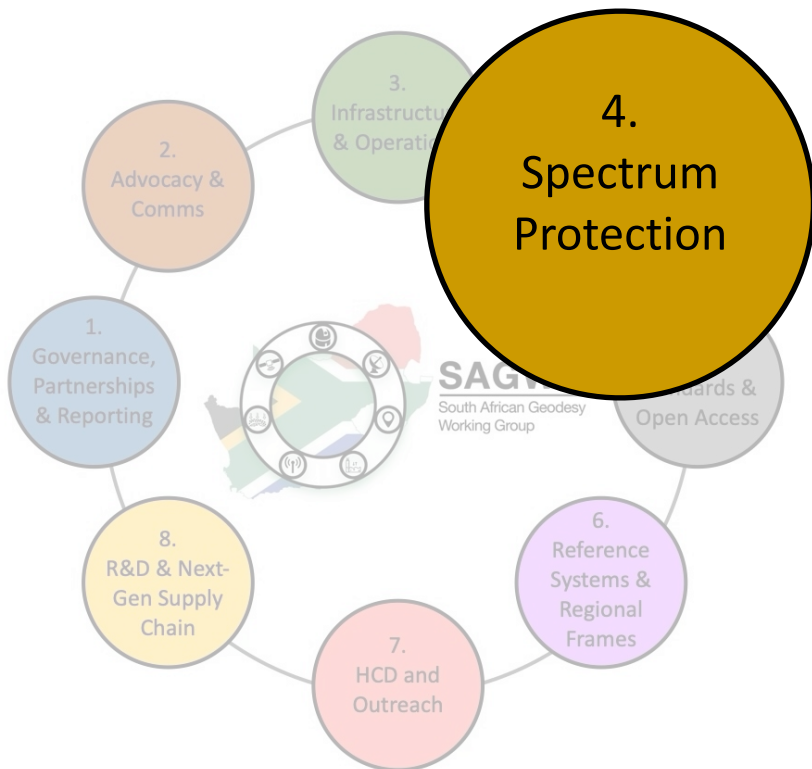


SA Geodesy Workshop: Pillar 4



Safeguard geodesy's radio frequencies, core sites, and infrastructure to protect current and next-generation systems

Development Plan Activities

Phase 1: Avoid further degradation of the global geodesy supply chain

- Assess risks and take all practical steps to protect geodetic sites and infrastructure from harmful interference, light pollution, and other threats
- Actively engage regulators and authorities so they understand that geodesy needs spectrum protection and site protection, similar to astronomy — i.e. communicate the needs of the geodetic community to the Astronomy Management Authority (AMA, DSTI) and ICASA (DCDT)

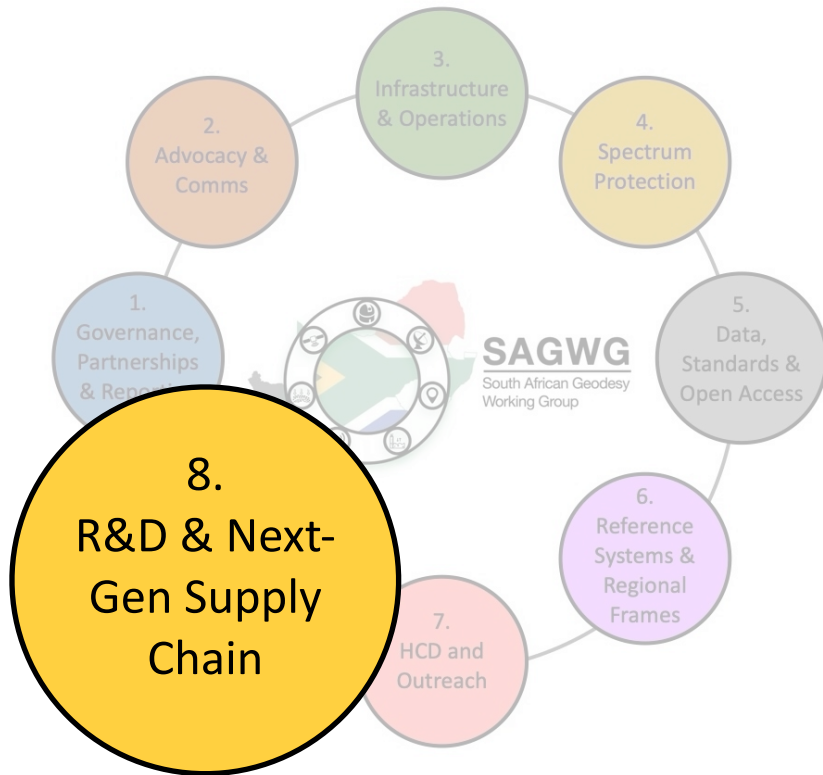
Phase 2: A robust global geodesy supply chain:

- Represent the needs of geodetic community at the International Telecommunications Union to protect the radio frequency spectrum required for geodesy (in collaboration with Astronomy community)

Phase 3: A next-generation global geodesy supply chain

- Go beyond safeguarding current geodetic VLBI frequency allocations to securing spectrum access for next-generation VLBI systems, including wideband VGOS, higher-frequency geodesy

SA Geodesy Workshop: Pillar 8



Support and advance geodetic research, development, and innovation, adopt emerging technologies, align with global initiatives, and build next-generation capacity for Africa's leadership in the geodesy supply chain

Development Plan Activities

Phase 3: A next-generation global geodesy supply chain

- Provide information to UN-GGCE regarding what are the operational requirements constituting a next-generation global geodesy supply chain
- Undertake the geodetic research and development required to sustain and enhance the global geodesy supply chain
- Where appropriate, support space missions relevant to geodesy such as the ESA Genesis mission or the NASA/ESA joint missions on satellite gravimetry
- Support projects where South Africa is already leading globally in developing new techniques and solutions
- Strengthen current SA-led geodetic R&D projects and encourage innovation, commercialisation, and multi-domain collaborations
- Adopt and implement emerging technologies — including machine learning and AI applications (e.g. in ionospheric modelling) — and ensure national infrastructure (e.g. VLBI receivers, HPC capacity) keeps pace with international developments
- Ensure geodesists have access to national HPC infrastructure for data-intensive research, modelling, and analysis
- Develop and support innovative infrastructure solutions for African capacity-building (e.g. remote stations, shared infrastructure models)