

Digital Pakistan Policy

Pakistan

Data Governance

Definitions of Data:

N/A

Main Focus of Document:

Outlines the government's plans regarding digitization

Target Beneficiaries or Sectors:

public, government

Key Elements:

Key elements of the Policy include:

Legislation 1.1. Promulgate necessary policy frameworks, laws and rules to enable creation of a sustainable IT environment including enactment of data protection law that covers: 1.1.1. Protection of personal data and online privacy for improved transparency and security of sensitive and confidential information through appropriate Data Protection law. 1.1.2. Develop a framework for cloud-based services and its regulation which include data classification mechanism, standards for access, data privacy and transparency, ownership and security to promote the adoption of cloud services for better and agile delivery of services to end users. 1.1.3. Continue cooperation with the Ministry of Commerce to formulate an e-Commerce framework/policy guidelines in consultation with relevant stakeholders in e-commerce. This will include measures such as appropriate regulation, tax rationalization, trade facilitation, Online Dispute Resolution (ODR), Consumer Protection and Privacy. 1.1.4. Promote the use of digital signatures to augment data security and authentication. 1.1.5. Amendment of relevant rules/laws related to e-governance such as “Rules of Business”, “Secretariat Instructions” etc. to accommodate electronic workflows, processes and eApprovals/e-Submissions etc.

Infrastructure Development 2.1. Enable cross-sector collaboration with a strategic shift towards a digital ecosystem for maximum economic impact by establishing Software Technology Parks (STPs) and engagement models to promote digitization, research and innovation in new emerging technologies within the ICT as well as other socio-economic sectors.

2.2. Establish state-of-the-art STPs in the federal and provincial capitals and devise a framework for development of STPs in secondary cities that provide relevant world class data and network facilities to SMEs and MNCs. The STPs will have built-in facilities for women and Persons with Disabilities (PWDs) as per international standards. 2.3. Establish National Technology Incubation Centers across the country. STPs will also house an ‘Accelerator’ and ‘Incubation Center’ with attached investment fund to help entrepreneurs and emerging technology startups find stable support and access to the resources they need.

2.4. Promote open digitization infrastructure for shared services including cloud technologies to achieve synergies and economies of scale in both the public and private sectors. 2.5. Provide access to subsidized workspaces, shared services, funding, promotional and accreditation agencies, R&D facilities and professional training. 2.6. Coordination with relevant stakeholders for interoperability to enable any-to-any settlement amongst various existing mobile banking systems specifically with respect to Pakistan’s e-Payment Gateway. 2.7. Establish ‘Telecenters’ across Pakistan to encourage the usage of digital services, promote innovation and help bridge the digital divide. 2.8. Facilitate IT-related innovation through developing smart cities and helping to solve local problems through use of technology.

Human Resource Development, Entrepreneurship, R&I and Freelancing in IT 3.1. Utilize the power of IT to enhance the outreach and quality of education, at all levels, across the country through HRD programs to enhance requisite digital skill set of individuals that are of relevance and value to the IT industry. Initiate programs to train young graduates, freelancers and professionals on market intensive skills through both class room and virtual training sessions. 3.2. Collaborate with relevant stakeholders, including international universities, to advance e-learning for the educational and other strategic sectors to improve our knowledge economy. 3.3. Bridge the gap between industry and academia through a ‘Structured Gap Analysis’ programme by engaging with key stakeholders. Periodic advisories to be issued to all respective stakeholders for implementation with set timelines. 3.4. Design and develop customized programs with a special focus on girls and women. This should aim to ensure socio-economic uplift of a significant percentage of Pakistan's demographics particularly in rural and underserved areas of the country, giving them a stronger voice in their communities and local government as well as at the national and international level. 3.5. Work with industry stakeholders to ensure the provision of equal opportunities of employment for women and girls in the field of IT and to put in place employment policies that encourage their effective participation by removing barriers that hinder career development. 3.6. In alignment with industry demands, execute an internship programme to make young IT graduates market ready on cutting-edge technologies and to enhance the employability of our youth and their development in the latest IT trends such as Internet of Things (IoT), Artificial Intelligence, robotics, fintech, cyber security, Big Data, entrepreneurship. 3.7. Regular review and assessment of supply-demand equilibrium through market studies to make planning and execution more effective. 3.8. Support Startups and the MSME sector through IT skills training and usage, sponsorships, national level competitions, certifications, facilitation for Mergers & Acquisitions (M&A), equity sale and connecting these startups with relevant funding organizations. 3.9. Advance

entrepreneurship and Research and Innovation (R&I) by implementing a paradigm shift towards the strategic exploitation of traditional as well as emerging technology sectors such as robotics, FinTech, augmented/virtual reality, IoT, Big Data and Artificial Intelligence. 3.10. Encourage international collaboration to develop partnerships to promote relevant research and innovation. 3.11. Promote a culture of entrepreneurship through technology incubators within the IT community. Invest in creating the ecosystem that is needed for entrepreneurs to successfully compete in global knowledge economies. 3.12. Promote sector-wise digitization and entrepreneurship by developing viable and cost-effective next generation services, applications and content that is relevant to key economic sectors for mass adoption and commercialization. Promote smart IT applications to facilitate health, education, energy, commerce, agriculture and entertainment sectors. 3.13. Facilitate seed funding to “Proof of Concept” projects of entrepreneurs to encourage localization, content creation and user adoption. 3.14. Collaborate with technology industry associations, academic and industry incubation centers and stakeholders to promote the products produced with seed funding initiatives at national and international forums. 3.15. Create incentives and initiatives for entrepreneurs for indigenous development by helping the domestic IT and ITeS industry to build upon its success in traditional sectors of strength including banking, insurance, health and telecommunication applications. 3.16. Promote National Innovation and Entrepreneurship competitions in emerging ICT technologies across the country and their participation in relevant international events to gain global exposure and to attract international investors. 3.17. Encourage financial institutions and major key industry players for the provision of funding for IT Startups. 3.18. Launch digital skills training programs for freelancers.

Software Exports 4.1 Pursue all measures including legislative, policy, administrative and international marketing measures, to augment software exports, create jobs and contribute towards the government’s efforts to increase overall IT exports and remittances. 4.2 Concentrate on emerging areas of mobile application development, responsive web applications, Big Data analytics, IoT and cloud computing to leverage existing competencies in the Pakistani IT industry and to improve its export potential. 4.3 Focus on moving up the global IT value chain through innovative product development while also exploring new markets where ‘Business Process Outsourcing’ jobs can be created. 4.4 Attract global multinational companies to leverage Pakistan’s talent for backend services by providing appropriate incentives in a transparent manner. 4.5 Promote the domestic software market through public sector projects. 4.6 Utilize the Pakistani Diaspora in North American, European and Middle Eastern markets to enable inclusion of young Pakistani IT entrepreneurs into the global IT value chain. 4.7 Provide an enabling environment for companies to set up venture capital funds, accelerators and other support mechanisms for startup companies. 4.8 Work with public sector relevant stakeholders to develop a conducive business environment for IT Industry. 4.9 Educate IT companies for proper reporting of IT remittances as mandated by SBP. 4.10 Maintain a database by conducting market surveys regarding IT companies’ annual exports, domestic revenues, HR strengths and areas of technical expertise. 4.11 Pursue the placement of ICT Business Development experts at Pakistani embassies, commercial consulates, and offices of the Trade Development Authority of Pakistan (TDAP) to promote and showcase Pakistani IT products and services. For some large markets, such as North America, Europe and the Middle East, dedicated consultants will be hired to spearhead the market development and promotional efforts. 4.12 Encourage equity participation of banks in software projects by setting up venture capital funds. 4.13 Earmark sufficient additional funds and support infrastructure for PSEB to perform its role effectively in promoting IT exports by encouraging Pakistani IT companies’ participation in international IT events, trade fairs and exchange of IT delegations. 4.14 Attract local investors and business groups to invest in the software industry through a comprehensive incentive program. 4.15 Encourage major multinationals operating in Pakistan to set up their software houses in Pakistan and expand their business footprint for serving their domestic and international markets. 4.16 Engage in international marketing campaigns to highlight Pakistan’s software expertise, government initiatives and incentives.

ICT for Girls 5.1. Promote the use of ICT technology among women and girls for their empowerment and to bridge the digital divide. 5.2. Initiate ‘ICT for Girls’ programs across the country for training in computing skills so that girls can have an opportunity to earn. Establish computer labs in girls’ schools of unserved and underserved mandated areas of the country to train women and girls in computing skills (computing, coding, and communication) through collaboration with the private sector. 5.3. Provide incentives to boost digital services and applications for girls’ empowerment (direct-to-mobile strategy) lowering barriers to technology adoption. 5.4. Strengthen international cooperation in the area of access to ICT and active participation of women and girls in the digital society. 5.5. Provide legal protection to women and girls to encourage online participation.

e-Governance

10.1 Enable delivery of public services to citizens through innovative use of ICT. Assist relevant departments in developing technology solutions and platforms for greater productivity and effectiveness in service delivery and its standardization. 10.2 Establish holistic enterprise architecture through the creation of data center clusters at essential sites. Facilitate integration of government databases and software systems to share requisite data and knowledge within the government and with citizens through e-government service portals. 10.3 Enable implementation of e-procurement in all areas of public procurement. 10.4 Enable efficient governance focused platforms for identity/transaction management, payment mechanisms, digital documentation. 10.5 Encourage placement of dedicated IT human resources in government organizations for ownership, change management and successful implementation of e-government initiatives/programmes. 10.6 Establishment of G-Cloud to integrate different databases and to provide a resilient and secure ICT environment.

Enabling the digitization of key socio-economic sectors Ministry of Information Technology and Telecommunications (MoIT) will play the role of an enabler and facilitator, for digitization, providing necessary guidance where required, while relevant federal ministries, divisions and departments will take the lead role for the implementation of policy strategy falling within their domain.

Through this policy, the Federal Government mandates the MoIT to develop an ‘Action Plan’ along with relevant ministries and departments detailing the time frame and outputs. Financial details of each initiative as outlined by the Action Plan will be worked out by the relevant ministries and departments in consultation with MoIT. The key initiatives for ICT enablement and sectorial digitization are detailed as below:

11. e-Agriculture To facilitate and assist the Ministry of National Food Security & Research to: 11.1 Create mobile “Agriculture Information Portal” for collection and dissemination of knowledge regarding price, horticultural diseases with remedial actions, water quality, weather updates and supply/demand data from agricultural commodity markets, on a sustainable model. 11.2 Revamp Geographical Information Systems (GIS) for Pakistan to monitor the environment and plan sustainable agriculture. 11.3 Prepare latest agriculture R&I material in local languages in order to improve its dissemination and agricultural yields. 11.4 Make available agricultural extension services by empowering

and equipping farm extension workers with IT skills. Support farmers through the use of IT in relevant areas such as digital mapping, land use, soil types, meteorology, ecology, oceanography (particularly off-shore fisheries exploitation), hydrology, agricultural records. 11.5 Build ICT capacity in agricultural institutions, farmer organizations and groups based on “train the trainer” concept. 11.6 Effectively utilize the available HR and financial resources for demand side digitization programs as per the mandates of these organizations.

12. e-Health To facilitate and assist the Ministry of National Health services, Regulation and Coordination to: 12.1 Accelerate the use of telemedicine to provide clinical health care to distant rural communities, especially for emergencies. Leverage access to qualified specialists by building an online network of doctors and paramedical staff working directly or remotely with them. 12.2 Promote digitization and automation of existing hospitals to develop a network across the country to facilitate nationwide integration of health related records and data through a central health database/s. Legal requirements including a clear and consistent mechanism for patient data security to be ensured and appropriate instruments to be put in place at all levels. 12.3 Share information for preventive care of dominant disease groups in local languages through appropriate ICT tools and technologies. 12.4 Set e-health service providers accreditation and requisite protocols and standards.
13. e-Energy To facilitate and assist the Ministry of Water and Power to: 13.1 Utilize IT to optimize energy consumption in the domestic, industrial, and retail sectors. 13.2 Establish public-private partnerships with cellular operators and utility providers to utilize 3G/4G network for solutions such as smart grids, demand forecasting and availability of consumer portals to manage energy consumption. 13.3 Promote implementation of a secure wireless Smart Metering system to improve control over electricity consumption and billing, theft, tampering with meters and supply lines. 13.4 Scale and adopt research developed for indigenous energy efficiency solutions.
14. e-Commerce To facilitate and assist the Ministry of Commerce to: 14.1 Create an enabling environment that empowers stakeholders in trade and commerce with the underlying infrastructure to improve productivity and positively position the nation for global competition. 14.2 Establish a national e-commerce gateway with the State Bank of Pakistan (SBP) with the support and coordination of relevant stakeholders to promote internet merchant accounts to facilitate B2B and other in-bound transactions. 14.3 Develop a framework to allow e-banking activities in order to maximize the usage of mobile financial services. 14.4 Encourage the use of e-commerce amongst general public through awareness campaigns to promote a culture of e-commerce in the country which supports electronic business transactions at national, regional and international levels. 14.5 Promote Pakistan as a competitive Foreign Direct Investment (FDI) destination for e-commerce as well as attract local private sector participation and investment in the development of e-commerce solutions and attract international key players in the field. 14.6 Bring Micro Small and Medium Enterprises (MSMEs) and disadvantaged groups online to enhance their effective participation in e-commerce activities. 14.7 Promote the IT enabled logistic systems of Logistic Operators, especially the operations of Pakistan Post. 14.8 Bring regulatory frameworks in-line with international obligations such as those being envisaged under the World Trade Organization (WTO) for signing off fruitful multilateral agreements.
15. e-Justice To facilitate and assist the Ministry of Law and Justice to: 15.1 Encourage use of IT for administration of justice to reduce delays in dispensation of justice, eradicate corruption and remove barriers to easy and equitable access to justice. Automation will provide efficient case management and significantly reduce disposal time of cases. 15.2 Provision of online forms required in various courts. 15.3 Development of online portals for judges to access various kinds of information such as calendar, pending tasks, pending cases and quick links to research tools. 15.4 Support introduction of Online Dispute Resolution (ODR) for low-value civil claims to promote Alternative Dispute Resolution (ADR).
16. Cloud Computing and Big Data To engage with relevant stakeholders like NADRA, FBR, AGPR and ICT Administration to: 18.1 Integrate the Federal Government’s distributed databases to enable data mining and analysis on Big Data through the establishment of state of the art tier 3/4 national level data centers. Enhance the quality of e-government services through real-time integrated management and data analytics. Discourage the establishment of silo IT infrastructure (small islands) in different government offices to mitigate duplication of efforts, HR requirements and operational expenses. 18.2 Integrate national and provincial databases to avert duplication and ensure synergy. 18.3 Remove legal and administrative barriers for exchange of data for citizen-oriented services and pattern analysis. 18.4 Provide cloud-based citizen-centric services for the public, paving the way for subsequent transformation to e/m-government. 18.5 Provide a common infrastructure platform for the public and private sectors for the development and implementation of citizen-centric mobile applications to improve the communication between government and citizens and to improve efficiency, agility and innovation. 18.6 Promote cloud infrastructure and associated delivery models (PaaS, SaaS, and IaaS) to be offered across the globe to attract local and international markets through special incentives programs. 18.7 Focus on capacity building in Big Data and cloud computing to build requisite skills for effective and efficient delivery of new and improved services. 18.8 Provide measures for the security of sensitive business and individual data in a big-data environment.

Artificial Intelligence Authentication Cloud-based services Competition Data Data analytics Data privacy Data protection Data security Digital divide Digital ecosystem Digital infrastructure Digital signature Digital skills Electronic commerce Emerging technologies Innovation Interoperability Internet of Things Internet Mobile Personal data Private sector Research and development (R&D) Smart cities Transparency Virtual reality Youth

Policy/regulation mirrored:

Countries: