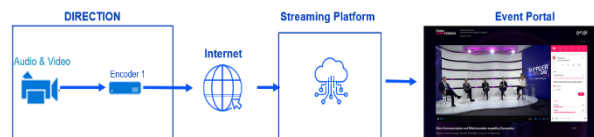


Figure 1. Streaming process for digital events.

In March 2021, ENEL created an internal unit called Digital Events Competence Center (DECC) to

begin the insourcing process of its streaming service. Key tasks performed by the DECC included assessing the internal offering, conducting research, developing and testing the streaming service infrastructure. From March 2021 to August 2021, Enel reduced its outsourcing relationships from multiple vendors to a single streaming vendor, aiming to standardize the production process across the group. Then, from September to December 2021, the DECC developed an in-house streaming platform. In January 2022, the DECC launched the first version of the platform, which supported an internal live event attended by 30,000 employees from different countries. From March 2022 to January 2023, the DECC gradually released new product features such as: live polls, content management systems for creating events portal, and an event management console for managing streaming and interactions easily. By insourcing the streaming service, Enel produced 270 events in-house, reducing the service cost by 42%. Moreover, the average time to set the streaming service decreased from 72 hours to 2 hours. Enel senior management considers these results successful.

3.2 Data collection

We conducted the data collection from March 2021 to January 2023 at Enel's headquarters in Rome, Italy. We adopted the participant-observation technique (DeWalt & DeWalt, 2011) since one member of the researcher team, employed by Enel, was a "key decision maker in an organizational setting" (Yin, 2018, p. 123). This position enabled the whole research team to have the unique opportunity to get access to events and decisions that would typically not be accessible. The research team member participated in the insourcing initiative as project leader for 110 weeks. He has been involved since day one in the design, governance, and execution of the IT insourcing process, interacting with all the key actors. In the first phase, at the end of each month, the researcher took time to detach himself from the working routine and recorded his observations and reflections in the form of project summary deck presentations that he constantly updated with new information and reflections. Moreover, he participated to 9 executive meetings with the top management to present project progress. He discussed details and updates on different project aspects such as vision, budget, team organization, requirements, roadmaps, and results.

In the second phase of data collection, after revising the case summary and the deck presentations, the other two team researchers conducted 10 interviews of 60 minutes with all the actors involved

in the project. The interviews were semi-structured, and the interview guide was adapted to accommodate role and tasks of the interviewees. For example, directors and executives held a more strategic view of the initiative, providing key insights about the political and organizational context of the project. In contrast, middle-level managers and the developers members of the team offered operational insights about the organization and enactment of the insourcing process of the streaming service. Table 1 provides a breakdown of the interviewees.

Table 1. List of interviewees.

| Role | Code | Date |
|-------------------------------------|------|-------------|
| Chief Information Officer | I-1 | 16 Mar 2023 |
| Chief of Communication | I-2 | 27 Mar 2023 |
| Head of Communication Digital Hub | I-3 | 6 Mar 2023 |
| Head of Strategy | I-4 | 20 Mar 2023 |
| Head of DECC | I-5 | 23 Mar 2023 |
| DECC responsible for IT development | I-6 | 13 Mar 2023 |
| DECC responsible for operation | I-7 | 9 Mar 2023 |
| DECC team member | I-8 | 13 Mar 2023 |
| DECC team member | I-9 | 9 Mar 2023 |
| DECC team member | I-10 | 20 Mar 2023 |

3.3 Data analysis

The data collected during the participatory observation by the first researcher were systematically organized and validated by the key actors in the project. The case narrative which emerged by this triangulation process was then used to inform the definition of the interview template. At the end of the interviews phase, the researchers jointly reviewed, complemented and consolidated the initial case summary. Before starting the analysis, they asked all the actors involved in the case to review and comment on the case summary to be sure that the researchers overall understanding of the case was correct.

Given the study's exploratory nature, the analysis followed an inductive approach (Strauss & Corbin, 1998). One researcher adopted open coding during the first step, identifying 47 themes. A joint review of the open coding enabled researchers to exclude 18 themes due to redundancy or unfit with the purpose of the investigation (Braun & Clarke, 2006). The second phase required researchers to systematically relate themes in categories and subcategories representing

recurrent concepts (axial coding). The second phase's output was clustering the initial themes into 12 fundamental themes. Then, fundamental themes were integrated into six overarching organizational themes, demarcating distinct analytical dimensions pertinent to the findings (Attride-Stirling, 2001). Fig. 2 illustrates the coding scheme.

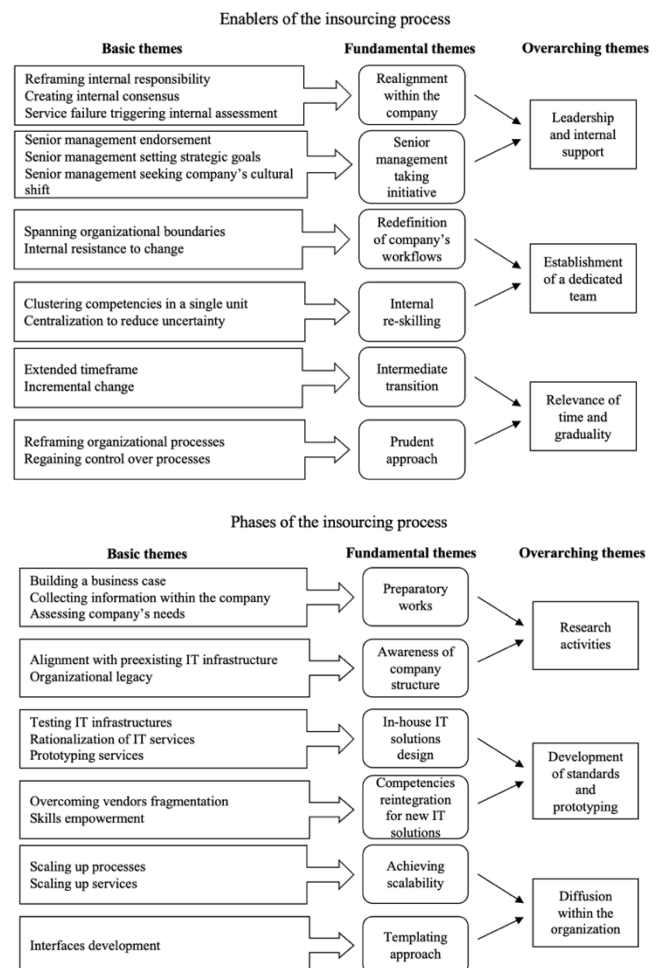


Figure 2. Coding scheme.

4. Findings

The thematic analysis provides evidence to isolate specific phases of the insourcing process of IT and digital services and outline critical enablers of the process, which we address in the following sections. Enablers include: (i) leadership and internal support; (ii) establishment of a dedicated team; (iii) relevance of time and graduality. Phases of the process include: (a) research activities; (b) development of standards and prototyping; (c) diffusion within the organization.

4.1 Enablers of the insourcing process

4.1.2 Leadership and internal support. Findings from the data analysis highlight the key role of senior management in pursuing the insourcing strategy. Confronted with the fact that outsourced services did not generate enough value due to inconsistencies and failures, senior executives approved the decision to insource the streaming services from the beginning. The case reveals that a key factor for the insourcing initiative success was the senior management's endorsement and strategic framing of the project. Senior management positioned insourcing as a strategic driver for the organization's development, aiming to regain control over core services and reduce costs. The Enel CEO supported the insourcing strategy and encouraged the directors to proceed with the project. As one senior manager explains: "Enel had increasingly embraced insourcing as a corporate driver. (...) So, the choice of insourcing came from the top, politically" (I-3). The senior management also created the conditions to support the insourcing process – for example, establishing the DECC team and empowering it with the needed authority to fulfil the expected goals. By so doing, the DECC team could transfer the senior management's vision to different levels and increase internal support around the insourcing initiative: "The leadership exerted by the DECC team has been crucial in building consensus, which gradually extended to other business lines and generated curiosity about the initiative" (I-10).

4.1.2 Establishment of a dedicated team. A unique factor for the success of the initiative was that Enel's senior management, confronted with the lack of necessary skills to design and develop the service internally, decided to pursue the path of insourcing. Notably, the senior management understood that insourcing was needed to rebuild internal competencies to fully execute the provision of streaming services. The most senior executive interviewed argued that Enel's goal was "bringing the brains back into the organization" (I-1). To this purpose, the creation of DECC was crucial because it provided the organization with a dedicated unit that executed the insourcing strategy and created the organizational conditions for its success. The DECC took care of assessing Enel's needs and means and facilitating skilled professionals to learn how to work together to achieve the desired outcome. As the Chief of Communication noted, "We established a structure, a competence in the digital area, both to create a technological roadmap and to be aware of Communication area needs. So, on our end, there has certainly been the definition of a competence that did

not exist before". The DECC composition included developers and experts who started focusing on how to provide streaming services. One member of the DECC notes: "Little by little, we studied a bit (...). We gathered some know-how and tried to create our process. Gradually, we improved until we became, I wouldn't say a complete product team – we still lack some elements – but we started working according to a methodology that allows us to operate along a production line" (I-4).

4.1.3 Relevance of time and graduality. The temporal factor was also identified as "crucial" (I-10) by most interviewees to ensure a successful transition from outsourcing to insourcing. Specifically, the timeframe of the initiative allowed for a gradual unfolding of the insourcing strategy, which was necessary against the existing lack of competencies within the organization. The critical step in the insourcing strategy was to move gradually from many vendors to one, and then from one vendor to the complete insourcing. In other words, the organization decided to transition gradually from complete outsourcing to complete insourcing. This phased approach allowed for the necessary time to build internal competencies to steer the provision of streaming services. A senior manager revealed: "So, we were really cautious, taking the right steps, aware that we would need to have full control and also build internal expertise. This step was helpful; otherwise, we would have made mistakes if we had the arrogance to close everything and transition solely to ourselves in one shot" (I-3). Echoing the senior manager, a DECC's member observed: "Gradually moving from many suppliers to one supplier helped us so much because we increased the efficiency on control issues (...). We could devote that time to processes and technology" (I-10).

4.2 Phases of the Insourcing Process

4.2.1 Research activities. The DECC team was strategic in building a case for insourcing, increasing the organization's internal knowledge, and carefully planning a strategy to execute the needed tasks. As Enel's Head of Strategy explains, building a case to support the sourcing change was essential to convince the organization about the feasibility of the process: "The DECC coordinator was assigned with the task of carrying out a complete analysis to understand the feasibility of this initiative. First, the technical feasibility and then the economic aspects related to this decision, because it was not clear that we would benefit from savings by insourcing the services" (I-4). Research activities included carefully assessing how

to connect the insourcing initiative with the outsourcing legacy and mindset that have dominated the organization for decades. As noted by a senior manager, “We had to pay respect to existing balances” (I-3). Hence, the DECC team conducted extensive interviews and meetings with employees from units and departments involved in the provision of streaming services for digital events. This evidence-based approach was key to increase DECC’s awareness about streaming provision and to plan the insourcing process: “We interviewed all the communication teams, leaving nothing overlooked. We gathered all the elements and were supported by the experience of our colleagues in the day-to-day operations. All this information then helped us making the insourcing decision” (I-3). The findings from the case study illustrate that the preparatory works and the research activities prior to the insourcing initiative execution were crucial to better connect the initiative with the organizational environment. Moreover, efforts to investigate existing outsourcing arrangements within the organization provided the DECC’s team the initial awareness needed to increase knowledge about how and where to intervene.

4.2.2 Development of standards and prototyping.

The phased transition from multiple vendors to one vendor was crucial to achieve the complete insourcing of the streaming services. First, overcoming the fragmented multivendor outsourcing strategy allowed Enel to accomplish specific early goals, such as avoiding redundancy, simplifying relationships and reducing some costs. A senior manager explains why the multivendor fragmentation was a critical issue: “This was one of the most critical aspects by far: many suppliers with a significant turnover, because when you outsource a service of this kind, competitions also lead to turnovers” (I-3). Accordingly, the transition from many vendors to one single vendor enabled the organization to define standard workflows and increase awareness about the process. This emerges in the words of two developers from the DECC team: “Reducing the number [of vendors] also decreases potential criticalities, so from this perspective, the time factor was important, and transitioning to a single supplier was fundamental” (I-10). “We managed to progress so quickly because, while working with the single vendor, we had understood the weaknesses and the priorities to start developing” (I-7).

At the beginning of the process, the DECC team did not possess any specific skill or competence of streaming services. However, the straightforward interaction with a single vendor – against the multifaceted interaction with many vendors – enabled the DECC team’s developers to better understand how

the streaming service worked and to start designing a standard production process for the streaming service.

The knowledge and skills acquired in the single vendor phase were crucial to execute the second phase of the process, which is complete insourcing. From a technological point of view, the DECC team was already testing standardized and prototyped solutions for the briefing and pre-live stages of the digital event. When they reached adequate levels of technological awareness with the prototypes, the organization decided to terminate the contract with the single vendor to pursue the complete insourcing. One developer from the DECC explains that: “We used this prototype for a technological reflection, but also for the organizational direction, to see if it worked. (...) It involved making, let’s say, the decision to move away from the vendor” (I-6). The centrality of the intermediate step pivoting around the single vendor is confirmed by many actors involved in the insourcing initiative. Moving from many vendors to one single vendor, and then from one vendor to complete insourcing, determined the success of the whole process because it engendered a gradual transition allowing the organization to build back the competences without concerning about interruptions of the outsourced services. Rather, the gradual timeframe enabled the DECC to test specific technological functionalities in parallel with the continued service provision – once they were approved, the organization was confident about the complete insourcing.

4.2.3. Diffusion within the organization. The phased approach followed by the DECC allowed the organization to increase the knowledge about the insourcing initiative’s technological and organizational aspects. Building on the positive feedback received after the launch of the catalogue and the initial prototyping, the DECC further refined and improved the streaming service provision. One member of the DECC accounts for how the improvement of skills and competencies within the team allowed the organization to widen the scope of their actions: “And then, gradually, the expertise increased, it went beyond streaming because we started looking at everything related to the interface that provides the streaming service” (I-10). The subsequent challenge for the DECC was to release a streaming service that could be diffused among the different areas of the organization, ensuring both a shared and acceptable level of standardization and some leeway to enable different units customizing the services according to specific needs of the digital events. The logic of scalability, as mentioned by one developer, emerged as the key driver of the insourced

services: “While we were carrying out the streaming service, we conducted about 80 events using the standard templates. We were developing Minimum Viable Product, always with the logic of scalability” (I-6). By doing so, the DECC finalised the development of an interface “that now allows us to start streaming in a scalable way, meaning very simply, without having to engage the development team each time” (I-6).

5. Discussion

The findings from the Enel case study provide detailed insights into both the enablers and the phases of an insourcing process. By analyzing these elements, we can identify key factors such as leadership support, organizational changes, and gradual transition that are critical for the success of an insourcing strategy. In the previous section, for analytical purposes we have presented the findings distinguishing the enablers from the process phases. However, in the discussion section we aim to merge enablers and phases to holistically illustrate how to conduct an insourcing initiative for IT and digital services.

5.1 Pre-conditions for the insourcing process

Findings from the case study show that before the beginning of the insourcing process, the commitment of the senior management and the setting up of a dedicated team were crucial to execute the whole process.

The senior management has provided the needed political support to win internal resistance and to ensure that employees within the organization were aware about the initiative’s reliability. Further, the strategic vision of the senior management was paramount to enable the necessary organizational transformations to start the insourcing process. These findings mirror prior literature that discussed the critical role of senior management and executives in defining goals and strategies to trigger the insourcing process (Jansson et al., 2021). Setting up a dedicated team, assembled with internal employees reallocated for this specific purpose, has allowed the insourcing process to unfold in a centralized and controlled way, which was a key pre-requisite for the subsequent standardization and fragmentation reduction tasks.

Setting up special units or task forces to achieve specific goals is not a novelty in public sector literature either (Clarke, 2020; Mergel, 2019). However, the initial activities of the DECC in the Enel case allow to better understand why this dedicated team has been crucial to realize the insourcing initiative. In fact, the dedicated team ensured a smooth transition from the

outsourced IT infrastructures and practices to the insourced IT infrastructures and workflows. Without the effort of gradually transitioning the organization from the legacy of outsourcing to the new strategies and practices, the overall project would have been at risk of not surviving internal resistances.

Moreover, as the Enel case shows, a key strength of the dedicated team was its multidisciplinary nature, with the purpose of clustering competencies from across the organization. However, it should be noted that in the initial phase of the insourcing process, the team members did not possess enough competencies to trigger the insourcing process immediately.

5.2 Strategy for the insourcing process

Research activities are key to start the IT insourcing process. In the research phase, defined as phase 0, the team understands the political and organizational context, and raises internal awareness about the outsourced services, i.e. the number of vendors and their dependencies. The relevance of research activities is emphasized by the need to properly understand how to reorganize the provision of the services once that contracts with vendors are terminated. This is particularly relevant in organizational contexts where different departments and units possess their own distinct outsourcing strategies and agreements about different services or even about the same service (Hakansson & Axelsson, 2020). Research activities are needed to make sense whether the organizational context enables the transition from multiple vendors to a single one without interrupting the services provision (Vestues et al., 2021). If it emerges that is not possible to move to one vendor, the insourcing initiative may be at risk.

The phased transition by which the organization reduces its outsourced relationships from many to one allows the dedicated team to refine the standardization of the digital services. The gradual dismissal of the outsourced relationships enables the organization to increase the internal know-how, which is crucial to properly identify the criteria, needs, and objectives that guide the development of the standardized process for the design and production of the previously outsourced digital services. Working with only one vendor reduces the organization’s efforts in terms of resources, time, and coordination (Ejodame & Oshri, 2018), enabling the team to study the organizational and technological aspects necessary to insource the service. This results in competencies reintegration, aligning with prior literature that has demonstrated the relevance of reconstructing internal skills (Zimmermann et al., 2018).

Beyond competencies reintegration, the development of a standard process enables the organization to achieve two related goals. The first one is an enhanced control over the whole process of designing and producing digital services. Findings illustrate that operating in a simplified framework facilitates the execution of work practices and the fixing of potential criticalities. This allows for a more granular governance of the technological and organizational aspects of the digital services design and production. This aspect resonates with works that have focused on the increased control over specific workflows as one of the key outcomes of the insourcing process (d'Estmael et al., 2020). The second purpose is perhaps the most immediate: overcoming the vendors fragmentation enables the organization to negotiate a better contract with a single vendor resulting in an initial cost reduction (Kempton et al., 2020). Findings from this study mostly resonate with prior literature. However, against this background, we observe that the development of a standard process for achieving competencies reintegration, increased control, and cost reduction, is tightly bound to a phased transition characterized by a streamlined relationship with a single vendor.

Knowledge reintegration and standardization of organizational and technological aspects of the digital services are functional to start the replication of the digital service using a prototype. Findings from the case confirm the relevance of developing a prototype which combines procedures, tasks, and competencies, with the available technological resources to rapidly test the insourcing of the service. The prototype is tested against technical and organizational feasibility. The development and testing of the digital service prototype take place while the organization has still an ongoing relationship with one vendor. This circumstance facilitates the provision of feedback and generates exchanges between the dedicated team and the vendor to refine and improve the prototype. This contradicts prior literature that showed how the interactions with the vendors were limited to the early stages of the insourcing process (Vestues et al., 2021). Against this background, we observe that a smooth development of the prototype was ensured because of the prolonged relationship with the single vendor, with feedback and exchange extended until the complete definition of the prototype. The prototyping achieving satisfactory results leads the organization to reach the final stage of the process.

The scaling up of the developed digital service within the organization requires two boundary conditions. The first is the full control over the digital services design and production by the dedicated team. The second is ensuring that the termination of the

contract with the single vendor does not interrupt the digital services provision. Findings from the case illustrate that the scaling up from a prototyped to a proper digital service happened while the outsourcing contract was still ongoing. Indeed, the gradual dismissal of the remaining single vendor provides the organization with the necessary timeframe to align organizational needs (the internal digital service demand) with the robustness of the insourced digital services. When this alignment is verified, scaling up the digital service requires the organization to enact the final technological and organizational adjustments: switching from the outsourced to the insourced digital services, and tasking the dedicated team with the management of the new insourced service. At this stage, the control over the service becomes total, and usually, the organization achieves significant savings.

5.3 Insourcing digital services in the public sector: theoretical framework

Building on the key factors illustrated in the discussion, we provide a cohesive framework that explains how organizations can systematically execute IT and digital services insourcing. This framework encapsulates each stage of the process – from pre-conditions to scaling up – against the evolving nature of the sourcing strategy, transitioning from multiple vendors to a single vendor, and from a single vendor to full insourcing. The framework provides a detailed reference for navigating the complexities of the insourcing process of digital services in the public sector.

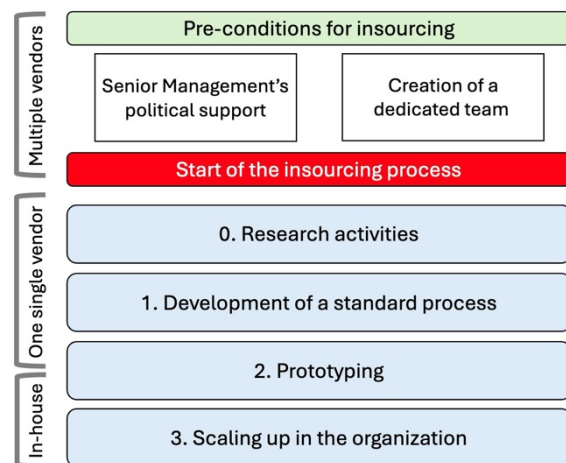


Figure 3. Framework of the insourcing process.

6. Conclusions and outlook

The paper engages with the ongoing discussion about IT and digital services insourcing in the public sector (Thunes & Kempton, 2023; Vestues et al., 2021), offering theoretical and practical implications about the insourcing process. Relevance of insourcing emerges from the increasing number of public organizations which revert their sourcing strategies, insourcing IT and digital services that were previously outsourced. Against this background, academic literature has mainly focused on the reasons to insource, for example rebuilding internal competencies, increasing control of the services production, and overcoming the enhanced costs of outsourcing practices (Omar et al., 2016; Thunes & Kempton, 2023). The paper adds to the existing knowledge investigating how the process of insourcing digital services is conducted. Discussing the Enel case, the paper fills this gap providing key theoretical contributions.

The paper builds a theoretical framework to explain how to insource a previously outsourced digital service. The framework highlights the relevance of the organizational pre-conditions and emphasizes the importance of a phased transition from multiple vendors to a single vendor. The intermediate step enables the organization to regain the know-how and the resources necessary to run the service in-house. An insourcing strategy pivoting on phased approach has been deployed in other public organizations: for example, when the Swedish National Statistics Bureau decided to insource the previously outsourced statistical services, it granted the external vendor an extra one-year contract because the Bureau needed time to rebuild the internal skills (Weghmann, 2022). Theorizing the importance of a phased approach that pivots on an intermediate step, in which the organization deals with a single vendor, the paper acknowledges a recurrent practice that has received very scant attention from research.

Beyond the academic contribution, findings of this paper provide also relevant implications for industry and practitioners. Showcasing Enel's successful insourcing process, the paper offers key insights on how to plan, schedule, and execute the insourcing process of IT and digital services. Mirroring decisions and practices adopted in the Enel case, public organizations confronted with similar challenges can take inspiration and adapt to their organizational contexts the needed steps to successfully insource IT and digital services. Moreover, the proposed framework can provide useful insights due to the modularity of its structure. For example, public organizations that already have

streamlined the relationships with vendors can leverage the single vendor phase to speed up the process of know-how reintegration. The framework emphasizes phases, actions, and actors enabling an insourcing process starting from a condition in which all the IT and digital services had been outsourced and existing knowledge within the organization was very limited. Indeed, the modular configuration of the framework facilitates its adoption across different contexts with specific exigencies.

It is worth noting two boundary conditions of our study. The first one pertains to the generalizability of the findings. Although the Enel's insourcing process aligns with well-established practices, it is possible that some decisions and actions are bounded to the specific context and could not be replicated in other organizational settings within the public sector. The second weakness is related to the participant-observation data collection (DeWalt & DeWalt, 2011): we do not neglect that the research team was influenced by the fact that one member was directly involved in the insourcing process. To minimize this bias, the research team has adopted methodological choices to triangulate the pieces of information collected and to ensure rigorous data collection and analysis.

However, despite its weaknesses, we believe that this study can serve as a basis for future research in several ways. Research can refine, challenge, or adapt our framework to other public sector contexts. Further, specific phases or enablers of the framework might be expanded, for example looking more closely at the phased transition and its relevance. Ultimately, the focus on the strategic dimension of the insourcing process can be enhanced, investigating how the decision to insource digital services is deeply connected with the long-term purposes and objectives of public organizations.

7. References

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