

Governing Robotic Process Automation in the Public Sector: Contextual Insights from Turkey and Sweden

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Abstract: *Scaling Robotic Process Automation (RPA) in public organizations presents governance challenges, yet existing research remains largely private sector oriented. This paper explores RPA governance through case studies in public organizations in Turkey and Sweden. The analysis provides contextual insights into how public organizations adapt governance structures during RPA scaling. The study shows that governance choices are contingent on factors, such as the complexity of RPA systems, the maturity of automation, and the institutional context of public administration. The Turkish case exhibits a stable, IT-led, centralized model while the Swedish case demonstrates a development from decentralized, innovative experimentation to coordinated governance, supported by a Center of Excellence. The paper contributes new knowledge to e-government and information systems research, enhancing understanding of RPA governance in public organizations. Rather than offering generalizable prescriptions, this paper positions its contributions as exploratory lessons learned, laying groundwork for research on digital government automation and offering considerations for aligning governance models with contextual conditions.*

Keywords: *RPA governance; IT governance, lightweight IT, public organization, case study*

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1. Introduction

Digital government initiatives increasingly rely on automation technologies to transform how public administrations organize work, deliver services, and manage administrative routines. In this context, Robotic Process Automation (RPA) is transforming public administration by automating routine tasks, thereby freeing employees to focus on more strategic work (Andersson et al., 2022). Unlike traditional enterprise software, RPA operates without requiring deep integration with existing systems, relying on non-intrusive, user interface-based interactions, allowing non-technical staff to automate processes (Penttinen et al., 2018). This lightweight IT solution is attractive due to its swift and cost-effective implementation driven by business needs (Herm et al., 2023; Lacity et al., 2015). RPA boosts process speed, productivity, and accuracy (Aguirre & Rodriguez, 2017), ultimately enhancing service quality (Houy et al., 2019). Furthermore, RPA facilitates workforce reallocation, allowing employees to shift from tedious tasks to more meaningful work (Ranerup & Henriksen, 2019). Research indicates that administrative work (i.e., case management, application processing, and document handling) is increasingly being automated, through which RPA is becoming embedded in the everyday routines and administrative practices of public organizations (Andersson et al., 2022; Lindgren, 2024). Beyond operational benefits, RPA contributes to broader digital transformation initiatives within public organizations, aiming to improve citizen services and create a more agile and responsive public sector (Lindgren et al., 2021; Frick, 2025).

However, RPA poses significant challenges, particularly when adoption outpaces the development of adequate control mechanisms (Borghoff & Plattfaut, 2022). Empirical studies show that difficulties related to exception handling and robot maintenance can significantly reduce the expected gains from automation (Noppen et al., 2020). Research also highlights risks associated with inadequate access controls, unclear responsibilities, and cybersecurity vulnerabilities, especially when robots operate across multiple systems without mature oversight structures (Eulerich et al., 2024a). Moreover, many early RPA initiatives struggle to scale due to inadequate knowledge and insufficient governance, despite the technology's perceived simplicity (Eulerich et al., 2024a). While these challenges are not specific to public or private organizations, public organizations experience distinct challenges which often slow down and complicate RPA implementations. These include less digitalized and fragmented processes, limited internal communication about automation, uneven strategic direction from top management and bureaucratic decision processes (Flehsig et al., 2022). Public sector experiences further indicate that business-driven deployments may introduce coordination problems, duplicate development efforts, dispersed responsibilities and create uncertainty around accountability and control mechanisms (Asatiani et al., 2023; Flehsig et al., 2022).

These benefits and challenges highlight that RPA creates both opportunities and risks for public organizations, making governance a central concern to realize benefits and mitigate risks during

RPA scaling. By scaling, we refer to the progression from experimental uses of RPA (e.g. pilot projects) toward a more extensive implementation across organizational processes. Scaling RPA requires structured governance. Research shows that three primary RPA governance approaches have emerged, drawing from established IT governance frameworks: centralized, decentralized, and federated (Asatiani et al., 2019; Borghoff & Plattfaut, 2022). Centralized governance vests control in a central unit such as a Center of Excellence (CoE) or IT department. The decentralized model grants autonomy over RPA initiatives to business units. The federated model offers a balance, with a central unit setting standards and providing resources while allowing some business unit autonomy. However, traditional IT governance models might not fully address RPA's unique characteristics, as Bygstad and Iden (2017) argue. They advocate for governance approaches tailored to how lightweight IT is secured and resourced within organizations. In line with this, Borghoff and Plattfaut (2022) further emphasize governance as a contingent phenomenon where factors such as organizational conditions, technological complexity, and strategic orientation influence the design of governance models supporting RPA implementation.

Notwithstanding RPA's rising adoption, a significant knowledge gap persists concerning the governance of RPA within the public sector (Johansson et al., 2023). Current literature is still dominated by corporate case studies, leaving limited empirical insights into how public organizations manage RPA during the scaling process. To address this gap, this study aims to explore how RPA governance is formed and adjusted as organizations move from pilot projects toward more extensive use. Against this background, the research question of this study is formulated as follows:

"How do public sector organizations establish governance structures when scaling Robotic Process Automation (RPA)?"

To answer this question, RPA governance is investigated in selected public organizations in Turkey and Sweden. Using an exploratory case study design, we analyze how IT-led and business-led RPA governance models are constructed, negotiated, and adjusted over time in the case organizations.

We use an integrated analytical lens to examine how RPA is governed during scaling. This lens builds upon the foundational IT governance framework (De Haes & Van Grembergen, 2006) as the primary structure for understanding public sector automation governance. Given that RPA is a form of "lightweight IT", we supplement this with lightweight IT governance principles (Bygstad & Iden, 2017) to better capture how these initiatives are resourced and coordinated. Finally, we incorporate context-specific factors from RPA governance research (Borghoff & Plattfaut, 2022) to account for administrative variations. This integrated analytical lens captures the dynamic, context-dependent governance structures that support RPA scaling across diverse organizational and administrative settings.

The paper contributes new knowledge to e-government and information systems research, enhancing the understanding of RPA governance in public organizations. Rather than offering generalizable prescriptions, this paper positions its contributions as exploratory lessons learned from early-stage public sector cases. These insights provide the groundwork for future research on digital

government automation and offer practitioners considerations for aligning governance arrangements with technological, organizational, and contextual conditions.

2. Research background

This section reviews and discusses the key theoretical frameworks that underpin the integrated analytical lens for our empirical study.

2.1. IT governance framework

Van Grembergen (2002) defines IT governance as "the organizational capacity exercised by the board, executive management, and IT management to control the formulation and implementation of IT strategy, ensuring the fusion of business and IT" (p. 1). IT governance is widely understood as the system through which IT decisions are made, coordinated and controlled across an organization for generating business value from IT (Peterson, 2004; Weill, 2004), at strategic, managerial, and operational levels (De Haes & Van Grembergen, 2006). IT governance framework mainly guides how governance is enacted in practice through interdependent mechanisms: structures, processes, and relational mechanisms (Van Grembergen et al. 2004). Structures establish formal accountability by defining roles and decision-making authority, such as Chief Information Officer (CIO) positions, IT steering committees, and governance bodies. These structures clarify who is responsible for strategic, tactical, and operational decisions, reducing ambiguity and enabling consistent oversight (De Haes & Van Grembergen, 2006). Processes encompass standardized practices, models, and methods for planning, prioritizing, monitoring, and evaluating IT initiatives. Examples include Portfolio Management, Strategic Alignment Frameworks, Service-level Agreements (SLAs), and Control Objectives for Information and Related Technologies (COBIT), Information Technology Infrastructure Library (ITIL) based procedures, all of which provide consistency and traceability in how IT decisions are prepared and executed. Relational mechanisms refer to the practices that foster collaboration and shared understanding between IT and business stakeholders (Peterson, 2004), such as cross-functional meetings, participation in committees, training initiatives, and ongoing dialogue that build trust and commitment to governance decisions (De Haes & Van Grembergen, 2006).

Another dimension of IT governance concerns how decision rights are allocated across the organization. In this respect, the literature distinguishes between centralized, decentralized, and federated governance models (Weill & Ross, 2004; Peterson, 2004). In centralized governance, decision-making authority is concentrated on a central IT function that sets standards, oversees investments, and manages technology risks. This approach ensures consistency and unified control but can reduce responsiveness (Peterson, 2004). In contrast, decentralized governance grants autonomy to business units to select, develop, and manage their own IT solutions, increasing flexibility but risking fragmentation (Peterson, 2004). Federated governance represents a hybrid approach, combining elements from central coordination and distributed autonomy (Asatiani et al., 2019). It establishes shared principles and centralizes services while allowing individual units to adapt solutions to their specific needs (Peterson, 2004).

Importantly, these models are not rigid categories; rather, they describe different ways organizations configure structures, processes, and relational mechanisms to balance efficiency, control, and innovation in diverse contexts (Borghoff & Plattfaut, 2022). For example, a centralized model is more suitable when organizations require tight control over shared infrastructures, whereas decentralized or federated models become necessary in settings where organizational units differ in their tasks, expertise, or operational priorities (Peterson, 2004; Asatiani et al., 2019). Prior research shows that IT governance is adaptive to organizational and external contingencies that change over time (Sambamurthy & Zmud, 1999). Contextual factors including organizational size and structure, regulatory requirements, technological characteristics (De Haes & Van Grembergen, 2006) as well as cultural dimensions shape governance models (Zhong et al., 2012). In public organizations, hybrid models, combining elements from centralized and decentralized models, are commonly used to reconcile formal accountability and risk management requirements with the need for responsiveness in service delivery (Rychkova & Zdravkovic, 2017).

The IT governance provides our study with a well-established analytical lens for exploring RPA governance in public organizations. From this perspective, RPA governance requires decisions about how automation is initiated, controlled, and coordinated. These decisions are enacted through a combination of processes, and relational mechanisms that allocate decision authority, formalize control practices, and facilitate coordination across organizational units (De Haes & Van Grembergen, 2006).

At the same time, RPA is a lightweight technology that enables experimentation and development outside traditional IT structures, driven by business needs with limited technical involvement of IT (Bygstad & Iden, 2017). To account for these characteristics, the following section introduces the lightweight IT governance framework, which complements the IT governance perspective by focusing on how innovation-oriented and control-oriented mechanisms are combined when governing RPA.

2.2. Lightweight IT governance framework

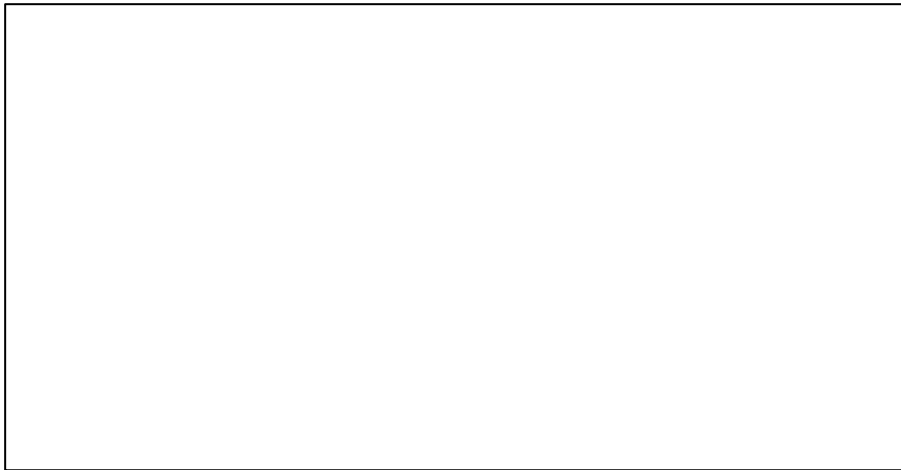
Lightweight IT refers to digital technologies that are loosely coupled to core IT systems (heavyweight IT) and characterized by limited invasiveness to underlying infrastructures (Bygstad, 2015). The use of such technologies—including mobile applications, cloud-based front-end solutions, and RPA—is typically driven by business needs that require rapid development and adaptation (Bygstad, 2015). Lightweight IT is often implemented by business units or end users with limited involvement from central IT functions (Bygstad & Iden, 2017). This challenges traditional centralized approaches in IT governance and calls for governance arrangements that accommodate local initiative alongside organizational control (Borghoff & Plattfaut, 2022).

RPA is commonly described as a form of lightweight IT as it can be deployed on top of existing systems, often through user interfaces rather than deep system integration (Stople et al., 2017). Because RPA relies on both business process knowledge and stable IT environments, it requires governance approaches that balance local autonomy in automation initiatives with coordination and oversight at the organizational level (Osmundsen et al., 2019). To address these requirements, By-

gstad and Iden (2017) propose a lightweight IT governance framework built around two complementary mechanisms: resourcing and securing. Resourcing concerns how organizations enable business units to engage in automation, for example through access to training, tools, and technical support. Securing refers to governance mechanisms that protect organizational assets and ensure reliable operation, including defined roles, access policies, standards, and oversight practices.

Different combinations of resourcing and securing give rise to four governance configurations: 1) Laissez-faire, 2) Central Control, 3) Bimodal and 4) Platform (see Figure 1). These configurations extend traditional IT governance models by focusing on how innovation-oriented and control-oriented mechanisms are configured. (Bygstad & Iden, 2017). In this study, the lightweight IT governance framework is used as an interpretive extension to IT governance, supporting the analysis of how responsibilities for RPA are distributed and controlled as automation expands beyond localized initiatives into more coordinated organizational practices.

Figure 1: Lightweight IT governance framework (adapted from Bygstad & Iden, 2017)



2.3. RPA governance factors

Borghoff and Plattfaut (2022) show that RPA as lightweight IT requires governance approaches that diverge from traditional IT governance because the technology introduces different development practices, organizational responsibilities, and control needs as argued earlier by Bygstad and Iden (2017). Borghoff and Plattfaut (2022) identify six contextual factors that influence how lightweight IT governance models are designed: 1) Lead, 2) Maturity of automation capabilities, 3) Complexity of the systems, 4) Structural diversity of organizational units, 5) Strategic focus toward security or innovation, and 6) Geographic scale of implementation. Each factor conditions governance toward more centralized, decentralized, or hybrid configurations. For instance, organizations with business-led initiatives and mature automation practices, often align toward decentralized models that leverage local expertise and support innovativeness. In contrast, automation in complex system landscapes or increased security requirements typically necessitate more centralized coordination to manage interdependencies and risks.

For our study, this perspective is valuable because it provides the interpretive depth required to analyze diverse RPA governance pathways. In Table 1, we describe the six governance factors identified by Borghoff and Plattfaut (2022), outlining their dimensions, describing how they manifest in organizations, and their impacts on RPA governance.

Table 1: RPA governance factors and their impacts (adapted from Borghoff & Plattfaut, 2022)

Factor	Dimension	Description	Impact on RPA Governance Model
Lead	Business vs. IT	Who leads RPA development and deployment (business or IT department)?	Business Lead: Decentralized governance, emphasis on training and support. IT Lead: Centralized governance, focus on security and compliance.
Automation Maturity	Mature vs. Immature	Level of experience a business unit has with RPA implementation.	Mature: Decentralized governance leverages existing expertise. Immature: Centralized governance provides guidance and risk mitigation.
System Complexity	Complex vs. Simple	Degree of intricacy and dependencies within the systems involved.	Complex: Centralized governance ensures coordinated security and integration. Simple: Decentralized governance empowers business units with process knowledge.
Structural Diversity	Heterogeneous vs. Homogeneous	Level of variation in business units and processes across the organization.	Heterogeneous: Federated governance with central oversight and decentralized, unit-specific tasks. Homogeneous: Decentralized governance leverages uniform structure and processes.
Focus	Security vs. Innovation	Balancing security concerns with fostering innovation in RPA development.	Security: Centralized governance enforces security protocols and access controls. Innovation: Decentralized governance empowers experimentation and adaptation.
Scale	Local vs. Global	The geographic scope of the RPA deployment (single business unit vs. global).	Local: Decentralized governance manages local needs. Global: Centralized governance ensures consistency and global security standards.

2.4. RPA governance in the public sector: The integrated analytical lens

This section synthesizes prior RPA research and organizes it according to our analytical lens: structuring RPA governance, establishing governance process, and fostering RPA governance relationship.

Previous studies point out that IT governance and lightweight IT frameworks heavily influence RPA governance (Borghoff & Plattfaut, 2022). While lightweight governance supports initial implementation, formal IT governance structures and processes are crucial for scaling and sustaining RPA (Asatiani et al., 2019). A key challenge is establishing frameworks that align with organizational goals, manage risks, and ensure compliance. Consequently, this study utilizes an integrated analytical lens to examine the governance of RPA across three core elements: 1) Structures, 2) Processes (encompassing security and resourcing), and 3) Relational mechanisms.

While RPA holds promise for public organizations, research specifically addressing its governance in this context remains limited (Eggers et al., 2023). This research landscape is largely defined by the earlier adoption and higher maturity of RPA in private-sector settings (Willcocks et al., 2015; Flechsig et al., 2022). Nevertheless, insights from these studies remain analytically relevant because they identify fundamental governance mechanisms, such as decision-making structures and strategic and operational processes that are also central to public sector RPA governance (Asatiani, 2022). This is consistent with broader IT governance research, which has long utilized private-sector cases to provide conceptual guidance for public administration (Pang, 2014). These mechanisms are not inherently sector-bound but represent general organizing principles that must be configured according to the institutional context (Weill & Ross, 2004). Importantly, research on IT governance in public organizations confirms that despite differences in accountability regimes, regulatory constraints, and organizational culture (Campbell et al., 2009), governance insights are transferable across sectors when interpreted through the specific institutional conditions of public administration (Magnusson et al., 2017). Accordingly, we use private sector RPA studies as conceptual resources to identify governance mechanisms that can be adapted within public sector contexts.

RPA governance in the public sector is fundamentally shaped by its institutional environment, where regulatory frameworks and accountability structures define the conditions for adopting digital automation (Wirtz et al., 2019; Flechsig et al., 2022). Public organizations differ from private firms in terms of ownership, funding models, and legal constraints, shifting the framing of automation toward accountability, transparency, and public value rather than efficiency alone (Johansson et al., 2023). Furthermore, the nature of the automated processes distinguishes these settings: while private firms often automate standardized digital workflows, public organizations frequently manage heterogeneous, interdependent, and partly analog processes, requiring significant reconfiguration to ensure service continuity (Flechsig et al., 2022).

Decision-making in the public sector is further conditioned by the involvement of multiple stakeholders and formal decision layers, which can slow implementation and complicate coordination across organizational units (Johansson et al., 2023; Toll et al., 2022). As a result, governance arrangements often diverge from the centralized CoEs commonly observed in private-sector RPA programs. In public organizations, efficiency objectives are balanced against broader policy goals, necessitating governance arrangements that adhere to strict legal mandates, procurement regulations, and data protection standards (Frick, 2025).

While these differences limit the direct transferability of private sector RPA governance models, prior research shows that specific governance practices remain relevant when adapted to the public

sector (Flechsigt et al., 2022). Importantly, rather than sector-specific logics, critical governance challenges arise from the technological characteristics of RPA, such as selection of suitable processes to automate, the technical errors during execution, and the continuity required to ensure robots remain functional when underlying software environments change (Asatiani, 2022).

2.4.1. Structuring RPA governance

RPA governance research emphasizes that well-defined structures are foundational for coordinating and supporting RPA initiatives, organizing decision-making, allocating resources, and ensuring accountability (Kokina & Blanchette, 2019). A recurring pattern in the literature is the use of federated governance models (Asatiani et al., 2019; Osmundsen et al., 2019; Noppen et al., 2020). In these models, business units retain responsibility for developing and maintaining automation, while central oversight ensures standardization, compliance, and broader organizational alignment (Kokina & Langmann, 2022).

CoEs perform a key function by consolidating organizational expertise, coordinating development efforts, and providing methodological guidance throughout the automation lifecycle (Noppen et al., 2020; Herm et al., 2023; Asatiani et al., 2019; Borghoff & Plattfaut, 2022). While CoEs are often situated within business units to leverage domain knowledge, smaller organizations may adopt hybrid arrangements combining business and IT roles (Herm et al., 2023). Notably, a CoE's role is not tied to a specific governance model but varies according to decision-right allocation: it focuses on coordination in decentralized models, whereas in centralized configurations, it combines coordination with strong decision-making authority (Borghoff & Plattfaut, 2022). In federated governance, the CoE establishes common frameworks while allowing experienced units autonomy in development.

In addition to CoEs, governance boards and committees provide strategic oversight, assisting departments with prioritization and risk assessment (Noppen et al., 2020). Larger organizations may further utilize divisional boards to tailor decisions to unit-specific needs while maintaining consistency with organization-wide standards (Kokina & Langmann, 2022). Across studies, the importance of clearly defined roles, including developers, project managers, and process owners, is consistently emphasized as essential for establishing accountability and maintaining consistent quality (Herm et al., 2023; Eulerich et al., 2024b; Noppen et al., 2020).

2.4.2. Establishing RPA governance processes

Research on RPA governance reveals that a set of interdependent processes governs how automation is prioritized, implemented, evaluated, and maintained within organizations (Herm et al., 2023). These processes are foundational for coordinating and sustaining RPA initiatives and for foreseeing and addressing the challenges that automation introduces (Asatiani et al., 2023; Herm et al., 2023; Farinha et al., 2024).

A substantial body of research highlights the importance of criteria-based process selection to avoid inefficient or unsustainable implementations (Herm et al., 2023; Noppen et al., 2020; Well-

mann et al., 2020). Organizations use criteria-based evaluation and selection processes to avoid automation that is inefficient, unpredictable, or unsustainable (Farinha et al., 2024). Complementing this, opportunity assessment and prioritization processes emerge to manage expectations regarding scalability and maintenance requirements, supporting organizations in managing portfolio-level decisions and allocating development capacity (Herm et al., 2023; Asatiani et al., 2023).

Research identifies that the governance processes allow organizations to manage portfolio-level decisions and allocate development capacity effectively. (Asatiani et al., 2023; Farinha et al., 2024). To guide initiation and scaling, organizations utilize procedural artifacts such as operational models, checklists, and process templates that structure documentation, risk assessment, and development workflows (Farinha et al., 2024). These procedural artifacts help combine business knowledge and technical implementation and are particularly important in settings where process ownership lies outside the IT function. Studies also highlight the planning and alignment processes that link individual automation initiatives to broader organizational strategies (Herm et al., 2023). Several public and private organizations have embedded RPA within Strategic Information Systems Planning (SISP) processes, using roadmaps and steering mechanisms to define automation objectives, allocate resources, and coordinate initiatives across departments (Herm et al., 2023; Eulerich et al., 2024b; Farinha et al., 2024).

Another set of governance processes concerns internal control and risk management, particularly where software robots interact with sensitive data or external platforms (Farinha et al., 2024). These controls involve procedures for access management, approval flows, and compliance monitoring, which together ensure that automation operates reliably across system boundaries (Eulerich et al., 2024a). To strengthen these efforts, organizations often adapt practices from established IT governance frameworks like COBIT to manage RPA-specific decision rights (Kokina & Langmann, 2022). Furthermore, centralized control platforms provide the technical visibility and oversight needed to coordinate distributed automations while safeguarding data against cyber risks (Wellmann et al., 2020; Farinha et al., 2024). Lastly, the literature underscores the necessity of continuous improvement to sustain the automation lifecycle. Maturity models allow organizations to evaluate their current governance status and identify developmental gaps (Herm et al., 2023; Asatiani et al., 2023). By standardizing practices across the RPA lifecycle, organizations can reduce variability in development and maintenance and ensure long-term procedural consistency.

2.4.3. Fostering relationships in RPA governance

The literature emphasizes that relational mechanisms are indispensable for effective RPA governance, as automation performance depends on sustained coordination between IT units, business departments, and CoE (Noppen et al., 2020; Herm et al., 2023; Asatiani et al., 2023). These mechanisms foster the communication and shared understanding required to bridge the distinct knowledge bases held by technical and administrative units, ensuring that localized experimentation remains aligned with broader organizational priorities (Asatiani et al., 2023; Herm et al., 2023; Noppen et al., 2020). Such collaboration is vital for clarifying responsibilities and preventing the procedural fragmentation and duplicated efforts which are frequently observed when automation is initiated independently across business units (Noppen et al., 2020; Asatiani et al., 2023).

Beyond immediate coordination, relational mechanisms encompass training and capability development, which establish a shared knowledge base among users and developers while reducing dependency on external vendors and specific individuals (Herm et al., 2023; Eulerich et al., 2024b; Noppen et al., 2020). Through collaborative workshops and structured routines for sharing lessons learned—from both successful and failed automations—organizations can facilitate the gradual standardization of practices and achieve more predictable outcomes (Asatiani et al., 2023; Wellmann et al., 2020; Herm et al., 2023). Ultimately, these relational interactions enable governance to remain adaptive; as RPA evolves, feedback from developers and operational staff informs the periodic adjustment of procedures and oversight routines in response to shifting technological and organizational conditions (Asatiani et al., 2023; Herm et al., 2023).

3. Exploratory study

This study adopts an exploratory case study design to investigate development of RPA governance in public organizations. Exploratory case studies are particularly suitable when the phenomenon under study is emergent, insufficiently understood or not yet well-theorized (Stebbins, 2001; Yin, 2014). Such designs emphasize contextual depth and discovery rather than hypothesis testing (De Haes & Van Grembergen, 2009). Because the governance of RPA in public organizations remains a novel domain, an exploratory case study is well-suited to identify and describe governance arrangements as they unfold in practice, laying the groundwork for further conceptual development.

We conducted empirical research in three organizations: one Turkish metropolitan municipality and two Swedish public universities. This deliberate organizational diversity is essential for achieving more contextually grounded insights. By examining differing sectors—local government versus higher education—and contrasting contexts across Turkish and Swedish administrative traditions, we can explore governance models specific to organizational type and national setting. This approach extends the applicability of our conclusions, moving beyond single-case limitations to inform a broader public sector on RPA governance.

For analytical purposes, the two universities are treated together as a single case, consistent with Yin's (2014, p. 50) notion of an "embedded single-case design", comprising two units of analysis: university Alpha and university Delta. The basis for this choice is that the Swedish universities operate under the same legal and administrative framework and display shared approaches to RPA initiatives. Embedding the two units in a single case allows us to examine their governance practices as a coherent case rather than fragmenting findings across nearly identical settings while still acknowledging organizational variations between them (Yin, 2014).

Our research design follows an illustrative logic (Siggelkow, 2007) rather than comparative case research aimed at building generalizable theory through replication logic (Eisenhardt & Graebner, 2007). Each case is analyzed in its own right to provide rich, situated accounts of how RPA governance develops under specific institutional conditions. The cases serve as analytic exemplars (Yin, 2014), offering "thick description" (Geertz, 1973) rather than controlled comparison. The purpose of this design is not to compare cases systematically, but to generate conceptual insights that highlight

possible governance approaches in public organizations (Yin, 2014). In this way, the study contributes exploratory lessons and mechanisms that may guide further research and inform practitioners, while acknowledging the context-specific nature of the findings (Flyvbjerg, 2006).

The case organizations operate under different administrative structures and national policy regimes (Ebbinghaus, 2005). For instance, municipalities, with elected officials, experience potential shifts in IT prioritization with elections. Conversely, universities have more stable leadership, fostering consistent IT governance. In Sweden, universities are classified as public organizations because they function as government agencies under national law and are accountable to the Ministry of Education and Research (Swedish Council for Higher Education, n.d.). They are tax-funded, governed by public sector regulations, and led by government appointed leadership. Their legal and administrative frameworks emphasize public values, aligning with the public administration system and defines them as part of the Swedish public sector. This classification aligns with broader Nordic administrative traditions, where universities are treated as integral components of the public sector. As Salminen (2003) observes in the Finnish context, universities operate within the core structures of public administration, subject to state steering, performance evaluation, and administrative reforms typically associated with public sector governance.

3.1. Case descriptions

The Turkish case concerns a metropolitan municipality, with around 12,000 staff, offers a broad range of services from infrastructure management to social welfare and e-government access. As a legally autonomous public authority, it is governed by an elected mayor and municipal council and serves a population of more than 5 million residents. Aligned with Turkey's national digital transformation strategy, the municipality prioritizes improving digital competence among staff, preparedness for technological change, and the adoption of automation to improve service quality. The municipality initiated its RPA efforts at the end of 2019 under the control and coordination of the IT department. A proof-of-concept (PoC) was conducted in the human resources (HR) department, focusing on administrative processes. The success of PoC led to the broader adoption across multiple departments. The municipality utilized UiPath software to automate workflows, particularly processes that connect with external e-government platforms. The municipality automated 8 processes across HR, finance, public relations and map planning departments.

In Sweden, two public universities, Alpha and Delta are also implementing RPA. Alpha University, with 16,000 students and 1,700 staff, is dedicated to enhancing core activities through digitalization and innovation. Responding to the growing trend of automation in the Swedish public sector, Alpha University launched a pilot RPA project in June 2022. Their initial focus was on identifying suitable solutions and prioritizing quality and user-friendliness over cost. The project aimed not only to implement RPA but also to develop organizational knowledge of this technology. This approach encouraged departmental autonomy in developing automation solutions with minimal IT involvement. The success of the project led to the continued use of RPA in six processes, with plans to establish a CoE within the finance department.

Delta University, with a smaller student body of 12,000 and 700 staff, began its RPA journey due to the finance manager's interest in automation. Supported by the university's central administration, a small-scale RPA project was initiated in January 2020. Consultants assisted in the initial phases, and by mid-2021, the first automated processes were put into production. The finance department took a leading role in automation efforts, expanding their use of RPA across various departmental functions. They even involved students in RPA projects. Delta University primarily targeted internal workflows for automation, focusing on improving efficiency in finance, HR, library services, and student services (a total of 25 processes). A CoE was formed alongside the RPA deployment to oversee and coordinate these initiatives.

Despite their shared public sector environment and RPA goals (digitalization, pilot testing, routine tasks), the Turkish municipality and Swedish public universities diverge in key areas. The municipality, serving millions, far exceeds the universities' student populations. Its structure is centralized, while the universities possess higher degree of autonomy. Considering the organizational size, differences evident in employee numbers, as the municipality operates on a much larger workforce scale than the universities.

Another distinction between the cases concerns the operational boundaries of the automated processes. In the Turkish case, several processes involve inter-organizational data exchange, requiring the software robots to interact with external e-government platforms. In the Swedish case, automated workflows remain within intra-organizational, meaning that they are initiated and executed within the organizations' access layer, and do not require real-time coordination with external systems during the execution cycle of software robots.

Finally, national contexts differ: Turkey's public sector is characterized by a centralized governance approach, with significant oversight and directives emanating from national authorities (Küçük, 2022). On the other hand, Sweden's public sector governance exemplifies a decentralized model, granting substantial autonomy to local institutions, including universities (Bjare, 2024). Such autonomy in Swedish public sector enables developing strategies that are more responsive to local contexts encouraging innovation and customization in IT initiatives (Rizk et al, 2024), as well as framing universities as entities with formal decision-making capacity, responsibility, and legitimacy to act strategically within a broader public governance framework (Brunsson & Sahlin-Andersson, 2000). These differences in scale, structure, integration, and institutional autonomy shape not only how RPA is adopted but also how it is governed, emphasizing the importance of considering contextual factors when examining RPA governance in the public sector.

3.2. Data collection

Semi-structured, in-depth interviews (n=16) were conducted with participants involved in RPA implementation and those who use it in their day-to-day operations in both the Turkish and Swedish cases. The selection of the respondents was based on their RPA knowledge and expertise within their respective organizations in order to gain rich insights into the experiences and perspectives of participants (Mason, 2004). We outline the details of respondents in Table 2.

Table 2: Respondent overview

ID	Experience in RPA	Job Title	Case Organization
R1	RPA project member, RPA user	Finance deputy manager	Turkish Municipality
R2	RPA project member, RPA user	HR specialist	Turkish Municipality
R3	RPA project member, RPA user	HR specialist	Turkish Municipality
R4	RPA project manager	IT Specialist	Turkish Municipality
R5	Involved in RPA project	IT deputy manager	Turkish Municipality
R6	RPA project consultant	Manager	RPA Provider (Turkey)
R7	RPA developer, RPA user	Librarian, systems manager	Swedish University Alpha
R8	RPA trainee, RPA user	Librarian	Swedish University Alpha
R9	RPA project manager	Digital business developer	Swedish University Alpha
R10	RPA project owner	Finance manager	Swedish University Alpha
R11	RPA developer, RPA user	Finance officer, systems manager	Swedish University Alpha
R12	RPA ambassador, developer, and RPA user	Finance systems manager	Swedish University Delta
R13	CoE manager, RPA ambassador	Finance manager	Swedish University Delta
R14	RPA coordinator, senior developer	Automation coordinator	Swedish University Delta
R15	Automation consultant	Chief technology officer	RPA Consultant (Sweden)

All interviews began with introducing the research and asking questions about the respondent's role and responsibilities. Respondents were then asked to describe how RPA project was initiated and progressed, which processes were automated, and which organizational actors were involved. Subsequent questions examined governance-related aspects of RPA, including decision-making, the division of responsibilities between IT and business units, perceptions of governance models (e.g., centralized, decentralized, federated), and the organizational and digital capabilities required to support automation. Participants also reflected on how RPA changed their work practices and routines, the challenges they encountered (including maintenance, scaling, skills), and expectations of automation in the future. Interviews with RPA providers focused on their role in supporting public

sector clients and their approaches of RPA implementation, training, and maintenance along with insights concerning governance challenges.

The interviews in the Turkish case were conducted online, using the Zoom platform. In the Swedish case, we performed both in-person and online interviews. All interviews were conducted with informed consent obtained from participants prior to the interviews. The recorded interview data were transcribed into text files and shared with respondents for validation (Lincoln & Guba, 1985). To supplement the primary data, we incorporated secondary sources, including internal documents such as annual reports, process flow diagrams, RPA project documentation, news articles published on case organizations' official websites, and a YouTube webinar (Linktera, 2021). Table 3 shows the data collection process.

Table 3: Data collection process

Aspect	Turkish Case	Swedish Case
Data Collection Period	August 2021 to April 2024	November 2023 to April 2024
Number of Interviews	7	9
Interview Sample	- 5 employees from the municipality - 1 representative from the RPA provider company	- 5 employees from Alpha University - 3 employees from Delta University - 1 representative from the RPA consultancy firm
Interview Mode	All interviews were conducted online (Zoom)	- 4 in-person (Alpha University) - 5 online (3 from Delta, 1 from Alpha University, 1 from the RPA consultancy firm)
Recording and Transcription	All interviews were recorded with consent and transcribed	All interviews were recorded with consent and transcribed
Secondary Data	- Annual action plans - Process flow diagrams - YouTube webinar with research participants (Linktera, 2021)	- Project documents - Annual reports - News published on the universities' official websites
Follow-up Data Collection	Follow-up interview in February 2023 Email and phone confirmations in May 2023 and May 2024	Not applicable

3.3. Data Analysis

We analyzed the data using a deductive (theoretical) thematic analysis method (Braun & Clarke, 2006). Unlike inductive approaches where themes emerge mainly from the data, this approach involved mapping the data into theoretical concepts and prior research (Boyatzis, 1998).

The analysis was structured using IT governance as the primary analytical lens, focusing on structures, processes, and relational mechanisms (Van Grembergen et al., 2004). Concepts from lightweight IT governance were used as an interpretive extension to examine resourcing and securing logics in RPA initiatives. In addition, RPA governance factors identified by Borghoff and Plattfaut (2022) were applied to provide contextual explanation for differences across cases.

We followed the six-step model proposed by Braun and Clarke (2006):

(1) Familiarization with the data: We began by immersing ourselves in the data through transcription of the audio data and repeated readings. We revisited the three chosen theoretical lenses to identify connections between the data and the theoretical concepts.

(2) Generating initial codes: A preliminary coding structure was developed (Nowell et al, 2017) based on the three theoretical frameworks, treating notions of structures, processes, relational mechanisms (Van Grembergen et al., 2004), resourcing, and securing (Bygstad & Iden, 2017) as theoretical constructs. Empirical excerpts were then coded deductively to these concepts. For example, the statement "...approval of the CIO is necessary for initiation" was coded under "structures" and interpreted as indicative of "centralized governance". Descriptions such as "...we organized hackathons to select processes and engage employees in automation" or "a short list for process selection was created by IT department", coded under "processes". Lightweight IT governance concepts were coded in the same way. For example, "IT controlled implementation" informed "securing", and "trainings were provided to employees during the initial RPA implementation phase by the vendors" contributed to "resourcing".

(3) Searching for themes: Because our analysis was deductive, the overarching themes were established a priori (Nowell et al., 2017), as structures, processes, and relational mechanisms, based on the IT governance framework (Van Grembergen et al., 2004). During coding, we examined how empirical codes clustered within these pre-defined domains and organized them into sub-themes that captured recurring patterns in how governance manifested in practice. For example, within the theme "structures", codes such as "top-down approach" and "IT manager's approval" formed the sub-theme "centralized governance". We applied the same logic to concepts drawn from lightweight IT governance. Codes reflecting enabling activities (e.g., training and vendor support) and control-oriented activities (e.g., security risks, controlling, sensitive data) were first coded as resourcing and securing, respectively. We paid particular attention to these codes as they also resonated with the "processes" of broader IT governance. Therefore, in this phase, we categorized the codes related to securing and resourcing under the high-level theme of "processes" which describe the procedural mechanisms through which lightweight technologies are governed.

(4) Reviewing themes: We reviewed the themes to ensure they accurately captured the data, and that they are aligned with the frameworks. We constructed thematic maps to visually represent how

the themes connected to each other and to the specific frameworks used. The secondary data were analyzed to find evidence supporting the identified themes and to assist contextualization and validation of the primary data (Guba, 1981).

(5) Defining and naming themes: We defined and named the themes explicitly referencing the relevant frameworks.

(6) Producing the report: We reviewed all the themes and the sub-themes for consistency and empirical support and used them in this paper.

4. Results

This chapter presents the findings from the two case studies: Turkish case and Swedish case. The findings are structured around IT governance components: structures, processes, and relational mechanisms and are depicted accordingly. Further, the chapter discusses the similarities and differences in case organizations' approaches in establishing RPA governance models.

4.1. Turkish case

RPA governance model components derived from data analysis of Turkish case are summarized in Table 4.

Table 4: RPA governance structures, processes and relational mechanisms found in the Turkish case

Governance Component	Empirical Manifestation
Structures	- IT-led RPA governance. - IT centralized in initiating, managing, and overseeing RPA. - Top-down approach to governance. - Decision rights concentrated in IT (initiation, prioritization, approval). - RPA roles located in IT (IT manager, project manager, analysts, developers, testers). - Outlook: Bimodal IT aspiration with automation sub-unit under IT department.
Processes	- Strategic IT decision-making. - IT-controlled, vendor supported automation planning. - PoC, methodological development. - Project management, agile approach. - Metrics and reports from the vendor. - Standardized workflows and formal documentation for design, development, change and test of the RPA implementations. - Combination of IT-defined process selection criteria and business unit's domain (process) knowledge. - Continuous monitoring, especially for e-government integrated processes. - Increased security and risk management for externally connected systems.

Relational Mechanisms	- Coordination between IT, business units, and external provider. - Limited knowledge sharing among business units. - Communication between IT and business units (meetings, unit visits) - Continuous vendor collaboration for scaling RPA. - Introductory level RPA training for business units. - CIO support for IT resources and the adoption of RPA. - Employee engagement and addressing employee concerns. - Developing internal capabilities.
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The Turkish municipality exhibits a strongly centralized and IT-lead approach to RPA governance. The empirical material shows that RPA governance is enacted through reinforcing IT department's central position in directing and coordinating automation activities, reflecting the national directives on digitalization reinforcing centralized coordination and integration with national e-government policy and platforms (Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı, 2023).

Structurally, the municipality has an IT-led, top-down approach to RPA governance. Automation initiatives require CIO approval, which positions IT as the primary locus of strategic and operational authority. In this centralized configuration, initiation and decision rights for RPA reside with the IT department. Within this structure, the IT manager and the employees of the IT department such as analysts, developers, and test specialists hold the core RPA roles.

The hierarchical nature of governance ensures that prioritization, resource allocation, and technical direction remain aligned with the municipality's broader digitalization agenda. Although governance is currently highly consolidated, the municipality anticipates establishing a dedicated automation sub-unit under IT, indicating adaptation toward a more flexible and innovation focused model in line with lightweight IT principles. RPA project manager explained this as follows:

"I think this will happen in a few years if we continue at this pace. A team, a department, even a director will definitely be needed, because as the number of robots and orchestrators increase, an analysis team, a developer team, and an operations team will be needed. This means a change in the organization, even if on a small scale" (R4).

Regarding governance processes, the municipality relies on strategic decision-making, formalized process management, and continuous monitoring to structure how RPA initiatives are initiated, developed, and maintained. The findings indicate that procurement, deployment, and implementation practices were clearly defined from the outset. The IT department's expertise is evident in how early methodological choices were shaped, particularly through the initial PoC conducted with an external provider. This PoC not only tested feasibility but also established the development approach the municipality later internalized under IT coordination. As IT deputy manager noted:

"We decided to test this with a PoC... The PoC was very successful, and then we immediately began implementing RPA in other administrative processes" (R5).

Later development followed the standardized operating procedures of IT in which business units contributed mainly with their domain knowledge. Formal meetings between IT and business units are held to adapt processes for RPA, ensuring standardization and operational efficiency. While

ideas for automation originate across the organization, with hackathons fostering innovation and employee engagement, their evaluation and prioritization are governed by IT-defined criteria, ensuring alignment with technical constraints and security requirements. Development activities are conducted following documented procedures that regulate design, testing, and change management, while agile practices are used within this overarching structured approach since it is IT department's default approach for lightweight technologies. Continuous oversight and evaluation of deployed automations conducted jointly with business units but anchored in IT to ensure security and reliability in automated processes that interact with external systems. This is a notable challenge concerning the automation of processes which interact with external e-government systems. Because these systems change independently of the municipality, even minor interface updates can interrupt automated workflows and require immediate adjustments to keep operations running. As one respondent explained:

"When a ministry changes its web page from start to finish, you have to revise all the automated processes you run on that page" (R6).

These dependencies create operational risks that the municipality struggles to manage internally due to its limited RPA expertise. The absence of in-house development competence makes it difficult to respond quickly to such changes, increasing the risk of interruptions and provider dependency. Reflecting this, the municipality has expressed plans to build an internal automation team to ensure continuity, reduce external reliance, and respond more effectively to changes in the external systems on which many of its automated processes depend. This suggests an emerging orientation toward "bimodal IT".

"We (IT employees) are doing all of it now, but that will not be possible when there are ten robots or two orchestrators, someone will have to operate them" (R4).

Collaboration is a cornerstone of the relational mechanisms in the municipality's RPA governance and works in tandem with the centralized structures and formalized processes described above. Strong communication between IT, business units, and the external provider is built through regular meetings and open communication in both formal and informal manners. High-level IT management provides leadership and resources and engages business units to address employee concerns and enhance satisfaction. Trainings are concentrated on building basic RPA understanding within business units, securing their involvement in automation and preparing them for the change despite their limited formal control over automation.

Looking ahead, the municipality plans to scale up its RPA initiatives, increasing robot deployments and improving internal capabilities within the IT department, making collaboration and coordination practices increasingly critical for sustaining engagement and supporting maintenance during scaling.

4.2. Swedish case

RPA governance model components derived from data analysis of the Swedish case are summarized in Table 5.

Table 5: RPA governance structures, processes and relational mechanisms found in the Swedish case

Governance Component	Empirical Manifestation
Structures	- Business-led RPA, finance ownership. - Decentralized initially, evolved to CoE centralized RPA governance. - Governance consolidated into a CoE housed in finance. - Defined roles: ambassadors, coordinators, developers, controllers, technical coordinator. - Steering group (strategic) and executive group (operational) oversight. - CoE expands the scope to include broader automation. - Long-term orientation toward a federated model with distributed development under CoE standards.
Processes	- Strategic planning and prioritization by CoE and steering group. - Pilot projects with consultant support. - Formalized RPA management model. - Process selection by RPA coordinator. - Standardized operations: design, development, testing, and change management procedures. - Continuous monitoring; exception handling by controllers. - Security processes (authorization, system-interaction checks). - Budgeting and cost-benefit assessments.
Relational Mechanisms	- Knowledge sharing through meetings, workshops, informal exchanges. - Ambassadors and coordinators bridging units, CoE, and suppliers. - Training programs (introductory and advanced). - Student involvement in development. - Cross-department collaboration. - External networking with other universities/public organizations. - Leadership support.

The Swedish case illustrates a hybrid RPA governance model that evolved over time from decentralized experimentation to a more centralized structure. In the Swedish universities, RPA began as business-led pilot projects:

“...Anyone who wants to have an RPA process are allowed, but you have to do it yourself. So, it was the model or the strategy of the project” (R9).

The initial focus is characterized by innovation and learning. However, the need for centralization is considered necessary as RPA scaled. RPA project members emphasized the need for a more centralized approach to RPA governance. One respondent who attended RPA trainings noted:

“You need some sort of centralized team or organization to help out to make these decisions that would be the best for the university” (R11).

In other words, formalizing decision rights for overall direction and alignment of automation work was recognized. As the RPA project manager explained:

“Now when we are ending the project and doing it as our usual business, we will change the model or the organization because before we had this decentralized, everyone could learn, it's up to everyone. We will go centralized, we are switching our strategy or model for competence, or we are building a competence center” (R9).

Housed in the finance department, the CoE formalizes RPA ownership. Within this structure roles and responsibilities are formally defined such as RPA ambassadors (business users), RPA coordinators (technical leads), developers, and controllers (monitors). Strategic oversight rests with a steering group that integrates administrative and technical perspectives, whereas an executive group handles operational decision-making. The CoE is increasingly involved in evaluating and experimenting with other lightweight technologies available within the university's IT environment, such as embedded automation functions in financial systems and solutions offered through Microsoft 365:

“Our spectrum is so much broader ... because it develops so much more in the AI field” (R12).

The envisioned future state is a federated governance model, in which business units take more responsibility for developing and maintaining automations under CoE oversight.

Governance processes integrate strategic decision-making with business unit goals. The CoE and steering group guide strategic prioritization, budget allocation, and alignment with organizational goals. Early adoption involved pilot projects with dedicated budgets and external consultancy support, which helped the universities to test and refine the automation approach. Workshops and communication strategies promote knowledge sharing, continuous improvement, and stakeholder engagement.

As more processes are automated, governance became progressively formalized. Documented procedures, summarized in the municipality's RPA management model, guiding the operations. RPA management model defines roles, responsibilities and how processes are selected, designed, developed, changed, and tested. The RPA coordinator is responsible for assessing candidate processes together with units. RPA ambassadors act as representatives of the automation initiative by promoting RPA internally and externally, conducting supplier relations as well as bridging business units and the IT department. These standardized procedures ensure process efficiency and adaptation for RPA. Monitoring and control are overseen by the steering group and RPA coordinator. Process experts and controllers handle exceptions on an ongoing basis. Budgeting, cost-benefit analysis, and security are overseen by the steering group and RPA coordinator.

Security considerations form an integral part of the universities' governance processes, as automated processes require controlled access to administrative systems and must comply with institutional security policies. To manage these risks, the technical coordinator works together with CoE, and controllers with system-related requirements, oversees authorizations, and operational specifications, ensuring that automations operate within approved security boundaries.

Relational mechanisms are critically important for a shared understanding of automation across the organization. The findings show that relational mechanisms are established through different

practices. For example, communication and knowledge-sharing practices, including regular meetings, workshops, and informal exchanges, help align expectations and identify new automation opportunities. RPA ambassadors in the units, together with coordinators, support internal networking and act as intermediaries between local implementations and the CoE. Formal training programs provide both introductory and more advanced RPA education, and students are involved in development projects, contributing to experimentation and capability building. Collaboration between and among units is critical. One of the respondents describes it as follows:

"We need to have continuous collaboration with other departments as well. I mean, during the whole process, you need to allocate time for everyone, for being in a sort of new team" (R11).

External networking with other universities and public organizations further supports knowledge sharing, mutual learning, collective innovation, and RPA capability building. High-level leadership provides resources and demonstrates support for RPA adoption.

4.3. Pathways to RPA governance

This section explores the similarities and differences in RPA governance models between the Turkish case and the Swedish case. Case-specific divergences in pathways to RPA governance are summarized in Table 6.

Table 6: Different pathways to RPA governance

Governance Component	Turkish Case - Empirical Manifestation	Swedish Case - Empirical Manifestation
Structures	- IT ownership, CIO approval. - Highly centralized under IT, with strict hierarchical roles and a top-down approach. IT leads all strategic and operational aspects of RPA. - Aspires for a bimodal with defined roles in an automation unit built under IT at the operational management level.	- Finance ownership. - Initially decentralized, evolving to federated model, CoE within the finance department. - Defined roles are spread across business and IT, incorporating both strategic and operational management levels.
Processes	- Strategic IT planning and control with formal and documented processes. - Monitoring and control are continuous, with emphasis on standardized procedures and criteria-based process selection. - More complexity in automated processes with integration to external processes.	- Business-driven strategic planning and integration, beginning with pilot projects and evolving through workshops and strong communication. - Continuous improvement through documented processes and exception-handling roles. - Less complexity in automated processes.
Relational Mechanisms	- Limited knowledge sharing, with IT retaining most of the expertise.	- Strong emphasis on communication and networking, both internal and

	- Collaboration is mainly internal, with occasional project meetings and basic RPA trainings for process understanding.	external. - Training programs and involvement of students and various departments in RPA projects.
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In both cases, RPA governance models incorporate elements of centralization. The Turkish case illustrates a top-down governance structure led by the IT department, where the CIO plays a crucial role in overseeing RPA initiatives. Similarly, the Swedish case presents a centralized structure, a CoE, within its finance department. Despite the similarity in centralization, the initial approaches in the two cases diverge. In the Turkish case, RPA governance has always been centralized, while in the Swedish case, governance followed a decentralized, unstructured, and experimental approach before transitioning to a more structured CoE-based federated model.

The roles and responsibilities within the RPA governance models of both countries are well-defined. In the Turkish case, the IT manager, analysts, software developers, and test teams collaborate with business units and vendors during the development stages of RPA. In the Swedish case, specific roles such as RPA ambassadors, technical coordinators from the IT department, RPA coordinators, developers, and controllers are clearly outlined. These roles facilitate the execution and oversight of RPA processes within their respective organizational structures. Notably, in the Turkish case, roles and responsibilities are defined using conventional IT titles rather than specific RPA-related terminology. For instance, roles that are referred to as “RPA developers” or “RPA coordinators” in the Swedish case do not exist in the Turkish case.

Regarding governance processes, the case organizations integrate RPA governance within their strategic planning frameworks. In the Turkish case, IT department ensures that automation projects align with the municipality's digitalization goals, resembling traditional strategic IT planning, emphasizing coordination and risk control rather than the exploratory orientation associated with light-weight IT. On the other hand, the Swedish case reveals that strategic planning in the CoE not only focuses on current RPA implementations but also works to identify new and innovative ways to extend automation and support broader digitalization within the organization. As respondents noted, additional tools such as Microsoft Copilot, ChatGPT and other emerging solutions are increasingly being considered. In this way, the CoE looks for alternative automation possibilities.

The case organizations emphasize standardized procedures from initiation to further scaling. Turkish municipality utilizes PoCs and hackathons for identifying suitable processes, but these activities primarily serve feasibility confirmation rather than enabling organizational learning. In contrast, Swedish case uses pilot projects as opportunities for experimentation and capability development, allowing business units and the CoE to internalize automation.

Operating procedures in both countries are formalized, with ongoing adaptation as RPA matures. Monitoring, control, and security processes are robust in both cases, but differ in execution. In the Turkish case, related tasks are shared between IT and business units, whereas in the Swedish case, they are handled by defined roles such as controllers, technical coordinators, and process experts who manage exceptions and system-related requirements. Documentation practices also diverge,

with the Swedish case using a formal RPA management model, while the Turkish case lacks an equivalent guiding document.

Relational mechanisms in the Turkish and Swedish cases share commonalities. High-level strategic management and leadership support are evident in both cases, ensuring that the necessary resources and decision-making authority are provided to advance RPA initiatives. Both countries promote knowledge sharing and communication within their organizations. However, knowledge sharing among business units is limited in the Turkish municipality, while the Swedish municipality fosters it through RPA ambassadors. Training also varies. The Turkish municipality offers basic RPA training, while the Swedish municipality offers advanced RPA tool courses and involves students in real-world projects.

Finally, process complexity differs. Processes in the Turkish case involve external integrations adding complexity, requiring coordination with various external government entities. Conversely, the automated processes in the Swedish case do not interact with external systems. Both countries leverage external support.

However, their approach to consultation differs. The Turkish municipalities' approach resembles an outsourcing service, collaborating mainly with IT. In Swedish case, the combination of non-IT staff and consultants aims to build internal RPA capabilities. Notably, both countries move towards decreasing reliance on external providers. Security considerations, expressed through authorization control, exception management, and process monitoring, form part of broader risk and reliability concerns rather than a standalone theme. These considerations are addressed through IT security protocols in both cases.

In conclusion, despite shared principles such as centralized functions and strategic planning integration, Turkish case and Swedish case demonstrate distinct approaches in their governance models, decision-making structures, process complexity, training, and collaboration. The formalized RPA management model found in the Swedish case supports consistency and scalability, differing from the more ad-hoc approach identified in the Turkish case.

5. Discussion

This paper aims to explore how RPA governance is formed and adjusted as organizations move from pilot projects toward more extensive use.

Using an exploratory case study approach, we analyzed an IT-led model in a Turkish metropolitan municipality and a business-led model in Swedish universities through an integrated analytical lens anchored in the IT governance framework (De Haes & Van Grembergen, 2006) and informed by lightweight IT governance (Bygstad & Iden, 2017) and RPA governance factors (Borghoff & Plattfaut, 2022).

A first key insight is that governance does not follow a uniform development pattern across cases. In the Turkish case, RPA governance has been centralized and IT-led from the outset, with formal

decision rights, role definitions, and oversight located in the IT department. The municipality anticipates establishing an automation sub-unit within IT as automation scales, separating RPA from “heavyweight IT”. This represents an outlook toward bimodal IT defined in lightweight IT governance (Bygstad & Iden, 2017; Osmundsen et al., 2019). By contrast, the Swedish case demonstrates a governance transition. RPA started as decentralized experimentation in finance and evolved to a more consolidated governance arrangement with emerging federated features, balancing coordination with local involvement. This aligns with prior literature emphasizing the need for governance models to evolve as automation scales (Herm et al., 2023; Borghoff & Plattfaut, 2022).

A second insight concerns how governance choices are contingent on factors such as the complexity of RPA systems, the maturity of automation initiatives, and the institutional context of public administration. We agree with Borghoff and Plattfaut (2022) that centralized, IT-led governance ensures security and control in organizations with immature automation and complex external integrations, as seen in Turkey. However, such centralization constrains opportunities for experimentation and local innovation, as business units have limited involvement in development or governance. This creates a governance configuration that aligns well with heavyweight IT principles emphasizing stability, control, and risk minimization (Osmundsen et al., 2019) but diverges from lightweight IT principles that relies on rapid experimentation, iterative innovation, a higher tolerance for failure and user exploration. Conversely, the initially decentralized approach in the Swedish case transitioned to a CoE-led, federated model which balances compliance with business innovation. This confirms that RPA governance is a set of alternative configurations, involving adoption and innovation as well as imperatives of compliance, accountability, and long-term sustainability (Borghoff & Plattfaut, 2022). In relation to this, we argue that the capacity of business units to take on automation-related responsibilities requires a certain level of RPA knowledge, even though maturity has not been established, investment in automation skills is still necessary (Bygstad & Iden, 2017). The assignment of RPA roles further supports this condition, as seen in the decentralized approach of the Swedish case. By establishing RPA-specific roles such as coordinators and developers, this approach clarifies responsibilities and creates a sense of ownership, whereas the use of traditional software development terminology in the Turkish case might limit the innovation that more specialized roles could provide.

Third, strategic decision-making is a critical process in both models, aligning with Asatiani et al. (2023) and Farinha et al. (2024). In Turkish case, centralized leadership owns decision-making and allocates resources, which aligns with findings from Vollenberg et al. (2024) on RPA acceptance in public organizations. On the other hand, in the Swedish case, the CoE distributes decision-making throughout the automation process, validating the need for operational-level RPA governance frameworks. As Farinha et al. (2024) suggest, operational level frameworks support non-IT employee decision-making in consistent, high-quality automation outcomes.

Fourth, both cases emphasize strong relational mechanisms, although the approach differs. The Turkish case prioritizes hierarchical communication, with decision-making authority concentrated at upper levels of the organization. In contrast, the Swedish case demonstrates collaborative deci-

sion-making, where input from various levels of the organization is incorporated in the RPA governance, encouraging collaborative decision-making and a more participative approach to governance as previously discussed by Toll et al. (2022).

6. Research contributions and considerations for practitioners

This research contributes to the field of RPA governance within public organizations. We integrate existing IT and lightweight IT governance frameworks with empirical insights, illustrating how centralized and decentralized governance models develop during RPA scaling. These insights are particularly valuable, as they stem from public organizations with diverse organizational structures and operational contexts.

First, this study extends IT governance theory by demonstrating that RPA governance develops through context-dependent pathways rather than fixed centralized or decentralized archetypes (De Haes & Van Grembergen, 2006). The Turkish case illustrates a stable, IT-led centralized pathway shaped by system complexity and risk considerations, consistent with heavyweight IT principles (Osmundsen et al., 2019). In contrast, the Swedish case shows a pathway from decentralized experimentation toward a CoE-led federated model, aligning with research emphasizing governance adaptation as automation matures (Herm et al., 2023; Borghoff & Plattfaut, 2022). This processual perspective enriches lightweight IT governance theory (Bygstad & Iden, 2017) by showing how organizations transition between governance configurations over time.

A second contribution highlights how governance models must align with the complexity of the system landscape, maturity of automation, and the organization of automation capabilities. In settings with extensive external integrations and limited internal expertise, centralized coordination and strong process controls are essential for ensuring security. In more autonomous environments where RPA workflows are executed within the organizations' authorized system environments, governance arrangements allow greater scope for iterative learning and internal capability building. Across these configurations, the handling of sensitive data and system dependencies makes security a central governance concern, requiring early IT involvement in business-led, federated models. Furthermore, our findings emphasize the necessity of adapting RPA training and role development to the governance lead and automation maturity of the organization (Borghoff & Plattfaut, 2022). Mature organizations might benefit more from team-based learning, while those less experienced might require a more centralized approach to skills and competence development. This insight helps public organizations design effective training programs that support their RPA initiatives.

Third, the study highlights that RPA governance models are influenced by institutional and administrative contexts, such as national policies and the degree of organizational autonomy within the public sector. While standardized RPA governance practices and best practices circulate widely, our findings suggest that such practices are interpreted in relation to national policy frameworks, regulatory oversight, and administrative structures. These observations align with prior research emphasizing that IT governance configurations can be adapted to different countries with distinct contexts (Zhong et al., 2012).

Fourth, public organizations can leverage lightweight IT governance frameworks to promote rapid RPA deployment while maintaining essential control mechanisms. Our study shows that public organizations leverage lightweight IT as an innovation instrument, enabling experimentation and learning. However, the successful implementation of lightweight IT governance requires careful consideration of various factors influencing governance models, as identified by Borghoff and Plattfaut (2022). This study provides an improved understanding of these factors, enabling public organizations to implement RPA effectively and efficiently.

From a digital government perspective, these findings illustrate how automation governance functions as a mechanism through which public organizations reconcile efficiency-oriented digitalization with public sector imperatives such as accountability, legal compliance, and administrative continuity. The observed governance pathways therefore reflect not only technical or organizational contingencies, but also how public administrations interpret and enact digital government mandates within their specific institutional settings. Based on the study's findings, we summarize practical implications as governance considerations for public organizations in Table 7.

Table 7: Governance considerations for public organizations

Governance	Considerations
Structures	- Adapt governance models to technological, organizational and environmental contexts: Establish RPA governance models considering unique technological, organizational and environmental factors to ensure relevance and effectiveness within each organizational context. - Define roles and responsibilities: Clearly outline the roles and responsibilities of all stakeholders involved in RPA projects to enhance coordination and accountability.
Processes	- Plan for growth: Anticipate the scaling of RPA and other automation technologies across the organization. The governance framework should be adaptable, allowing for expansion while maintaining control and efficiency. - Tailor security to risk: Reflect the risks associated with automation technology in the level of security built into the governance framework. Public organizations dealing with sensitive data require stricter security measures compared to those handling routine tasks.
Relational Mechanisms	- Promote relational mechanisms: Encourage regular cross-functional meetings and collaborative projects to strengthen relationships between IT, business units, and other public organizations. Establish communication channels and feedback loops to ensure transparency and continuous improvement.

7. Research limitations and future research

The primary limitation of this research relates to external validity. Crucially, the cases examined, a Turkish metropolitan municipality and two Swedish public universities, were not selected to be representative of the public sector at large, nor were they intended to showcase only "successful" RPA implementations. Instead, they were chosen to provide rich, illustrative examples of governance development across differing organizational structures and national administrative traditions. Consequently, our findings provide analytical contributions to the understanding of RPA governance mechanisms but should not be statistically extrapolated to the entire public sector population. Furthermore, as an exploratory study, the research prioritized rich insights into the governance for RPA scaling. This focus meant setting clear boundaries on the data collected, meaning that it was not possible to gather all detailed, quantitative data across all organizational levels. Finally, the cross-national nature introduces the challenge of conceptual equivalence; while we attempted to carefully contextualize terms, subtle differences in the meaning of key governance concepts due to distinct national legal frameworks or cultural norms may persist; a risk inherent in cross-national public sector research.

Future research should consider expanding the scope to include a broader range of countries with varying levels of technological advancement, governance structures, and regulatory environments. Incorporating nations from different regions would provide a more comprehensive understanding of how diverse governance models can be adapted to different contexts. Further investigation into the impact of cultural factors on the adoption and effectiveness of RPA governance in public organizations could provide valuable insights. Understanding how cultural differences influence governance approaches and their outcomes could help in designing more context-sensitive models that are tailored to the specific needs of various countries and regions. Additionally, future research could explore longitudinal studies to track the evolution of RPA governance over time in various public sector settings. This lens is particularly valuable for understanding how governance models adapt to changing technological landscapes, shifts in regulatory frameworks, and evolving organizational needs, as organizations move beyond RPA, toward generative AI-integrated workflows. This would ultimately contribute to the creation of more effective and globally relevant automation governance frameworks in the public sector.

8. Conclusion

This exploratory case study investigated the development of RPA governance by gathering empirical evidence from diverse public organizations: a Turkish metropolitan municipality and two Swedish public universities. The results illustrate that RPA governance develops through the configuration of structures, processes, and relational mechanisms, and that these mechanisms evolve in response to contextual factors. In answering the research question "How do public sector organizations establish governance structures when scaling Robotic Process Automation (RPA)?", the findings show that public organizations establish RPA governance by allocating decision making rights

through either IT-led or CoE-led structures; standardizing critical processes for implementation, execution, monitoring, and security; and building relational mechanisms for communication, collaboration, capability development and practices that support automation.

For digital government research, this study contributes empirical insights into how digital automation technologies are governed as part of broader public sector digital transformation efforts. By focusing on governance arrangements rather than technological outcomes alone, the study highlights how governance functions as a mechanism through which digital government capacity is enacted via organizational structures, decision-making processes, and relational mechanisms inside public administrations. The study shows how established IT governance concepts and lightweight IT governance principles manifest in public sector automation initiatives. These insights extend current understandings of automation governance and provide a basis for examining how public organizations integrate new forms of lightweight IT into established governance regimes.

For practice, the study offers insights into how governance can be organized to support the reliable and scalable use of automation technologies in public administration. The findings illustrate that governance requires not only formal procedures but also the cultivation of relational practices that help bridge organizational units and facilitate the diffusion of automation knowledge. In this sense, the cases from Turkey and Sweden highlight how governance functions as an ongoing coordination effort that must be adapted to the organization's technological dependencies, competence base, and administrative norms. These insights can serve as a practical knowledge base that public organizations can adapt and refine to create governance structures suited to their unique local contexts.

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E.O.G. is the lead author and was responsible for conceptualization, research design, methodology, data collection, data curation, formal analysis, and validation of the findings. E.O.G. carried out the empirical investigation and drafted the original manuscript. S.H. and G.J.S. are the significant contributors of the conceptualization, research design, methodology and supervision. All authors contributed to writing, reviewing, and editing of the manuscript and were actively involved in revisions of the submitted manuscript. All authors have read and agreed to the published version of the manuscript.

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