> **NITB's digital strategy is anchored on three core pillars: Digital Society, Digital Economy, and Digital Governance. In enhancing the accessibility and efficiency of digital public services, the Digital Society initiative takes center stage by transforming how citizens interact with government services through innovative, user-friendly digital solutions**

Dr. Babar Majid Bhatti
CEO, National Information Technology Board (NITB)

ICMA: How is NITB leading the digital transformation of government institutions in Pakistan?

CEO NITB: Pakistan's Information Technology landscape is inherently devolved, with provinces steering their own digital transformation. In this dynamic ecosystem, the National Information Technology Board (NITB) has emerged as a pivotal catalyst for nationwide digital integration. Granted full autonomy on August 16, 2022, NITB evolved from its earlier status as a department under the Ministry of Information Technology and Telecommunication (MOITT). It was originally established in 2014 through the merger of the Pakistan Computer Bureau (PCB) and the Electronic Government Directorate (EGD). NITB's mandate is to architect a cohesive, unified digital landscape that not only bridges the federal-provincial divide but also propels Pakistan toward a robust, technology-driven future. The organization's approach is strategically segmented into three core tiers:

a) **Digital Society Initiatives:** NITB is dedicated to empowering citizens by delivering seamless, state-of-the-art digital services that enhance public engagement, simplify access to government resources, and promote civic participation.

b) **Digital Economy Transformation:** Recognizing the transformative power of technology in economic governance, NITB leverages innovative digital solutions to modernize financial and administrative processes. This initiative aims to reduce systemic challenges such as corruption and fund mismanagement, ensuring greater financial transparency and integrity.

c) **Government Digitalization:** At the core of its strategy, NITB implements cutting-edge digital solutions to enhance governmental operations, improve efficiency, and foster transparency. This transformation enables a more agile, responsive, and accountable public service system.

The best example of digital transformation of government institutions in Pakistan is the E-Office. E-Office is a transformative digital application designed to help government departments transition to paperless operations. By replacing manual file handling with an efficient electronic system, it enhances internal efficiencies, accelerates decision-making, and ensures secure document management.

E-Office introduces a digital workplace solution that:

- **Eliminates Paper Dependency:** Replaces manual file handling with an electronic system.

- **Enables Real-Time Collaboration:** Files can be updated, shared, and accessed by authorized users instantly.

- **Ensures Data Security:** Digital storage with audit trails for every transaction.

- **Guarantees Data Integrity:** Regular backups and Disaster Recovery Systems (DRS) protect against data loss.

Key Benefits of E-Office

Key Benefits	Details
Active Users	Over 6,760 government employees leveraging the system.
Data Resilience	500 million documents securely stored and backed up.
Cost Savings	Rs. 300 million saved annually on stationery.
Time Efficiency	80% reduction in operating time.
Enhanced Productivity	80% increase in organizational efficiency.

By orchestrating these strategic tiers, NITB not only streamlines digital initiatives across diverse governmental and provincial frameworks but also sets a benchmark for excellence in digital governance. Its holistic and integrated approach ensures that every segment of society benefits from enhanced technological connectivity, laying the foundation for sustainable socioeconomic progress. Through innovative partnerships, robust policy frameworks, and a relentless focus on service excellence, NITB is redefining the contours of digital transformation in Pakistan, steering the nation toward a future marked by efficiency, inclusivity, and resilience.

ICMA: What major initiatives has NITB undertaken to improve e-governance and service efficiency?

CEO NITB: In the persistent pursuit of digital excellence, the National Information Technology Board (NITB) has embarked on a comprehensive suite of initiatives designed to revolutionize e-governance and elevate public service efficiency. These initiatives are strategically segmented into short-term and long-term interventions, each tailored to address immediate operational challenges while laying the groundwork for sustained digital transformation.

Short-term Interventions:

a) **Hajj App and Portal:** NITB's pioneering Hajj app and portal represent a paradigm shift in managing

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pilgrimage logistics. This digital solution streamlines the entire Hajj process by offering a fully integrated online registration system that caters to both citizens and government agencies. The platform incorporates dynamic modules for real-time complaint management, allowing complaints to be logged, monitored, and resolved with unparalleled efficiency, alongside modules for financial management, visa processing, flight booking, and accommodation. Enhanced features, such as dynamic complaint categorization, call center integration, and geolocation-enabled services, empower both pilgrims and administrative staff. With over 36,000 complaints successfully managed since its launch, this initiative has garnered international acclaim from the Saudi government for its role in optimizing accommodation logistics, scheduling, and overall operational efficiency.

b) **Apostille System:** Addressing longstanding delays in document attestation, NITB has digitized the Apostille process for the Ministry of Foreign Affairs (MoFA). This globally recognized system, established under the Hague Convention, eliminates the cumbersome queues and delays traditionally associated with academic and official document verification. Between July 8 and December 31, 2024, by seamlessly integrating with leading courier services—such as Leopards, which emerged as the most frequently used service with 23,122 deliveries, followed by ECS with 9,841, TCS with 9,025, Gerry's with 6,599, and M&P with 3,995—this system has expedited the attestation process.

Walk-in services remained a priority for individuals, with 11,500 attestations processed in person. Islamabad led the initiative, accounting for 48,267 attestations, followed by Lahore with 10,810, Karachi with 4,534, Gujrat with 2,596, Peshawar with 680, and Quetta with 22. This initiative has not only streamlined administrative procedures but also delivered tangible benefits to the Pakistani diaspora by reducing bureaucratic hurdles at embassies worldwide.

Long-term Strategic Interventions

a) Digital Economy Enhancement Project (DEEP): Recognizing the imperative to fortify Pakistan's digital infrastructure, NITB is at the helm of the DEEP initiative, aligned with the 2018 Digital Pakistan Policy under the Act of Digital Nation Pakistan (DNP). This ambitious project seeks to construct a holistic enterprise architecture, integrating disparate government databases and systems into unified e-government service portals. In a historic move, the establishment of the Pakistan Digital Authority under the Digital Nation Pakistan Act signals a new era in regulatory oversight for digital transformation. This body is tasked with ensuring that the nation's digital initiatives are executed with precision, transparency, and accountability. In collaboration with key agencies such as the Board of Investment (BoI), the National Database and Registration Authority (NADRA), and Ignite National Technology Fund, DEEP is poised to catalyze inclusive and sustained growth. This transformative endeavor not only enhances the quality and accessibility of public services but also bolsters resilience against potential socio-economic shocks.

Through these meticulously crafted initiatives, NITB is setting unprecedented benchmarks in e-governance, ensuring that both citizens and government entities benefit from efficient, transparent, and future-ready digital services.

ICMA: What is NITB's role in formulating and executing national IT policies and regulations?

CEO NITB: The National Information Technology Board (NITB) stands as a cornerstone in the evolution of Pakistan's digital framework, playing an instrumental role in both crafting and operationalizing national IT policies and regulations. As one of the founding members of Digital Nation Pakistan, NITB is charged with architecting a unified digital ecosystem that transcends provincial divides and ensures cohesive national progress.

The National IT Board's mandate has evolved from mere policy advisory to active execution, thereby translating

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visionary digital policies into actionable initiatives. This dynamic transition empowers us to serve as the executor of strategic plans that drive transformative change across all government tiers.

Moreover, by bridging the gap between strategic policy formulation and practical implementation, the Board ensures that the digital revolution permeates every facet of government operations. The Board's efforts are pivotal in establishing robust digital public infrastructure, catalyzing inclusive economic growth, and positioning Pakistan as a forward-thinking leader in the global digital arena.

We are not just policy architects but transformative executors, redefining the contours of public sector IT management and setting new benchmarks for efficiency and innovation in digital governance.

ICMA: How does NITB ensure the security, reliability, and scalability of government digital systems?

CEO NITB: The National Information Technology Board (NITB) prioritizes security, reliability, and scalability as foundational elements of its digital solutions. Every system is architected with "security by design," ensuring that robust safeguards are integrated from the initial stages of development. This proactive approach mitigates risks and fortifies our infrastructure against evolving cyber threats.

To guarantee system resilience, NITB implements a rigorous, multi-layered testing framework. This includes comprehensive internal testing protocols to identify and remediate vulnerabilities early in the development cycle, followed by stringent external audits conducted by certified third-party security experts. This dual-phase validation process not only confirms compliance with international security standards but also reinforces the integrity of our digital ecosystems.

Additionally, we collaborate closely with relevant governmental agencies to conduct additional security assessments and stress tests, ensuring that each digital solution meets both operational and regulatory benchmarks. By leveraging advanced monitoring tools and continuous improvement practices, we ensure that our platforms remain scalable and responsive to the increasing demands of a dynamic digital environment. This holistic, layered security strategy is instrumental in maintaining the trust of government stakeholders and citizens alike, while supporting Pakistan's broader vision of a secure, efficient, and resilient digital future.

ICMA: What key challenges does NITB face in advancing Pakistan's digital transformation?

CEO NITB: NITB's journey toward a digitally empowered Pakistan is confronted by a triad of interlinked challenges:

a) **Protracted Technology Rollout:** The cycle of conceiving, securing approvals, and deploying new technologies is inherently lengthy. Traditional governmental procedures, while methodical and systematic, are often mired in bureaucratic inertia. This extended timeline is misaligned with the rapid pace required for digital transformation, thereby impeding the swift delivery of efficient public services. To bridge this gap, there is an urgent need to streamline these processes, embracing agile methodologies and innovative governance models that can expedite decision-making and implementation.

b) **Business Process Re-engineering (BPR) Imperatives:** Digitalization doesn't just exceed mere automation of existing workflows; it necessitates a fundamental re-engineering of business processes. This holistic transformation requires rethinking and redesigning legacy systems and operational models to unlock true efficiency and innovation. However, there is a notable reluctance within the public sector to overhaul entrenched practices. The challenge lies in overcoming cultural resistance and developing a mindset that is receptive to change. Implementing robust change management strategies and demonstrating the tangible benefits of BPR are critical to achieving this transformation.

c) **Public Sector Capacity and Workforce Adaptability:** Adaptability is a significant hurdle in the prevailing resistance among public servants toward adopting digital change. This skepticism is often rooted in concerns over job security and a general lack of digital literacy. The current workforce, while experienced, is not sufficiently tech-savvy to fully harness the potential of modern digital tools.

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Addressing this challenge requires a dual approach: first, implementing targeted capacity-building programs to elevate digital competencies; and second, nurturing a culture of continuous learning and innovation that reassures employees about the value of digital transformation rather than viewing it as a threat.

We are navigating a complex landscape where accelerating technology rollout, re-engineering business processes, and upgrading public sector capabilities are imperative. Overcoming these challenges will be pivotal in achieving a seamless, efficient, and inclusive digital transformation that meets the evolving demands of Pakistan's public service delivery.

ICMA: How is NITB utilizing enterprise resource planning (ERP) to enhance government operations?

CEO NITB: Enterprise Resource Planning (ERP) serves as a strategic linchpin in our mission to digitize and streamline governmental processes. At NITB, ERP is not merely a software solution; it is a comprehensive suite of bespoke IT systems, designed to address the unique operational challenges faced by Pakistan's government institutions.

Our approach begins with an in-depth assessment of each agency's operational needs, followed by the custom development of ERP solutions that seamlessly integrate diverse functions such as finance, human resources, supply chain management, and project oversight. By consolidating these disparate systems into a unified digital framework, ERP enhances data transparency, enables real-time analytics, and fosters a culture of agile decision-making across all levels of government. The implementation phase is executed with precision, utilizing agile methodologies to ensure that the ERP rollout is both rapid and scalable.

ICMA: What steps has NITB taken to strengthen cybersecurity and safeguard government data?

CEO NITB: In light of the critical need to bolster cybersecurity within Pakistan's government sector, NITB has instituted a robust, multi-layered defense framework to safeguard every digital product it delivers. Recognizing that cybersecurity maturity in the region requires significant enhancement, NITB's comprehensive approach ensures that each solution is fortified at every stage of its lifecycle. This framework comprises four key layers:

a) **Security by Design:** At the inception of every project, security is an integral component of the design process. This proactive integration ensures that cybersecurity principles are embedded within the architecture, thereby mitigating potential vulnerabilities from the outset and laying a resilient foundation for the system.

b) **In-House Testing:** Post-development, each digital product undergoes rigorous internal testing. Leveraging both automated and manual methodologies, NITB's in-house teams conduct comprehensive assessments to identify and rectify any security gaps, ensuring the solution adheres to stringent internal standards.

c) **Third-Party Validation**: Once internal evaluations confirm the robustness of the product, it is subjected to external testing by certified third-party security experts. This validation not only demonstrates the in-house findings but also provides an unbiased assessment of the system's resilience against evolving cyber threats.

d) **Agency Involvement:** Finally, with all internal and external testing phases satisfactorily completed, the product is presented to relevant governmental agencies. These agencies perform an additional layer of security scrutiny, ensuring that the solution complies with national standards and operational requirements before its full-scale deployment.

By implementing this four-tiered security strategy, NITB not only enhances the reliability and scalability of government digital systems but also ensures continuous improvement in cybersecurity. This layered defense mechanism is essential in ensuring that all digital initiatives are resilient, trustworthy, and capable of protecting sensitive data, thereby supporting Pakistan's broader digital transformation agenda.

ICMA: How does NITB collaborate with public and private sector entities to drive digital governance?

CEO NITB: NITB recognizes that effective digital transformation hinges on comprehensive stakeholder

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engagement. Without the active participation of end-user departments and relevant stakeholders, digitalization remains incomplete. To address this, NITB adopts a "top-down engagement" strategy, ensuring that directives, initiatives, and critical communications cascade seamlessly from senior leadership to entry-level personnel. This hierarchical alignment fosters organizational cohesion and underpins the execution of strategic digital initiatives across all government tiers.

At the core of NITB's collaborative framework is a robust commitment to public-private partnerships. Rather than positioning itself as a conventional software house within the government, NITB strategically leverages the expertise and innovative capabilities of third-party private sector organizations. By sourcing specialized solutions and advanced technological insights from leading industry players, NITB not only enriches the quality of its digital services but also drives competitive innovation within the public sector.

This synergistic model enables a co-working environment where public sector imperatives merge with private sector agility. The integration of external technological expertise ensures that best practices and cutting-edge solutions are incorporated into government operations. Consequently, this collaborative approach accelerates the digitalization process, enhancing service delivery and fostering an ecosystem of continuous improvement.

With this approach, we are not only streamlining digital governance but also paving the way for a more agile, transparent, and citizen-centric public administration. This comprehensive, partnership-driven approach is central to nurturing a resilient digital infrastructure that can effectively respond to evolving challenges and opportunities in the realm of public service delivery.

ICMA: How is NITB enhancing the accessibility and efficiency of digital public services?

CEO NITB: NITB's digital strategy is anchored on three core pillars: Digital Society, Digital Economy, and Digital Governance. In enhancing the accessibility and efficiency of digital public services, the Digital Society initiative takes center stage by transforming how citizens interact with government services through innovative, user-friendly digital solutions.

A flagship example of this strategy is the ICT App Islamabad. This mobile platform consolidates a range of essential services into one streamlined interface—enabling residents to submit vehicle token tax payments, apply for driving or arms licenses, and complete various other administrative tasks with ease. The seamless integration of these services eliminates the need for physical visits and accelerates service delivery while ensuring transparency and accountability.

The success of the ICT App Islamabad is evident in its impressive performance metrics:

• Domicile: Total Applications – 138,366
• IDP: Total Applications – 68,126
• Token Tax: Total Applications – 907,420
• Android Downloads: 600K
• iOS Downloads: 159,000
• Revenue Generated by Token Tax: Rs. 12,446,551,539
• Total Revenue Collected for ETO: Rs. 12,836,665,711.00

These figures not only reflect widespread adoption but also highlight the substantial impact digital solutions can have on public service efficiency and revenue collection. Citizens experience faster, more reliable services, while the government benefits from enhanced operational transparency and improved resource management.

In addition to the ICT App Islamabad, NITB is driving transformative change through initiatives such as the Digital Economy Enhancement Project (DEEP). As a World Bank-assisted endeavor, DEEP is designed to elevate the government's capacity for digitally enabled public service delivery. The project focuses on creating a cohesive digital ecosystem by integrating advanced technologies across multiple sectors. Supported by key partners, including the Ministry of Information Technology and Telecommunication (MoITT), the Board of Investment (BoI), the National Database and Registration Authority (NADRA), and the Ignite National Technology Fund, DEEP is set to revolutionize service delivery by promoting efficiency, inclusivity, and economic growth.

> " **NITB is committed to long-term projects like the Digital Economy Enhancement Project (DEEP), which aims to develop the country's digital infrastructure** "

A citizen-centric approach ensures reliable public-private partnerships, and NITB is at the forefront of Pakistan's digital transformation. Through initiatives like the ICT App Islamabad and DEEP, we are paving the way for a future where government services are more accessible, efficient, and responsive to the evolving needs of our society.

ICMA: What are the primary goals of NITB's digitalization strategy for the next five years?

CEO NITB: NITB's digitalization strategy for the next five years is structured to achieve impactful outcomes across various timeframes:

Short-term Goals: NITB aims to swiftly implement digital solutions to meet immediate needs. For instance, we provided e-licensing services to the Ministry of Tourism for tourist operators in just two weeks, enhancing efficiency and accessibility.

Medium-term Goals: Over the next few months, NITB focuses on creating tailored digital platforms to address specific governmental requirements. An example is the development of a digital Apostille solution for the Ministry of Foreign Affairs, completed in six weeks, streamlining document authentication processes.

Long-term Goals (Comprehensive Strategies): NITB is committed to long-term projects like the Digital Economy Enhancement Project (DEEP), which aims to develop the country's digital infrastructure. This initiative focuses on enhancing the government's capacity for digitally enabled public service delivery to citizens and businesses, fostering a more efficient and accessible digital ecosystem.

We seek to drive digital transformation at the federal, national, and international levels, ensuring that Pakistan remains at the forefront of technological advancement and public service innovation.