



Strategic Evolution of IT Leadership in Indonesian National Police Using the IT Strategic Grid

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Abstract

Background: Digital transformation has increasingly positioned Information Technology (IT) as a strategic enabler of public service quality, transparency, and data-driven decision-making. Within the Indonesian National Police (Polri), however, fragmented applications, limited data integration, and the absence of comprehensive IT governance have constrained the strategic value of digital initiatives.

Objective: This study examines the evolution of IT's role in Polri from administrative support to a strategic enabler and analyzes how IT leadership and governance mechanisms have facilitated this transition.

Methods: A qualitative approach was employed using the IT Strategic Grid framework. Data were collected through document analysis of 12 strategic and administrative documents, field observations at three Polri public service units, and international benchmarking with police organizations in the United Kingdom, India, and Singapore.

Results: The findings indicate that Polri's IT role has evolved from the Support quadrant, characterized by isolated administrative automation, to the Turnaround quadrant through the implementation of digital public services such as SIM Online, SKCK Online, E-Tilang, and SP2HP. The establishment of the ICT Committee and the development of the Presisi SuperApp have further accelerated the transition toward the Strategic quadrant by strengthening governance, service integration, and data-driven decision-making. Nevertheless, application fragmentation, interoperability limitations, cybersecurity challenges, and organizational readiness remain significant barriers to achieving fully integrated digital governance.

Conclusion: The study demonstrates that governance mechanisms and IT leadership, rather than technology alone, are the primary drivers of IT role evolution in Polri. The findings extend the application of the IT Strategic Grid to policing institutions.

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INTRODUCTION

Digital transformation in government organizations around the world continues to be enhanced to support transparency, efficiency, and accessibility of public services (Balaji, 2025) (Aleisa, 2024). Police organizations are particularly affected by this transformation, as they must balance operational demands for crime prevention and public safety with the growing expectations for digital service accessibility and institutional accountability (Popovich et al.,

2024). In Indonesia, the Indonesian National Police (*Polri*) seeks to respond to the challenges of the digital era by implementing strategic transformations such as organizational restructuring, technology adoption, and capacity development in order to improve its services to the public (Yustinus, 2024). However, empirical indicators suggest that this transformation remains a work in progress: as of 2024, the *Presisi SuperApp*—*Polri*'s flagship integrated digital platform—had registered approximately 3.2 million users, while several key services such as *SIM Online* and *E-Tilang* continued to operate as standalone applications outside the integrated ecosystem, indicating persistent fragmentation in *Polri*'s digital service architecture (Divisi TIK *Polri*, 2024).

This direction is further emphasized through the *Polri* Strategic Plan (*Renstra*) 2025–2029, which positions digital transformation and the strengthening of Information Technology (IT) as key enablers in achieving *Polri*'s strategic objectives, including service integration, service quality improvement, and data-driven decision-making (Mazly et al., 2025). These conditions create an urgency to strengthen the role of IT as a catalyst for improving institutional performance, rather than merely serving as an administrative support tool. Critically, the same Strategic Plan identifies several structural weaknesses that constrain digital transformation: application fragmentation across organizational units, where each directorate develops its own digital solutions without centralized coordination; suboptimal data integration resulting in information silos that prevent cross-functional analytics; insufficient cybersecurity governance to protect increasingly digitized public service infrastructure; and a human resource gap in digital competencies among personnel at the operational level (Aldoseri et al., 2023). These problems indicate that the existence of various IT initiatives does not automatically result in IT utilization that genuinely supports the achievement of organizational strategic goals. Therefore, a consistent direction is needed regarding how IT is positioned, prioritized, and aligned with organizational objectives in a comprehensive manner.

In addressing these challenges, the role of IT Leadership [MIK2.1] becomes increasingly critical, as the strengthening of infrastructure, the development of public service applications, and various other IT initiatives will only have an optimal impact if they are guided by leadership that views IT as an integral part of institutional strategy rather than as a standalone technology project. Therefore, identifying more clearly the role of IT leadership within *Polri* is important to ensure that the ongoing digital transformation maintains a direction that is consistent with the institution's strategic objectives.

Theoretically, the evolution of IT roles can be explained through the IT Strategic Grid, which distinguishes IT positions based on their current operational impact and future strategic potential. McFarlan (1984) categorizes IT into support, factory, turnaround, and strategic roles, thereby enabling organizations to assess whether IT functions merely as an administrative tool or as a source of organizational transformation. In the context of public organizations, this framework is relevant because digital systems are not only assessed based on technical availability, but also on the extent to which they shape service delivery, coordination mechanisms, and institutional performance. Therefore, the movement of IT from support to strategic requires an assessment of how technology is embedded into core business processes and how it contributes to the achievement of organizational objectives.

The strategic role of IT is also closely related to the theory of strategic alignment and IT governance. Henderson and Venkatraman (1993) emphasize that IT delivers value when there is alignment between business strategy, IT strategy, organizational infrastructure, and IT infrastructure. This perspective is strengthened by IT governance theory, which explains that organizational value from IT depends on leadership structures, decision rights, accountability mechanisms, and prioritization processes (Weill & Ross, 2004). In digital government, technology adoption also needs to be understood as an institutional transformation process, because digital platforms can reshape bureaucratic routines, information flows, public interaction, and accountability relationships (Fountain, 2001; Vial, 2019). Thus, IT leadership in *Polri* is not limited to managing infrastructure and applications, but also involves ensuring strategic alignment, integration, data governance, and institutional readiness so that digital transformation produces public value.

Furthermore, digital transformation theory highlights that the strategic value of IT emerges when digital technology becomes integrated with organizational capabilities, service

innovation, and decision-making processes. Bharadwaj et al. (2013) argue that digital business strategy is no longer separate from organizational strategy, but increasingly becomes embedded in how organizations create value and coordinate resources. In the public sector, this idea is reflected in the need for agencies to redesign processes, strengthen interoperability, and improve data-based governance rather than simply digitizing existing procedures. Nograšek and Vintar (2014) also emphasize that e-government transformation involves organizational, managerial, and institutional change. This theoretical perspective supports the analysis of Polri's digital transformation as a shift from fragmented service applications toward integrated digital governance and strategic IT leadership.

In addition, the public value perspective strengthens the theoretical foundation of this study because digital transformation in public institutions should not be assessed only through efficiency or technical modernization. Moore (1995) explains that public organizations create value when their programs respond to public needs, gain legitimacy, and strengthen operational capacity. In the context of digital policing, this means that IT initiatives should support transparency, responsiveness, service quality, and public trust. Therefore, Polri's IT transformation can be understood as a process of creating public value through integrated services, stronger governance, and data-based institutional decision-making.

Despite the growing body of literature on e-government and digital transformation in public sector organizations, a significant research gap persists regarding the application of IT role evolution frameworks to policing institutions. Previous studies have predominantly examined digitalization of police services from a technology adoption perspective (Popovich et al., 2024; Yustinus, 2024), or focused on e-government readiness and citizen satisfaction without analyzing how IT's organizational role transitions over time (Aleisa, 2024; Balaji, 2025). Furthermore, while the IT Strategic Grid framework (McFarlan, 1984) has been extensively applied in private sector contexts, its application to public sector organizations—particularly law enforcement agencies facing unique operational, security, and accountability constraints—remains largely unexplored. Studies on digital policing in specific countries (Wells et al., 2023; Khan & Irshad, 2025) tend to focus on isolated digital initiatives rather than tracing the systematic evolution of IT's role across organizational quadrants. This gap is particularly evident in the Indonesian context, where no prior study has examined how Polri's IT function has evolved from a support tool to a strategic enabler within the IT Strategic Grid framework, nor how IT leadership structures such as the ICT Committee have influenced this transition. The present study addresses this gap by providing a framework-based analysis of IT role evolution within Polri, complemented by international benchmarking to contextualize the findings.

The novelty of this study lies in three aspects. First, it applies the IT Strategic Grid framework—originally developed for corporate IT assessment—to a law enforcement institution, thereby extending the framework's applicability to a high-risk, public-facing organization with unique operational constraints. Second, the study provides an integrated analytical narrative that traces the evolution of IT's role in Polri across four quadrants (support, factory, turnaround, and strategic), connecting each transition to specific governance mechanisms, leadership decisions, and digital service milestones. Third, the inclusion of international benchmarking against police organizations in the United Kingdom, India, and Singapore offers a comparative perspective that situates Polri's digital transformation trajectory within broader global patterns, enabling the identification of both universal trends and context-specific challenges in police IT modernization.

This study aims to provide a clearer understanding of how the role of IT within Polri evolves alongside the implementation of various digital initiatives, as well as the implications for IT leadership at the institutional level. The primary focus is directed toward identifying patterns of IT role transition in supporting policing functions and public services, while also examining how policies, organizational structures, and IT-related decision-making mechanisms are utilized to direct and support these shifts. To enrich the perspective, the analysis is complemented by benchmarking against several police organizations in other countries. Through this approach, the study is expected to provide practical contributions to strengthening IT governance within Polri and, at the same time, enrich the body of knowledge regarding the role of IT and IT leadership in public sector organizations.

Additional theoretical enrichment further strengthens this study through several

perspectives. The digital-era governance perspective (Dunleavy et al., 2006) explains that public sector digital transformation shifts bureaucratic structures toward integrated, data-centric, and platform-based governance. Meanwhile, the DeLone and McLean Information System Success Model (2003) highlights that the effectiveness of IT can be evaluated through system quality, information quality, service quality, use, user satisfaction, and net benefits. In addition, the sociotechnical systems perspective (Orlikowski, 1992) emphasizes the interaction between technology and organizational actors in shaping the success of digital transformation initiatives. Theoretically, this study contributes to the development of IT governance and digital transformation theories by demonstrating how the IT Strategic Grid framework can be operationalized in a public sector policing context. Specifically, the findings are expected to illustrate how governance mechanisms—such as executive-level ICT committees and centralized IT planning documents—function as institutional drivers that facilitate IT role transitions across quadrants. This extends existing strategic alignment theory (Henderson & Venkatraman, 1993) by providing empirical grounding for how alignment between IT strategy and organizational strategy manifests in practice within a non-corporate, public sector setting. Furthermore, the study enriches the public value framework (Moore, 1995) by linking IT role evolution to measurable improvements in public service accessibility, transparency, and institutional accountability.

METHOD

This study employs a qualitative method consisting of two stages: data collection and data analysis.

Data Collection

Data collection in this study was conducted through two methods, namely document analysis and field observation. Document analysis was performed on a total of 12 strategic and administrative documents, selected based on their direct relevance to Polri's IT governance and digital transformation initiatives. The primary documents include: (1) the Polri Strategic Plan (Renstra) 2025–2029, which contains the vision, mission, objectives, and strategic targets for the current planning period; (2) the Polri Information and Communication Technology Master Plan (MPTIK) 2019–2025, which serves as the ICT roadmap containing programs and architectural blueprints; (3) the Decree on the Establishment of the Polri ICT Committee (2021); (4) annual reports of the ICT Division (Divisi TIK) from 2021–2024; (5) service performance reports for SIM Online, SKCK Online, E-Tilang, and SP2HP; and (6) the Presisi SuperApp development documentation. Documents were selected using purposive sampling with the following inclusion criteria: (a) officially issued by Polri institutional units with IT governance authority; (b) published or enacted within the period 2019–2025; and (c) directly relevant to IT strategy, digital service delivery, or ICT organizational structure. Documents that were classified, inaccessible, or pertaining to non-IT administrative functions were excluded.

Field observations were conducted at three Polri public service units in the Jakarta Metropolitan Area (Polda Metro Jaya) between January and March 2025, covering: (1) Satpas (Driving License Service Center) for SIM Online implementation; (2) Intelkam service unit for SKCK Online processing; and (3) the Integrated Police Service Center (SPKT) for digital police report submission. Observations focused on four aspects: the degree of digital system utilization in daily service operations, the user interface and workflow of digital applications, the interaction patterns between officers and applicants in digitally mediated services, and the availability and functionality of supporting IT infrastructure. Data was recorded through structured observation notes and photographic documentation, subsequently analyzed using thematic coding aligned with the IT Strategic Grid quadrant indicators.

Data Analysis

This study analyzes the IT transition that has occurred and its implications for police business processes in an effort to align them with Polri's digital strategy. The analysis procedure followed three sequential stages. First, documents were subjected to content analysis using a deductive coding framework based on the four quadrants of the IT Strategic Grid (McFarlan,

1984). Each digital service and IT initiative identified in the documents was mapped to a specific quadrant based on two operational dimensions: (a) the current operational impact of IT on core policing functions and public services, measured through indicators such as service availability (24/7 vs. business hours), process dependency on digital systems (whether manual backup exists), and user volume; and (b) the future strategic importance of IT, assessed through indicators such as integration with organizational strategy documents, cross-functional data sharing capabilities, and contribution to institutional decision-making. Second, temporal analysis was conducted to trace the chronological movement of IT initiatives across quadrants, identifying governance decisions, policy instruments, and leadership interventions that catalyzed each transition. Third, the results were triangulated against field observation data to validate document-based classifications against operational reality.

In addition, benchmarking of IT innovations is conducted by comparing best practices from international police institutions. Three countries were selected for benchmarking using purposive criteria: (1) the United Kingdom (England & Wales), selected for its advanced digital government maturity as reflected in the UN E-Government Development Index (consistently ranked in the top 10 globally) and its systematic Digital Public Contact (DPC) program that has been extensively documented in academic literature; (2) India, selected for its comparable characteristics as a large, diverse developing nation with a centralized national police system undergoing rapid digitalization through the CCTNS program; and (3) Singapore, selected for its internationally recognized Smart Nation initiative and its integration of artificial intelligence into police operations, representing the upper benchmark of digital policing innovation in the Asia-Pacific region. South Korea and Japan were initially considered but excluded due to limited availability of English-language academic literature on their police-specific IT governance structures. The benchmarking analysis employed a structured comparative framework examining four dimensions across all cases: (a) the initial role of IT in police public services; (b) the trigger mechanisms for IT role transition; (c) the governance structures supporting digital transformation; and (d) the current strategic positioning of IT within each police organization. The results of this benchmarking are expected to provide strategic recommendations for Polri in adopting IT innovations to accelerate and strengthen the implementation of digital transformation toward Presisi Polri.

Ethical Considerations: This study relies exclusively on publicly available institutional documents and direct observation of public service delivery processes. No human subjects were interviewed, surveyed, or experimentally involved. All documents analyzed are official publications or publicly accessible government records. Field observations were conducted in public service areas without recording personal data of service users. Accordingly, this research falls outside the scope of human subjects research requiring institutional ethics committee approval, consistent with established guidelines for document-based qualitative research in the social sciences (Bowen, 2009).

RESULTS AND DISCUSSION

Evolution of Polri Public Services

To systematically analyze the evolution of Polri's public services, each digital initiative is assessed against two dimensions of the IT Strategic Grid: operational impact (the degree to which current operations depend on IT for continuity) and strategic impact (the extent to which IT shapes future organizational direction). Table 1 presents the operational indicators used to classify each service within the IT Strategic Grid quadrants.

Table 1

Operational Indicators for IT Strategic Grid Quadrant Classification

Strategic Grid Quadrant	Operational Indicators	Example
Support	IT automates isolated administrative tasks; manual backup systems remain fully functional; there is no dependency on real-time data; IT failure does not disrupt core services.	Computerized SIM/SKCK records before 2020

Strategic Grid Quadrant	Operational Indicators	Example
Factory	IT supports mission-critical operations that require high availability; system downtime directly affects service continuity; processes are standardized and subject to Service Level Agreement (SLA) requirements.	Mass SIM/SKCK renewal processing; 24/7 ETLE operations
Turnaround	IT functions as the primary public-facing service channel; process reengineering is driven by digital capabilities; service quality improvements are measurable; dependence on physical service channels is reduced.	SIM Online; SKCK Online; Online SP2HP
Strategic	IT is integrated into organizational strategy and governance; cross-functional data sharing is enabled; IT-based decision analytics inform institutional policies; an executive-level IT governance body is established.	Presisi SuperApp; ICT Committee governance

Polri has undertaken various efforts to improve the quality of public services and the accountability of law enforcement through the utilization of information technology. In the early stage, all services were conducted conventionally through service counters, paper-based documents, and face-to-face interactions at service units (Satpas for Driving Licenses (SIM), Security Intelligence (Intelkam) for Police Clearance Certificates (SKCK), Integrated Police Service Centers (SPKT) for Police Reports (LP), and operational divisions for event permits). Along with the bureaucratic reform agenda and the need for greater transparency, digitalization began to be implemented in each service. In the SIM service, the renewal process, which previously depended on visits to Satpas, shifted to online registration and verification. Around 2021, a mobile-based SIM renewal application was introduced, enabling applicants to upload documents, select schedules, and make cashless payments. The SKCK service followed a similar pattern: online registration and scheduling reduced queues at Intelkam service counters while also providing online tracking of application status. In the Police Report service, digital reporting channels were introduced to facilitate the submission of initial reports from any location, which were subsequently linked to the investigation management system so that the follow-up process could be tracked by the complainant. Event permits, which were previously processed through manual correspondence, were reengineered into an electronic licensing system encompassing application submission, cross-functional verification, Non-Tax State Revenue (PNBP) payment, and the issuance of digital documents, thereby making the process faster and easier to audit. Within the framework of accountability, the Notification Letter on Investigation Progress (SP2HP), which was formerly delivered physically, was transformed into an Online SP2HP integrated with the investigation system. Complainants are able to monitor case progress through ticket numbers and periodic notifications. In the field of traffic law enforcement, E-Tilang (Electronic Traffic Ticketing/ETLE) replaced manual ticketing with CCTV/ANPR-based enforcement. Violation notifications, verification, and payments are conducted digitally, while violation data serves as an important source for evaluating road safety.

Following the phase of standalone applications for each function, Polri encouraged consolidation into an integrated ecosystem to provide a “one-stop” experience for the public. Online SIM and SKCK services, Police Report submissions, Event Permit applications, SP2HP tracking, and E-Tilang status checks were integrated into the same digital service platform and connected to command centers and public information dashboards. Gradually, the role of IT shifted from Support (administrative automation at individual service counters) to Factory when services became mission-critical (for example, mass SIM/SKCK renewals, SP2HP transparency, and 24/7 ETLE operations), and then toward Turnaround as processes and public service experiences were reengineered through ticketing systems, Service Level Agreements (SLAs), and notifications. In the subsequent stage, cross-service data integration, including ETLE violation data, licensing metrics, and LP/SP2HP status records, became the foundation for the Strategic role of IT because it was utilized for policy analytics, resource allocation planning, and continuous service quality improvement. Thus, these six major services demonstrate a consistent

evolutionary trajectory: service counters → standalone applications → integration into a single platform, while simultaneously shifting the role of IT from merely providing administrative support to becoming a key driver of data-driven decision-making at the institutional level.

IT Role Transition in Polri

This analysis section demonstrates how the role of IT in Polri has transitioned, as illustrated in Figure 1. This shift in the role of IT did not occur automatically; rather, it was driven and managed by IT leadership within Polri, including the ICT Division and the ICT Committee, which function as strategic direction and governance bodies.

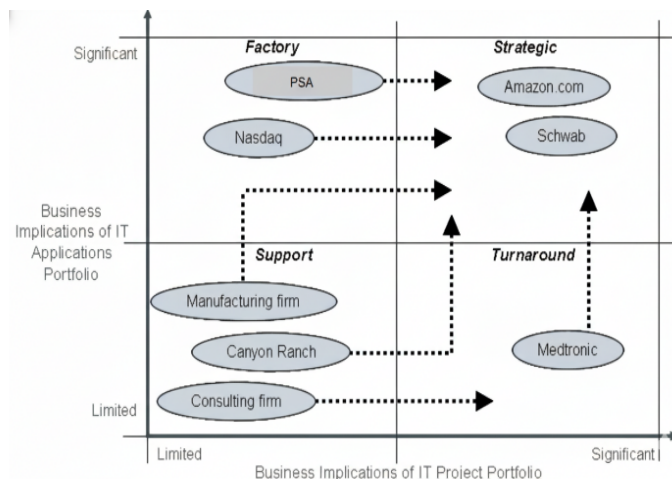


Figure 1. IT Strategic Grid

The development of IT utilization, from the digitalization of administrative processes to the development of integrated digital services, can be interpreted as a movement from the Support quadrant, shifting to Turnaround when services began to be delivered online, and then progressing toward Strategic when internal foundations were strengthened and these various services were consolidated into a single digital ecosystem.

The Role of IT in the Support Quadrant

Looking at the history of digitalization up to the early 2020s, IT in Polri initially played a support role for business processes: computerization of SIM and SKCK service records, digital forms for initial Police Reports, and the provision of basic service information. Its function focused on service counter automation and the reduction of manual work (registration, scheduling, and printing), without a high dependency on central integration or real-time data sharing. At this stage, disruptions to IT systems did not significantly affect core services because manual procedures still functioned as backup mechanisms.

Turnaround Transition of the IT Role to the Turnaround Quadrant

Policy drivers and demands for more accessible services encouraged Polri to digitalize several key services. At this stage, the orientation of IT began to shift from merely supporting internal processes to serving as a means of expanding the reach and quality of public services. Various administrative services that had previously relied entirely on physical presence became available through SIM Online and SKCK Online, enabling applicants to register, upload documents, select schedules, and monitor application status online. In the field of law enforcement, E-Tilang/ETLE utilizes cameras and image processing technologies to record traffic violations, process evidence electronically, and send notifications to vehicle owners 24 hours a day.

With the introduction of applications positioned within the turnaround quadrant, service time improvements and service achievement enhancements were observed. According to data reported by the SIM Nasional Presisi (SINAR) program, SIM Online service processing time decreased from an average of 120 minutes (conventional counter-based service) to approximately 60 minutes (online-assisted processing) since its launch in 2021, representing a 50% improvement in service time. This figure is derived from the comparative performance metrics

published in the SINAR program evaluation report (Sinar, 2025), which measured average end-to-end processing duration across 15 Satpas units implementing the digital system. Additionally, online SIM renewal transactions increased by 35% year-on-year between 2022 and 2024, indicating growing public adoption of the digital channel (Sinar, 2025).

In the case-handling process, Online SP2HP, which is connected to the Electronic Investigation Management (EMP) application, provides complainants with the ability to monitor case progress more transparently while also supplying centralized data for leadership to oversee investigative performance. The digitalization of Electronic Event Permits enables permit applications and verification to be conducted online across work units, making the licensing process more measurable and well documented.

This series of innovations marks a clear shift toward the turnaround quadrant, where IT no longer merely automates back-office processes but becomes the public-facing interface of Polri's services. External value increases through easier access, reduced queues, and greater transparency. At the same time, limitations in application integration and the separation of databases indicate that internal foundations are still being strengthened, meaning that the strategic benefits of IT have not yet been fully optimized.

Transition of the IT Role to the Strategic Quadrant

The transition of Polri's IT role from the turnaround quadrant to the strategic quadrant was first marked by the strengthening of IT leadership and governance at the executive level. One key step was the establishment of the Polri ICT Committee in 2021, chaired by the Deputy Chief of Police (Wakapolri), whose responsibilities include providing direction, assessing, and monitoring the implementation of ICT governance and strategic ICT initiatives throughout Polri. With the establishment of the ICT Committee, decisions regarding standards, integration, and IT program priorities are no longer dispersed across individual units but are discussed within an executive forum that links IT initiative agendas with organizational strategy.

In line with this, the Polri Strategic Plan (Renstra) 2025–2029 also emphasizes the need to shift from separate application initiatives toward the design of digital technologies that are integrated with organizational strategy and core processes, while maintaining attention to data security and privacy, digital service accessibility, and the strengthening of public trust. The existence of the Polri ICT Master Plan (MPTIK) further reinforces this direction through an ICT architecture blueprint and application integration based on a common database.

The development of the Presisi SuperApp has become an initiative that drives Polri's IT role into the strategic quadrant, where the Presisi SuperApp is designed to become a one-stop integrated digital service platform for the public. The Presisi SuperApp integrates various public services, including SIM, SKCK, Police Reports, Event Permits, SP2HP/EMP, and ETLE.

This serves as an indication that Polri is positioned within the strategic quadrant, where IT not only supports operations but also becomes a key enabler for service integration, cross-functional coordination, and data-driven decision-making. The role of IT leadership, through the Polri ICT Division as well as forums such as the ICT Committee, is critical in directing initiative priorities, establishing integration standards, and ensuring that IT remains aligned with Polri's strategic objectives.

The current challenge within the strategic quadrant is the continued existence of organizational silos. This is evidenced by the fact that several public services still operate outside the Presisi SuperApp, such as SIM Online, STNK Online, and ETLE. Internally, the impact of this condition is budget inefficiency in the infrastructure supporting these systems.

Another challenge concerns the ICT Committee. Although its duties and functions have been formally established, the ICT Committee currently focuses only on planning activities. This is due to the absence of a framework that can serve as a reference, which consequently affects the comprehensive implementation of the ICT Committee's duties and functions.

Beyond the organizational silos and governance framework gaps, several additional implementation challenges constrain Polri's digital transformation within the strategic quadrant. First, human resource readiness remains a critical bottleneck: a significant proportion of Polri personnel at the operational level lack adequate digital literacy and technical competencies required to fully utilize integrated digital systems, necessitating systematic capacity building

programs (Mergel et al., 2019). Second, organizational culture presents resistance to digital change, as established bureaucratic routines and hierarchical decision-making patterns often conflict with the collaborative, data-sharing ethos required by integrated digital platforms (Vial, 2019). Third, cybersecurity governance requires substantial strengthening, given that the consolidation of multiple public services into a single platform such as the Presisi SuperApp significantly increases the attack surface and potential consequences of security breaches, demanding dedicated cybersecurity frameworks and incident response capabilities (Janssen & van den Hoven, 2015). Fourth, system interoperability remains technically challenging, as legacy systems across different Polri units were developed using heterogeneous technologies and data standards that are not inherently compatible (Aldoseri et al., 2023). Fifth, budget constraints impose practical limitations, as the shift from hardware-centric IT spending toward integrated software development, data analytics, and continuous system maintenance requires sustained financial commitment and revised budgetary allocation mechanisms.

The findings of this study extend existing theoretical frameworks in several meaningful ways. With respect to the IT Strategic Grid (McFarlan, 1984), the Polri case demonstrates that quadrant transitions in public sector organizations are not solely driven by technological capability but are fundamentally shaped by governance structures and leadership decisions—a dimension that the original framework, developed for private sector application, does not explicitly address. The establishment of the ICT Committee as a catalyst for the turnaround-to-strategic transition suggests that in public sector contexts, executive-level governance mechanisms function as necessary institutional prerequisites for IT to achieve strategic status. Regarding strategic alignment theory (Henderson & Venkatraman, 1993), the persistent operation of standalone applications (SIM Online, STNK Online, ETLE) outside the integrated Presisi SuperApp illustrates that alignment between IT strategy and organizational strategy is not a binary state but a continuous process, where partial alignment coexists with ongoing integration challenges. This finding enriches the alignment concept by demonstrating its incremental, contested nature within hierarchical public organizations. From the public value perspective (Moore, 1995), the digitalization of services such as SP2HP and E-Tilang demonstrates how IT can generate public value not only through service efficiency but also through enhanced transparency and accountability—extending the public value framework to specifically address how IT-mediated transparency mechanisms strengthen institutional legitimacy in law enforcement contexts.

Benchmarking

International benchmarking shows that the digital transformation of police public services in various countries is largely centered on digital public contact and online crime reporting. Studies on online crime reporting and technologically mediated policing indicate that digital channels were initially introduced as complements to face-to-face and telephone channels (support role), then evolved into primary front offices that transformed the way crime reporting and public contact were conducted (turnaround role), and in some contexts developed into strategic pillars for managing legitimacy, public trust, and overall police performance (Wells et al., 2023; Elphick et al., 2021; Henning et al., 2024).

The following are three brief examples from England and Wales, India, and Singapore that discuss police public services.

England (England & Wales)

The literature on “channel shift” in policing in England explains that the initial use of IT for public services was positioned in a support role, for example through computerized incident recording systems and call management systems, while primary contact was still dominated by telephone calls and visits to police stations (Wells et al., 2023). Through the Digital Public Contact (DPC) program and the Single Online Home (SOH) platform, online channels were subsequently positioned as a national digital front counter for non-emergency crime reporting and other services, serving a turnaround role because digital channels became the primary interface of public–police interaction and transformed service delivery processes (Wells et al., 2023; Henning et al., 2024). In line with the IT Strategic Grid framework, channel shift and SOH can be interpreted

as steps toward a strategic role when the design of digital channels is explicitly linked to efforts to maintain procedural justice and public trust, rather than merely improving technical efficiency.

India

In India, police digitalization is directed not only toward operational efficiency but also explicitly toward strengthening accountability and transparency. Nationally, the Crime and Criminal Tracking Network and Systems (CCTNS) program and the Digital Police Portal were developed as centralized platforms for recording First Information Reports (FIRs), case tracking, and criminal data management, enabling police actions to be digitally documented and more easily audited. This infrastructure subsequently became the foundation for other citizen-oriented digital services, such as the RajCop Citizen App, which enables citizens to submit complaints and monitor FIR status online, as well as cyber helpdesks and WhatsApp helplines designed to respond more rapidly to cybercrime and public complaints ([Khan & Irshad, 2025](#)).

The Indian Police have also developed integrated command and control centers that utilize CCTV, traffic monitoring, and GIS-based mapping for public space surveillance and enhanced police responsiveness. These various initiatives make police actions more visible, strengthen complaint mechanisms, and provide structured data for performance monitoring and policy analytics.

The transition of the IT role within Indian policing can be identified as beginning with support (digitalization of records and internal processes through CCTNS), progressing toward turnaround when digital channels such as the Digital Police Portal and RajCop became one-stop services for public interaction with the police, and moving toward strategic when data from these systems is utilized for performance monitoring, accountability metrics, and evidence-based policymaking ([Munagandla et al., 2024](#)).

Singapore

In Singapore, the digital transformation of police public services has been built upon the foundation of the Smart Nation initiative and a strong e-government tradition. In the early stages, IT played a support role in administrative efficiency and the consolidation of government services across various domains, as described in studies on Singapore's smart city initiatives and Smart Nation 2.0 reports ([Pereira et al., 2023](#); [Lee et al., 2016](#)). The official Singapore Police Force (SPF) website subsequently positioned E-services explicitly as one of the key areas of police operations, including services such as Check Outstanding Traffic Offences and Pay Traffic Fines, which allow citizens to check and pay traffic fines online. At this stage, the role of IT can be categorized as turnaround because service design and public contact points were reengineered around digital interfaces ([Trischler & Westman Trischler, 2022](#)).

Subsequent innovations, such as the AI-powered R-COP chatbot that assists the reporting process through self-service kiosks, demonstrate a shift toward a strategic role, where IT (including AI) is utilized not merely to move forms online, but to shape the quality of interactions, reduce investigators' workload, and integrate reporting data into broader law enforcement and national security strategies ([Tan et al., 2022](#); [Kuhlmann & Heuberger, 2023](#)).

Table 2

Comparative Synthesis of IT Role Evolution in Police Organizations

Country/ Police Organization	Initial IT Role	Transition Trigger	Governance Mechanism	Current Position
Indonesia (Polri)	Support: Administrative automation and standalone record systems	Bureaucratic reform agenda and public demand for more accessible services	ICT Committee (2021), ICT Division, and MPTIK	Transitioning to Strategic: Presisi SuperApp integration is ongoing, although partial system silos remain

Country/ Police Organization	Initial IT Role	Transition Trigger	Governance Mechanism	Current Position
United Kingdom	Support: Computerized incident recording and call management	Channel-shift policy and Digital Public Contact (DPC) program	National Digital Policing Portfolio (DPP) and centralized SOH platform	Approaching Strategic: Digital channels are increasingly linked to procedural justice and public trust agendas
India	Support: Digitalization of First Information Report (FIR) records through CCTNS	Accountability mandates and growing demand for citizen-oriented services	National CCTNS infrastructure and state-level innovations such as RajCop	Turnaround to Strategic: Integrated command centers and performance-monitoring analytics are increasingly implemented
Singapore	Support: E-government administrative consolidation	Smart Nation initiative and service-design reengineering	Smart Nation and Digital Government Office (SNDGO)	Strategic: AI-powered R-COP chatbot, integrated reporting, and law-enforcement analytics are incorporated into policing operations

The cross-case comparison reveals three consistent patterns in police IT role evolution: (1) all four police organizations began with IT in a support role characterized by administrative automation and standalone systems; (2) the transition to turnaround was consistently triggered by external pressures—public demand for accessible services, government-wide digital mandates, or accountability requirements—rather than by internal technological innovation alone; and (3) the progression toward strategic status required the establishment of dedicated governance mechanisms (ICT committees, digital portfolios, or national digital offices) that elevated IT decision-making to the executive level. The key differentiator between organizations that achieved full strategic positioning (Singapore, approaching in UK) and those still in transition (Indonesia, India) appears to be the maturity of data integration infrastructure and the consistency of governance enforcement across organizational units.

CONCLUSION

This study demonstrates that the evolution of IT's role in Polri—from administrative support through turnaround to an emerging strategic function—is fundamentally driven by governance mechanisms and IT leadership rather than by technological capability alone. The IT Strategic Grid framework, when applied to a policing institution, reveals that quadrant transitions are catalyzed by specific institutional interventions: the establishment of the ICT Committee in 2021 served as the pivotal governance mechanism that shifted IT from a collection of standalone digital services toward an integrated strategic asset, while the development of the Presisi SuperApp represents the tangible manifestation of this strategic intent. However, persistent organizational silos—evidenced by SIM Online, STNK Online, and E-Tilang continuing to operate outside the integrated platform—combined with gaps in cybersecurity governance, human resource digital competencies, and data interoperability, indicate that full strategic positioning remains an ongoing process rather than an achieved state. International benchmarking confirms that this trajectory is consistent with global patterns, where police organizations universally progress through similar IT role phases, with the pace of transition determined by the maturity of governance structures and the consistency of cross-functional data integration.

This study contributes to the theoretical understanding of IT role evolution in public sector organizations by demonstrating the applicability of the IT Strategic Grid framework to law enforcement institutions, extending strategic alignment theory to account for the incremental and contested nature of IT–organizational alignment in hierarchical public organizations, and

enriching the public value framework by linking IT-mediated transparency to institutional legitimacy. Future research should pursue quantitative investigations examining the relationship between digital service quality and public trust in Polri, using validated instruments such as the DeLone and McLean IS Success Model (2003). Additionally, evaluative studies assessing the implementation effectiveness of the Presisi SuperApp through user satisfaction surveys and system usage analytics would provide empirical evidence to complement this study's document-based findings. Comparative studies extending the benchmarking to police organizations in other developing countries with similar institutional characteristics would further enrich the understanding of context-specific factors that facilitate or constrain IT role evolution in law enforcement agencies.

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AUTHOR CONTRIBUTION STATEMENT

Tri Broto Siswoyo conceived the research idea, designed the study, conducted the data collection and analysis, and prepared the original manuscript draft. Muhammad Iqbal Kurniawan contributed to the research design, theoretical development, interpretation of findings, and manuscript revision. Ricky Bahari Hamid contributed to data validation, document analysis, and international benchmarking. Benny Ranti supervised the overall research process, provided methodological guidance, reviewed the manuscript critically for important intellectual content, and approved the final version for publication. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work.

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