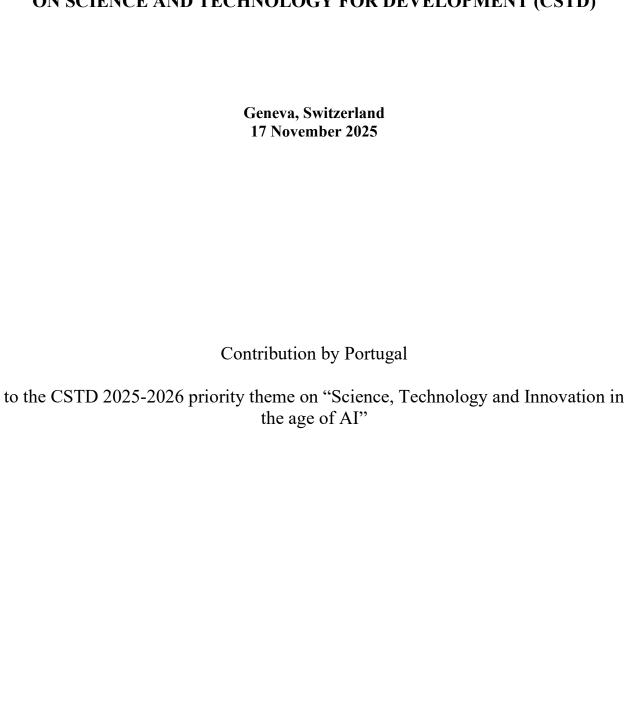
INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)



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PORTUGAL

1.
Can you provide some successful examples of how Al 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)

Portugal has seen significant advances in the use of AI and data in science and innovation. For example, national research centres and universities have launched projects in healthcare, such as AI-based diagnostic support tools and genomics research. In the public sector, data-driven decision support systems are improving urban mobility and resource management. Industry-led initiatives in areas like smart manufacturing and renewable energy are also noteworthy, namely some of those funded by the Recovery and Resilience Fund in Portugal, under the actions "Mobilizing Agendas/Alliances for Business Innovation" and "Green Agendas/Alliances for Business Innovation" A good example is the Center for Responsible AI3.

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

Challenges include limited access to high-quality datasets, difficulties in integrating AI into existing processes, a shortage of specialized skills, knowledge about available AI computing resources at national/European level and issues related to data privacy and ethical concerns. Lessons learned point to the importance of continuous investment in digital skills, close collaboration with end-users, and the need to establish clear ethical and regulatory frameworks.

3. Has your country implemented national strategies or policy instruments to support Al 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)

Yes, Portugal has adopted a National Digital Strategy⁴ focused on digital transformation, investment in R&D, and ethical principles such as fairness, transparency, privacy, and accountability. The Strategy foresees several actions related with AI, grouped under a National Artificial Intelligence Agenda, namely "Development and launch of the 1st Portuguese LLM", "Implementation of an Artificial Intelligence Factory" and "Acquisition of dedicated computing capacity for Artificial Intelligence". The Strategy also foresees the creation of a National Digital Agency. Guidelines for ethical AI are being incorporated into public funding instruments and research evaluation.

4. Does your country promote 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)

Portugal promotes open data through the national open data portal (dados.gov.pt), supporting transparency and reuse of public sector information. The research community engages in open science

¹ https://recuperarportugal.gov.pt/prr-resiliencia/capitalizacao-e-inovacao-empresarial/re-c05-i01-01-agendas-aliancas-mobilizadoras-para-a-inovacao-empresarial/

² https://recuperarportugal.gov.pt/prr-resiliencia/capitalizacao-e-inovacao-empresarial/re-c05-i01-02-agendas-aliancas-verdes-para-a-inovacao-empresarial/

³ https://centerforresponsible.ai/

⁴ https://bo.digital.gov.pt/api/assets/etic/84a2d288-a508-4992-8e0c-ae9d3baa7050/

initiatives, including data repositories and open access publications, which have enhanced collaboration and innovation.

A key initiative is the **National Programme for Open Science and Research Data (PNCADAI)**⁵ which aims to establish a national network of infrastructures, services, and digital tools for FAIR data management, aligned⁶ with Open Science principles and the European Open Science Cloud (EOSC). Complementing this, the **Re.Data National Consortium**⁷, coordinated by the University of Minho and University of Coimbra, is responsible for operationalizing the Portuguese support network for research data management and openness. It works in close collaboration with 13 competence centres selected by FCT and focuses on: 1) Developing institutional policies for data management; 2) Training and capacity building for the research community; 3) Data curation throughout the research lifecycle.

5. What mechanisms are in place in your country to foster collaboration around Al and data for science and innovation among different stakeholders (e.g., university-industry, or private-public)?

Mechanisms include public-private partnerships, collaborative laboratories (CoLABs), and university-industry research consortia. Public funding calls encourage multi-actor projects, while digital innovation hubs facilitate knowledge transfer and foster innovation ecosystems.

6. Is your country 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*)

Portugal is part of European partnerships in AI (e.g., participation in Horizon Europe projects and the European AI Alliance) and maintains links with the US and other countries for joint AI research. Benefits include access to expertise, funding, and networks; challenges involve regulatory alignment and administrative complexity. Portugal is also an active member of the institutionalized European partnership EuroHPC, in which, together with Spain and Turkey, successfully obtained cofunding for hosting and operation AI computing platforms, for research and innovation.

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 is crucial for sharing best practices, enhancing interoperability, and ensuring ethical standards. The UN CSTD can contribute by promoting policy dialogue, supporting capacity building, and facilitating global cooperation platforms focused on both technological advancement and responsible innovation.

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⁵ https://polen.fccn.pt/atividades/pncadai/

 $^{^{6}\, \}underline{\text{https://eosc.eu/news/building-a-sustainable-open-science-infrastructure-portugals-approach/}}\\$

⁷ https://redata.pt/