INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

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Contribution by ESCAP

to the CSTD 2025-2026 priority theme on "Science, Technology and Innovation in the age of AI"

PRIORITY THEME 2: Science, Technology and Innovation in the age of AI

United Nations Commission on Science and Technology for Development (CSTD)

To whom it may concern

The 28th CSTD annual session selected "Science, Technology and Innovation in the age of AI" as one of the priority themes for its 29th session (2025-2026). This theme directly addresses SDG 9 "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" at the 2030 Agenda.

The rapid rise of frontier technologies and the surge in data generation are transforming research and development. Artificial intelligence, as a general-purpose technology, will further accelerate this transformation. These changes in research and development practices offer significant opportunities for inclusive industrialisation and innovation, which are the core objectives of SDG 9.

Under this theme, the Commission could discuss how the use of AI and data analytics would impact research and development processes in science and industry and identify the institutional and policy conditions required to harness these technologies for inclusive and sustainable industrialization and innovation. In this context, the Commission can examine the challenges and opportunities specific to countries at different levels of development; identify good practices and policies to support domestic technological development, research and innovation; and explore ways to leverage international cooperation to bridge the uneven technological capabilities and steer technological progress toward sustainable development.

The CSTD secretariat is in the process of drafting an issue paper on the theme to be presented at the CSTD inter-sessional panel meeting to be held in November 2025. In this context, we would like to solicit inputs from international organizations, UN entities and agencies, and regional commissions on this theme. We would be grateful if you could kindly answer the following questions based on your organization's work at the global, regional, and/or national levels:

1. Can you provide some successful examples of how AI and data are being used to advance science and innovation in your country? *(Please describe how these applications transformed research and development practices and their impacts)*
2. What specific challenges, bottlenecks, or failures have you encountered in implementing AI and data for science and innovation? What are the lessons learned?
3. Can you provide examples of strategies or policy instruments to support AI and data for science and innovation? *(Please describe how ethical considerations—such as fairness, transparency, privacy, and accountability—are being incorporated and provide relevant details such as links, budget, evaluation, or other information to characterize them)*
4. Are you engaged in promoting open innovation or open data? If not, why? If yes, can you share specific projects and outcomes? *(Please provide relevant details such as links, budget, evaluation, or other information to characterize them)*
5. Are you engaged in putting in place mechanisms to foster collaboration around AI and data for science and innovation among different stakeholders (e.g., university-industry, or private-public)?
6. Are you engaged in any bilateral, regional, or international partnership aimed to foster AI for STI? (*Please describe the benefits and challenges of participating in these partnerships)*
7. How can international cooperation enhance the use of AI and data for science and innovation to support technological capacity building in your country? In what ways can the UN CSTD contribute to this effort?

Please indicate contact person(s) responsible for projects/policies and international collaboration in this context in case we need clarification on the inputs.

Please send your responses and any further inputs on the theme to the CSTD secretariat (cstd@un.org) by **31 August 2025**. We look forward to receiving your valuable inputs.

Sincere regards,

CSTD secretariat

1. Can you provide some successful examples of how AI and data are being used to advance science and innovation in your country? *(Please describe how these applications transformed research and development practices and their impacts)*

<Cambodia>
ESCAP is working with the Ministry of Post and Telecommunications (MPTC) of Cambodia to formulate its National AI Strategy. ESCAP provided technical assistance and policy advisory services to the Ministry, including the provision of AI experts and organization of the expert group meetings. The draft National AI Strategy (NAIS) outlines visions, proposed strategies and pilot projects that illustrate how AI and data will be used to advance science and innovation, aiming to transform digital transformation:

- **Khmer Large Language Model (LLM) Development**: Cambodia is continuing to build the Khmer LLM. This foundational work in natural language processing (NLP) for the Khmer language is crucial for enabling a wide range of AI applications specific to Cambodia's linguistic and cultural context. It directly contributes to advancing scientific understanding of language models and provides a base for future innovation in areas like public service chatbots, educational tools, and information access in the local language.
- **AI Pilots in Key Sectors**: The NAIS plans to deploy AI pilots in at least three sectors, including agriculture (crop forecasting), health (diagnostic imaging), education (adaptive learning), tourism (chatbots), and logistics (route optimization). These pilots are designed to demonstrate the tangible benefits of AI.
    - **Agriculture**: AI-powered crop forecasting aims to contribute to more consistent productivity and lower input costs in agriculture, especially in regions with digital infrastructure readiness.
    - **Health**: AI in diagnostic imaging (e.g., detecting TB or diabetes through X-ray or retinal scans) will help relieve pressure on limited medical professionals, particularly in provincial hospitals, and enable more proactive, personalized care through predictive analytics.
    - **Education**: AI aims to automate administrative tasks, provide adaptive learning experiences, and enable data-driven insights for student support and curriculum planning.
- **Government Data Portal**: The launch of a Public Data Portal, alongside a Data Governance and Open Data Policy, is a foundational step to fuel innovation. This will provide the necessary data for AI applications and research, enabling data-driven decision-making and fostering private-sector growth.

These initiatives, while largely in the planning and initial implementation phases, are set to transform research and development by:

- **Providing local datasets**: Prioritizing Khmer-language datasets and establishing a Public Data Portal will provide localized data crucial for relevant AI development within Cambodia.
- **Fostering practical application**: The focus on sectoral pilots ensures that AI development is directly linked to national needs and practical problem-solving in areas like agriculture, health, and education.
- **Building foundational skills**: Training civil servants in AI literacy and integrating AI modules into university curricula are critical for developing the human capital necessary for future science and innovation in AI.

<Pakistan>
ESCAP is working with the Ministry of Information Technology and Telecommunications (MoITT) of Pakistan to advance its National AI Policy and Strategy. ESCAP is providing technical assistance and policy advisory services, including the provision of AI experts and the organization of capacity-building workshops. The draft National AI Policy outlines comprehensive strategies and initiatives that illustrate how AI and data will be used to advance science and innovation, aiming to transform research and development practices and their impacts:

Centers of Excellence in Artificial Intelligence (CoE-AI): Pakistan is establishing a nationwide network of CoE-AI, These centers will provide state-of-the-art computing infrastructure, AI labs, and testbeds to support advanced research and development, facilitating demand-driven research that aligns with national priorities.

National Artificial Intelligence Fund (NAIF): The policy establishes NAIF to support research, development, and commercialization of AI technologies. This fund will prioritize commercializable R&D in academia and industry.
Sectoral AI Applications: The policy identifies priority transformation areas including:

- **Agriculture**: AI for pesticide and fertilizer management, irrigation management, yield estimation, and food security
- **Healthcare**: Medical record digitization, telemedicine, and diagnostic applications
- **Education**: AI-focused curricula integration and adaptive learning platforms
- **Governance**: AI for policing, disaster management, and decision-making support
- **Manufacturing**: Quality assurance, predictive maintenance, and supply chain optimization

Capacity Building and Training: Pakistan plans to train 200,000 individuals annually in AI and allied technologies through hybrid learning mechanisms, prepare 10,000 trainers by 2027, and offer 20,000 stipend-based internships annually in collaboration with local and international organizations.
Research and Innovation Framework: The policy establishes mechanisms for intellectual property law reform to support AI-related patents, aiming to register 400 patents annually in AI and allied technologies, while supporting indigenous research and development of homegrown AI solutions.
These initiatives are designed to transform research and development by:

2. What specific challenges, bottlenecks, or failures have you encountered in implementing AI and data for science and innovation? What are the lessons learned?

The NAIS of Camboida acknowledges potential challenges and risks, emphasizing proactive mitigation strategies rather than detailing past failures. Key challenges and bottlenecks anticipated are:

- **Public Misunderstanding and Resistance**: Without widespread AI literacy, the public may mistrust AI systems or reject their use in public services.
    - **Lesson Learned (Anticipated)**: The strategy includes public awareness campaigns and participatory governance mechanisms to build understanding and trust.
- **Ethical Misuse or Unintended Consequences**: Poorly designed or unregulated AI systems could reinforce bias, violate privacy, or cause harm.
    - **Lesson Learned (Anticipated)**: A national ethics framework and sectoral sandboxes are designed to proactively address these concerns and promote responsible AI.
- **Digital Inequality and Exclusion**: There is a risk that AI tools may primarily benefit digitally literate or urban populations, widening inequality.
    - **Lesson Learned (Anticipated)**: The strategy emphasizes inclusive design, Khmer language tools, rural connectivity, and accessibility as core pillars to mitigate this risk.
- **Risk of Inaction**: The strategy explicitly highlights the "risks of inaction," including falling behind regionally and globally, potential loss of economic competitiveness and digital sovereignty, and missing crucial opportunities for accelerated development.
    - **Lesson Learned (Anticipated)**: This emphasizes the urgency and necessity of strategic AI adoption despite the inherent challenges.
- **Data Availability and Quality**: While the strategy aims to fuel innovation with data by promoting open and interoperable data ecosystems and prioritizing Khmer-language datasets, data quality, representativeness, diversity, and sufficiency are recognized as crucial aspects for reliable and unbiased AI outcomes. The need to identify and prioritize high-value datasets for AI pilots also indicates a current challenge in data readiness.
- **Infrastructure Limitations**: AI relies heavily on robust digital infrastructure, and the demands on bandwidth, compute power, energy, and security are escalating. Expanding broadband, cloud, and computer access are foundational enablers, indicating current limitations that need to be addressed.
- **Talent Gap**: The strategy identifies "Empowering Our People" as a foundational enabler, focusing on building digital and AI literacy and growing a base of AI professionals. This implicitly acknowledges a current gap in AI talent and skills.

3. Can you provide examples of strategies or policy instruments to support AI and data for science and innovation? *(Please describe how ethical considerations—such as fairness, transparency,*

privacy, and accountability—are being incorporated and provide relevant details such as links, budget, evaluation, or other information to characterize them)

(Cambodia)
Cambodia's National AI Strategy outlines several strategies and policy instruments:

1. **Governance and Coordination Mechanisms**:
   - An AI Working Group will be established under the Digital Government Committee (DGC), led by a Chief AI Officer. This officer will also function as an AI Ambassador.
   - The Ministry of Post and Telecommunications (MPTC) will be the lead agency.
   - An Annual NAIS Stakeholder Forum will be launched.

   Ethical Considerations:
   - **Ethics Framework**: A national AI ethics framework will be adopted. The strategy builds on Cambodia's early leadership in adopting ethical AI principles through alignment with UNESCO, ASEAN, and OECD guidelines.
   - **Safety and Ethics Awareness Campaigns**: Public awareness campaigns will address associated risks like misinformation, algorithmic bias, and privacy concerns, promoting safe online practices and critical thinking.
   - **Ethical Pilot Initiatives**: Ethics pilot initiatives will be launched.
   - **Regulatory Sandboxes**: Creation of regulatory sandboxes in health and finance (and potentially other ministries) will allow for safe experimentation with AI tools. This allows for testing and refining ethical considerations in a controlled environment.
   - **Integration into Education**: AI modules integrating ethical considerations will be embedded into university curricula. Responsible AI principles and risk awareness will be incorporated into civil servant training programs.
   - **Public Consultation and Participation**: Mechanisms for public input on AI policies and risk tolerance will be developed to integrate societal values and concerns.
   - **Cross-Sectoral Community of Practice**: Creation of inclusive forums for knowledge-sharing on responsible AI among government, private sector, academia, and civil society.
   - **Context-Specific Sectoral AI Guidelines**: Collaboration with sectoral regulators to tailor national responsible AI principles into specific, actionable guidance.
   - **Transparency, Explainability, and Auditability**: Practical guidelines and potential standards will ensure high-risk AI systems are understandable and auditable.

2. **Investment and Resource Mobilization**:
   - **A Digital Transformation Fund** will be launched with initial seed funding from public and donor sources.
   - **Fiscal Incentives**: Finalizing tax incentive packages for AI startups and investors by the end of 2025.
   - **AI Investment Plan**: Creation of a cross-ministerial AI investment plan linked to national budgeting processes.
   - **Cambodia AI Investment Forum**: Hosting a forum to attract Foreign Direct Investment (FDI) and promote public-private collaboration.
   - **R&D Expenditure Target**: Aiming to gradually raise gross R&D expenditure to 1.5% of GDP.

3. **Human Capital Development**:
   - **AI Literacy and Awareness Campaign**: A high-visibility national campaign to introduce core AI concepts, benefits, and risks to the public.
   - **Upskilling Civil Servants**: Training 5,000 civil servants in AI literacy.
   - **University Curriculum Integration**: Integrating AI modules into university curricula across prioritized disciplines.
   - **Localized Learning Resources**: Prioritizing adaptation of online AI and data science learning materials into Khmer.

4. **Data and Infrastructure**:

- **Public Data Portal**: Launching a Public Data Portal with 10+ datasets and a Data Governance and Open Data Policy.
- **Khmer LLM Development**: Continuing to build the Khmer Large Language Model and defining data standards.
- **Cloud First Policy and Data Centers**: Finalizing the Cloud First Policy and advancing the National Data Center Project.
- **National AI Centre and Platform**: Establishing a central institution and a national digital infrastructure layer for AI development, research, and capacity-building.

5. **Innovation Ecosystem**:
   - **AI Digital Park**: Operationalizing a Digital Park by end of 2025 to serve as a hub for AI startups and investors, offering tax incentives, flexible regulation, and high-speed infrastructure.
   - **National AI Innovation Challenge**: Launching a national challenge to foster innovation.
   - **AI Incubator**: Establishing an AI incubator with CADT or university partners.

4. Are you engaged in promoting open innovation or open data? If not, why? If yes, can you share specific projects and outcomes? *(Please provide relevant details such as links, budget, evaluation, or other information to characterize them)*

Cambodia's National AI Strategy is explicitly engaged in promoting open data as a foundational enabler for fueling innovation. Specific Projects and Outcomes (Planned for 2025-2026) are:

- **Launch of the Public Data Portal**: This portal will publish at least 10 priority datasets (e.g., transport, health, agriculture) to "jumpstart AI and data reuse".
- **Data Governance and Open Data Policy**: The launch of the Public Data Portal is coupled with the finalization of a Data Governance and Open Data Policy.
- **Prioritizing High-Value Datasets**: A cross-sectoral process will identify and prioritize "the top 20-30 datasets (public and potentially private sector via partnerships) most critical for enabling high-impact AI applications".
- **Developing and Expanding Khmer-Language Datasets**: This includes prioritizing the creation of local-language data resources to support relevant AI applications, particularly in Khmer Natural Language Processing (NLP). This also implicitly promotes open access to these datasets for broader innovation.
- **National Data Infrastructure and Platforms**: The strategy aims to establish a foundational infrastructure to support large-scale data operations and sharing, including exploring national open data platforms and data marketplaces.

The motivation for this engagement is to "Fuel Innovation with Data" by promoting "open and interoperable data ecosystems" and ensuring "data protection". This is seen as essential for developing local-language data resources, ensuring data quality, and building public trust.

5. Are you engaged in putting in place mechanisms to foster collaboration around AI and data for science and innovation among different stakeholders (e.g., university-industry, or private-public)?

Cambodia's NAIS explicitly outlines mechanisms to foster collaboration:

- **University-Industry / Private-Public Collaboration**:
  - **AI Incubator**: Establishing an AI incubator with CADT (Cambodia Academy of Digital Technology) or university partners.
  - **Digital Park**: The Digital Park aims to co-locate universities, research labs, and private firms to serve as a hub for AI startups and investors.
  - **Public-Private Partnerships (PPPs)**: PPPs will drive investment in infrastructure (e.g., cloud services, data centers), sector-specific AI solutions (e.g., logistics, crop analytics), and joint AI training and talent development programs. A "Quick-Start PPP" pilot in logistics or health, supported by government and donor grants, is a priority action for 2025-2026.

    - **National AI Innovation Challenge**: This challenge is designed to support startups and MSMEs.
    - **AI Investment Forum**: Hosting a Cambodia AI Investment Forum to attract FDI and promote public-private collaboration.
- **Government-Academia Collaboration**:
    - **Integrating AI Basics into University Education**: Working with key universities to embed foundational AI and data science concepts into curricula.
    - **Upskilling Civil Servants**: Integrating AI modules into existing digital literacy programs at the Royal School of Administration and other government training institutes.
- **Cross-Sectoral Community of Practice**: Creation of inclusive forums for knowledge-sharing and collaborative problem-solving among government, private sector, academia, and civil society to promote ethical and safe AI deployment.
- **Broad Consultation**: The strategy itself was developed through broad consultation, drawing on national and international experts, public and private sector actors, and broader civil society actors.

  These mechanisms are designed to align diverse stakeholders towards a shared vision and ensure that AI development and adoption are rooted in national needs and values

6. Are you engaged in any bilateral, regional, or international partnership aimed to foster AI for STI? (*Please describe the benefits and challenges of participating in these partnerships)*

   (Cambodia)
   ESCAP has cooperated with the Ministry of Post and Telecommunications (MPTC) of Cambodia with the support of UNRC Cambodia. Cambodia is engaged in and plans to further engage in bilateral, regional, and international partnerships aimed at fostering AI for Science, Technology, and Innovation (STI).

- **Engagement in Regional and Global Forums**:
    - **ASEAN AI Initiatives**: Cambodia plans to actively engage with ASEAN AI initiatives.
    - **Global AI Ethics Forums**: Cambodia will join global AI ethics forums.
    - **Relevant UN Bodies**: Prioritizing participation in initiatives such as ITU, UNESCO, and GPAI (Global Partnership on Artificial Intelligence).
- **Alignment with International Standards**: Continuously monitoring and learning from global AI governance developments (e.g., EU AI Act, OECD principles) and aligning national frameworks where beneficial for interoperability, trade, and attracting investment.
- **Technology Transfer Partnerships**: Cambodia will actively seek technology transfer partnerships from public and private sector actors in its region and beyond.
- **Showcasing National Progress**: Highlighting Cambodia's advancements in applying AI ethically and effectively to national challenges by participating in international AI events and policy dialogues.
- **Leveraging Diaspora Networks**: Engaging diaspora networks with AI expertise and global talent to support AI talent development, policy advice, and international partnership building in Cambodia.
- **Technical Representation Abroad**: Considering establishing technical liaisons or AI representatives in Cambodian embassies in key partner countries or tech capitals to facilitate monitoring, relationship building, and knowledge exchange.
- **Global AI Safety and Security Dialogues**: Actively participating in international discussions

  (Pakistan)
  ESCAP has cooperated with the Ministry of Information Technology and Telecommunication (MoITT) of Pakistan with support from UNRC Pakistan. Pakistan is engaged in and plans to further engage in bilateral, regional, and international partnerships aimed at fostering AI for Science, Technology, and Innovation (STI). MoITT of Pakistan has strong partnerships with UN agencies including UNRC Pakistan, UNDP, UNESCO, and UN Women to foster AI for STI.

Current and Planned International Engagements:

- **UN ESCAP Collaboration**: Pakistan is actively working with UN ESCAP through the Asia-Pacific Information Superhighway multistakeholder platform to build AI foundations and share emerging regional good practices across priority areas of digital transformation.

7. How can international cooperation enhance the use of AI and data for science and innovation to support technological capacity building in your country? In what ways can the UN CSTD contribute to this effort?

International cooperation can significantly enhance the use of AI and data for science and innovation and support technological capacity building in Cambodia in several ways, as outlined or implied by the NAIS of Cambodia:

1. **Knowledge and Technology Transfer**: International partnerships facilitate the transfer of "off-the-shelf, proven AI solutions" and expertise, reducing the need for Cambodia to "reinvent wheels". This directly supports technological capacity building by providing access to advanced tools and methodologies without extensive in-house research.
2. **Talent Development**: Collaborations can support the development of "integration and application skills" in AI through joint training programs, exchange programs with international universities, and leveraging the Cambodian diaspora's expertise.
3. **Data Ecosystem Development**: International cooperation can provide best practices and technical assistance for building open and interoperable data ecosystems, ensuring data quality, and developing Khmer-language datasets, which are foundational for AI development.
4. **Funding and Investment**: International cooperation, through development partners and foreign direct investment (FDI), is crucial for mobilizing resources for infrastructure, talent, and innovation, as highlighted by the Digital Transformation Fund and AI Investment Forum initiatives.
5. **Ethical AI Governance**: Engaging with global AI ethics forums (like UNESCO, OECD, GPAI) helps Cambodia "learn from international discourse and frameworks". This enables Cambodia to build a human-centric, secure, and interoperable AI ecosystem that earns public trust, aligning with global best practices while adapting to national context. This also helps in addressing potential risks such as algorithmic bias and privacy concerns through shared knowledge and regulatory frameworks.
6. **Showcasing and Learning**: Participating in international AI events allows Cambodia to showcase its progress and learn from other countries' experiences, fostering adaptive learning and strategic resilience.

How the UN CSTD Can Contribute to this Effort:
The UN CSTD (Commission on Science and Technology for Development) can contribute significantly by:

1. **Facilitating Knowledge Exchange and Capacity Building**: CSTD can organize workshops, seminars, and expert group meetings that bring together Cambodian policymakers, researchers, and practitioners with international experts to share best practices in AI development, ethical governance, and data management. This directly supports Cambodia's focus on "adaptive adoption" and training for "integration and application skills".
2. **Promoting Policy Dialogues and Frameworks**: CSTD can provide a platform for Cambodia to contribute its unique perspective on AI for development, especially concerning the challenges of Least Developed Countries (LDCs) and newly graduated LDCs. It can help in shaping international norms and standards that are inclusive and consider the specific needs of developing countries, thereby supporting Cambodia's goal of harmonizing strategically with international standards while maintaining national priorities.
3. **Brokerage for Partnerships and Resource Mobilization**: CSTD can help connect Cambodia with potential bilateral and multilateral partners, as well as donor organizations and private sector investors, to support initiatives like the Digital Transformation Fund and technology transfer partnerships.
4. **Supporting Data Governance and Open Data Initiatives**: CSTD can offer guidance and technical assistance in developing robust data governance standards and promoting open data

ecosystems, directly aligning with Cambodia's priority to "Fuel Innovation with Data" and establish a Public Data Portal.

5. **Addressing Digital Inclusion and Inequality**: Given CSTD's mandate on development, it can support Cambodia's efforts to mitigate digital inequality by promoting inclusive AI design, localized tools (like the Khmer LLM), and rural connectivity, ensuring that AI benefits all segments of society, particularly underserved communities.
6. **Monitoring and Evaluation Methodologies**: CSTD can provide expertise in developing robust monitoring, evaluation, and learning frameworks for AI strategies, ensuring that Cambodia's "tiered KPIs" and annual progress reports are effective for adaptive learning and transparency.

International cooperation can significantly enhance the use of AI and data for science and innovation and support technological capacity building in Pakistan in several ways, as outlined in the National AI Policy and Strategy:

1. **Knowledge and Technology Transfer**: International partnerships facilitate the transfer of proven AI solutions and expertise, supporting Pakistan's objective to "promote research, development, and commercialization of homegrown AI solutions" while reducing dependency on imported technologies. This directly supports technological capacity building through the Centers of Excellence in AI (CoE-AI) network, providing access to global AI resources and infrastructure.
2. **Talent Development**: Collaborations can support Pakistan's ambitious goal to train 200,000 individuals annually in AI and allied technologies through international exchange programs, scholarships with global universities, and leveraging the Pakistani diaspora's expertise. The policy emphasizes preparing 10,000 trainers by 2027 and offering 20,000 stipend-based internships annually with international partners.
3. **Data Ecosystem Development**: International cooperation can provide best practices for building Pakistan's National Data Center (NDC) and establishing robust data governance frameworks, ensuring data quality and developing culturally sensitive AI applications that preserve Pakistan's cultural identity while meeting global interoperability standards.
4. **Funding and Investment**: International cooperation through the National Artificial Intelligence Fund (NAIF) and foreign direct investment is crucial for mobilizing resources for infrastructure, talent, and innovation. The policy emphasizes creating favorable environments for international investment in AI startups and collaboration with global funding bodies.
5. **Ethical AI Governance**: Engaging with global AI ethics forums helps Pakistan build a "progressive and trusted environment" for AI deployment. The policy emphasizes alignment with international frameworks while ensuring responsible use of AI, addressing algorithmic bias, transparency, and human oversight in high-risk scenarios.
6. **Showcasing and Learning**: Participating in international AI events allows Pakistan to demonstrate its advancements in applying AI to national challenges across priority sectors including agriculture, healthcare, education, governance, and manufacturing, while learning from global best practices.

How the UN CSTD Can Contribute to this Effort:
The UN CSTD (Commission on Science and Technology for Development) can contribute significantly by:

1. **Facilitating Knowledge Exchange and Capacity Building**: CSTD can organize workshops, seminars, and expert group meetings that bring together Pakistani policymakers, researchers, and practitioners with international experts to share best practices in AI development, ethical governance, and sectoral applications. This directly supports Pakistan's focus on building domestic AI capabilities and preparing skilled workforce for the AI economy.
2. **Promoting Policy Dialogues and Frameworks**: CSTD can provide a platform for Pakistan to contribute its perspective on AI for development, especially concerning developing countries' challenges in AI adoption. It can help shape international norms that consider Pakistan's specific needs while supporting the country's goal of aligning with global standards for interoperability and competitiveness.
3. **Brokerage for Partnerships and Resource Mobilization**: CSTD can help connect Pakistan with potential bilateral and multilateral partners, donor organizations, and private sector

investors to support initiatives like the NAIF, CoE-AI establishment, and technology transfer partnerships across the identified priority sectors.

4. **Supporting Data Governance and Open Data Initiatives**: CSTD can offer guidance and technical assistance in developing robust data security policies, privacy frameworks, and open-source AI governance standards, directly aligning with Pakistan's third pillar of building a "Secure AI Ecosystem."
5. **Addressing Digital Inclusion and Inequality**: Given CSTD's development mandate, it can support Pakistan's efforts to ensure inclusive AI adoption through specialized programs for marginalized women and persons with disabilities (PWDs), rural connectivity initiatives, and culturally sensitive AI applications that serve all segments of Pakistani society.
6. **Monitoring and Evaluation Methodologies**: CSTD can provide expertise in developing robust monitoring and evaluation frameworks for Pakistan's AI strategy implementation, ensuring that the policy's ambitious targets across all five pillars are effectively tracked and that the AI Council and Policy Implementation Cell have appropriate tools for adaptive learning and transparency in progress reporting.