



ADMINISTRATIVE PROCESS IMPROVEMENT APPROACHES FOR REDUCING SERVICE DELAYS IN CITY GOVERNMENTS: A SYSTEMATIC REVIEW

Emmanuel Owusu Agyei ¹

¹ University of Memphis, USA

Article DOI: <https://doi.org/10.36713/epra26808>

DOI No: 10.36713/epra26808

ABSTRACT

Administrative delays in city governments undermine citizen satisfaction, economic performance, and governance effectiveness. This systematic review synthesizes evidence from 26 peer-reviewed studies published between 2015 and 2025, examining approaches to reduce service delays in municipal contexts. It focuses on four key methodologies: Lean and Six Sigma, Business Process Reengineering, digital transformation, and administrative simplification reforms. Findings show that structured improvement approaches consistently reduce service turnaround times, with the strongest effects observed in high-volume, routine administrative processes. Digital transformation proves particularly effective, though outcomes depend on service complexity, implementation quality, and contextual factors such as infrastructure and socioeconomic conditions. Critical success factors include sustained leadership commitment, stakeholder engagement, robust performance measurement, organizational capacity for continuous improvement, and careful adaptation of methods to public sector realities. Implementation barriers remain substantial, including organizational resistance, limited technical and managerial capacity, political dynamics, and resource constraints, which disproportionately affect smaller municipalities. Contextual factors such as municipal size, governance structures, and institutional legacies shape both feasibility and outcomes. Effective delay reduction requires integrated approaches combining multiple methodologies, aligned with local conditions, alongside investments in capacity and change management. The study informs public sector process improvement scholarship and provides actionable guidance for municipal administrators seeking efficient, accountable, and equitable service delivery.

KEYWORDS: *Administrative Process Improvement, Service Delays, City Government, Digital Transformation, E-Government.*

1.0 INTRODUCTION

City governments across the world increasingly face mounting pressure to deliver services efficiently, transparently, and responsively. Administrative delays that manifest in slow permit approvals, protracted business registration, and bottlenecks in public records processing have become a significant barrier to citizen satisfaction and urban governance performance (Walker, 2015). As cities expand and service demands grow, conventional bureaucratic models have proven insufficient for managing the complexity and velocity of contemporary administrative tasks. This has spurred interest in structured process improvement methodologies such as Lean, Six Sigma, Business Process Reengineering (BPR), Total Quality Management (TQM), and digital transformation approaches that aim to eliminate waste, streamline workflows, and enhance service delivery speed (Rodgers & Radnor, 2019). These methodologies, which originated in private-sector manufacturing, have been increasingly adapted to public sector environments, contributing to efficiency gains (Kim, 2024). Their adoption has expanded significantly over the past decade as local governments seek innovative solutions to longstanding administrative inefficiencies.

The relationship between administrative process improvement and service delay reduction is further strengthened by the ongoing digitalization of public sector workflows. E-government systems, workflow automation tools, and digital service platforms are now central in transforming how municipal administrations process requests, store information, and interact with citizens (Pittaway et al., 2020). Administrative process improvement has evolved into a multifaceted governance strategy with strong implications for administrative effectiveness.



Despite the increasing adoption of process improvement approaches in city governments, the literature reveals persistent gaps in understanding their cumulative effectiveness, contextual variability, and operational challenges. While numerous studies document individual case applications such as Lean implementation in municipal departments (Zefaj, 2021) or BPR initiatives in public registries (Dronamraju, 2018), there is limited systematic synthesis of how these approaches collectively reduce administrative delays in city-level governance settings. Existing scholarship remains fragmented across themes such as digital transformation, bureaucratic simplification, quality management, and performance monitoring, with few comprehensive reviews integrating these strands. This systematic review seeks to address these gaps by consolidating empirical and theoretical insights from the past decade.

The primary aim of this systematic review is to examine administrative process improvement approaches, their effectiveness in reducing service delays within city government settings, and practical implications that can support the work of policymakers, scholars, and administrators. The review aims to identify trends, empirical patterns, and review the major methodologies applied in municipal administration, assess their impact on service turnaround times, and analyze the contextual factors that influence their success or limitations.

This study contributes significantly to academic literature by synthesizing contemporary research on administrative process redesign, digital transformation, and quality management in municipal governance. For city governments and administrative practitioners, the review offers practical insights into approaches that have demonstrated measurable reductions in service delays, thereby supporting organizational decision-making and reform planning.

This systematic review focuses exclusively on administrative process improvement approaches implemented within city government contexts and their influence on reducing service delays.

2.0 METHODOLOGY

2.1 Research Design

This study adopts a systematic review design to comprehensively examine administrative process improvement approaches used to reduce service delays in city governments. A systematic review is appropriate because it provides a structured, transparent, and replicable process for synthesizing diverse empirical and theoretical studies across fields such as Lean, Six Sigma, Business Process Reengineering, e-government, and bureaucratic simplification. Given that existing research on municipal process improvement is fragmented across different disciplines and geographical contexts, a systematic review enables the integration of evidence to identify overarching patterns, methodological consistencies, and conceptual gaps.

2.2 Data Sources and Data Collection Strategy

The review relied on reputable academic databases to ensure scholarly rigor. Search was conducted in Google Scholar, Scopus, Web of Science, ScienceDirect, SpringerLink, and Taylor & Francis Online. Additional targeted searches were conducted in Emerald Insight, Wiley Online Library, and institutional repositories to capture grey literature such as theses, government-commissioned studies, and municipal case analyses where applicable.

The search strategy combined keywords and Boolean operators to retrieve relevant studies published in the last decade. Primary keywords included: “*administrative process improvement*,” “*service delays*,” “*city government*,” “*municipal administration*,” “*Lean government*,” “*Six Sigma public sector*,” “*business process reengineering*,” “*public service delivery efficiency*,” “*bureaucratic simplification*,” “*workflow automation*,” “*digital transformation*,” “*municipal e-government*,” and “*quality management in local government*.” These were combined using Boolean connectors such as “AND,” “OR,” and “NOT” to improve search specificity.

2.3 Inclusion and Exclusion Criteria

To maintain methodological rigor, clear inclusion and exclusion criteria were established.

Studies were included if they:

1. were published between 2015 and 2025
2. focused on administrative process improvement initiatives within city or municipal government settings
3. examined approaches aimed at reducing service delays or improving administrative efficiency
4. were published in peer-reviewed journals, reputable academic books, or credible institutional repositories.

Studies were excluded if they:

1. were published before 2015;



2. focused solely on national-level reforms rather than city governments
3. lacked empirical evidence or conceptual relevance to process improvement
4. were opinion pieces, non-academic reports, or lacked methodological clarity.

2.4 Data Analysis

The selected studies were analyzed using a narrative synthesis approach, which is suitable for integrating findings from diverse methodologies and contexts. The synthesis was conducted thematically in line with the review objectives, integrating evidence from 26 peer-reviewed studies published between 2015 and 2025.

First, studies were grouped according to their dominant process improvement approaches. Findings within each group were then examined to identify patterns in effectiveness, implementation challenges, organizational readiness factors, and contextual influences. Finally, a cross-themed analysis was conducted to identify convergences and divergences across the approaches. This thematic narrative synthesis enabled the development of a cohesive understanding of how different process improvement models contribute to reducing service delays in city governments.

2.5 Ethical Considerations

Although this review did not involve human participants, several ethical principles were upheld. Only publicly available academic sources were used, and all studies were appropriately acknowledged through proper citation and referencing. The analysis was conducted objectively, avoiding selective reporting or bias in the interpretation of findings.

2.6 Limitations of the Study

This study is subject to several limitations. First, the review is constrained by the availability of relevant literature published within the last ten years, which may exclude earlier foundational studies. Also, because the review relies heavily on published academic sources, it may underrepresent innovative but undocumented municipal initiatives. Despite these limitations, the systematic review provides a comprehensive synthesis of current knowledge on administrative process improvement in city governments.

3.0 KEY FINDINGS AND DISCUSSIONS

This chapter presents the key findings from the systematic review of administrative process improvement approaches for reducing service delays in city governments. It identifies convergent patterns across improvement methodologies while acknowledging contextual variations that influence their applicability and success in different city government settings.

3.1 Process Improvement Methodologies in Municipal Administration

Four primary categories of process improvement approaches emerge in municipal contexts. This includes Lean and Six Sigma methodologies, Business Process Reengineering (BPR), digital transformation and e-government initiatives, and administrative simplification reforms.

Lean and Six Sigma methodologies are management approaches that improve organizational performance by systematically reducing waste and minimizing errors while enhancing process efficiency and quality. Business Process Reengineering (BPR) refers to the fundamental redesign of organizational processes to achieve improvements in efficiency and effectiveness. Digital transformation and e-government initiatives involve the use of digital technologies to redesign operations in order to improve accessibility, efficiency, and transparency. Administrative simplification reform focuses on reducing unnecessary procedures, rules, and paperwork to make public services more efficient.

Each approach represents a distinct philosophical orientation toward service improvement, although practical applications often involve hybrid models that combine elements from multiple methodologies.

3.1.1 Lean and Six Sigma Applications

Lean and Six Sigma methodologies have become firmly established within public sector reform, with growing application across municipal functions. In city governments, these approaches are commonly applied to permit processing, public health administration, and back-office operations, where they target inefficiencies that generate



service delays through waste, process variation, and poor workflow visibility (Psomas et al., 2022). Unlike large-scale restructuring initiatives, Lean and Six Sigma emphasize continuous improvement through disciplined, incremental change, making them particularly compatible with the risk-averse and politically accountable nature of public organizations (Rodgers & Radnor, 2019).

Adapting manufacturing-based Lean principles to municipal contexts requires careful attention to the distinctive features of government work, including regulatory obligations, multiple stakeholder interests, and public accountability pressures (Teeuwen, 2018). Effective implementation begins with redefining “value” from the citizen’s perspective and systematically removing activities that do not contribute to timely service outcomes. When Lean’s focus on waste elimination is combined with Six Sigma’s analytical rigor, municipalities gain a structured means of diagnosing complex administrative delays and sustaining performance improvements over time (Okrent, 2025).

Empirical evidence supports the effectiveness of these approaches. Structured problem-solving frameworks improve transparency and shorten processing times by exposing hidden bottlenecks in administrative workflows (Zefaj, 2021). Case studies of business registration reforms further demonstrate how Lean and Six Sigma reduce turnaround times by simplifying approval chains and standardizing routine tasks (Andersson et al., 2018). These findings suggest that Lean and Six Sigma are especially effective in high-volume municipal services where consistency, measurement, and repetition allow improvements to compound over time.

3.1.2 Business Process Reengineering

Business Process Reengineering (BPR) represents a more transformative approach to administrative improvement, prioritizing fundamental redesign over incremental adjustment. Rather than refining existing workflows, BPR challenges underlying assumptions about how public services are organized and delivered. In municipal settings, however, the success of reengineering initiatives depends as much on organizational readiness as on technical redesign, as resistance to change remains a persistent barrier in politically embedded and rule-bound environments (Akbar, 2017).

When effectively implemented, BPR can produce substantial reductions in service delays by eliminating redundant steps, consolidating fragmented responsibilities, and restructuring cross-departmental coordination (Lucas, 2016). Reengineering initiatives that rethink entire service pathways, rather than isolated tasks, have been shown to improve throughput and reduce handoff delays across municipal departments (Sayuti et al., 2025). These outcomes demonstrate the potential of BPR to address inefficiencies that incremental methods may leave untouched.

Beyond routine administrative functions, reengineering principles have also been applied to complex project evaluation and decision-making processes, where delays often stem from overlapping mandates and unclear accountability (Lin & Huang, 2021). Nevertheless, BPR in government must balance efficiency gains with transparency, participation, and legal compliance. Evidence suggests that reengineering efforts that incorporate participatory design and change management strategies achieve more durable reductions in service delays while preserving service quality and institutional legitimacy (Dronamraju, 2018).

3.1.3 Digital Transformation and E-Government

Digital transformation has emerged as one of the most influential strategies for reducing service delays in city governments. By automating workflows, replacing paper-based systems, and enabling citizen self-service, digital platforms reduce transaction times and improve process visibility. Municipal adoption of e-government systems is strongly associated with organizational capacity, with larger and better-resourced cities more likely to implement comprehensive electronic service delivery solutions (Budding et al., 2017). Empirical evidence indicates that such systems reduce administrative costs and processing times, although impacts vary across service domains (Budding et al., 2018).

The effectiveness of digital transformation is significantly enhanced when technological systems are integrated with performance management frameworks. Digital dashboards and real-time monitoring tools allow managers to identify emerging bottlenecks and intervene before delays become systemic (Dey et al., 2015). Technology, however, is not a substitute for sound process design; digital tools amplify existing workflows and therefore require alignment with broader improvement strategies.



Evidence from Ghana highlights both the promise and the limitations of digital reforms in developing country contexts. While e-government initiatives offer opportunities to improve efficiency and access, their effectiveness is often constrained by infrastructure deficits, limited digital literacy, and institutional capacity challenges (Osei-Kojo, 2017). Successful implementations require sustained investment in staff training, organizational change management, and citizen engagement to ensure uptake and effective use (Owusu et al., 2022). More broadly, digital transformation outcomes depend on leadership capable of aligning technology adoption with administrative reform and navigating the political and organizational complexities of municipal governance (Nel-Sanders & Malomane, 2022)

3.1.4 Administrative Simplification and Bureaucratic Reform

Administrative simplification focuses on reducing regulatory complexity, streamlining approval processes, and eliminating unnecessary procedural requirements that prolong service delivery. Evidence shows that systematic simplification initiatives, such as reducing documentation demands or shortening approval chains, can significantly decrease processing times, particularly in high-demand municipal services (Rahmi & Wijaya, 2022). However, simplification must be carefully designed to preserve accountability and service quality, as excessive deregulation may weaken essential oversight mechanisms.

The literature emphasizes that process improvement cannot be separated from broader governance structures. Sustainable reductions in service delays depend on embedding efficiency objectives within institutional reforms that reinforce transparency, accountability, and administrative coherence (Mofolo & Adonis, 2021). Without such alignment, operational gains risk being temporary or undermined by political interference and institutional fragmentation.

Importantly, service delays are rarely purely technical problems. They are often rooted in political bargaining, inter-agency conflicts, and competing policy priorities that shape how administrative rules are applied in practice (Parker & Dobson, 2025). This perspective underscores the limits of purely technical reform and highlights the need for integrated strategies that address both procedural design and the political-institutional context in which city governments operate.

3.2 Effectiveness in Reducing Service Turnaround Times

The evidence on the effectiveness of administrative process improvement approaches points to consistently positive outcomes, although the magnitude of delay reduction varies across governance contexts, service types, and implementation quality. Quantitative studies provide the strongest confirmation of measurable reductions in processing times, while qualitative research explains how and why these improvements occur and identifies the conditions under which they are sustained. Together, these strands offer a balanced understanding of both outcomes and mechanisms.

3.2.1 Quantitative Evidence of Delay Reduction

Empirical studies demonstrate that structured improvement methodologies produce measurable reductions in service delays when applied systematically. Business registration reforms, for example, achieve shorter processing times by removing non-value-adding steps and simplifying approval workflows (Andersson et al., 2018). Similarly, municipalities that implement electronic service delivery systems report statistically significant declines in administrative processing times, with stronger effects observed where digital transformation is comprehensive rather than piecemeal (Budding et al., 2018).

Performance improvements are also evident when municipalities adopt integrated performance management systems. Real-time visibility into workflows enables agencies to identify bottlenecks more quickly and intervene before delays escalate, resulting in consistent reductions in service turnaround times (Dey et al., 2015). Applications of Lean Six Sigma further enhance process transparency and cycle-time control, although precise quantification of improvements is often constrained by weak baseline measurement practices common in public sector settings (Zefaj, 2021).

More rigorous evaluation studies reinforce these findings, showing that delay reduction is most pronounced where improvement initiatives are supported by sustained managerial commitment and institutional follow-through (Davis & Bodkin, 2024). At the same time, the literature acknowledges potential publication bias, as unsuccessful or marginal improvement efforts are less frequently documented, suggesting that reported effectiveness may represent best-case rather than typical outcomes.



3.2.2 Qualitative Evidence and Improvement Mechanisms

Qualitative research deepens understanding by revealing the mechanisms through which process improvement reduces service delays. Total Quality Management frameworks, for instance, foster systematic problem identification and continuous learning, shifting organizations from reactive delay correction toward proactive prevention (Kim, 2024). In many cases, cultural change, rather than technical redesign alone, emerges as a critical determinant of sustained improvement.

Delay reduction is most effective when improvement initiatives align with broader quality management philosophies that emphasize responsiveness to citizen needs. Studies caution that focusing narrowly on speed risks undermining service accuracy or fairness, whereas integrated approaches that balance timeliness with service reliability and accessibility produce more durable gains (Gala & Francisco-Javier, 2025). This alignment helps ensure that efficiency improvements translate into meaningful service outcomes rather than superficial performance gains.

Across studies, delay reduction is shown to result from coordinated changes in workflow design rather than isolated interventions. Improvements typically arise from better coordination across departments, reduced rework, smoother workload distribution, and simplified approval structures (Teeuwen, 2018). These findings underscore the importance of comprehensive process analysis that addresses root causes of delay embedded in organizational routines.

3.2.3 Variation in Effectiveness Across Service Types

The effectiveness of process improvement approaches varies substantially across municipal service categories. High-volume, routine administrative services, such as permits, licenses, and certificates, consistently show the strongest gains. These processes are well-suited to standardization and measurement, allowing Lean and Six Sigma techniques to generate reliable and repeatable reductions in processing time (Psomas et al., 2022).

By contrast, services involving professional judgment, stakeholder negotiation, or political deliberation exhibit more variable outcomes. Urban planning and development approvals, for example, often involve trade-offs between speed and deliberative quality, with delays reflecting legitimate governance considerations rather than inefficiency alone (Parker & Dobson, 2025). In such contexts, improvement efforts must distinguish between avoidable procedural delays and necessary decision-making time.

Digital transformation outcomes also differ by service complexity. Simple transactional and informational services benefit most from automation, while complex regulatory processes remain only partially digitized due to documentation requirements and judgment-based decision points (Buddin et al., 2018). Evidence from African municipalities reinforces this pattern, showing strong gains in basic services but more limited progress in complex regulatory functions where institutional and capacity constraints persist (Nel-Sanders & Malomane, 2022).

3.3 Implementation Challenges and Barriers

Despite strong evidence of effectiveness under favorable conditions, process improvement initiatives in city governments frequently encounter barriers that limit adoption, weaken implementation, or erode long-term gains. The systematic review identifies organizational, technical, political, and financial constraints that shape both the pace and durability of service delay reduction efforts. These challenges highlight that improvement outcomes depend as much on institutional context and capacity as on methodological soundness.

3.3.1 Organizational and Cultural Resistance

Resistance to change emerges as the most persistent barrier to process improvement in municipal settings. Business Process Reengineering initiatives often provoke employee concern over job security, professional autonomy, and disruption of established routines (Akbar, 2017). Where change management is neglected, even well-designed reforms tend to stall during implementation or gradually revert to prior practices. Effective initiatives, therefore, invest heavily in communication, staff involvement, and visible demonstration of benefits.

Organizational culture plays a decisive role in shaping reform outcomes. Bureaucratic norms that prioritize rule compliance and risk avoidance frequently conflict with improvement approaches that depend on experimentation and



questioning existing procedures (Lucas, 2016). Shifting these norms is a gradual process that requires sustained leadership commitment and, in some cases, changes in senior management before improvement efforts can take hold. Importantly, resistance should not be interpreted solely as obstruction. In many cases, concerns reflect legitimate worries about service quality, equity, and accountability (Dronamraju, 2018). Treating all resistance as inertia risks undermining reform credibility. More effective approaches distinguish between principled concerns that warrant design adjustments and resistance rooted in habit or vested interests, addressing each through targeted engagement.

3.3.2 Technical and Capacity Constraints

Capacity limitations present major obstacles, particularly for digital transformation initiatives. E-government reforms frequently struggle with inadequate infrastructure, limited in-house technical expertise, and insufficient funding for system development and maintenance (Osei-Kojo, 2017). These weaknesses slow implementation and may produce unreliable systems that erode public trust rather than improve service delivery.

Persistent gaps include poor system interoperability, weak cybersecurity protections, and limited capacity for ongoing upgrades (Owusu et al., 2022). Deploying technology without parallel investment in institutional capacity often results in systems that deteriorate quickly or fail to deliver expected efficiency gains.

Capacity challenges extend beyond technology to encompass project management, change leadership, and familiarity with structured improvement methodologies (Nel-Sanders & Malomane, 2022). Many municipalities lack internal expertise in Lean and Six Sigma, leading to heavy reliance on external consultants. While consultants may accelerate early implementation, overreliance can limit knowledge transfer and weaken sustainability unless internal improvement capabilities are deliberately developed (Psomas et al., 2022).

3.3.3 Political and Institutional Constraints

Political dynamics further complicate process improvement efforts. Service delays are often politicized, with stakeholders framing delays either as necessary safeguards or as evidence of bureaucratic failure, depending on political interests (Parker & Dobson, 2025). This politicization can generate resistance to reforms that redistribute benefits or alter established power relationships, even when efficiency gains are clear.

Electoral cycles and shifting political priorities also undermine continuity. Improvements initiated under one administration may be abandoned by successors, especially when reforms are closely associated with prior leadership (Walker & Andrews, 2015). Institutionalizing improvements through formal policies, embedding changes into routine practices, and demonstrating broad-based benefits are therefore critical to sustaining gains across political transitions. Accountability frameworks simultaneously support and constrain reform. Oversight mechanisms ensure transparency but may also entrench delays when compliance requirements multiply approval steps and documentation demands (Mofolo & Adonis, 2021). Reorienting accountability toward outcomes and risk-based oversight allows efficiency improvements while preserving essential safeguards.

3.3.4 Resource and Financial Constraints

Financial limitations shape both the scope and ambition of improvement initiatives. Wealthier municipalities are significantly more likely to invest in digital systems, suggesting that fiscal constraints exclude many jurisdictions from adopting reforms that could reduce service delays (Budding, Faber, & Gradus, 2017). This creates a paradox in which municipalities facing the greatest efficiency pressures are least able to finance improvement efforts.

Lean Six Sigma and related approaches also involve upfront costs for training, analysis, and implementation before benefits become visible (Okrent, 2025). In resource-constrained settings, this timing mismatch complicates political and budgetary justification for reform.

While Lean methods can be introduced incrementally and with relatively modest financial outlay, they still demand staff time for analysis and implementation (Teeuwen, 2018). In understaffed organizations, these opportunity costs are high, reinforcing the need to integrate improvement activities into routine operations rather than treating them as add-on initiatives.



3.4 Success Factors and Enabling Conditions

Despite these challenges, the systematic review identifies several enabling conditions that substantially increase the likelihood of successful delay reduction. These factors provide practical guidance for municipalities seeking to design and sustain effective process improvement initiatives and emphasize the importance of aligning technical reforms with institutional context.

3.4.1 Leadership Commitment and Sponsorship

Consistent leadership commitment emerges as a decisive success factor across improvement approaches. Leadership knowledge and sustained sponsorship strongly influence the success of digital transformation and process reform in local governments (Pittaway & Montazemi, 2020). Effective leaders articulate a clear improvement vision while remaining engaged in implementation, allocating resources, addressing resistance, and maintaining focus amid competing political priorities.

Leadership is particularly central to Total Quality Management, which requires long-term commitment to continuous improvement rather than short-term initiatives (Kim, 2024). Visible leadership support, participation in improvement activities, and recognition of staff contributions foster organizational cultures that sustain reform momentum. Commitment becomes most critical during difficult implementation phases, when resistance intensifies or early results fall short of expectations. Leaders who remain engaged during these periods enable organizations to adapt and persist rather than abandon reforms prematurely (Akbar, 2017).

3.4.2 Stakeholder Engagement and Participation

Meaningful stakeholder engagement consistently enhances both design quality and implementation success. Participatory approaches that involve frontline staff, managers, and service users improve process designs by incorporating operational knowledge while building ownership among those responsible for execution (Dronamraju, 2018). Engagement also reduces resistance by addressing concerns early and transparently.

Citizen-centric administration is particularly important in public service quality management, as improvement efforts must reflect citizen priorities rather than internal efficiency assumptions (Gala & Francisco-Javier, 2025). Evidence shows that technically efficient reforms may fail when they overlook user expectations related to accessibility, transparency, or fairness. Bureaucratic simplification initiatives are most effective when both employees and citizens participate in identifying unnecessary requirements and shaping streamlined alternatives (Rahmi & Wijaya, 2022).

3.4.3 Process Measurement and Data-Driven Decision Making

Robust measurement systems underpin effective process improvement. Performance management platforms that provide timely visibility into service delivery metrics enable municipalities to identify bottlenecks, prioritize interventions, and evaluate outcomes objectively (Dey et al., 2015). Without reliable data, improvement efforts risk targeting low-impact areas while critical delays persist.

Lean and Six Sigma approaches rely heavily on data for diagnosing problems and sustaining gains (Rodgers & Radnor, 2019). Many municipalities lack baseline process data, limiting the rigor of improvement initiatives. Investment in measurement infrastructure is therefore a prerequisite rather than a complement to process reform. Improved process visibility alone can generate performance gains by making inefficiencies transparent to managers and staff, reinforcing accountability and learning (Zefaj, 2021).

3.4.4 Organizational Capacity and Learning

Long-term success depends on organizational capacity for continuous improvement. Municipalities that invest in staff training, establish dedicated improvement teams, and align incentives with improvement goals achieve more durable results than those relying on external consultants or one-off initiatives (Psomas et al., 2022). Internal capability enables organizations to sustain gains and respond to emerging challenges.

Performance management research emphasizes the importance of institutionalizing monitoring and learning mechanisms within local government operations (Schoeman & Chakwizira, 2023). Business process reengineering efforts that incorporate deliberate capacity building are more likely to deliver lasting benefits by embedding improvement competencies within the organization (Sayuti et al., 2025).



3.4.5 Contextual Alignment and Adaptation

Effective process improvement requires careful adaptation to public sector contexts. Manufacturing-derived methodologies such as Lean must be adjusted to account for political accountability, regulatory requirements, equity considerations, and multi-stakeholder governance environments (Teeuwen, 2018). Rigid application of private-sector models risks undermining legitimacy and effectiveness.

Contextual alignment also shapes reengineering outcomes. Governance processes redesigned for complex public decision-making perform better when improvement principles are adapted to preserve necessary deliberation and oversight (Lin & Huang, 2021). Similarly, e-government effectiveness depends on alignment with municipal size, fiscal capacity, citizen characteristics, and organizational readiness (Budding et al, 2018). Tailoring strategies to local realities consistently produces stronger and more sustainable reductions in service delays.

3.5 Contextual Factors Influencing Outcomes

Process improvement outcomes in city governments are strongly shaped by context. Organizational characteristics, socioeconomic conditions, governance arrangements, and institutional histories influence both the feasibility of reform and the magnitude of achievable delay reduction. Recognizing these contextual influences is essential for realistic assessment of improvement potential and for selecting interventions that align with local conditions.

3.5.1 Organizational Size and Complexity

Municipal size plays a decisive role in shaping improvement opportunities and constraints. Larger municipalities exhibit higher rates of e-government adoption, reflecting greater fiscal capacity, deeper professional expertise, more formalized processes, and stronger economies of scale for improvement investments (Budding et al., 2017). At the same time, their complexity can complicate implementation, as reforms must be coordinated across multiple departments with divergent priorities and cultures.

Smaller municipalities often lack resources to implement sophisticated improvement methodologies but may benefit from simpler structures that enable faster decision-making and more direct communication. In large municipalities, successful improvement strategies require deliberate mechanisms for cross-departmental coordination, shared performance goals, and sustained communication to ensure that gains achieved in one unit translate into system-wide benefits (Walker & Andrews, 2015).

3.5.2 Socioeconomic Context and Citizen Characteristics

Socioeconomic conditions shape both service delivery challenges and improvement outcomes. Municipalities with higher levels of education demonstrate stronger adoption of digital services, reflecting citizen demand as well as staff capacity to design and manage technology-enabled processes (Budding et al., 2018). In contrast, jurisdictions serving populations with limited digital literacy face constraints in realizing the full benefits of e-government and must retain complementary non-digital service channels to ensure equity.

Development context further conditions improvement effectiveness. In many settings, infrastructure limitations, uneven internet access, and constrained resources reduce the feasibility of technology-driven reforms that are effective in more developed contexts (Osei-Kojo, 2017; Owusu et al., 2022). Factors such as electricity reliability, connectivity, poverty levels, and education directly shape both improvement needs and viable strategies (Nel-Sanders & Malomane, 2022). Effective approaches therefore build on local strengths while directly addressing contextual constraints rather than importing standardized solutions.

3.5.3 Governance Structures and Institutional Environment

Governance arrangements significantly influence process improvement potential. Oversight mechanisms, political structures, and accountability frameworks shape how quickly decisions can be made and how much flexibility administrators have to redesign processes (Mofolo & Adonis, 2021). In some contexts, operational reforms are unlikely to succeed without parallel adjustments to governance arrangements that reduce unnecessary procedural burdens.

Institutional environments also embed trade-offs between speed and other public values. Delays in areas such as urban planning or environmental approval often reflect deliberate governance choices prioritizing participation,



transparency, and quality over rapid decision-making (Parker & Dobson, 2025). Improvement initiatives must therefore distinguish between delays arising from inefficiency and those rooted in legitimate governance objectives. Local government structures, including political leadership models, administrative organization, intergovernmental relationships, and fiscal frameworks, strongly influence managerial autonomy and performance capacity (Walker & Andrews, 2015). Process improvement efforts that ignore these structural factors risk limited impact, while those that work within or strategically adjust them are more likely to achieve sustained results.

3.5.4 Institutional Legacies and Path Dependencies

Institutional legacies exert a powerful influence on improvement trajectories. Established procedures, legal frameworks, organizational cultures, and stakeholder expectations create path dependencies that shape both resistance to change and the forms change can realistically take (Lucas, 2016). Improvement initiatives must either work incrementally within these constraints or pursue more disruptive reforms that deliberately break with past practices.

Bureaucratic simplification is particularly challenging in contexts characterized by strong rule-based traditions and hierarchical decision-making (Rahmi & Wijaya, 2022). While such systems may slow service delivery, they often support fairness, consistency, and accountability. Effective reform, therefore, requires careful calibration, reducing unnecessary complexity without undermining essential safeguards.

Institutional context ultimately defines the boundaries of feasible improvement. Successful initiatives navigate existing legal and administrative frameworks, respect cultural norms, and manage established relationships while still delivering meaningful performance gains (Sayuti et al., 2025). The most effective reforms balance transformation in outcomes with sensitivity in implementation, ensuring that change is both impactful and institutionally sustainable.

3.6 Summary of Findings

This systematic review of 26 studies on administrative process improvement in city governments identifies consistent patterns across methods, contexts, and service areas. Lean and Six Sigma, Business Process Reengineering, digital transformation, and administrative simplification all demonstrate the ability to reduce service delays when implemented systematically and supported by sustained managerial commitment. Evidence shows that high-volume routine administrative processes respond most strongly to structured improvement approaches, with measurable reductions in turnaround time achieved through streamlined workflows, removal of non-value-adding steps, and targeted automation.

Digital transformation emerges as a particularly powerful driver of delay reduction, although its effectiveness varies by service type and implementation quality. Outcomes are strongly conditioned by infrastructure reliability, organizational capacity, and socioeconomic context, especially in developing country settings. Across studies, successful initiatives share common enabling conditions: committed leadership, active stakeholder engagement, effective performance measurement, internal capacity for continuous improvement, and adaptation of improvement methodologies to public sector realities rather than rigid transfer of private-sector models.

At the same time, implementation barriers remain significant. Organizational resistance, limited technical and managerial capacity, politicization of service delays, and persistent resource constraints frequently undermine reform efforts. Contextual factors, including municipal size, governance arrangements, and institutional legacies, shape both improvement needs and feasible strategies. Smaller and resource-constrained municipalities face heightened access barriers to improvement approaches requiring upfront investment, despite often having simpler structures that could support rapid change. The temporal gap between reform costs and realized benefits further challenges sustainability, particularly under shifting political leadership. Overall, the findings confirm the effectiveness of administrative process improvement for reducing service delays, while underscoring that lasting impact depends on contextual alignment, organizational readiness, and deliberate capacity building alongside technical redesign.

4.0 RECOMMENDATIONS

Based on the systematic review findings, two priority recommendations emerge for city governments seeking to reduce service delays through administrative process improvement.

City governments should implement integrated approaches that combine Lean process redesign, selective digitalization, and structured stakeholder engagement rather than relying on single methodologies. Evidence shows



that hybrid strategies produce more sustainable delay reductions than isolated interventions when aligned with local conditions. Improvement initiatives must be adapted to municipal size, socioeconomic context, infrastructure readiness, and organizational capacity. Resource-constrained municipalities should prioritize low-cost Lean interventions and incremental digital solutions for high-volume services, while larger municipalities may pursue broader reengineering initiatives. Across contexts, success depends on baseline performance measurement, staff capacity development, and sustained leadership commitment beyond electoral cycles.

Municipalities should embed improvement capabilities within permanent organizational structures rather than treating reform as a one-time effort. Dedicated improvement teams, ongoing staff training, and performance monitoring systems enable sustained gains. Meaningful engagement of staff and citizens, transparent communication, and protection of core public values strengthen legitimacy and sustainability.

5.0 CONCLUSIONS

This study demonstrates that administrative process improvement approaches can substantially reduce service delays when they are applied systematically and aligned with local institutional contexts. While multiple methodologies demonstrate effectiveness, success hinges on leadership that can navigate political complexities, allocate resources strategically, and foster a culture of continuous improvement as a permanent practice rather than a temporary initiative. Findings confirm that Lean and Six Sigma, Business Process Reengineering, digital transformation, and administrative simplification each contribute to improved service turnaround times, particularly in high-volume, routine municipal processes. Digital transformation stands out as a powerful enabler, though its effectiveness depends highly on infrastructure readiness among many other factors.

Persistent barriers such as resistance to change, political dynamics, resource constraints, and institutional legacies often determine whether reforms achieve lasting impact or dissipate over time. Transforming service delivery extends beyond technical process redesign to encompass fundamental organizational change, demanding patience, persistence, and a focus on citizen-centric outcomes. Contextual factors such as municipal size, governance arrangements, and socioeconomic conditions also significantly shape both the feasibility and outcomes of improvement initiatives.

REFERENCES

1. Akbar, S. I. (2017). *Business process reengineering and change management strategy to overcome resistance to change*. SSRN.
2. Andersson, R., Bridi, E., Baez, Y. P., Maldonado, M. U., Forcellini, F. A., & Moraes, F. C. (2018). Improvement in public administration services: A case of business registration process. *International Journal of Industrial Engineering and Management*, 9(2), 109–119.
3. Budding, T., Faber, B., & Gradus, R. (2017). *Assessing Electronic Service Delivery in Municipalities* (No. 17-087/VIII). Tinbergen Institute Discussion Paper.
4. Budding, T., Faber, B., & Gradus, R. (2018). Assessing electronic service delivery in municipalities: determinants and financial consequences of e-government implementation. *Local Government Studies*, 44(5), 697–718.
5. Davis, T. J., & Bodkin, C. P. (2024). Assessment of public service delivery performance: Process improvement. In *Handbook of Public Service Delivery* (pp. 270–282). Edward Elgar Publishing.
6. Dey, S. S., Thommana, J., & Dock, S. (2015). Public agency performance management for improved service delivery in the digital age: Case study. *Journal of Management in Engineering*, 31(5), 05014022.
7. Dronamraju, D. (2018). *Process improvement strategy for public sector organizations: A case study at Linköping Municipality–MoS department*.
8. Gala, R. F., & Francisco-Javier, F. M. (2025). Quality management in public services: Lessons for municipal governance and citizen-centric administration. *Lex Localis*, 23(S4), 1177–1191.
9. Kim, J. H. (2024). Improving public service delivery: Total Quality Management. In *Handbook of Public Service Delivery* (pp. 306–321). Edward Elgar Publishing.
10. Lin, Y.-S., & Huang, C.-H. (2021). Reengineered governance process for assessing core projects. *Sustainability*, 13(17), 9669.
11. Lucas, T. (2016). *The application of business process re-engineering systems to enhance service delivery in the public sector*. *European Journal of Research in Social Sciences*.
12. Mofolo, M. A., & Adonis, V. (2021). Re-engineering imperatives to enhance the effectiveness of municipal public accounts committees in South African municipalities. *Africa's Public Service Delivery & Performance Review*, 9(1), 8.
13. Nel-Sanders, D., & Malomane, A. P. (2022). Challenges and best practices for e-municipalities. *Africa's Public Service Delivery and Performance Review*, 10(1), 646.



14. Okrent, M. D. (2025). *Lean Six Sigma in government and non-profit*. In *Applied Lean Six Sigma Resources*.
15. Osei-Kojo, A. (2017). *E-government and public service quality in Ghana*. *Journal of Public Affairs*, 17(3), e1620.
16. Owusu, Acheampong & Akpe-Doe, Cynthia & Taana, Ivy. (2022). *Assessing the Effectiveness of E-Government Services in Ghana: International Journal of Electronic Government Research*. 18. 1-21. 10.4018/IJEGR.289827.
17. Parker, G., & Dobson, M. (2025). *Examining the discourse of 'delay' in urban governance: project speed and the politicisation of time in the English Planning System*. *Cities*, 158, 105709.
18. Pittaway, J. J., & Montazemi, A. R. (2020). *Know-how to lead digital transformation: The case of local governments*. *Government information quarterly*, 37(4), 101474.
19. Psomas, E., Keramida, E., & Bouranta, N. (2022). *Practical implications of Lean, Six Sigma and Lean Six Sigma in the public administration sector: a systematic literature review*. *International Journal of Lean Six Sigma*, 13(6), 1277-1307.
20. Rahmi, E., & Wijaya, C. (2022). *Analysis of Public Service Quality Improvement Through Bureaucratic Simplification Policies*. *Technium Soc. Sci. J.*, 36, 29.
21. Rodgers, B., & Radnor, Z. (2019). *Lean and Six Sigma practices in the public sector: A review*. *International Journal of Quality & Reliability Management*.
22. Sayuti, M., Syairudin, B., & Gunarta, I. K. (2025). *Enhancement of business processes through re-engineering to optimize the performance of local government in Central Sulawesi province*. *Cogent Social Sciences*, 11(1), 2542922.
23. Schoeman, I., & Chakwizira, J. (2023). *Advancing a performance management tool for service delivery in local government*. *Administrative Sciences*.
24. Teeuwen, B. (2018). *Lean for the public sector: The pursuit of perfection in government services*. CRC Press.
25. Walker, R. M., & Andrews, R. (2015). *Local government management and performance: A review of evidence*. *Journal of public administration research and theory*, 25(1), 101-133.
26. Zefaj, E. (2021). *Lean Six Sigma for Public Sector Process Visibility Improvement-Case Study*.