



Policy Brief

SENATE ECONOMIC PLANNING OFFICE

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Transforming Public Service Delivery: A Strategic Framework for E-Government in the Philippines

1. Introduction

A robust e-government legal framework is urgently needed in the Philippines to unify fragmented systems and harness digital transformation for effective governance. This framework should drive e-government adoption at all levels, foster digital inclusion, bridge the digital divide, and ensure the efficient and effective delivery of public services—especially to the poor and marginalized sectors—to guarantee equitable access for all Filipinos.

In today's highly interconnected world, digital transformation is essential for governments to remain efficient, transparent, and responsive to citizens' needs. Despite this global shift, the Philippines faces substantial challenges in advancing its e-governance initiatives. The 2024 UN E-Government Survey reveals that the country ranks 73rd out of 193 member-states in the E-Government Development Index, indicating substantial room for improvement.

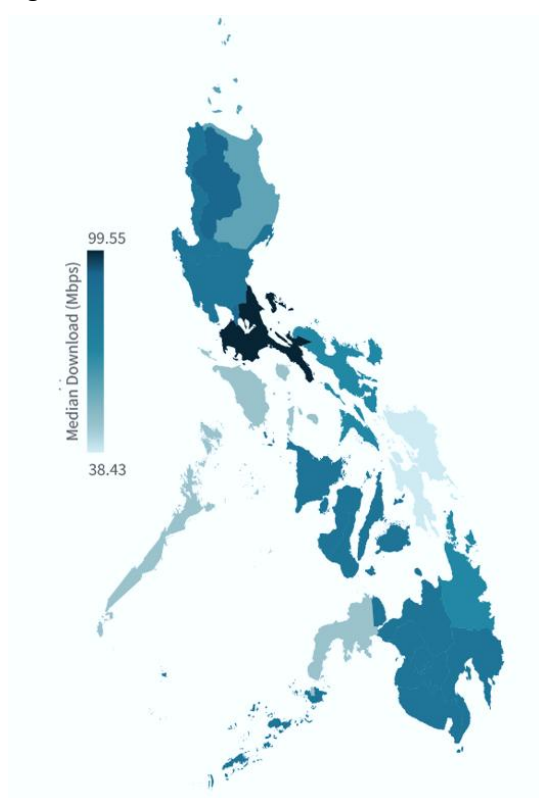
To address these challenges and accelerate e-government transformation, the Senate has passed Senate Bill No. (SBN) 2781 on Third Reading, which will be up for a Bicameral Conference Committee meeting to harmonize its disagreeing provisions with the House of Representatives' counterpart version, House Bill No. 7327. This proposed legislative measure represents a significant step toward leveraging Information and Communication Technology (ICT) to modernize government services. It designates the Department of Information and Communications Technology (DICT) as the lead agency for e-government implementation and mandates the development of an E-Government Master Plan, which will serve as a roadmap for the country's digital transformation.

Recognizing the urgent need for a comprehensive e-governance policy framework to accelerate the Philippines' digital transformation, this Policy Brief aims to: (1) analyze the current state of e-governance in the country, highlighting key policy issues that impede its progress; (2) examine the provisions of SBN 2781, evaluating their potential to address these challenges and promote e-government adoption; and (3) propose concrete policy recommendations and actionable strategies to guide the effective implementation of an e-governance framework, paving the way for a more efficient, transparent, and citizen-focused government.



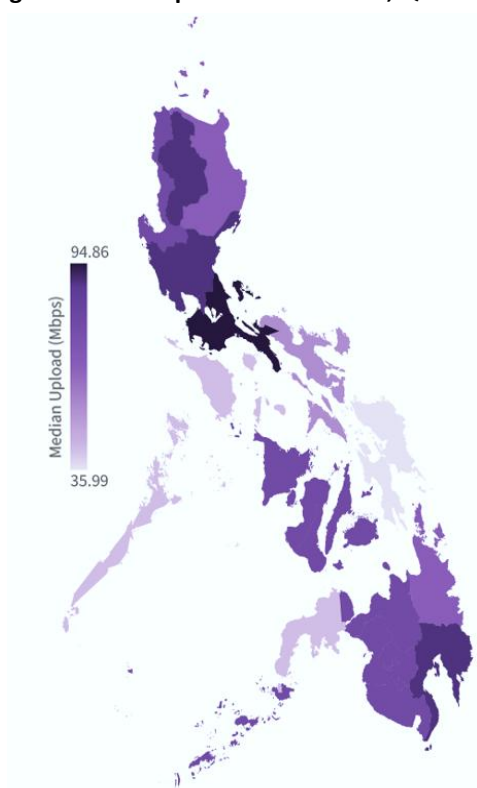
The SEPO Policy Brief, a publication of the Senate Economic Planning Office, provides analysis and discussion on important socio-economic issues as inputs to the work of Senators and Senate Officials. The SEPO Policy Brief is also available at www.senate.gov.ph.

Figure 1. Fixed Download Performance, Q2 2024



Source: Speedtest Intelligence, Ookla

Figure 2. Fixed Upload Performance, Q2 2024



Source: Speedtest Intelligence, Ookla

2. Key Policy Issues on E-Governance

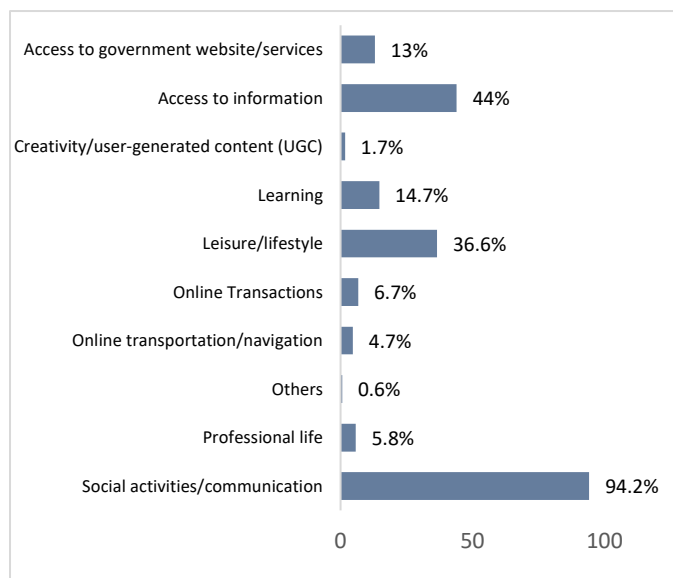
E-governance, which involves integrating digital technologies into government operations, offers immense potential for the Philippines. It can streamline service delivery, enhance transparency, and encourage citizen participation, driving national development and improving the lives of Filipinos. However, unlocking this potential requires overcoming a range of complex policy challenges. This section explores the key issues impeding e-governance progress in the Philippines, offering essential context to understand the challenges that SBN 2781 seeks to address.

2.1. Uneven Digitalization Across Regions

The Philippines is an archipelago composed of over 7,600 islands, making it challenging to provide equal access to technology and internet connectivity throughout the country. Despite government initiatives to bridge the digital divide, uneven digitalization across regions persists. This unevenness is evident in areas such as internet penetration, availability of e-government services, and digital literacy rates.

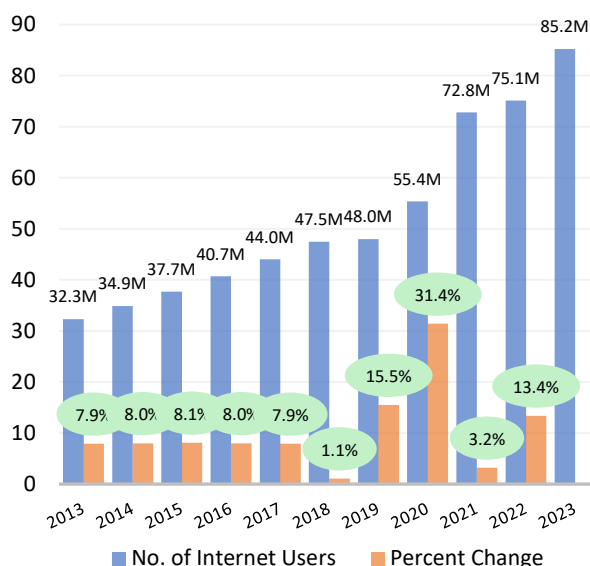
Internet Access and Speed: Access to reliable and affordable internet is essential for digital inclusion. The Philippines significantly lags behind its Southeast Asian neighbors in fixed broadband access and internet speeds. In 2022, only 33 percent of households had fixed broadband access, below the 41 percent ASEAN average, and mobile broadband subscriptions reached 70 percent of the population, significantly below the 101 percent ASEAN average. Moreover, internet costs constitute a significant barrier, with fixed broadband being twice the ASEAN average, and mobile broadband 1.5 times higher (Kanehira et al. 2024). The uneven distribution of internet speeds and infrastructure further exacerbates the disparity in internet access. For instance, in the second quarter of 2024 (Figures 1 and 2), the five fastest regions for fixed internet speeds were located on Luzon Island, with Calabarzon achieving the highest speed at 99.55 Mbps. In stark contrast, the Eastern Visayas region recorded the slowest speed at 38.43 Mbps. The lack of reliable and affordable internet access, particularly in rural areas, has far-reaching implications, limiting opportunities for education, economic growth, and access to critical information and services. Addressing these issues is vital to ensuring equitable digital inclusion and progress nationwide.

Figure 3. Internet Users' Online Activities, 2019



Source: 2019 NICTHS, DICT and PSRTI

Figure 4. Internet Users Over Time, 2023



Source: DataReportal

E-Government Services Adoption: While the Philippines has made strides in e-government development since 2005, significant challenges persist. The 2019 National Information and Communications Technology Household Survey (NICTHS), for instance, highlighted low engagement with online government platforms; Figure 3 shows that only 13.0 percent of internet users reported accessing government websites or services in the three months preceding the survey, a stark contrast to activities like social communication (used by 94.2%). This low adoption indicates that many citizens may be unaware of or hesitant to use online government services.

Digital Literacy: Digital literacy is increasingly vital for Filipinos to thrive in the digital economy, yet significant disparities persist, particularly impacting rural communities. While national internet penetration has grown substantially, reaching 73.6 percent in early 2024 and increasing to 83.8 percent by early 2025, a stark urban-rural divide remains evident. For instance, in 2020, household internet access in the highly urbanized National Capital Region stood at 74.6 percent, compared to a mere 28.5 percent in the Zamboanga Peninsula (PSA 2020). This gap in access is further highlighted by the trend of increasing internet users over time, as illustrated in Figure 4, where the user base expanded from 32.3 million in 2013 to 85.2 million by 2023—experiencing notably rapid growth between 2019 and 2021. This underscores the growing need for digital literacy skills across the nation. However, this growth is unevenly distributed. The persistent challenges of inadequate infrastructure, affordability, and access to quality ICT education in rural municipalities necessitate more focused and comprehensive interventions to ensure equitable digital inclusion across the Philippines.

2.2. Fragmented Systems and Lack of Interoperability

The Philippines suffers from fragmented systems and inadequate interoperability across government agencies.¹ This situation stems from insufficient standardization and a unified approach to ICT implementation. The limited interoperability in government platforms, particularly in the social security and tax collection sectors like e-GSIS, e-SSS, and e-BIR, results in the perception of bureaucratic inefficiency, redundancy, and user dissatisfaction (Capistrano 2020), as citizens still have to interact with multiple agencies separately for related transactions.

¹ Fragmented systems refer to multiple, independent ICT platforms and applications across different government agencies. This often leads to data silos, where data is isolated in separate systems and cannot be easily shared (NDRRMC 2022, 12), akin to having different puzzle pieces that do not fit together. Interoperability, on the other hand, is the ability of these diverse systems to communicate and exchange data which streamlines operations and mitigates delays, effectively ensuring smooth and efficient delivery of services (Lallana et al. 2002).

2.3. Lack of a Unified Data Framework and Strategy

The absence of a unified data framework and strategy in the Philippine e-government landscape is a significant challenge that contributes to data silos, inconsistencies in data practices, and inadequate data utilization.² This is evident in the Data Governance Study (DGS) findings, which highlight fragmented and inadequate data management and cataloging systems within government agencies dealing with Disaster Risk Reduction and Management-Climate Change Adaptation (DRRM-CCA). The lack of standardization hampers efforts to contextualize data, unlock its potential for new opportunities, and fully leverage it for informed decision-making (NDRRMC 2021).

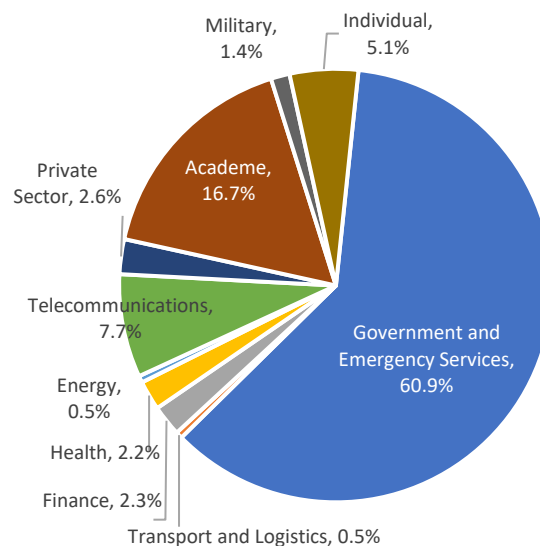
Similarly, the lack of a unified approach has resulted in agencies developing their independent data platforms and systems, leading to redundancies and a proliferation of agency-to-agency data flow relationships that are difficult to manage. The DGS result identifies the absence of a centralized/unified data warehouse as a key reason why formulating DRRM-CCA plans and conducting assessments have been challenging, particularly for local government units (LGUs). Further illustrating this challenge is the need for multiple, complex data-sharing agreements, showcasing the need for a standardized data-sharing framework. This situation hinders efficiency and increases the workforce required for coordination. Without a clear roadmap for data management and utilization, the potential of data to drive innovation, improve transparency, and enhance public service delivery remains largely untapped (NDRRMC 2021).

2.4. Cybersecurity Concerns

The transition to digital platforms has amplified the risks of data breaches, cyberattacks, and privacy violations. These risks are highlighted by the 2022 cybersecurity incident data (Figure 5), which clearly shows that government agencies are disproportionately targeted in cyberattacks. Inadequate infrastructure, limited awareness and expertise, and insufficient investment in cybersecurity measures further exacerbate these concerns, as underscored by past incidents dating

back to the 2016 Commission on Elections server hacking, which exposed 54 million sensitive records, (Magno 2018, 164) and data breaches suffered by the Philippines Statistics Authority (PSA) and the Philippine Health Insurance Corporation (PhilHealth) in 2023.

Figure 5. Cybersecurity Incidents by Target, 2022

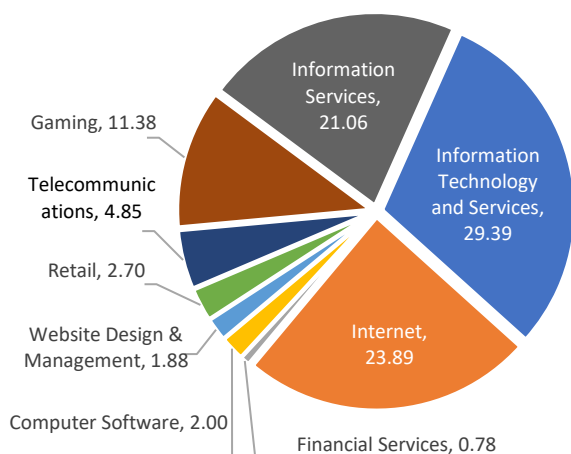


Source: DICT

Studies emphasize the potential consequences of these cybersecurity breaches, particularly their impact on public trust in government institutions. As illustrated in Figure 5, the prevalence of attacks on government entities directly contributes to the erosion of this trust, making citizens hesitant to use e-government platforms. Building a trustworthy digital environment becomes crucial for successful e-governance. Furthermore, increasing the collection and storage of personal information by government agencies raises concerns about data privacy. Citizens need assurance that their data is handled securely and ethically (UN 2022; Magno 2018).

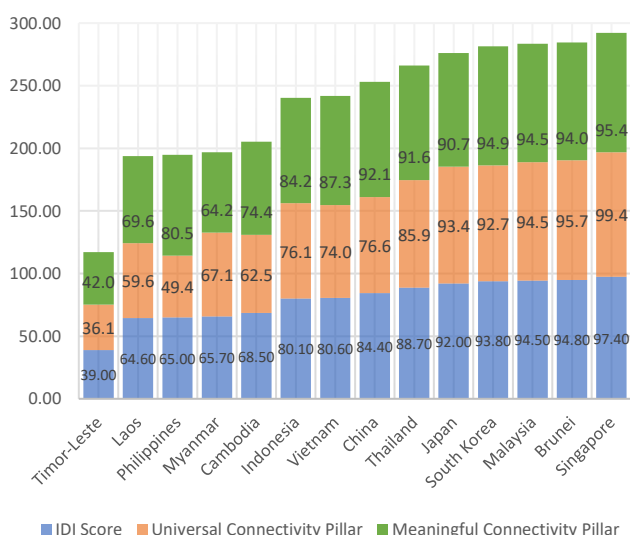
Additionally, cybersecurity incidents can cause significant economic harm by disrupting businesses, reducing investor confidence, and hindering economic growth. As illustrated in Figure 6, sectors crucial to the digital economy, such as Information Technology and Services (29.39%), Internet (23.89%), and Information Services (21.06%), face the highest proportion of cyber threats, indicating significant risk to businesses operating within them and potentially impacting investor confidence. To counter these threats and mitigate potential economic damage, a

Figure 6. Philippine Threats Overview, 2023



Source: Cyfirma

Figure 7. ICT Development Index Score, 2023



Notes:

- ICT Development Index (IDI) Score is a composite indicator, which initially aimed to measure the level of development of the ICT sector.
- Universal Connectivity Pillar contains indicators on people, households, communities and businesses, covering the main places where people can connect, namely at home, in schools and community centers, and at work.
- Meaningful Connectivity Pillar contains indicators on the five enablers of connectivity: infrastructure, affordability, device, skills, and safety and security.

Source: ICT Development Index

comprehensive approach to cybersecurity is essential. This approach should encompass technical measures, such as robust security technologies; organizational measures, including strong cybersecurity policies; and legal measures, including effective cybersecurity laws and regulations.²

2.5. Lack of ICT Skills and Expertise

ICT skills and expertise are necessary for successful e-government initiatives in the Philippines, highlighted by the country's ICT Development Index (Figure 7), which indicates areas for improvement, particularly in 'the skills component of meaningful connectivity.' These skills extend beyond basic computer proficiency, encompassing specialized knowledge in cybersecurity, data management, and interoperability. Developing, implementing, and maintaining secure and reliable systems for effective online services is only possible with qualified personnel. However, attracting and retaining competent IT professionals is challenging due to limitations in the E-Government Fund and inconsistent application of the National ICT Competency Standard. Agencies often have to work with inadequate budgets, resulting in understaffed IT departments with low salaries, further hinders the development and sustainability of e-government systems. These limit the government's ability to provide efficient and citizen-centric services (Caramancion 2023).

A multifaceted approach is necessary to bridge this gap. Solutions include investing in digital literacy for citizens and government employees, creating a standardized ICT career path with competitive salaries, and providing targeted training in specialized areas like cybersecurity and data management (UN 2022; World Bank 2020).

Establishing a dedicated E-Governance Academy could also offer specialized training and certifications to meet the Philippine government's specific e-governance needs.

² A unified data framework provides a structured, standardized approach to managing data across an organization or system. It encompasses data governance, which defines roles, responsibilities, and processes for data management, and data architecture, which outlines how data is organized, stored, and accessed. A unified data strategy outlines the organization's overall approach to leveraging data for its objectives, including data collection, storage, analysis, sharing, and security.

3. Harnessing the Power of ICT: The Proposed E-Governance Policy

The preceding section highlights the multifaceted challenges that impede the Philippines' progress in e-governance. To address these challenges and propel the nation toward a digitally empowered future, SBN 2781 proposes a comprehensive framework for e-governance.

3.1. Expanding DICT's Role as Lead Implementing Body

SBN 2781 designates the DICT as the lead implementing body for e-governance in the Philippines. This represents a significant shift from the current framework, where multiple agencies share responsibility for ICT development and implementation.

The DICT Act of 2015 (Republic Act No. 10844) created the DICT as the primary agency responsible for planning, developing, and promoting the national ICT development agenda. However, it did not explicitly mandate the DICT to lead e-governance efforts across the entire government. SBN 2781 addresses this gap by clearly defining the DICT's role in overseeing and coordinating e-governance initiatives.

Centralizing e-governance efforts under the DICT is crucial for overcoming several challenges identified earlier. By overseeing the distribution of internet infrastructure investments, the DICT can better coordinate efforts to bridge the digital divide and ensure equitable access across regions. Furthermore, DICT's leadership can break down data silos by promoting interoperability standards and shared databases, enabling government agencies to share information. Without a central authority like DICT, current inefficiencies may persist, leading to long wait times for citizens seeking essential services and bureaucratic delays for businesses, hindering economic growth.

Moreover, a unified cybersecurity strategy is necessary with the increasing threat of cyberattacks. DICT can ensure all agencies meet the same high

standards for data protection, safeguarding sensitive information, and maintaining citizen trust.

3.2. Formulating an E-Government Master Plan

SBN 2781 mandates formulating an E-Government Master Plan (EGMP), a comprehensive blueprint for developing and enhancing digital government services in the Philippines. This plan is critical for resolving existing challenges and ensuring a coordinated transition to a digital government. While the DICT Act of 2015 established a master plan for ICT development, the EGMP mandated by SBN 2781 goes further by explicitly focusing on e-governance and covering a broader range of digital services and initiatives.

The EGMP can directly address the issue of fragmented systems by mandating interoperability standards, facilitating seamless information exchange, and improving efficiency. Additionally, it can bridge the digital literacy gap by including provisions for targeted training programs and empowering citizens to utilize online services effectively. By outlining a clear cybersecurity strategy, the EGMP can address concerns about data breaches and cyberattacks, building trust in digital government services.

It can also promote economic growth by creating a conducive environment for digital businesses, attracting investments, and creating jobs. Without a comprehensive plan like the EGMP, the Philippines risks falling behind in digital development, potentially leading to continued inefficiencies, missed economic opportunities, and a decline in public trust in government services.

3.3. Developing E-Government Programs as Building Blocks of Digital Transformation

SBN 2781 outlines a range of e-government programs that go beyond the provisions of previous laws like the E-Commerce Act of 2000 (RA No. 8792) and the New Government Procurement Reform Act (RA No. 12009). Instead of focusing on isolated initiatives, SBN 2781 offers a more holistic approach and a strategic roadmap for a more integrated, effective, citizen-centric digital government.

Philippine Government Interoperability Framework:

This framework establishes clear guidelines and standards for data sharing and system integration to break down data silos and facilitate seamless information flow across different government entities. This enhanced interoperability will improve government operations' efficiency, transparency, and accountability by making information more readily accessible.

Integrated Government Network: By establishing a robust and interconnected network infrastructure, this program will deliver online services more efficiently and conveniently, particularly benefiting citizens in underserved areas with limited internet connectivity. This program aligns with the proponents' vision of using e-governance to overcome challenges like red tape and improve service delivery.

Government Digital Payment Systems: The legislative proposal mandates the development of Government Digital Payment Systems, a critical step in modernizing government transactions and promoting financial inclusion. This program will reduce reliance on traditional paper-based methods by enabling citizens and businesses to pay the government electronically, improving efficiency and transparency. The successful implementation of this program will require close coordination with institutions like the Bangko Sentral ng Pilipinas (BSP), as indicated by the DICT's plans to establish a Memorandum of Agreement with the BSP.

3.4. Enhancing Data and Information Security

While the Data Privacy Act of 2012 (RA No. 10173) provides a general framework for data protection in the Philippines, SBN 2781 emphasizes data and information security. It explicitly mandates measures to protect the security of government ICT assets and strict compliance with data privacy regulations. This positive step can strengthen the country's cybersecurity posture and build trust in e-government services.

3.5. Nurturing Digital Talent with the E-Governance Academy

To ensure that the Philippines has the skilled workforce to drive digital transformation, SBN 2781 provides for an ICT Academy, a dedicated institution with a broader mandate than just e-governance capacity building.

The Academy aims to be the "National Center of Excellence for ICT Education," encompassing education for national labor capacity enhancement, promoting quality ICT education for all citizens, and supporting the national ICT development agenda.

It likewise aims to provide a more structured and centralized approach to e-governance capacity building that focuses on better coordination, resource sharing, and knowledge exchange, ultimately enhancing the quality and relevance of ICT education in the Philippines.

The Academy's mandate to partner and collaborate with other educational institutions, industry, and international organizations would further support this objective.

3.6. Leveraging Expertise and Resources with Private Sector Participation

The provision for private sector participation in SBN 2781 builds upon existing policies recognizing the importance of public-private partnerships (PPPs) in ICT development.

For instance, the PPP Code of the Philippines (RA No. 11966) allows private sector involvement in government projects. However, SBN 2781's provision is more specific to e-governance, providing a clear legal basis for collaboration with the private sector in digital transformation initiatives. This can encourage more private sector investment and innovation in e-governance solutions.

4. Policy Recommendations

The successful implementation of this proposed measure hinges on several critical factors, which require careful consideration and strategic action. The following subsections delve into these factors and offer specific policy recommendations to enhance the legislative proposal's effectiveness and ensure a smooth transition toward a digitally empowered Philippines.

4.1. Capacity Building

The E-Governance Academy is crucial to empowering civil servants with the necessary skills and knowledge to drive successful e-governance initiatives. However, to ensure its effectiveness, the bill could benefit from greater specificity regarding the training programs it will offer.

It is recommended that SBN 2781 mandate training in specific areas critical to e-governance implementation. These areas could include the following:

- a) *Data Analytics*: Equipping civil servants with data analytics skills will enable them to extract valuable insights from government data, aiding in evidence-based policymaking, improved service delivery, and fraud detection.
- b) *Cybersecurity*: Protecting government systems and data from cyber threats is paramount in the digital age. The Academy should provide training in cybersecurity best practices, including risk assessment, incident response, and secure software development.
- c) *Digital Service Design*: Understanding user needs and designing user-centric digital services is essential for effective e-governance. Training in digital service design would help civil servants create accessible, user-friendly, and inclusive digital platforms.
- d) *Project Management*: Successful e-governance initiatives require effective project management. The Academy should offer training in project management methodologies, stakeholder engagement, and risk management, ensuring that e-governance projects are delivered on time, within budget, and to the desired specifications.

By mandating training in critical e-government areas, this legislative proposal ensures that the E-Governance Academy equips civil servants with essential skills. This targeted approach, with specifics detailed in the Implementing Rules and Regulations (IRR), maximizes the Academy's impact. It fosters the successful adoption of e-government solutions across agencies, promoting a digitally proficient civil service.

4.2. Resource Allocation for E-Government Initiatives

The Senate plays a vital role in shaping the nation's budgetary priorities, and it can leverage this influence to drive meaningful progress in e-government initiatives. By advocating for a more robust fiscal commitment to e-government, the Senate can help ensure that the nation has the necessary resources to implement and sustain digital transformation efforts.

One approach could be to allocate specific funds within the annual budget for e-government projects. This would create a dedicated funding stream specifically targeted at modernizing and enhancing government digital services. By ring-fencing these funds, the Senate can signal that e-government is a top priority and is committed to providing the resources necessary to support its implementation.

To further ensure sustainable funding for e-government initiatives, the Senate can prioritize strategically allocating sufficient resources within the national budget. This involves deliberately directing funds to e-governance projects, guaranteeing they receive the necessary financial support for effective implementation. Exploring multi-year budgeting mechanisms is essential to enhance funding predictability, particularly for major initiatives. Moreover, optimizing the utilization of existing government funds to maximize their impact on digital transformation is also vital. The Senate is crucial in securing and effectively deploying these financial resources.

In addition to these measures, the Senate can ensure that the EGMP and related programs receive adequate funding. The EGMP is a comprehensive

roadmap for modernizing government digital services, and it outlines several specific initiatives that need to be implemented. By ensuring that the master plan is adequately funded, the Senate can help implement these initiatives promptly and effectively.

4.3. Stakeholder Engagement

Stakeholder engagement is crucial for the successful implementation of e-government initiatives. SBN 2781 recognizes this importance but could benefit from including more specific mechanisms to facilitate meaningful engagement.

One approach is to mandate public consultations during the planning phase of e-government projects. These consultations would allow citizens, businesses, and other stakeholders to voice their needs and concerns and contribute to the design of the e-government system. The consultations could take various forms, such as public hearings, online forums, or workshops, ensuring inclusivity and accessibility.

Regular feedback mechanisms are also essential for ongoing stakeholder engagement. Citizens and businesses should have dedicated channels for feedback on their experiences with e-government services. This feedback could be collected through surveys, hotlines, or online platforms, ensuring that the system remains responsive to user needs and continuously improves.

Furthermore, establishing multi-stakeholder advisory boards would provide a structured platform for ongoing collaboration and guidance. These boards could comprise representatives from government agencies, the private sector, academia, civil society, and other relevant stakeholders. The boards would provide strategic advice on implementing the EGMP, identifying challenges, and recommending solutions.

These concrete mechanisms for stakeholder engagement would enhance transparency, accountability, and inclusivity in the e-government development process. They would ensure that the voices of all stakeholders are heard, leading to more effective and user-centric e-government services.

4.4. Monitoring and Evaluation

To ensure the effectiveness of e-government initiatives, SBN 2781 should require the development of a comprehensive set of performance indicators. These indicators should be specific, measurable, achievable, relevant, and time-bound (SMART), allowing for a clear assessment of progress and impact. Potential indicators include the percentage of online government services, citizen satisfaction with e-government services, cost savings achieved through e-government implementation, reduced processing times for government transactions, and increased citizen participation in e-government platforms.

Furthermore, this proposed legislative measure should emphasize mechanisms for periodic assessment of e-government initiatives, such as annual progress reports submitted to Congress or public dashboards that track performance indicators in real time. This will enable the government to gather valuable data on the performance of e-government initiatives, inform evidence-based decision-making, identify areas for improvement, and ensure that e-government investments deliver the desired outcomes. A robust monitoring and evaluation framework can also enhance accountability and transparency in e-government implementation. The government can demonstrate its commitment to providing efficient, effective, and citizen-centric digital services by regularly reporting on performance indicators and evaluation results.

4.5. Cybersecurity

SBN 2781 may include provisions for proactive cybersecurity measures, such as (1) regular vulnerability assessments and penetration testing to identify and address security weaknesses in government systems; (2) mandatory cybersecurity training for all government personnel to raise awareness of cyber threats and promote best practices; and (3) establishment of a dedicated cybersecurity unit within the DICT to monitor cyber threats, coordinate incident response, and provide technical assistance to government agencies.

Implementing robust cybersecurity measures can help the government build trust in e-government services. This is crucial for encouraging citizens and businesses to adopt digital services and share their data with the government.

E-government systems often rely on critical ICT infrastructure like networks, servers, and databases. By strengthening cybersecurity, the government can protect these assets from cyberattacks and ensure the continuity of essential services.

4.6. Digital Inclusion

SBN 2781 should include specific provisions for expanding internet access in underserved areas and promoting digital literacy among marginalized communities. This could involve (1) investing in broadband infrastructure development in rural and remote areas, (2) providing subsidies or vouchers for internet access to low-income households, and (3) promoting PPPs to expand internet connectivity.

To further promote digital inclusion, the proposed measure should include a provision for targeted digital literacy initiatives focused on marginalized communities. This provision should emphasize developing and implementing accessible and culturally relevant training programs. It should also encourage partnerships with community organizations and educational institutions to deliver training and provide ongoing support. Additionally, it should promote the creation of user-friendly e-government platforms accessible to all, regardless of their digital literacy levels. The specific programs, measurable targets, and implementation details for these initiatives should be further elaborated in the IRR, allowing for flexibility, stakeholder input, and adaptability to the unique needs of these communities.

5. Conclusion

The Philippines stands at a pivotal juncture in its e-governance journey. The challenges are significant, from the digital divide and limited citizen engagement to cybersecurity risks and the need for greater transparency. However, the potential benefits of e-governance—streamlined services, enhanced transparency, and empowered citizens—are too compelling to ignore.

SBN 2781 offers a promising framework for addressing these challenges and harnessing the power of ICT to transform the government. By centralizing e-governance efforts, mandating a comprehensive master plan, and outlining critical programs, the bill sets the stage for a more coordinated and practical approach to digital transformation.

However, this legislative proposal's success hinges on its effective implementation. The policy recommendations outlined in this Policy Brief—capacity building, resource allocation, stakeholder engagement, monitoring and evaluation, cybersecurity, and digital inclusion—can maximize the impact of this legislative measure.

Senators and stakeholders must prioritize the passage and implementation of SBN 2781. By taking decisive action, the Philippines can build a more inclusive, responsive, digitally empowered nation, ensuring that no one is left behind in the digital age.

References

- Albert, Jose Ramon G. 2021. "Why literacy measurement deserves rethinking." PIDS Policy Notes 2021-10. Quezon City, Philippines: Philippine Institute for Development Studies.
- Albert, Jose Ramon G., Francia Mark A. Quimba, Aubrey D. Tabuga, Mary Grace Mirandilla-Santos, Maureen Ane D. Rosellon, Jana Flor V. Vizmanos, Carlos C. Cabaero, and Mika S. Muñoz. 2021. PIDS Discussion Paper Series No. 2021-20: Expanded Data Analysis and Policy Research for National ICT Household Survey 2019. August 2021.
- Alshehri, Mohammed, and Steve Drew. 2010. "Implementation of e-Government: Advantages and Challenges." IASK E-ALT2010 CONFERENCE PROCEEDINGS.
- Asian Development Bank Institute (ADBI). 2007. High-Level Seminar on E-Governance. Tokyo: Asian Development Bank Institute.
- Barcenas, Lai-Lynn A.B. 2019. "ICT Regulation and Regulatory Authority." PIDS Policy Note No. 2019-02. Philippine Institute for Development Studies.
- Brown, David. 2005. "Electronic government and public administration." *International Review of Administrative Sciences* 71, no. 2: 241–254.
- BusinessWorld. 2024. "Addressing gaps in PHL's digital connectivity." *BusinessWorld Online*, April 29.
- Capistrano, Erik Paolo. 2020. "Determining e-Government Trust: An Information Systems Success Model Approach to the Philippines' Government Service Insurance System (GSIS), the Social Security System (SSS), and the Bureau of Internal Revenue (BIR)." *Philippine Management Review* 27: 57-78.
- Capistrano, Erik Paolo. n.d. "Determinants of e-government trust: A Philippine three-case scenario of GSIS, SSS, and BIR." University of the Philippines, Diliman.
- Caramancion, Kevin Matthe, and Pierre Pauline Abesamis. 2023. "Human Capacity Organizational Roadmap for E-Government Interoperability in the Philippines." Department of Information Science, University at Albany, State University of New York; College of Computer Studies, De La Salle University - Manila.
- Department of the Interior and Local Government (DILG) and the Department of Information and Communications Technology (DICT). 2016. E-Readiness Survey for Cities and Municipalities. Quezon City, Philippines: DILG and DICT.
- Dhaoui, Iyad. 2022. "E-Government for Sustainable Development: Evidence from MENA Countries." *Journal of the Knowledge Economy* 13, no. 4: 2070–2099.
- DICT (Department of Information and Communications Technology). 2017. National Broadband Plan: Building Infrastructures for a Digital Nation. Diliman, Quezon City: Department of Information and Communications Technology.
- DICT and PSRTI. 2020. National Information and Communications Technology Household Survey (NICTHS) PRESENTATION OF RESULTS. DICT Office, June 26.
- Dutta, S., & Lanvin, B. (eds.). 2022. Network Readiness Index 2022: Philippines. Washington DC: Portulans Institute.
- Iglesias, Gabrielle. 2010. E-government Initiatives of Four Philippine Cities. Philippine Institute for Development Studies.
- Institute of Digital Government, Waseda University, and International Academy of CIO (IAC). 2020. The 15th Waseda International Digital Government Rankings Report. Tokyo: Waseda University.
- Internet Society (ISOC) and TRPC Pte Ltd. 2015. Unleashing the Potential of the Internet for ASEAN Economies. The Internet Society (ISOC) and TRPC Pte Ltd.
- Johan, Affandy. 2024. "Fiber In The Philippines Is Improving And Catching Up With Its Regional Peers." *Ookla Research™ Articles*. July 22.
- Kanehira, Naoto, Mitch Abdon, and Mary Grace Mirandilla-Santos. 2024. "Updating policies to upgrade the Internet for all Filipinos." *East Asia & Pacific on the Rise*, January 25, 2024.
- Kanehira, Naoto, Mitch Abdon, and Mary Grace Mirandilla-Santos. 2024. "Upgrading Philippine internet for faster and inclusive growth." *East Asia & Pacific on the Rise*, April 4, 2024.

- Lallana, Emmanuel C., Patricia J. Pascual, and Edwin S. Soriano. 2002. E-Government in the Philippines: Benchmarking Against Global Best Practices. Digital Philippines.
- Legaspi, Zeus. 2024. "Stratbase cites gains, downside of PH internet." Inquirer, March 11.
- Magno, Francisco A. 2018. "E-Government and Philippine Development." Journal of Asia-Pacific Studies (Waseda University) No. 32 (March 2018).
- Mantikayan, J. M., & Abdulgani, M. A. 2017. "Conceptualizing E-government Readiness of the Philippines using Different Stages Model." CCSPC R&D Journal 1, no. 4: 84-117.
- Mapanoo, Ma. Eliza D., and Jonathan M. Caballero. 2018. "E-Government for human capability development program: An implementation of G2E System for enhanced government services." MATEC Web of Conferences 189: 10005.
- Mirandilla, Maria Cecilia, and Sheryl R. San Pascual. 2017. "E-Government for Development." Asia Pacific Journal of Multidisciplinary Research 5, no. 2: 98-104.
- National Computer Center (NCC) and National IT Industry Promotion Agency (NIPA). 2012. Philippines E-GovMasterPlan. National Computer Center, National IT Industry Promotion Agency.
- OECD. 2003. "Implementing E-Government in OECD Countries: Experiences and Challenges." OECD.
- Pacific Council on International Policy. 2002. Roadmap for E-government in the Developing World: 10 Questions E-Government Leaders Should Ask Themselves. Los Angeles, CA: Pacific Council on International Policy.
- Pasco, Renee C., and Sherwin E. Ona. 2017. "Enabling e-Government in the Philippines: Uncovering gaps and opportunities in policy development." DLSU Research Congress 2017 Abstract.
- Philippine Institute for Development Studies (PIDS). 2021. Excerpts from 'PIDS - Philippine Institute for Development Studies'. PIDS.
- Quimba, Francis Mark A., Sylwyn C. Calizo Jr., Jean Clarisse T. Carlos, and Jose Ramon G. Albert. 2021. How Ready Are We? Measuring the Philippines' Readiness for Digital Trade Integration with the Asia-Pacific. Discussion Paper Series No. 2021-17. Philippine Institute for Development Studies.
- Ramos, Tatum P., Pauline Joy M. Lorenzo, Jenica A. Ancheta, and Marife M. Ballesteros. 2021. Readiness of Philippine Cities to Smart City Development. PIDS Discussion Paper Series No. 2021-33. Philippine Institute for Development Studies (PIDS).
- Siar, Sheila V. 2005. "E-governance at the Local Government Level in the Philippines: An Assessment of City Government Websites." Philippine Journal of Development 32, no. 2: 135-169.
- Twizeyimana, Jean Damascene, and Annika Andersson. 2019. "The Public Value of E-Government – A Literature Review." Government Information Quarterly 36 (2019): 167–178.
- United Nations. 2011. Information Economy Report 2011: ICTs as an Enabler for Private Sector Development. United Nations publication. Sales No. E.11.II.D.6. New York and Geneva.
- United Nations. 2022. UN E-Government Survey 2022: The Future of Digital Government. New York: United Nations.
- Velasco, Felix. 2024. "Is the Philippines Still Behind when it Comes to Internet Speeds?" Info February 28.
- Waseda University Institute of D-Government and International Academy of CIO. 2021. "16th Waseda University-IAC World Digital Government Ranking 2021 Survey." Waseda University Institute of D-Government.
- Wescott, Clay G. 2003. "E-Government in Asia and the Pacific." The Governance Brief 6.
- World Bank. 2020. Philippines Digital Economy Report 2020: A Better Normal Under COVID-19: Digitalizing the Philippine Economy Now. Washington, DC: World Bank.
- World Bank. 2022. Digital Transformation of Philippine Higher Education. Washington, DC: World Bank.
- World Bank. 2022. Philippines Economic Update, June 2022 Edition. Washington, D.C.: World Bank Group.

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