



# Digital Public Goods and Artificial Intelligence for Sustainable Development



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AI Hub for Sustainable Development

# What Are Digital Public Goods?

Digital public goods (DPGs) are open-source software, open data, open AI models, open standards, and open content that adhere to privacy laws and best practices, do no harm, and support the Sustainable Development Goals (SDGs).

Established in 2019, the **Digital Public Goods Alliance, of which UNDP is on the board**, is a multi-stakeholder initiative with a mission to accelerate the attainment of the sustainable development goals in low- and middle-income countries by facilitating the discovery, development, use of, and investment in digital public goods.



## Principles of DPGs:

1. Relevance to SDGs – Must contribute to sustainable development.
2. Open Licensing – Free to use, modify, and share.
3. Clear Ownership – Transparent and accountable governance.
4. Platform Independence – Not tied to specific vendors.

## Leveraging Digital Public Goods in Solutions:

- Scalability and Adaptability – Open-source solutions can be tailored to diverse contexts.
- Cost-Effectiveness – Reduces development costs and maximizes resource allocation.
- Community Engagement – Encourages continuous improvement through collaboration.

## Designing solutions as DPGs:

- Adopt Open Standards – Ensures interoperability and integration.
- Ensure Compliance – Align with privacy regulations and best practices.
- Promote Inclusivity – Design for diverse users, ensuring accessibility.

# What is DigitalX?

DigitalX is UNDP's digital innovation initiative that accelerates the adoption of Digital Public Goods (DPGs) by connecting them with governments, UN agencies, and development partners.

How DigitalX Works:

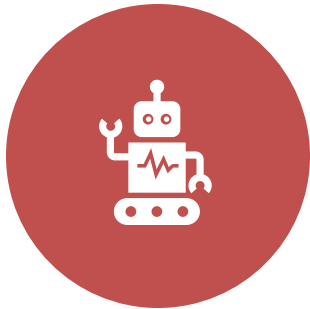
- Identifies and supports high-impact DPGs aligned with the SDGs.
- Facilitates funding and partnerships to scale digital solutions.
- Provides technical support and resources for deployment.
- Strengthens the global digital ecosystem through collaboration.

## DIGITAL X

A Partnerships for Scale Programme designed to find, match, and connect ready-to-scale digital solutions with UNDP Country Offices and governments in 170 countries.

[LEARN MORE](#)

# Bridging Digital Public Goods and AI



DIGITAL PUBLIC GOODS (DPGS) PROVIDE THE FOUNDATION FOR ETHICAL AI BY ENSURING OPEN ACCESS TO DATA, MODELS, AND TECHNOLOGIES.



AI BUILT ON DPGS BENEFITS FROM TRANSPARENCY, INTEROPERABILITY, AND GLOBAL ACCESSIBILITY, REDUCING MONOPOLIZATION OF AI ADVANCEMENTS.







ENSURING AI SOLUTIONS ALIGN WITH DPG PRINCIPLES CAN DRIVE RESPONSIBLE INNOVATION AND EQUITABLE DISTRIBUTION OF AI'S BENEFITS.



OPEN AI MODELS DERIVED FROM DPGS CAN EMPOWER LOCAL COMMUNITIES, FOSTER INNOVATION, AND ADDRESS GLOBAL CHALLENGES SUCH AS CLIMATE CHANGE AND HEALTHCARE.



# AI has significant potential to drive sustainable development

-  **Energy and Sustainability:** Accelerate energy efficiency and support low-carbon systems.
-  **Biodiversity and Environment:** Enable effective monitoring of biodiversity systems and enhance crop yields while reducing negative environmental impacts.
-  **Healthcare:** Improve accuracy in medical diagnostics for better patient outcomes.
-  **Education:** Enable adaptive learning and improve education outcomes.



# However, many countries risk being left behind in the AI ERA

## Digital Divide

Nearly **1 in 3 people** still lack access to the internet globally.

## Concentration of AI Development

AI innovation is largely driven by **a few tech giants** based in the **Global North**.

## Gaps in the Global South

**Limited investments** in local AI ecosystems.

Severe shortages in **resources, infrastructure, and capabilities**.





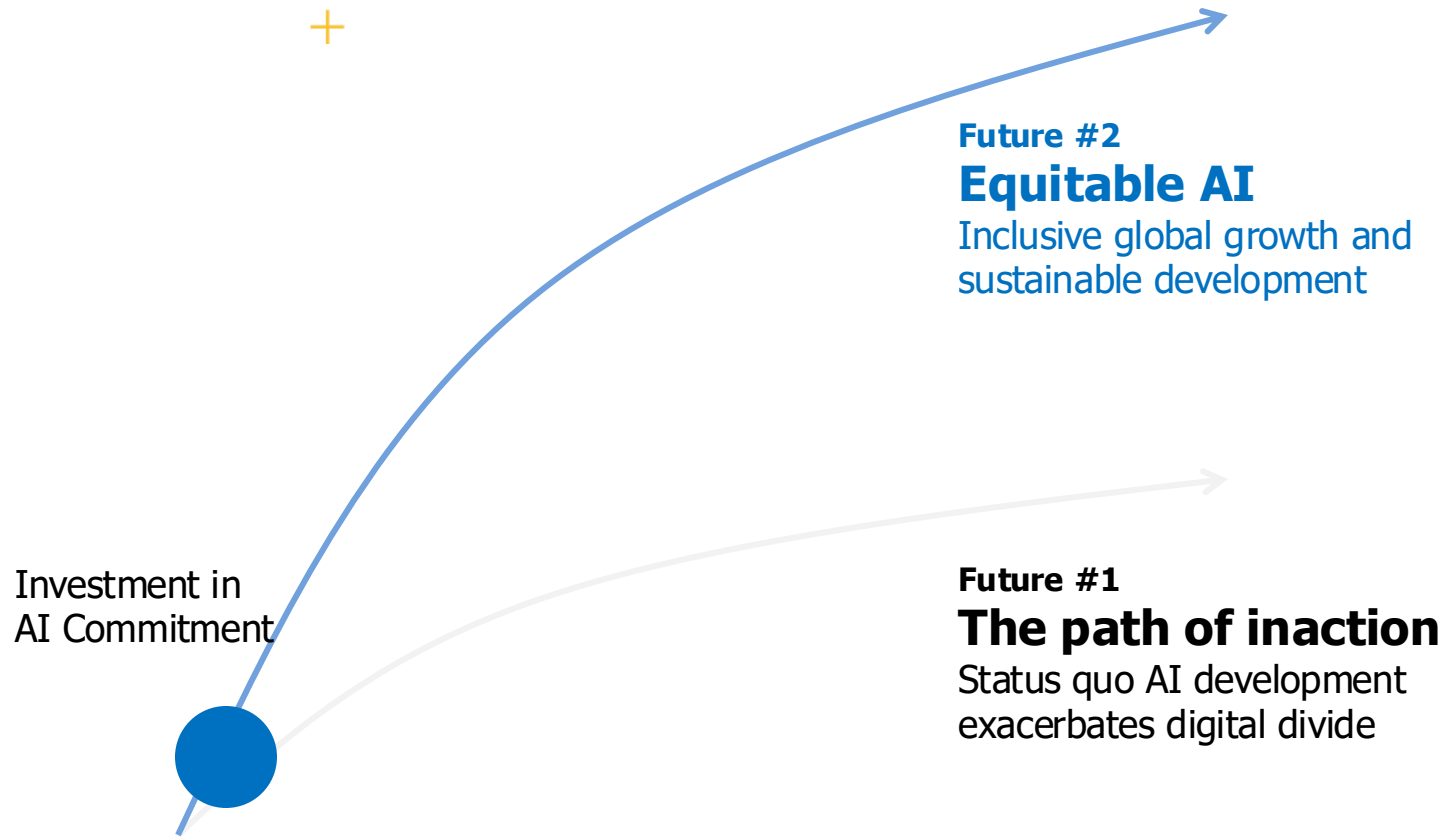
# ONLY ~10% OF THE ECONOMIC IMPACT GENERATED BY AI WILL BENEFIT THE GLOBAL SOUTH

**(\$1.7 trillion out of \$15.7 trillion)**

[PwC's Global Artificial Intelligence Study: Exploiting the AI Revolution](#)  
[Brookings: AI in the Global South: Opportunities and challenges towards more inclusive governance](#)



# Which future do we want?



## The Promise of Equitable AI

- An alternative scenario where strategic investments are made towards developing an expansive and inclusive AI marketplace.
- This can help unlock AI's full potential to tackle collective challenges, create economic opportunities, and harness the dynamism and innovation that diverse, globally distributed markets bring to the AI landscape.

## The Path of Inaction

- The current trajectory of AI development threatens to exacerbate existing inequalities and will prevent developing countries from unlocking new engines of growth.



# What needs to happen?



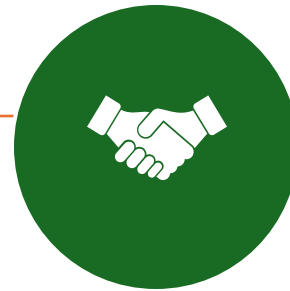
## Data

Inclusive datasets that facilitate the development of locally-relevant AI tools



## Green Compute

Financing and provision of green computing sources to power sustainable AI revolution



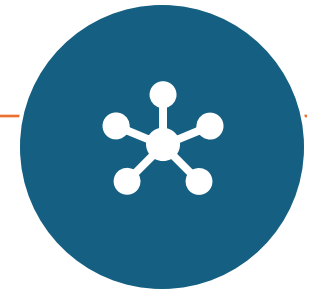
## Partnerships & Financing

Global partnerships to drive investments in local AI ecosystems in the Global South



## Trust & Safety

AI safeguards that can support countries in implementing trust and safety measures



## Ecosystem Capacity & Readiness

Strengthening of local capacity to enable effective and safe use of AI technologies

***Need for scale and speed***

# The robustness of AI foundations can determine key success factors or potential pitfalls in AI development.

## ✓ Success Factors:

- Develop AI solutions with diverse, inclusive datasets to avoid bias and ensure fairness.
- Use energy-efficient AI models and prioritize green computing to minimize carbon footprint.
- Foster open, ethical AI practices by engaging local communities and governments.
- Support regulatory frameworks that promote transparency, trust&safety, accountability, and responsible AI governance.

## ⚠ Pitfalls:

- Over-reliance on high-resource AI models that contribute to environmental degradation.
- Widening digital divides by developing AI solutions that are inaccessible to low-income communities.
- Lack of diverse representation in AI training data, leading to biased outcomes.
- Failing to address ethical risks, including misinformation and potential misuse of AI.

# UNDP Vision on AI

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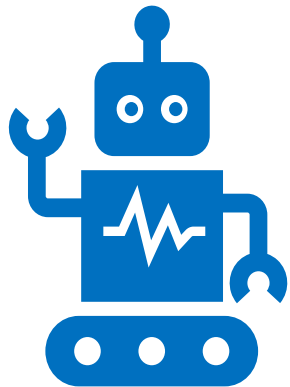


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UNDP champions AI to **accelerate progress** towards **sustainable human development**, whilst steadfastly **promoting human rights**. This involves the **ethical, transparent, and sustainable** development and utilization of AI technologies to ensure their deployment contributes significantly to global initiatives focused on **safeguarding and advancing human dignity, equality, justice and environmental sustainability**

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# UNDP Offers on AI



- Artificial Intelligence Landscape Assessment (AILA)
- National AI Strategy Development
- AI Capacity Building
- AI Hub for Sustainable Development
- Low-resource language digitization
- The CDO Studio: Technical tool development
- Accelerator Labs: 91 Labs serving 115 countries



# Introducing the AI Hub for Sustainable Development



# Introducing the AI Hub for Sustainable Development

During the G7 Italian Presidency, UNDP and the Ministry of Enterprises and Made in Italy (MIMIT), in collaboration with African and G7 partners, have co-designed the **AI Hub for Sustainable Development** focused on strengthening local AI ecosystems. On 14th June, the **G7 Leaders** welcomed "the Italian Presidency's decision to **establish** the AI Hub for Sustainable Development with UNDP"

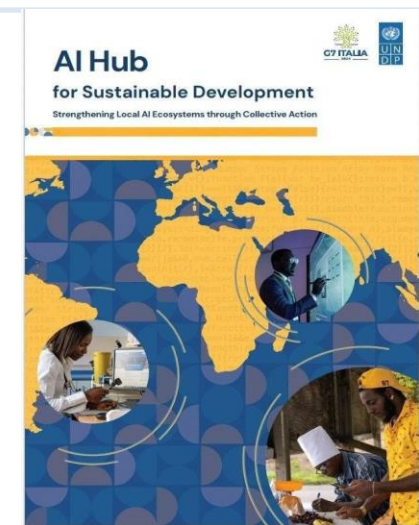
Countries in Africa have limited access to or control over the AI value chain to build sustainable national and regional AI ecosystems due to unequal:

- **Data**
- **Green Compute**
- **Human Talent**
- **Enabling Ecosystem**

An integrated private sector approach is needed to foster innovation and partnerships in these essential pillars that support the AI ecosystem.

Without concerted and coordinated collective action to mitigate risks, the transformative power of AI may not be fully realized.

The AI Hub for Sustainable Development aims to strengthen local AI ecosystems in African countries and accelerate innovation and responsible private sector partnerships on the foundational elements that underpin AI's potential for sustainable development.



AI Hub's first public report: Strengthening local AI ecosystems through collective action.

# Testing our Theory of Change through Co-Design Pilots

The 'Learning by Doing' Pilots are designed to inform the co-design of the AI Hub for Sustainable Development, with partners globally, in countries and the private sector.



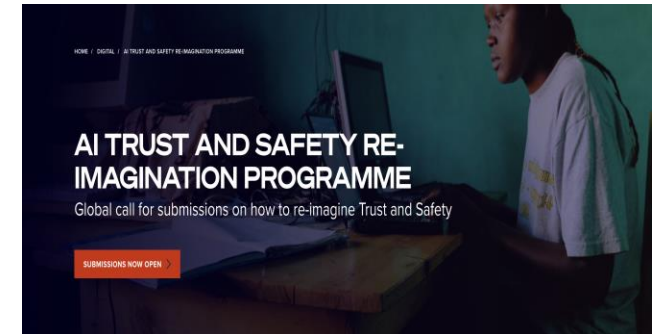
## AI START UP ACCELERATOR PILOT JULY – NOVEMBER 2024

This programme aimed to foster AI-driven industrial innovations benefiting local communities. This initiative has showcased the wealth of innovation across the African continent, highlighting the immense potential of AI to drive progress.



## LANGUAGE AS PUBLIC GOODS AUGUST – DECEMBER 2024

This four-month initiative explored scalable partnership models to integrate African languages into AI, addressing issues such as, digitising local languages at scale, data governance and community ownership, cross-sectoral partnerships & big tech engagement, and use-cases and technologies for industrial growth in Africa.



## TRUST & SAFETY in AI SYSTEMS JANUARY – APRIL 2025

The programme invites innovators from the public and private sectors to submit proposals that address three key objectives: gathering practical data on how AI systems create harm in local contexts, building foundations for equitable AI development ecosystems in developing countries, and exploring safety-by-design partnerships for early-stage AI development.



# Current initiatives





## **AI Hub Flagship: Africa Green Compute Coalition (AGCC)**

**'from Africa (and partners), for Africa, green compute', where compute power is abundant and affordable and supports the continent's vision for a self-sufficient, resilient industrial growth.**

***The Africa Green Compute Coalition***



# Africa Green Compute Coalition (AGCC)

**The AGCC aims to be a partnership platform coordinating sustainable AI compute access across Africa, transforming barriers into enablers through shared infrastructure and resources.**

The AI Hub for Sustainable Development has positioned **compute as a core pillar**. The Hub's compute strategy aims to **partner with public and private sector entities to reduce costs and empower end users** with enhanced computing access, while minimizing negative environmental and societal impact.

Africa's compute infrastructure is insufficient to meet growing demand, with several critical barriers such as:

**Limited data centers:** Africa has a limited number of local data centers, which are often more expensive than those in other regions. The continent hosts approximately 2.1% of the globe's data centers, with South Africa leading in the continent. It is estimated that the continent needs 700 data center facilities to meet the growing demand.

**Low cloud adoption:** Despite a growth in data center investments, cloud computing adoption in Africa remains low. For example, cloud adoption is at 15% in Africa, compared to 71% in Europe.

**Few supercomputers:** Africa has only a handful of supercomputers, restricting AI research and high-performance computing (HPC). Notable facilities include Toubkal (Morocco), Square Kilometer Array (South Africa), CHPC (South Africa)

**Uneven distribution:** Compute resources available in South Africa, followed by Egypt, Nigeria, Kenya, and Morocco, and can be shared across Africa.

**High costs and accessibility barriers:** The relative cost of compute is much higher in Africa compared to developed countries. The price of a GPU as a percentage of GDP per capita can be 10 to 30 times more expensive than in benchmarked developed countries.

# Every Language Matters: Building a more inclusive digital future.

Building on the success of the Local Language Accelerator Pilot, the AI Hub's data pillar is focused on **making high-quality datasets available to enable more accurate and representative AI solutions**. The initiative ensures that datasets are accessible to local communities, researchers, and developers, thereby democratizing the development of AI solutions.

In particular, the AI Hub is currently focused on the following four key areas:

**Enabling Access:** Ensuring that datasets are accessible to local communities, researchers, and developers, thereby democratizing the development of AI solutions.

**Digitise and Process:** Supporting the digitization and processing of local languages and culturally relevant content to enhance the availability and usability of data for AI applications.

**Data Licensing Models:** Developing innovative and responsible data licensing models that protect community ownership while encouraging collaboration and the creation of public goods.

**Capacity Building:** Building local capacity by empowering communities, organizations, and individuals with the skills and knowledge needed to participate actively in the AI value chain, from data collection to AI deployment.



## Community paper (coming soon):

With the pilot conclusion at end of last year, we are now focused on synthesizing the lessons learned into a community paper to share insights more broadly. To ensure a robust output, we continue to engage closely with pilot participants and learning advisors throughout this process.

# UNDP's AI Trust and Safety Re-imagination Programme (launched on 20 January 2025)



Aligned with the mission and goals of the AI Hub, the **AI Trust and Safety Re-imagination Programme** is designed to strengthen local enabling environments and complement ongoing research and policy efforts related to fostering AI advancement.

It is imperative to ensure that AI systems are safe, fair, inclusive and uphold human rights. **Addressing the trust and safety gap in AI systems is crucial for realizing AI's potential benefits with the public and private sector.**

The AI Trust and Safety Re-imagination Programme **invites innovators across the public and private sectors to collectively re-imagine T&S, through measures that both prioritize equitable and practical approaches and foster shared, public-private sector responsibility.**

The programme aims to advance T&S **beyond reactive measures, by creating practices that actively anticipate and prevent harm,** and create safer development environments. These practices ought to be tailored to the sensitivities of local contexts and the needs of impacted communities.

More specifically, the programme seeks to:

- Gather **practical experiences and data** on how AI products and systems manifest new risks that create harm in local contexts;
- Lay the foundations for equitable and safe AI development ecosystems that **support local startups and the safe application of AI** in developing countries; and
- Explore **innovative partnerships** that ensure safety-by-design in the early stage of AI development and deployment.

# AI TRUST & SAFETY MUST BE LOCALIZED AND SHARED RESPONSIBILITY

## Today's reality

### **Managed by Private Companies**

Governance led and executed by private tech companies with liability placed on companies reactively

### **Centralized and universal**

Globally scaled, universally applied policies risk replicating hierarchical and colonial governance models that threaten principles of sovereignty

### **Reactive, Crisis focused**

Focused on managing escalations based on user reports. Priorities are ranked by severity of harm, imminent risk and market priorities



## A safe and inclusive future

### **Shared responsibility**

Collaborative and co-designed governance practices in private and public sector partnership that distributes responsibility and diffuses liability

### **Locally empowered and relevant**

Scaled localized solutions, sensitive to the public interests as determined by cultural contexts

### **Proactive, anticipatory, adaptive**

Mitigate systemic risks in proactive ways that are adaptive to emerging risks and harms



# Thank you

## Further Resources

For additional context on our work, please see:

- [UNDP AI Webpage](#)
- [AI Hub for Sustainable Development Webpage](#)

For queries you can contact [digital.support@undp.org](mailto:digital.support@undp.org)

