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# NAMIBIA

## Building artificial intelligence readiness through coordination and collaboration

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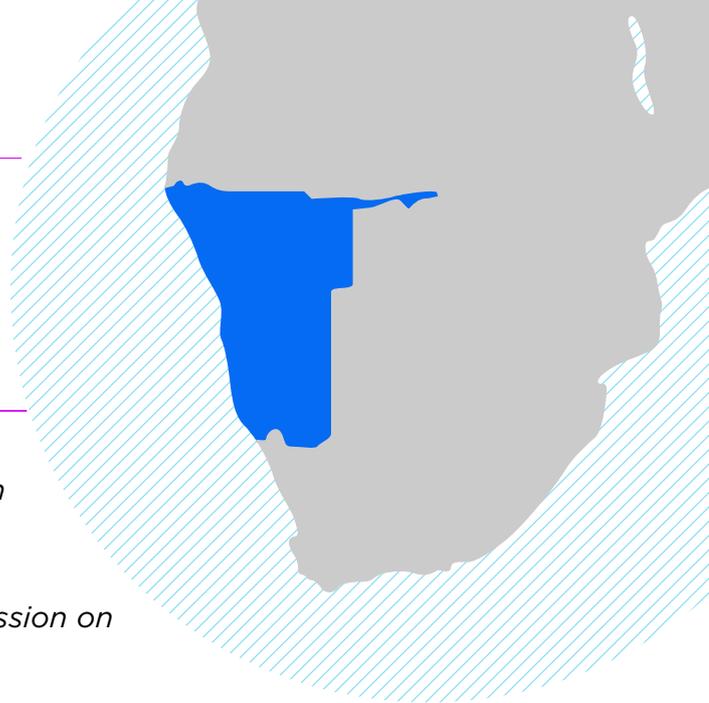
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### Key takeaways

- Namibia is developing a national AI strategy through its National Commission on Research Science and Technology (NCRST) – to map out how to harness AI for socio-economic development, and address gaps and deficiencies in regulations, data, infrastructure, local expertise financing and cybersecurity.
- Namibia has completed an AI readiness assessment, prioritized digital literacy through its *National Digital Strategy 2025–2028* and *Sixth National Development Plan*, expanded academic pathways for AI, and focused national AI efforts on health, agriculture, food security, water and energy, including the green hydrogen sector.
- The NCRST is leading AI development in Namibia – allocating research grants and ensuring the integration of AI across research domains.
- Namibia is strengthening its science system with specialized research institutions and adapted evaluation processes to support the integration of AI.
- Collaboration is embedded through the NCRST’s multi-stakeholder working group and technical advisory committees, and in a proposed national AI institute working with universities, government, the private sector and communities.

Namibia currently lacks a national AI strategy but has undertaken comprehensive preparations to put one in place. Most notably, the NCRST, in collaboration with the Ministry of Education, Innovation, Youth, Sports, Arts and Culture, and the United Nations Educational, Scientific and Cultural Organization (UNESCO), completed an AI readiness assessment using UNESCO’s Readiness Assessment Methodology – to provide a foundational understanding of the country’s AI preparedness across multiple sectors (UNESCO, 2025).

Additionally, the recently published *Sixth National Development Plan* for 2025 to 2031 explicitly prioritizes AI development, calling for the revamping of the NCRST to strengthen

the national research system, and the creation of specialized research institutions, including an AI research centre (National Planning Commission, 2025). The plan also calls for equitable, inclusive and quality primary education through improved access to digital learning and literacy – aiming to prepare younger generations for emerging technologies such as AI.

This commitment is reinforced by Namibia’s *National Digital Strategy 2025–2028*, which provides a comprehensive blueprint for digital transformation aimed at bridging the digital divide, fostering innovation for economic opportunities, providing citizen-centric digital public services and promoting digital literacy (Ministry of Information and Communication Technology, 2025).

Namibia’s measured approach recognizes that AI readiness requires more than just technological infrastructure: it demands coordinated institutional frameworks, skilled human resources, adequate data, infrastructure and financing, and strategic alignment with national development priorities. This foundation-first strategy positions the country to implement AI initiatives sustainably once formal strategies are finalized.

### **Namibia’s science system**

Namibia’s science system comprises multiple interconnected components that collectively support research, science, technology and innovation. The NCRST serves as the principal regulatory and coordinating body, established in 2004 to coordinate and promote research, science, technology and innovation for sustainable development (Research, Science and Technology Act 23, 2004).

The NCRST has registered more than 70 research institutions in Namibia. Academic institutions form the core of research capacity, with public universities such as the Namibia University of Science and Technology and the University of Namibia serving as primary centres for knowledge production and researcher training, complemented by private tertiary institutions offering specialized programmes. Additionally, specialized research institutions, such as the Gobabeb Namib Research Institute and the proposed national AI institute, address national priorities in specific sectors.

Research funding flows through multiple channels such as the Science Granting Councils Initiative in sub-Saharan Africa, and international and domestic funders as well as private sector investment. The Namibia Students Financial Assistance Fund indirectly supports research capacity by enabling students to access postgraduate education in priority fields. This coordinated ecosystem enables the integration of AI across multiple research domains while addressing infrastructure and capacity constraints identified in the UNESCO AI readiness assessment.

### **Institutional structures and initiatives**

The NCRST is mandated to coordinate, promote, develop, monitor and supervise research, science, technology and innovation in Namibia. The NCRST is also the regulator for biosafety and biotechnology in the country. Among its initiatives, the NCRST has established an

Artificial Intelligence Working Group, which operates as a multi-stakeholder platform guiding AI development and implementation. This working group contributed significantly to the UNESCO AI readiness assessment and continues to drive strategic AI initiatives, including the development of the forthcoming national AI strategy.

The Artificial Intelligence Working Group incorporates specialized technical advisory committees addressing specific aspects of AI development. In particular, the Science and Research Technical Advisory Committee advises on scientific development and research in AI, promotes interdisciplinary collaboration, and supports development of the research workforce. In addition, the Data Technical Advisory Committee provides critical data and high-performance computing centres, and the Skills Technical Advisory Committee promotes relevant training programmes and builds national capacity in AI. These three committees, among others, ensure that specialized expertise informs strategic research-related decisions while maintaining coordination across different aspects of AI development.

**Opportunities**

Namibia has identified clear sectoral priorities for AI development, in the areas of health, agriculture, water and energy. These priorities align with national development challenges, and national research priorities set by the NCRST in the National Programme on Research, Science and Technology – to leverage existing capacity within the country’s universities and research institutions.

According to the Namibia’s AI readiness report, the NCRST’s continued support for AI-related research demonstrates concrete commitment to these priority sectors – and creates clear development opportunities. In particular, significant funding has been allocated to emerging technology projects such as ‘Food security and nutrition improvement by fostering

*Namibia’s approach recognizes AI and broader ICT development as fundamental to economic transformation rather than as a mere technological upgrade.*



emerging technologies’, led by Professor Percy Chimwamurombe at the Namibia University of Science and Technology (UNESCO, 2025). Similar investments support projects in the realms of climate-smart agriculture, sustainable food systems, space science and Indigenous knowledge management.

Larger grants of more than NAD 1 million have also been allocated; for example, the University of Namibia has awarded a large grant for the processing and commercializing of Indigenous food products. These investments demonstrate substantial commitment to leveraging AI in order to address national development priorities (UNESCO, 2025).

Beyond traditional sectors, Namibia recognizes AI’s potential for economic diversification, particularly in the emerging sector of green hydrogen production. Namibia’s *Task Force on the Fourth Industrial Revolution Final Report* (4IR Report) specifically identifies AI’s role in accelerating research and development in technology and engineering for green hydrogen, positioning the country to capitalize on its renewable energy potential (4th Industrial Revolution Namibia, 2022).

In addition, Namibia's *National Digital Strategy 2025–2028* emphasizes building a vibrant digital economy and empowering citizens, especially youth, with skills demanded by the Fourth Industrial Revolution. This approach recognizes AI and broader ICT development as fundamental to economic transformation rather than as a mere technological upgrade.

Furthermore, the 4IR Report recommends establishing a national AI institute to coordinate AI research and development efforts nationwide. This institute would oversee AI-related initiatives, encourage AI adoption, promote innovation incubation, recruit and develop expertise, and harness AI capabilities to address national challenges (4th Industrial Revolution Namibia, 2022). The proposed institute is designed to collaborate with existing institutions including the NCRST, universities, research centres, the private sector and other government agencies.

Another opportunity is provided by the National Programme on Research, Science and Technology, also developed by the NCRST. This national research agenda emphasizes aligning research initiatives with global trends in emerging technologies, including AI. This approach ensures that AI integration spans multiple research domains rather than remaining isolated in the computer science sector. Additionally, while formal changes to student and researcher evaluation processes are still emerging, Namibia's science system acknowledges the need for integrating AI into all research sectors.

## **Challenges**

Despite Namibia's opportunities, significant challenges still constrain the development of AI. Namibia's AI readiness report identifies as primary obstacles a lack of regulatory frameworks and curated data for AI, limited expertise and training, infrastructure gaps and low public awareness (UNESCO, 2025). In particular, despite having a mobile 3G coverage of 92.7 percent and 64.4 percent of the population as internet users (Data portal, 2025), electricity coverage in rural and remote areas presents fundamental challenges.

The AI readiness report notes *2023 Education Statistics* which reveal that only 65.4 percent of schools in Namibia (1,311 out of 2,004) had internet connectivity during that year, highlighting infrastructure gaps that limit AI implementation (UNESCO, 2025). Namibia also lacks comprehensive legislation for data protection and cybersecurity, and frameworks for AI governance – creating uncertainty for AI development and implementation. Additionally, changes to evaluation processes across the national science system and other disciplines are yet to be implemented, and will likely only be addressed in the forthcoming national AI strategy, as institutions gain more experience with integrating AI into research and education.

## **Capacity building**

Within Namibia's science sector, there is an increasing demand for interdisciplinary skills that combine traditional scientific expertise with AI and data science capabilities – and capacity building initiatives are stepping up to meet this demand. For example, through the African Science Granting Councils Initiative, the NCRST has funded projects focusing on the utilization of AI-powered tools for early disease detection (SGCI, 2024), reflecting the growing need for researchers who can bridge health care and AI technologies.

The Namibia University of Science and Technology currently leads academic capacity-building in AI, offering programmes such as bachelors and honours degrees in Artificial Intelligence and a Master of Science in Data Science degree featuring modules on AI techniques. The university's partnership with the Bank of Namibia, which funded its AI and Robotics Accelerator, directly supports new AI-focused undergraduate and honours degree programmes, creating the first dedicated AI Bachelor degree in Namibia (NUST, 2025).

These academic programmes address the critical shortage of AI expertise identified in the UNESCO AI readiness assessment (UNESCO, 2025). By establishing degree pathways, Namibia aims to create sustainable mechanisms for developing local AI talent rather than relying solely on international expertise. Events like the Deep Learning IndabaX Namibia also contribute to collaboration and learning, ultimately strengthening the AI ecosystem in Namibia (Deep Learning INDABA, 2025).

Additionally, Namibia's *National Digital Strategy 2025–2028* emphasizes integrating digital literacy into the national education curriculum – recognizing that AI readiness requires foundational digital skills across the population. In particular, the NCRST is implementing UNESCO-funded projects to integrate coding and AI in the school curricula. Moreover, Namibia's *Sixth National Development Plan* specifically highlights providing AI training to teachers and learners, equipping them with skills necessary for the digital economy (National Planning Commission, 2025). This foundational approach ensures broad-based preparation for integrating AI across society.

Notably, the NCRST Artificial Intelligence Working Group has coordinated the recruitment of experts for various AI-related committees, thereby building networks of practitioners and researchers to drive AI initiatives. This approach develops institutional knowledge and creates the communities of practice essential for sustained development of AI.

UNESCO's *Recommendation on the Ethics of Artificial Intelligence*, embraced by Namibia, stresses that AI systems should be transparent, accountable and inclusive, with human rights protection and gender and diversity considerations built in (UNESCO, 2021). Namibia therefore emphasizes responsible, transparent, ethical, inclusive and human-centred AI, with women, youth and rural communities involved in all AI-related decisions and initiatives.

### **Next steps**

The next steps in preparing Namibia's research ecosystem for AI include finalizing and implementing the country's national AI strategy, establishing the recommended AI institute, completing data protection and cybersecurity legislation, curating high-quality data sets, securing computing infrastructure and expanding capacity-building programmes nationwide. These initiatives require coordinated effort across government, academia, community and private sector partners.

Success will depend on maintaining the collaborative, systematic approach that has characterized Namibia's AI readiness efforts so far – while at the same time accelerating implementation to capture emerging opportunities in the global AI landscape.

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