



# Public Sector Transformation in Mongolia: From Functional Management to Process-Based Management and its Impact on Small and Medium Enterprise (SME) Development

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**Abstract—** Mongolia’s public organizations are under pressure to modernize and improve service delivery. Although reforms have introduced results-oriented and process-based management, most institutions remain in a hybrid state where functional silos coexist with partially applied process logic. This study was undertaken to address the lack of empirical understanding of how such hybrid management affects small and medium enterprises (SMEs) that depend on public programs, regulations, and support.

Using document analysis and three illustrative cases—Umnugovi aimag, the Mongolian Agency for Standardization and Metrology (MASM), and the SME Agency—the study evaluates structural clarity, implementation consistency, and SME-level impacts. Findings reveal that functional dominance, fragmented accountability, and limited digital integration continue to constrain efficiency and SME competitiveness. The paper argues that only the digital institutionalization of process-based management can create a transparent, results-oriented public sector capable of providing a stable and enabling environment for SME growth.

**Keywords—** Mongolia, public sector, process-based management, functional management, small and middle enterprises (SMEs), digital transformation

## I. INTRODUCTION

Mongolia’s public organizations have long operated under functional management structures inherited from Soviet-style administration [1]. Tasks and responsibilities are divided by departments, creating silos and limiting cross-sector collaboration. In recent years, reforms have introduced the concept of results-oriented and process-based management to improve efficiency and accountability [2], [4].

However, these reforms are often incomplete. Instead of a full transformation, Mongolia’s public organizations end up with hybrid systems — combining functional silos with partially applied process logic. This produces what many practitioners describe as an unintegrated hybrid system where initiatives overlap, accountability is blurred, and outcomes are hard to measure.

The issue is not isolated to the public sector. Since SMEs in Mongolia depend on government services, regulations, and programs, they too are affected by this hybrid management style. For example, fragmented subsidy programs, inconsistent licensing processes, and unclear regulations hinder business growth.

Because organizational culture and people-driven change evolve slowly, these inefficiencies persist. This paper argues that the only sustainable solution is digital transformation, which standardizes processes, embeds workflows into digital systems, and institutionalizes change beyond human variability.

## II. PROBLEM STATEMENT

Public organizations in Mongolia increasingly attempt to adopt result-oriented and process-based management [1], [4]. Yet, instead of restructuring fully, they apply fragmented elements, resulting in a hybrid model of functional and process-based planning. This hybrid approach creates several challenges:

- Confusion in responsibilities, as functions and processes overlap
- Resource inefficiencies, due to uncoordinated programs and duplicated initiatives

- Weak measurement of outcomes, since indicators are not linked to logical frameworks
- Instability, as reforms depend heavily on political cycles and leadership changes.

These challenges directly influence Mongolia's SMEs development. Businesses rely on consistent regulations, transparent processes, and efficient public services [2], [5]. When government agencies manage subsidies, licensing, or infrastructure programs through a hybrid functional-process approach, it creates uncertainty and administrative burden for businesses.

Because people and culture change slowly and inconsistently, this problem cannot be solved by training or structural adjustments alone. The only viable long-term solution is digital transformation, which:

- Embeds process-based workflows into digital systems (e.g., licensing, taxation, subsidy management)
- Ensures transparency and reduces opportunities for overlap or misuse
- Creates a stable foundation for businesses, independent of changing personnel or leadership.

Thus, the limitations of hybrid functional-process planning in public organizations is a structural barrier to SME development in Mongolia. Digital transformation is not optional, but essential.

### III. CONCEPTUAL FRAMEWORK

#### A. Functional Management

Functional management divides organizational activities according to specialized departments (finance, HR, procurement, operations). Its strengths lie in:

- control,
- specialization,
- and efficiency

within a department. Its strengths lie in control, specialization, and efficiency within departments. However, in dynamic environments, this model creates silos, duplication of work, and weak coordination between units. In Mongolia's public organizations, functional structures have been the dominant model since the socialist era, creating strong vertical chains of command but limited horizontal integration.

#### B. Process-Based Management

Process-based management (PBM) emphasizes end-to-end workflows that cut across functions to deliver outcomes. Instead of optimizing departments individually, PBM seeks to optimize the entire value chain or service delivery process. PBM requires:

- Clear definition of portfolios, programs, and projects
- Separation of strategic, tactical, and operational levels
- Use of indicators linked to outputs and outcomes
- Continuous improvement through feedback loops.

For public organizations, PBM enables citizen-centric services, transparency, and alignment with national goals (e.g., Vision 2050 [7]) and Sustainable Development Goals [6]. For businesses, PBM improves customer satisfaction, efficiency, and adaptability.

#### C. The Hybrid Model in Mongolia

In practice, Mongolian public organizations rarely move fully from functional to process-based management. Instead, they adopt hybrid models: keeping strong functional divisions while layering partial process elements on top. This creates a unintegrated hybrid model, where:

- Functional priorities (departmental budgets, authority) dominate over cross-cutting processes
- Process elements (results frameworks of portfolio, program and project, KPIs, program documents) exist, but without consistent logic
- Responsibilities overlap, leading to blurred accountability.

This hybrid model affects SMEs in two ways:

- 1) *Regulatory Uncertainty* – businesses face inconsistent licensing, subsidy, and inspection processes.
- 2) *Administrative Burden* – multiple uncoordinated agencies demand overlapping documents and compliance.

As a result, public-sector limitations in planning and management spills over into business development, constraining SMEs' growth potential.

#### D. Digital Transformation as Enabler

Organizational culture and people-driven reforms evolve slowly in Mongolia. Training, restructuring, and leadership changes often fail to institutionalize process-based approaches. Digital transformation provides the structural solution by embedding process logic into systems:

- e-Mongolia demonstrates how licensing and citizen services can be standardized digitally [6], [8]
- ERP and e-procurement systems reduce duplication and enhance accountability [3], [5]
- Digital workflows institutionalize rules and minimize the influence of individual discretion.

In this way, digital transformation bridges the gap between functional and process-based management, enabling public organizations to operate coherently and creating a more predictable environment for SMEs.

### IV. METHODOLOGY

This paper applies a conceptual and case-based analysis to examine the transition from functional to process-based management in Mongolia's public organizations, and its influence on SMEs development. The methodology consists of three steps:

#### A. Analytical Approach

1) *Document Analysis* – reviewing Law on Development policy planning, SME Development Laws [7], [9], [11], Vision 2050, Government Action Programs [7], [8], strategic plans of public organizations [10], [11], Mid-term

Development Plans of aimags, subsidy policies, and Standard Operating Procedures (SOPs) of Aimag Governors' Offices [6], [10], [11]

2) *Process Mapping* – identifying how public organizations design, plan, and deliver programs by tracing workflows across functional departments and comparing them with process-based principles.

3) *Comparative Assessment* – contrasting hybrid practices with international models of process-based management (strategic management process, tactical management process, operations management process) to identify gaps.

#### B. Data Collection and Analytical Procedure

To ensure methodological transparency, the study combined qualitative document analysis with limited quantitative assessment.

##### 1) Data sources (2020–2025):

- 14 strategic and operational documents (laws, government programs, agency strategic plans, SOPs).
- 3 organizational cases (Umnugovi aimag, MASM, SME Agency).
- Supplementary interviews/discussions with 6 officials (2 per case) conducted in May 2024–July 2025.

##### 2) Process-based Management (PBM) Assessment Rubric:

Each case was evaluated along four dimensions—

- (a) structural clarity, (b) implementation consistency, (c) results logic (output → outcome linkage), and (d) feedback/learning mechanisms.
- Scores ranged 0 = absent → 4 = fully institutionalized. Two raters (researchers, professional evaluators) scored independently

##### 3) Quantitative data extraction:

- % of strategic activities formulated as outcomes vs. outputs.
- Number of duplicated processes/documents within each case.
- Average processing time (days) for representative SME-related services (licensing, certification, or loan approval).
- % of digital workflows in total service portfolio.

##### 4) Analysis:

- Administrative indicators were cross-checked with publicly available datasets (e-Mongolia dashboard, MASM statistics, SME Agency annual reports).
- Results were interpreted comparatively to identify systemic bottlenecks.

#### C. Case Selection

Three cases are chosen as representative of Mongolia's ongoing transformation:

##### 1) Umnugovi Aimag Case (Portfolio–Program–Project Planning Process)

Umnugovi aimag piloted a portfolio-based planning process; development activities were categorized into portfolios (economic diversification, human capital, infrastructure, tourism, environment), programs (e.g., coordinated SME support, eco-tourism, renewable energy), and projects (e.g., trainings, infrastructure investments). This case illustrates how hybrid functional–process planning operates at the local government level and how it influences the enabling environment for SMEs in a mining-dependent region.

##### 2) Mongolian Agency for Standardization and Metrology Case (MASM)

The Mongolian Agency for Standardization and Metrology (MASM) is critical for ensuring quality infrastructure and SME competitiveness. However, it operates with functional silos (standards, certification, metrology, inspection) while layering partial process-based digital services (e-certification, online standards access). This case illustrates how hybrid management creates inefficiencies and burdens for SMEs seeking compliance and export readiness.

##### 3) Small and Medium Enterprises Agency (SME Agency)

The SME Agency implements programs to support SMEs through financing schemes, capacity building, and training. In practice, however, programs are fragmented, overlapping, and sometimes politically influenced. Functional structures dominate decision-making, while process-based elements (e.g., program cycles, M&E) are inconsistently applied. This case demonstrates how hybrid management reduces program effectiveness and creates uncertainty for SMEs that rely on government support.

#### D. Evaluative Dimensions

The three cases are assessed along three evaluative dimensions:

1) *Clarity of Structure* – Are portfolios, programs, and projects logically separated? Are functions integrated into processes?

2) *Consistency of Implementation* – Are strategies aligned across strategic, tactical, and operational levels?

3) *Impact on SMEs* – Do public-sector practices create predictability and reduce administrative burdens for SMEs and middle businesses?

#### E. Role of Digital Transformation

The analysis treats digital transformation as a cross-cutting dimension. In all three cases, digital platforms (e.g., e-Mongolia, MASM e-systems, SME Agency digital finance portals, ERP pilots at local level) are assessed for their ability to:

- Embed process logic into workflows
- Standardize service delivery and reduce duplication
- Ensure transparency and continuity beyond individual or political variability.

### F. Logic Model of Transformation Pathway

To illustrate the causal pathway between public sector reform and SME development outcomes, this study applies a logic model:

*Inputs (laws, platforms) → Activities (process mapping, data integration) → Outputs (e-workflows) → Outcomes (↓ processing time/cost, ↑ transparency) → Impacts (↑ SME revenue/export survival).*

It links legal, institutional, and digital inputs to measurable SME impacts through process-based activities and outputs.

- Inputs – Legal frameworks (Law on Development Policy and Planning, SME Development Law), institutional mandates (Vision 2050, Government Action Program), and digital platforms (e-Mongolia, ERP, e-procurement, SME finance portals).
- Activities – Process mapping, data integration, portfolio–program–project alignment, digital system design, and capacity building for results-based management.
- Outputs – Standardized e-workflows, unified data registries, and integrated monitoring dashboards across public agencies.
- Outcomes – Reduced processing time and administrative cost, increased transparency, consistency of service delivery, and improved accountability between agencies.
- Impacts – Enhanced SME competitiveness through predictable regulatory processes, reduced compliance burden, improved export readiness, and overall contribution to national economic diversification.

### G. Reliability and Quality Assurance through Project-Management Approach

To strengthen the reliability of findings, the study applied principles of project management throughout the research process. A structured project plan defined the scope, timeline, resources, and quality criteria for data collection and analysis. A Work Breakdown Structure (WBS) guided each analytical step and ensured transparency in task allocation. A risk-management plan was used to identify and mitigate potential biases, data gaps, and inconsistencies.

Quality assurance (QA) and quality control (QC) procedures were integrated at each stage: cross-checking multiple data sources, peer reviewing coding decisions, and validating process maps and quantitative scores with officials and experts from the studied organizations. Applying these project-management tools ensured that the research process was systematic, transparent, and replicable, thereby reinforcing the credibility and reliability of the results.

## V. RESULTS

The three cases —Umnugovi aimag’s portfolio-based planning, the Mongolian Agency for Standardization and Metrology (MASM), and the SME Agency — all illustrate the persistence of hybrid functional–process management. While reforms introduce elements of process-based management, functional silos remain dominant. This produces inefficiencies

that directly influence the development of Mongolia’s SMEs.

### A. Umnugovi Aimag Case: Strategic Management Process Analysis

The assessment of policy and program management in Umnugovi aimag demonstrates both progress and persistent structural weaknesses. On the positive side, the scope of local policies has expanded to address pressing issues, with programs such as “Gobi+Water” and “Systematic Ger Area” showing improvements in reporting and organizational arrangements. Furthermore, the introduction of strategic portfolios in areas such as economic diversification and SME development, human capital, infrastructure, tourism, and environmental management reflects an effort to align local development with Vision 2050 [7], [12].

However, the analysis also revealed significant shortcomings:

- Structural Differentiation Weakness - Portfolio, program, and project management processes were not consistently separated. Budget, program, and portfolio levels overlapped, blurring strategic boundaries.
- Process Governance Layering Deficit - Decision-making concentrated at a single level, undermining accountability and checks and balances.
- Process Results Logic Gaps - Key performance indicators (KPIs) were primarily output-based (e.g., number of trainings), with limited focus on outcomes and impacts.
- Continuous Improvement and Reporting Inconsistencies - Reports emphasized quantitative activities without linking to strategic results.
- Conceptual Instability - Policy documents used inconsistent terminology and lacked a coherent planning logic.

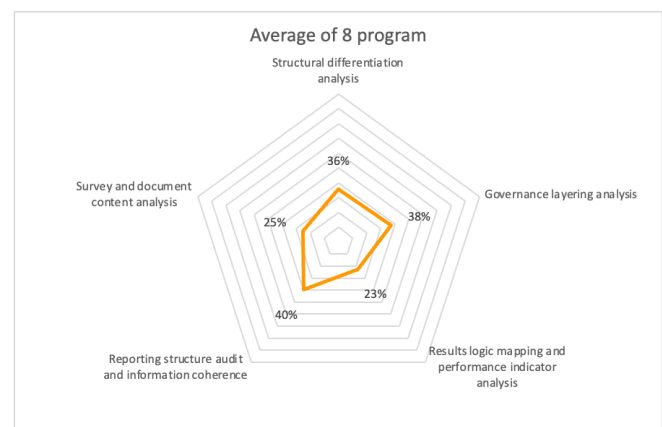


Fig.1. Aimag’s 8 development programs results framework assessment

A radar chart covering eight programs showed that none of the process-layer dimensions exceeded 40%, with particularly low scores in results logic (23%) and content/terminology consistency (25%). This indicates that policy management in the aimag remains activity-driven rather than results-based.

For SMEs, the consequences are direct: fragmented support initiatives, unclear prioritization, and inefficient resource allocation. Although portfolios exist on paper, businesses often experience overlapping training programs, delays in infrastructure development, and inconsistent access to local government support.

### B. MASM Case

The Mongolian Agency for Standardization and Metrology (MASM) is central to enabling SMEs to comply with international standards and improve their competitiveness [10]. The case analysis revealed that while MASM has initiated digital services (e.g., e-certification, online access to standards), its strategic planning and management continue to reflect a hybrid functional–process model:

- Functional silos (standards, certification, inspection, metrology) remain dominant, with limited integration across divisions.
- Process-based elements are mentioned but unevenly applied, creating fragmentation.
- SMEs often face duplication of requirements, needing to submit similar documentation to different units.
- Compliance costs remain high, and certification processes are slow.

Quantitative analysis of MASM’s strategic planning highlights the imbalance:

- Only 27.4% of strategic activities were defined in terms of results, while 72.6% were framed as deliverables (e.g., producing documents, organizing events).
- Core processes accounted for only 29.3% of references in strategic planning, while supporting processes dominated with 70.7%.

This demonstrates that MASM’s strategic focus remains input- and activity-heavy, with insufficient emphasis on measurable outcomes and the organization’s core value chain of process management.

For SMEs, this imbalance translates into:

- High administrative burdens,
- Weak incentives for innovation,
- Delayed adoption of international standards.

Unless MASM transitions toward a results-based and digitally enabled process framework, SMEs will continue to face systemic barriers in reaching export readiness and scaling their operations.

### C. SME Agency Case

The SME Agency is formally mandated to support the development of small and medium enterprises in Mongolia [11]. However, the findings reveal that in practice, its operations are oriented more as a supporting finance-function, i.e. financial organization than as an SME development accelerator.

Key findings include:

- Deliverable-Centered Activities - 100% of SME Agency’s strategic activities are defined as deliverables (e.g., number of loans disbursed, number of training events) rather than results (e.g., SME revenue growth, export diversification).
- Complex and Fragmented Stakeholder Structure - SME Agency engages with 119 types of stakeholders, creating an overly complex network with weak stakeholder engagement process. This dilutes accountability and results in duplication of support services.
- Systemic Problems in Strategic Management - Human resource and competency deficiencies limit the Agency’s ability to design precise SME development programs.
- Lack of centralized data - SME needs are not well understood, and decisions are not evidence-based.
- Strategic planning is vague, failing to prioritize sectors or identify high-growth potential SMEs.
- Monitoring and evaluation mechanisms for loan recipients are virtually absent, preventing systematic assessment of impact.

From the perspective of Loan Recipients (SMEs):

- SMEs receiving loans are unable to calculate ROI or demonstrate business performance improvements.
- Information provided to SME Agency is partial, creating an information gap between SMEs and the Agency.
- SME needs are not precisely defined based on market or data-driven analysis.
- Many SME owners lack the competency to define business goals and suffer from a culture of unaccountability.

The combined effect is a structural mismatch - SME Agency provides financial inputs, but SMEs do not generate measurable outcomes in terms of productivity, competitiveness, or innovation. Instead of accelerating SME development, the Agency’s current model risks perpetuating dependency on financial assistance without building sustainable business capabilities.

### D. Comparative Synthesis of Findings

All three cases are still dominated by functional silos, deliverables, and centralized decision-making. Elements such as portfolios, process mapping, digital services, or program cycles are introduced but not systematically embedded. Functional and process approaches coexist without clarity, creating inefficiencies, duplication, and lack of accountability.

TABLE I. COMPARATIVE SYNTHESIS OF FINDINGS: FUNCTIONAL – PROCESS TRANSFORMATION

Current Functional Orientation	Attempted Process Orientation	Hybrid Problems (Unintegrated Hybrid System)	Impact on SMEs	Digital Transformation Pathway
Public organizations in Mongolia still operate	Elements of process orientation have been	These reforms remain partial: structural levels blurred,	SMEs face fragmented and overlapping	Only digital transformation can institutionalize

mainly through functional silos, deliverable-based planning, centralized decision-making, and fragmented stakeholder structures	introduced — e.g., portfolio-program-project frameworks, core/supporting process references, and program cycles with stakeholder engagement.	KPIs output-focused, supporting processes dominate over core, data not centralized, and monitoring/evaluation absent. The result is a hybrid model that is neither fully functional nor fully process-based.	support programs, high compliance costs, information gaps, weak accountability, and lack of ROI measurement — preventing them from becoming competitive and innovative.	process-based management: e-planning and portfolio systems, integrated standards/certification platforms, digital SME accelerator platforms with centralized data, outcome-based KPIs, real-time dashboards, and transparent workflows.
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This hybrid state produces fragmented, costly, and unpredictable support systems that hinder SME competitiveness.

## VI. CONCLUSION

This paper examined the transition of Mongolian public organizations from functional management to process-based management, focusing on three representative cases: Umnugovi aimag's strategic portfolios, the Mongolian Agency for Standardization and Metrology (MASM), and the SME Agency. The analysis revealed that although process-oriented concepts have been formally introduced, yet the dominant operational reality remains a hybrid model in which functional silos, deliverable-oriented planning, and centralized decision-making coexist with fragmented attempts to institutionalize process logic.

Across the three cases, several systemic features were identified: structural ambiguity, output dominance, institutional capacity constraints, fragmented information systems and adverse effects on SMEs in Mongolia.

The experience of OECD member states and other reform-oriented administrations demonstrates that sustained transformation requires embedding results-based principles into institutional structures and practices [2], [4], [5]. OECD guidelines on performance budgeting and RBM emphasize differentiating levels of planning (mission → portfolio → program → project), employing SMART indicators across outputs, outcomes, and impacts, linking budgeting and policy evaluation to societal results, institutionalizing continuous feedback loops (PDCA cycle) [2].

International experience also suggests that these reforms cannot rely solely on legal or cultural change. As shown by Estonia's e-Government model and Korea's digitalized monitoring and evaluation system, the integration of digital platforms is essential for consistency, transparency, and traceability across governance levels [6]. Without digital tools, RBM risks becoming formalistic and dependent on individual leadership or temporary administrative capacity.

The Mongolian cases confirm the limitations of human-driven, incremental reform. Institutional culture remains activity-oriented, leadership turnover disrupts continuity, and methodological innovations are inconsistently applied. Consequently, public organizations are unable to create an enabling environment for SMEs.

In this context, digital transformation emerges not as an auxiliary instrument but as the foundational enabler of process-based management. Such reforms would shift

Mongolia's public sector from a fragmented financier role toward that of a development accelerator, providing SMEs with coherent support, measurable ROI, and alignment with national priorities (e.g., Vision 2050 and the Sustainable Development Goals).

In sum, this study confirms that Mongolia's public sector is situated in a "hybrid trap", where functional and process-based management coexist without coherence. Comparative evidence from OECD and UNDP best practices suggests that the only viable exit from this trap is the digital institutionalization of process-based management. Digital transformation provides the structural backbone for embedding RBM, ensuring that reforms are sustainable, scalable, and resistant to political or administrative turnover.

Accordingly, the digital transformation of Mongolia's public sector should be viewed as a precondition for both effective governance and SME development. By moving decisively from functional to digital-enabled process management, Mongolia can create a transparent, accountable, and results-oriented state apparatus capable of supporting economic diversification and long-term competitiveness in a rapidly changing global environment.

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