

International Models of Public Data Governance and Lessons for Vietnam

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Abstract: *The article reviews public data governance models from six countries to identify approaches relevant to Vietnam's efforts to promote innovation in digital government. It examines institutional systems, data openness, performance indicators, and implementation challenges. Innovation is presented as a governance approach that emphasizes data use in public management. The study concludes with policy recommendations designed to support Vietnam in developing an integrated and transparent public data system suited to national conditions.*

Keywords: Innovation, Public data governance, international experience, Digital government, Performance indicators

1. Introduction

In the context of the Fourth Industrial Revolution and digital transformation, innovation is regarded as a crucial “key” to promoting development in all sectors, including public governance. The Documents of the 13th National Congress of the Communist Party of Vietnam identified innovation as one of the three major strategic breakthroughs to guide the country toward socialist-oriented development by the mid-21st century.

Digital data governance supporting government management and executive functions is also one of the top priority tasks in Vietnam's strategy to develop e-government toward digital government. This constitutes a form of governance innovation aimed at enhancing efficiency and identifying appropriate approaches to consolidating digital data systems considered the “nervous system” of a digital government.

International experiences in innovation in digital data governance for governmental management and administration are abundant. Vietnam can draw lessons to design approaches suited to its institutional context.

2. Theoretical Framework

According to the OECD (2005), innovation is defined as “the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations” [1]. In a similar vein, Clause 3, Article 3 of Vietnam's Law on Science, Technology and Innovation (2025) describes innovation as “activities that create new products, services, processes, business models, or significantly improve existing products, services, processes, or business models” [2].

Despite minor wording differences, the definitions share several core features. First, innovation is both a process and an outcome, involving the creation and application of technical, technological, and managerial solutions. To be considered innovative, such solutions must demonstrate novelty in relation to the organization, sector, nation, or even the international context. Second, innovation encompasses

the development of new products or services, the improvement of processes or technologies, and changes in organizational methods- covering both technological and non-technological aspects. Third, the ultimate objective of innovation is to enhance productivity, quality, and added value, thereby contributing to socio-economic development.

From this perspective, innovation can be understood as the continuous application of new methods and technologies to generate products and services of superior quality, efficiency, and cost-effectiveness [3].

In the public sector, digital data governance oriented toward building open data systems to support governmental management and administration represents a clear example of an innovative solution. Clause 1, Article 3 of Decree No. 47/2020/ND-CP defines digital data as information represented in digital signals in the form of symbols, letters, numbers, images, sounds, or similar forms, and shared in the form of data messages [4].

3. Research Methodology

This study adopts a comparative and interdisciplinary synthesis approach, combining public administration, public policy, and data science. Innovation is examined not merely as a technological activity but as a new governance paradigm. Three primary research methods are employed:

Desk study: Analysis of academic and policy documents, including reports, strategic documents, legal texts, and scholarly works on innovation, digital data, and digital government.

Case study: Six representative countries were selected: France, Australia, the United Kingdom, the United States, India, and Malaysia. Selection criteria included: (1) Existence of national data or innovation strategies; (2) Established monitoring and evaluation (KPI) systems; and (3) available public data or periodic performance reports.

Analysis and synthesis: Content analysis was conducted to identify themes relating to institutional frameworks,

performance indicators, processes, openness, and social feedback mechanisms.

The study focuses on innovation in public data governance and executive indicator systems. Due to time and data constraints, field surveys in Vietnam were not conducted.

4. International Experiences

4.1 The French Experience

France has undertaken notable and coordinated investments in the formulation and implementation of a comprehensive national data strategy. A Chief Data Officer (CDO) was appointed at the governmental level to spearhead the state's strategic orientation concerning data governance and data-driven policymaking. France has promulgated a series of interrelated strategic frameworks, including the National Big Data Strategy, the National Artificial Intelligence Strategy, the Open Data Strategy, and the National Cloud Strategy, thereby establishing an integrated policy architecture for digital transformation.

France operates within the regulatory framework of the European Union's General Data Protection Regulation (GDPR), effective since 25 May 2018. The GDPR institutionalizes stringent personal data protection standards, grants EU citizens enhanced control over their personal data, and imposes significant sanctions for non-compliance. A landmark policy initiative was the French Big Data Strategy (2015), which articulated three foundational pillars: public policy modernization, research and innovation enhancement, and enterprise support and ecosystem development [5].

The national open data portal, Data.gouv.fr, represents one of the earliest global models enabling participatory data governance. Beyond mere publication, the platform allows users to enrich, refine, and repurpose datasets. Since its major upgrade in 2013, the portal has facilitated extensive data reuse and cross-sectoral application. The French Government's strategic objective has been to centralize public datasets within a unified digital infrastructure to stimulate innovation, promote public-private collaboration, and enhance administrative transparency.

The operational philosophy of Data.gouv.fr is guided by three principles: (i) maximizing ease and scope of public information reuse; (ii) fostering innovation across the developer and business communities to support the digital economy; and (iii) strengthening governmental transparency and accountability.

In parallel, France has advanced digital public service innovation through the Beta.Gouv.fr program - an intragovernmental start-up incubator model designed to cultivate agile, user-centered digital services. The program is guided by three core tenets: prioritization of user needs; adaptive project management driven by iterative impact evaluation rather than predetermined outputs; and trust-based team governance. Ministries second civil servants to the Interministerial Directorate for Digital Affairs (DINUM), ensuring coordination in open data policies, interoperability standards development, and the establishment of legal

frameworks facilitating secure data circulation and third-party access.

On 18 January 2023, the Prime Minister expanded France's policy monitoring architecture by introducing 60 Government Priority Policies. These encompass 150 projects and approximately 750 performance indicators, collectively constituting an integrated performance management system across all ministries. Oversight is entrusted to the Interministerial Directorate for Public Transformation (DITP), operating under the Prime Minister's authority. Monitoring is conducted through the PILOTE digital platform, enabling real-time reporting, vertical coordination, and escalation mechanisms for addressing implementation bottlenecks. Each project designates a responsible director accountable for performance tracking through measurable indicators reflecting both resource allocation and tangible societal impact.

4.2 The Australian Experience

The Australian Government has articulated an ambitious objective to position itself among the world's leading digital governments by 2025 and to establish a globally competitive digital economy and society by 2030. Achieving this vision has necessitated coherent institutional reform and targeted digital investment strategies.

Established in 2014, the Local Government Performance Reporting Framework (LGPRF) constitutes a structured performance accountability mechanism designed to: (i) support strategic decision-making and continuous improvement at the council level; (ii) enhance transparency regarding productivity and service effectiveness; (iii) ensure regulatory compliance; and (iv) inform federal and state-level governance oversight [6].

Legislatively embedded within the Local Government Act 2020, the LGPRF differentiates between Service Performance operational effectiveness in delivering outputs and Strategic Performance the broader socio-economic impacts of policy interventions.

The framework adheres to the SMART criteria (Specific, Measurable, Achievable, Relevant, Time-bound) and emphasizes indicator comparability, comprehensibility, proportionality of data collection costs, and longitudinal consistency. This structured, multi-level performance architecture offers a replicable reference model for countries seeking to institutionalize data-driven governance.

4.3 The United Kingdom Experience

The United Kingdom has been a forerunner in institutionalizing Evidence-Based Policy (EBP) and KPI-oriented public management. In an environment characterized by rapid socio-economic transformation and advanced digital infrastructure, real-time data availability has enhanced the feasibility of data-driven governance.

The UK Government has implemented structural incentives to embed evidence within policymaking processes. These include mandatory disclosure of evidentiary foundations for

policy decisions, evidence-based justification for budget allocations, independent peer review of analytical models, and open dissemination of performance data to facilitate societal scrutiny [7][8].

Performance analysts are embedded within ministries from the policy design phase, ensuring that monitoring frameworks are integrated ex ante rather than appended ex post. Indicator selection is service-oriented and demand-driven, reflecting citizen priorities rather than hierarchical imposition. Public data accessibility encourages independent evaluation by researchers and civil society actors, thereby reinforcing accountability and iterative policy refinement.

4.4 The United States Experience

In the United States, public administration reflects principles of market responsiveness and strategic management. Federal agencies align KPIs with long-term strategic plans, thereby institutionalizing performance measurement as an instrument of mission realization.

At the municipal level, the City of Irving (Texas) exemplifies best practice in smart governance and performance transparency. Its “Future in Focus” strategic dashboards operationalize 25 smart city objectives spanning economic vitality, infrastructure development, sustainability, community cohesion, and public safety [9].

The dashboards integrate diverse data visualization formats including geospatial mapping, scorecards, trend analyses, and benchmark comparisons while ensuring data exportability for citizen use. Across U.S. local governments, KPI systems frequently prioritize citizen-centric service dimensions and incorporate public satisfaction surveys into performance evaluation.

4.5 The Indian Experience

India institutionalizes ministerial performance transparency through publicly accessible indicator systems [10] and real-time digital dashboards [11].

The Development Monitoring and Evaluation Office (DMEO), operating under NITI Aayog, functions as an autonomous national evaluation authority. Established in 2015, DMEO advances a data-driven, results-based governance paradigm.

The Output-Outcome Monitoring Framework (OOMF) represents a paradigm shift from input and expenditure tracking toward outcome-based measurement. The 2021–2022 framework incorporated nearly 6,000 indicators. DMEO maintains a digital dashboard that monitors budget allocations, output targets, and outcome progress, thereby strengthening fiscal accountability and strategic coherence.

4.6 The Malaysian Experience

Malaysia’s governance model integrates medium-term national planning with annual budgetary frameworks. The Eleventh Malaysia Plan (2016–2020) articulated six strategic thrusts, operationalized through a four-tier results-based

monitoring system: national, ministerial, programmatic, and activity levels.

Each strategic priority is translated into key outcomes and KPIs, subsequently cascaded into ministerial programs with allocated fiscal resources. An integrated electronic management information system ensures vertical data integration. Notably, up to 3% of program budgets are earmarked for monitoring and evaluation, institutionalizing performance oversight as a core governance function.

5. Policy Implications and Strategic Recommendations for Vietnam

5.1 Policy Implications for Vietnam

Executive data architectures are deeply influenced by political institutions and governance philosophies, meaning that performance indicator systems must be closely aligned with national strategic priorities. To ensure effectiveness, data governance should be institutionalized under a designated coordinating authority that oversees interoperability, integration, and regulatory harmonization. Executive indicators are best understood as relative metrics such as growth rates, ratios, and percentages derived from statistical, administrative, and survey sources. These indicators capture dynamic trends rather than static values, making them more suitable for policy monitoring. At the same time, open data ecosystems play a crucial role in enhancing societal participation, policy transparency, and accountability. At the subnational level, KPI systems often emphasize citizen-centered service delivery and incorporate participatory evaluation mechanisms, thereby strengthening local governance.

5.2 Strategic Recommendations for Vietnam

Vietnam should prioritize the development of an integrated executive data system that is firmly anchored in national development strategies, sectoral mandates, and program-based planning frameworks. A unified and interoperable data infrastructure is essential to enable cross-ministerial integration and advanced analytics, thereby supporting evidence-based decision-making. Indicator systems should follow a cascading architecture that logically connects macro-level strategic objectives with meso- and micro-level operational KPIs. Digital platforms must be designed to reduce reporting burdens while maximizing analytical value. Relative indicators should be prioritized, as they are particularly effective in identifying systemic imbalances and policy bottlenecks. Finally, expanding controlled data openness while ensuring cybersecurity and data integrity will improve transparency, stimulate independent analysis, and ultimately enhance the overall quality of governance.

6. Conclusion

Innovation in public data governance represents a transformative shift from traditional administrative management toward data-driven, transparent, and results-oriented governance. International experiences demonstrate that successful data governance requires not only technological infrastructure but also strong institutional

frameworks, clearly defined performance indicators, inter-agency coordination mechanisms, and a culture of openness and accountability.

For Vietnam, the development of an integrated, interoperable, and strategically aligned public data system is essential to improving governmental direction and administration. The cascading design of indicators, institutionalization of data governance responsibilities, and expansion of open data practices will contribute significantly to strengthening evidence-based policymaking.

Ultimately, innovation in public data governance should be viewed as a continuous process rather than a one-time reform. It demands sustained political commitment, capacity building, and adaptive learning. By selectively internalizing international best practices while tailoring them to domestic institutional and socio-economic conditions, Vietnam can advance toward building an effective, transparent, and citizen-centered digital government that supports sustainable national development in the digital era.

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