



Digital

Khyber Pakhtunkhwa

Khyber Pakhtunkhwa Digital Transformation Policy & Roadmap 2030

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KHYBER PAKHTUNKHWA
INFORMATION
TECHNOLOGY
BOARD





PART ONE

Digital Transformation Policy

Defines the Government's long-term vision, principles, and governance framework for digital transformation across Khyber Pakhtunkhwa. It establishes the policy direction, institutional responsibilities, and guiding standards to ensure a secure, citizen-centric, and Whole-of-Government digital ecosystem.

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Leadership Foreword

“Our vision for Khyber Pakhtunkhwa is to lead a digital revolution that transforms governance, empowers our youth with future-ready skills, and unlocks unprecedented economic opportunities. By leveraging innovation and technology, we are creating a transparent, inclusive, and prosperous province where every citizen has the tools to succeed in a dynamic, interconnected world.”



MUHAMMAD SOHAIL AFRIDI

Chief Minister, Khyber Pakhtunkhwa

“Digital governance, a robust digital economy, and a future-ready workforce are the pillars of sustainable progress. By harnessing the power of emerging technologies, we aim to revolutionize public service delivery, drive industrial innovation, and empower our youth with the skills to lead in a competitive global market. Our vision is to uplift industries, foster economic resilience, and position Khyber Pakhtunkhwa as a leader in technological transformation and inclusive growth.”



SHAHAB ALI SHAH

Chief Secretary, Khyber Pakhtunkhwa

“Empowering Digital Future embodies our vision of ‘One Stop, Non Stop, Any Stop Government,’ transforming governance with a citizen-centric approach. By reimagining public services to be accessible, transparent, and efficient, ST&IT is driving empowerment, innovation, and inclusivity. Together, we are building a future-ready Khyber Pakhtunkhwa, where technology fuels growth, governance, and opportunity for all.”



ABDUL BASIT

Secretary ST&IT, Khyber Pakhtunkhwa

Message from the Managing Director

Khyber Pakhtunkhwa Digital Transformation Policy & Roadmap 2030

It gives me immense pleasure to present the Khyber Pakhtunkhwa Digital Transformation Policy & Roadmap 2030, a landmark framework for building a digitally empowered, inclusive, and future-ready Khyber Pakhtunkhwa.

This Policy & Roadmap represents the most comprehensive digital transformation agenda undertaken in the province. Developed through assessments of 33 government departments, 180 academic institutions, and 74 IT companies, and refined through 186 stakeholder consultations, it establishes a clear pathway towards a digitally enabled government, society, and economy. It encompasses 9 strategic goals, 5 transformation pillars, 32 thematic domains, 144 measurable outcomes, and more than 900 strategic interventions that will guide the province's digital journey through 2030.

Anchored around the DIGIT Framework—Digitize, Include, Grow, Innovate, and Trust—the Policy & Roadmap provides a comprehensive approach to modernizing public services, expanding digital inclusion, accelerating economic growth, fostering innovation, and strengthening trust in digital systems.

At its core, this Policy & Roadmap is about people. It seeks to improve citizen experiences, create opportunities for youth and businesses, and ensure that every community can benefit from the opportunities of the digital age.

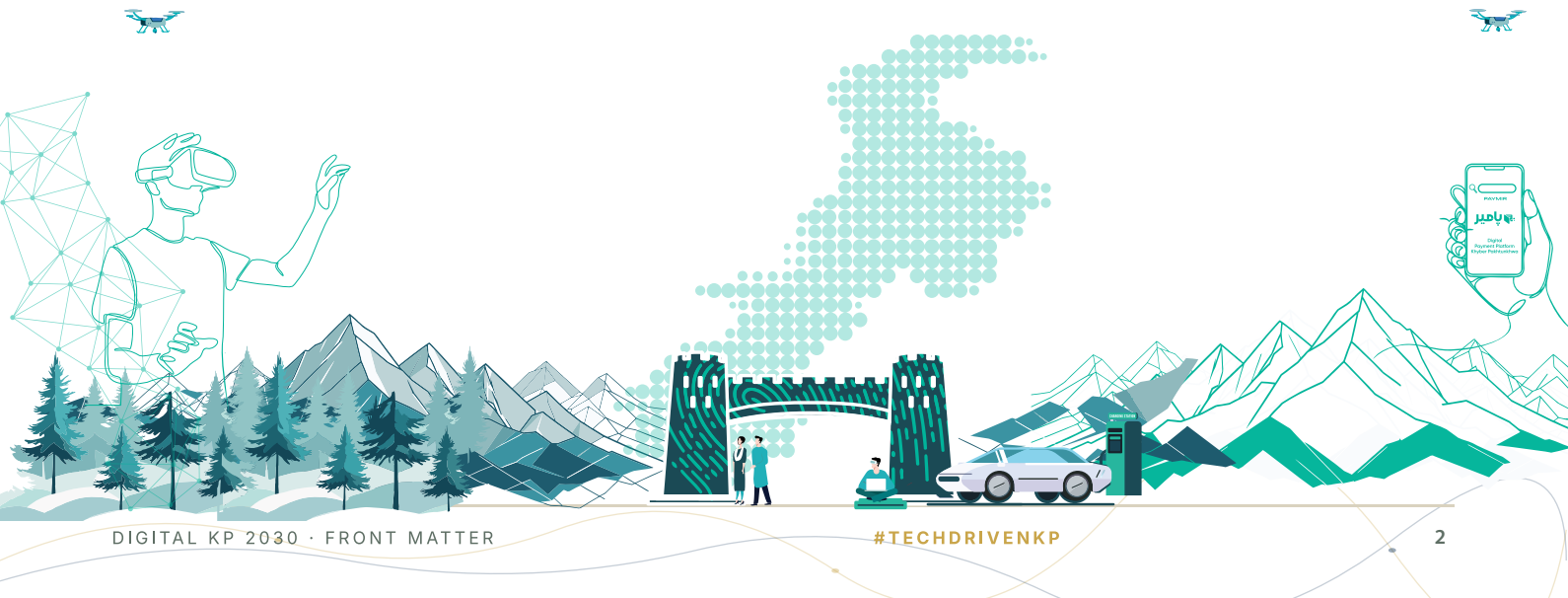
I extend my sincere appreciation to all government departments, academic institutions, industry representatives, development partners, and stakeholders whose valuable contributions helped shape this Policy & Roadmap. I also acknowledge the dedication of the KPITB team and all contributors who transformed a shared vision into a practical framework for action.



Dr. Muhammad Akif Khan, Tamgha-i-Imtiaz (e-Governance)

Managing Director, KPITB

Government of Khyber Pakhtunkhwa



I Preamble

Digital transformation is reshaping how governments govern, economies compete, and societies prosper. Around the world, governments are leveraging digital technologies, data, Artificial Intelligence (AI), Digital Public Infrastructure (DPI), and innovation to deliver responsive, transparent, secure, and citizen-centric public services while driving inclusive economic growth, social development, and sustainable prosperity.

Recognizing this global transformation and the evolving expectations of citizens, businesses, and public institutions, the Government of Khyber Pakhtunkhwa places digital transformation at the centre of its governance and development agenda. The Government recognizes that digital technologies are no longer merely tools for administrative efficiency; they are strategic enablers for modernizing public institutions, transforming service delivery, strengthening economic competitiveness, fostering innovation, improving resilience, and enhancing the quality of life of every citizen.

The Khyber Pakhtunkhwa Digital Transformation Policy & Roadmap 2030 (Digital KP 2030) establishes the Province's overarching policy and strategic framework for planning, governing, implementing, and continuously advancing digital transformation across the public sector. It provides a shared vision, guiding principles, strategic priorities, and implementation directions to ensure that all government entities pursue a coordinated Whole-of-Government and Whole-of-Society approach toward building a digitally empowered province.

The Policy promotes the development of a secure, interoperable, and inclusive digital ecosystem built upon Digital Public Infrastructure (DPI), Government Enterprise Architecture, trusted digital identity, digital payments, secure data exchange, cloud-enabled government platforms, cybersecurity, privacy, Artificial Intelligence, and other emerging technologies. These foundational capabilities will enable integrated public services, data-driven governance, evidence-based policymaking, innovation, and seamless collaboration across government institutions while strengthening transparency, accountability, resilience, and public trust.

Digital KP 2030 further recognizes that successful digital transformation extends far beyond technology. It requires visionary leadership, institutional reform, effective governance, policy coherence, digital skills, workforce transformation, regulatory modernization, strategic partnerships, sustainable investment, and a culture of continuous innovation. Accordingly, the Policy seeks to accelerate the development of an innovation-driven digital economy, cultivate future-ready human capital, expand equitable access to digital opportunities, bridge the digital divide, and ensure that no citizen is left behind regardless of geography, gender, age, disability, or socio-economic status.

Aligned with the Government of Pakistan's Digital Nation Pakistan initiative, national development priorities, the Sustainable Development Goals (SDGs), and internationally recognized digital government principles, frameworks, and best practices, this Policy establishes the strategic foundation for positioning Khyber Pakhtunkhwa as Pakistan's leading digitally empowered, innovation-driven, and future-ready province. Through the adoption of Digital Public Infrastructure (DPI), interoperable government platforms, trusted digital identity, secure data ecosystems, Artificial Intelligence (AI), and emerging technologies, the Policy seeks to transform governance, modernize public service delivery, accelerate inclusive economic growth, strengthen institutional resilience, foster innovation, and enhance the quality of life for all citizens while creating sustainable public value for present and future generations.

2 Scope and Applicability

This Policy shall apply to all Government Departments, Attached Departments, Autonomous Bodies, Local Governments, Public Sector Organizations, and entities receiving public funding for digital transformation initiatives. All government entities shall align their digital transformation initiatives, strategies, projects, and investments with the objectives and principles of this Policy.

3. VISION & MISSION

3.1 Vision

WHERE WE ARE GOING

Transform Khyber Pakhtunkhwa into a globally recognized hub for digital innovation, efficiency, and citizen-centric governance through the establishment of a sustainable and inclusive digital ecosystem by 2030.

3.2 Mission

HOW WE GET THERE

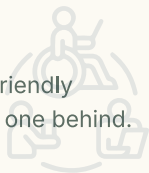
Accelerate equitable socio-economic growth by leveraging digital technologies, fostering innovation, and ensuring secure, accessible, and sustainable digital services through Digital Public Goods for inclusive and citizen-centric governance.

4 Principles

The implementation of the Digital KP Policy 2030 shall be guided by the following principles:

Citizen-Centric and Inclusive

Ensure accessible, affordable, and user-friendly digital services for all citizens, leaving no one behind.



Digital by Default

Deliver government services and processes digitally by default, supported by the Once-Only principle and assisted access where required.



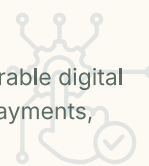
Whole-of-Government

Enable integrated, interoperable, and seamless service delivery through shared platforms, standards, and data exchange.



Digital Public Infrastructure

Promote secure, reusable, and interoperable digital foundations, including digital identity, payments, cloud, and data exchange platforms.



Privacy, Security and Trust

Safeguard personal data, strengthen cybersecurity, and ensure secure, resilient, and trustworthy digital systems.



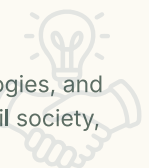
Transparency and Accountability

Foster open government, digital rights, ethical AI, citizen participation, and data-driven decision-making.



Innovation and Collaboration

Encourage innovation, emerging technologies, and partnerships with academia, industry, civil society, and development partners.



Sustainability and Adaptability

Advance environmentally sustainable digital development and continuously evolve through learning, feedback, and technological change.



Objectives

The Government shall:

- ◆ Promote Digital-First Governance across all public institutions.
- ◆ Deliver integrated, citizen-centric, and accessible public services.
- ◆ Develop Digital Public Infrastructure as a foundation for digital transformation.
- ◆ Expand digital inclusion, connectivity, and digital skills.
- ◆ Foster innovation, entrepreneurship, and a competitive digital economy.
- ◆ Accelerate digital payments and financial inclusion.
- ◆ Enable responsible adoption of Artificial Intelligence and emerging technologies.
- ◆ Strengthen cybersecurity, privacy, and digital trust.
- ◆ Promote open government, transparency, and data-driven decision-making.
- ◆ Advance environmentally sustainable and climate-resilient digital development.

6 Pillars



I Digitize

Transform public services, institutions, and government operations through digital technologies.



II Include

Expand digital access, literacy, and participation for all citizens.



III Grow

Strengthen the digital economy, entrepreneurship, and technology sector development.



IV Innovate

Promote innovation, research, and adoption of emerging technologies.



V Trust

Ensure cybersecurity, digital trust, privacy, resilience, and responsible use of technology.

7 Strategic Goals

To realize the vision of a digitally empowered, inclusive, innovative, and trusted Khyber Pakhtunkhwa, the Government shall pursue the following strategic goals:

GOAL 1

Digital-First Government

Transform government operations through digital technologies, integrated platforms, automation, and data-driven decision-making to improve efficiency, transparency, and accountability.

GOAL 2

Seamless Public Service Delivery

Deliver seamless, accessible, and user-centric public services through integrated digital channels that improve citizen experience and satisfaction.

GOAL 3

Digital Access and Inclusion for All

Expand equitable access to digital connectivity, devices, digital literacy, and digital opportunities for all citizens, particularly underserved and marginalized communities.

GOAL 4

Future-Ready Human Capital

Develop a digitally skilled, innovative, and future-ready workforce equipped to thrive in an increasingly digital economy and society.

GOAL 5

Women's Digital Empowerment

Promote the participation, leadership, and economic empowerment of women through equitable access to digital technologies, skills, entrepreneurship, and employment opportunities.

GOAL 6

Digital Economy and Financial Inclusion

Accelerate the growth of the digital economy by fostering innovation, entrepreneurship, technology investment, digital trade, and inclusive digital financial services.

GOAL 7

Innovation and Emerging Technologies

Promote responsible adoption of artificial intelligence and emerging technologies to enhance public services, economic competitiveness, research, and innovation.

GOAL 8

Sustainable & Climate-Resilient Digital Economy

Leverage digital technologies to support environmental sustainability, climate resilience, efficient resource management, and sustainable development outcomes.

GOAL 9

Trusted, Transparent, and Accountable Government

Strengthen public trust through cybersecurity, privacy protection, open government, responsible use of data, transparency, accountability, and citizen participation.

8 Policy Statements

Digital-First Government

Government institutions shall progressively digitize administrative processes, records, communications, and service delivery mechanisms to improve efficiency, transparency, accountability, and responsiveness.

Digital Public Infrastructure

The Government shall establish and strengthen Digital Public Infrastructure, including digital identity, digital payments, government cloud services, interoperability platforms, and secure data exchange mechanisms as foundational enablers of digital transformation.

Data Governance and Open Data

Government data shall be managed as a strategic public asset through appropriate governance, interoperability, quality, security, and open data frameworks to support evidence-based decision-making and transparency.

Citizen-Centric Service Delivery

Public services shall be designed around the needs of citizens and businesses, ensuring accessibility, simplicity, inclusion, responsiveness, and multi-channel service delivery.

Digital Inclusion and Human Capital

The Government shall promote universal digital access, digital literacy, digital skills development, and equitable participation in the digital society and economy, particularly for women, youth, persons with disabilities, and underserved communities.

Digital Economy and Innovation

The Government shall foster innovation, entrepreneurship, digital trade, technology investment, research, and emerging technology adoption to support economic growth, job creation, and competitiveness.

Artificial Intelligence and Emerging Technologies

Artificial Intelligence and emerging technologies shall be adopted responsibly to improve governance, public services, and economic development while ensuring transparency, fairness, accountability, human oversight, and ethical use.

Cybersecurity, Privacy, and Digital Trust

All public sector digital systems shall comply with cybersecurity, privacy, digital identity, and data protection requirements to safeguard citizens, businesses, and government digital assets.

Open Government and Digital Rights

The Government shall promote transparency, citizen participation, open government, digital rights, and responsible use of digital technologies to strengthen public trust and accountability.

Green and Sustainable Digital Development

Digital transformation initiatives shall support environmental sustainability, climate resilience, and responsible use of resources through sustainable digital practices and green technologies.

9 Governance Framework

Implementation shall follow a three-tier institutional structure:

INSTITUTION / BODY	MANDATE	ROLE
KP Digital Council	Apex provincial body responsible for policy oversight, strategic direction, interdepartmental coordination, prioritization of digital initiatives, and monitoring implementation progress.	Policy / Strategic
KPITB	Provincial lead agency responsible for digital transformation coordination, technical guidance, standards development, implementation support, capacity building, and monitoring of policy implementation.	Technical
Departmental Implementation Forum (DIF)	Operational arm in every department. Chaired by Administrative Secretary. Translates provincial strategy into departmental plans.	Implementation & Operations

9.1 Regulatory Alignment

Government entities shall align digital transformation initiatives with applicable laws, regulations, standards, and policies relating to data protection, cybersecurity, digital transactions, public sector governance, and emerging technologies.

10–13. Sustaining the Policy

10 Financing and Sustainability

The Government shall ensure sustainable financing for digital transformation through public investments, development programs, public-private partnerships, development partner support, innovation funds, and other approved financing mechanisms.

11 Monitoring, Evaluation and Reporting

A provincial monitoring and evaluation framework shall be established to assess implementation progress through measurable indicators, performance reporting, and periodic reviews. The Policy shall be reviewed at least every three years or earlier as required by technological, regulatory, or strategic developments.

12 Policy Review and Continuous Improvement

The Government of Khyber Pakhtunkhwa recognizes that digital technologies, citizen expectations, and governance models evolve rapidly. Accordingly, this Policy shall serve as a dynamic framework that remains responsive to technological advancements, emerging opportunities, evolving risks, and changing socio-economic priorities.

The Government shall periodically review and update the Policy, associated strategies, standards, and implementation frameworks to ensure continued relevance and effectiveness. Such reviews shall be informed by performance assessments, stakeholder consultations, citizen feedback, international best practices, and emerging technology trends.

The Digital KP Strategy and Roadmap shall be updated periodically to reflect implementation progress, lessons learned, innovation opportunities, and evolving government priorities, while remaining aligned with the objectives and principles of this Policy.

13 Effective Date

This Policy shall come into force upon approval by the Provincial Cabinet of Government of Khyber Pakhtunkhwa and shall remain effective until 2030 unless amended, superseded, or extended by the Government.

II

PART TWO

Strategy & Roadmap 2025–2030

The Strategy & Roadmap outlines the Province's strategic priorities and phased implementation plan for achieving the Digital KP 2030 vision. It defines the key transformation initiatives, timelines, governance arrangements, and performance indicators required to deliver a secure, inclusive, and citizen-centric digital government by 2030.

From Vision to Action

Khyber Pakhtunkhwa (KP) is embarking on a journey to become Pakistan's leading digital province by 2030, driven by a citizen-centric vision that harnesses innovation, inclusivity, and excellence in governance. Building upon the Khyber Pakhtunkhwa Good Governance Strategy 2019, the Digital KP 2030—a comprehensive Digital Transformation Strategy and Roadmap to modernize government, accelerate economic growth, strengthen institutional resilience, and foster an inclusive digital society.

The Province enters this transformation with a strong digital foundation comprising a modern Tier-III Government Data Centre, an expanding portfolio of government digital platforms, and a vibrant technology ecosystem. At the heart of this ecosystem is DASTAK, the Government's globally award-winning Unified Digital Public Service Delivery Platform, providing citizens and businesses with a single digital gateway to government services. Complementing this is Khyber Pass, Pakistan's first provincial Digital Identity Platform, enabling secure digital identity, authentication, and seamless access to public services. Together with Paymir, the Province's integrated digital payment gateway, these flagship platforms form the foundation of Khyber Pakhtunkhwa's Digital Public Infrastructure (DPI), enabling secure, interoperable, and citizen-centric digital governance.

We define Digital as

Digital for Khyber Pakhtunkhwa is not just about technology—it is a strategy to drive governance excellence, economic prosperity, and citizen empowerment through innovation and inclusivity.

The Strategy is built around nine Strategic Goals, six Strategic Pillars, and more than 900 transformational interventions, providing a structured framework to guide the Province's digital transformation through 2030. At its core is the DIGIT Framework—Digitize, Include, Grow, Innovate, and Trust—which aligns digital investments, institutional reforms, and innovation initiatives through a coordinated Whole-of-Government approach. The Strategy integrates Digital Public Infrastructure, Enterprise Architecture, Government-as-a-Platform, Artificial Intelligence, Digital Payments, Cybersecurity, Data Governance, and Digital Trust into a unified transformation agenda that strengthens governance, enhances public services, and stimulates sustainable economic growth.

Delivery is governed by a three-tier institutional arrangement: the KP Digital Council for policy direction and political ownership; a Digital Transformation Unit (DTU) at KPITB as the technical backbone; and Departmental Implementation Forums with e-Governance Units for on-ground execution — reinforced by enablers such as the KP Enterprise Architecture, Integration Framework and Open API Governance Layer.

By 2030, Digital KP envisions a government that is digital by default, integrated by design, secure by principle, and citizen-centric by purpose. Digital KP 2030 is a transformation agenda that will deliver seamless public services, empower citizens and businesses, strengthen institutional performance, foster innovation and digital economic growth, and position Khyber Pakhtunkhwa as Pakistan's benchmark for digital government and a globally recognized leader in inclusive, trusted, and sustainable digital transformation.

90%

REDUCTION IN
MANUAL PROCESSES

70%

DIGITAL-
TRANSACTION
ADOPTION

100k+

AI-TRAINED
PROFESSIONALS

2030

A DIGITALLY NATIVE
PROVINCE

III

PART THREE

Guiding Principles & Value Proposition

The Government of Khyber Pakhtunkhwa's approach to digital transformation — the vision, values and promise that anchor everything that follows.

Vision, Mission & Principles

VISION

Transform Khyber Pakhtunkhwa into a globally recognised hub for digital innovation, efficiency and citizen-centric governance through a sustainable and inclusive digital ecosystem by 2030.

MISSION

Accelerate equitable socio-economic growth by leveraging digital technologies, fostering innovation, and ensuring secure, accessible and sustainable digital services through Digital Public Goods — for inclusive, citizen-centric governance.

GUIDING PRINCIPLES

Inclusivity

No citizen left behind; marginalised communities prioritised for equal access.

Digital Public Goods

Open, interoperable, reusable infrastructure driving innovation and equity.

Innovation

Experimentation and agility via sandboxes, emerging tech and PPPs.

Transparency

Open data, ethical AI governance and digital-rights protection.

Collaboration

Co-creation with citizens, academia, industry and global partners.

Sustainability & Adaptability

Green, resource-efficient tech, continuously refined on real-time feedback.

STRATEGIC OBJECTIVES

- ◆ Deliver seamless, efficient government services through technology.
- ◆ Implement a cashless economy for financial inclusion and transparency.
- ◆ Establish green initiatives for environmental sustainability.
- ◆ Build digital skills for youth and professionals.
- ◆ Use AI, Big Data and automation to improve decisions and efficiency.
- ◆ Foster a thriving technology-entrepreneurship environment.
- ◆ Strengthen cybersecurity across public and private digital assets.
- ◆ Bridge the digital divide via broadband and digital literacy.
- ◆ Institutionalise a whole-of-government approach via an enabling legal framework.

VALUE PROPOSITION

Citizen-Centric Digital Governance	Seamless service access via integrated platforms; secure digital identity (Khyber Pass).
Economic Growth & Empowerment	Accelerating fintech and digital payments (Paymir), supporting startups and SMEs, and a skilled digital workforce.
Smart Infrastructure & Connectivity	Broadband expansion, secure interoperable platforms (Digital Khyber Stack), and strong cybersecurity.
AI-Driven Innovation	AI and Big Data for predictive analytics, evidence-based policymaking and emerging-tech adoption.
Sustainability &	SDG alignment, climate-tech (Carbon Credit Registry), and financial and digital inclusion.

KP's Existing Digital Ecosystem

Digital KP 2030 does not start from zero. The province enters this decade with real infrastructure, a maturing industry and proven flagship platforms — a foundation ready to be scaled.

Tier-3

GOVERNMENT DATA
CENTER

300+

GOVERNMENT
DIGITAL ASSETS

80+

IT ENTERPRISES

8,000+

IT GRADUATES / YEAR

FLAGSHIP INTERVENTIONS

DIGITAL PUBLIC INFRASTRUCTURE

Khyber Pass



Digital identity mechanism — secure, one-click authentication across services.

Paymir



The province's digital payment gateway and wallet, enabling cashless government transactions.

DPIC



Enables secure, interoperable, and reusable digital platforms powering connected government services.

GOVERNMENT TRANSFORMATION

DASTAK



Unified public-service delivery platform — the single front door for citizens and businesses.

DTU



Coordinates digital transformation initiatives and accelerates whole-of-government implementation.

INNOVATION

AI Innovation Hub



Drives responsible AI adoption through research, innovation, governance, intelligent automation, and AI-powered public services.

KPVerse



Empowers startups, IT enterprises, and digital entrepreneurs through world-class infrastructure, incubation, and industry partnerships.

Upskill KP



Develops future-ready talent in AI, cybersecurity, cloud computing, software engineering, and emerging technologies to power the digital economy.

CYBERSECURITY

KP CERC

Strengthens government cyber resilience through continuous monitoring, threat detection, incident response, and cybersecurity operations.



*AS OF JUNE 2026

IV

PART FOUR

Strategic Direction

Nine interconnected goals that define a Digitally Native Khyber Pakhtunkhwa — a province where technology is not just an enabler, but a core ethos of public-service excellence, equity and empowerment.

A Digitally Native Khyber Pakhtunkhwa

At the heart of Digital KP 2030 lies a bold, integrated framework of nine interconnected goals. These are not isolated targets but a unified transformation agenda — reimagining governance, empowering citizens, driving inclusive growth and embedding ethical innovation at every level of society. Together they lay the foundation for a province where technology drives excellence, equity, sustainability and empowerment by 2030.

GOAL 1 · DIGITIZE

Digital-First Governance*Government 2.0*

GOAL 2 · DIGITIZE

Seamless Public Service Delivery*Services at Your Fingertips*

GOAL 3 · INCLUDE

Inclusive Digital Access for All*No One Left Offline*

GOAL 4 · INCLUDE

Future-Ready Workforce*Next-Gen Talent*

GOAL 5 · INCLUDE

Women-Led Digital Revolution*Queens of Code*

GOAL 6 · GROW

Cashless & FinTech Economy*Cash Out, Tech In*

GOAL 7 · INNOVATE

AI-Driven Smart Governance*AI Runs the Show*

GOAL 8 · INNOVATE

Sustainable & Climate-Resilient Digital Economy*Green Tech Rising*

GOAL 9 · TRUST

Open, Accountable Governance*Trust You Can See*



GOAL 1 · DIGITIZE

Digital-First Governance

Government 2.0

OUTCOME A fully digitized, interoperable, citizen-centric government that eliminates administrative inefficiencies and ensures seamless service delivery across all departments.

- ◆ Mandate AI-driven digital workflows — e-File, digital signatures and automated approval chains via the Gov360 Paperless Office ecosystem.
- ◆ Integrate all services into DASTAK 2.0 with API-driven interoperability and single sign-on using Khyber Pass Digital ID.
- ◆ Enforce Zero-Trust Architecture and a Cybersecurity Framework — Cyber Team penetration testing and GovSOC for real-time threat monitoring.
- ◆ Implement Government-as-a-Platform (GaaP) — reusable components (eID, ePayments, eKYC) on GovStack architecture.
- ◆ Establish a Government Process Innovation Lab to eliminate redundancies.

SIGNATURE INITIATIVES

Gov360 · DASTAK 2.0 · Khyber Pass · GovSOC · GaaP / GovStack

KPIS BY 2030

Paperless Government Processes **100%**

Digital File & Workflow Adoption **100%**

Whole-of-Government Platform Adoption **100%**



GOAL 2 · DIGITIZE

Seamless Public Service Delivery

Services at Your Fingertips

OUTCOME Accessible, efficient and equitable government services for every citizen — regardless of location or literacy level.

- ◆ Universalise the DASTAK portal with 100% digitised services and Voice2Gov integration for low-literacy citizens.
- ◆ Deploy AI-powered multilingual chatbots (KPBOT — Urdu, Pashto, English) and AI virtual assistants for real-time support.
- ◆ Launch Mobile Citizen Facilitation Centers and a government-franchise model, with Women- & Minority-friendly service desks.
- ◆ Implement participatory governance — digital budget planning and policy feedback.
- ◆ Integrate AI-based sentiment analysis to refine services on citizen perception.

SIGNATURE INITIATIVES

DASTAK · Voice2Gov · KPBOT · Mobile CFCs

KPIS BY 2030

End-to-End Digital Government Services **100%**

Reduction in Average Service Delivery Time **70%**

AI-Enabled Public Services **100%**



GOAL 3 · INCLUDE

Inclusive Digital Access for All*No One Left Offline*

OUTCOME Universal access to affordable connectivity, devices and IT services, and digital literacy — bridging the divide for women, persons with disabilities and rural communities.

- ◆ Expand province-wide fibre-optic networks and free Wi-Fi zones in schools, hospitals and markets.
- ◆ Launch subsidised device programmes for women, students and rural communities, paired with AI-driven digital-literacy bootcamps.
- ◆ Implement ICT accessibility tools — voice navigation, text-to-speech and gesture-based UI for persons with disabilities.
- ◆ Establish Digital Community Centers (Digital Connects) in underserved regions for e-learning and freelancing.
- ◆ Deploy GovNet secure connectivity across government departments.

SIGNATURE INITIATIVES

Digital Connects · GovNet · Device Financing
· Literacy Bootcamps

KPIS BY 2030

Digital Inclusion Index	Significantly Improved
Digital Literacy & Skills	Province-Wide
Access to Digital Public Services	Universal



GOAL 4 · INCLUDE

Future-Ready Workforce*Next-Gen Talent*

OUTCOME A globally competitive talent pool in AI, cybersecurity and emerging technologies — youth employable in tech sectors by 2030.

- ◆ Establish Schools / Centers of AI, Cybersecurity and Digital Games with GPU-based data centers.
- ◆ Upskill government officials via AI upskilling programmes and international IT certifications.
- ◆ Launch AI Grand Challenges and Tech Fellowships to solve governance and climate-resilience problems.
- ◆ Partner with universities for emerging-tech curriculum integration (AI, IoT, metaverse).
- ◆ Incubate startups in Drushal Divisional Innovation Centers.

SIGNATURE INITIATIVES

School of AI · Drushal · GPU Data Center ·
Global Certifications

KPIS BY 2030

Future-Ready Digital Workforce	100,000+
Government Officials Upskilled	100,000+
Youth with Global Tech Certifications	15,000+



GOAL 5 · INCLUDE

Women-Led Digital Revolution

Queens of Code

OUTCOME Gender-inclusive digital growth and leadership — women leading tech jobs, IT startups and innovation in fintech, healthtech and edtech.

- ◆ Train women in AI, coding and freelancing through Mother-Daughter digital bootcamps and Women-in-Tech scholarships.
- ◆ Reserve IT Park spaces for women-led startups and create Women-Inclusive Innovation Labs.
- ◆ Launch microfinancing for women entrepreneurs and remote work hubs for home-based businesses.
- ◆ Establish a Women Tech Think Tank to advise on digital policies and gender equity in AI governance.

SIGNATURE INITIATIVES

Women-in-Tech Scholarships · Women Innovation Labs · Women Tech Think Tank

KPIs BY 2030

Women trained in tech	At scale
IT Park spaces reserved	Women-led
Women Tech Think Tank	Operational



GOAL 6 · GROW

Cashless & FinTech-Driven Economy

Cash Out, Tech In

OUTCOME A thriving digital economy with seamless financial inclusion — where SMEs, farmers and artisans transact and access credit digitally.

- ◆ Scale the Paymir digital wallet, integrating QR-code payments and biometric authentication.
- ◆ Mandate digital revenue collection with AI-driven fraud detection and real-time payment dashboards.
- ◆ Launch FinTech Regulatory Sandboxes and a FinTech Startup Acceleration Fund.
- ◆ Promote digital financial literacy in schools and among SMEs.
- ◆ Integrate with 1Link / national payment systems; enforce a No Cash Collection policy.

SIGNATURE INITIATIVES

Paymir · FinTech Sandbox · QR Payments · G2P / P2G Ecosystem

KPIs BY 2030

Digital payment transactions	70%
Receipts / disbursements via wallet	100%
Government QR payment systems	100%



GOAL 7 · INNOVATE

AI-Driven Smart Governance

AI Runs the Show

OUTCOME Proactive, data-driven decision-making and automated governance — AI and IoT optimising planning, welfare and urban life.

- ◆ Deploy the KP Local Language Model (LLM) / KP GovGPT for policy analysis in Urdu/Pashto and AI-powered predictive analytics.
- ◆ Implement IoT-based smart traffic systems and Digital Twin Cities.
- ◆ Integrate an AI Ethics Framework to ensure bias-free algorithms in welfare, social protection and policing.
- ◆ Establish an AI Governance Policy and a Provincial AI Regulatory Unit for compliance.

SIGNATURE INITIATIVES

KP GovGPT · Digital Twin Cities · Provincial AI Regulatory Unit

KPIs BY 2030

GovGPT in core departments	100%
Departments w/ AI dashboards	80%
Divisional digital twins	All divisions



GOAL 8 · INNOVATE

Sustainable & Climate-Resilient Digital Economy

Green Tech Rising

OUTCOME Green growth powered by tech innovation — a carbon-neutral digital economy with green data centers and monetised emission reductions.

- ◆ Establish green-certified data centers and solar-powered IT infrastructure; launch the KP Carbon Credit Registry to monetise emission reductions.
- ◆ Deploy AI dashboards to monitor GHG emissions and sustainability metrics.
- ◆ Promote circular-economy practices among SMEs and green digital procurement.
- ◆ Support climate-tech startups in renewable energy and smart agriculture; integrate green skills into education.

SIGNATURE INITIATIVES

Carbon Credit Registry · Green Data Centers · GHG Dashboards

KPIs BY 2030

Digital carbon footprint	Reduced
Green Digital Transformation Index	Annual
Carbon Credit Registry	Operational



GOAL 9 · TRUST

Open, Accountable & Citizen-Centric Governance

Trust You Can See

OUTCOME Transparent governance with real-time citizen oversight — where citizens monitor budgets, access open data and report issues through AI-audited channels.

- ◆ Establish a Real-Time Budget Tracker for public access to government expenditure.
- ◆ Expand the KP Open Data Portal with non-sensitive datasets and public APIs.
- ◆ Deploy AI-audited grievance-redressal systems for accountability in service delivery; introduce a Public Trust Index to measure government credibility and responsiveness.
- ◆ Implement Citizen-Controlled Consent Management for data privacy; promote civic-tech innovation.

SIGNATURE INITIATIVES

Open Data Portal · Real-Time Budget Tracker
· Public Trust Index

KPIS BY 2030

Digital Trust Index **Live & monitored**

Non-sensitive datasets published **100%**

Open budget dashboards **All departments**

PART 4 · SEQUENCING LOGIC

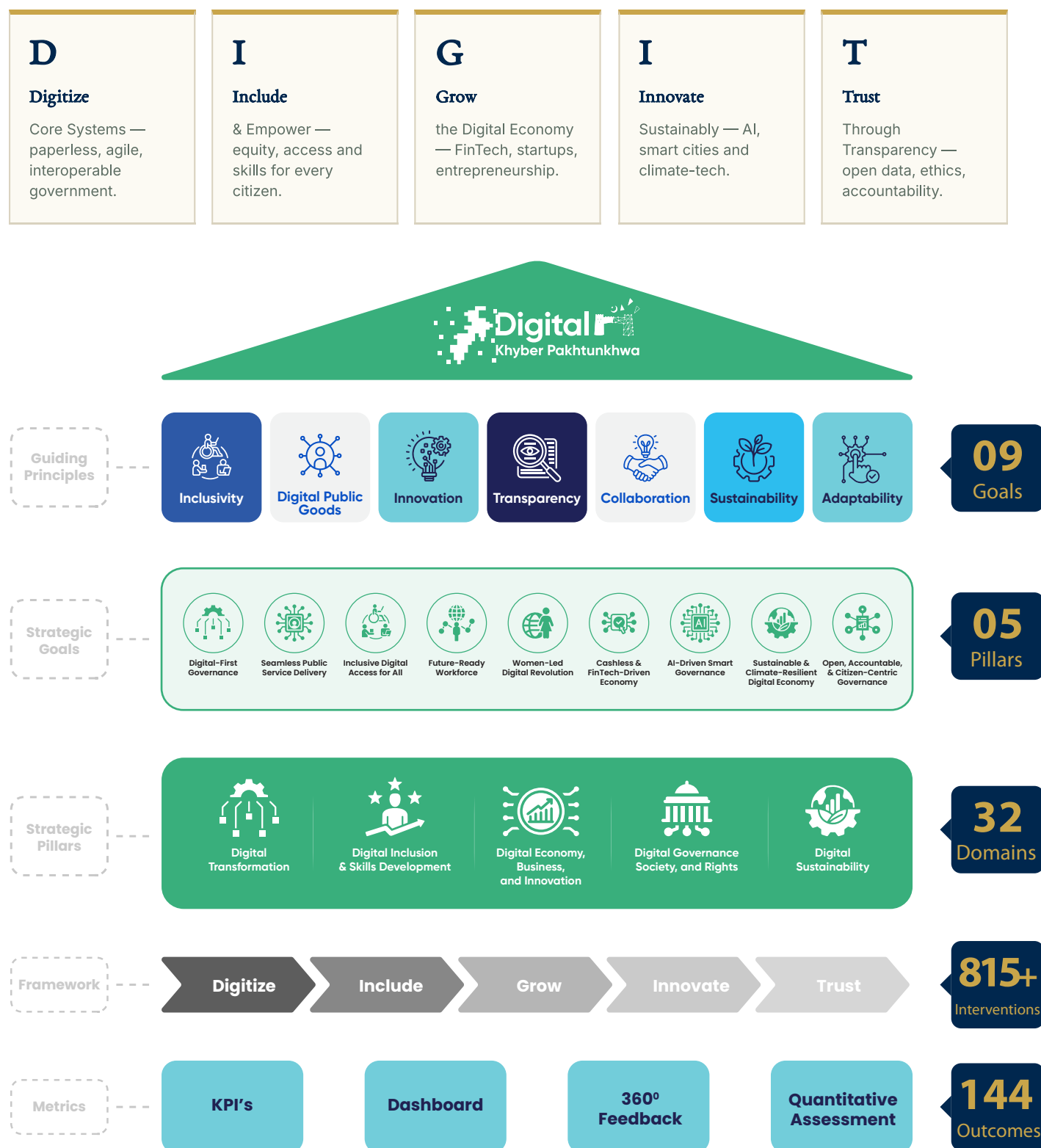
How the Nine Goals Sequence

Digital KP 2030 follows a deliberate sequencing logic — each stage builds the platform for the next, ensuring sustainable and inclusive transformation.



The DIGIT 2030 Framework

The DIGIT 2030 Framework is the execution spine of the strategy — an actionable architecture that aligns the nine goals with clearly defined pillars, sub-pillars and interventions. Anchored in five interconnected themes, each maps to clusters of strategic goals and enables a sequenced, measurable, scalable implementation pathway. The five DIGIT themes are the implementation lens; they are operationalised through the six strategic pillars set out on the following page.



Strategic Pillars

The DIGIT themes are operationalised through six strategic pillars and twenty-eight sub-pillars — translating vision into actionable interventions with phased implementation and measurable impact.



P1 Digital Transformation

DIGITIZE

AI-driven automation, secure digital identity and seamless e-government platforms modernising governance.

Sub-pillars: AI & Emerging Technologies · e-Government & Smart Services · Digital Identity & Inclusion (DPI) · Cloud-First & Edge Computing · Digital Twin & Smart Cities · Metaverse & Immersive Experience · Open Government & Data-Driven Policymaking



P2 Digital Inclusion & Skills Development

INCLUDE

Bridging the divide through universal connectivity, digital literacy and a future-ready workforce.

Sub-pillars: Universal Access, Connectivity & Accessibility · Digital Skills & Workforce Development · Digital Literacy for Government Officials



P3 Digital Economy, Business & Innovation

GROW

Accelerating economic digitalisation, FinTech and entrepreneurship across the province.

Sub-pillars: FinTech & Digital Payments · Startup & Innovation Ecosystem · Private Sector & Business Enablement · Digital Trade & E-Commerce



P4 Digital Governance, Society & Rights

DIGITIZE / TRUST

A responsive, transparent, secure digital government with strong data and enterprise architecture.

Sub-pillars: Government & Business Process Optimization · e-Governance Infrastructure · Sectoral Digitalization · Governance Experience (GX) · Data Governance & Analytics · Digital Society, Rights & Well-being · Technology Governance, Standards & Architecture · e-Governance Frameworks



P5 Digital Sustainability

INNOVATE

Embedding green, eco-friendly and financially sustainable practices into the digital economy.

Sub-pillars: Eco-Friendly Digital Ecosystem · Sustainable Digital Growth



P6 Digital Trust & Responsibility

TRUST

Cybersecurity, ethical AI and accountability frameworks that earn durable public confidence.

Sub-pillars: Cybersecurity & Data Protection · Advanced Cyber Governance · Ethical AI & Digital Rights · Accountability, Open Governance & Trust · Institutional & Advisory Ecosystem



PART FIVE

Roadmap 2025–2030

How Digital KP 2030 is delivered, governed and measured — a three-tier institutional arrangement, a living roadmap, and a results-driven monitoring framework.

Roadmap 2025–2030

The roadmap organises the strategy's detailed interventions by their parent pillar and sub-pillar, exactly as structured in the DIGIT 2030 framework. Each **thematic domain** states its objective and an implementation plan — a set of time-bound interventions with their timeline, lead responsibility, required action, expected outcome, deliverable and KPI. Together these operationalise the six strategic pillars across 2025–2030.

PILLAR 1 · DIGITIZE

Digital Transformation

7 THEMATIC DOMAIN 176 INTERVENTIONS



PILLAR 2 · INCLUDE

Digital Inclusion & Skills Development

2 THEMATIC DOMAIN 85 INTERVENTIONS



PILLAR 3 · GROW

Digital Economy, Business & Innovation

4 THEMATIC DOMAIN 87 INTERVENTIONS



PILLAR 4 · DIGITIZE / TRUST

Digital Governance, Society & Rights

8 THEMATIC DOMAIN 486 INTERVENTIONS



PILLAR 5 · INNOVATE

Digital Sustainability

2 THEMATIC DOMAIN 24 INTERVENTIONS



PILLAR 6 · TRUST

Digital Trust & Responsibility

3 THEMATIC DOMAIN 37 INTERVENTIONS



PILLAR 7 · DIGITIZE

Overarching Spectrum - Cross-Cutting Enablers

6 THEMATIC DOMAIN 29 INTERVENTIONS



Reading the roadmap. Each thematic domain opens with its objective and intervention catalogue — the strategic actions grouped by domain — followed by its implementation plan: time-bound workstreams with timeline, lead responsibility, required action, expected outcome, deliverable and KPI. Thematic domains are numbered sequentially in reading order. The complete catalogue of all 924 strategic interventions is consolidated in and tracked on the Digital KP Dashboard.



PILLAR 1 . DIGITIZE

AI & Emerging Technologies

OBJECTIVE Leverage Artificial Intelligence (AI), Big Data, the Internet of Things (IoT) and emerging technologies to optimize governance, automate public services, and enable predictive decision-making.

AI Governance & Regulatory Framework

Objective: Establish ethical AI policies, legal frameworks, and institutional mechanisms to regulate AI adoption across public-sector services.

- ◆ **AI Governance Policy** — Establishing guidelines for AI deployment in governance, ensuring transparency, fairness, and accountability.
- ◆ **Provincial AI Regulatory Unit** — A dedicated body to monitor AI implementation, compliance, and policy enforcement in the public and private sector.
- ◆ **Ethical AI Adoption Strategy** — A legal framework for responsible AI use, ensuring non-bias, data privacy, and security in AI-driven solutions.
- ◆ **AI Research & Innovation Fund** — A funding mechanism to support AI-based startups, research projects, civic innovation, use of AI in the public sector, and academic institutions for AI-driven solutions in governance and innovation.

AI-Powered Governance & Service Delivery

Objective: Enhance government efficiency, optimize decision-making, and automate public service delivery using AI-powered technologies.

- ◆ **AI-Driven Governance** — Implementing AI in government for process automation, data-driven policymaking, and predictive analytics.
- ◆ **Khyber Pakhtunkhwa Local & Regional Large Language Model (LLM)** — Developing an AI model for local languages.
- ◆ **KP GovGPT (Khyber Pakhtunkhwa Government GPT)** — A domain-specific, fine-tuned LLM trained on KP's governance data, citizen services, policies, rules/regulations/acts/frameworks, and administrative processes — powering smart policymaking assistants, conversational government interfaces, automated document generation, and real-time analytics tools.
- ◆ **Developing KP-Specific LLM** — Customizing AI language models to cater to regional dialects and governance needs.
- ◆ **AI Bots for Information & Service Delivery** — Deploying AI-driven virtual assistants for real-time citizen support and service requests.
- ◆ **AI Virtual Assistant for Grievances & Feedback** — Automating complaint resolution through AI-powered grievance-redressal systems.
- ◆ **Multilingual AI Chatbots (Urdu, Pashto, and English)** — Ensuring inclusive access to government services through AI-powered chatbots.
- ◆ **AI-Powered Policy Translation & Analysis** — AI-driven language processing to facilitate policy translation and multilingual legal documentation.
- ◆ **Open-Source LLM for AI Research** — Making AI-driven language models publicly available for academic and research institutions in KP.
- ◆ **AI Chatbots in Public Service Portals** — Integrating AI assistants in government service portals for efficient citizen interactions.

AI-Driven Decision-Making & Predictive Analytics

Objective: Utilize AI and big-data analytics for evidence-based policymaking, budget planning, and real-time governance monitoring.

- ◆ **Big Data & Predictive Analytics for Smart Governance** — Using AI models to analyze large datasets and audit service delivery for optimizing public services.
- ◆ **AI-Based Predictive Policy Modeling** — AI-driven analytics to improve policymaking and future-proof governance strategies based on data collected from various platforms / open data.
- ◆ **AI-Powered Citizen Engagement Platforms** — AI-powered dashboards and data-driven feedback mechanisms for citizen participation and feedback in governance.
- ◆ **AI-Driven Budget Allocation Models** — AI-based financial planning tools to optimize budget utilization, track expenditures and recommend plans for allocations.
- ◆ **AI-Driven Postings / Transfers** — AI-based posting / transfer of government employees based on merit, qualification and experience fitness.
- ◆ **AI-Based Public Satisfaction Surveys / Public Perception** — AI-generated surveys / perception analysis to measure citizen satisfaction and identify gaps in service delivery.
- ◆ **Sentiment Analysis for Policy Impact Assessment** — AI-driven tools to analyze social sentiment, public opinion, and policy effectiveness via social-media channels.
- ◆ **AI-Based Social Media Monitoring** — AI-powered sentiment tracking and misinformation detection to enhance governance credibility and build a better narrative of the Government.
- ◆ **AI-Based Fraud Detection in Public Complaints** — Machine-learning models to detect fraudulent complaints, enabling a citizen credibility index and preventing misuse of public grievance systems.
- ◆ **Real-Time AI Dashboards for Governance** — AI-powered visualization tools to track KPIs and government performance metrics in real time.

AI & IoT for Smart Infrastructure & Urban Development

Objective: Enhance smart-city management, disaster resilience, environmental monitoring, and urban planning through AI and IoT integration.

- ◆ **IoT-Based Smart Solutions** — Deploying IoT sensors and AI analytics for real-time infrastructure, strategic-asset monitoring and governance.
- ◆ **IoT-Based Smart Traffic Systems** — AI-powered traffic management solutions to reduce congestion and optimize urban mobility.
- ◆ **IoT Air Quality & Water Management Sensors** — AI-enabled environmental monitoring systems for air-pollution control and water-resource management.
- ◆ **IoT-Based Disaster Risk Management** — AI-driven predictive analytics for flood forecasting and emergency-response planning.

- ◆ **IoT in Agriculture & Climate Monitoring** — AI-powered IoT tools for precision farming, smart irrigation, and climate forecasting.
- ◆ **AI-Based Predictive Urban Planning** — AI-driven geospatial analytics for optimized city planning and infrastructure development.
- ◆ **Big Data for Disaster Preparedness** — AI-enabled data models for disaster-risk assessment, resource planning, and emergency response.

AI Education & Workforce Development

Objective: Develop an AI-ready workforce by integrating AI education, upskilling programs, and AI literacy into academic and professional training.

- ◆ **School of AI** — Center of excellence for AI research, platforms, education, innovation, and policy development.
- ◆ **AI Certification Programs** — Offering undergraduate, postgraduate, and diploma courses / bootcamps in AI, machine learning, and data science.
- ◆ **AI Upskilling for Government Officials** — Training policymakers and civil servants in AI-driven governance models, AI governance, and the ethical use of AI.
- ◆ **AI for Women & Digital Inclusion** — Special AI training programs for women and underrepresented communities.
- ◆ **AI for School Curriculum Integration** — Introducing AI modules in KP's education system from secondary level onwards.
- ◆ **AI Incubator & Startup Acceleration Program** — Supporting AI-based startups and tech entrepreneurs.
- ◆ **AI Grand Challenges & Hackathons** — Encouraging AI-based solutions for governance, fintech, and climate resilience.
- ◆ **Partnerships with Universities & Global AI Institutes** — Collaboration with Google, OpenAI, and leading AI research labs.

IMPLEMENTATION PLAN

WORKSTREAM 1: GOVERNANCE & REGULATORY FRAMEWORKS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI Governance Policy	Q4 2025	KPITB + Law Department	Draft policy with stakeholder consultations	Transparent AI deployment framework	Approved policy document	Policy adoption
Provincial AI Regulatory Unit	Q3 2026 – Q1 2027	KP Digital Council, KPITB	Hire experts, define compliance protocols	Oversight of public/private AI projects	Functional regulatory unit	Compliance audits
Ethical AI Adoption Strategy	Q3 2026	KPITB + KPITB Ethics Committee	Legal drafting, bias-testing guidelines	Trustworthy AI systems	Legal framework document	0 bias incidents reported by 2027
AI Research & Innovation Fund	Q4 2026 – Q4 2030	Finance Dept + KPITB	Allocate budget, launch grant portal	Boosted AI startups / research	Fund disbursed to 20+ startups	YoY growth in AI startups

WORKSTREAM 2: AI & IOT APPLICATIONS IN PUBLIC SERVICES

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI-Driven Governance	Q4 2026 – Q4 2030	All Departments	Automate workflows (e.g., approvals)	40% faster service delivery	Automated processes	30% reduction in processing time
KP-Specific LLM Development	Q3 2026 – Q4 2030	KPITB + Academia + Departments	Partner with leading AI model providers, collect local datasets	Pashto/Urdu & regional-language AI models	Deployed LLM for governance	90% accuracy in local language processing
AI Chatbots & Virtual Assistants	Q1 2026 – Q2 2029	KPITB + All Departments	Integrate with DASTAK portal	24/7 citizen support	Multilingual chatbots in 5 sectors	60% citizen satisfaction rate
Predictive Analytics & Decision Tools	Q2 2026 – Q4 2028	All Departments; P&DD, Finance Dept, CS & CM Offices	Build real-time dashboards	Data-driven policymaking	15 predictive models	20% improvement in policy outcomes
IoT Solutions (Traffic, Environment, Disaster Mgmt)	Q3 2027 – Q4 2030	Transport / Agriculture Depts	Install sensors, link to GovCloud	Smart infrastructure	IoT devices deployed	Reduction in traffic congestion

WORKSTREAM 3: EDUCATION, WORKFORCE DEVELOPMENT & INNOVATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
School of AI	Q3 2026 – Q4 2030	KPITB	Curriculum design, faculty hiring	Center of excellence	Operational campus in Peshawar	1,000+ graduates by 2030
AI Education & Upskilling	Q1 2026 – Q4 2030	Universities / Colleges + KPITB	Launch certification programs	10,000+ skilled professionals	50+ certified courses	Increase in employability rate

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI Incubator & Hackathons	Q3 2026 – Ongoing	KPITB + Private Sector	Funding, mentorship, events	Thriving AI startup ecosystem	100+ startups supported	Investment raised
Global AI Partnerships	Q1 2026 – Ongoing	KPITB + Private Sector	Strategic partnerships with AI companies / organizations	Access to cutting-edge R&D	5+ joint projects	Tech transfer rate

PILLAR 1 . DIGITIZE

e-Government & Smart Services

The e-Government & Smart Services sub-pillar envisions a fully digital, citizen-centric, and accessible government where people can access services online rather than waiting in queues. With this, the government aims to enhance efficiency, transparency, and inclusivity while ensuring that public services are user-friendly, responsive, and seamlessly integrated across departments and attached formations.

OBJECTIVE Deliver a fully digital, citizen-centric, and accessible government — enhancing efficiency, transparency, and inclusivity while ensuring public services are user-friendly, responsive, and seamlessly integrated across departments and attached formations.

Digital Public Service Delivery & Governance Framework

Objective: Develop a policy-driven, technology-enabled governance system for seamless citizen engagement and service delivery.

- ◆ **Standardized Digital Service Framework** — Developing a policy for digital governance, automation, and integration in service delivery.
- ◆ **Comprehensive Public Service Delivery Catalog** — Developing a structured and transparent catalog of all government services to standardize workflows, optimize processes, and ensure accessibility to the citizen.
- ◆ **DASTAK for Citizens** — Seamless Public Service Delivery – A single portal for all e-services, licensing, applications, registration, and feedback.
- ◆ **DASTAK for Businesses** — Ease of Doing Business – Digitize business registrations, licensing, and compliance processes through a fully digital business registration portal.
- ◆ **Voice-Government (Voice2Gov)** — Integrate voice-based service requests for citizens with low digital literacy, through call centre, audio messages, etc.
- ◆ **Unified Service Access Guide** — Ensuring citizens and businesses understand service availability, requirements, fees, and application processes through a central portal embedded in the DASTAK platform.
- ◆ **Re-Engineering of Public Services** — Optimize public service delivery by reducing unnecessary steps, adding automation, and improving ease of access.
- ◆ **Public Service Tracking & Two-Way Interaction** — Public service tracking and automated response systems for real-time citizen updates; short-code-based SMS tracking / mobile-app notifications.
- ◆ **Data-Driven Public Service Monitoring** — AI-based dashboards for performance tracking, service-quality analysis, and efficiency measurement.
- ◆ **Integrated Citizen Helpline** — One Helpline for All Services & Feedback – A unified helpline where citizens can access all government service information, complaints, inquiries and feedback under a single universal number.

Citizen Facilitation & Service Delivery Centers — One-Window Service Hubs

Objective: Provide physical and digital access points to streamline citizen and business interactions with the government.

- ◆ **Citizen Facilitation Centers (CFCs) (DASTAK Walk-in / Express)** — Establishing one-window service centers for public services and business facilitation.
- ◆ **Government Franchise Model** — Public-driven Citizen Facilitation Centers, franchising government services to local entrepreneurs.
- ◆ **Financial Inclusion Through Localized Service Centers** — Enabling rural and semi-urban populations to access essential government services within their communities.
- ◆ **KPBOT** — Multilingual AI Chatbots (Urdu, Pashto, English) – AI-driven virtual assistants to provide real-time assistance for citizens.
- ◆ **AI-Based Sentiment Analysis for Service Enhancement** — Analyzing citizen feedback to identify service-improvement areas and policy refinements.
- ◆ **Mobile & Satellite CFCs for Remote Areas** — Deploying mobile facilitation centers to serve underserved and remote communities.
- ◆ **Women & Minority-Friendly Service Centers** — Establishing dedicated service desks for women, differently-abled individuals, and marginalized communities.

Citizen Feedback & Participatory Governance

Objective: Strengthen citizen engagement and trust in government through automated feedback loops, participatory budgeting, and open governance initiatives.

- ◆ **AI-Based Citizen Feedback Model** — Implementing automated feedback collection and analysis systems to measure service quality / performance of the government.
- ◆ **Citizen Perception & Sentiment Analysis** — AI-powered social-media monitoring and media management to counter misinformation and enhance the KP Government's image as a brand of good governance.
- ◆ **Sentiment-Driven Service Rating Mechanism** — Allowing citizens to rate public services with AI-driven analysis to identify inefficiencies and recommend improvements.
- ◆ **Citizen Participatory Governance (Citizen Voice Initiative)** — Enabling citizen-driven budget planning and policy recommendations through digital platforms.
- ◆ **Predictive Analytics for Public Satisfaction** — Using big data to predict trends in citizen satisfaction and take preemptive actions for better service delivery.
- ◆ **Public Trust Index** — Developing an AI-based governance credibility index to assess government reputation and responsiveness.
- ◆ **Real-Time Misinformation Detection & Counter-Narratives** — Deploying AI to detect fake news, counter disinformation campaigns, and build trust through fact-based communication.

- ◆ **Crowdsourced Decision-Making for Local Development through the Governance+ initiative** — Allowing citizens to provide input on infrastructure projects, governance policies, and service enhancements.
- ◆ **Gamification of Citizen Feedback** — Reward-based engagement models to incentivize citizen participation in governance and feedback sharing.

Public Outreach & Right to Information

- Objective:* Ensure transparency, accessibility, and proactive citizen engagement by leveraging digital technologies, AI-driven outreach, and real-time access to government information.
- ◆ **Public Outreach & Digital Governance Awareness** — AI-powered automated citizen-engagement campaigns through social media.
 - ◆ **Automated Citizen Engagement Campaigns** — AI-powered targeted awareness initiatives via SMS, social media, chatbots, and IVR calls to educate citizens on government programs and rights.
 - ◆ **Multilingual Digital Awareness Platforms** — Public service announcements in Urdu, Pashto, and English (and other regional languages) using AI-generated voiceovers and content-translation tools.
 - ◆ **Virtual Town Halls & Digital Community Forums** — Establishing online interactive sessions for citizens to directly engage with government officials and seek clarifications.
 - ◆ **Online RTI Request & Processing System** — A centralized, AI-integrated RTI portal where citizens can submit, track, and receive responses on information requests.
 - ◆ **Proactive Disclosure Mechanism** — A public-facing digital repository for government data, policy decisions, and department performance reports.
 - ◆ **Public Data API for Developers & Researchers** — Open-access data-sharing mechanisms for civic-tech innovations, academic research, and policy analysis.
 - ◆ **Open Budget & Fiscal Tracking Dashboards** — AI-driven open-governance dashboards for budget and expenditure transparency.
 - ◆ **Real-Time Public Expenditure Monitoring** — AI-powered budget visualization dashboards displaying government allocations, expenditures, and project performance.
 - ◆ **Integration with DASTAK & Government Citizen Helpline** — Providing one-click RTI requests and budget insights via the DASTAK platform and a unified government helpline.

Regulatory Measures & AI-Powered Compliance

- Objective:* Strengthen regulatory governance by leveraging digital platforms, AI-driven compliance monitoring, and enforcement systems.
- ◆ **Smart Governance & Anti-Encroachment System** — AI-driven monitoring of illegal constructions and land encroachments.
 - ◆ **Real-Time Illegal Encroachment Detection** — AI-powered drone surveillance and satellite-imagery analysis to identify unauthorized constructions, land encroachments, and illegal settlements.
 - ◆ **AI-Based Monitoring for Clean & Green KP** — Automated environmental compliance, waste-management tracking, and cleanliness monitoring.
 - ◆ **Smart Waste Management System** — AI-driven waste-collection scheduling and route optimization.
 - ◆ **Satellite & Drone-Based Deforestation Monitoring** — AI-integrated analysis of forest coverage, illegal logging, and afforestation efforts.
 - ◆ **Carbon Footprint Tracking & Green Energy Adoption Monitoring** — AI-driven analytics for monitoring carbon emissions and development of a Carbon Credit Portal.
 - ◆ **AI-Driven Water Resource Management** — Automated tracking of water reservoirs, pipeline leakages, and efficient water-distribution models.
 - ◆ **Traffic & Road Infrastructure Compliance** — AI-powered detection of illegal billboards, speed breakers, and traffic-management violations.
 - ◆ **Smart Traffic Violation Detection System** — AI-powered IP-camera and drone-based surveillance to detect traffic violations, wrong-way driving, and over-speeding.
 - ◆ **Automated Digital Fine Issuance** — AI-based e-Challan system for instant traffic and regulatory fines, integrated with the Paymir digital payment platform for seamless transactions.
 - ◆ **Digital Construction & Building Permit Compliance System** — AI-driven automated building approval and inspection processes.
 - ◆ **Smart Citizen Alerts & Advisory System (via the DASTAK platform)** — AI-driven real-time traffic updates, air-quality advisories, and disaster alerts to empower citizens with actionable insights.

Digital Inclusion, Good Citizen Programs & Accessibility

- Objective:* Ensure equitable access to digital services for persons with disabilities, underserved communities, and marginalized groups.
- ◆ **ICT Accessibility (Assistive Technologies for Persons with Disabilities)** — Implementing voice navigation, text-to-speech, and adaptive UI features for public services.
 - ◆ **Multilingual Digital Services** — Providing AI-powered translation services to cater to diverse linguistic groups.
 - ◆ **Adaptive UI & Gesture-Based Navigation** — Developing customizable user interfaces, high-contrast modes, and gesture-controlled interactions for people with disabilities.
 - ◆ **AI-Based Digital Literacy Initiatives** — Upskilling citizens with digital-literacy programs to enhance service adoption, with a special program for people with special needs.
 - ◆ **Good Citizen Program** — Engaging citizens in Green / Clean KP, anti-corruption initiatives, and price monitoring.
 - ◆ **Sign Language Interpretation & AI Speech Recognition** — AI-powered real-time sign-language translation tools for citizens with hearing impairments.
 - ◆ **Accessible Digital Public Service Centers** — Ensuring wheelchair-friendly digital services and dedicated counters at Citizen Facilitation Centers (CFCs).

IMPLEMENTATION PLAN

WORKSTREAM 1: FOUNDATIONAL DIGITAL GOVERNANCE FRAMEWORK

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Standardized Digital Service Framework	Q3 2025	KPITB + All Departments	Policy drafting, stakeholder workshops	Unified digital governance standards	Approved policy document	Department compliance by 2026

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Public Service Delivery Catalog	Q3 2025 – Q1 2026	All Departments	Mapping of services and prioritization	Transparent service workflows	Online service catalog	Services mapped and prioritized
DASTAK Portals (Citizens & Businesses)	Q3 2025 – Q4 2026	KPITB + Industries Dept, BOI, Chamber of Commerce	Develop integrated portal with AI chatbots	Single-window service access	Registered users	Reduction in service time
Re-Engineering of Public Services	Q3 2025 – Q4 2027	All Departments	Automate redundant steps	Faster processing	Re-engineered services	Cost reduction

WORKSTREAM 2: CITIZEN-CENTRIC SERVICE DELIVERY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Voice2Gov Integration	Q1 2026 – Q2 2027	KPITB + Local Govt	Deploy voice-enabled IVR	Inclusive access for low-literacy citizens	Voice queries resolved	Query resolution rate
Citizen Facilitation Centers (CFCs)	Q3 2025 – Q4 2030	All Departments + KPITB	Establish 30+ CFCs	Major population coverage	30 CFCs established	Rural service uptake
Women / Minority-Friendly CFCs	Q1 2026 – Q4 2027	Social Welfare Dept + KPITB	Train staff, design accessible layouts	Equitable service access	Dedicated service desks	Ease of accessibility achieved
Participatory Governance Tools	Q3 2026 – Q4 2028	Planning Dept + Finance + KPITB	Launch digital platforms for citizen input	Citizen proposals and feedback	Crowdsourced projects	Proposals implemented

WORKSTREAM 3: PUBLIC OUTREACH & TRANSPARENCY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI-Driven Outreach Campaigns	Q3 2025 – Q4 2026	KPITB + Information Dept	Develop multilingual content (Urdu / Pashto)	Citizen awareness	Campaign reach to masses	Increase in service adoption
RTI Digital System	Q3 2025 – Q2 2027	RTI Commission + KPITB	Build RTI portal for query handling	Transparent governance	Improved response time	RTI requests resolved per RTI Act
Open Budget Dashboards	Q3 2026 – Q4 2027	Finance Dept + KPITB	Integrate real-time expenditure data	Public fiscal accountability	Interactive dashboards	Citizen engagement rate

WORKSTREAM 4: SMART URBAN & ENVIRONMENTAL GOVERNANCE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Anti-Encroachment Systems	Q2 2026 – Q4 2028	Local Govt + KPITB	Deploy drone monitoring	Reduction in illegal constructions	Encroachments flagged	Enforcement rate
Smart Waste & Forest Management	Q3 2026 – Q4 2029	Environment Dept + KPITB	Install IoT sensors in forests / cities	Waste reduction	Smart solutions deployed	Forest cover increase
AI Traffic Management	Q1 2027 – Q4 2028	Transport Dept + KPITB	Install AI cameras + e-Challan system	Decrease in traffic violations	Smart cameras	Accident reduction

WORKSTREAM 5: DIGITAL INCLUSION & ACCESSIBILITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Assistive Technologies	Q3 2025 – Q4 2026	Social Welfare Dept + KPITB	Develop voice / gesture interfaces	Accessible digital services	Users supported	WCAG 2.1 accessibility compliance
Digital Literacy Programs	Q3 2025 – Ongoing	E&SE Dept + HED + KPITB	Train students	Digital skills development	Workshops	Female participation
Accessible Service Centers	Q3 2025 – Q4 2027	KPITB + District Administration	Retrofit CFCs with ramps / kiosks	Inclusive service access	Accessible CFC centers	Accessible service areas

Digital Identity & Inclusion — Digital Public Infrastructure (DPI)

Ensure secure, interoperable, and API-driven digital frameworks for identity verification, financial inclusion, and seamless access to public services in Khyber Pakhtunkhwa. Leveraging Khyber Pass — the Digital Identity Mechanism — this sub-pillar aims to streamline e-Government services, enhance digital transactions, and protect citizen data through a robust cybersecurity framework.

OBJECTIVE Establish Khyber Pass as the province's secure digital identity layer and extend Digital Public Infrastructure — identity, payments and data exchange — to every citizen and service.

Interventions

- ◆ **Khyber Pass** — Digital Identity Mechanism – A province-wide digital ID system for citizens, businesses, and public / government services.
- ◆ **Single Digital ID for All Services** — A secure, inclusive, and citizen-centric digital identity platform linked to CNIC and biometric verification.
- ◆ **Electronic & Biometric Authentication** — Integration with NADRA biometrics, facial recognition, and liveness checks to prevent identity fraud, alongside developing the province's own verification mechanisms (biometrics, facial, etc.).
- ◆ **Document Locker for Secure Document Storage** — Citizens can store and verify birth certificates, educational records, tax documents, and property records digitally.
- ◆ **Centralized Data Hub for Government Services** — Real-time citizen information for departments such as Health, Education, Transport, and Finance, improving decision-making and efficiency.
- ◆ **Digital Wallets for Citizens & Businesses** — Cashless transactions, service payments, and disbursements through integrated digital wallets.
- ◆ **QR Code & Contactless Payments** — Expanding digital payment options for government fees, public transport, and commercial transactions.
- ◆ **AI-Based Welfare Distribution System** — Automating Zakat, pensions, healthcare benefits, and social-protection payments through Khyber Pass-linked digital wallets.
- ◆ **Subsidy & Grant Disbursement via Digital Identity** — Government aid and subsidies automatically allocated to eligible citizens without manual processing.
- ◆ **Digital Health & Vaccination Records** — Citizens can store and verify medical history, vaccination status, and social healthcare benefits digitally.
- ◆ **Digital Identity-as-a-Service (IDaaS)** — Providing a plug-and-play identity-verification system for government and enterprise applications.
- ◆ **API Marketplace for Digital Identity (Public & Private Sector Access)** — Enable secure, controlled, and standardized access to digital identity verification through an API marketplace for government departments, financial institutions, and private-sector entities.
- ◆ **Biometric & Mobile-Based Authentication** — Multi-factor authentication to enhance security in public and financial services.
- ◆ **Digital Wallets & E-Payments** — Enabling secure, cashless transactions through the Paymir digital payment platform.
- ◆ **Digital Inclusion for Underserved Communities** — Ensuring rural areas, women, and persons with disabilities have access to digital identity and financial services.
- ◆ **Data Protection & Privacy Framework** — Establishing a provincial cybersecurity framework to safeguard digital identities.
- ◆ **Provincial Data Protection & Cybersecurity Law** — Establishing legal safeguards for digital identity, financial transactions, and data privacy.
- ◆ **Chief Minister's Master Dashboard** — AI-powered real-time insights on government services, welfare disbursements, and financial transactions, with seamless integration of data across all sectors / departments / formations.
- ◆ **Inter-Departmental Data Interoperability** — Secure one-click access to health, education, taxation, and law-enforcement data (and other departments) for seamless governance.
- ◆ **Predictive Analytics for Policy Making** — AI-driven insights to forecast service demands, detect inefficiencies, and optimize governance workflows.
- ◆ **Citizen-Controlled Digital Access** — Enabling users to manage their personal data, set privacy preferences, and control access permissions.
- ◆ **Gamification for Digital Identity Adoption** — Encouraging citizens to transition to digital services through incentives, rewards, and loyalty programs.

IMPLEMENTATION PLAN

WORKSTREAM 1: DIGITAL IDENTITY FRAMEWORK

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Khyber Pass Digital ID	Q3 2025 – Q4 2030	KPITB + All Departments	Integrate biometrics with CNIC + services	Citizens onboarded	Khyber Pass issued	eID adoption by 2027
Digi-Locker	Q2 2026 – Q4 2026	KPITB	Secure cloud storage for documents	Documents stored	Document management for citizens	Citizen usage
API Marketplace	Q2 2026 – Q4 2027	KPITB + Private Sector	Develop plug-and-play ID verification	Integrated services	API calls / day	Govt & private-sector adoption
Citizen-Controlled Access & Gamification	Q2 2026 – Q4 2027	KPITB	User privacy controls, reward systems	Increase in ID adoption	Gamified app launched	Improved awareness

WORKSTREAM 2: FINANCIAL INCLUSION & DIGITAL TRANSACTIONS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Wallets & QR Payments	Q4 2026 – Q4 2028	Finance Dept + KPITB	Launch Paymir wallet, deploy QR codes	Transactions / month	QR terminals	Cashless adoption

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Paymir Integration	Q3 2025 – Q2 2026	KPITB	Partner with banks / telecoms	Seamless G2P / P2G payments	Integrated banks / 1Link	Transaction success rate

WORKSTREAM 3: DATA PROTECTION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Data Protection Framework	Q3 2026 – Q4 2027	KPITB + ST&IT	Draft and enact data-protection framework	Legal compliance framework	Framework for data protection	Departmental adherence

WORKSTREAM 4: INTEROPERABILITY & GOVERNANCE ANALYTICS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Centralized Data Hub	Q4 2025 – Q4 2027	KPITB + All Depts	Integrate health, education, tax data	Real-time governance	Linked departments	Data accuracy
CM Dashboard & Predictive Analytics	Q1 2026 – Q4 2027	KPITB	AI-driven insights for policymaking	Faster decision-making	Operational dashboard	Predictive models

PILLAR 1 . DIGITIZE

Cloud-First & Edge Computing

OBJECTIVE Implement a Cloud-First Strategy in compliance with the Khyber Pakhtunkhwa Cloud-First Policy and the National Cloud Policy, enabling scalable, secure, and cost-effective digital infrastructure for government operations.

Interventions

- ◆ **GovCloud-KP (Provincial Cloud Infrastructure)** — Secure, Government-Owned Cloud – A centralized cloud for hosting government applications, citizen data, and public digital services.
- ◆ **Hybrid Cloud-Based Digital Services** — Migration of education, healthcare, and financial systems to cloud platforms.
- ◆ **Integration with National Cloud Policy & Compliance Standards** — Ensuring secure cloud adoption aligned with federal regulations and ISO / NIST frameworks.
- ◆ **GovCloud Service-Level Agreements (SLAs) with Leading Partners** — Defining cloud service performance benchmarks, uptime guarantees, and disaster-recovery policies.
- ◆ **Public & Private Cloud Integration** — Enabling hybrid cloud models to facilitate secure data sharing between government and private enterprises.
- ◆ **GovCloud-Enabled AI & Big Data Platforms** — Hosting data-driven governance applications, predictive analytics, and e-Government solutions.
- ◆ **Cybersecurity & Zero-Trust Architecture** — Implementing continuous threat detection, data encryption, and identity management in cloud services.
- ◆ **Automated Incident Response & Cyber Resilience** — AI-driven security analytics to prevent cloud breaches, ransomware attacks, and data loss.
- ◆ **Multi-Region Data Backup & Disaster Recovery Framework** — Deploying geo-redundant storage solutions to ensure data protection.
- ◆ **Cloud Acquisition Office under KPITB** — Managing / assisting procurement, compliance, and optimization of cloud services for public-sector entities.
- ◆ **Capacity Building & Cloud Workforce Training** — Developing a cloud-skilled workforce through specialized certification programs.
- ◆ **Public-Private Partnerships (PPP) for Cloud Innovation** — Encouraging local and international investment in cloud services to boost digital transformation.
- ◆ **Secure API Gateway for Cloud Services** — Enabling secure API access to government cloud services for fintech, startups, and enterprises.
- ◆ **E-Government API Hub** — Providing real-time service integration for land records, taxation, healthcare, and education platforms.
- ◆ **Establishment of a GPU-Based Data Center** — High-performance computing infrastructure to support LLMs, AI models, 3D simulations, and ML workloads.
- ◆ **Edge Computing for the Public Sector** — Enabling decentralized data processing for smart cities, traffic systems, IoT sensors, and e-Governance at the edge.
- ◆ **Establishment of a Digital DMZ (Demilitarized Zone) for Classified Information & Services** — A secure intermediary network layer to protect internal government systems by preventing unauthorized access, enabling secure web services, and strengthening perimeter defense through controlled access segmentation.

IMPLEMENTATION PLAN

WORKSTREAM 1: CLOUD INFRASTRUCTURE & GOVERNANCE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GovCloud-KP	Q1 2026 – Q4 2027	KPITB + KP Data Center, ST&IT	Procure servers, deploy private cloud	Centralized hosting	Operational GovCloud	99.9% uptime SLA
Hybrid Cloud Migration	Q2 2026 – Q4 2027	All Departments	Migrate legacy systems	Cost savings	Hybrid cloud services	Workload migration

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Public-Private Cloud Integration	Q3 2025 – Q2 2027	KPITB + CSPs	Establish secure data gateways	Seamless data sharing	Integrated private clouds	Data interoperability

WORKSTREAM 2: SECURITY, COMPLIANCE & RESILIENCE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Zero-Trust & Incident Response	Q4 2025 – Q4 2026	KPITB + CERC	Deploy MFA, AI threat detection	Reduced breach risk	SOC operational	<1 security incident / year
Multi-Region Backup	Q3 2026 – Q1 2028	KPITB + KP Data Center	Geo-redundant storage in 3 regions	99.99% data availability	Disaster recovery plan	RTO <1 hour
GovCloud SLAs	Q1 2026 – Q2 2027	KPITB + KP Data Center	Define uptime, response times	Clear accountability	Signed SLAs	100% SLA adherence

WORKSTREAM 3: CAPACITY BUILDING & INNOVATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
CSP Pre-Accreditation	Q1 2026 – Q3 2027	KPITB	Vendor assessment framework	Trusted CSP ecosystem	Accredited CSPs	Vendor compliance
Cloud Workforce Training	Q4 2025 – Ongoing	KPITB + Universities	Certify professionals	Skilled cloud workforce	Certification courses	Job placement rate
Cloud Acquisition Office	Q1 2026 – Q2 2027	KPITB	Streamline procurement processes	Efficient cloud spending	Operational office	Procurement cost reduction

WORKSTREAM 4: EDGE COMPUTING & REAL-TIME INTEGRATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GovCloud AI / Big Data Hosting	Q2 2026 – Q4 2027	KPITB + KP Data Center	Migrate AI models to cloud	Faster predictive analytics	AI services hosted	Faster processing
API Gateway & E-Gov Hub	Q2 2026 – Q4 2026	KPITB	Develop APIs for land, health, tax data	Seamless service integration	APIs published	API calls / month

PILLAR 1 . DIGITIZE

Digital Twin & Smart Cities

OBJECTIVE Establish smart, AI-powered, predictive urban planning through Digital Twin technology — integrating GIS, AI, IoT and predictive analytics to enhance urban infrastructure, security, energy efficiency and environmental sustainability across Khyber Pakhtunkhwa.

Interventions

- ◆ **GIS-Based Smart City Planning & Development** — AI-driven urban expansion forecasting, infrastructure mapping, and public-facility optimization.
- ◆ **Digital Mapping of Government Buildings & Facilities** — Creating GIS-linked digital blueprints for real-time monitoring, maintenance, and infrastructure planning / inspections.
- ◆ **Geo-Tagged Public Service Facility Management** — Real-time tracking of hospitals, schools, emergency services, and public utility facilities to improve efficiency.
- ◆ **Integrated GIS Dashboard for Decision-Making** — AI-powered visual analytics platform providing real-time data insights on infrastructure status, land use, and service accessibility.
- ◆ **Drone & Satellite Imagery for Urban Monitoring** — AI-integrated high-resolution satellite data and UAV imagery for land management, city expansion, and security surveillance.
- ◆ **3D Urban Modeling for Smart Governance** — Developing AI-powered digital twins of Peshawar and other major divisional headquarters / historic buildings to support real-time decision-making.
- ◆ **Predictive Growth Modeling & Smart Zoning** — AI-driven simulations for forecasting population growth, infrastructure expansion, and commercial zoning.
- ◆ **Mega City Digital Replication (Divisional HQs)** — Digitally replicating public parks, road networks, transport hubs, and water-distribution systems for improved management.
- ◆ **GIS-Integrated Crime Mapping & Policing Analytics** — AI-driven spatial analytics for crime-trend analysis, resource deployment, and predictive policing.
- ◆ **Facial Recognition & Smart Surveillance Networks** — AI-powered real-time crime monitoring using connected CCTV / IP camera / mobile feeds and GIS mapping.
- ◆ **AI-Enabled Smart Crime Reporting** — Integrating digital crime-reporting systems with predictive analytics for law-enforcement response planning.
- ◆ **GIS-Based Emergency Response & Disaster Management** — AI-powered simulations for rescue operations, fire incidents, and natural-disaster response coordination.

IMPLEMENTATION PLAN

WORKSTREAM 1: URBAN PLANNING & DIGITAL TWINS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GIS-Based Smart City Planning	Q3 2026 – Q4 2028	P&D Department, KPITB	GIS software, train staff	Faster planning cycles	GIS urban expansion model	Reduction in planning time
Digital Mapping of Govt Buildings	Q2 2026 – Q4 2028	All Departments + KPITB	Drone surveys, blueprint digitization	Real-time facility monitoring	Digital blueprints	Faster maintenance resolution
Mega City Digital Replication	Q2 2026 – Q4 2029	Local Government, P&DD	Scale 3D models to divisional HQs	Improved infrastructure mgmt	City replicas	Cost savings in projects

WORKSTREAM 2: PUBLIC SAFETY & SURVEILLANCE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GIS Crime Mapping	Q1 2026 – Q4 2026	Police, Home Dept	Integrate crime data with GIS	Crime reduction	Crime hotspot dashboard	Fewer incidents
Facial Recognition Surveillance	Q2 2026 – Q4 2027	Home Dept + KPITB, Police	Install AI cameras	Real-time crime detection	Surveillance network	Detection accuracy
AI Crime Reporting	Q3 2026 – Q4 2028	KPITB	Develop online reporting portal	Faster response times	Digital reporting system	Accuracy in reporting

WORKSTREAM 3: EMERGENCY MANAGEMENT & RESPONSE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GIS Emergency Response	Q1 2026 – Q4 2028	Relief Department + PDMA, P&DD	Model flood / fire scenarios	Faster rescue ops	Disaster response plan	Reduction in response time

WORKSTREAM 4: INFRASTRUCTURE MONITORING & MANAGEMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Geo-Tagged Facility Mgmt	Q2 2026 – Q4 2030	Health / Education Depts	Install smart sensors in facilities	Efficiency gains	Real-time tracking system	Facility coverage
Integrated GIS Dashboard	Q3 2026 – Q4 2029	P&D GIS Hub	Aggregate data from departments	Centralized decision-making	Operational dashboard	GIS-based planner adoption
Drone / Satellite Monitoring	Q1 2026 – Q4 2027	P&D GIS Hub	Acquire high-res imagery	Updated land-use maps	AI-processed imagery	Classification accuracy

PILLAR 1 . DIGITIZE

Metaverse & Immersive Experience

OBJECTIVE Harness metaverse, VR/AR and immersive technologies for urban management, education, tourism, cultural preservation and next-generation public services.

Interventions

- ◆ **KP Metaverse Platform** — A Digital Twin of the Province: 3D digital replication of cities, historical sites & government infrastructure — an immersive metaverse environment of Peshawar, Mardan, Swat, Abbottabad, and other major cities.
- ◆ **Virtual Public Services & Governance (Khuli Kachehri in the Metaverse)** — Enabling citizens to access government services, file complaints, pay taxes, and attend virtual town-hall meetings (with the Chief Minister / Chief Secretary / heads of departments) in the metaverse; establishment of the Office Metaverse.
- ◆ **KP VR/AR-Based Learning Platform for Schools & Colleges** — Metaverse classrooms for STEM & practical learning: AI-powered virtual-reality learning environments for science, engineering, medicine, and social sciences.
- ◆ **Immersive Physics, Chemistry & Biology Labs** — Allowing students to perform virtual experiments, chemical simulations, and biological dissections in a risk-free VR environment.
- ◆ **AI-Enhanced Virtual Field Trips & Historical Exploration** — Bringing ancient civilizations, space science, and human anatomy to life using augmented reality (AR).
- ◆ **VR-Based Career & Skills Development** — AI-driven job-training simulations for technical trades, emergency response, and specialized professions.
- ◆ **E-Library & Digital Book Repository in the Metaverse** — A virtual knowledge hub where students can access educational content, books, and lectures.

- ◆ **Digital Twin of Archaeological & Religious Tourism Sites** — 3D mapping of historic sites & museums: digital replicas of Takht-i-Bahi, Bala Hisar Fort, and other UNESCO heritage sites.
- ◆ **VR-Based Religious Tourism & Pilgrimage Simulations** — Immersive virtual tours for Buddhist, Hindu, Sikh, and Islamic religious heritage sites.
- ◆ **Historical Reenactments** — Using machine learning to reconstruct and animate historical events and civilizations for tourism and education.
- ◆ **Virtual Art Galleries & Cultural Events in the Metaverse** — Hosting interactive exhibitions, music festivals, and digital storytelling experiences.
- ◆ **Smart Law Enforcement & Security Training in the Metaverse** — VR-based police training simulations: AI-driven real-time combat drills, tactical operations, and hostage-rescue scenarios for law enforcement and special forces.
- ◆ **Digital Economy in the KP Metaverse** — Secure, smart-contract-based transactions for buying, selling, and leasing digital assets (local products) and real-world properties.
- ◆ **Digital Twin for Urban Development & Predictive City Management** — Smart-city planning & infrastructure visualization: AI-powered digital twins for traffic, public transportation, and utility management.
- ◆ **Predictive AI for Emergency Response & Crisis Management** — Simulating earthquake, flood, and fire response strategies in the metaverse.
- ◆ **AI-Powered Crowd Management & Public Safety Planning** — Simulating public events, rallies, and security protocols for large gatherings.
- ◆ **API-Enabled KP Metaverse Marketplace for the Public & Private Sector** — Public-private collaboration for AI & metaverse innovation, encouraging startups, researchers, and enterprises to develop metaverse applications for governance, education, and commerce.
- ◆ **NFT Marketplace for Digital Arts, Cultural Assets & Virtual Properties** — Enabling artists, museums, and content creators to monetize digital assets securely.

IMPLEMENTATION PLAN

WORKSTREAM 1: METAVERSE INFRASTRUCTURE DEVELOPMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
3D City Replication	Q4 2026 – Q4 2028	P&D, Urban Policy Unit, Local Government	Partner with 3D modeling firms	Immersive virtual cities	Metaverse environments	Active participation of citizens
Digital Twin for Urban Mgmt	Q4 2026 – Q4 2029	P&D, Urban Policy Unit, Local Government	Integrate GIS / IoT with metaverse	Predictive city planning	AI-driven urban twin	Faster decision-making
IoT-Enabled Monitoring	Q4 2026 – Q4 2028	Local Govt + KPITB	Deploy 10K+ sensors	Real-time data integration	IoT-metaverse dashboard	Data accuracy

WORKSTREAM 2: EDUCATION & SKILLS DEVELOPMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
VR / AR Learning Platforms	Q1 2026 – Q4 2029	KPITB	Equip 500 schools with VR kits	Enhanced STEM engagement	Students enrolled	20% improvement in test scores
Immersive Labs	Q2 2026 – Q4 2029	Colleges (HED), Technical (Industries) + KPITB	Develop virtual labs for sciences	Cost-effective experimentation	Virtual experiments	Teacher adoption
VR Career Training	Q3 2026 – Q4 2029	KPITB	Partner with industries (e.g., Siemens)	Job-ready workforce	Trained professionals	Employment rate

WORKSTREAM 3: TOURISM & CULTURAL PRESERVATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Heritage Site Digital Twins	Q1 2026 – Q4 2028	Tourism Dept + Archaeology Dept	3D scan UNESCO sites	Virtual tourism boost	Heritage replicas	Virtual visits / year
VR Religious Tourism	Q2 2026 – Q4 2028	Tourism Dept + Archaeology Dept	Create pilgrimage simulations	Cultural preservation	VR pilgrimage modules	User satisfaction
Virtual Cultural Events	Q3 2026 – Q4 2028	Culture Dept	Host metaverse festivals	Global cultural reach	Digital events	Virtual attendees

WORKSTREAM 4: PUBLIC SERVICES & GOVERNANCE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Virtual Public Services	Q1 2026 – Q4 2028	KPITB	Develop metaverse service portal	24/7 citizen access	Services online	Adoption rate

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
VR Law Enforcement Training	Q2 2026 – Q4 2028	Police Dept	Simulate hostage rescues, riots	Improved officer readiness	Trained personnel	Faster response times
Emergency Simulations	Q3 2026 – Q4 2029	Relief Department + PDMA	Model flood / fire scenarios in metaverse	Enhanced crisis response	AI-driven drills	Reduction in casualties

WORKSTREAM 5: DIGITAL ECONOMY & MARKETPLACE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
NFT Marketplace	Q2 2027 – Q4 2030	Culture Dept + Artists + KPITB	Mint KP cultural assets (upon policy approval from Federal Govt)	Revenue from digital art	NFTs listed	NFT sales

PILLAR 1 . DIGITIZE

Open Government & Data-Driven Policymaking

OBJECTIVE Implement an Open Government and Data-Driven Policymaking Framework in alignment with the KP Open Government Strategy 2022, ensuring transparency, citizen participation, evidence-based policymaking, and digital governance.

Interventions

- ◆ **Unified Open Data Ecosystem** — A centralized, machine-readable, and API-enabled platform hosting public datasets across sectors (health, education, transport, finance, environment).
- ◆ **Provincial Open Data Portal** — Enhancing and upgrading the existing KP Government Open Data Portal into a centralized, AI-powered, and interoperable open-data ecosystem.
- ◆ **Automated Data Publishing & Governance Dashboards** — Ensuring real-time updates, metadata tagging, and machine-readable open-data formats (to be integrated with the Government Resource Planning (GRP) platform).
- ◆ **RTI & Open Data Integration** — Linking KP's Open Data Portal with the Right to Information (RTI) platform.
- ◆ **Evidence-Based Policymaking & Predictive Analytics** — AI-driven policy modeling, risk forecasting, and economic-impact assessment.
- ◆ **Sector-Specific Data Insights (Health, Education, Economy, Public Finance)** — AI-powered dashboards to track economic trends, healthcare efficiency, and development projects.
- ◆ **AI-Powered Policy Dashboards** — Data-driven decision-making in economic planning, healthcare, and education based on open / linked data.
- ◆ **Public Spending & Infrastructure Transparency Hub** — Real-time dashboards tracking government contracts, project funding, and infrastructure development progress.
- ◆ **Departmental Scorecards & Citizen Satisfaction Index** — AI-based performance dashboards ranking government agencies based on service effectiveness.
- ◆ **Civic Tech & Open Data Hackathons** — Engaging youth, startups, and civic-tech innovators in building data-driven applications for governance solutions.
- ◆ **Public Outreach on Open Data & Citizen Rights** — AI-enhanced awareness campaigns on digital transparency, access to public data, and informed civic engagement.
- ◆ **Open API Hub for Public & Private Sector Integration** — Providing secure API access to government open data for startups, research institutions, and businesses.
- ◆ **E-Governance Transparency Initiatives** — Digital tracking of government contracts, procurement, and development projects.

IMPLEMENTATION PLAN

WORKSTREAM 1: DATA INFRASTRUCTURE & INTEGRATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Unified Open Data Ecosystem	Q1 2026 – Q4 2027	KPITB, PMRU	Develop centralized platform with APIs	Centralized access to public data	Operational platform	Datasets available
Provincial Open Data Portal	Q2 2026 – Q4 2028	KPITB, PMRU	Integrate AI tools, enhance UX	User-friendly data access	Upgraded portal	Monthly users
Automated Data Publishing	Q3 2026 – Q4 2028	All Departments	Deploy AI for metadata tagging	Real-time data updates	GRP integration	90% automated updates
RTI-Open Data Integration	Q1 2026 – Q2 2028	Law Dept + KPITB	Link RTI requests to datasets	Transparent governance	Unified portal	95% RTI resolution rate

WORKSTREAM 2: ANALYTICS & DECISION-MAKING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Evidence-Based Policymaking	Q2 2026 – Q4 2027	Planning Dept + PMRU	Develop AI models for policy simulation	Faster policy formulation	Predictive models	Model accuracy
Sector-Specific Insights	Q3 2026 – Q4 2027	Health / Education / Finance / All Depts + KPITB	Build sectoral dashboards	Data-driven sector management	Interactive dashboards	Departmental adoption
Financial & Policy Dashboards	Q3 2026 – Q4 2027	Finance Dept + KPITB	Integrate real-time budget tracking	Fiscal transparency	AI dashboards	Data accuracy
Public Spending Hub	Q2 2026 – Q4 2028	Finance, KPPRA	Track contracts / projects	Reduced corruption	Transparent hub	Contract visibility

WORKSTREAM 3: TRANSPARENCY & ACCOUNTABILITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Departmental Scorecards	Q1 2026 – Q4 2028	All Departments	AI ranking of service effectiveness	Improved agency performance	Quarterly scorecards	YoY service improvement
Civic Tech Hackathons	Q3 2026 – Ongoing	KPITB + Startups	Host annual open-data competitions	Innovative governance solutions	Prototypes	Solutions implemented
Public Outreach Campaigns	Q2 2026 – Q4 2028	Information Department + KPITB	AI-driven multilingual campaigns	Citizen awareness	Campaign reach	Increase in portal traffic
E-Governance Transparency	Q1 2026 – Q4 2027	KPITB	Digitize procurement workflows	Transparent processes	Digital audit trails	Procurement tracking



P2 Digital Inclusion & Skills Development

INCLUDE

This pillar focuses on bridging the digital divide, ensuring universal connectivity, and empowering citizens with future-ready digital skills. Promoting equitable access to technology, inclusive digital policies, and specialized workforce training, it aims to enable all segments of society — women, youth, differently-abled individuals, and underserved communities — to actively participate in the digital economy. Through broadband expansion, financial inclusion, AI-driven learning platforms, and emerging-technology certifications, this pillar fosters a digitally literate, globally competitive workforce. By integrating public-private partnerships, university linkages, and startup incubation programs, it accelerates economic growth, innovation, and entrepreneurial success in Khyber Pakhtunkhwa.

PILLAR 2 . INCLUDE

Universal Access to Technology, Connectivity & Accessibility

OBJECTIVE To expand digital connectivity, provide universal access to technology, and enhance digital inclusivity for marginalized communities.

Interventions

- ◆ **Province-Wide Fiber Optic Expansion** — Province-wide deployment of fiber-optic networks and high-speed broadband in urban and rural areas.
- ◆ **Fiberization of Civil Secretariat & Government Departments** — Upgrading all government offices with high-speed fiber connectivity for seamless digital operations.
- ◆ **Public Digital Access Centers & Free Wi-Fi Zones** — Setting up public Wi-Fi hotspots in universities, libraries, hospitals, and urban centers for citizen access to digital services.
- ◆ **Affordable Digital Devices Initiative** — Subsidizing laptops, tablets, and smartphones for students, women, and rural communities through different programs.
- ◆ **Digital Device Financing Program** — Enabling installment-based digital device purchasing through microfinance institutions.
- ◆ **Digital Right of Way (ROW) Policy Implementation** — Streamlining permissions for fiber deployment, telecom expansion, and digital infrastructure development.
- ◆ **Fair Use of Internet Policy for Government Departments** — Regulating official internet consumption, cybersecurity, and digital efficiency in public-sector offices.
- ◆ **Bring Your Own Device (BYOD) Policy for Government Offices** — Enabling secure usage of personal devices in workplaces through access control and data-protection mechanisms.
- ◆ **GovNet** — Secure Internet for Government Departments – Establishing a dedicated, high-security government network to prevent cyber threats and unauthorized data access.

IMPLEMENTATION PLAN

WORKSTREAM 1: INFRASTRUCTURE EXPANSION & CONNECTIVITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Province-Wide Fiber Optic Expansion	Q3 2026 – Q4 2028	KPITB + All Depts	Partner with ISPs, lay fiber cables	Broadband coverage	Fiber network	Rural connectivity improved
Fiberization of Govt Offices	Q2 2026 – Q4 2026	KPITB + ST&IT + KP Data Center	Upgrade govt offices with fiber	Seamless digital governance	High-speed connectivity	Govt offices connected
Digital ROW Policy	Q3 2026 – Q2 2028	Local Govt + KPITB + Works Dept	Streamline permits for infrastructure	Faster deployment	Approved ROW framework	Reduction in approval time

WORKSTREAM 2: PUBLIC ACCESS & AFFORDABILITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Public Wi-Fi Zones	Q2 2026 – Q4 2029	Local Govt + KPITB + Education + Health	Install hotspots in public spaces	Free internet access	Monthly users	80% hotspot uptime
Affordable Devices Initiative	Q1 2026 – Q4 2029	ST&IT	Subsidize tablets / laptops for students	Device cost reduction	Devices distributed	60% female beneficiaries

WORKSTREAM 3: INCLUSIVE SERVICES

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Multilingual AI Services	Q4 2026 – Q4 2029	KPITB	Deploy Urdu / Pashto translation tools	Inclusive digital access	AI-powered language support	Translation accuracy
Assistive Technologies	Q1 2026 – Q4 2029	KPITB	Develop voice navigation, text-to-speech	Accessibility for PWDs	Users' accessibility supported	WCAG compliance

WORKSTREAM 4: GOVERNMENT CONNECTIVITY & SECURITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Fair Use Internet Policy	Q1 2026 – Q2 2029	ST&IT	Regulate bandwidth usage	Efficient resource allocation	Approved policy	Bandwidth savings
BYOD Policy	Q3 2026 – Q4 2029	ST&IT	Enable secure personal device usage	Flexible workplace access	Policy implementation	Employee compliance
GovNet Secure Network	Q2 2026 – Q4 2029	KPITB + Cybersecurity Unit + Data Center	Deploy encrypted govt network	Zero data breaches	Operational secure network	Threat detection

PILLAR 2 . INCLUDE

Bridging the Digital Divide

OBJECTIVE To promote inclusive participation in the digital economy by integrating gender, disability, and economic-friendly policies in governance, education, and finance.

Women & Youth Empowerment in Digital Economy

Objective: To foster digital inclusion, entrepreneurship, and economic empowerment by equipping women and youth with digital skills, leadership training, and access to financial resources.

- ◆ **She Leads KP Initiative** — A women's leadership and digital-entrepreneurship program providing mentorship, funding, and networking for female-led startups and companies.
- ◆ **Women in Tech Programs** — Implementing scholarships, bootcamps, and mentorship opportunities for women in AI, cybersecurity, software development, creative art, digital games and animation.
- ◆ **Women Work-From-Home Initiative** — Establishing remote-work platforms, co-working spaces, and freelancing hubs to support women entrepreneurs.
- ◆ **Women-Inclusive Innovation Spaces** — Creating dedicated co-working spaces, innovation labs, and incubation centers for female-led startups and digital professionals.
- ◆ **Mother-Daughter Digital Boot Camps** — Organizing AI, coding, and digital-marketing workshops where mothers and daughters learn and collaborate.
- ◆ **Women in STEM Pairing Program** — Matching mothers interested in tech with their daughters in STEM education to encourage joint exploration of emerging technologies.
- ◆ **Freelancing & Remote Work Training** — Teaching mothers and daughters how to monetize digital skills through freelancing, content creation, and online business models.
- ◆ **E-Commerce & Home-Based Businesses** — Enabling joint business ventures in online selling, digital art, and small-scale e-commerce using platforms like Daraz, Etsy, and Amazon.
- ◆ **Microfinancing & Digital Credit for Women Entrepreneurs** — Providing financial support, digital loans, and grants to women-led family businesses.
- ◆ **Generational Digital Upskilling** — Offering basic to advanced training in digital literacy, freelancing, and e-commerce to enable mothers and daughters to start digital businesses together.
- ◆ **Women-Led Tech Think Tanks** — Establishing policy advisory groups where women tech leaders contribute to shaping digital policies and strategies.
- ◆ Collaboration with incubation centers, industry chambers, and universities to drive women-centric digital transformation initiatives.
- ◆ Implementing a Train-the-Trainer model, where trained professionals mentor and empower other women in emerging technologies and digital business.
- ◆ **Encouraging Youth Participation in STEM** — Expanding coding bootcamps, digital-leadership programs, and AI-driven skill-development courses for young innovators.

Digital Inclusion in Higher Education & Schooling

Objective: To ensure equitable access to digital education, strengthen industry-academia collaboration, modernize curricula with emerging technologies, and expand digital literacy from elementary schools to universities.

- ◆ **Strengthening University-Industry Linkages** — Facilitating collaboration between universities, IT industries, and research organizations to align curricula with market demands and industry needs.
- ◆ **Establishing MoUs / Strategic Partnerships with Universities & Research Centers** — Creating long-term collaboration frameworks between academia and industry for digital R&D and policy innovation.
- ◆ **Public-Private Partnership for Digital Skills Growth** — Encouraging tech firms to invest in workforce development, digital education, and research collaborations.
- ◆ **Modernizing Curricula with Emerging Technologies** — Introducing AI, FinTech, Cybersecurity, and Data Science as core subjects in higher education.

- ◆ **University Innovation & Research Collaboration** — Establishing joint research programs between academia and the private sector to promote commercialization of R&D.
- ◆ **AI & Digital Policy Research Hubs** — Funding digital-policy research centers to work on data governance, digital-economy frameworks, and regulatory technology.
- ◆ **Establishing AI & Computing Research Labs** — Equipping universities with AI-driven computing resources, digital-twin infrastructure, and IoT research labs.
- ◆ **Cloud & Supercomputing Facilities for Research** — Providing universities and colleges access to cloud computing and supercomputing resources for digital experiments.
- ◆ **Startup Incubation in Universities** — Embedding startup culture within academic institutions by providing mentorship, funding, and industry exposure.
- ◆ **Digital Learning & Smart Classrooms for Schools** — Early-Age Digital Literacy Program introducing coding, robotics, and digital-safety lessons at the elementary-school level.
- ◆ **School Connectivity & Digital Learning Hubs** — Equipping primary and secondary schools with internet access, digital libraries, and interactive learning environments.
- ◆ **EdTech Platforms for Remote & Rural Schools** — Launching government-backed e-learning platforms to ensure continued education for out-of-school children.
- ◆ **Gamified Learning & VR/AR-Based Education** — Integrating virtual reality (VR), augmented reality (AR), and gamification in school curricula to enhance engagement and retention.
- ◆ **Out-of-School Digital Learning Centers** — Establishing Digital Community Centers that provide free access to e-learning, coding bootcamps, and online certification programs for school dropouts.
- ◆ **Establishing Digital Community Centers** — Providing public access to online learning resources, digital-skills training, and freelancing workshops.
- ◆ **Makerspaces for Digital Innovation** — Setting up innovation labs in community centers to enable hands-on experience with AI, robotics, and 3D printing.

Promoting Digital Technologies for Business Modernization

Objective: To accelerate the digital transformation of MSMEs, local businesses, and startups by providing policy incentives, digital infrastructure, and technological support — ensuring increased competitiveness, market expansion, and financial sustainability in e-commerce, tourism, agriculture, and fintech sectors.

- ◆ **Policy Incentives & Tax Breaks for Digital Adoption** — Introducing financial incentives, tax relief, and subsidies for small businesses adopting e-commerce, cloud computing, and AI-driven solutions (through STZA).
- ◆ **Local Business Digital Toolkit** — Developing ready-to-use digital solutions (e.g., invoicing systems, online booking platforms, and CRM tools) for small businesses.
- ◆ **AI-Driven Business Advisory Platform** — Deploying an AI-powered assistant to provide market analysis, pricing strategies, and business-growth recommendations to MSMEs.
- ◆ **Digital Literacy & E-Business Training for Entrepreneurs** — Organizing workshops and masterclasses to train local business owners, artisans, and traders in online selling, digital branding, and customer engagement.
- ◆ **E-Commerce Enablement Program** — Assisting brick-and-mortar businesses in launching online stores through e-marketplace onboarding, digital catalog creation, and integrated payment systems.
- ◆ **Local Business Online Marketplace** — Developing a regional e-commerce platform to promote small businesses, traditional crafts, and local products.
- ◆ **Fintech-Driven Payment Solutions for Small Businesses** — Expanding QR-code payments, mobile banking, and AI-based credit scoring to simplify transactions for MSMEs.
- ◆ **AI-Powered Tourist Services** — Developing AI-powered chatbots for personalized tourist recommendations; integrating smart ticketing, digital guides, and immersive VR/AR experiences for historical sites and national parks.
- ◆ **Tourism E-Marketplaces** — Establishing tourism e-marketplaces for hotels, local tour operators, and cultural experiences.

IMPLEMENTATION PLAN

WORKSTREAM 1: WOMEN EMPOWERMENT IN TECH

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
She Leads KP Initiative	Q3 2026 – Q4 2027	Women Development Dept + KPITB	Mentorship, funding for female-led startups	Women-led startups	Incubation hubs	Startup survival rate
Women in Tech Programs	Q2 2026 – Q4 2028	KPITB + Universities + Colleges	Scholarships, bootcamps in AI / cybersecurity	Skilled women workforce	Certified women	Job placement
Women-Inclusive Innovation Spaces	Q3 2026 – Q4 2028	KPITB + Private Sector	Establish co-working labs	Collaborative ecosystems	Innovation labs	Female occupancy
Mother-Daughter Digital Upskilling	Q1 2026 – Q4 2028	Social Welfare Dept + E&SE + HED	Joint workshops in coding, e-commerce	Intergenerational digital literacy	Families trained	New businesses launched

WORKSTREAM 2: EDUCATION & ACADEMIA

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Youth STEM Participation	Q1 2026 – Q4 2028	Education Dept + KPITB	Coding bootcamps, AI courses	Youth skilled	Certified programs	Employability
Modernized Curricula & Research	Q2 2026 – Q4 2028	Universities + KPITB + IT Industry	Introduce AI / FinTech courses	Industry-aligned graduates	Updated curricula	Industry satisfaction

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Learning in Schools	Q3 2026 – Q4 2029	Education Dept + KPITB	VR / AR labs, gamified learning	Students engaged	Smart classrooms	Improved test scores
Community Learning Centers	Q1 2026 – Q4 2029	Local Govt + KPITB	Makerspaces, online certification	Upskilling for dropouts	Centers operational	Certifications issued

WORKSTREAM 3: SME & LOCAL BUSINESS SUPPORT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Policy Incentives & Toolkits	Q1 2026 – Q4 2028	Finance + Industries + KPITB	Digital toolkits for SMEs	SME digitization	Toolkits distributed	Revenue growth
AI Business Advisory & Training	Q2 2026 – Q4 2028	KPITB + Chamber of Commerce + Industries	AI-driven market analysis	Optimized business models	SMEs trained	Profit increase
E-Commerce Enablement	Q3 2026 – Q4 2028	KPITB + Industries + Commerce	Onboard SMEs to online platforms	Expanded market reach	Regional e-marketplace	Increase in annual sales

WORKSTREAM 4: TOURISM DIGITIZATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI Tourism Tools & E-Marketplaces	Q1 2026 – Q4 2028	Tourism Dept + KPITB	Develop VR guides, booking platforms	Tourism revenue growth	Digital bookings	Tourist satisfaction

PILLAR 2 . INCLUDE

Digital Skills & Workforce Development

OBJECTIVE To develop a globally competitive workforce equipped with AI, cybersecurity, fintech, digital business expertise, and emerging technologies by expanding professional training, certification programs, and real-world industry exposure.

Skill Development

Objective: To create a future-ready, digitally empowered workforce by equipping individuals with foundational, intermediate, and advanced technology skills, ensuring inclusive access to digital opportunities across all segments of society.

- ◆ **Skill Progression Strategy** — A structured skill-progression strategy to transition individuals from basic digital literacy to advanced technology specialization (guidelines, framework, roadmap).
- ◆ **Global Certification Scholarships** — Providing financial aid and government-sponsored scholarships for AI, cybersecurity, and emerging technologies.
- ◆ **Industry-Aligned Tech Training Bootcamps** — Conducting intensive bootcamps in AI, data science, software development, and ethical hacking.
- ◆ **Micro-Credentialing & Specialized IT Diplomas** — Offering short-term professional diploma programs aligned with global industry certifications.
- ◆ **Structured Industry Internships** — Partnering with tech companies, startups, and R&D labs to provide hands-on learning experiences.
- ◆ **Apprenticeship & Work-Study Programs** — Implementing dual-learning models where students gain real-world experience while completing formal education.
- ◆ **Government-Supported IT Apprenticeship Programs** — Placing graduates in emerging-technology roles through government-subsidized internships.
- ◆ **AI-Powered Career Counseling & Job Placement Platforms** — Deploying AI-driven career-coaching platforms for personalized career recommendations for graduates and professionals.
- ◆ **Freelancer to Entrepreneur Program** — Helping freelancers transition into business owners by supporting them with legal, financial, and marketing expertise.
- ◆ **Startup Growth Accelerator for Tech Entrepreneurs** — Providing funding, mentorship, and training to early-stage startups.
- ◆ **Women & Youth-Led Digital Businesses** — Supporting female entrepreneurs, youth-led startups, and freelancers in launching digital businesses.
- ◆ **Soft Skills & Digital Communication Training** — Ensuring graduates and job seekers are equipped with communication, problem-solving, and leadership skills.
- ◆ **AI-Powered Language Learning for Remote Jobs** — Offering AI-driven multilingual training for global freelancing and cross-border job placements (China, Saudi Arabia, UAE, Japan markets, etc.).
- ◆ **Creative & Digital Media Training** — Providing professional certification in gaming, animation, content creation, and VR-based storytelling.
- ◆ **University & R&D Learning Platforms** — Establishing AI-powered adaptive learning and virtual research-collaboration tools.
- ◆ **Specialized Semester & University Courses** — Introducing semester-based specialized courses in emerging technologies to align with industry demand.
- ◆ **AI-Powered Adaptive Learning Systems** — Deploying AI-driven personalized learning platforms to optimize student performance and skill acquisition.
- ◆ **Tech-Based Academia-Industry Partnerships** — Facilitating joint research projects, startup-incubation programs, and industry-driven university curricula.
- ◆ **Developing Open-Access Digital Libraries** — Providing free access to educational materials, research papers, and learning resources for students and professionals.
- ◆ **Remote Learning Tools for Schools & Universities** — Expanding e-learning platforms and smart classrooms to facilitate distance education.

- ◆ **Integrating VR, AR & Gamification into Education** — Developing interactive learning experiences through virtual labs and immersive educational simulations.

IMPLEMENTATION PLAN

WORKSTREAM 1: FOUNDATIONAL SKILL DEVELOPMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Skill Progression Strategy	Q1 2026 – Q4 2026	KPITB	Develop tiered skill frameworks (basic to advanced)	Structured learning pathways	Approved strategy document	Skill framework for the Government
Micro-Credentialing	Q2 2025 – Q4 2027	Universities + Industry + KPITB	Partner with global certifications	Short-term industry-ready diplomas	Micro-credentials	Certifications issued
AI-Powered Adaptive Learning	Q3 2025 – Q4 2026	EdTech Firms + KPITB	Deploy AI platforms (e.g., Coursera, Khan Academy)	Personalized learning experiences	Active users	Improvement in pass rates

WORKSTREAM 2: ADVANCED TECHNICAL TRAINING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Global Certifications	Q4 2026 – Q4 2028	KPITB	Fund scholarships via Coursera / edX	Certified professionals	Scholarship fund	Job placement rate
Tech Bootcamps	Q2 2026 – Ongoing	KPITB	Intensive 12-week programs in AI / cybersecurity	Job-ready graduates	Bootcamps / year	Employment rate
Specialized University Courses	Q3 2026 – Q4 2027	Universities	Introduce AI, FinTech, IoT courses	Industry-aligned graduates	Updated curricula	Industry satisfaction

WORKSTREAM 3: INDUSTRY-ACADEMIA COLLABORATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Internships & Apprenticeships	Q1 2026 – Q4 2029	IT Industry Partners + KPITB	MoUs with IT firms / IT Park / STP for placements	Hands-on experience	Internships / year	Conversion to full-time roles
Tech Partnerships	Q2 2025 – Q4 2028	Universities + Industry	Joint R&D projects, curriculum co-design	Commercialized innovations	Patents filed	Research funding

WORKSTREAM 4: ENTREPRENEURSHIP & CAREER TRANSITION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Freelancer / Startup Support	Q1 2026 – Q4 2028	KPITB	Funding, legal workshops, mentorship	Startups launched	Startup accelerator hub	Funding raised
Women / Youth-Led Businesses	Q2 2026 – Q4 2027	KPITB	Grants, incubators for underrepresented groups	Inclusive entrepreneurship	Women-led startups	Revenue growth

WORKSTREAM 5: EMERGING TECH EDUCATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Creative Media Training	Q1 2026 – Q4 2028	KPITB + Information Department	Certifications in VR / gaming	Skilled media professionals	Trained creators	Employment in creative sector
VR / AR in Education	Q2 2026 – Q4 2027	Education Dept	Deploy VR labs in 100 schools	Immersive STEM learning	VR modules	Engagement boost
AI Language Learning	Q3 2026 – Q4 2029	KPITB	Multilingual training for remote jobs	Global freelancing opportunities	Users trained	Cross-border job placement

WORKSTREAM 6: INFRASTRUCTURE & RESOURCES

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Open-Access Libraries	Q2 2025 – Q4 2027	KPITB + HED	Digitize textbooks, research papers	Free knowledge access	Resources	Learning resource availability
Remote Learning Tools	Q3 2025 – Q4 2026	HED + E&SE + KPITB	Expand e-learning platforms (e.g., Moodle)	Accessible education	Active users	Rural participation

Emerging Technologies & Future Skills

Objective: To equip individuals with advanced and specialized skills in next-generation technologies, ensuring a future-ready workforce aligned with global digital trends.

- ◆ **Advanced AI, Machine Learning & NLP Training** — Offering structured, tiered training programs in generative AI, computer vision, natural language processing (NLP), and autonomous systems.
- ◆ **Cybersecurity & Ethical Hacking Certifications** — Launching specialized programs in penetration testing, ethical hacking, digital forensics, and zero-trust architecture.
- ◆ **Metaverse-Based Education & Skills Training Environments** — Creating interactive digital environments for industrial training simulations, virtual labs, and soft-skills development.
- ◆ **AI-Driven Career Pathway Platforms** — Offering customized skill assessments, career mapping, and upskilling pathways based on labor-market trends and user aptitude.
- ◆ **Tech Leadership Acceleration Programs** — Training mid- and senior-level professionals in strategic technology management, digital governance, and innovation leadership.
- ◆ **Digital Future Skills Labs** — Establishing multi-disciplinary innovation spaces for youth, professionals, and civil servants to explore emerging-tech applications.
- ◆ **Women & Youth in Deep Tech Leadership** — Special programs to build leadership capabilities among women and young professionals in AI, cybersecurity, digital games and fintech.
- ◆ **Future Skills Curriculum in TVET & Higher Education** — Mainstreaming AI, gaming & animation, metaverse development, and IoT courses into technical and university programs.
- ◆ **Curriculum Innovation Hub** — A dedicated hub within a university / college to continuously modernize digital-skills curricula in collaboration with industry, ensuring graduates possess future-ready competencies aligned with the evolving needs of the digital economy.
- ◆ **Cross-Sectoral Emerging Tech Use Cases** — Embedding real-life sectoral use cases (agritech, healthtech, smart cities, digital justice) in training modules.
- ◆ **Continuous Learning & Digital Micro-Credentials** — Enabling on-demand learning with stackable micro-certifications for lifelong learning pathways.

IMPLEMENTATION PLAN

WORKSTREAM 1: ADVANCED TECHNICAL TRAINING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Advanced AI / ML / NLP Training	Q1 2026 – Q4 2027	Universities + KPITB	Partner with leading AI firms (e.g., NVIDIA) for labs and joint ventures	AI specialists	Certified programs	Increase in job placement
Cybersecurity Certifications	Q2 2026 – Q4 2026	KPITB + Industry	Ethical-hacking bootcamps	Certified experts	ISO 27001 compliance	Exam pass rate
Metaverse Education	Q3 2026 – Q4 2028	EdTech Firms	Develop VR industrial simulations	Skilled metaverse developers	Training modules	Industry adoption
Future Skills Curriculum	Q1 2026 – Q4 2027	Education Dept + KPITB	Embed AI / gaming / IoT in TVET	Modernized education	Updated curricula	Institution adoption
Cross-Sector Use Cases	Q2 2026 – Q4 2028	KPITB + Sector Depts	Case studies in agritech, healthtech	Practical skill application	Use-case modules	Solution scalability

WORKSTREAM 2: LEADERSHIP & GOVERNANCE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Tech Leadership Programs	Q1 2026 – Q4 2028	KPITB + Industry	Executive workshops on digital governance	Leaders trained	Leadership certification	Promotion rate
Women / Youth in Deep Tech	Q2 2026 – Q4 2028	Social Welfare Dept + KPITB	Scholarships for AI / cybersecurity	Inclusive leadership	Women / youth leaders	50% leadership roles

Establishment of Specialized Digital Education Institutions

Objective: To build centers of excellence in emerging technologies and digital governance, enabling the development of high-end specialized skills in AI, cybersecurity, digital games & animation, and public-service digitization.

- ◆ **School of Artificial Intelligence** — A center of excellence for training and research in AI, machine learning, and deep-tech innovation in the public / private sector.
- ◆ **School of Digital Games & Animation** — A specialized institute for game design, animation, and immersive media technologies.

- ◆ **School of Cybersecurity & Governance** — A training hub for cybersecurity, ethical hacking, digital forensics, and cyber policy.
- ◆ **School of e-Governance & Digital Literacy** — A dedicated institution to build digital-governance capacity for public servants and citizens.

- ◆ **Center of Excellence in Emerging Technologies (Divisional HQs)** — Regional tech hubs offering advanced training, incubation, and R&D in each Divisional Headquarters.

IMPLEMENTATION PLAN

WORKSTREAM 3: INSTITUTIONAL DEVELOPMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
School of AI	Q4 2026 – Q4 2030	KPITB	Hire faculty, set up AI labs	AI innovation hub	Graduates / year	AI professionals trained
School of Digital Games	Q4 2026 – Q4 2030	KPITB	Partner with Unity / Epic Games	Creative tech workforce	Game prototypes	Digital-games professionals trained
School of Cybersecurity	Q4 2025 – Q4 2026	KPITB	Certifications, threat simulation labs	Cyber-resilient KP	Certified professionals	Cybersecurity professionals trained
Centers of Excellence	Q4 2026 – Q4 2030	Divisional HQs	Regional hubs for R&D / incubation	Decentralized innovation	Operational hubs	Startups supported

WORKSTREAM 4: LIFELONG LEARNING & ECOSYSTEM

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI Career Pathways	Q1 2026 – Q4 2029	KPITB	AI-driven skill assessments	Personalized career plans	Digital platform	AI professions adopted
Future Skills Labs	Q2 2026 – Q4 2029	KPITB + IT Industry	Labs for AI / robotics prototyping	Innovations / year	Commercialized products	Investment
Micro-Credentials (Stackable)	Q3 2026 – Q4 2029	KPITB + Universities + Colleges	Stackable certifications	Flexible learning	Micro-credentials	Learner retention



P3 Digital Economy, Business & Innovation

GROW

To accelerate economic growth by leveraging digital technologies in FinTech, e-commerce, MSMEs, digital trade, innovation ecosystems, and sustainable digital entrepreneurship.

PILLAR 3 . GROW

FinTech & Digital Payments

OBJECTIVE The FinTech & Digital Payments domain aims to drive financial inclusion, promote a cashless economy, and create a seamless digital payment ecosystem across Khyber Pakhtunkhwa.

Interventions

- ◆ **Digital Payment and FinTech Strategy** — A comprehensive roadmap to transform Khyber Pakhtunkhwa's financial ecosystem into a secure, inclusive, interoperable, and innovation-driven digital payment landscape.
- ◆ **Paymir** — KP's Digital Payment Gateway – A secure, scalable, and integrated platform to enable all government-to-citizen, citizen-to-government, and business digital transactions in one place.
- ◆ **Integration with 1Link, National Payment Systems and Financial Institutions** — Ensuring interoperability with national financial infrastructure for seamless, real-time transactions across platforms (1Link, Raast, and other e-payment solutions).
- ◆ **Digital Wallets for Citizens & Businesses** — Secure digital wallets linked to CNICs to facilitate government payments, subsidies, utilities, and commerce (G2P and P2G).
- ◆ **QR Code-Based Payment Acceptance Points** — Deployment of QR-code systems at public offices, utility counters, and retail shops to promote contactless transactions.
- ◆ **Digitization of All Government Revenue Receipts** — Embedding end-to-end digital payment solutions across all public revenue streams to enhance efficiency, reduce manual handling, and improve fiscal transparency.
- ◆ **Integrated G2P and P2G Payment Ecosystem** — Establishing seamless platforms for government disbursements and citizen payments through biometric-linked wallets and secure gateways.
- ◆ **Public Service Delivery-Embedded Payments** — Embedding digital payments directly into e-government service portals to ensure cashless, user-friendly transactions.
- ◆ **Provincial FinTech Innovation Ecosystem Development** — Cultivating a robust FinTech sector by enabling regulatory sandboxes, startup incubation, and innovation-funding frameworks.
- ◆ **Financial Literacy & Digital Inclusion Strategy** — Implementing province-wide education programs to increase financial knowledge, trust in digital payments, and reduce exclusion of marginalized communities.
- ◆ **School & College Digital Financial Safety Program** — Awareness and training for children and youth on secure digital transactions, cyber hygiene, and privacy.
- ◆ **Curriculum Development for FinTech & Financial Literacy** — Integration of digital finance, e-payment systems, and budgeting skills into university and technical education.
- ◆ **FinTech Startup Acceleration Fund** — Dedicated funding support for digital-finance startups, accelerators, and early-stage innovations.
- ◆ **No Cash Collection Policy** — Mandating a province-wide shift from manual payment receipts to digital transaction modes to improve service accountability and transparency.
- ◆ **Digital Payment Infrastructure Modernization Plan** — Upgrading technical architecture, payment-acceptance devices, and interoperability frameworks through public-private partnerships.
- ◆ **AI-Driven Payment Oversight & Revenue Analytics** — Using AI-powered systems for transaction monitoring, fraud detection, predictive forecasting, and data-driven revenue optimization.
- ◆ **Open Payment Data & Public Financial Dashboards** — Real-time public access to government receipts, expenditures, and budget tracking through digital transparency portals.
- ◆ **Digital Public Finance Management (PFM) Reform** — Integrating payments, budget execution, procurement, and audit systems into a unified digital finance ecosystem.
- ◆ **Standardization of E-Receipts and Legal Recognition** — Establishing e-receipts as official proof of transaction and mandating their use across all sectors.
- ◆ **Inclusive Digital Payment Accessibility Programs** — Extending digital payment services to remote and underserved areas with low-cost merchant-acquisition models.
- ◆ **FinTech Partnerships & PPP Framework** — Driving innovation through structured partnerships between government, tech firms, telcos, and financial institutions.

IMPLEMENTATION PLAN

WORKSTREAM 1: DIGITAL PAYMENT INFRASTRUCTURE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Payments & FinTech Strategy	Q2 2025 – Q3 2025	Finance Dept + KPITB	Roadmap development, stakeholder consultations	Unified digital payment ecosystem	Approved strategy	Action plans with timelines
Paymir Gateway	Q2 2025 – Q4 2026	KPITB + Banks + 1Link	Develop integrated platform	All-in-one payment solution	Operational gateway	Transactions / month
National Payment Integration	Q3 2025 – Q1 2026	KPITB + SBP / 1Link	API integration with Raast / 1Link	Interoperable transactions	Real-time settlement	Transaction success rate

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Wallets & QR Payments	Q1 2025 – Q4 2027	Finance Dept + KPITB + Financial Institutions	Deploy wallets and QR codes	Cashless KP	Wallets + QR points	Cashless adoption

WORKSTREAM 2: FINANCIAL INCLUSION & LITERACY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Financial Literacy	Q4 2025 – Q4 2026	Education Dept + KPITB	Workshops in rural / urban areas and schools	Financial inclusion	Citizen awareness	Awareness programs delivered
School / College Programs	Q4 2025 – Q4 2027	Education Dept + KPITB	Curriculum integration, cyber-hygiene training	Youth financial safety	Schools covered	Student awareness
Inclusive Payment Access	Q1 2026 – Q4 2027	Local Govt + KPITB	Low-cost merchant onboarding	Rural digital access	Rural merchants	Rural transaction growth

WORKSTREAM 3: GOVERNANCE & SECURITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
No Cash Policy	Q1 2026 – Q4 2027	Finance Dept	Mandate digital payments for govt services	Digital transactions	Policy enforcement	Compliance
AI Oversight & Dashboards	Q2 2026 – Q4 2026	KPITB + Finance	Deploy AI fraud detection, open-data portals	Transparent governance	Real-time dashboards	Fraud detection

PILLAR 3 . GROW

Startup & Innovation Ecosystem

OBJECTIVE To create a thriving, inclusive, and globally competitive startup ecosystem in Khyber Pakhtunkhwa by fostering innovation, entrepreneurship, and digital business growth through strategic interventions such as incubators, accelerators, venture funding, global partnerships, and regulatory reforms.

Interventions

- ◆ **Startup Exchange Program with Global Tech Hubs** — Facilitate international collaboration and exposure for local startups through global exchange programs with innovation centers in Silicon Valley, Singapore, London, etc.
- ◆ **Establishment of Divisional Innovation Centers (GovTech, AI, AgriTech)** — Develop regional innovation hubs in all divisional headquarters to foster sectoral innovation in AI, agriculture, tourism, governance, health, and fintech.
- ◆ **One-Month Fast-Track Incubation & Acceleration Programs** — Launch short-cycle accelerator programs offering mentorship, prototyping support, and investor-readiness training for early-stage founders.
- ◆ **Digital Startup Registry & Monitoring Dashboard** — Create a centralized platform to register, track, and evaluate startup growth, impact metrics, funding rounds, and sectoral diversity.
- ◆ **Venture Capital / Innovation Fund for High-Impact Startups** — Establish a dedicated provincial fund and blended financing models to support scale-ready startups with equity, debt, or matching grants.
- ◆ **Challenge Funds & Innovation Competitions (HealthTech, EdTech, AgriTech)** — Launch government-sponsored innovation challenges, grand tech competitions, and thematic hackathons to crowdsource impactful solutions.
- ◆ **Mentorship Networks, Business Clinics & Go-to-Market Support** — Build structured mentorship programs, advisory clinics, and GTM support platforms to strengthen business-model execution.
- ◆ **Startup Accreditation & Incentive Programs (Grants, Subsidies)** — Roll out a formal startup accreditation system linked with access to government grants, tax reliefs (via STZA), and co-working subsidies.
- ◆ **GovTech Sandbox Programs for Piloting Digital Solutions** — Establish regulatory sandboxes in collaboration with departments to allow startups to test GovTech solutions.
- ◆ **Loan Programs for Freelancers and Startups** — Provide low-interest, collateral-free loans and credit-guarantee facilities to early-stage entrepreneurs and freelancers.
- ◆ **Freelancer Tech Meetup Consortium** — Build a community-driven consortium to foster peer learning, client sourcing, and cross-border freelancing market integration.
- ◆ **University-Based Incubators & Accelerators (Strengthening BICs)** — Set up structured incubation programs within universities, enabling research commercialization and youth-driven innovation.
- ◆ **Integrated Startup Support Framework** — Establish a province-wide framework for startup support integrating incubators, accelerators, government facilitation desks, mentors, funding bodies, and legal advisors.
- ◆ **Startup One-Window Facilitation Portal** — Create a digital portal offering one-window services for startup registration, funding access, certification, and mentorship matching.
- ◆ **National & Global Startup Residency Programs** — Facilitate startup visas, residency, and infrastructure support to attract regional and international talent to KP's innovation ecosystem.
- ◆ **Tech for Social Impact Program** — Encourage startups working on SDG-aligned solutions through special incentives, partnerships, and funding.
- ◆ **Women-Led Startup Acceleration Program** — Introduce dedicated programs to accelerate women-led startups and provide safe innovation spaces, grants, and peer-learning opportunities.

- ◆ **Rural Innovation & Entrepreneurship Hubs** — Establish tech-enabled innovation labs and micro-incubators in rural and semi-urban areas to democratize startup culture.
- ◆ **Startup Globalization Support Desk** — Help startups expand globally through export facilitation, trade partnerships, branding support, and international investor linkage.
- ◆ **Tech Fellowship & Founder Development Programs** — Introduce structured fellowship and leadership-training programs for founders and CTOs.

IMPLEMENTATION PLAN

WORKSTREAM 1: INCUBATION & ACCELERATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Global Exchange & Divisional Hubs	Q1 2025 – Q4 2027	KPITB + Int'l Partners	MoUs with Silicon Valley / Singapore hubs	Global exposure for startups	Innovation hubs	Startups scaled
Fast-Track Programs & Registry	Q2 2025 – Q4 2026	KPITB	30-day bootcamps, digital tracking	Rapid prototyping	Startups incubated	Funding success
University Incubators	Q3 2025 – Q4 2027	Universities + KPITB	Embed programs in academia	Youth-driven innovation	University incubators	Success stories

WORKSTREAM 2: FUNDING & INCENTIVES

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
VC Fund & Competitions	Q4 2026 – Q4 2028	Finance Dept + KPITB + BOK	Innovation fund, hackathons	High-impact startups	Investments	Funded startups
Accreditation & Sandboxes	Q2 2026 – Q4 2026	KPITB	Startup accreditation, GovTech testing	Policy-compliant innovations	Accredited startups	Solutions adopted
Women / Rural Focus	Q3 2026 – Q4 2027	Social Welfare Dept	Grants, rural labs	Inclusive innovation	Women-led startups	Rural participation

PILLAR 3 . GROW

Private Sector & Business Enablement

OBJECTIVE To foster a conducive business environment that empowers the private sector to drive innovation, digital transformation, and economic growth in Khyber Pakhtunkhwa.

Interventions

- ◆ **IT Park Revitalization Strategy** — Comprehensive infrastructure and service modernization plan for enhancing IT Park performance and company retention.
- ◆ **IT Company Facilitation SOPs & eDesk** — Standardized operational procedures and digital help desks to streamline administrative and technical support.
- ◆ **One-Window Facilitation for IT Companies** — Single-window service platform for registrations, licenses, compliance, and business services in all IT Parks and STPs.
- ◆ **Establishment of Ghandhara Digital Complex (Peshawar)** — A flagship innovation hub for digital showcasing, startup exhibitions, and tech product launches, hosting IT companies, incubation and co-working spaces.
- ◆ **Product Showcasing Arena in KPITB** — Dedicated space to exhibit software solutions, digital innovations, and products from KP-based tech companies.
- ◆ **Digital Innovation Fund for KP IT Park Companies** — Grants for startups and established firms to develop cutting-edge technologies in areas like AI, blockchain, and IoT.
- ◆ **Public-Private Collaboration Platform** — Enabling KP IT Park companies to collaborate with government departments, academic institutions, and research centers to co-create and test new digital solutions for public service delivery.
- ◆ **Regional Digital Hubs** — Hubs in smaller cities within Khyber Pakhtunkhwa to decentralize digital innovation and bring digital resources closer to local businesses and talent pools.
- ◆ **Digital Innovation Partner Program** — Allowing pre-qualified KP IT Park companies to co-develop and test digital tools for government needs.
- ◆ **IT Companies Product Showcasing via Metaverse** — Creating immersive virtual showrooms and exhibitions using metaverse platforms to globally showcase KP tech products and attract international buyers and investors.
- ◆ **Operationalization of Digital City Haripur** — A comprehensive digital ecosystem enabling innovation, enterprise development, and hosting high-end IT organizations.
- ◆ **Help Desk for IT Companies** — A dedicated facilitation desk to support IT companies with investment, registration, and technical assistance.
- ◆ **Expansion of Software Technology Parks in Universities & Colleges** — Upgrading academic institutions with STPs to promote innovation, incubation, and academia-industry linkages.
- ◆ **Establishment of Grand Software Technology Park in Peshawar** — A landmark facility to host high-end IT companies and boost regional digital exports.
- ◆ **Development of Co-Working Clusters in Peshawar** — Shared workspaces designed to promote freelancing, remote work, digital startups, and collaborative tech innovation.
- ◆ **IT Industry Exposure Visits** — Organized tours / visits and participation in national / international tech expos to build business networks and global visibility for KP IT companies.
- ◆ **Triple Helix Linkage Model** — Strengthening collaboration among industry, academia, and government for digital-policy co-creation and joint R&D.

- ◆ **Linkage with National Tech Ecosystems** — Connecting KP's IT Parks with major tech hubs in Islamabad, Lahore, and Karachi for market access and mentoring.
- ◆ **KPPRA Rules Modification** — Amending procurement rules to encourage public-sector procurement from local tech firms and startups.
- ◆ **Cluster-Based Promotion of IT Companies** — Sector-focused facilitation and promotion strategies targeting HealthTech, FinTech, AgriTech, and EduTech clusters.
- ◆ **Products / Solutions Exhibitions** — Participation in tech expos across Pakistan and abroad to promote KP's digital products and attract partnerships.
- ◆ **Establishment of KP Software Export Board (KPSEB)** — A dedicated body to promote software export, policy advocacy, and market development.
- ◆ **Strengthening P@SHA Local Chapter** — Enhancing representation, networking, and capacity-building of KP's tech firms under the P@SHA umbrella.
- ◆ **Online Marketplace for Local Procurement** — A digital portal for the KP government to source IT solutions directly from local tech companies.
- ◆ **Ease of Doing Business Facilitation at KPITB Office** — Streamlined services and support desks for entrepreneurs and IT firms under a business-friendly environment.
- ◆ **Training Programs for IT Park Companies** — Business, technical, and compliance training modules designed for capacity development in IT Parks.
- ◆ **Sponsorship Mechanism for Global Exposure** — Structured support system to sponsor IT companies' participation in global B2B expos and conferences.
- ◆ **Establishment of KP High-Tech Zone** — A tech-intensive industrial zone focused on deep technologies, AI, robotics, and advanced manufacturing.
- ◆ **IT Companies Certification Program** — Supporting global certification (CMMI, ISO, GDPR) to enhance credibility and export competitiveness.
- ◆ **Development of Low-Skill Digital Economy Segments** — Enabling growth in BPO, call centers, data entry, and virtual-assistant services for employment generation.
- ◆ **Establishment of Innovation Centers** — Integrated incubators providing R&D infrastructure, co-development support, and business assistance to startups.
- ◆ **Public-Private Partnerships in Digital Infrastructure & Services** — Fostering collaborative investment in broadband, data centers, cloud platforms, and e-governance services to accelerate infrastructure development and service delivery.
- ◆ **BPO & Shared Services Hub Development (Call Centers, Tech Parks)** — Building Business Process Outsourcing hubs and shared service centers to tap into global outsourcing demand and generate youth employment.
- ◆ **Digital Cluster Development Strategy** — Promoting sectoral clusters such as FinTech, EdTech, HealthTech, AgriTech, and eCommerce through common infrastructure, branding, and innovation ecosystems.
- ◆ **Business Incubation in SEZs & Industrial Parks** — Integrating innovation centers and incubation programs within industrial parks to encourage tech-driven enterprise development and job creation.

IMPLEMENTATION PLAN

WORKSTREAM 1: INFRASTRUCTURE DEVELOPMENT & MODERNIZATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
IT Park Revitalization	Q1 2026 – Q4 2027	KPITB + IT Industry	Modernize IT parks with high-speed internet, labs	Revitalized IT parks	Upgraded facilities	30% increase in company retention
Ghandhara Digital Complex	Q2 2026 – Q4 2030	KPITB + Private Sector	Build innovation hub in Peshawar	Operational complex hosting startups	Complex commissioned	Investment attracted
Grand Software Tech Park	Q1 2026 – Q4 2029	KPITB	Establish flagship facility in Peshawar	IT companies housed	Flagship park	Export growth
Co-Working Clusters	Q3 2026 – Q4 2027	KPITB	Develop shared workspaces in Peshawar and other districts	Affordable workspace	Co-working hubs	Freelancers supported

WORKSTREAM 2: POLICY & REGULATORY SUPPORT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
KPPRA Rule Amendment (subject to approval)	Q1 2026 – Q2 2028	Finance Dept	Mandate local tech procurement	Policy enacted	Amended rules	Govt IT procurement from KP firms
Cluster-Based Promotion	Q2 2026 – Q4 2030	KPITB	Sector-specific hubs (HealthTech, FinTech)	Operational clusters	Cluster launches	Cluster revenue
Certification Support	Q3 2026 – Q4 2030	KPITB	Subsidize ISO / CMMI certifications	Certified companies	Certification subsidies	Export increase

WORKSTREAM 3: BUSINESS SUPPORT & FACILITATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
One-Window eDesk	Q1 2026 – Q4 2030	KPITB, Industries, District Administration	Digital platform for registrations / licenses	Process automation	Unified eDesk	Faster service delivery
Metaverse Showcasing	Q2 2026 – Q4 2030	KPITB, Industries, Chamber of Commerce	Virtual exhibitions for global buyers	Global product display	Virtual expos	Buyer engagement
Local Procurement Marketplace	Q3 2026 – Q4 2030	KPPRA + KPITB	Portal for govt IT procurement	Local vendors onboarded	Procurement portal	Cost savings

WORKSTREAM 4: PUBLIC-PRIVATE PARTNERSHIPS & ECOSYSTEM BUILDING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Triple Helix Linkages	Q1 2026 – Q4 2030	Academia + Industry + KPITB	Joint R&D projects	10 industry-academia MoUs	5 commercialized innovations	Innovations commercialized
BPO Hub Development	Q2 2025 – Q4 2030	KPITB	Establish call centers / tech parks	2 BPO hubs	Hubs operational	1,000+ jobs created
Digital Clusters	Q3 2028 – Q4 2030	KPITB	Sectoral clusters (EdTech, AgriTech)	3 operational clusters	Clusters launched	Cluster revenue

WORKSTREAM 5: INNOVATION & SKILL DEVELOPMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
University & College STPs	Q1 2026 – Q4 2030	Universities & Colleges	Embed STPs in institutions	Students trained / year	Campus STPs	Startup formation
Low-Skill Digital Economy	Q2 2026 – Q4 2030	KPITB	Train youth in BPO / data entry	Certified workers	Training pipeline	Job placement

PILLAR 3 . GROW

Digital Trade & E-Commerce

OBJECTIVE To accelerate economic growth, empower SMEs, and integrate Khyber Pakhtunkhwa into global digital value chains by establishing robust digital trade infrastructure, e-commerce platforms, export facilitation systems, and targeted capacity-building interventions for entrepreneurs, youth, and women.

Interventions

- ◆ **Export Facilitation for E-Commerce SMEs (Training, Tools, Logistics Support)** — Provide tailored training, toolkits, and logistics support to help SMEs navigate global e-commerce platforms, manage supply chains, and scale exports efficiently.
- ◆ **Integration with Global E-Commerce Platforms (e.g., Amazon, Alibaba, eBay, Etsy)** — Enable onboarding and support for KP's SMEs on leading global marketplaces with technical assistance, branding support, and regulatory compliance.
- ◆ **AI-Powered Market Intelligence Platforms for Exporters** — Develop AI-driven tools for predictive analytics, export trends, pricing strategies, and demand forecasting to help SMEs identify and access new global markets.
- ◆ **Cloud-Based ERP & Business Management Tools for SMEs** — Promote adoption of cloud-based ERP, CRM, and accounting solutions among SMEs to improve operations, compliance, and global competitiveness.
- ◆ **Promotion of Freelance Exports through Global Platforms** — Facilitate access to platforms like Upwork, Fiverr, Toptal, and Freelancer by providing skill certification, digital-marketing training, and transaction support.
- ◆ **E-Commerce Enablement Program for Women and Youth** — Launch tailored digital-commerce training programs and startup kits for women- and youth-led enterprises to promote inclusive participation in online business.
- ◆ **Provincial Digital Trade Policy and Investment Promotion Plan** — Draft and implement a comprehensive policy to promote digital exports, reduce trade barriers, offer incentives, and attract foreign e-commerce investment.
- ◆ **E-Commerce Export Gateway Portal for KP** — Develop a centralized digital gateway for export documentation, payment reconciliation, market-access data, and matchmaking with international buyers.
- ◆ **SME Digital Branding & Product Showcasing Hubs** — Set up physical and virtual hubs for showcasing KP's crafts, products, and services on international platforms using VR/AR and digital storytelling.
- ◆ **E-Commerce Business Accreditation & Quality Certification Program** — Introduce digital accreditation systems and product-quality certifications for e-commerce enterprises to boost credibility in global markets.
- ◆ **Digital Marketing & Growth Hacking Bootcamps for Exporters** — Organize intensive bootcamps to equip businesses with online marketing, SEO, content strategy, and cross-border digital-campaign skills.

IMPLEMENTATION PLAN

WORKSTREAM 1: GLOBAL MARKET ACCESS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Export Facilitation	Q1 2026 – Q4 2029	Industries Dept + KPITB + Chamber	Train SMEs on global platforms; workshops, logistics partnerships	Globally competitive SMEs	SMEs onboarded	Export volume increase
Platform Integration	Q2 2026 – Q4 2029	KPITB + E-commerce Firms	Technical support for compliance / branding; API integration, regulatory guidance	Global marketplace presence	SMEs on global platforms	Annual sales

WORKSTREAM 2: INCLUSIVE PARTICIPATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Freelance Exports	Q3 2027 – Q4 2029	KPITB	Certify freelancers for global platforms; skill certification, payment support	Export-earning freelance workforce	Freelancers certified	Freelance revenue
Women / Youth Enablement	Q1 2026 – Q4 2029	Social Welfare Dept + KPITB	Startup kits, mentorship; grants, e-commerce training	Inclusive digital trade	Women / youth-led startups	Survival rate

WORKSTREAM 3: SKILLS DEVELOPMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Marketing Bootcamps	Annual from 2025	KPITB + Marketing Firms	SEO and content-strategy training; workshops, hackathons	Digitally market-ready businesses	Businesses trained	Online sales growth



P4 Digital Governance, Society & Rights

DIGITIZE / TRUST

To build a responsive, transparent, citizen-centric, and secure digital government that empowers citizens, strengthens institutions, ensures equitable access to digital rights, and promotes sustainable digital public infrastructure.

PILLAR 4 . DIGITIZE / TRUST

Digital Government & Business Process Optimization

OBJECTIVE To transform government operations into a smart, agile, integrated, and paperless digital ecosystem, aligned with the vision of a “One Stop, Non-Stop, and Any Stop Government” — where citizens and businesses can access seamless services anytime, anywhere, through unified, interoperable, and proactive digital government systems.

Interventions

- ◆ **Comprehensive Digitization of Government Processes** — Digital transformation of administrative, governance, operational, and service-delivery processes across all departments and autonomous bodies.
- ◆ **Government-as-a-Platform (GaaP)** — Develop shared, reusable building blocks (eID, ePayments, eKYC, Messaging, Data Exchange, Consent Management) as core digital public goods across all government departments.
- ◆ **Internal Process Re-engineering Lab (GovProcess Lab)** — Establish a Government Process Innovation Lab to continuously redesign service flows, reduce steps, eliminate redundancies, and increase citizen satisfaction.
- ◆ **Unified Notification System (UNS)** — A central notification system that auto-sends reminders, approvals, alerts, and status updates to citizens via SMS, email, mobile push notifications, and digital mailboxes.
- ◆ **Unified Government Resource Planning (GRP) System** — Implementation of a province-wide GRP system integrating financial management, human-resource systems, procurement, planning, asset tracking, and performance monitoring.
- ◆ **Digital Document Vault / DigiLocker for Citizens & Departments** — Enable citizens and government departments to store, retrieve, and share documents (certificates, licenses, approvals) via secure cloud-based document vaults.
- ◆ **Paperless Office Ecosystem (Gov360)** — A fully digitized internal working environment enabling e-File systems, digital signatures, digital correspondence, e-Note sheets, and automated approvals.
- ◆ **End-to-End e-Governance Platform** — Centralized integration of all government functions via interoperable modules covering ERP, HRMIS, budgeting, procurement, planning, and performance dashboards.
- ◆ **AI-Powered Government Decision Support Systems** — AI-driven dashboards and business-intelligence tools to support predictive planning, early-warning / alert systems, and real-time service-delivery monitoring.
- ◆ **Enterprise Architecture Framework for Government** — Structured architecture for ICT standardization, process harmonization, and systems interoperability aligned with TOGAF / GovStack / COBIT frameworks.
- ◆ **Citizen-Centric Workflow Automation Systems** — Automating citizen-facing workflows with personalized service-delivery triggers, integrated notifications, and status tracking.
- ◆ **One Unified Government ID System Integration** — Linkage of services with Khyber Pass Digital ID for authentication, digital signatures, and single sign-on for all citizen-facing services.
- ◆ **Proactive Government Services Model** — Move from request-based to proactive service delivery by using integrated citizen profiles, predictive analytics, and lifecycle events (birth, education, marriage, business, pre-pension).
- ◆ **Integrated Case & Task Management Systems** — Smart case tracking, automated task allocation, escalation mechanisms, and performance-accountability tools across departments.
- ◆ **Government Collaboration and Communication Platform** — Secure internal messaging, project-collaboration suites, file sharing, and document co-authoring tools replacing paper-based communication.
- ◆ **Employees' Internal Portal** — Digital assistant and chatbot support for officials: AI-powered virtual assistants for scheduling, file tracking, referencing, and automated data summaries.
- ◆ **Smart Performance & Productivity Measurement System** — Department-wise performance analytics powered by KPIs, milestone tracking, benchmarking, and annual digital scorecards.
- ◆ **Digital Procurement and e-Bidding Integration** — Transparent digital procurement lifecycle with e-tendering, e-auctions, pre-qualification, contract monitoring, and vendor dashboards.
- ◆ **Departmental Digital Maturity Index** — Development of an index for digital governance, infrastructure, human resources, and related dimensions.
- ◆ **Real-Time Government Service Monitoring Command Center** — Central dashboard (Government Performance Command Center) tracking all digital transactions, delivery timelines, and citizen feedback.
- ◆ **Automated Notifications and Escalation Protocols** — Real-time alerts to officials for pending files, delays, and citizen complaints through integrated SMS / Email / Push channels.
- ◆ **Audit-Ready Digital Trails and Archiving** — Secure archival, audit logs, and traceability features for governance transparency and accountability.
- ◆ **Interdepartmental System Interoperability via APIs** — A robust API layer enabling real-time data exchange between departments for seamless service orchestration.
- ◆ **Multi-Device Access and Mobility Enablement** — Enabling officials and citizens to access digital governance platforms via mobile, tablets, and desktops, ensuring anywhere governance.

IMPLEMENTATION PLAN

WORKSTREAM 1: FOUNDATIONAL DIGITIZATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
End-to-End Digitization	Q4 2025 – Q4 2030	All Departments	Digitize workflows (e.g., approvals, records)	Paperless government operations	Processes digitized	Reduction in manual handling

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Government-as-a-Platform (GaaP)	Q2 2026 – Q4 2028	KPITB	Develop shared modules (eID, ePayments)	Reusable digital public goods	Reusable APIs	Department adoption
Digital Document Vault	Q3 2026 – Q4 2028	KPITB	Secure cloud storage for documents	Secure document access for citizens & departments	Documents stored	Document management

WORKSTREAM 2: PROCESS RE-ENGINEERING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GovProcess Lab	Q2 2026 – Q4 2027	KPITB	Identify bottlenecks, automate steps	Streamlined service flows	Re-engineered services	Faster service delivery
Workflow Automation	Q1 2026 – Q4 2027	KPITB	Automate citizen-facing workflows	Reduced manual intervention	Automated services	Fewer manual steps

WORKSTREAM 3: SYSTEMS INTEGRATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Unified GRP System	Q3 2025 – Q4 2028	KPITB, ST&IT	Integrate finance, HR, procurement	Whole-of-government resource planning	Province-wide GRP	Department integration
API Interoperability	Q4 2025 – Q4 2027	KPITB	Deploy API gateway for data sharing	Seamless interdepartmental data exchange	APIs published	System connectivity
Enterprise Architecture	Q4 2025 – Q4 2026	KPITB, ST&IT	Adopt TOGAF / GovStack frameworks	Standardized ICT landscape	Approved architecture	Departmental compliance

WORKSTREAM 4: CITIZEN-CENTRIC AUTOMATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Unified Notification System	Q4 2025 – Q4 2026	KPITB	Central alerts via SMS / WhatsApp	Proactive citizen updates	Alerts / month	Reduction of processing cost
Single Sign-On (SSO)	Q4 2025 – Q4 2026	KPITB	Link services to Khyber Pass ID	One-ID access to all services	SSO for services	Usage rate

WORKSTREAM 5: GOVERNANCE & MONITORING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Real-Time Command Center	Q4 2025 – Q4 2026	KPITB	Central dashboard for service tracking	End-to-end delivery visibility	Live KPI monitoring	SLA adherence
Smart Performance Analytics	Q4 2025 – Q4 2027	KPITB	AI-driven department scorecards	Accountability-driven performance culture	Quarterly performance reports	YoY efficiency gains

PILLAR 4 . DIGITIZE / TRUST

e-Governance Infrastructure (Core Digital Backbone)

OBJECTIVE To establish a secure, cloud-powered, scalable, and interoperable digital backbone that enables smart governance, seamless communication, efficient service delivery, data-driven decision-making, and digital workplace modernization across the Government of Khyber Pakhtunkhwa.

Interventions

- ◆ **Enterprise-Class Civil Secretariat Secure Network** — Establish a high-speed, encrypted internal network infrastructure across the provincial secretariat for secure communication and document transmission.
- ◆ **Fiberization of All Departments and Attached Formations** — Ensure end-to-end high-speed broadband connectivity across all government offices, district formations, and service-delivery outlets.

- ◆ **e-Governance Infrastructure (Core IT Services)** — Deploy enterprise-grade email systems, cloud-based collaboration suites, secure file sharing, and document co-authoring platforms.
- ◆ **Official Email Usage Enforcement Policy** — Mandate the use of secure, domain-based government email accounts for all official communication across departments and directorates.
- ◆ **Government Employee Communication Portal** — Launch an internal digital platform for file sharing, circulars, HR notices, e-documents, calendars, and collaborative tools for interdepartmental coordination.
- ◆ **Internal Intranet Portal** — Build an internal, restricted-access portal for confidential departmental communication, file-movement tracking, document templates, and resources.
- ◆ **Central Internet Tunnel & Bandwidth Optimization Framework** — Route all internet access through a centrally controlled tunnel to optimize bandwidth, manage usage, and ensure cybersecurity compliance.
- ◆ **Fair Internet Usage Policy (FIUP)** — Enforce digital usage guidelines for internet access in government offices including role-based access, content filters, and social-media management protocols.
- ◆ **Bring Your Own Device (BYOD) Policy** — Introduce a BYOD policy allowing secure use of personal devices through controlled access protocols, encryption policies, and endpoint security.
- ◆ **IT Hardware Standardization Guidelines** — Establish hardware specifications and procurement frameworks for all government departments to ensure compatibility, cost-efficiency, and performance.
- ◆ **Provincial Government IT HelpDesk System** — Set up a central troubleshooting helpdesk for government officials offering support for IT hardware, software, and user-access issues.
- ◆ **Government Cloud Storage & Backup Services** — Provide secure, scalable cloud infrastructure for data storage, departmental backups, and interdepartmental sharing.
- ◆ **Establishment of a GPU-Based Data Center** — Develop a high-performance computing environment to support AI, big-data analytics, high-computational applications, and real-time decision systems.
- ◆ **Digital Asset Compliance System** — Implement a system for storing, indexing, tracking, and accessing government digital content, media files, documents, templates, source code, databases, UIs, etc.
- ◆ **User Authentication & Identity Access Management (IAM)** — Enable role-based, multi-factor authentication protocols for all access points within the government IT network.
- ◆ **Device & Endpoint Monitoring System** — Monitor IT equipment and devices for performance, security, updates, and optimization to ensure robust service delivery.
- ◆ **Provincial Cloud Infrastructure** — GovCloud-KP – Develop and operationalize a government-owned, secure, and scalable cloud infrastructure hosted at the KP Data Center to serve all departments and public-sector entities.
- ◆ **Cloud-Native Application Development & Hosting** — Enable departments to build and host their digital applications directly on GovCloud-KP with scalability, performance, and cost-efficiency.

IMPLEMENTATION PLAN

WORKSTREAM 1: NETWORK & CONNECTIVITY INFRASTRUCTURE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Enterprise-Class Civil Secretariat Secure Network	Q1 2026 – Q4 2028	ST&IT, Data Center	Deploy encrypted network infrastructure, conduct penetration testing	Secure internal network for document transmission	Network commissioned	Full coverage, <1 ms latency, zero breaches
Fiberization of All Departments	Q1 2026 – Q4 2029	ST&IT, Data Center	Lay fiber cables, upgrade remote offices	End-to-end broadband connectivity	Offices connected	99.9% uptime
Central Internet Tunnel & Bandwidth Optimization	Q2 2026 – Q1 2029	ST&IT, Data Center	Route traffic centrally, allocate bandwidth	Optimized internet gateway	Central gateway live	Cost savings, 95% uptime

WORKSTREAM 2: CLOUD & DATA INFRASTRUCTURE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Provincial Cloud Infrastructure (GovCloud-KP)	Q2 2026 – Q4 2027	ST&IT, Data Center	Build government-owned cloud infrastructure	Operational GovCloud	GovCloud live	Departments migrated
Cloud-Native Application Development	Q1 2028 – Q4 2030	ST&IT, Data Center	Train developers, host apps on GovCloud	100+ cloud-hosted apps	Apps deployed	Reduced hosting costs
Government Cloud Storage & Backup	Q3 2026 – Q4 2027	ST&IT, Data Center	Migrate data, enable secure sharing	100TB+ cloud storage	Storage live	Backup compliance

WORKSTREAM 3: SECURITY & ACCESS MANAGEMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Official Email Enforcement Policy	Q1 2026 – Q2 2026	ST&IT, Data Center	Ban non-official emails, train staff	Policy compliance	Policy enforced	Adoption of official emails
Fair Internet Usage Policy (FIUP)	Q1 2026 – Q2 2026	ST&IT, Data Center	Deploy content filters, role-based access	Filtered internet usage	FIUP live	Adherence to protocols
Identity Access Management (IAM)	Q1 2026 – Q4 2026	ST&IT, Data Center	Implement MFA, role-based access	MFA-enabled systems	IAM rolled out	User enrollment

WORKSTREAM 4: IT SUPPORT & COLLABORATION TOOLS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Core IT Services (Email, Cloud Collaboration)	Q3 2026 – Q2 2028	ST&IT, Data Center, KPITB	Migrate to enterprise email, deploy collaboration tools	Active email accounts	Suite deployed	Adoption of core services
Government Employee Communication Portal	Q4 2026 – Q3 2028	ST&IT, Data Center, KPITB	Develop HR, file-sharing, and calendar tools	Portal with government users	Portal live	Active monthly users
Provincial IT HelpDesk System	Q2 2026 – Q1 2029	ST&IT, Data Center	Deploy ticketing system, train staff	Operational helpdesk	Helpdesk live	Resolution in <4 hrs

WORKSTREAM 5: ADVANCED COMPUTING & DATA MANAGEMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GPU-Based Data Center	Q1 2027 – Q4 2030	ST&IT, Data Center	Procure GPUs, deploy HPC infrastructure	AI-ready data center	HPC cluster live	AI projects hosted
Digital Asset Compliance System	Q2 2027 – Q4 2028	ST&IT, Data Center, KPITB	Tag metadata, enforce access protocols	Searchable asset database	System live	Digital assets indexed

PILLAR 4 . DIGITIZE / TRUST

Sectoral Digitalization (Hyper-Digitalization Across Sectors)

OBJECTIVE To accelerate the digital transformation of high-impact service sectors through sector-specific smart solutions, integrated platforms, and real-time analytics, ensuring citizen-centric service delivery, resource efficiency, and data-driven governance.

Digital Tourism (Smart Tourism)

Objective: Digital transformation of the tourism sector to enhance tourist experiences, streamline services, and unlock KP's cultural, religious, and ecological tourism potential.

- ◆ Smart Tourism Portals with e-booking, virtual guides, and payment systems.
- ◆ AR/VR-based cultural site exploration and immersive digital tours.
- ◆ Tourism Information Management System (TIMS) for data-driven planning.
- ◆ Community-based tourism digital integration and capacity-building.
- ◆ QR-based digital ticketing at museums, parks, and heritage sites.

Digital Revenue & Taxation

Objective: Complete digitization of revenue systems to improve transparency, compliance, and forecasting, while reducing manual handling and leakages.

- ◆ Online property tax, excise, stamp duty, and licensing systems.
- ◆ AI-based revenue intelligence and performance-monitoring dashboards.
- ◆ QR-code enabled digital payment receipts.
- ◆ AI-driven valuation tools and GIS mapping to modernize tax assessments.
- ◆ Digitizing land records, automating property taxes, and integrating revenue services.
- ◆ Digitized dispute resolution.
- ◆ Automated e-filing and digital invoicing.
- ◆ Integration with Paymir for digital revenue collection through digital muhassil.
- ◆ GIS-based mapping of property records, token tax, and motor-vehicle registration.
- ◆ Tobacco tax, professional tax, and related levies.

Digital Agriculture (AgriTech)

Objective: Leverage digital and emerging technologies to transform agriculture, empower farmers, optimize resources, and build resilience in the agriculture value chain.

- ◆ IoT and AI-based precision farming, crop monitoring, and weather forecasting.
- ◆ Farmer Digital IDs (integration with Khyber Pass) and e-subsidy platforms.
- ◆ Mobile-based agri-advisory services and e-Mandi systems.
- ◆ Drone and satellite-based crop surveillance and risk assessment.
- ◆ Agriculture data analytics for yield forecasting and climate adaptation.

Digital Transport & Mobility

Objective: Transformation of transport governance and service delivery using smart mobility systems, automation, and real-time analytics.

- ◆ End-to-end automation of driving licenses, vehicle permits, and e-challans.
- ◆ AI-based traffic violation detection, fitness checks, and digital payments.
- ◆ Integrated digital ticketing for public transport.
- ◆ Smart parking, fleet management, and road-infrastructure dashboards.
- ◆ GIS-based transport route planning and monitoring tools.

Smart Health (Digital Health Services)

Objective: Enhancing access, efficiency, and quality of healthcare services through digitization, smart diagnostics, and real-time patient-management systems.

- ◆ **One Patient** — One ID (Khyber Pass integrated).
- ◆ A centralized digital platform for managing patient records, facility performance, diagnostics, and health-service data.
- ◆ Standardized digital health records for seamless, secure, and interoperable patient-data access across all health facilities.
- ◆ Cloud-based digital repository for secure storage and easy retrieval of patient medical history and diagnostic data.
- ◆ Remote consultation and AI-enabled diagnostic tools for accessible healthcare in remote and underserved areas.
- ◆ Digital immunization records linked to Khyber Pass Digital ID for secure citizen authentication and service delivery.
- ◆ Automation of hospital operations including admission, discharge, billing, pharmacy, and laboratory workflows.
- ◆ Digitized medical-imaging management and tele-radiology systems for seamless image sharing across facilities.
- ◆ AI-powered dashboards for tracking disease patterns, forecasting outbreaks, and public-health planning.
- ◆ Digitally equipped mobile health teams with HMIS connectivity for community-level service delivery.
- ◆ Dashboards to monitor antenatal care, child immunization, nutrition and growth indicators, and disease spread in real time.
- ◆ Digital systems for managing medicine procurement, inventory, and e-prescription fulfillment.
- ◆ Machine-learning algorithms to prioritize high-risk patients and automate referrals.
- ◆ Real-time monitoring of facility operations, service delivery, and health-staff deployment.

Digital Education (Smart Learning Ecosystem)

Objective: Transforming the education system through digital platforms, data-driven learning tools, and AI-enabled personalization to improve teaching quality, student performance, and institutional efficiency.

- ◆ Integrated School Information Management System (SIMS) and digital teacher-performance portals.
- ◆ Smart classrooms equipped with interactive displays, digital content, and Learning Management Systems (LMS).
- ◆ Real-time student-performance dashboards and auto-generated e-certifications.
- ◆ AI-powered adaptive learning systems and personalized learning pathways.
- ◆ Mobile apps for digital attendance, learning-progress tracking, assessments, and parent-teacher communication.
- ◆ Digital curriculum mapping, online content repositories, and gamified learning platforms.
- ◆ Teacher digital upskilling platforms and professional-development learning hubs.
- ◆ Centralized examination systems, digital test banks, and auto-grading tools.
- ◆ e-Libraries, knowledge portals, and offline-first learning apps for rural outreach.
- ◆ AI-driven school-cluster mapping and rationalization dashboards for equitable access planning.
- ◆ Digital posting / transfers of teachers.
- ◆ Digital attendance of teachers and students.
- ◆ School Leaving Certificate, Provisional Certificate, and Character Certificate issuance online.

Smart Policing & Digital Law Enforcement

Objective: Enhancing law-enforcement effectiveness and public safety through AI, digital case management, real-time surveillance, and citizen-centric policing tools.

- ◆ Real-time crime dashboards with GIS-enabled crime heat maps and incident tracking.
- ◆ Digital FIR registration, e-prosecution workflows, and integrated case-tracking systems.
- ◆ AI-powered surveillance systems with facial recognition and anomaly detection (linked with Khyber Pass).
- ◆ Smart patrolling systems with predictive deployment and incident-anticipation analytics.
- ◆ Digital forensic tracking, evidence management, and chain-of-custody dashboards.
- ◆ Integration with Police ERP for seamless records management.
- ◆ QR-based beat logging and officer-tracking systems.
- ◆ Predictive analytics for crime prevention, crowd control, and hotspot detection.

Digital Social Protection & Welfare

Objective: Redesigning social-welfare delivery through data-driven targeting, AI-based eligibility screening, and integrated financial-disbursement systems to uplift marginalized populations.

- ◆ Development of a Social Protection Registry.
- ◆ Centralized Digital Beneficiary Management System linked with Khyber Pass Digital Identity.
- ◆ AI-based eligibility scoring and dynamic targeting algorithms for social assistance.
- ◆ G2P payments delivered securely through Paymir-enabled digital wallets / digital payments.
- ◆ Unified platform for disbursing Zakat, scholarships, stipends, micro-loans and other subsidies.
- ◆ Smart-card-enabled social-welfare services and subsidy-tracking systems.
- ◆ Social-protection analytics for coverage mapping and inclusion diagnostics.
- ◆ Digital enrollment and exit tracking for conditional cash-transfer programs.
- ◆ Integration with civil-registration data to enable proactive support delivery.
- ◆ e-Welfare Performance Scorecards for departmental efficiency monitoring.
- ◆ **National Sign Language Data Repository** — standardized content for chatbots and learning platforms.
- ◆ Immersive AR learning modules for children with autism and dyslexia.
- ◆ e-Welfare MIS, vulnerability mapping, and unified service cards for PWDs, senior citizens, transgender persons and other related sections.

Digital Climate Protection, Forestry & Environment

Objective: Enabling environmental sustainability and climate resilience through digital surveillance, ecosystem analytics, and AI-based climate-governance tools.

- ◆ Satellite and drone-based forest monitoring and plantation-tracking systems.
- ◆ AI-powered dashboards for real-time emissions tracking and deforestation alerts.
- ◆ Online automation for Environmental Impact Assessments and clearance processes.
- ◆ Real-time monitoring stations for air, water, and soil quality with public dashboards.
- ◆ Digital Carbon Credit Registry for climate financing, trading, and offset validation.
- ◆ Biodiversity mapping systems and ecosystem-health analytics platforms.
- ◆ Integration of weather-data systems for disaster early warning and response.
- ◆ Smart forest asset inventory and geotagging tools for sustainable management.
- ◆ E-reporting platforms for environmental violations and pollution alerts.
- ◆ Climate Risk Vulnerability Index Dashboard for data-driven environmental planning.

Digital Mines & Mineral Development

Objective: Promoting transparent, efficient, and data-enabled mineral-resource governance and automation.

- ◆ GIS-based mapping of mineral resources, deposits, and exploration zones.
- ◆ Online Mining Lease Management System (MLMS) for application, approval, and monitoring.
- ◆ Digital auction platforms and e-procurement systems for contracts and permits (through service delivery).
- ◆ IoT-enabled mine-site surveillance and safety-monitoring systems.
- ◆ Real-time dashboards for royalty tracking, production reporting, and compliance management.
- ◆ Mineral-resource valuation dashboards and AI-based revenue-forecasting tools.
- ◆ e-Permit verification and QR-enabled transparency in transactions.
- ◆ Digital inspection and regulatory, checklist-based compliance audit tools.

Digital Transformation Plans for Key Departments

Department-wise digital transformation plans localising the sectoral programmes into concrete departmental initiatives.

Police Department

- ◆ **Digital FIR & Reporting System** — Automate FIR registration and enable digital crime reporting.
- ◆ **Crime Profiling & Investigation Automation** — AI-driven crime hotspot mapping, digital profiling, and case-tracking systems.
- ◆ **Forensics & Evidence Management** — Digitize forensic labs and evidence handling through smart chain-of-custody systems.
- ◆ **e-Prosecution & Traffic e-Challan System** — Deploy electronic prosecution tools and integrate digital challan systems with payment gateways.
- ◆ **HRMIS & Performance Management** — Integrated HRMIS for training, duty rosters, and performance tracking.
- ◆ **Digital Case Management & e-Filing** — Streamline litigation workflows and automate case documentation via e-filing systems.
- ◆ **Fleet & Asset Management Systems** — Digitize management of police vehicles, equipment, and asset-tracking systems.
- ◆ **Citizen Service Portal & Mobile App (DASTAK platform)** — Unified platform for police clearance, tenant verification, complaint registration, e-FIR, and legal support.
- ◆ **Smart License & ID Verification Services** — Digitize issuance and verification of driving licenses, servant verification, and character certificates.
- ◆ **AI-Based Surveillance & Monitoring** — AI-enabled facial recognition, biometric verification, and smart surveillance systems.
- ◆ **Daily Situation Reports (e-DSR)** — Automate daily reporting of security status, hotspots, and incidents with predictive dashboards.
- ◆ **Smart Patrol & Deployment Planning** — AI and GIS tools to optimize patrolling routes and force-deployment strategies.
- ◆ **Digital Payments & Financial Systems** — Integrate Paymir and digital payment solutions for fines, fees, and service charges.
- ◆ **Integrated Data Registries** — Link police systems with NADRA, Excise, hotels, and criminal databases for seamless profiling.
- ◆ **Police Welfare Digital Services** — Digitize welfare school admissions, volunteer blood banks, and information centers.
- ◆ **Smart Innovation Labs** — Innovation labs focused on AI, IoT, big data, and cybersecurity for future policing needs.

Home Department

- ◆ Integrated Security Compliance & Monitoring System (ISCMS) for centralized oversight.
- ◆ Case Tracking System for Police, Prison, and Prosecution.
- ◆ Digital Daily Situation Reporting System for law & order and emergencies.
- ◆ E-Verification System for biometric and identity checks.
- ◆ E-Incident Reporting Platform for real-time security-issue reporting.
- ◆ Integrated Security Workspace for multi-agency coordination.
- ◆ Automated Issuance System for arms licenses, NOCs (local / foreigner), and notary services.
- ◆ Centralized Information Registry for FIRs, POs, and the criminal database.
- ◆ E-Registration System for NGOs, companies, dealers, and manufacturers.
- ◆ Digitized SAW & KPISW compliance monitoring.
- ◆ Hotspot Monitoring System using GIS for high-risk areas.
- ◆ Track & Trace System for smuggling-prone goods and border activity.
- ◆ Integration with national security agencies (NACTA, FIA, PTA, SB, CTD, IB, Police).
- ◆ Probation Digital Portal for online referrals, progress reporting, and coordination.
- ◆ GIS-driven tool to supervise probation-officer movements and enhance planning and decision-making.
- ◆ Centralized digital platform to manage case data of probationers and parolees.
- ◆ Electronic case-tracking systems for real-time updates across judicial & law-enforcement bodies.

Local Government

- ◆ Integrated Citizen Services, Reporting & Monitoring System for end-to-end governance automation.
- ◆ Financial Management System covering budget management, asset / liability tracking, and fund utilization.
- ◆ Real-Time Fund Tracking and e-Payments integrated with Raast.
- ◆ Tracking & KPI Dashboard for performance and progress monitoring.
- ◆ E-Procurement ecosystem with e-tendering, e-bidding, e-invoicing, and e-auction.
- ◆ Automated Citizen Services (certificates, licenses, permits) including birth / death / marriage, NOCs, and water connections.
- ◆ Performance Management System for institutional accountability.
- ◆ Human Resource Management and Case / e-Filing System.
- ◆ Strengthened Emergency Management & Early Warning Systems (Rescue 1122, Fire Brigade, hospitals).
- ◆ Urban Planning & Land Use integration with GIS mapping and anti-encroachment solutions.
- ◆ Citizen Feedback System to institutionalize participatory governance.
- ◆ Integrated Information Registry for profiling of Tehsil / VC / NC and service personalization.
- ◆ Smart City / Smart Village and Smart TMA models.
- ◆ Integrated Reporting & Monitoring with Health, Education, and Works sectors.
- ◆ Digital Compliance Reporting through litigation & task-management systems.
- ◆ **Unified Urban Service Monitoring Dashboard** — an integrated urban digital-services dashboard at district and tehsil levels consolidating sanitation, water supply, solid-waste collection, municipal vehicle movements, and complaint-redressal data in real time.
- ◆ **Geo-Fencing of Service Zones** — geo-fencing across municipal service zones (especially waste-collection and public-sanitation vehicles) to ensure route adherence, performance tracking, and automatic exception alerts.
- ◆ **Digital Licensing and Staff Verification System** — a centralized digital driver and operator verification system for all government-operated or contracted fleet services.
- ◆ **Real-Time Waste Collection Index (WCI)** — a Waste Collection Index using IoT and GIS data to measure cleanliness levels in urban areas.

Transport Department

- ◆ Integrated License Issuance System for domestic, international, learner & commercial licenses.
- ◆ Automated Compliance & Monitoring via license-renewal alerts and a self-service reporting portal.
- ◆ Financial Management System for target setting, fund tracking, and e-payments.
- ◆ Commercial Vehicle Inspection & Vehicle Fitness System.
- ◆ Citizen Services Platform for permits, certifications, and goods-forwarding agency licensing.
- ◆ Vehicle Emission Certification & Inspection Module.
- ◆ Bus Stand Management System for licensing and maintenance tracking.
- ◆ Body-Building Workshops Licensing System.
- ◆ Digitized Axle Load Management System for freight monitoring and compliance.
- ◆ Citizen Feedback System to enhance public engagement and participatory governance.
- ◆ Dashboard & Analytics System for performance visibility and insights.
- ◆ Integrated core systems for HRM, asset management, case & e-filing, and performance monitoring.
- ◆ Third-party integration with NADRA, Immigration, and banking systems for service authentication.
- ◆ VETS System for technical inspections and digital compliance assurance.

Excise Department

- ◆ Tax Alerts & Compliance Monitoring through self-service portals and ETO performance management.
- ◆ Financial Management System for tax management, fund tracking, and e-payments.
- ◆ Digitized Professional Tax System for registration, e-invoicing, assessment, payment & rebates.
- ◆ Citizen Feedback System for perception tracking and participatory governance.
- ◆ Modernized revenue systems via GIS tax zoning, AI-based plate recognition & smart vehicle monitoring.
- ◆ Urban Property Management System for digital survey, mapping, valuation & e-assessment.
- ◆ Automated tax enforcement with land-property system integration.
- ◆ Narcotics Incident Reporting & Analysis System including demographics, mobility & hotspot mapping.
- ◆ Citizen services for vehicle registration, fitness inspection, token tax, dealer licensing & transfer of vehicles.
- ◆ Integrated electronic record management & smart number-plates system.
- ◆ Centralized Information Registry for profiling and integration with ANF, Customs, and NADRA.
- ◆ Automated government vehicle tax and commercial property invoicing through e-invoicing modules.
- ◆ Dashboard & Analytics Platform for oversight, decision-making and compliance review.

Agriculture Department

- ◆ **Smart Agriculture Information System (SAIS)** — a province-wide digital platform integrating weather data, pest alerts, agronomic tips, and local market rates; mobile-friendly with local-language support.
- ◆ **Drone and Satellite-Based Monitoring** — monitor crop health, detect diseases early, assess flood / drought impacts, and ensure optimal use of inputs (fertilizers, pesticides, water).
- ◆ **IoT-Enabled Precision Farming** — soil and moisture sensors to guide irrigation schedules, reduce water wastage, and improve crop yields.
- ◆ **Digital Farmer ID and e-Wallet Integration** — register farmers with a unique digital ID linked to an e-wallet to streamline disbursement of subsidies, crop-insurance payouts, and incentives.
- ◆ **AgriTech Startup Incubation** — support local startups focused on AI-driven crop analytics, supply-chain optimization, smart irrigation, and farm-to-market connectivity.
- ◆ **E-Marketplace for Farmers** — a digital platform where farmers can directly sell their produce to buyers, bypassing middlemen.
- ◆ **Remote Sensing for Disaster Response** — satellite imagery and AI analytics to quickly assess damage from floods, locusts, or droughts, enabling timely relief and re-sowing interventions.
- ◆ **Community Wi-Fi Zones and Digital Centers** — rural digital hubs ("Agri-Tech Centers") providing internet access, training, and digital services to farmers in remote areas.
- ◆ Integrated Farmer Registry linked with Gov e-ID and land records.

- ◆ Mobile app, call center, and mobile units for farmer facilitation and outreach.
- ◆ Digital farmer registration, crop profiling, and demographic data collection.
- ◆ Integration of bank information and land records for targeted, transparent subsidy management.
- ◆ Kisan Card (Khyber Pass integrated) & Farmer Info System for unified digital farmer identity and services.
- ◆ Land Record Information System for ownership validation and transparency.
- ◆ Digitized irrigation assessment and Girdawari system for real-time crop monitoring.
- ◆ Automated subsidy disbursement across seeds, tractors, fertilizers, and agri-inputs.
- ◆ E-Portal for digital advisory & credit services for improved decision-making.
- ◆ Soil Information & Certification System for improved agricultural planning.
- ◆ Early Warning & Pest Monitoring System for proactive crop protection.
- ◆ Data analytics, crop forecasting, and visualization systems for predictive agriculture.
- ◆ Digitally operationalized field assessment & compliance-inspection systems.

Auqaf, Hajj, Religious & Minority Affairs

- ◆ Online pilgrim registration and tracking system.
- ◆ Digital donations-management platform.

Irrigation Department

- ◆ Smart irrigation and climate forecasting; digitized irrigation assessment and Girdawari system for real-time crop monitoring.
- ◆ GIS-based digitization of irrigation infrastructure and assets.
- ◆ E-Abyana digital system for streamlined Abyana (water charges) collection.
- ◆ Digital transformation of the Abyana assessment process.
- ◆ Digitized irrigation, fertilizer distribution, and harvest-management systems.
- ◆ **Full automation of the procurement system** — integration with 1Link for Call Deposit Receipt (CDR) verification and implementation of an e-procurement system.

Labour Department

- ◆ End-to-end digitization of departmental processes.
- ◆ Financial automation of all transaction activities.
- ◆ e-Labour inspection system.
- ◆ Online job portal for labourers.
- ◆ Digital worker database.
- ◆ Digital wage-protection programs.
- ◆ Digital platform for workers to easily access information on labour laws, benefits, and rights.
- ◆ Case management and tracking system.

Administration Department

- ◆ Vehicle Management System and fleet management.
- ◆ House allotment and mapping system.
- ◆ KP House booking and automation system.
- ◆ **Government protocols management system** — orders, notifications.

- ◆ Automated agriculture supply-chain & procurement management end-to-end.
- ◆ Digitized irrigation, fertilizer distribution, and harvest-management systems.
- ◆ Market-engagement platforms for real-time pricing and improved farmer income.
- ◆ Integrated Seed Certification System for traceability and authenticity.
- ◆ Weather-driven advisory, AI-based irrigation planning, and climate-resilient cropping systems.
- ◆ **Agri-FinTech & Micro-insurance** — weather-indexed crop insurance and AI-based credit scoring for smallholder farmers.
- ◆ **Unified Smart AgriOps Platform** — merging irrigation, crop, and input digitization into a single platform for streamlined operations.
- ◆ **Expanded soil-intelligence tools** — AI-powered dashboards for soil health, nutrient mapping, and crop-soil matching.
- ◆ **Blockchain for traceability** — seed authenticity, transparent subsidy disbursement, and product tracking from farm to market.
- ◆ **Farmer Feedback Loop** — voice / SMS-based rating systems within agri-advisory apps for real-time service improvement.
- ◆ **Agri-Innovation Challenges** — a challenge fund supporting homegrown AgriTech startups targeting climate adaptation, supply chain, and mechanization solutions.

- ◆ Virtual tours for religious sites.

- ◆ **Crop assessment via GIS and remote sensing** — advanced geospatial technologies for accurate crop assessment to support transparent and efficient Abyana levying.
- ◆ **E-Warabandi System** — a digital scheduling system to ensure timely and equitable water distribution to farmers.
- ◆ **IoT-based telemetry systems** — installation across the eight canal systems in Khyber Pakhtunkhwa to enhance monitoring and operational efficiency.
- ◆ Enhancement of the Water Apportionment Accounting (WAA) Tool.
- ◆ AI-driven hydrological model for accurately estimating seasonal water availability in KP.

- ◆ **Record management of Workers Welfare Board scholarships** — case tracking, online application submission, and a digital payment system for grants and benefits.
- ◆ **ESSI Smart Portal** — a unified portal for benefit applications, e-verification, and contribution records.
- ◆ **Mobile app for workers** — real-time claim updates, medical-care access, and benefit awareness (multilingual: Urdu, Pashto, English).
- ◆ **Digital Medical Board System** — scheduling, reporting, and appeals through online tools, including telemedicine where applicable.
- ◆ **Geotagged health-facility directory** — mapping access to ESSI-affiliated hospitals with real-time service availability.

- ◆ Centralized case-management system.
- ◆ AI-driven decision-support tools.
- ◆ E-Cabinet automation.
- ◆ Asset Management System.

Energy & Power Department

- ◆ Digital platform to monitor and evaluate the physical and financial progress of ongoing projects, including hydropower, solar, and mini / micro hydropower (MHP) projects.
- ◆ Electronic Document Management System.

Establishment Department

- ◆ Documents e-Archiving System.
- ◆ Revamping / enhancing the existing Machine-Readable Service Card System.
- ◆ Integrated HR management system.
- ◆ AI-based posting / transfer system.
- ◆ Digitized service records and approvals.

Elementary & Secondary Education Department

- ◆ Integration of digital platforms developed.
- ◆ Real-time geospatial mapping of schools with infrastructure and enrollment overlays.
- ◆ Data-driven school planning and monitoring.

Finance Department

- ◆ e-Budgeting system.
- ◆ Digital payment solutions for government transactions.
- ◆ AI-driven financial fraud-detection tools.
- ◆ AI-driven Budget Dashboard (expenditure, allocation, spending patterns).
- ◆ SNE automation system / NOC management.

Food Department

- ◆ Food Supply Chain System.
- ◆ Digital inspections of food items.

Higher Education, Archives & Libraries Department

- ◆ Web-based online registration system for private-sector HEIs.
- ◆ Unified campus-management platform for colleges and universities covering the student lifecycle — admission, fees, examinations, etc.
- ◆ AI-powered Historical Archives Assistant.
- ◆ College / university ERP and Learning Management System (LMS).
- ◆ Centralized Academic Record Repository (certificates, transcripts, degrees) linked with Khyber Pass and CNIC-based verification.
- ◆ Real-time dashboards analyzing faculty performance, student outcomes, course effectiveness, and academic resource optimization.

Industries, Commerce & Technical Education

- ◆ Digitalization of DG Industries and Commerce.
- ◆ Online business-registration portal.
- ◆ E-commerce support program for SMEs.
- ◆ Digital export-import tracking system.
- ◆ ERP for SIDB, including inventory management.

Law Department

- ◆ Integrated Case Management System.
- ◆ Litigation Management and Reporting System (integrated with courts).
- ◆ CPLA case management and digital payments.

Information & Public Relations Department

- ◆ AI agent for efficient knowledge management, record keeping, and analysis.

- ◆ Energy sources and utilization dashboard.
- ◆ Real-time energy monitoring dashboard and complaints handling.
- ◆ AI-based demand forecasting.

- ◆ Biometric attendance tracking.
- ◆ E-PSB System.
- ◆ KPIs Tracking System.
- ◆ Integrated Inquiries System.
- ◆ Employee Engagement Platform.

- ◆ Public reporting tool for school issues (e.g., facilities, teacher presence).
- ◆ Central dashboard for real-time KPIs of all schools.
- ◆ E-learning platform for KPEMA monitors on digital tools and data handling.

- ◆ Grant-in-Aid approval and automation system.
- ◆ Open Budget Portal (citizen dashboard).
- ◆ Debt & Liability Management Dashboard.
- ◆ Digital Grants Transparency Tracker.
- ◆ Chatbot for financial queries (budgets, releases, and procedural guidance).

- ◆ Digital demand-and-supply of wheat system.
- ◆ AI-driven dashboard.

- ◆ Higher Education Research Data Repository.
- ◆ Digital accreditation and quality-assurance platform.
- ◆ Online faculty evaluation and professional-development portal.
- ◆ Unified admission systems for colleges and universities.
- ◆ **Open-Source GovTech Labs** — college / university labs to develop open-source tools for governance.
- ◆ **Digital KP Student Ambassadors** — train students to mentor SMEs, women entrepreneurs, and rural communities on adopting Paymir, e-commerce platforms, and cybersecurity tools.

- ◆ Artisan e-marketplaces to support the visibility and commercialization of traditional crafts and local products at national and international levels.
- ◆ Student lifecycle digitization (end-to-end) of TEVTA / BTE / TTB.
- ◆ GIS mapping of Small Industrial Estates (SIE) — plot allotment, payments, etc.
- ◆ Integrated dashboard for industries and SMEs.

- ◆ AI-powered legal research & case prediction.
- ◆ AI-based attendance and performance tracking for District Attorneys.

- ◆ Digital media platforms for government communication.
- ◆ AI for sentiment analysis of public opinion.

- ◆ Citizen-engagement mobile application.
- ◆ AI-driven monitoring of social-media platforms for countering propaganda and false narratives.
- ◆ AI-driven monitoring of TV channels and newspapers.
- ◆ Centralized reforms-management system for real-time information regarding reform initiatives and activities of the provincial government.
- ◆ Linkages of the media-monitoring system with all government departments through APIs to keep them informed about news regarding their respective sectors.

Inter-Provincial Coordination Department

- ◆ Website for the KP Overseas Pakistanis Commission.
- ◆ Integrated data-sharing platform between provinces.

Planning & Development Department

- ◆ **Planning Toolkit** — a digital platform covering concept papers, PC documents, progress, and outcomes.
- ◆ Project HR Management System.
- ◆ Litigation Management System.

Population Welfare Department

- ◆ Provincial Supply Chain Management System.
- ◆ Digital reproductive-health awareness campaign.
- ◆ Electronic health record (EHR) system.

Public Health Engineering Department

- ◆ IoT for real-time water-quality monitoring.
- ◆ Smart water-management system.

Relief, Rehabilitation & Settlement Department

- ◆ Disaster-management GIS mapping system.
- ◆ Real-time emergency-response tracking.

Social Welfare & Women Empowerment Department

- ◆ ERP system for the Social Welfare Department and its attached formations.

Communication & Works Department

- ◆ Digital project-management software.
- ◆ Geographic Information System (GIS) for project tracking.
- ◆ Digital tendering and procurement system.
- ◆ **Road Asset Management System (RAMS)** — a digital system for tracking inventory, condition, and lifecycle of road assets.
- ◆ **Bridge Health Index Dashboard** — real-time monitoring of bridge conditions and safety metrics.
- ◆ **Green Infrastructure Compliance Scorecard** — a tool to evaluate contractor performance against environmental benchmarks.
- ◆ **Drone and AI-based site-inspection app** — a mobile application for field engineers to upload drone data and site reports.

Culture, Tourism & Archaeology Department

- ◆ Virtual tourism platform showcasing historical sites.
- ◆ Digitized records of cultural heritage.
- ◆ AI for predictive maintenance of tourist sites.
- ◆ **Integrated Digital Heritage Portal** — a one-stop online resource featuring virtual tours, collection databases, site information, research archives, interactive maps, and e-ticketing.

- ◆ Digital media content regulation for government departments to ensure unified and consistent narratives across all platforms.
- ◆ Centrally controlled content-dissemination mechanism linking all public-information officers across the province to share public-welfare interventions from their respective pages / accounts and websites.
- ◆ Training an AI model for character-based story development and narrative building.
- ◆ Transforming public engagement in education, health, tourism, etc. by shifting from storytelling to story-living — letting citizens experience history, governance, and culture firsthand using VR, AR, and metaverse technologies.

- ◆ Centralized policy-coordination system.
- ◆ Digital documentation for intergovernmental meetings.

- ◆ Inventory / stock-control system, Library Management Information System, and human-resource systems.
- ◆ AI-driven urban planning tools.
- ◆ Digital project-monitoring dashboards.
- ◆ Centralized data hub for policy analysis.

- ◆ Learning Management System (LMS) — admissions, examinations, etc.
- ◆ Upgradation / extension of the Monitoring & Evaluation Android application (M&NS App).
- ◆ AI-based population trend analysis.

- ◆ AI-based predictive maintenance for water-supply infrastructure.

- ◆ Digital platform for relief-fund distribution.

- ◆ Online registration (and renewal) of non-profit organizations.

- ◆ **Smart Construction Permit Monitoring System** — real-time compliance tracking using AI-enabled models.
- ◆ **Digital Project Performance Tracker** — a central dashboard to track project progress, quality ratings, delays, and budget performance.
- ◆ **Crowdsourced Maintenance Reporting App** — a mobile app allowing citizens to report road issues (e.g., potholes, damaged signage) tagged with geolocation and photos.
- ◆ **Contractor Rating and Digital Feedback System** — a transparent platform where contractor performance is rated based on digital KPIs, citizen feedback, and audit trails.
- ◆ **Real-Time Road Usage & Load Monitoring System** — AI-integrated sensors to monitor road usage and identify potential wear-and-tear hotspots proactively.

- ◆ AI-driven toolkit for analyzing satellite / drone imagery to identify potential archaeological sites, monitor existing sites, model site degradation predictively, and assist artifact analysis.
- ◆ Digital platform / app for tracking artifact provenance to enhance authenticity verification (QR-based).
- ◆ Augmented-reality interactive guides for visitors at sites and museums.

- ◆ Crowdsourced heritage-mapping platform allowing citizens to contribute information (with expert verification).

Housing Department

- ◆ GIS-based urban planning tools.
- ◆ Online housing application system.

Livestock, Fisheries & Cooperatives Department

- ◆ IoT-based smart farming solutions.
- ◆ Digital disease-tracking system for livestock.

Environment, Wildlife & Forest Department

- ◆ Hunting licenses / NOCs online.
- ◆ Biodiversity mapping systems and ecosystem-health analytics platforms.
- ◆ Smart forest asset inventory and geotagging tools for sustainable management.
- ◆ Issuance of permits for the transportation of timber.
- ◆ EPA NOC approvals, renewals and digital payments.
- ◆ **EcoWatch KP** — an AI- and IoT-enabled platform to monitor illegal hunting, deforestation, and wildlife trafficking in real time using motion sensors, thermal cameras, and GPS tagging.
- ◆ **GreenRanger App** — a mobile app for field officers to log sightings, GPS coordinates, habitat data, and incidents, syncing to a central biodiversity database accessible across departments.
- ◆ **Wildlife Citizen Science Portal** — engaging communities and schools through a gamified platform where users upload images or sounds from the wild for species identification using AI models.

Zakat & Ushr Department

- ◆ Online Zakat collection and disbursement system.
- ◆ AI-driven beneficiary verification.
- ◆ Financial-inclusion program for underprivileged citizens.
- ◆ **AI-based assistive-tech matching system** — matching PWDs with suitable devices / services based on the type and severity of disability.
- ◆ **Disability Rights Dashboard** — real-time monitoring of accessibility compliance in public infrastructure.
- ◆ **Digital Disability Wallet** — preloaded monthly allowances, subsidies, and access to partner services.

- ◆ Digital land-record management system.

- ◆ Online fisheries and cooperatives management system.
- ◆ Digital farm-tracking system with disease, medication, vaccination, milk-production and owner records.
- ◆ **Digitized permit and licensing system** — automated processes for wildlife-related permits (hunting, research, rehabilitation) with integrated biometric verification, transparent tracking, and digital payments.
- ◆ **Environmental Intelligence System (EIS)** — integration of air-quality, noise-pollution, and industrial-emissions data into a central environmental-intelligence platform.
- ◆ **Digitization of environmental approvals workflow** — full automation of the EIA / IEE / GEA application, screening, review, approval, and post-approval compliance process.
- ◆ **Smart Enforcement System** — integration of environmental field inspections with mobile inspection apps, QR-based verification of approvals, and live feeds from CEMS.
- ◆ **Open Environmental Data Portal** — a public dashboard for transparency in pollution levels, compliant industries, and enforcement actions.

PILLAR 4 . DIGITIZE / TRUST

Digital Experience Hubs / Governance Experience (GX) & Government Innovation Lab

OBJECTIVE Establish immersive, citizen-centric Digital Experience Hubs through unified government portals, mobile apps, self-service kiosks, and AR/VR-powered interfaces to reimagine public service delivery. Integrate behavioral-science frameworks to analyze citizen behavior, service friction points, and decision-making patterns, enabling evidence-based redesign of services and nudging strategies to improve adoption, satisfaction, and compliance. The Government Innovation Lab will act as a catalyst for rapid experimentation, co-creation with citizens, testing of GovTech prototypes, and scaling of transformative digital solutions across departments.

Interventions

- ◆ **Digital Experience Hubs** — Establish citizen-facing hubs equipped with AR/VR kiosks, mobile apps, and digital screens for immersive service delivery.
- ◆ **Unified Citizen Service Portals (DASTAK)** — Launch centralized portals integrating all public services with a seamless user interface and multilingual accessibility.
- ◆ **GovTech Innovation Lab** — Create a dedicated lab for agile service design, digital-solution prototyping, and co-creation with citizens and startups.
- ◆ **Behavioral Science Unit** — Set up behavioral-insight units to apply behavioral economics in redesigning services, policies, and citizen-engagement models.
- ◆ **AI-Enabled Feedback Loops** — Integrate real-time feedback systems powered by AI to capture, analyze, and respond to citizen sentiments and experiences.
- ◆ **Service Friction Analytics** — Implement tools to analyze pain points and improve ease of access in public service delivery using data insights.
- ◆ **Government Service Satisfaction Benchmarking** — Develop KPIs and indices to benchmark citizen satisfaction across departments and improve service-delivery standards.
- ◆ **Voice of Citizens Platform** — Establish digital platforms to continuously gather citizen feedback, identify frustrations, and inform policy improvements.

- ◆ **Capability Maturity Assessments** — Conduct digital capability evaluations across departments using structured maturity indexes and readiness models.
- ◆ **Participatory Governance Framework** — Foster citizen engagement through open consultations, digital participatory platforms, and co-creation mechanisms.
- ◆ **Edge of Government** — Museum of the Future – Develop an innovation showcase to exhibit futuristic governance solutions using AI, IoT, and immersive technologies.

IMPLEMENTATION PLAN

WORKSTREAM 1: CITIZEN-CENTRIC SERVICE DELIVERY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Experience Hubs	Q2 2026 – Q4 2028	KPITB	Deploy AR/VR kiosks, mobile apps, and digital screens	Hubs operational	Experience hubs	Citizen engagement rate
Unified Citizen Service Portals (DASTAK)	Q1 2026 – Q3 2028	KPITB	Integrate services into a single multilingual portal	Services accessible	Unified portal	Monthly active users
Edge of Government — Museum of the Future	Q3 2026 – Q4 2027	KPITB Innovation Lab	Showcase AI, IoT, and immersive governance solutions	Interactive innovation exhibit	Exhibit open	Annual visitors

WORKSTREAM 2: INNOVATION & CO-CREATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
GovTech Innovation Lab	Q3 2026 – Q4 2027	KPITB Innovation Lab	Prototype digital solutions with startups / citizens	Piloted innovations	Lab operational	Adoption rate
Behavioral Science Unit	Q2 2027 – Q1 2030	KPITB BSU	Apply behavioral economics to service redesign	Redesigned policies	Unit operational	Citizen effort reduction
Participatory Governance Framework	Q3 2026 – Q4 2027	KPITB + Finance + P&D	Launch digital co-creation platforms	Citizen inputs / year	Framework adopted	Policy changes influenced

WORKSTREAM 3: GOVERNANCE & CAPACITY BUILDING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Service Satisfaction Benchmarking	Q1 2026 – Q4 2030	PMRU	Develop satisfaction KPIs for departments	Annual benchmarking report	Benchmark reports	YoY satisfaction improvement
Capability Maturity Assessments	Q2 2026 – Q3 2030	KPITB	Evaluate digital readiness using maturity models	Departmental maturity scores	Assessment cycle	Departments assessed

PILLAR 4 . DIGITIZE / TRUST

Data Governance — Dashboard / Data Analytics

OBJECTIVE Ensure standardized, secure, ethical, and accountable management of data across all government departments and entities — institutionalizing data-stewardship practices, fostering data accountability across departments, and enabling trusted data sharing and integration for informed decision-making.

Interventions

- ◆ **Data Governance Strategy** — Establish a comprehensive policy and framework for data ownership, stewardship, quality, access, privacy, compliance, and ethical use of data across all government entities.
- ◆ **Data Archival and Disposal Framework** — Draft framework containing retention schedules, archival procedures, and secure disposal mechanisms.
- ◆ **Master Dashboard (Unified Government View)** — Develop an integrated, real-time dashboard for the Chief Minister, Chief Secretary, and key officials providing unified KPIs, alerts, trends, and analytics across departments.
- ◆ **Data Integration Framework** — Create standardized protocols and middleware for seamless integration of structured and unstructured data from diverse government systems ensuring interoperability.
- ◆ **Data Analytics and Big Data Infrastructure** — Establish a Data Analytics and Big Data Unit (DX Unit) equipped with AI/ML capabilities for predictive modeling, scenario analysis, policy forecasting, and evidence-based planning.
- ◆ **Open Data Integration** — Enable integration with open-data platforms to promote transparency, citizen engagement, and innovation through anonymized datasets and public APIs.

- ◆ **OpenAPI Marketplace** — Create a centralized OpenAPI Marketplace for secure, standardized, and scalable data sharing between government entities, the private sector, startups, and researchers.

IMPLEMENTATION PLAN

WORKSTREAM 1: GOVERNANCE & COMPLIANCE

Activity	Timeline	Responsibility	Required Action	Expected Outcome	Deliverable	KPI
Data Governance Strategy	Q2 2026 – Q4 2027	KPITB, PMRU	Define ownership, privacy, and ethical guidelines	Approved governance framework	Framework issued	Compliance with data-governance indicators
Data Archival & Disposal Framework	Q2 2026 – Q1 2028	Establishment Department, ST&IT	Design retention schedules, secure disposal protocols	Archival compliance system	Framework live	Data archiving compliance

WORKSTREAM 2: EXECUTIVE DECISION-MAKING

Activity	Timeline	Responsibility	Required Action	Expected Outcome	Deliverable	KPI
Master Dashboard (Unified Government View)	Q3 2026 – Q4 2027	KPITB + CMPO + PMRU	Integrate KPIs, alerts, and trends	Real-time dashboard for leadership	Dashboard live	User adoption by officials

WORKSTREAM 3: DATA INFRASTRUCTURE

Activity	Timeline	Responsibility	Required Action	Expected Outcome	Deliverable	KPI
Data Integration Framework	Q3 2026 – Q2 2027	KPITB	Develop protocols for structured / unstructured data	Unified middleware layer	Framework deployed	System interoperability

WORKSTREAM 4: ADVANCED ANALYTICS

Activity	Timeline	Responsibility	Required Action	Expected Outcome	Deliverable	KPI
Data Analytics & Big Data Infrastructure	Q4 2026 – Q4 2030	Government DX Unit	Deploy AI / ML tools, predictive models	Operational analytics unit	Analytics stack live	Predictive models deployed

WORKSTREAM 5: OPEN DATA & COLLABORATION

Activity	Timeline	Responsibility	Required Action	Expected Outcome	Deliverable	KPI
Open Data Integration	Q3 2026 – Q1 2029	KPITB	Publish anonymized datasets via APIs	Public Open Data Platform	Platform live	Datasets shared
OpenAPI Marketplace	Q2 2026 – Q4 2030	KPITB Innovation Lab	Build secure API marketplace	Centralized API hub	Marketplace live	APIs published

PILLAR 4 . DIGITIZE / TRUST Cybersecurity & Data Protection

OBJECTIVE To build a secure, resilient, and trusted digital government ecosystem by safeguarding digital assets, infrastructure, data, and services from cyber threats.

Interventions

- ◆ **KP Information Protection Framework** — Develop and enforce a framework for the classification, handling, and protection of government data and digital infrastructure.
- ◆ **Cyber Governance, Risk & Compliance (GRC) Platform** — Implement a centralized system to monitor cyber compliance, conduct risk assessments, and ensure regulatory adherence.
- ◆ **Zero Trust Security Architecture** — Introduce identity-based access control, continuous verification, and network segmentation across departments.
- ◆ **Cyber Resilience Framework** — Build resilience through continuity planning, simulation exercises, recovery protocols, and multi-layered security architecture.
- ◆ **Government Digital Assets Protection Guidelines** — Define technical and policy-based security guidelines aligned with ISO 27001, NIST, and national standards.
- ◆ **Cyber Threat Intelligence & CERT Strengthening** — Enhance the capabilities of KP-CERT with real-time threat feeds, red teaming, SIEM / SOAR solutions, and inter-agency coordination.

- ◆ **Crisis Management & Incident Response Strategy** — Deploy structured playbooks, crisis-communication protocols, and a unified incident-response platform for rapid action.
- ◆ **Cyber Security Policy Compliance Toolkit** — Create toolkits for departments to self-assess and monitor adherence to security controls and standards.
- ◆ **Cybersecurity Training & Awareness Program** — Institutionalize mandatory cyber-hygiene training, simulations, and certification programs for government employees.
- ◆ **Public Sector Security Infrastructure Enhancement** — Upgrade firewall systems, endpoint protection, secure VPNs, DLP, IDS / IPS, and authentication mechanisms.
- ◆ **Integrated Incident Reporting & Monitoring Portal** — Launch a unified platform for incident logging, vulnerability scanning, assessment, and follow-up actions.
- ◆ **Data Loss Prevention & Insider Threat Monitoring** — Implement proactive tools and protocols to detect anomalies and insider risks, and prevent data exfiltration.
- ◆ **Cybersecurity Maturity Index** — Assess and benchmark the cybersecurity maturity of departments to guide digital-security investments.
- ◆ **Secure Digital Identity and Authentication Systems** — Integrate multi-factor authentication and biometric verification for access to digital government platforms.
- ◆ **Policy for Critical Information Infrastructure (CII) Protection** — Identify and secure high-value digital assets such as e-services portals, citizen databases, and treasury systems.

PILLAR 4 . DIGITIZE / TRUST

Digital Literacy for Government Officials

OBJECTIVE Equipping government officers, executives, and policymakers with essential digital skills, leadership competencies, and transformation readiness.

Interventions

- ◆ **School of eGovernance** — Establish a dedicated School of eGovernance for structured, institutionalized training on digital governance, inclusion, and innovation.
- ◆ **Digital Competence Framework for Government** — Define a standard digital skillset matrix aligned with global frameworks to map skill progression for all government roles.
- ◆ **Capacity Development Programs** — Conduct regular training courses, executive programs, workshops, bootcamps, summits, and conferences to build digital capability at scale.
- ◆ **Self-Paced Digital Learning Platforms (DLX)** — Launch e-courses and self-paced online learning modules for continuous skilling and upskilling of public officials.
- ◆ **Digital Leadership for Executives & Policymakers** — Design specialized programs on digital change management, leadership in the digital age, and strategic innovation for top-tier government leadership.
- ◆ **KP eGovpedia** — Knowledge Exchange Hub – Establish a digital hub to share knowledge, case studies, success stories, and global best practices in digital governance.
- ◆ **Awareness on Digital Transformation** — Develop podcasts, whitepapers, webinars, dashboards, and communication toolkits to promote awareness and adoption of digital initiatives.
- ◆ **International IT Certification Program for the Government IT Workforce** — Launch globally recognized certification programs to professionally upskill government IT personnel and align them with international digital-competency standards.
- ◆ **Government Civic Innovation Programs** — Foster civic innovation through fellowships, challenge funds, digital-innovation scholarships, and hackathons for public-sector innovation.
- ◆ **Digital Mentorship and Peer-Learning Networks** — Build mentorship programs and peer-exchange cohorts to promote collaborative learning across departments.
- ◆ **Digital Literacy Index for Government Departments** — Establish a benchmarking index to assess digital maturity and literacy levels across departments for targeted capacity building.
- ◆ **Global Perception & Visibility** — Global Publications & Whitepapers – Publish strategic whitepapers, blogs, and thought pieces showcasing digital-governance success stories and innovations.
- ◆ **International eGovernment Conferences & Summits** — Host and participate in global digital-government conferences to exchange ideas, promote local innovations, and position KP globally.
- ◆ **Strategic Events & Forums** — Organize high-impact events, digital showcases, and panel discussions on emerging technologies and digital-policy innovation.
- ◆ **TED Talks & Expert Keynotes** — Encourage leadership participation in global TED-style talks and expert keynotes to highlight transformative initiatives and governance innovation.
- ◆ **Digital Storytelling & Impact Blogs** — Develop impact-driven digital storytelling blogs and case studies to narrate citizen-centric digital success stories.

IMPLEMENTATION PLAN

WORKSTREAM 1: INSTITUTIONAL TRAINING & CAPACITY BUILDING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Capacity Development Programs	Q2 2026 – Q4 2027	KPITB	Conduct workshops, bootcamps	Officers upskilled at scale	Training sessions	Participation rate
Self-Paced Digital Learning Platforms (DLX)	Q2 2026 – Q2 2027	KPITB	Launch e-courses, certifications	Anytime, anywhere learning	Online modules	Completion rate

WORKSTREAM 2: COMPETENCY ASSESSMENT & LEADERSHIP

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Competence Framework	Q2 2026 – Q4 2026	ST&IT, KPITB	Align skills with global standards	Skill matrix for roles	Roles mapped	Framework adoption
Digital Leadership Programs	Q2 2026 – Q4 2030	KPITB	Train executives on digital strategy	Leaders certified	Innovation projects initiated	Projects delivered
Digital Literacy Index	Q3 2026 – Q4 2030	KPITB	Benchmark departmental maturity	Annual literacy scores	Departments assessed	YoY index improvement

WORKSTREAM 3: KNOWLEDGE SHARING & INNOVATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
KP eGovpedia — Knowledge Hub	Q1 2026 – Q4 2030	KPITB	Curate case studies, best practices	Institutional memory strengthened	Digital resources	Monthly users
Civic Innovation Programs	Q2 2026 – Q4 2027	KPITB	Host hackathons, fellowships	Innovation projects	Solutions scaled	Solutions adopted
Digital Mentorship Networks	Q3 2026 – Q2 2030	KPITB	Pair mentors with mentees	Mentorship pairs	Active network	Satisfaction rate

WORKSTREAM 4: GLOBAL ENGAGEMENT & AWARENESS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
International IT Certifications	Q3 2026 – Q4 2030	KPITB	Partner with global certifiers	Certified IT staff	Officers certified	Certification pass rate
Global eGov Conferences	Q3 2026 – Q4 2030	KPITB	Host / participate in global summits	Annual events	Global attendees	International partnerships
Digital Storytelling & Impact Blogs	Q2 2026 – Q4 2030	KPITB	Publish citizen-centric success stories	Public engagement	Case studies, storytelling and blogs	Readership growth

PILLAR 4 . DIGITIZE / TRUST

Digital Society, Rights & Well-being

OBJECTIVE Empowering citizens through inclusive digital ecosystems that uphold digital rights, promote civic engagement, and foster digital well-being.

Interventions

- ◆ **Digital Rights & Citizen Engagement** — Promote online freedom, privacy protection, and open governance through citizen-centric digital platforms.
- ◆ **Digital Civic Engagement Platforms** — Deploy platforms and mobile applications that facilitate citizen participation, public consultations, and crowdsourced policy inputs.
- ◆ **Cyber Ethics & Digital Literacy for Society** — Launch programs to promote ethical online behavior, counter misinformation, and improve digital hygiene among citizens.
- ◆ **Digital Inclusivity Framework** — Ensure marginalized communities, women, and persons with disabilities are included in the digital transformation journey through targeted initiatives and accessibility standards.
- ◆ **Well-being & Mindful Tech Use Campaigns** — Initiate awareness programs on digital wellness, screen-time balance, and mental health in the digital age.
- ◆ **Youth Digital Volunteer Network** — Establish a youth-driven digital volunteer program to support social innovation, awareness campaigns, and community tech enablement.
- ◆ **AI for Social Good** — Promote use of ethical AI for community development, accessibility tools, disability inclusion, and social justice.

IMPLEMENTATION PLAN

WORKSTREAM 1: DIGITAL RIGHTS & CIVIC PARTICIPATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Rights & Citizen Engagement	Q1 2026 – Q4 2030	KPITB	Launch privacy-protection frameworks and open governance platforms	Citizen-centric digital rights charter	Charter published	Citizen awareness
Digital Civic Engagement Platforms	Q2 2026 – Q4 2030	KPITB	Deploy apps for public consultations, petitions, and crowdsourced policy inputs	Participatory platforms	Platforms live	Monthly active users

WORKSTREAM 2: ETHICS, LITERACY & INCLUSIVITY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Cyber Ethics & Digital Literacy	Q3 2026 – Q4 2028	KPITB	Train citizens on misinformation detection and digital hygiene	Citizens trained	Training campaigns	Reduction in misinformation reports
Digital Inclusivity Framework	Q1 2026 – Q2 2028	Social Welfare Dept + KPITB	Implement accessibility standards for marginalized groups	Inclusive digital policy	Framework adopted	Compliance by service providers

WORKSTREAM 3: WELL-BEING & YOUTH ENGAGEMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Well-being & Mindful Tech Use	Q2 2026 – Q4 2030	KPITB	Run campaigns on screen-time balance and mental health	Provincial wellness guidelines	Guidelines issued	Improvement in citizen well-being surveys
Youth Digital Volunteer Network	Q1 2026 – Q4 2030	KPITB	Mobilize volunteers for tech-enabled community projects	Youth volunteers	Network active	Social innovation projects

WORKSTREAM 4: AI FOR SOCIAL IMPACT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI for Social Good	Q3 2026 – Q4 2030	KP AI Ethics Board	Develop AI tools for disability inclusion and social justice	AI-driven solutions	Tools deployed	Adoption in targeted communities



To foster a climate-resilient, environmentally sustainable, and low-carbon digital ecosystem in Khyber Pakhtunkhwa by embedding green IT principles and sustainable infrastructure practices across the digital-transformation landscape.

PILLAR 5 . INNOVATE

Eco-Friendly Digital Ecosystem

Interventions

- ◆ **Green IT & Climate-Smart Technology** — Energy-Efficient Data Centers (Green DCs): establishing Tier-3/Tier-4 green-certified data centers with renewable-energy integration, liquid cooling systems, and AI-powered energy optimization.
- ◆ **Low-Emission Digital Devices Program** — Promoting energy-efficient devices in schools, offices, and community centers, including device labelling and procurement incentive schemes.
- ◆ **AI for Environmental Monitoring** — Using IoT sensors and AI platforms for real-time tracking of carbon emissions, air and water quality, waste disposal, and natural-resource utilization.
- ◆ **Sustainable Building Certifications for Tech Infrastructure** — Ensuring green-building certifications for new ICT hubs / IT parks / STZs and digital learning centers.
- ◆ **Green Startup Ecosystem Development** — Supporting eco-tech entrepreneurs, agritech startups, clean-energy innovators, and circular-economy enablers through green grants, incubation, and market access.
- ◆ **Green Digital Literacy Campaigns** — Launching awareness programs on green computing, e-waste recycling, digital minimalism, and sustainable device use.
- ◆ **Carbon Accounting Dashboard for Digital Services** — Establishing AI-powered dashboards to monitor the carbon footprint of digital platforms, service centers, and infrastructure.
- ◆ **Green Digital Skills Curriculum** — Embedding green tech, sustainability in digital innovation, and environmental responsibility into technical and vocational training programs.
- ◆ **Provincial Carbon Credit Registry** — A Digital Carbon Credit Registry System to document, monitor, and validate carbon offsets by public- and private-sector initiatives.
- ◆ **GHG Emissions Dashboards** — AI-powered dashboards to track real-time greenhouse-gas emissions from digital infrastructure, public buildings, and service-delivery operations.
- ◆ **Green Governance Awards** — Rewarding high-performing departments (paper reduction) and introducing recognition systems for eco-efficient behavior.
- ◆ **Green Government Office Certification Program** — Evaluating departments on paper reduction, energy efficiency, digital adoption, and recycling compliance.

IMPLEMENTATION PLAN

WORKSTREAM 1: GREEN IT INFRASTRUCTURE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Green Data Centers	Q1 2027 – Q4 2030	Energy Dept + KPITB + ST&IT	Deploy renewable-powered Tier-3/4 data centers	Certified green DCs	DCs certified	Energy savings
Low-Emission Devices	Q2 2026 – Q4 2030	KPITB + ST&IT	Incentivize energy-efficient device procurement	Labeled devices	Eco-labels adopted	Emission reduction
Sustainable Building Certifications	Q3 2026 – Q2 2030	KPITB + ST&IT + C&W	Certify ICT hubs / parks as green buildings	LEED-certified hubs	Buildings certified	Compliance

WORKSTREAM 2: ENVIRONMENTAL MONITORING & AI

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
AI for Environmental Monitoring	Q1 2026 – Q4 2030	Environment Dept	Deploy IoT sensors for air / water quality	Real-time monitoring platform	Platform live	Data accuracy
Carbon Accounting Dashboard	Q2 2026 – Q4 2030	Data Team	Develop AI-powered carbon tracking	Live emissions dashboard	Dashboard live	Digital services monitored
GHG Emissions Dashboard	Q3 2026 – Q1 2030	Climate Authority	Track real-time emissions from infrastructure	Provincial GHG tracker	Tracker live	Emission reduction

WORKSTREAM 3: SUSTAINABILITY EDUCATION & RECOGNITION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Green Digital Literacy	Q1 2026 – Q4 2030	Education Dept + KPITB	Train students on green initiatives	Sustainability awareness	Students trained	Awareness growth
Green Office Certification	Q3 2026 – Q2 2030	KPITB	Evaluate offices on energy efficiency	Certified offices	Offices certified	Compliance

PILLAR 5 . INNOVATE

Sustainable Digital Growth

OBJECTIVE To promote environmentally sustainable digital transformation by adopting green ICT practices, fostering low-carbon digital innovation, and enabling businesses to contribute to climate goals through eco-friendly technologies, carbon-offset systems, and responsible digital infrastructure.

Interventions

- ◆ **KP Green Digital Transformation Index** — An index to measure the environmental performance of digital companies and public institutions, ranking them on energy use, emissions, and sustainability practices.
- ◆ **Promotion of Local Green IT Hardware Manufacturing** — Incentives for production of eco-certified IT devices and accessories in KP, reducing import reliance and carbon transport footprint (through KP digital complexes via STZA).
- ◆ **Green ICT Procurement Policy for Businesses** — Policy mandates encouraging public- and private-sector entities to procure energy-efficient ICT hardware and sustainable digital tools.
- ◆ **Sustainable Data Centers for Private-Sector Hosting** — Promoting green, energy-efficient data centers with renewable-energy integration, modular cooling systems, and carbon-footprint tracking.
- ◆ **Carbon Credit Integration in Digital Businesses** — Enabling tech companies and startups to participate in carbon trading by embedding carbon-credit calculation and reporting mechanisms in their platforms.
- ◆ **Digital Sustainability Reporting Framework** — A standardized sustainability-reporting mechanism for digital enterprises to monitor and disclose environmental impact.
- ◆ **Digital Innovation for Climate-Tech and Eco-Economy** — Encouraging startups and researchers to develop solutions in renewable-energy management, carbon-capture technology, smart waste management, and biodiversity monitoring through IoT and AI.
- ◆ **Paperless Business Certification and Filing Processes** — Transitioning all business registrations, renewals, licensing, and compliance reporting to secure digital platforms to reduce paper usage and bureaucratic delays.
- ◆ **Green Coding & Sustainable Software Development Practices** — Promoting eco-efficient coding standards, energy-optimized application development, and serverless computing techniques in software design.
- ◆ **Public-Private Partnerships for Sustainable Digital Infrastructure** — Encouraging joint development of low-impact digital-infrastructure projects such as solar-powered ICT hubs and green co-working spaces.
- ◆ **Eco-Friendly Digital Education Content & Platforms** — Developing awareness modules and certification programs on digital sustainability, green-economy skills, and climate-resilient technologies for entrepreneurs and students.
- ◆ **Carbon-Neutral Digital Events & Exhibitions** — Digital-first, carbon-offset events and conferences for the ICT industry, supported by real-time impact tracking and sustainability scoring.

IMPLEMENTATION PLAN

WORKSTREAM 1: MEASUREMENT & REPORTING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Green Digital Index	Q4 2026 – Q4 2030	KPITB	Rank institutions on sustainability	Annual index report	Index published	Institutions assessed
Sustainability Reporting	Q4 2026 – Q4 2030	KPITB	Standardize ESG disclosures for tech firms	Reporting framework	Framework adopted	Compliance

WORKSTREAM 2: LOCAL MANUFACTURING & PROCUREMENT

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Green IT Manufacturing	Q3 2026 – Q4 2030	KPITB	Incentivize eco-certified hardware production	Local factories	Facilities operational	Import reduction
Green Procurement Policy	Q3 2026 – Q4 2027	KPITB	Mandate energy-efficient ICT procurement	Policy document	Policy notified	Adoption of green digital initiatives

WORKSTREAM 3: SUSTAINABLE BUSINESS PRACTICES

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Green Coding Practices	Q2 2026 – Q4 2027	KPITB	Train developers in energy-efficient coding	Eco-coding guidelines	Guidelines issued	Energy savings
Carbon-Neutral Events	Q3 2025 – Q1 2027	KPITB	Host digital-first, offset conferences	Carbon-neutral events	Events certified	Offset compliance

WORKSTREAM 4: CLIMATE-TECH INNOVATION

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Climate-Tech Solutions	Q1 2026 – Q4 2028	KPITB Innovation Lab	Support AI / IoT for waste management	Pilot projects	Pilots delivered	Adoption rate
Carbon Credit Integration	Q2 2026 – Q4 2027	KPITB + CMPO	Embed carbon trading in tech platforms	Trading mechanism	Mechanism live	Credit value



P6 Digital Trust & Responsibility

TRUST

To establish a secure, transparent, ethical, and accountable digital environment, ensuring data protection, responsible use of AI, and public confidence in digital systems.

PILLAR 6 . TRUST

Cybersecurity & Data Protection

Interventions

- ◆ **Provincial Cybersecurity & Data Protection Framework** — Enacting a robust framework for data privacy, digital rights, secure data processing, and compliance requirements for digital systems.
- ◆ **Cybersecurity Governance Framework** — Implementing an enterprise-wide cybersecurity architecture based on NIST CSF and ISO 27001, focusing on Identify, Protect, Detect, Respond, and Recover functions.
- ◆ **Cyber Governance & Resilience Framework** — A comprehensive Cyber GRC (Governance, Risk & Compliance) strategy, with policies for risk mapping, control mechanisms, and institutional cyber-maturity scaling.
- ◆ **Implementation of Cyber GRC Platforms** — Deployment of automated cyber GRC systems in government institutions to ensure real-time monitoring of risks, vulnerabilities, and regulatory compliance status.
- ◆ **Classification of Digital Assets** — A framework to categorize digital assets by sensitivity, criticality, and exposure, ensuring prioritized protection of mission-critical systems.
- ◆ **Digital Risk Assessment & Compliance Audits** — Periodic cyber-risk profiling, vulnerability scans, and red-team security assessments across departments with a central audit compliance tracker.
- ◆ **Secure Cloud Data Architecture** — End-to-end encryption, identity access management, privileged-user control, and secure data-residency policies in compliance with cloud standards.
- ◆ **Government CERT (Computer Emergency Response Team)** — A Provincial CERT for incident response, threat-intelligence sharing, phishing mitigation, and early-warning systems.
- ◆ **Information Security Audit Registry** — A centralized audit registry and maturity-scoring system for all government entities to measure and report on cyber-hygiene practices.
- ◆ **Establishment of a RED Cyber Team** — A specialized team of ethical hackers & penetration testers to simulate advanced persistent threats (APT), test system resilience, and proactively identify vulnerabilities.
- ◆ **Cyber Awareness & Social Engineering Simulations** — Regular cyber-awareness campaigns, phishing simulations, and social-engineering resistance drills to build a security-first culture across all levels of government.
- ◆ **AI-Powered Threat Intelligence Platforms** — AI and machine-learning tools for behavior-based anomaly detection, threat hunting, and predictive breach analysis.
- ◆ **Zero Trust Security Architecture (ZTNA)** — Adopting Zero Trust principles (never trust, always verify) across identity, devices, networks, and applications to ensure perimeter-less security.
- ◆ **Cybersecurity Capacity Building & Certification Program** — A Certified Government Cybersecurity Officer Program (CGCOP) and partnerships with global cybersecurity organizations to train professionals in cybersecurity governance.
- ◆ **Public Sector Security Operations Center (GovSOC)** — A dedicated, AI-integrated Security Operations Center to monitor and respond to cyber threats in real time across the provincial network.
- ◆ **Cybersecurity Simulation Center** — A lab for real-time cyberattack simulations (e.g., ransomware, phishing) to train government IT staff and students.

IMPLEMENTATION PLAN

WORKSTREAM 1: LEGAL & GOVERNANCE FRAMEWORKS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Provincial Cybersecurity Framework	Q1 2026 – Q4 2027	KPITB, ST&IT	Enact data-privacy and digital-rights laws	Approved legal framework	Framework enacted	Compliance
Cybersecurity Governance Framework	Q2 2026 – Q4 2027	KPITB	Align with NIST CSF / ISO 27001	Enterprise-wide security architecture	Architecture adopted	IS controls implemented
Cyber GRC Platforms	Q3 2026 – Q2 2027	KPITB	Deploy automated risk-monitoring tools	Real-time compliance dashboard	Platform live	Risk reduction

WORKSTREAM 2: THREAT DETECTION & RESPONSE

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Provincial CERT	Q1 2026 – Q4 2029	KPITB CERT Team	Establish incident-response protocols	Operational CERT	CERT stood up	Incidents resolved in <24 hrs
AI-Powered Threat Intelligence	Q2 2026 – Q4 2027	KPITB CERT Team	Deploy anomaly-detection tools	Predictive threat analytics	Platform live	50% fewer breaches

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Zero Trust Architecture	Q3 2026 – Q1 2027	KPITB CERT Team	Implement “never trust, always verify”	Perimeter-less security	Architecture rolled out	100% systems covered

WORKSTREAM 3: CAPACITY BUILDING & AUDITS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Cyber Awareness Simulations	Q1 2026 – Q4 2026	KPITB CERT Team	Conduct phishing drills	Security-first culture	Drill program	Reduced phishing success
Cybersecurity Certification Program	Q2 2026 – Q1 2030	KPITB CERT Team	Train certified officers	Certified professionals	Officer cohort trained	Workforce skilled
Digital Risk Audits	Q3 2026 – Q4 2030	KPITB CERT Team	Perform vulnerability scans	Central audit tracker	Tracker live	Departments audited

PILLAR 6 . TRUST

Ethical AI, Technology & Digital Rights

OBJECTIVE To ensure the ethical and responsible development, deployment, and use of digital & AI systems, while safeguarding citizen digital rights, privacy, equity, and trust in digital public services.

Interventions

- ◆ **Provincial Responsible AI Framework** — Covering fairness, transparency, inclusivity, human oversight, and non-discrimination.
- ◆ **Transparent, Interpretable & Auditable AI Decision-Making Models** — Mandated especially for citizen-facing services (e.g., welfare distribution, recruitment, land records).
- ◆ **Ethics-by-Design and Accountability-by-Design** — Enforced principles in public AI & digital systems.
- ◆ **AI Ethics Impact Assessment (AIEIA) Protocol** — Institutionalized for all major government AI deployments.
- ◆ **Complaint Category for Algorithmic Bias** — Integrated into existing complaint portals to address algorithmic bias, discrimination, or digital-rights violations.
- ◆ **Digital Rights Literacy & Inclusion Programs** — Awareness campaigns and training programs on data ownership, privacy rights, consent protocols, and secure digital participation.
- ◆ **Digital Rights Modules in School & University Curricula** — Targeting youth understanding of digital dignity and information self-determination.
- ◆ **Digital Well-being & Online Ethics** — Collaboration with education departments and tech platforms to promote digital well-being, online ethics, and healthy screen-time practices.
- ◆ **AI Ethics Compliance for GovTech Providers** — Encouraging GovTech solution providers to comply with AI-ethics benchmarks and undergo periodic audits.
- ◆ **Digital Consent Mechanism** — Citizen-Controlled Consent Management Systems for data sharing across government departments, allowing users to manage access preferences and configurations.
- ◆ **Data Localization & Digital Sovereignty** — Ensuring data localization and digital sovereignty, especially for sensitive citizen information.
- ◆ **Ethics Curriculum for Public Officials & AI Practitioners** — Institutionalizing ethical-AI and data-governance training in civil-service capacity-building programs, especially for departments using automated or algorithmic systems.

PILLAR 6 . TRUST

Accountability, Open Governance & Trust Frameworks

OBJECTIVE To build a transparent, participatory, and citizen-trusted digital governance ecosystem through open-data standards, digital-trust mechanisms, consent frameworks, and grievance-redressal systems, aligned with Open Government Partnership (OGP) principles and the Khyber Pakhtunkhwa Open Government Data Strategy 2022. This pillar ensures that government digital services are ethical, reliable, auditable, and citizen-centric.

Interventions

- ◆ **Open Data Governance Policy** — Aligning with the Khyber Pakhtunkhwa Open Government Data Strategy, promoting open access, reuse of public data, and cross-sectoral transparency.
- ◆ **Standardized Data Disclosure Protocols** — Standardizing metadata quality, open-API integration, and interoperability across government departments.
- ◆ **Upgradation of the KP Open Data Portal** — Enhancing the portal with new datasets from health, education, transport, agriculture, environment, and fiscal sectors.
- ◆ **Interactive Dashboards & AI-Based Data Insights** — Introducing real-time visualizations, AI-based data insights, and download-ready datasets.
- ◆ **Open Data Literacy & Civic Tech** — Promoting open-data literacy workshops, civic-tech hackathons, and startup access to government datasets.
- ◆ **Digital Trust Framework for Public Platforms** — A Digital Trust Index to assess and rate government platforms based on security, privacy compliance, uptime, service quality, and user-trust metrics.
- ◆ **Digital Transparency Monitoring Unit (DTMU)** — Established to oversee digital-governance performance and citizen-trust indicators.
- ◆ **Digital Ethics Curriculum & Public Sector Training** — Mandatory digital-ethics, data-protection, and cybersecurity modules in public-servant training programs.

- ◆ **Open Budget & Fiscal Transparency Platforms** — Publishing departmental budgets, development expenditure, procurement details, and fiscal KPIs via interactive open-budget dashboards.

IMPLEMENTATION PLAN

WORKSTREAM 1: AI GOVERNANCE & ETHICS

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Responsible AI Framework	Q1 2026 – Q4 2026	KPITB Policy Wing	Define fairness and transparency principles	Approved AI ethics policy	Policy approved	AI systems compliant
AI Ethics Impact Assessments	Q2 2026 – Q4 2027	KPITB Ethics Board	Evaluate AI deployments	AIEIA protocol	Protocol adopted	Assessments / year
Digital Consent Management	Q3 2025 – Q2 2027	KPITB	Launch citizen-controlled consent systems	Consent-management platform	Platform live	Citizen opt-in rate

WORKSTREAM 2: RIGHTS & LITERACY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Rights Literacy	Q1 2026 – Q4 2027	Education Dept + KPITB	Train citizens on privacy rights	Citizens educated	Campaigns delivered	Awareness rate
School Curriculum Integration	Q2 2026 – Q4 2027	Education Dept + KPITB	Add digital-dignity modules	Updated curricula	Modules embedded	Schools compliant
Ethics Training for Officials	Q3 2026 – Q1 2027	Education Dept + KPITB	Train AI practitioners	Officials trained	Cohorts trained	Course completion

WORKSTREAM 3: OPEN DATA & TRANSPARENCY

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
KP Open Data Portal Upgrade	Q2 2026 – Q4 2027	KPITB, PMRU	Add health, education datasets	Enhanced portal	Portal upgraded	Annual users
Open Budget Dashboards	Q3 2026 – Q2 2027	KPITB, PMRU	Publish fiscal KPIs interactively	Live budget tracker	Tracker live	Transparency score

WORKSTREAM 4: TRUST & MONITORING

ACTIVITY	TIMELINE	RESPONSIBILITY	REQUIRED ACTION	EXPECTED OUTCOME	DELIVERABLE	KPI
Digital Trust Index	Q1 2026 – Q4 2027	KPITB, PMRU	Rate platforms on security / privacy	Trust index report	Index live	80% platforms rated “trusted”
Digital Transparency Unit	Q2 2025 – Q1 2026	KPITB, PMRU	Monitor governance performance	Quarterly reports	Unit operational	100% departments evaluated

P7 Overarching Spectrum — Cross-Cutting Enablers for Digital Transformation

OVERARCHING

To establish a robust, future-ready, and interoperable digital-governance ecosystem by embedding foundational enablers such as institutional frameworks, technology governance, enterprise architecture, policy coherence, infrastructure standardization, and citizen-centric service mechanisms.

PILLAR 7 . DIGITIZE

Institutional & Advisory Ecosystem

OBJECTIVE Establishing a robust governance and consultative mechanism to steer digital initiatives, foster innovation, and integrate academia-industry-policy frameworks.

Key Interventions

- ◆ Formation of IT Advisory Council (Government, Industry, Tech Experts, Development Partners).
- ◆ Establishment of a Working Group for Oversight of the Digital KP 2030 Strategy & Roadmap.
- ◆ Institutionalization of an eGovernance Council / eGovernance Service Cadre to lead and manage digital reforms across departments / formations.

IMPLEMENTATION PLAN

WORKSTREAM 1: INSTITUTIONAL & ADVISORY ECOSYSTEM

ACTIVITY	TIMELINE	RESPONSIBILITY	KEY ACTIONS	DELIVERABLE	KPI
IT & R&D Advisory Councils Formation	Q3 2025 - Q4 2026	KPITB Policy Wing	Constitute councils with members from government, academia, industry	Notified councils with TORs	Functional councils
Digital KP 2030 Oversight Working Group	Q3 2025	ST&IT, KPITB	Establish interdepartmental working group for roadmap monitoring	Working group charter	Quarterly review meetings held
eGovernance Cadre & Council Institutionalization	Q1 2026 - Q4 2026	Establishment Department & KPITB	Designate cadre roles, develop SOPs and policies	eGovernance service cadre established	Officers trained / placed

PILLAR 7 . DIGITIZE

Technology Governance, Standards & Architecture

OBJECTIVE Laying the foundation for unified, secure, scalable, and interoperable technology systems through clear standards and architectural blueprints.

Key Interventions

- ◆ Khyber Pakhtunkhwa Enterprise Architecture Framework (KPEAF) for standardized digital transformation across all departments / formations.
- ◆ Development of a Technology Governance Framework including guidelines on architecture, platforms, databases, mobile applications, APIs, cybersecurity, and data protection.
- ◆ Adoption of Open Standards & Interoperability Protocols to ensure seamless data and service exchange across departments.
- ◆ **Formation of the Khyber Pakhtunkhwa Integration Framework** — a middleware / API gateway for system integration.

IMPLEMENTATION PLAN

WORKSTREAM 2: TECHNOLOGY GOVERNANCE, STANDARDS & ARCHITECTURE

ACTIVITY	TIMELINE	RESPONSIBILITY	KEY ACTIONS	DELIVERABLE	KPI
KPEAF Implementation	Q4 2025 - Q4 2026	KPITB	Develop and roll out enterprise architecture across departments	KPEAF document & implementation toolkit	Departments onboarded
Technology Governance Framework	Q3 2025 - Q2 2026	KPITB	Define platform, application, API, and security standards	Published Tech Governance Framework	New systems compliant

ACTIVITY	TIMELINE	RESPONSIBILITY	KEY ACTIONS	DELIVERABLE	KPI
Interoperability Standards Adoption	Q1 2026 - Q4 2026	KPITB	Develop protocols for data and service interoperability	Open Standards Protocols Guide	Systems integrated
KP Integration Framework	Q4 2026 - Q2 2028	KPITB	Design and deploy middleware / API gateway	Live integration platform	API connections enabled

PILLAR 7 . DIGITIZE

E-Governance Infrastructure & Frameworks

OBJECTIVE Institutionalizing the foundation of end-to-end digital service-delivery mechanisms across all levels of government.

Key Interventions

- ◆ Creation of a Framework for E-Governance in Government Departments (processes, standards, interoperability).
- ◆ Establishment of an eGovernance Unit in every department / formation.
- ◆ Design of a Tech-Driven Public Service Delivery Framework & Tools (automation, AI, service workflows, analytics).
- ◆ Digitization of Government Workflows through standardization of e-File, digital signatures, GRP systems, and workflow-automation tools.

IMPLEMENTATION PLAN

WORKSTREAM 3: E-GOVERNANCE INFRASTRUCTURE & FRAMEWORKS

ACTIVITY	TIMELINE	RESPONSIBILITY	KEY ACTIONS	DELIVERABLE	KPI
Departmental eGovernance Units	Q3 2025 - Q4 2026	All Departments + KPITB	Set up units, assign focal persons, train teams	Functional eGovernance Units	Units reporting quarterly

PILLAR 7 . DIGITIZE

Smart City Governance Framework

OBJECTIVE Strategically driving the development of smart, connected, and sustainable cities using data and technology.

Key Interventions

- ◆ Formation of the KP Smart City Commission to develop Smart City Roadmaps (starting with Peshawar and Abbottabad).
- ◆ Integration of IoT, GIS, AI-based city-management tools, smart surveillance, waste management, and traffic systems.
- ◆ Development of Smart Governance Platforms for urban service delivery, citizen engagement, and city planning.
- ◆ Municipal AI-ethics and data-governance frameworks.
- ◆ Integration of AI into Smart City Masterplans.
- ◆ Urban data platforms (real-time sensors, open data, IoT integration).
- ◆ Edge-AI infrastructure for smart traffic, waste, and energy management.
- ◆ Training city officials, engineers, and planners in AI systems.
- ◆ AI-awareness and digital-inclusion campaigns for citizens.
- ◆ Incentives for AI startups working on urban problems via grants and PPPs.
- ◆ Pilots for digital twins, predictive policing, and AI in disaster management.
- ◆ Citizen-participatory platforms for feedback on AI services.

PILLAR 7 . DIGITIZE

Strategic Outsourcing & Vendor Ecosystem

OBJECTIVE Leveraging private-sector capabilities to enhance agility, reduce cost, and drive innovation in government digital projects.

Key Interventions

- ◆ Development of an IT Outsourcing Strategy (tactical, strategic, and transformational).
- ◆ Creation of a Standardized Vendor Ecosystem for IT services, digital platforms, and infrastructure provisioning.
- ◆ Pre-qualification of vendors, framework agreements, and adoption of performance-based contracting models for IT and digital services in government.

Infrastructure Standardization & Optimization

OBJECTIVE Ensuring cost-effective, scalable, and interoperable infrastructure through unified standards.

Key Interventions

- ◆ Standardization of infrastructure (hardware, software, network, cloud, endpoints).
- ◆ Implementation of a Government Asset Compliance System (GACS) to track digital-infrastructure lifecycle.
- ◆ Development of GovCloud-KP infrastructure, cloud-native services, and a GPU Data Center for AI and big-data platforms.

Institutional Arrangement

Execution rests on a strong three-tier institutional arrangement — connecting political ownership to technical delivery to on-ground implementation.



Enablers & Monitoring

CROSS-CUTTING ENABLERS

KP Enterprise Architecture

Common ICT standards and interoperable, reusable building blocks.

Integration Framework

Province-wide API gateway connecting departmental systems.

Open API Governance Layer

Governed, secure access to data and services for reuse.

e-Governance Councils

Cross-departmental coordination and an e-Governance service cadre.

GovStack Architecture

Reusable DPI components — eID, ePayments, eKYC — across systems.

Outsourcing Strategies

PPP and industry linkages to scale delivery and innovation.

MONITORING & EVALUATION

Implementation is guided by a robust M&E framework for transparency, responsiveness and results.

Digital KP Dashboard

Centralised, real-time tracking of process digitisation, training coverage, transaction volumes and satisfaction.

Quarterly Reviews

Led by the KP Digital Council to refine decisions, clear bottlenecks and make course corrections.

Voice of Citizens Platform

AI-powered feedback loops that collect, analyse and respond to citizen sentiment for dynamic service enhancement.

Annual Progress Reports

Publicly released updates on achievements, challenges and forward priorities — reinforcing accountability.

A LIVING STRATEGY & ADAPTIVE ROADMAP

Digital KP 2030 is designed as a living, evolving policy — not a static blueprint. KPIs, timelines and interventions are refined through quarterly reviews, data-driven evaluations and co-creation. As AI, quantum computing, digital twins and immersive platforms mature, the province will adopt them proactively to stay ahead of the curve.

Expected Outcomes by 2030

The strategy translates into concrete, measurable targets across its sub-pillars — the promise of Digital KP 2030, made specific.

90% PROCESSES PAPERLESS	70% PAYMENTS DIGITISED	100k+ AI-TRAINED PROFESSIONALS	100% GOVGPT IN CORE DEPTS
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DOMAIN	SIGNATURE TARGETS BY 2030
e-Government & Services	90% citizen services digitised via DASTAK 2.0; 70% reduction in service time; AI chatbots on 100% portals.
AI & Emerging Tech	100,000+ AI-trained professionals; 80% of departments using AI dashboards; KP GovGPT across 100% core departments.
Digital Identity (DPI)	Khyber Pass launched; 50+ services integrated; 100% government aid via digital wallets; DigiLocker used by 5M citizens.
Cloud & Infrastructure	90% departmental data on GovCloud-KP; 100% public apps cloud-native; secure API gateway on 100% platforms.
FinTech & Payments	70% of transactions digitised; 100% receipts & disbursements via wallets; QR systems in 100% of government.
Process Optimisation	100% processes paperless; 90% approvals via digital file; 100% departments on GRP; Unified Notification System deployed.
Cybersecurity & Trust	Zero-Trust in departments; GovSOC operational 24/7; Digital Trust Index live; 100% cybersecurity-audit compliance.
Sustainability	Reduced digital carbon footprint; Carbon Credit Registry operational; Green Digital Transformation Index published annually.
Open Governance	100% non-sensitive datasets on the Open Data Portal; open budget dashboards in all departments; Public Trust Index monitored.

Expected Outcomes by Sub-Pillar

Every sub-pillar carries its own measurable promise for 2030. The outcomes below translate the roadmap's 32 sub-pillars into the specific, checkable results each is expected to deliver.

P1 Digital Transformation

DIGITIZE

AI & Emerging Technologies

- ◆ 100,000+ AI-trained professionals equipped by 2030 to support AI-powered governance and innovation.
- ◆ 80% of government departments will use AI-enabled dashboards.
- ◆ KP GovGPT deployed across 100% of core departments.

e-Government & Smart Services

- ◆ 90% of citizen services digitized through DASTAK 2.0.
- ◆ DASTAK for Business launched.
- ◆ 100% of departments integrated into a unified service-delivery workflow.
- ◆ 70% reduction in average citizen service-delivery time.
- ◆ AI chatbots live on 100% of citizen service portals.

Digital Identity & Inclusion (DPI)

- ◆ Khyber Pass launched.
- ◆ 50+ services integrated with digital-ID authentication.
- ◆ 100% of government aid disbursed via digital wallets.
- ◆ Digital Document Locker accessed by 5 million citizens by 2028.

Cloud-First & Edge Computing

- ◆ 90% of departmental data hosted on GovCloud-KP.
- ◆ 100% of public-facing apps migrated to cloud-native architecture.
- ◆ Secure API Gateway adopted by 100% of digital platforms.

Digital Twin & Smart Cities

- ◆ Divisional cities mapped with 3D digital twins.

Metaverse & Immersive Experience

- ◆ 5+ historical sites integrated into the KP Metaverse Platform.
- ◆ Metaverse-based service portal piloted.
- ◆ Virtual Town Halls and Khuli Kachehris launched province-wide.

FinTech & Digital Payments

- ◆ 70% of government and citizen digital-payment transactions digitized.
- ◆ Paymir platform scaled.
- ◆ 100% of government receipts and disbursements via digital wallets.
- ◆ QR-based payment systems operational across 100% of government.

Startup & Innovation Ecosystem

- ◆ Divisional HQs host functional innovation centers.
- ◆ Tech entrepreneurs incubated through university-based programs.
- ◆ Global Startup Exchange Programs initiated.

Private Sector & Business Enablement

- ◆ 500+ IT companies registered in KP IT parks.
- ◆ Digital City Haripur fully operational.

Digital Trade & E-Commerce

- ◆ SMEs onboarded to e-commerce platforms.

Digital Government & Business Process Optimization

- ◆ 100% of government processes digitized and paperless.
- ◆ 100% of departments adopt standardized workflow-automation systems.
- ◆ Unified Notification System deployed in 100% of departments.
- ◆ 90% of internal approvals processed via digital file systems.
- ◆ 100% of departments integrated with the Government Resource Planning (GRP) system.

e-Governance Infrastructure (Core Digital Backbone)

- ◆ Departments connected via secure GovNet.
- ◆ Officials use secure official email and intranet.
- ◆ Digital Asset Compliance System deployed across government entities.

Sectoral Digitalization

- ◆ Automation in health, education, police, transport, revenue, and agriculture.
- ◆ Sectoral performance dashboards operational.

Eco-Friendly Digital Ecosystem

- ◆ Reduction in digital carbon footprint.
- ◆ Government buildings certified under Green IT standards.
- ◆ AI-powered GHG Dashboards live in all sectors.
- ◆ Digital Carbon Credit Registry fully operational.
- ◆ Green Governance Awards launched annually.

Sustainable Digital Growth

- ◆ KP Green Digital Transformation Index published annually.
- ◆ Green digital startups supported.
- ◆ Green ICT Procurement Policy adopted across all departments.

Cybersecurity & Data Protection (Advanced Layer)

- ◆ 100% compliance with cybersecurity audits.
- ◆ Cyber Governance Risk & Compliance Platform used by all departments.
- ◆ Red-teaming simulations conducted annually in all critical systems.
- ◆ Citizen-Controlled Access Management System adopted.
- ◆ Government employees trained in cyber-hygiene practices.

Ethical AI & Digital Rights

- ◆ Government AI systems pass the AI Ethics Impact Assessment.
- ◆ Digital Consent Mechanism adopted in all service platforms.
- ◆ AI Bias Audit Framework applied in AI systems.
- ◆ Digital Rights Literacy Curriculum integrated in public schools / colleges.
- ◆ Digital Ethics Certificate Program launched for all public-sector AI developers.

Accountability, Open Governance & Trust Frameworks

- ◆ Digital Trust Index live and monitored annually.
- ◆ Open Budget Dashboards functional in all departments.
- ◆ Public Performance Monitoring Portals adopted in all ministries.
- ◆ KP Open Government Strategy updated every two years.

Annexures

The following annexures provide the full intervention catalogue, implementation plans and technical references underpinning Digital KP 2030. As a living strategy, they are updated through the quarterly review cycle.

ANNEX A

Institutional Composition & ToRs

ANNEX B

Glossary & Abbreviations

Institutional Arrangement for Digital KP 2030 Execution

Delivery is governed by a three-tier institutional arrangement — from apex political ownership, through the technical delivery engine, to on-the-ground departmental implementation. This annex sets out the full terms of reference for each tier: its role, functions, composition, and where relevant, its meeting cadence and secretariat.

LEVEL I · STRATEGIC OVERSIGHT		Apex Digital Council — “KP Digital Council”		POLICY / STRATEGIC	
Provide high-level policy guidance, strategic direction, interdepartmental coordination, and political ownership.					
FUNCTIONS			COMPOSITION		
◆ Provide high-level strategic direction and guidance for Digital KP 2030. ◆ Approve key digital policies, frameworks, and strategic programs. ◆ Promote cross-sectoral coordination and integration of digital services. ◆ Monitor performance and implementation of digital transformation initiatives. ◆ Facilitate resource mobilization, budget allocation, and public-private partnerships. ◆ Recommend policy and legislative reforms for digital governance. ◆ Oversee digital inclusion, women empowerment, and rural outreach programs. ◆ Foster innovation through collaboration with academia, startups, and industry. ◆ Promote adoption of emerging technologies like AI, IoT, and smart systems. ◆ Ensure implementation of cybersecurity, open data, and digital trust frameworks. ◆ Guide digital response strategies for public emergencies and crisis resilience. ◆ Review KPIs, progress dashboards, and implementation reports from KPITB's Digital Transformation Unit (DTU). ◆ Ensure timely implementation of flagship projects and digital infrastructure initiatives.			◆ Chief Minister (Chairman) ◆ Minister for ST&IT / Special Assistant to CM on IT ◆ Chief Secretary ◆ Additional Chief Secretary (General) ◆ Additional Chief Secretary (P&D) ◆ Board Members (Private) of KPITB ◆ Secretary ST&IT ◆ Secretary Finance ◆ Secretary Planning & Development ◆ Secretaries of Health, Education, Transport, Agriculture, Local Government, etc. ◆ Managing Director, KPITB ◆ Academia Representatives ◆ Industry Representatives (Software Companies, Startups)		
MEETING FREQUENCY			SECRETARIAT		
Bi-Annual (twice a year) or as required			Digital Transformation Unit (DTU), KPITB		

Technical lead to drive, coordinate, standardize, and monitor the execution of the Digital KP 2030 strategy across departments.

FUNCTIONS

- ◆ Serve as the central technical coordination and delivery hub for Digital KP 2030.
- ◆ Provide technical advisory, program management, and implementation support to all departments.
- ◆ Translate strategic priorities into operational digital projects, platforms, and interventions.
- ◆ Ensure alignment of departmental initiatives with provincial digital frameworks and architecture.
- ◆ Support development and rollout of common digital infrastructure and services.
- ◆ Manage e-Government platforms, cloud services, integration frameworks, and digital standards.
- ◆ Drive innovation, research, and emerging technology adoption across departments.
- ◆ Monitor KPIs, timelines, and deliverables for strategic pillars and interventions.
- ◆ Provide capacity building, training, and digital upskilling programs.
- ◆ Facilitate public-private partnerships, industry linkages, and donor collaboration.
- ◆ Ensure cybersecurity, digital inclusion, and citizen-centric design across systems.
- ◆ Serve as the implementation secretariat to the KP Digital Council.

LEVEL III · ON-GROUND DELIVERY	Departmental Implementation Forum (DIF)	IMPLEMENTATION & OPERATIONS
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To serve as the operational arm of Digital KP 2030 at the departmental / formation level by ensuring that all strategies, digital interventions, and reforms are localized, implemented, and institutionalized effectively within each line department and its attached formations.

FUNCTIONS	COMPOSITION
◆ Translate provincial digital transformation strategy into department-specific implementation plans. ◆ Identify digital service delivery gaps and recommend solutions aligned with KPITB frameworks. ◆ Ensure smooth integration with province-wide platforms such as DASTAK, GRP, KP Cloud, and KP Digital Identity. ◆ Supervise development and deployment of departmental e-Services, automation modules, dashboards, and mobile apps. ◆ Monitor KPIs, timelines, and quality of digital initiatives at department level. ◆ Collaborate with KPITB's Digital Transformation Unit (DTU) for technical support and compliance with digital standards. ◆ Serve as a communication channel between the department and the apex KP Digital Council. ◆ Identify departmental digital workforce needs and recommend internal restructuring / upskilling. ◆ Establish internal feedback loops and performance scorecards for digital maturity. ◆ Ensure adoption of cybersecurity protocols, data protection measures, and citizen-centric design.	◆ Chairperson: Administrative Secretary / Head of Department ◆ Coordinator: Head of IT in the respective Department / In-charge of the e-Governance Unit ◆ Concerned Wings / Sections / Unit Heads

e-Governance Unit (within each Department / Attached Formation)

- ◆ Functions as the secretariat of the DIF.
- ◆ Maintains the digital-asset inventory, citizen-service catalog, and workflow redesigns.
- ◆ Drives interoperability with provincial systems (DASTAK, Cloud, Digital ID, GRP, etc.).

Digital Champions / Innovation Leads

- ◆ Mid-level officers designated as "Digital Champions," responsible for driving change at each functional directorate or division level.

ANNEX — GLOSSARY &
ABBREVIATIONSGlossary &
AbbreviationsBASED ON: KHYBER PAKHTUNKHWA DIGITAL
TRANSFORMATION POLICY 2030

Abbreviations and acronyms used throughout the Khyber Pakhtunkhwa Digital Transformation Policy 2030 and this supporting documentation.

ABBREVIATION	FULL FORM
AI	Artificial Intelligence
CM	Chief Minister
CS	Chief Secretary
DASTAK	KP's unified public-service delivery platform (Government-as-a-Platform initiative)
DIF	Departmental Implementation Forum
DPI	Digital Public Infrastructure
DTU	Digital Transformation Unit (KPITB)
G2B	Government-to-Business
G2C	Government-to-Citizen
G2G	Government-to-Government
GRP	Government Resource Planning (system)
ICT	Information and Communication Technology
IoT	Internet of Things
IT	Information Technology
KP	Khyber Pakhtunkhwa
KPITB	Khyber Pakhtunkhwa Information Technology Board
KPI	Key Performance Indicator
P&D	Planning & Development (Department)
Paymir	KP's digital payments platform
PPP	Public-Private Partnership
SDG(s)	Sustainable Development Goal(s)
ST&IT	Science, Technology & Information Technology (Department)

This glossary reflects abbreviations as used in the Policy document. Additional technical terms specific to the Strategy & Roadmap (e.g. individual platform and system names) are defined in context where they first appear.



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