



AFRICA EARTH OBSERVATION CHALLENGE



From Astronomy to Earth Observation Innovation

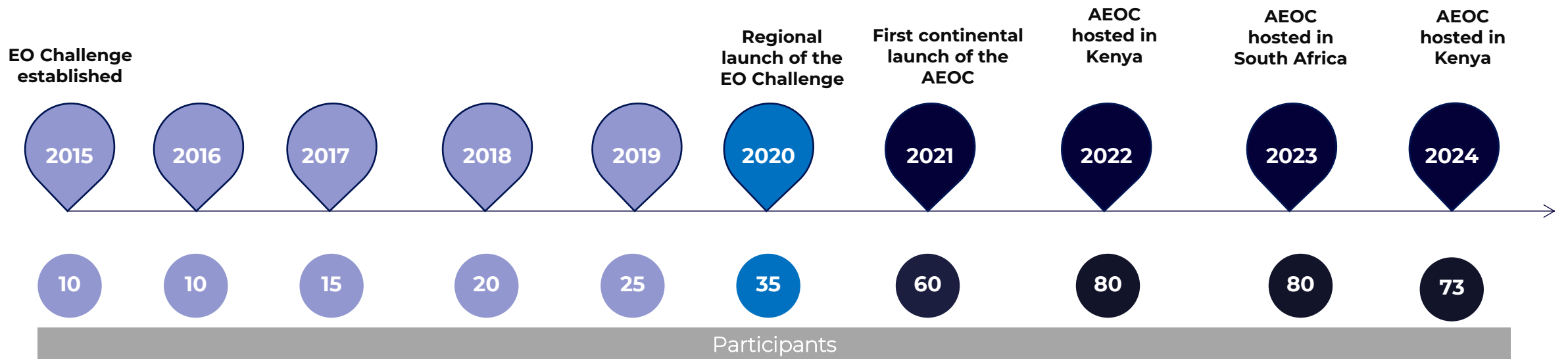
*AEOC as a Pan-African Engine for
Science-to-Market
Transformation*

10 Years of Building Africa's Space-Tech Pipeline

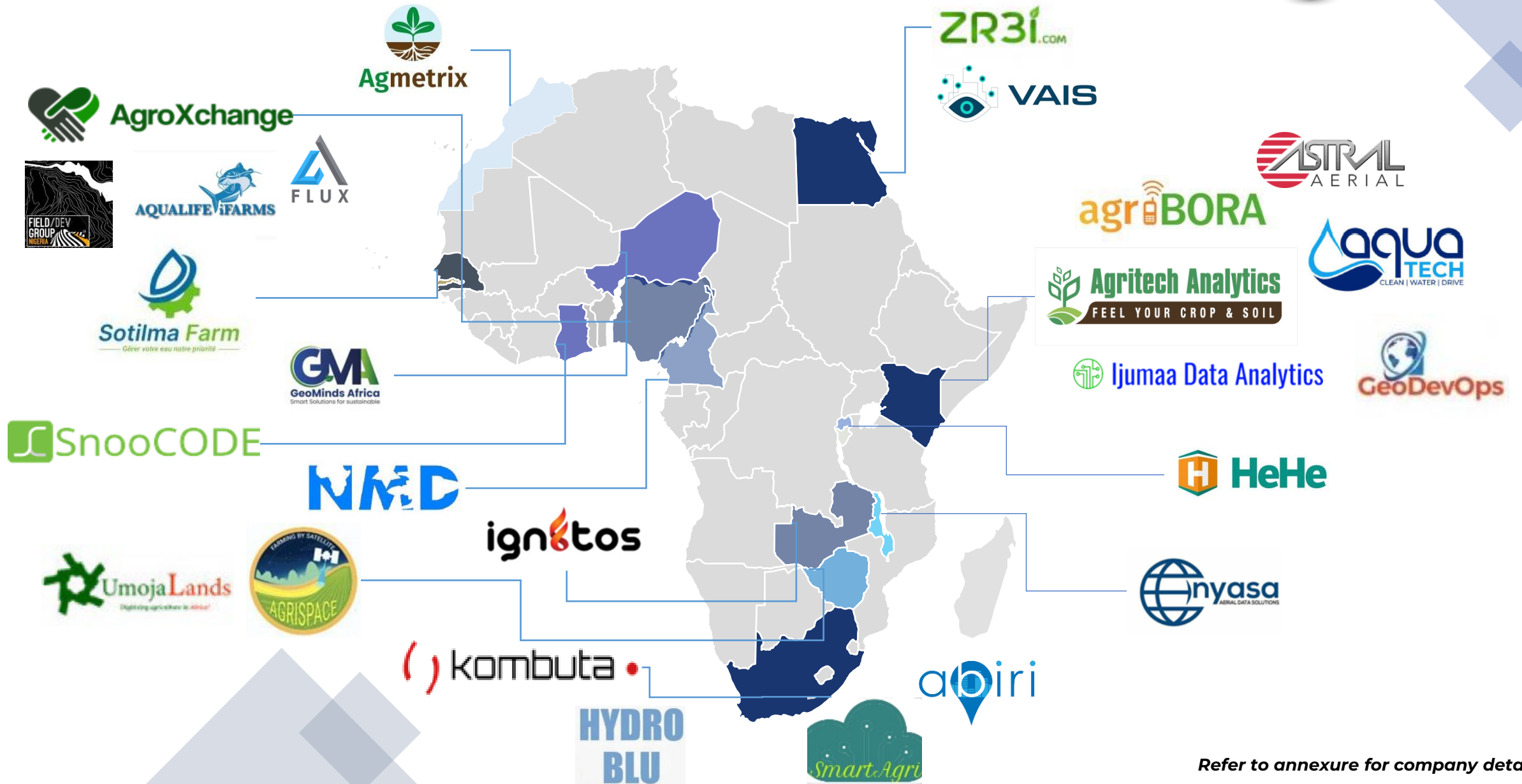


Established **in partnership with the South African National Space Agency (SANSA)** in 2015, the programme has engaged with more than **300 startups** since its inception.

Participants from across Africa, have ranged from **Pre-Seed to Series-A** stage tech companies developing downstream satellite data applications.



Pan-African Impact



Building The Partnerships

The programme has deepened its reach to participation from **17+ countries on the African continent** and **international space players** with an interest in **Africa's space innovation ecosystem**.

2015-2020

2021

2022

2023

2024







Leveraging The Ecosystem



OFFICE OF ASTRONOMY
FOR DEVELOPMENT



KENYA SPACE AGENCY
Possibilities beyond our skies



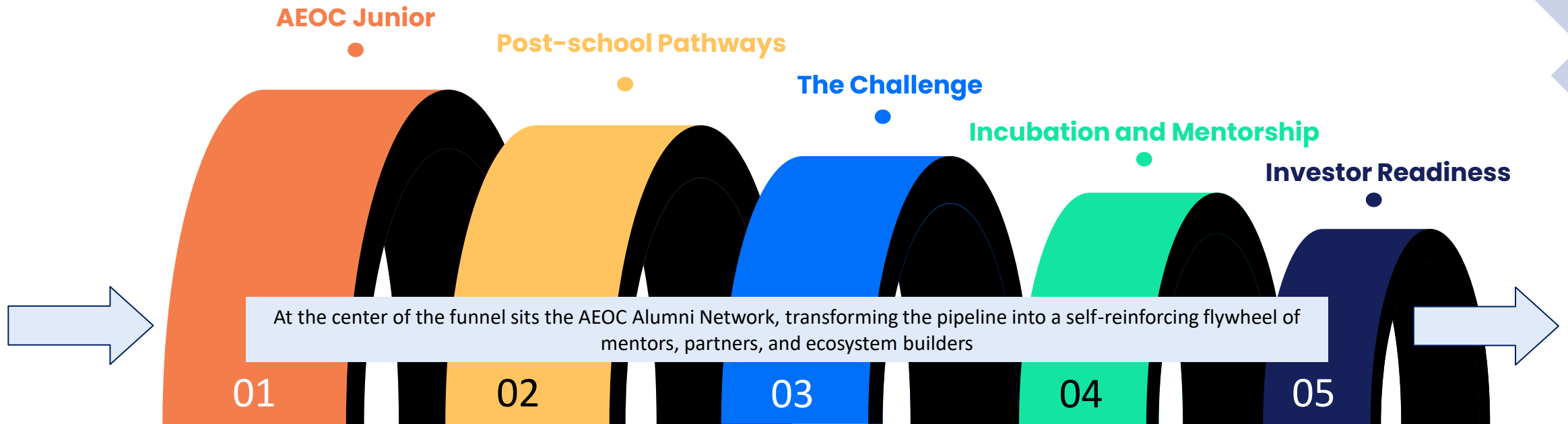
Digital Earth
AFRICA



AIRBUS



Nurturing The Pipeline



Awareness and Inspiration

Builds early curiosity and confidence among school-aged learners, creating a feeder pipeline before entrepreneurial intent exists

Capability Building

Provides structured environments for graduates and young professionals to develop skills, explore EO applications, and prepare for competitive programmes

Validation and Selection

The system anchor
Regionalised challenges ensure fairness, contextual relevance, and problem-solution validation through a hub-and-spoke model

Viability and Adoption

Supports selected ventures to strengthen business models, run pilots, and reduce dependence on grant funding

Scale and Sustainability

Prepares mature ventures for capital, procurement, and long-term growth focusing on resilience, governance, and credibility

1. AEOC Junior

Youth Education, Awareness and Ideation Pipeline



Strategic Positioning

AEOC Junior introduces secondary school learners to the possibilities of SpaceTech, Earth Observation and innovation and serves as the entry point into the AEOC innovation funnel, building early awareness, encouraging bold ideas, and identifying high-potential youth who can progress into the AEOC ecosystem through post-school pathways

The programme transforms curiosity into structured problem solving and early innovation thinking

Core Delivery

- AEOC / RIIS Programme Office: Programme owner responsible for governance, curriculum oversight, ecosystem coordination and reporting
- Nka'Thuto EduPropeller: Implementation partner responsible for programme delivery and school engagement
- Dunia: Technical partner providing digital EO learning modules for kids

Entry routes into the programme

1. Public Expression of Interest: Individual learner sign-ups through an online form
2. School-based Cohort Registration: Schools register learners as part of structured groups
 - Regional Grouping for Activities: Participants grouped geographically for physical and virtual activities

Strategic and Enrichment Partners

- SANSA (Hartebeeshoek and Hermanus facilities)
- SKA Observatory (Northern Cape astronomy exposure)
- IAU Office of Astronomy for Development (Ecosystem linkage and global outreach, Cape Town exposure tours)
- Dunia (Junior onboarding and learning platform)
- Esri (Introduction to GIS and spatial thinking)
- AEOC Alumni (Near-peer mentors supporting learner teams)
- UNICEF (incentives and reach)
- StarVision (Technical mentorship)
- Riversands Hub (in person labs and prototype development)

Setup Phase

1. Curriculum and workshop toolkits prepared
2. Dunia Junior onboarding platform activated
3. Learners complete the Basic Space Training Course, covering, Astronomy, Earth observation, Remote sensing and Innovation and ideation

Successfully completing the course forms the prerequisite for entering the preliminary idea round

Awareness and Mini Challenge Phase

Participants apply their learning through:

- Regional bootcamps
- Team formation sessions
- Guided idea development
- Exposure visits to space facilities
- Participants propose bold ideas addressing real African challenges using SpaceTech

Judges identify the most promising concepts, which then proceed to the Finale

Mentorship and Junior Finale Phase

- Selected teams receive structured mentorship over 4 sessions to bring their ideas to life
- Support includes:
 - Business concept refinement
 - Customer journey mapping
 - Business model canvas development
 - Pitch preparation
- Final outcome: Startup-style pitch deck and final product concept at Technology Readiness Levels (TRL 1-3)

Top 5 teams present virtually during the AEOC 2026 Finale, win prizes sponsored by partners

2. Post-school Pathways

Capability Development and Technical Innovation Pipeline



Strategic Positioning

Post-School Pathways bridge the gap between youth curiosity and professional capability. The programme supports students, graduates and early professionals interested in SpaceTech by providing structured technical training, innovation workshops and venture concept development.

It builds the second stage of the AEOC innovation funnel, transforming ideas from AEOC Junior and new entrants into technically grounded and challenge-ready solutions.

Core Delivery

- AEOC / RIIS Programme Office: Programme owner responsible for governance, curriculum oversight, ecosystem coordination and reporting
- Nka'Thuto EduPropeller: Implementation partner responsible for programme delivery and engagement

Entry routes into the programme

Participants may enter through:

- AEOC Junior graduates who successfully complete the basic course
- Public Expressions of Interest
- University and technical institution referrals

Participants are grouped regionally to support local training activities and collaboration.

Strategic and Enrichment Partners

- SANSA (Hartebeeshoek and Hermanus facilities)
- Digital Earth Africa (Technical training and real-world use case support)
- IAU Office of Astronomy for Development (Ecosystem linkage and global outreach)
- Dunia (Technical platform partner)
- UNICEF (incentives and reach)
- StarVision (Technical mentorship)
- Riversands Hub (in person innovation labs and prototype development)

Capability Development Phase

Participants build practical SpaceTech capabilities through:

- EO and GIS training sessions
- Data analysis workshops
- Innovation and ideation workshops
- Business model canvas training

Teams begin refining their ideas into structured solution concepts ready to progress from TRL 1-3 to TRL 4-6

Applied Innovation Phase

Participants apply their learning through:

- EO sprint weekends
- Hackathons and innovation labs
- Prototype concept development
- Customer problem validation

Teams/individuals prepare solutions suitable for submission to the AEOC Continental Challenge and other space entrepreneurship ecosystem initiatives, **advancing early prototypes into TRL 4-6**

Venture Preparation Phase

Selected teams receive support in:

- Technical validation
- Business concept development
- Market understanding
- Pitch preparation
- Optional: Support registering their startups (commercial and legal compliance as a startup)

Output: Challenge-ready submissions with prototypes at Technology Readiness Levels (TRL 7-9)

3. The Challenge

Venture discovery and validation



Strategic Positioning

The AEOC Continental Challenge is the venture discovery and validation stage of the AEOC innovation funnel, identifying the most promising Earth Observation and SpaceTech solutions addressing African development challenges

The Challenge is delivered with the support of the European Space Agency (ESA)'s Africa-EU Space Partnership Programme (AESPP), supporting the growth of African EO innovation ecosystems until 2028. A key focus of the programme is regionalisation, ensuring participation and innovation representation across all five African Union regions

Solutions submitted to the Challenge must demonstrate a Minimum Viable Product (MVP) or technically grounded prototype

Core Delivery

- AEOC / RIIS Programme Office: Programme owner responsible for governance, challenge design, coordination and reporting
- Regional Ecosystem Partners: Institutions supporting outreach, capacity building and participation

Entry Routes into the Challenge

Participants may enter the Challenge through two primary pathways:

1. Direct Applications: Startups submit solutions addressing one or more of the challenge's thematic tracks
2. Innovation Pipeline Pathways: Participants progressing from earlier stages of the AEOC programme (only if they meet the minimum requirements)

All applications undergo a structured screening and evaluation process and are segmented across five AU regions to support the regionalisation model

Strategic and Enrichment Partners

Partners support the Challenge through:

- Technical mentorship
- Judging panels
- Exposure visits and ecosystem connections
- Data and technology resources
- Financial contribution towards the programme's activities

Open Call and Application Phase

Applications open between May and June. Activities include:

- Continental open call for submissions
- Targeted campaign through F6S platform
- Activation events and ecosystem outreach
- LinkedIn and partner communications

Regional Evaluation and Pitching Events

Top submissions from each region are shortlisted by judges using set criteria. Delivery model:

- Preliminary round: Best submissions (top 5 per region) invited to virtual regional pitching events
- Finale round: Top three teams from each regional event progress to the in-person continental finale

AEOC Continental Finale

This is usually hosted in the last quarter of the year, hosted by one of our partners who help with on the ground logistics. To ensure the programme remains truly Pan-African, the continental finale will rotate between regions each year, avoiding centralization in one location

15 finalist startups present their solutions at the AEOC Continental Finale. Activities include:

- Pitching sessions to partners and general event audience
- Technology demonstrations at their booths
- Partner engagement and ecosystem exposure

Winning teams progress into the AEOC Incubation and Mentorship Programme to advance their solutions toward market readiness

The Challenge

Venture discovery and validation

Regionalisation

To ensure the Challenge evolves into a truly Pan-African innovation platform, the programme will now operate through a rotating finale host and regional hub-and-spokes model, preventing the initiative from becoming concentrated in a single geography

This approach ensures that all five African Union regions play an active role in the programme's delivery and visibility

Hub and Spokes Ecosystem Model

The regionalisation strategy is implemented through a Hub-and-spokes model, where one leading ecosystem actor anchors regional activities and collaborates with surrounding countries

Hubs: The hub acts as the regional coordination center, responsible for hosting regional activities and supporting ecosystem engagement

Spokes: Surrounding countries participate as spokes, contributing innovators, research teams and startups to the regional ecosystem

Strategic Value of the Model

The hub-spoke model enables the programme to:

- Strengthen regional EO innovation ecosystems
- Increase accessibility for innovators across Africa
- Promote collaboration between African space and innovation institutions
- Ensure equitable continental representation
- Support the long-term sustainability of the AEOC ecosystem

This structure enables the AEOC programme to scale participation while maintaining strong regional anchors

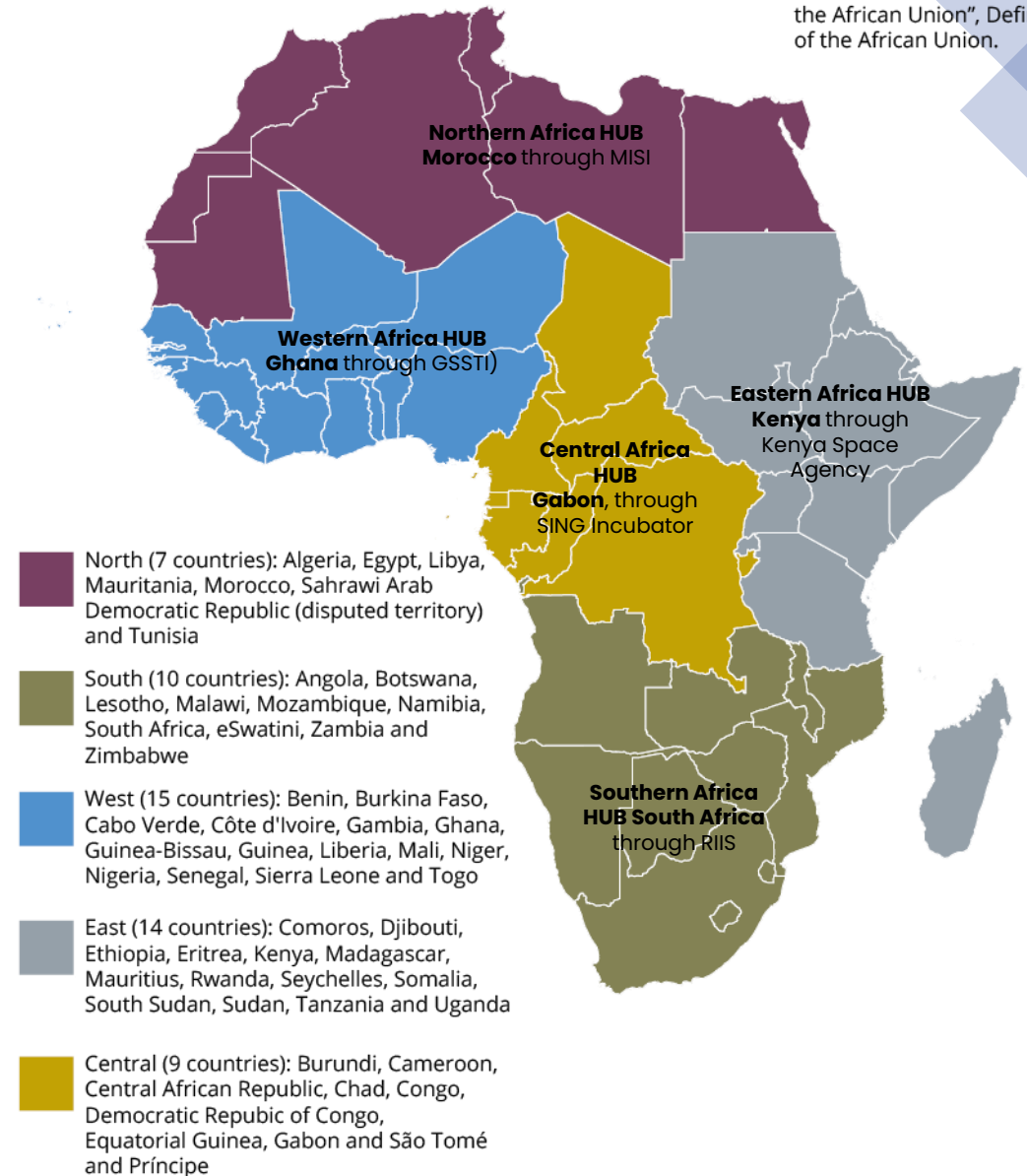
Rotating annual Finale event host

The AEOC Finale has only been hosted in South Africa (by SANSA, RIIS, SAIS) and Kenya (by KSA) in the past 10 years since inception. In 2026 and beyond, the programme will be implementing a rotating finale host model in alignment with the regionalisation strategy



**AFRICA EARTH
OBSERVATION
CHALLENGE**

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the African Union", Defin
of the African Union.



4. Incubation and Mentorship

Business Readiness and Startup Development



Strategic Positioning

The AEOC Incubation and Mentorship Programme supports the business maturation of the most promising ventures emerging from the AEOC Continental Challenge

Building on the business development training historically delivered to AEOC finalists, the 2026 programme introduces a structured 10-month Business Readiness Incubation and Mentorship Programme designed to strengthen the commercial maturity of participating startups

The programme focuses on closing the gap between technical innovation and commercial viability, enabling teams to refine their solutions, articulate their value proposition clearly, and prepare for engagement with investors, customers and ecosystem partners

Core Delivery

- AEOC / RIIS Programme Office: Programme owner responsible for governance, programme design, coordination and reporting. Select modules will be delivered directly by RIIS, leveraging internal programme management and venture development expertise
- Pan-African Incubator Consortium: AEOC is establishing a network of incubation partners providing regional support

Entry Routes into the Programme

- AEOC Continental Challenge Finalists: Startups are invited to join the incubation programme following the continental finale
- Direct applications: Startups who did not make it to the top 15 but meet the minimum requirements can apply directly to be considered

Progression to the Final Stage of the Innovation Funnel

Startups graduating from the Incubation and Mentorship Programme progress to the final stage of the AEOC innovation pipeline – the Investor Readiness Phase

In this stage, startups receive targeted support to prepare for investment engagement, strategic partnerships and scaling opportunities, ensuring that the most promising AEOC innovations are positioned to become sustainable African SpaceTech companies

Business Readiness Incubation (4-Week Intensive Programme)

The incubation component provides a structured venture development curriculum aimed at strengthening the business foundations of participating startups

Through facilitated workshops, applied case studies and practical venture-building exercises, startups refine critical components of their business strategy, including:

- Business Model Canvas development
- Value and Market Proposition articulation
- Customer discovery and market validation
- Go-To-Market strategy development and refinement

This phase enables startups to translate technically promising solutions into clearly structured businesses, strengthening their ability to communicate value to customers, partners and investors. The incubation concludes with investor pitch development and startup positioning, ensuring participants are ready for deeper mentorship and growth

Structured Mentorship Programme (9-Month Support)

Following the incubation phase, startups enter a nine-month structured mentorship programme designed to support execution and growth. Each startup is paired with mentors drawn from the space technology sector, venture building ecosystem and AEOC partner network

Through monthly engagements, mentors support startups in:

- Strategic business development
- Product and technology refinement
- Market expansion and partnership development
- Investor readiness preparation

This sustained mentorship ensures startups receive continuous guidance as they refine their products, test their market assumptions and progress toward commercial maturity

5. Investor Readiness

Investment and Market Scaling

Strategic Positioning

The AEOC Investor Readiness Programme represents the final stage of the AEOC innovation funnel, supporting high-potential startups graduating from the Incubation and Mentorship Programme to prepare for investment, commercial partnerships and market expansion

The focus of this stage is to strengthen investment positioning, enabling startups to refine their financial strategy, investor narrative and scaling roadmap The programme prepares startups to engage effectively with venture capital investors, corporate partners and development finance institutions, ensuring they reach advanced Technology Readiness Levels (TRL) and Business Readiness Levels (BRL)

Successful startups graduate from this stage as investment-ready SpaceTech companies capable of scaling across African and global markets

Core Delivery

- AEOC / RIIS Programme Office: Programme owner responsible for governance, programme design, coordination and reporting
- Pan-African Investor Readiness Consortium: Led by RIIS through the African Space Tech Fund initiative

Entry Routes into the Programme

Startups enter the Investor Readiness Programme through the following pathways:

1. Incubation and Mentorship Programme Graduation: Startups graduating from the AEOC Incubation and Mentorship Programme progress to the Investor Readiness stage after demonstrating a structured business model and market strategy progress in Technology Readiness Level (TRL) and Business Readiness Level (BRL)
2. Direct Path (External Startups): A limited number of high-potential startups not originating from the AEOC pipeline may enter the programme through a separate application and screening process, ensuring alignment with AEOC's thematic priorities and technical standards

Graduation from the AEOC Programme

The Investor Readiness stage represents the final phase and exit point of the AEOC innovation funnel Startups completing this stage graduate from the AEOC Programme as investment-ready African SpaceTech companies

Capital Raising

The programme prepares startups to successfully raise funding by strengthening their investment narratives and financial readiness Key support includes:

- Development of financial projections and funding strategy
- Preparation for investor due diligence
- Introductions to venture capital, angel investors and impact funds
- Participation in curated investor demo days and venture showcases

This ensures startups can clearly communicate their technical innovation, market opportunity and growth potential to investors

Strategic Partnerships

Startups are connected to strategic partners that support product development, validation and market adoption Activities include:

- Corporate partnership matchmaking
- Access to technology partners, EO data providers and infrastructure platforms
- Pilot deployment opportunities with industry partners

These partnerships help startups transition from early solutions to real-world deployment and industry adoption

Market Expansion

The programme supports startups in scaling their solutions across regional and international markets Support includes:

- Market entry and expansion strategy development
- Guidance on scaling operations and building commercial traction

This component positions startups to grow beyond pilots/early start ups into scalable African and global businesses

Progressing The Technology and Building the Business



TECHNOLOGY MATURITY: Technology Readiness Levels (TRL)

TRL 0 Idea or problem exploration	TRL 1 Basic concept formulation	TRL 2 Technology concept defined	TRL 3 Experimental proof of concept	TRL 4 Early prototype developed	TRL 5 Prototype validated in relevant environment	TRL 6 Working prototype demonstrated	TRL 7 Prototype demonstrated in operational environment	TRL 8 Technology qualified and ready for deployment	TRL 9 Fully operational technology
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BUSINESS MATURITY Business Readiness Levels (BRL)

BRL 0 Idea stage with no business structure	BRL 1 Early problem-solution concept	BRL 2 Initial value proposition defined	BRL 3 Business model concept emerging	BRL 4 Early market validation	BRL 5 Product-market fit testing	BRL 6 Structured startup with early traction	BRL 7 Scalable venture model	BRL 8 Investment-ready startup	BRL 9 Mature company with sustained growth
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AEOC Junior

Post-school Pathways

The Challenge

Incubation and Mentorship

Investor Readiness

Entry Points

- Direct signups through EOIs as individual learners
- Direct signups through EOIs from participating schools
- Direct invitations to Nka'Thuto alumni learners

Participants enter the pipeline at the concept exploration stage, where they are introduced to space technologies, innovation and problem-solving

Exit Points

- Participants exit the pipeline if they do not complete the programme
- Learners who successfully complete the programme progress to Post-School Pathways, with top performers invited to join the AEOC Alumni Network

Entry Points

- Graduates from AEOC Junior
- Direct EOIs from university students and young innovators

Participants enter the pipeline at the early prototype and innovation stage, where they begin developing structured solution concepts

Exit Points

- Participants exit the pipeline if they do not progress beyond innovation labs and prototype development activities
- Participants with viable solutions submit to the AEOC Continental Challenge, with high-potential innovators invited to the AEOC Alumni Network

Entry Points

- Startup teams emerging from Post-School Pathways
- Direct continental applications from African startups

Participants enter the pipeline at the minimum viable product stage, where startups present solutions demonstrating technical feasibility and problem-solution fit

Exit Points

- Startups exit the pipeline if they are not shortlisted during the regional and continental evaluation stages
- Top startups progress to the Incubation and Mentorship Programme, while all shortlisted participants are included in the AEOC Alumni Network

Entry Points

- Top 15 startups from the AEOC Continental Challenge (**3 from each AU region**)
- Direct application from African startups

Participants enter the pipeline at the venture development stage, where startups refine their business models, validate markets and strengthen their startup foundations

Exit Points

- Startups exit the pipeline if they do not complete incubation milestones
- Startups that successfully complete the programme progress to the Investor Readiness stage, with all participating startups included in the AEOC Alumni Network

Entry Points

- Graduates from the Incubation and Mentorship Programme
- Selected external pipeline startups (direct pathway)

Participants enter the pipeline at the venture scaling stage, where startups prepare for investment, strategic partnerships and market expansion

Exit Points

- Startups exit the pipeline upon graduation from the AEOC programme as investment-ready ventures, positioned for capital raising and commercial deployment
- All graduating startups become permanent members of the AEOC Alumni Network

AEOC Alumni Network

Building together the community



Strategic Positioning

The AEOC Alumni Network represents the long-term community layer of the AEOC ecosystem, connecting innovators, founders and participants who have previously taken part in the programme across different stages of the innovation pipeline

The network ensures that AEOC operates not only as an annual challenge programme, but as a continuous innovation community that supports collaboration, mentorship and ecosystem growth across Africa

Core Delivery

- AEOC / RIIS Programme Office: Network coordinator.

Historical Cohort Integration

Participants from previous editions of AEOC will form the founding cohort of the Alumni Network

- Past AEOC participants will receive a direct invitation to opt into the Alumni Network
- Participation will be voluntary and based on participant consent and profile submission
- Historical participants who opt in will be onboarded into the AEOC BI Platform alumni registry

This allows the programme to activate an existing network of innovators and startups that have already engaged with AEOC in previous years

Entry Points into the Alumni Network

Participants may enter the Alumni Network through multiple stages of the AEOC pipeline:

1. AEOC Junior – high-potential learners progressing beyond the initial screening stages
2. Post-School Pathways – innovators demonstrating strong solution concepts
3. Continental Challenge – shortlisted startups and finalists
4. Incubation and Mentorship Programme – participating startups automatically included
5. Investor Readiness Programme – startups entering directly through the investor readiness pathway

The Alumni Network therefore becomes a pan-African community of innovators and startups connected through the AEOC innovation pipeline

Alumni Interaction with the Programme

Members of the Alumni Network actively contribute to programme delivery and ecosystem development Roles may include:

- Mentors supporting earlier stages of the AEOC pipeline
- Judges or reviewers in the Continental Challenge
- Speakers and facilitators in bootcamps and innovation labs
- Startup role models and case studies for programme communications
- Peer advisors supporting emerging startups

This structure supports knowledge transfer and community-led ecosystem growth

Alumni Engagement Activities

Ongoing engagement with alumni will include:

- Alumni networking sessions and ecosystem convenings
- Participation in programme events and innovation activities
- Mentorship opportunities across programme stages
- Collaboration opportunities with ecosystem partners and investors

Alumni Communications

Communication with the alumni community will be coordinated through:

- AEOC Alumni mailing list and newsletters
- BI Platform alumni portal updates
- LinkedIn community engagement and programme announcements
- Invitations to AEOC events, innovation labs and ecosystem activities

These channels ensure alumni remain connected to programme developments and opportunities within the AEOC ecosystem

AEOC

AFRICA EARTH OBSERVATION CHALLENGE

Enabling space start-ups utilising digital technologies



LOOKING AT AFRICA'S CHALLENGES THROUGH A DIFFERENT LENS





AFRICA EARTH OBSERVATION CHALLENGE

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