

Session Outcome Document

(2 pages max)

Session 321. Democratizing Innovation: Citizen Data, Indigenous Knowledge & Participatory STEM

Women in Technology in Nigeria - WITIN and Nigeria Data Protection Commission - NDPC

Monday, 6 July 2026 | 10:00–10:45 UTC+02:00

<https://www.itu.int/net4/wsis/forum/2026/Agenda/Session/321>

Key Issues discussed:

- People-centred digital transformation requires women, girls and underserved communities to move beyond being users of technology to becoming active contributors to science, innovation and citizen-generated data ecosystems.
- Participatory, community-based STEM education was identified as a practical approach for enabling learners to investigate local challenges, generate evidence, develop innovative solutions and contribute new knowledge rooted in community experience.
- Citizen-generated and indigenous data were recognised as strategic assets for sustainable development and artificial intelligence, providing valuable local insights that strengthen evidence-based policymaking and innovation.
- Effective data governance must balance innovation with the protection of individual and community rights through frameworks founded on privacy, transparency, fairness, accountability, security and responsible stewardship of data.
- Indigenous knowledge and citizen-generated data require governance approaches that recognise community participation, collective rights and appropriate mechanisms for attribution, protection and responsible utilisation.
- Trusted data-sharing ecosystems supported by clear legal frameworks, institutional accountability, privacy-enhancing technologies, cybersecurity and independent regulatory oversight are essential for responsible innovation and public confidence.

- Communities that generate valuable datasets should benefit from their responsible use through equitable benefit-sharing, improved public services, local innovation and inclusive digital development.
- Multi-stakeholder collaboration among governments, academia, civil society, industry and local communities is essential to build inclusive innovation ecosystems and trustworthy AI that reflects diverse knowledge systems.

Key Outcomes of the session

- The session demonstrated that participatory STEM education provides a practical pathway for empowering women and girls to become innovators, citizen scientists and contributors to citizen-generated data ecosystems.
- Participants reaffirmed that citizen-generated and indigenous data should be recognised as valuable public assets and governed through rights-based frameworks that promote trust, accountability and responsible innovation.
- The discussion highlighted the need to strengthen the connection between community-generated knowledge, responsible data governance and AI development to ensure that digital transformation remains inclusive and people-centred.
- There was broad recognition that empowering educators, communities and institutions to collaborate in generating and responsibly governing data will strengthen sustainable development outcomes and digital inclusion.

Key Recommendations and Forward-Looking Actions

- Integrate participatory, community-based STEM education into national education systems to strengthen citizen science, innovation and local problem-solving.
- Develop adaptive, rights-based data governance frameworks that protect citizen-generated and indigenous data while enabling responsible data sharing, trusted AI and equitable benefit-sharing.
- Invest in teacher capacity-building, digital infrastructure and community innovation programmes that expand opportunities for women, girls and underserved communities to participate in science, innovation and digital development.

- Strengthen multi-stakeholder partnerships to promote trusted data ecosystems, responsible AI governance and inclusive digital transformation that values community knowledge and advances the WSIS vision beyond 2035.