



African Open Science Platform (AOSP)
Delivery Phase Planning Workshop - Alexandria, Egypt, 2-3 September 2019
BUILDING ON THE STRATEGY - SCIENCE FOR THE FUTURE, THE FUTURE OF SCIENCE

This Executive Summary summarises the rationale and purpose of the Platform as described in the [interim strategy for the AOSP](#) using the session titles of the workshop

1: SETTING THE SCENE: WHY IS AN AFRICAN OPEN SCIENCE PLATFORM NEEDED?

1.1 The global issue

Humanity is in the throes of a world-historical revolution in the way that information and knowledge are acquired, stored and communicated. This digital revolution is changing societies, economies and the lives of individuals in unprecedented ways, with enormous potential for science. “Data-driven science”, supercharged by artificial intelligence, has the potential to address the inherent complexity at the heart of most major global concerns, including the SDGs. The revolutionary impact is as a “general-purpose technology”, rare in human history, one that continually transforms itself, progressively penetrating new domains, boosting productivity across all sectors and industries because of its cost effectiveness, and with an economic impact that is much higher than for stand-alone technologies.

It has led to the emergence of a powerful new paradigm of ‘open science’ that enhances the efficiency of science through sharing of data and ideas. It is based on three pillars: open data, open access publishing and open engagement of science with business, policymakers, governments, communities and citizens as knowledge partners in ways that increase both effectiveness and socio-political legitimacy. Science systems worldwide are urgently grappling with these issues and adapting their structure, funding, training, support and prioritisation to these novel challenges and opportunities.

1.2 The challenge to Africa

African states must create the capacity in policies, processes and people that will permit them to deliver the benefits of the digital revolution whilst mitigating its dangers. The dilemma for Africa is to avoid the possibility of a new knowledge divide at time when African science has begun to thrive. States cannot afford to be dependent on skills bought in from elsewhere or to be passive consumers of digital services. A response is needed that will both address these global priorities and those identified in the *2024 STI Strategy for Africa*: to hit **thematic targets** such as disease prevention, resilient cities, and sustainability; and deal with the **foundational issues** of weak intra-African research collaboration and low knowledge production rates.

1.3 A Pan-African response: the African Open Science Platform

The Platform’s mission is to put African scientists at the cutting edge of contemporary, data-intensive science as a fundamental resource for a modern society. It is designed to support bold, internationally-significant endeavours by regional scientists, addressing the weaknesses identified above, and amplifying the impact of their science through common intellectual purpose and voice. It will be a digital ecosystem based on the experience that the interventions that work do three things: they focus not just on hardware, but also on content, data sharing and system-wide connections enabled by digital technology, and on federation of existing and new capacities as cost efficient means of enhancing benefit to all. Through six strands of activity, the Platform will provide:

Strand 1: shared broadband networks, computation and storage;

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- Strand 2:* good practices in managing and using core resources, including technical specifications, standards, protocols, and FAIR research outputs;
- Strand 3:* cutting-edge support for domain scientists in data analytics and AI;
- Strand 4:* collaborative research programmes on major regional priorities, that also facilitate creation of the critical masses necessary for regional scientific vitality;
- Strand 5:* training, education and capacity enhancement;
- Strand 6:* programmes of societal engagement on key topics in the transdisciplinary mode.

2. THE PREPARATORY PHASE (2017-2019)

This 3-year programme was planned to provide necessary background analysis and knowledge and to build the pan-African relationships and awareness essential for Platform launch. It has been overseen by an Interim Advisory Council comprising senior members from South Africa, Egypt, Kenya and Sierra Leone, together with representatives of the International Science Council (ISC) and its Committee on Data (CODATA), and supported by a Technical Advisory Board. It has been funded by the South African Department of Higher Education, Science and Technology, by ISC and by CODATA. It has included a pilot project managed by the Academy of Sciences of South Africa (ASSAf). The deliverable from the preparatory phase are: an African landscape map of relevant policies, projects, institutions and individuals; creation of a community of practice and expertise; frameworks for policy, incentives, research data management in institutions, training and skills, technical requirements and FAIR issues.

3. DELIVERING THE VISION

The interim strategy sets out operational deliverables for the Platform from 2020 onwards. The Alexandria workshop of potential founding members and partners is a critical staging point in this process. It will build on the foundations developed during a pilot phase by indicating how governance should be expanded and reoriented to ensure pan-African participation and engagement. It will agree the basis for a “roadmap” that will lead to implementation, by addressing a series of key questions. Is the interim strategy document a sound basis for a roadmap towards operational launch? Are the six strands of activity appropriate and sufficient? How are they best organized and located? Can existing capacities be federated, and can existing entities adapt their operations to deliver individual strands? Are the proposals for policy and practice to be tabled at the meeting adequate to the operational need?

4. MEMBERSHIP, COMMITMENT, GOVERNANCE AND RESOURCING

4.1 Membership

Founding members will be already involved in aspects of open science, e.g: digital service providers; universities; national academies; science granting councils; relevant Pan-African science bodies; and that membership will expand as the AOSP is implemented.

4.2 Commitment

Active commitments to the work of the Platform and expressions of interest will be sought over the whole range of Platform roles, from an interest in funding and strategy development to leadership or involvement in the delivery of individual activity strands.

4.3 Governance

The interim Advisory Council will be replaced by a substantive Governing Council, as determined by members. A management hub should be created during 2019.

4.4 Sponsorship and Resourcing

The Platform will seek African and international sponsors to support resourcing, facilitate global networking and profiling, to provide advice and to participate in strategy development. A 5-year period for full platform implementation is proposed.