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Institutional Constraints In Digital Transformation Project Delivery: A Cross-Sector Qualitative Study In Indonesia

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Abstract

Purpose: This study examines how institutional constraints shape digital transformation project delivery across private-sector, state-owned enterprise (SOE), and government contexts in Indonesia, with particular attention to how institutional governance structures influence project delivery rhythms across different organizational settings.

Design/methodology/approach: The study uses a qualitative multiple-case design based on seven Indonesian digital transformation consulting projects. The analysis draws on 487 coded interview segments, 82 coding nodes, and 69 themes. Cross-case comparison was used to identify how delivery constraints vary across project phases and institutional settings. The findings are intended to provide an analytical rather than statistical generalization of institutional patterns in digital transformation delivery.

Findings: Three sectoral patterns are identified. SOE projects were dominated by upstream planning-contract constraints, including contractual ambiguity, scope vagueness, and difficulty translating strategic transformation intent into project terms. Government projects were dominated by downstream UAT and deployment constraints, where procedural validation and acceptance routines shaped project closure. Private-sector projects showed dual pressure between delivery speed and scope clarity. Across sectors, agile delivery was often constrained by institutional approval rhythms, creating a mismatch between adaptive project execution and organizational governance requirements.

Originality/value: The study reframes digital transformation project delivery as an institutional problem rather than only a technical or managerial problem. It introduces the concept of delivery rhythm–institutional rhythm alignment as a mechanism for understanding how governance structures shape project execution across sectors. The study contributes cross-sector qualitative evidence from Indonesia and shows why IT consultants need sector-sensitive delivery governance rather than one-size-fits-all project controls.

Keywords: digital transformation; institutional constraints; project delivery; agile governance; institutional rhythm.

A. INTRODUCTION

Digital transformation has become a critical strategic agenda for organizations in Indonesia across the private, state-owned enterprise (SOE), and government sectors. However, despite aggressive investment in IT infrastructure, platforms, software development, and consulting services, digital transformation projects frequently encounter delays, scope disputes, implementation friction, and difficult deployment closure. A prevailing assumption is that these challenges stem primarily from technical complexity or poor project management. In practice, however, project delivery problems are also shaped by the institutional conditions of the client organization, including procurement rules, accountability structures, decision authority, approval routines, and formal acceptance requirements.

Institutional environments influence how projects are procured, scope is negotiated, decisions are approved, and final deliverables are validated. Digital transformation studies have provided extensive insights into technology adoption, business model change, organizational capability, and governance (Verhoef et al., 2021; Rachinger et al., 2019; Teece, 2018; Kane et al., 2019). IT consulting studies also show that consulting services and client–consultant relationships are changing in response to digital technologies (Bode et al., 2022; Tavoletti et al., 2022). However, fewer studies examine how sectoral institutional differences directly shape constraints on the delivery of digital transformation projects across private, SOE, and government contexts in Indonesia. More specifically, prior studies have not sufficiently explained how institutional mechanisms shift the location of delivery bottlenecks across the project lifecycle or create mismatches between adaptive delivery routines and organizational approval rhythms.

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Digital transformation projects are socio-technical and institutional. Information systems research shows that technology and organization are mutually shaped rather than separated into technical and social domains (Orlikowski, 1992; Lyytinen and Newman, 2008). Institutional theory further explains how formal rules, authority structures, legitimacy requirements, and taken-for-granted practices shape organizational action (DiMaggio and Powell, 1983; Scott, 2014). A system can therefore be technically delivered but still institutionally unresolved if users, decision owners, and approval bodies interpret its purpose, evidence, and completion criteria differently. In this study, institutional constraints are understood not simply as organizational weaknesses, but as formal and informal governance conditions that shape project scope, decision cadence, accountability, validation, and closure.

This gap matters for consultants, clients, and project management offices (PMOs). A delivery model that works in a private-sector project may not work in an SOE environment characterized by formal procurement and multi-layer accountability. A government project may not fail because the software cannot be built, but because procedural validation, UAT evidence, and administrative closure require a different rhythm from agile delivery. A private-sector project may move faster, but speed can intensify scope ambiguity when commercial expectations are not translated into delivery boundaries. These differences suggest that delivery performance depends not only on the selected project method but also on the alignment between the project delivery rhythm and the institutional rhythm.

This study addresses that gap by treating digital transformation project delivery as an institutional problem rather than merely a technical or managerial one. Its central contribution is to explain how sector-specific institutional mechanisms shift delivery constraints across upstream planning, midstream execution, and downstream UAT and deployment. It asks three questions: RQ1: What institutional constraints are observed in the delivery of digital transformation projects across the private, SOE, and government sectors in Indonesia? RQ2: How do these constraints differ across upstream planning, execution, and downstream UAT/deployment phases? RQ3: What practical implications do these cross-sector differences create for IT consultants and client organizations?

To answer these questions, this study employs a qualitative multiple-case design examining seven digital transformation consulting projects in Indonesia. The evidence reveals three distinct sectoral patterns: SOE projects tend to face severe upstream constraints regarding contract formulation, scope definition, and strategic translation; government projects predominantly face downstream constraints related to UAT, deployment, and procedural validation; and private-sector projects navigate dual pressure between demands for delivery speed and the need for scope clarity. Across all sectors, attempts to implement agile or adaptive delivery are frequently constrained by institutional approval rhythms. These patterns support an institutional rhythm–delivery rhythm explanation, in which project bottlenecks emerge when adaptive execution depends on decisions, validations, or authorizations that operate at a slower or differently structured institutional cadence.

The study contributes in three ways. First, it provides cross-sector qualitative evidence showing that the locus of digital transformation delivery constraints varies systematically across institutional settings. Second, it extends institutional theory into the project-delivery domain by identifying procurement rules, authority structures, legitimacy requirements, and acceptance routines as concrete mechanisms through which institutions shape project outcomes. Third, it offers a sector-sensitive governance perspective for IT consultants and PMOs, replacing universal project-control assumptions with delivery approaches aligned to institutional context.

B. LITERATURE REVIEW

Digital Transformation As A Delivery Challenge

Digital transformation is not simply about installing technology. Prior research distinguishes digitization as the conversion of analogue information into digital form, digitalization as the use of digital technologies to improve processes, and digital transformation as a broader change in business models, operating models, governance, and value creation (Verhoef et al., 2021; Rachinger et al., 2019). Business model innovation research similarly emphasizes that transformation can reshape value propositions, value creation mechanisms and organizational logic (Ramdani et al., 2019). This distinction is important for

project delivery because consulting projects labelled as transformation may still be scoped as dashboard development, process automation or system replacement.

Digital transformation, therefore, creates a translation problem. Strategic ambitions must be translated into scope, requirements, data readiness, decision rights, acceptance criteria and post-launch value measures. When this translation is weak, project teams may deliver technical outputs without resolving the organizational and institutional conditions needed for adoption and value realization. Dynamic capability research reinforces this point because transformation requires sensing, seizing and reconfiguring organizational resources, not only deploying software (Teece, 2018; Kane et al., 2019).

This translation problem is consistent with practitioner-oriented digital transformation research that warns against treating technology as a self-executing change instrument. Studies on IT-enabled transformation emphasize that digital initiatives require active change agency, cross-functional cooperation and explicit organizational ownership rather than a belief that the system itself will automatically transform work practices (Markus and Benjamin, 1997; Westerman et al., 2014). For consulting projects, this matters because the vendor may control design and implementation activities, but many transformation conditions remain under client authority. Consequently, successful delivery depends not only on technical execution but also on the ability to align project activities with organizational decision structures, approval routines and accountability mechanisms. The challenge of digital transformation is therefore not merely technological complexity, but the coordination of delivery activities within institutionally embedded governance systems.

Institutional Constraints and Sectoral Project Governance

Institutional constraints refer here to the formal and informal conditions that shape how project actors define, approve, coordinate and close digital transformation work. Drawing on institutional theory, these constraints include procurement rules, authority structures, legitimacy requirements, approval procedures, audit expectations and established organizational routines that influence project decisions and actions (DiMaggio and Powell, 1983; Scott, 2014). In private-sector projects, commercial urgency and performance pressure may support faster decisions but can also pressure teams to start delivery before the scope is stable. In SOE projects, formal procurement, semi-public accountability and layered decision rights can make upstream contract and scope interpretation more consequential. In government projects, regulatory requirements, auditability, and administrative validation may make downstream UAT and deployment closure the most visible constraints.

This definition deliberately treats constraints as delivery conditions rather than simply as organizational weaknesses. Formal procurement, committee-based approval and documentation requirements may appear inefficient from an agile delivery perspective, but they also serve accountability and legitimacy functions in public and SOE environments (DiMaggio and Powell, 1983; Scott, 2014). The delivery problem is therefore not to remove institutional controls, but to understand where those controls intersect with project scope, requirements, decision cadence and acceptance criteria.

The same consulting method can therefore produce different project dynamics across sectors. A project plan designed for rapid iteration may depend on fast decisions, accessible data owners and empowered users. These conditions are not equally available in all institutional settings. Sectoral comparison is therefore needed because generic project governance can hide how different approval rhythms, accountability structures and procurement rules influence delivery outcomes.

Public-sector digital transformation research reinforces this point: digital transformation in public organizations involves services, processes, culture and stakeholder relationships, not merely new tools (Mergel et al., 2019). For consulting delivery, this means that public and quasi-public projects require alignment between project teams, administrative rules, end users and formal validation bodies. Rather than viewing institutional constraints as barriers to be eliminated, this study treats them as governance conditions that shape where delivery bottlenecks emerge during the project lifecycle.

Agile Delivery And Bureaucratic Approval Rhythms

Digital transformation projects often adopt agile or hybrid delivery routines to handle uncertainty, iterative learning and changing requirements. This reflects a broader organizational need to balance formal control with adaptation, a tension also discussed in organizational ambidexterity research (O'Reilly and Tushman, 2013). However, agile delivery assumes that decisions can be made frequently, that

feedback can be translated into backlog changes quickly, and that product owners or business stakeholders can clarify priorities. In institutionally rigid settings, these assumptions may not hold. Approval may require formal documentation, multiple sign-offs, audit trails, committee review or alignment with procurement boundaries. It is important to distinguish between agile methods, organizational agility and adaptive delivery. Agile methods refer to specific project management practices such as iterative development and frequent stakeholder feedback. Organizational agility refers to the broader capability of an organization to respond to change. Adaptive delivery refers to project teams' ability to modify plans, priorities, and outputs in response to emerging conditions. Although related, these concepts do not necessarily occur together.

The tension is not simply between agile and waterfall methods. It is a broader rhythm mismatch between adaptive delivery on the consultant side and institutional approval on the client side. This mismatch becomes visible in delayed decisions, unresolved business rules, repeated scope reinterpretation and UAT pressure. For this reason, digital transformation delivery needs to be examined as a sector-sensitive process rather than as a universal project management template. Agile project management research supports this interpretation. Empirical studies suggest that agile methods can contribute to project success, but their effect depends on the quality of vision, goals and contextual fit (Serrador and Pinto, 2015). Agility is also better understood as a project capability to respond to change rather than as a fixed method label (Conforto et al., 2016). In this study, agile routines were useful only when the client-side institution could absorb rapid feedback, clarify priorities and authorize decisions at the required pace.

Accordingly, project performance depends not only on delivery capability but also on the degree of alignment between delivery rhythm and institutional rhythm. Delivery rhythm refers to the pace at which project teams generate outputs, decisions and iterations, whereas institutional rhythm refers to the pace at which organizations authorize, validate and legitimize project activities.

Research Positioning

Prior literature has explained digital transformation as strategic reconfiguration, digital consulting as changing professional service work, and organizational capabilities as conditions for transformation. However, less is known about how delivery constraints differ across private, SOE and government digital transformation consulting projects in Indonesia. More importantly, existing studies rarely explain how institutional mechanisms relocate delivery bottlenecks across different phases of the project lifecycle. This study addresses that gap by comparing cross-sector project evidence and identifying where constraints become most visible across the delivery lifecycle.

The present article positions itself between digital transformation studies, institutional theory and IT project delivery research. It does not ask whether digital transformation is strategically important; that point is already well established (Verhoef et al., 2021; Kane et al., 2019). Instead, it asks why projects that carry similar transformation labels can encounter different delivery bottlenecks depending on whether the client context is private, SOE or government. The study argues that these differences emerge because delivery activities operate within distinct institutional rhythms that shape decision speed, approval processes, accountability requirements and acceptance procedures. This positioning allows the study to contribute a sector-sensitive explanation without duplicating broader framework-building work. The contribution is therefore not only a cross-sector comparison of delivery constraints, but also an institutional rhythm–delivery rhythm perspective that explains why project bottlenecks emerge at different stages of the delivery lifecycle across sectors.

C. METHODS

This study used an exploratory, qualitative, multiple-case design to examine how institutional constraints shape the delivery of digital transformation projects (Yin, 2018). The unit of analysis was the digital transformation consulting project, defined as a collaboration between a client organization and an IT consulting provider that involves changes in processes, governance, service delivery, decision-making, or value creation. Seven information-rich cases were selected purposively to capture variation across private-sector, state-owned enterprise (SOE), and government settings, as well as client and consultant perspectives. The sample comprised three SOE-related cases, two private-sector cases, one government client case, and one boundary-spanning consultant case involving government and private-sector projects.

Evidence from the boundary-spanning case was assigned to a sector only when the informant explicitly referred to that context. The cases were intended to support analytical rather than statistical generalization.

Data were collected in January 2026 through semi-structured interviews lasting approximately 45–90 minutes, along with supporting project documents, including proposals, scope documents, meeting records, and authorized project communications. Each case was represented by a senior informant directly involved in project initiation, delivery, or acceptance. Interviews were conducted in Indonesian, transcribed, and translated; quotations were checked against the original transcripts. The interview guide covered project initiation, scope formulation, contractual arrangements, decision authority, delivery routines, stakeholder coordination, user acceptance testing, deployment, and project closure. Supporting documents were used to verify project chronology, contractual boundaries, decision processes, and reported delivery constraints.

The analysis combined thematic coding, within-case analysis, and cross-case synthesis (Miles et al., 2014; Yin, 2018). First-order codes were developed from participant accounts and then grouped into broader delivery nodes and higher-order themes. The final dataset comprised 487 coded segments, 82 coding nodes, and 69 consolidated themes. The analysis examined where constraints appeared in the project lifecycle, which actors were involved, which institutional mechanisms were implicated, and how the issue affected the delivery rhythm. Trustworthiness was strengthened through triangulation across cases, actor perspectives, and project documents, together with the retention of rival and contradictory evidence. Coded-segment counts were used only as indicators of qualitative prominence and not as measures of statistical prevalence. Because each case relied on one principal informant and sector representation was uneven, the findings are reported as recurring case-based patterns rather than universal sector characteristics.

D. RESULTS AND DISCUSSION

This section presents the cross-case findings regarding how institutional constraints shape digital transformation project delivery across private-sector, state-owned enterprise (SOE), and government contexts. Rather than treating delivery challenges as purely technical or managerial issues, the findings reveal that project constraints emerge through different institutional mechanisms operating across the project lifecycle. These mechanisms include procurement requirements, contractual arrangements, approval structures, accountability expectations, validation routines, and decision-making processes. Although all cases involved digital transformation initiatives, the location and nature of delivery bottlenecks varied substantially across institutional contexts.

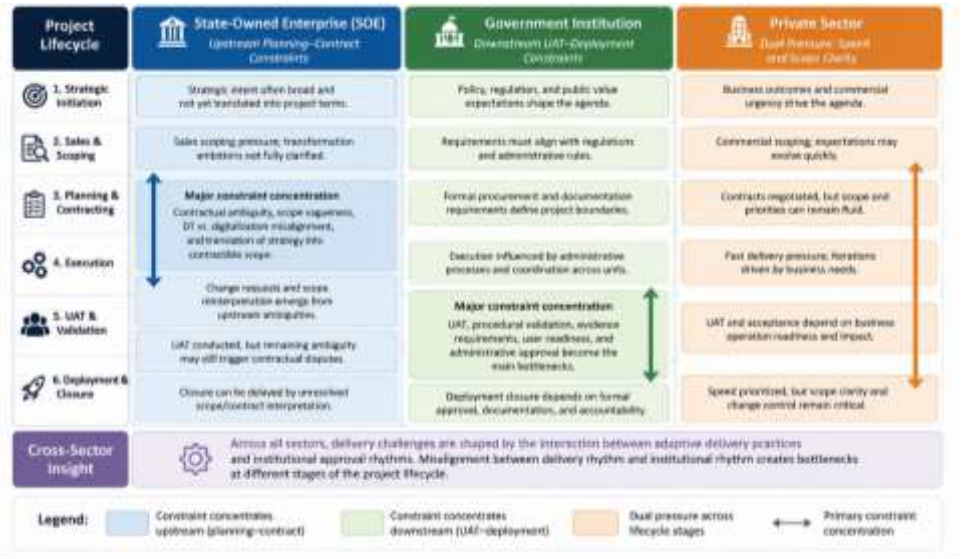

Figure 2. Cross-Sector Institutional Constraints In Digital Transformation Project Delivery
Source: Authors' Own Work, 2026

The analysis identified three recurring sectoral patterns. In SOE-related cases, delivery constraints were most evident during upstream planning and contracting activities, particularly when strategic transformation ambitions had to be translated into formal contractual scope. In government-related cases, constraints were most evident during downstream validation, user acceptance testing (UAT), and deployment closure, where procedural legitimacy and administrative accountability influenced project acceptance. In the private sector, project teams experienced dual pressure between delivery speed and scope clarity, creating distinct governance challenges. Across all sectors, a recurring theme was the interaction between adaptive delivery practices and institutional approval structures.

Figure 2 presents the cross-sector delivery patterns identified through the case evidence. Table 3 summarizes the dominant constraint nodes observed across the cases and indicates where delivery bottlenecks became most visible within the project lifecycle. Table 4 then translates these patterns into practical implications for consultants and client organizations. The coded-segment counts are presented as indicators of qualitative prominence within the dataset and should not be interpreted as measures of statistical prevalence or sector-wide frequency.

Table 3. Sectoral Distribution Of Project Delivery Constraints

Sector Context	Dominant Constraint Nodes	Coded Evidence Signal	Delivery Implication
State-owned enterprise (SOE)	Contractual Ambiguity; DT vs Digitalization Misalignment; Sales Scoping Phase	41; 40; 38	Upstream constraint: scope translation and contract interpretation dominate before execution stabilizes.
Government institution	UAT Deployment; DT vs Digitalization Misalignment; Sales Scoping Phase	38; 24; 21	Downstream constraint: procedural validation and administrative closure shape project acceptance.
Private sector	UAT Deployment; Sales Scoping Phase; DT vs Digitalization Misalignment	31; 30; 28	Dual pressure: fast decision cycles clash with fluid requirements, creating tension between speed and clarity.

Source: Authors' Own Work, 2026

Taken together, the findings suggest that digital transformation project performance is shaped not only by technical capability or project management competence, but also by the alignment between delivery and institutional rhythms. While delivery rhythm reflects the pace at which project teams generate outputs, iterations, and decisions, institutional rhythm reflects the pace at which organizations authorize, validate, and legitimize project activities. The sectoral patterns observed in this study indicate that delivery bottlenecks emerge when the two rhythms misalign at different stages of the project lifecycle.

SOE Projects: Upstream Planning–Contract Constraints

Across the SOE-related cases, the most consistently observed pattern was the concentration of delivery constraints in the upstream planning and contracting stages. The evidence indicated recurring problems involving contractual ambiguity, scope vagueness, misalignment between digital transformation and digitalization, and pressure during the sales-scoping phase. These issues appeared before technical execution had fully stabilized and subsequently shaped how project teams interpreted deliverables, responsibilities, and acceptance boundaries. Although coded-segment counts indicated the qualitative prominence of these themes, the interpretation was based on the convergence of evidence across the three SOE-related cases rather than on numerical frequency alone.

The findings suggest that delivery constraints in the SOE cases frequently emerged before substantial technical execution began. Formal procurement and semi-public accountability required project terms to be documented and approved at an early stage, even when the operational implications of the transformation agenda remained unsettled. As a result, contracts could appear administratively complete while leaving uncertainty regarding business logic, project assumptions, decision authority, value criteria,

and the boundaries of acceptable change. From an institutional perspective, these constraints were associated with the interaction among formal procurement rules, layered approval structures, contractual accountability, and legitimacy requirements. Strategic transformation ambitions had to be converted into contractible, auditable, and administratively defensible project terms. However, this translation often occurred before the project team had acquired sufficient operational knowledge to specify all requirements with precision. The resulting tension created a form of upstream institutional lock-in: broad strategic intentions were formalized into contracts, while important delivery assumptions remained open to later interpretation.

When these uncertainties became visible during execution, delivery teams faced repeated scope reinterpretation, change requests, and disputes over whether emerging requirements were included in the original statement of work. The problem was therefore not simply that the contract lacked detail, but that the institutional timing of contract formalization preceded the full clarification of transformation meaning. This mismatch between early contractual closure and later operational discovery constrained the project's ability to adapt without reopening formal approval processes. A translated SOE-side interview excerpt illustrates this condition: *"The SOW exists, but flexibility is still requested. The SOW is there, yet variation from the scope still happens."*

The quotation shows that a formal statement of work did not eliminate ambiguity. Instead, the contract became a point of contention for competing interpretations between the need for institutional certainty and the need for delivery flexibility. Similar evidence from the SOE consultant cases indicated that the distinction between digitalization and digital transformation was not always settled during scoping. Technical outputs could therefore be contracted under a transformation label even when expected changes in processes, governance, or organizational capability had not been translated into measurable delivery terms. Within the institutional rhythm–delivery rhythm perspective, the SOE cases demonstrate a clear timing mismatch. The institutional rhythm required early formalization, documented accountability, and approval of contractual boundaries. By contrast, the delivery rhythm required progressive clarification as technical, organizational, and user requirements became more visible. When these rhythms were poorly aligned, ambiguity generated upstream was carried into execution and reappeared as scope disputes, change requests, and delayed acceptance.

The findings, therefore, indicate that SOE digital transformation projects require stronger front-end translation rather than merely more detailed contracts. Consultants and client-side project owners need to jointly define what "transformation" means in operational terms and translate it into deliverables, assumptions, decision rights, dependency ownership, value indicators, and acceptance conditions before execution accelerates. The objective is not to eliminate contractual flexibility, but to distinguish clearly between permitted adaptation, formal scope change, and unresolved strategic intent. Accordingly, the upstream planning stage should include structured alignment workshops, explicit mapping of transformation to deliverables, documented decision authority, and scenario-based scope clarification. These mechanisms can reduce the risk that the project inherits institutional rigidity from the contract while continuing to carry unresolved strategic ambiguity into later delivery stages.

Government Projects: Downstream Validation and Deployment Constraints

Government-related cases exhibited a different institutional pattern than the SOE cases. Rather than focusing in upstream planning and contracting, the most visible delivery constraints emerged during downstream validation, user acceptance testing (UAT), deployment, and project closure. Although project execution often progressed according to plan, institutional acceptance frequently required additional validation, documentation, evidence generation, and administrative confirmation before deployment could be considered complete. The evidence suggests that downstream constraints were less associated with software functionality itself and more closely related to institutional validation mechanisms governing acceptance and deployment. In several instances, technical completion did not automatically translate into organizational acceptance. Instead, project teams were required to demonstrate compliance with procedural requirements, provide formal evidence of testing outcomes, obtain approval from multiple stakeholders, and satisfy administrative obligations before the project could move to closure.

From an institutional perspective, these constraints were closely linked to accountability, legitimacy, auditability, and procedural compliance. Government organizations operate within governance environments where formal acceptance is not solely a technical judgement regarding whether the system

functions as intended. Acceptance also represents an institutional declaration that the project has met organizational, administrative, and regulatory expectations. Consequently, deployment decisions often involve actors beyond the immediate project team, including managerial authorities, operational users, administrative units, and validation committees. One government informant described the situation as follows: "The application may already be running, but acceptance requires supporting documents, testing evidence, and confirmation from multiple units before deployment can be finalized." The quotation illustrates that completion and acceptance are not necessarily synchronized. A system may be technically operational while remaining institutionally incomplete. As a result, project closure becomes dependent on a broader validation process that extends beyond software functionality.

The findings further indicate that UAT served a dual role within the government-related cases. On one level, it functioned as a conventional mechanism for verifying system performance and user requirements. On another level, it operated as an institutional checkpoint through which legitimacy, accountability, procedural compliance, and organizational readiness were evaluated. This broader role increased the importance of documentation quality, evidence traceability, stakeholder participation, and formal approval pathways. Unlike the SOE cases, where ambiguity was generated primarily during planning and contracting, the government-related cases demonstrated how institutional complexity could accumulate toward the end of the project lifecycle. Requirements that had appeared manageable during development became more demanding during deployment, as stakeholders needed assurance that the system met organizational obligations, operational procedures, and accountability expectations. Consequently, delays often occurred not because additional programming was required, but because institutional acceptance conditions had not yet been met.

Within the institutional rhythm–delivery rhythm perspective, the government cases reveal a downstream rhythm mismatch. Delivery teams often operated within iterative development cycles designed to deliver rapid outputs and enable continuous improvement. Institutional actors, however, followed validation rhythms characterized by formal review, documented evidence, administrative verification, and sequential authorization. When these rhythms were misaligned, completed outputs accumulated faster than institutional approval processes could process them. The findings, therefore, suggest that government digital transformation projects require validation-oriented governance from the earliest project stages. Consultants and client organizations should not treat UAT as a final technical checkpoint, but rather as a continuous institutional process requiring stakeholder engagement, documentation planning, evidence generation, and acceptance preparation throughout the project lifecycle.

Accordingly, project governance in government settings should incorporate early agreement on acceptance criteria, documented validation pathways, stakeholder approval responsibilities, evidence requirements, and deployment authorization procedures. These mechanisms can reduce downstream bottlenecks by aligning delivery outputs with institutional expectations before formal acceptance becomes necessary. The government-related cases, therefore, demonstrate that successful deployment depends not only on building a functioning system but also on navigating the institutional processes through which that system becomes formally recognized, accepted, and legitimized within the organization.

Private-Sector Projects: Dual Pressure Between Delivery Speed and Scope Clarity

The private-sector cases displayed a different pattern of institutional constraint. Unlike the SOE cases, where constraints concentrated in upstream planning and contracting, or the government cases, where bottlenecks emerged during downstream validation and deployment, the private-sector cases experienced pressure across multiple stages of the project lifecycle. The dominant challenge was not procedural rigidity but the simultaneous demand for rapid delivery and evolving business expectations. In the private-sector cases examined here, commercial urgency often reduced approval delays and encouraged faster decision cycles. Competitive pressures, market responsiveness, and performance targets created strong incentives to accelerate project execution. Decision authority was generally more concentrated, allowing project teams to obtain approvals more quickly than in the SOE and government settings. This flexibility enabled faster iteration and adaptation when business requirements changed.

However, faster decision-making did not necessarily eliminate delivery constraints. Instead, speed frequently generated new forms of ambiguity. Business stakeholders often sought immediate progress while continuing to refine strategic objectives, operational requirements, and expected outcomes. As a

result, project teams were required to deliver quickly despite the absence of fully stabilized scope definitions. One informant explained the situation as follows: *"Management wanted results immediately, but discussions about what the system should ultimately achieve were still evolving during implementation."* This observation highlights a different institutional challenge from those observed in the SOE and government cases. The issue was not a delay in formal approval or procedural validation, but rather the coexistence of rapid execution expectations and incomplete scope clarification. Several cases demonstrated how commercial responsiveness encouraged projects to begin before all requirements had been formally articulated. Stakeholders were often willing to tolerate uncertainty in exchange for faster implementation. While this approach improved responsiveness, it also increased the likelihood of requirement changes, shifting priorities, and repeated reinterpretation of project objectives during delivery.

Rather than reflecting an absence of institutional constraints, the private-sector cases demonstrated a different institutional rhythm in which commercial responsiveness, managerial discretion, and delivery expectations interacted more directly. The institutional environment enabled faster decisions but also reduced the time available for structured clarification and formal boundary-setting. Consequently, delivery teams faced continuous pressure to balance execution speed with governance discipline. The findings further suggest that scope ambiguity in private-sector cases often emerged from evolving business priorities rather than contractual interpretation or procedural validation. Market opportunities, organizational restructuring, leadership initiatives, and emerging customer demands could alter expectations during implementation. Project teams, therefore, needed to negotiate scope boundaries continuously while maintaining delivery momentum.

From the perspectives of institutional and delivery rhythms, the private-sector cases presented a different type of alignment challenge. Unlike in SOE and government settings, institutional processes generally moved at a pace similar to that of delivery activities. However, the institutional rhythm itself was highly dynamic. Business priorities changed rapidly, leading to project objectives and success criteria evolving during implementation. As a result, delivery teams were required to absorb strategic change while maintaining operational stability. The evidence, therefore, indicates that the primary challenge in the private-sector cases was not bureaucratic delay but strategic fluidity. Fast decisions improved responsiveness but simultaneously increased the risk of unclear scope boundaries, changing expectations, and delivery rework. Project success depended on maintaining sufficient governance discipline without sacrificing responsiveness to emerging business needs.

Accordingly, private-sector digital transformation projects require governance mechanisms that support both agility and scope control. Consultants and client organizations should establish clear decision rights, structured change-management procedures, milestone-based scope reviews, and transparent prioritization processes. These mechanisms allow organizations to preserve delivery speed while reducing the risk of uncontrolled scope expansion. The private-sector cases, therefore, demonstrate that institutional flexibility does not eliminate delivery constraints. Instead, it shifts the challenge toward managing the interaction between commercial urgency, evolving strategic intent, and delivery governance. The result is a dual-pressure environment in which project teams must deliver quickly while maintaining clarity about what they are delivering and why.

Delivery Rhythm and Institutional Rhythm Across Sectors

While the preceding sections highlight sector-specific patterns, the cross-case analysis revealed a broader mechanism that transcended individual sectors. Across all cases, delivery challenges were not solely due to technical complexity, resource limitations, or project management deficiencies. Instead, a recurring pattern emerged from the interaction between delivery rhythm and institutional rhythm. In this study, delivery rhythm refers to the pace at which project teams generate outputs, resolve issues, refine requirements, and implement changes. Institutional rhythm refers to the pace at which organizations authorize decisions, validate evidence, approve modifications, and formally recognize project outcomes. Although both rhythms are necessary for project success, they do not always operate at the same speed or according to the same logic.

The cross-case findings suggest that project bottlenecks emerge when these rhythms become misaligned. In the SOE-related cases, institutional rhythm was concentrated in upstream governance mechanisms, such as procurement procedures, contractual approvals, and strategic authorizations.

Consequently, delivery teams often encountered constraints before technical implementation had fully commenced. In the government-related cases, institutional rhythm became most visible during downstream validation, UAT, and deployment closure, where formal acceptance and administrative accountability shaped project completion. In the private-sector cases, institutional rhythm was generally faster but more fluid, creating continuous pressure to adapt to evolving business expectations while maintaining delivery discipline.

These patterns indicate that delivery constraints are not randomly distributed throughout the project lifecycle. Rather, they tend to emerge at points where delivery activities become dependent on institutional authorization. Figure 2 illustrates this phenomenon by showing how the location of dominant bottlenecks differs across sectors despite similarities in project objectives and delivery approaches. A notable finding is that the same delivery method can generate different outcomes depending on institutional context. Agile practices, iterative development, rapid prototyping, and continuous feedback were generally viewed positively across cases. However, their effectiveness depended on whether institutional actors could provide timely decisions, validate evolving requirements, and authorize changes within a compatible timeframe. Where institutional approval processes operated more slowly or followed different procedural logic, delivery teams experienced delays, repeated clarification cycles, and uncertainty regarding acceptance criteria.

The findings therefore support the argument that digital transformation projects should not be understood solely through project-management frameworks. Technical competence, delivery methodology, and resource availability remain important, but they are insufficient for explaining why similar projects encounter different forms of friction across sectors. Institutional arrangements influence when decisions can be made, who can authorize changes, how evidence is evaluated, and what constitutes successful completion. Taken together, the findings suggest that project performance depends not only on the quality of delivery execution but also on the alignment between delivery rhythm and institutional rhythm. When these rhythms are aligned, project teams can translate requirements into outputs, obtain approvals, and move through project stages with relatively limited friction. When they become misaligned, bottlenecks emerge regardless of technical capability or project-management sophistication.

This rhythm-based perspective provides a unifying explanation for the sectoral differences observed in the study. Rather than viewing SOE, government, and private-sector projects as fundamentally different categories of work, the findings suggest that they represent different institutional environments within which delivery activities must operate. The location of project constraints, therefore, reflects the interaction between project delivery processes and the governance structures through which organizations exercise authority, accountability, and legitimacy. Table 4 summarizes the practical implications of these cross-sector findings and identifies the delivery governance adjustments required to improve project performance under different institutional conditions.

Table 4. Institutional Constraints and Sector-Sensitive Delivery Implications

Institutional setting	Main delivery risk	Dominant institutional mechanism	Recommended delivery emphasis	Practical implications for consultants and PMOs
State-owned enterprise (SOE)	Upstream planning, contract ambiguity, and incomplete translation of transformation intent into project scope	Formal procurement, layered approval structures, contractual accountability, and early scope formalization	Front-end translation and contract–scope discipline	Define the meaning of transformation, assumptions, deliverables, decision authority, dependencies, value criteria, and acceptance boundaries before execution accelerates. Separate permitted adaptation from formal scope change and unresolved strategic intent.
Government institution	Downstream UAT, deployment, procedural validation, and administrative closure	Accountability requirements, auditability, formal acceptance routines, sequential authorization, and procedural legitimacy	Early validation planning and deployment-readiness governance	Treat UAT as both a technical and institutional validation process. Agree on acceptance criteria, evidence requirements, approval responsibilities, training, user readiness, and deployment documentation from the beginning of the project.

Institutional setting	Main delivery risk	Dominant institutional mechanism	Recommended delivery emphasis	Practical implications for consultants and PMOs
Private sector	Dual pressure between delivery speed and scope clarity	Commercial urgency, managerial discretion, rapid priority shifts, and evolving business expectations	Hybrid-agile delivery with lightweight but explicit scope controls	Preserve delivery speed while repeatedly confirming scope, value criteria, priority changes, decision ownership, and change boundaries. Use milestone-based scope reviews and transparent change-control mechanisms without creating excessive bureaucracy.
Cross-sector	Misalignment between delivery rhythm and institutional rhythm	Differences in the pace of project iteration, organizational authorization, validation, accountability, and legitimacy processes	Sector-sensitive governance intensity and rhythm alignment	Adapt delivery cadence, governance checkpoints, escalation routes, and evidence requirements to the institutional setting. Avoid applying a single universal project template to private, SOE, and government projects.

Source: Authors' own work based on the cross-case analysis.

Discussion

Institutional Mechanisms and the Location of Delivery Constraints

The findings demonstrate that digital transformation project constraints are not uniformly distributed across the project lifecycle. Instead, their location appears to be shaped by the institutional mechanisms operating within different organizational settings. While prior digital transformation studies have emphasized technological capability, organizational readiness, and strategic alignment (Verhoef et al., 2021; Kane et al., 2019), the present study suggests that project delivery is also influenced by how institutions structure authority, accountability, validation, and decision-making processes. The SOE-related cases illustrate how procurement rules, contractual formalization, and layered approval structures create pressure during the upstream stages of project delivery. These mechanisms require that transformation initiatives be translated into contractible, auditable project terms before operational uncertainty is fully resolved. Consequently, project teams often inherit ambiguity generated during the planning phase and continue to negotiate scope boundaries throughout execution. This finding extends institutional theory by demonstrating how formal governance arrangements influence not only organizational behavior but also the timing and location of project constraints.

In contrast, the government-related cases reveal how institutional validation mechanisms influence downstream delivery activities. User acceptance testing, deployment, and project closure were not merely technical procedures but institutional processes through which legitimacy, accountability, and administrative compliance were established. Consistent with public-sector digital transformation research (Mergel et al., 2019), successful implementation depended on satisfying multiple organizational actors whose responsibilities extended beyond system functionality. The evidence, therefore, suggests that project completion is not solely determined by technical readiness but also by institutional acceptance.

The private-sector cases exhibited a different pattern. Institutional arrangements generally supported faster decision-making and greater managerial discretion, reducing some forms of bureaucratic delay. However, this flexibility introduced a different challenge: strategic fluidity. Business priorities, customer expectations, and commercial opportunities evolved during project execution, creating pressure to maintain delivery speed while continuously refining project scope. The findings, therefore, indicate that institutional flexibility does not eliminate delivery constraints but relocates them into the management of evolving expectations and delivery boundaries. Taken together, these findings suggest that institutional mechanisms influence where project bottlenecks emerge. Procurement systems, authority structures, accountability requirements, and validation routines shape the timing of decisions and approvals throughout the project lifecycle. As a result, project delivery constraints should be understood not merely as project-management problems but as manifestations of institutional arrangements operating within specific organizational contexts.

Delivery Rhythm and Institutional Rhythm

One of the most significant findings of this study is the recurring mismatch between delivery rhythm and institutional rhythm. Existing project management literature has frequently focused on methodologies, governance structures, and implementation controls (Serrador and Pinto, 2015; Conforto et al., 2016). However, the findings suggest that project performance also depends on whether delivery activities operate at a pace compatible with institutional decision-making processes. Delivery rhythm refers to the pace at which project teams generate outputs, refine requirements, respond to feedback, and implement change. Institutional rhythm refers to the pace at which organizations authorize decisions, validate evidence, approve modifications, and formally recognize project outcomes. Although both rhythms are necessary for successful project delivery, they are often governed by different priorities and time horizons.

The SOE cases demonstrated a mismatch generated by early contractual formalization and slower institutional approval processes. The government cases revealed a mismatch generated by extensive downstream validation requirements. The private-sector cases exhibited a more dynamic mismatch, in which delivery teams struggled to maintain stability amid rapidly changing business priorities. Despite these differences, the underlying mechanism remained similar: project bottlenecks emerged when delivery activities required institutional authorization operating on a different cadence. This finding contributes to the growing literature on digital transformation governance by proposing an institutional rhythm–delivery rhythm perspective. Rather than viewing project constraints solely through technical, organizational, or managerial lenses, the framework highlights the temporal interaction between adaptive delivery processes and institutional governance mechanisms. The findings therefore suggest that project success depends not only on choosing an appropriate delivery method but also on aligning the delivery cadence with institutional decision-making structures.

Implications for Digital Transformation Project Governance

The findings have several implications for digital transformation governance. First, organizations should avoid assuming that a single delivery model can be applied effectively across institutional contexts. Project governance arrangements that perform well in private-sector settings may encounter difficulties in SOE or government environments because the underlying institutional conditions differ substantially. Second, consultants and project management offices should assess institutional characteristics before selecting delivery approaches. Governance mechanisms, approval structures, procurement requirements, and validation procedures should be treated as project design variables rather than external constraints. Early assessment of institutional rhythm may help identify where bottlenecks are likely to emerge and enable proactive mitigation strategies.

Third, the findings suggest that governance effectiveness depends on institutional fit rather than governance intensity. Additional controls, documentation, or approval layers do not automatically improve project outcomes. Instead, governance arrangements should be calibrated to support accountability requirements while maintaining sufficient flexibility for adaptive delivery. Finally, the study highlights the importance of integrating institutional analysis into digital transformation planning. Organizations frequently invest in technological capabilities while paying less attention to the governance structures through which transformation initiatives are implemented. The evidence presented here suggests that institutional arrangements play a significant role in shaping project outcomes and should therefore be considered during project design, execution, and evaluation.

E. CONCLUSIONS

This study examined how institutional constraints shape the delivery of digital transformation projects across private-sector, state-owned enterprise (SOE), and government settings in Indonesia. Drawing on evidence from seven digital transformation consulting projects, the findings demonstrate that project constraints are not uniformly distributed across the delivery lifecycle. Instead, different institutional environments influence where delivery bottlenecks become most visible and how they affect project execution. The analysis identified three recurring patterns. In the SOE-related cases, delivery constraints were most evident during upstream planning and contracting activities, particularly where strategic transformation ambitions had to be translated into formal contractual arrangements. In government-

related cases, constraints emerged primarily during downstream validation, user acceptance testing, deployment, and administrative closure. In the private-sector cases, project teams faced simultaneous pressure to maintain delivery speed while preserving scope clarity amid changing business expectations. These patterns suggest that institutional arrangements influence not only project governance structures but also the timing and location of delivery challenges throughout the project lifecycle.

The principal theoretical contribution of this study is the development of an institutional rhythm–delivery rhythm perspective for understanding digital transformation project delivery. Existing research has largely explained delivery performance through technical capability, project management practices, organizational readiness, or strategic alignment. The present findings suggest that the interaction between the pace of project execution and the pace of institutional authorization, validation, accountability, and decision-making processes also shapes project outcomes. The concept of rhythm alignment provides a mechanism for extending institutional theory into the project-delivery domain and helps explain why similar transformation initiatives experience different forms of friction across organizational settings.

From a practical perspective, the findings indicate that digital transformation projects should not rely on universal governance templates. Consultants, project management offices, and client organizations should assess institutional conditions early in the project lifecycle and adapt delivery approaches accordingly. Procurement arrangements, decision authority, approval structures, validation requirements, and accountability mechanisms should be treated as integral components of project design rather than as external constraints to be managed after implementation begins. Sector-sensitive governance may therefore be more effective than standardized project-control approaches when managing transformation initiatives across different institutional environments.

Several limitations should be acknowledged. First, the study is based on seven cases and seeks analytical rather than statistical generalization. Second, each case relied primarily on a single senior informant, potentially introducing single-informant bias despite the use of supporting documentation and cross-case comparison. Third, the distribution of cases across sectors was uneven, reflecting access to information-rich projects rather than proportional representation. Finally, the study relied on retrospective accounts of completed or ongoing projects, which may be influenced by selective recall and participant interpretation. Future research may extend this work by examining larger, more balanced samples across sectors, incorporating multiple informants within each project, and testing the institutional rhythm–delivery rhythm perspective using mixed-methods or quantitative designs. Further investigation may also explore how specific institutional mechanisms—such as procurement systems, governance structures, audit requirements, and decision architectures—shape project outcomes across different forms of digital transformation initiatives.

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