Unpacking the AOSP and NRF Open Science agenda

26 October 2021

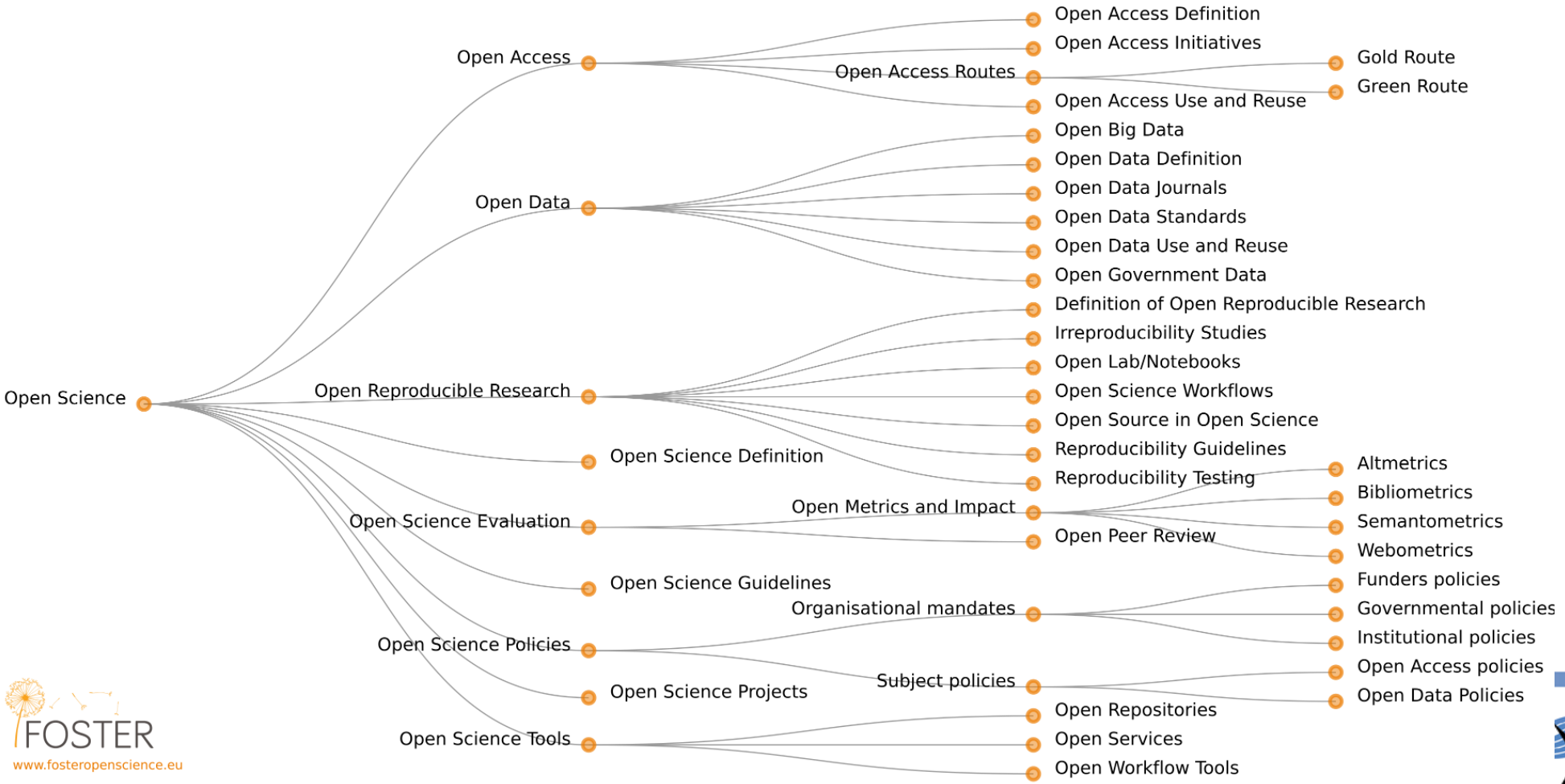
Dr Sepo Hachigonta
Director: Strategic Partnerships

CONTEXT

- Overview
- Current status
- Towards the NRF Open Science framework
- AOSP

COMPONENTS OF OPEN SCIENCE

The idea behind Open Science is to allow scientific information, data and outputs to be more widely accessible (Open Access) and more reliably harnessed (Open Data) with the active engagement of all the stakeholders (Open to Society)- UNESCO



science
Department:
Science and In
REPUBLIC OF

FOSTER
www.fosteropenscience.eu

NRF National Research Foundation

NATIONAL STATUS

Open Science Colloquium 31 July 2020

science & technology
Department: Science and Technology
REPUBLIC OF SOUTH AFRICA

SA-EU STRATEGIC PARTNERSHIP

Joint final statement of the SA-EU Dialogue on Open Science

UNIVERSITIES SOUTH AFRICA

From 01 March 2015, authors of research papers generated from research either fully or partially funded by NRF, when submitting and publishing in academic journals, should deposit their final peer-reviewed manuscripts that have been accepted by the journals, to the administering Institution Repository with an embargo period of no more than 12 months. Earlier Open Access may be provided should this be

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on

OPEN SCEINCE IN THE NEWS

Plan S
Making full & immediate Open Access a reality

"With effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo."

How Unpaywall is transforming open science

Unpaywall has become indispensable to many academics, and tie-ins with established scientific search engines could broaden its reach.

Draft text of the UNESCO Recommendation on Open Science

Following the consensus reached during the intergovernmental meeting of experts held from 6 to 11 May 2021, the Draft text of the Recommendation will be put forward for adoption by UNESCO's General Conference during its next session in November 2021:
English | Français | Español | Русский | العربية | 中文

BRAZIL-GLOBAL

The alarming rise of predatory journals

Marcelo S Perlin, Takeyoshi Imasato and Denis Borenstein 21 September 2018

Joint Declaration by the African Open Science Platform, AmeliCA, cOAlition S, OA2020, and SciELO

São Paulo Statement on Open Access

May 02, 2019 SPP

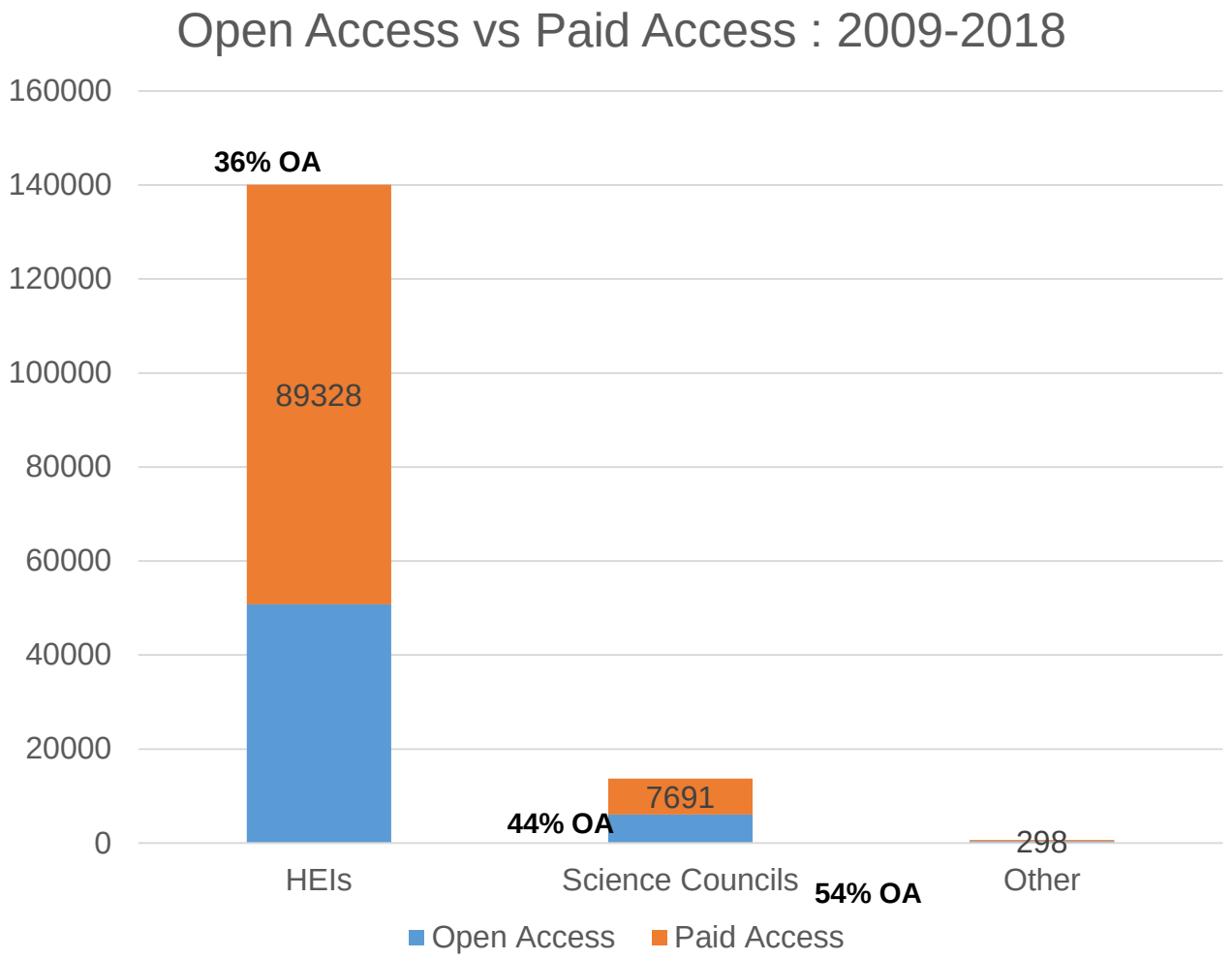
DATA OVERVIEW - JOURNAL PUBLICATIONS - SA

154 483
Total
Publications
over 9 years

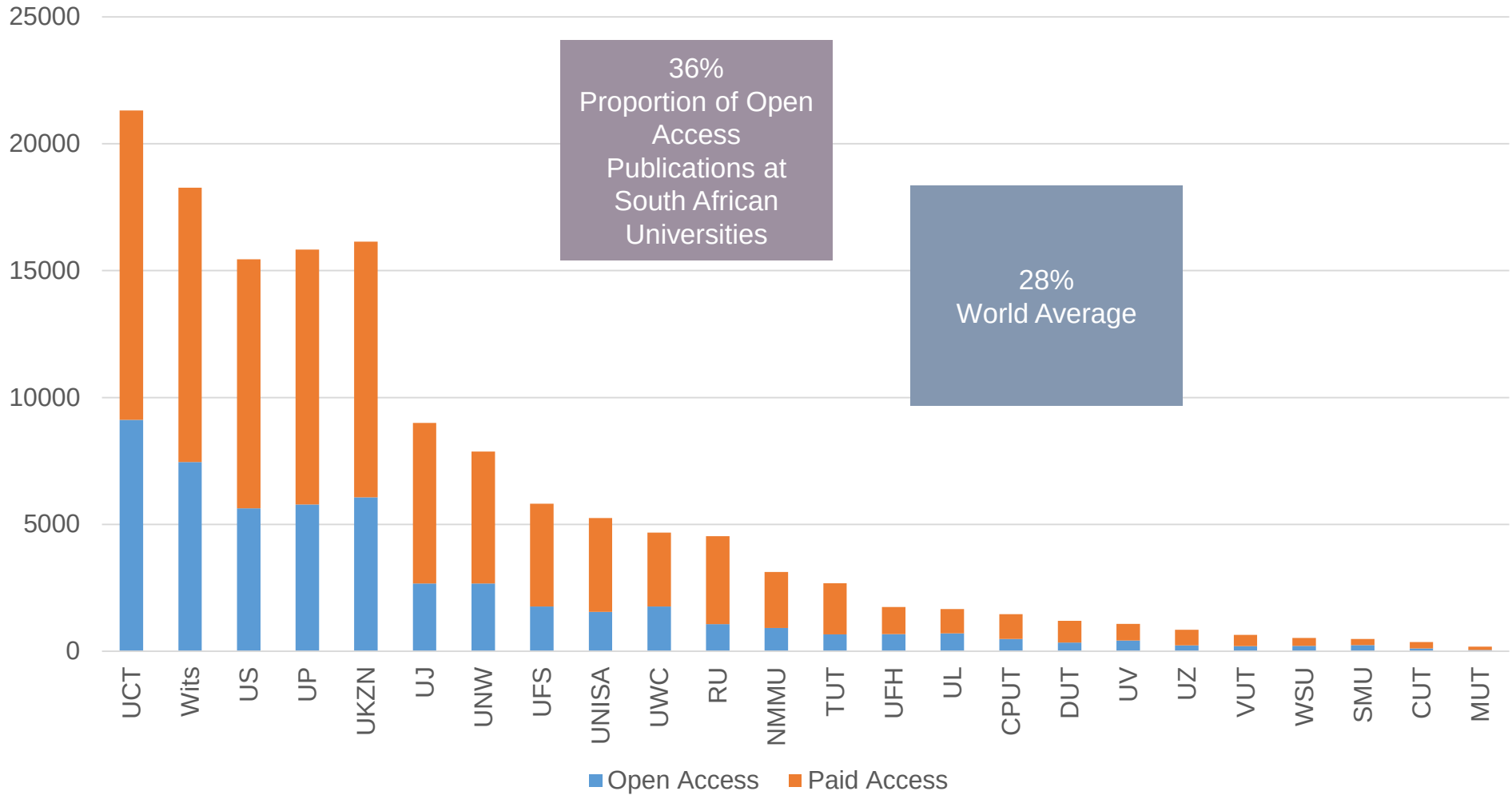
140 101
Publications by
Universities over 9
years

13 728
Publications by
Science
Councils over 9
years

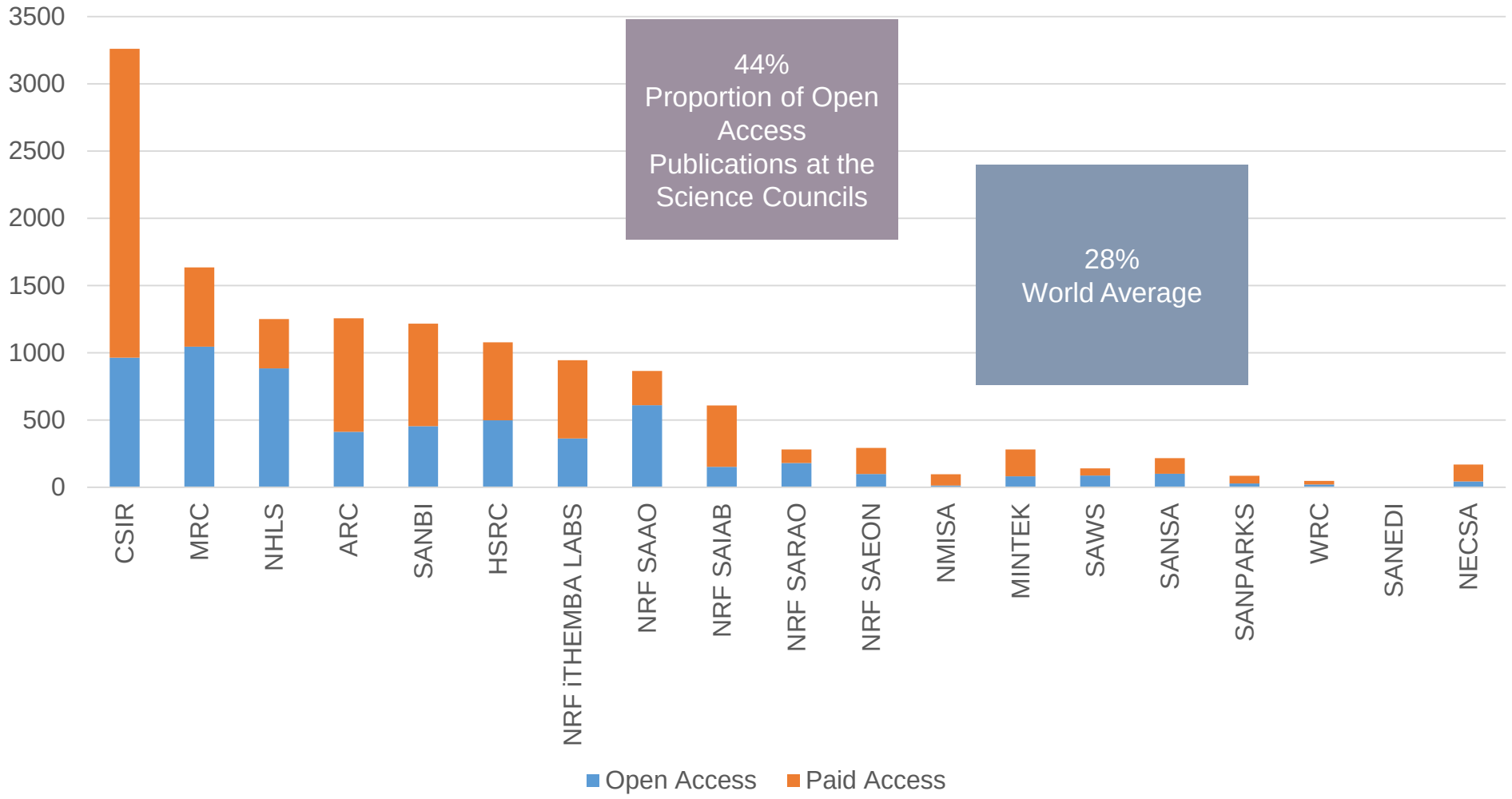
654
Total Publications
from other sources



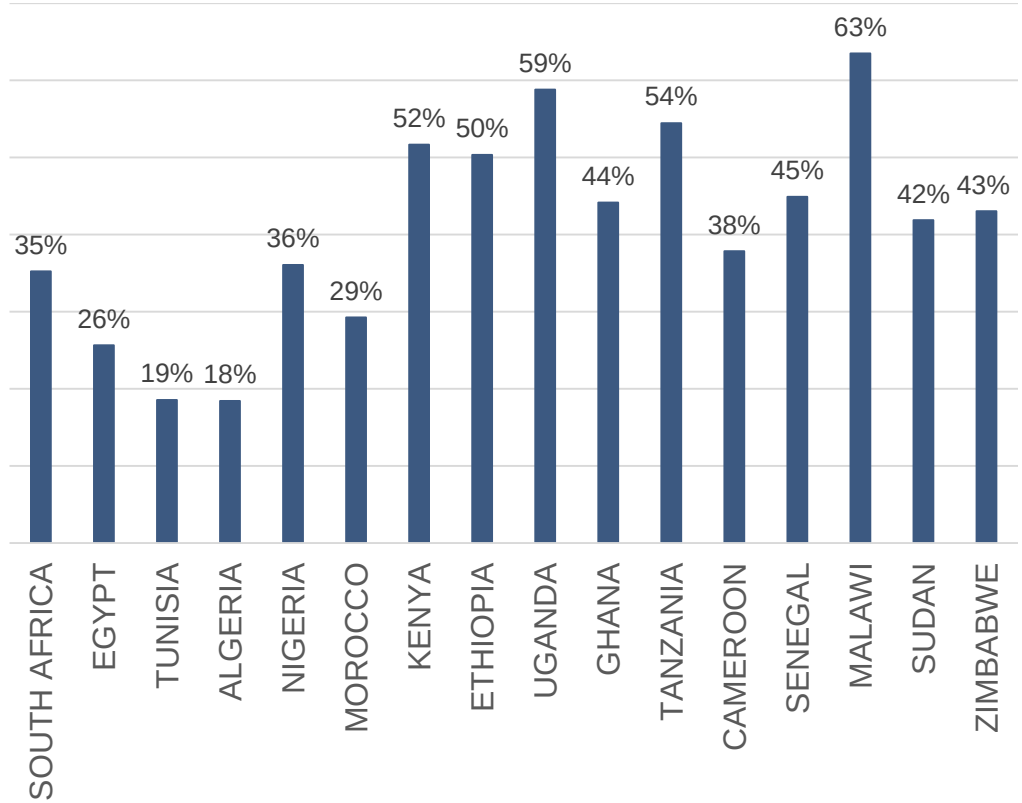
OVERVIEW UNIVERSITIES - OPEN VS PAID ARTICLES

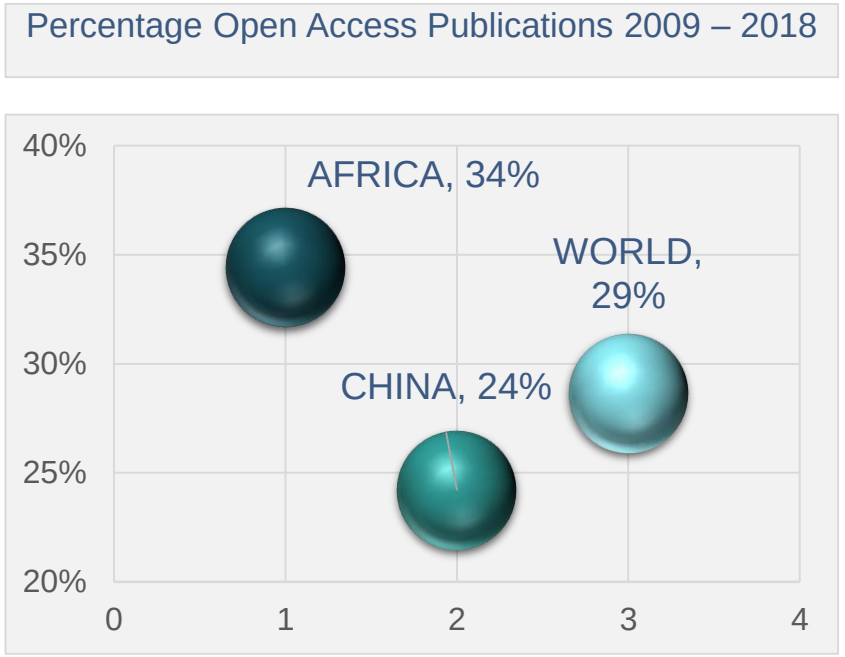


DATA OVERVIEW SCIENCE COUNCILS OPEN VS PAID ARTICLES (2009-2018) (WoS)



OPEN ACCESS PUBLICATIONS 2009 – 2018





TOWARDS THE NRF OPEN SCIENCE STRATEGY

- Support the scientific process through the adoption of specific Open Science movements and practices including open policies, open data, open source, open access etc.;
- Facilitate a measurable increase in open access scientific products in the research enterprise;
- Increase the sharing of research outputs within the research enterprise as well as with the broader society.

What can work for South Africa?

PRIORITY APPROACH

- Open access
- Open data;
- Open review and evaluation
- Open policies

DRAFT RECOMMENDATIONS - 1

- GRANT APPLICATION: All research proposals submitted to the NRF must include an Open Science plan guided by NRF Policies.

- GRANT AGREEMENT: Revise all grant agreements to reflect the NRF Open Science strategy. This could include:
  - Researchers to declare and share the links to all Open Science practices in their annual and final reports to the NRF.
  - The submission of final dissertations must include a disclosure form that states which Open Science practices have been used in each empirical study (i.e., open data, open material, preregistration, open access), including a link to each of those.
  - A percentage of publications from research outputs (Journal articles, books, etc.)

DRAFT RECOMMENDATIONS - 2

- MONITORING AND EVALUATION: The NRF must implement a more open review process through gradual, purposeful and consultative process. There should be a balance between the needs of open science and the expectation of the applicants and possibly the wider research community.

- DATABASES AND ASSOCIATED OS ICT INFRASTRUCTURE: The NRF must promote stakeholder community in developing/using digital platforms that will serve as repository that provides links to all institutional repositories. The institutions should make sure that the repositories are available and also be responsible for providing training to the researchers.

DRAFT RECOMMENDATIONS - 3

- INCENTIVE SYSTEM FOR OPEN ACCESS: What type of incentive system must be adopted for grant recipients?. How will it be funded
- Alignment with DHET funding.
  - Is APC-based open access affordable for publishing-intensive institutions? Are library subscription budgets sufficient?
- Note:
  - Participants in OA2020 believe that grant funding needs to be part of the funding mix; (model includes these options)
  - Most published research is a product of grant-funded research;
  - Grant funding is typically used to cover open access charges –

- **In South Africa, NRF Grant Funding is not used for publication / subscription**:
  - Should this change?
  - What is the role of the University Block Grant in this context?

ROADMAP TOWARDS THE OS STRATEGY - 1

1. **Develop a National Coalition:**
   - Establishing **shared negotiation goals** for transformative open access requires a strong alliance between the Government, Universities, and Science Councils;
   - **Identify existing** or **establish new committees** to appropriately **support** active participation and provide ongoing input.

2. **Prioritize a partnership between the Government, Universities, and Science Councils**:
   - The work must be **mutually reinforcing** and span from developing goals and a comprehensive strategy to signing (or not signing) an agreement, there must be a working partnership.

3. **Leverage the growing body of evidence to bolster confidence – stakeholders**:
   - Use the success of global players to bolster confidence with stakeholders;
   - Knowing that we are not acting in isolation, but adapting and advancing a new model that better reflects our funding structures in support of our research-intensive goals may empower action.

ROADMAP TOWARDS THE OS STRATEGY - 2

4. **Broadly communicate and contextualize goals well in advance:**
   - Through inclusive consultation of all constituents agree and communicate goals;
   - Build on any existing policies or public statements that articulate those principles.

5. **Socialize and secure support for potential outcomes**:
   - In setting publisher negotiation goals, it is important to acknowledge and discuss potential outcomes;
   - Plan for the scenario where publisher negotiations do not accomplish the desired goals;
   - Understand appetite and willingness to consider alternatives, including revised goals or foregoing subscription access.

We need to provide clear guidelines for the negotiation team!

Science for the Future : The Future of Science

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THE AOSP VISION

African scientists are at the cutting edge of contemporary, **data-intensive science** as a fundamental resource for a **modern society**.

They are innovative global exponents and advocates of **Open Science**, and leaders in addressing **African** and **Global Challenges**.

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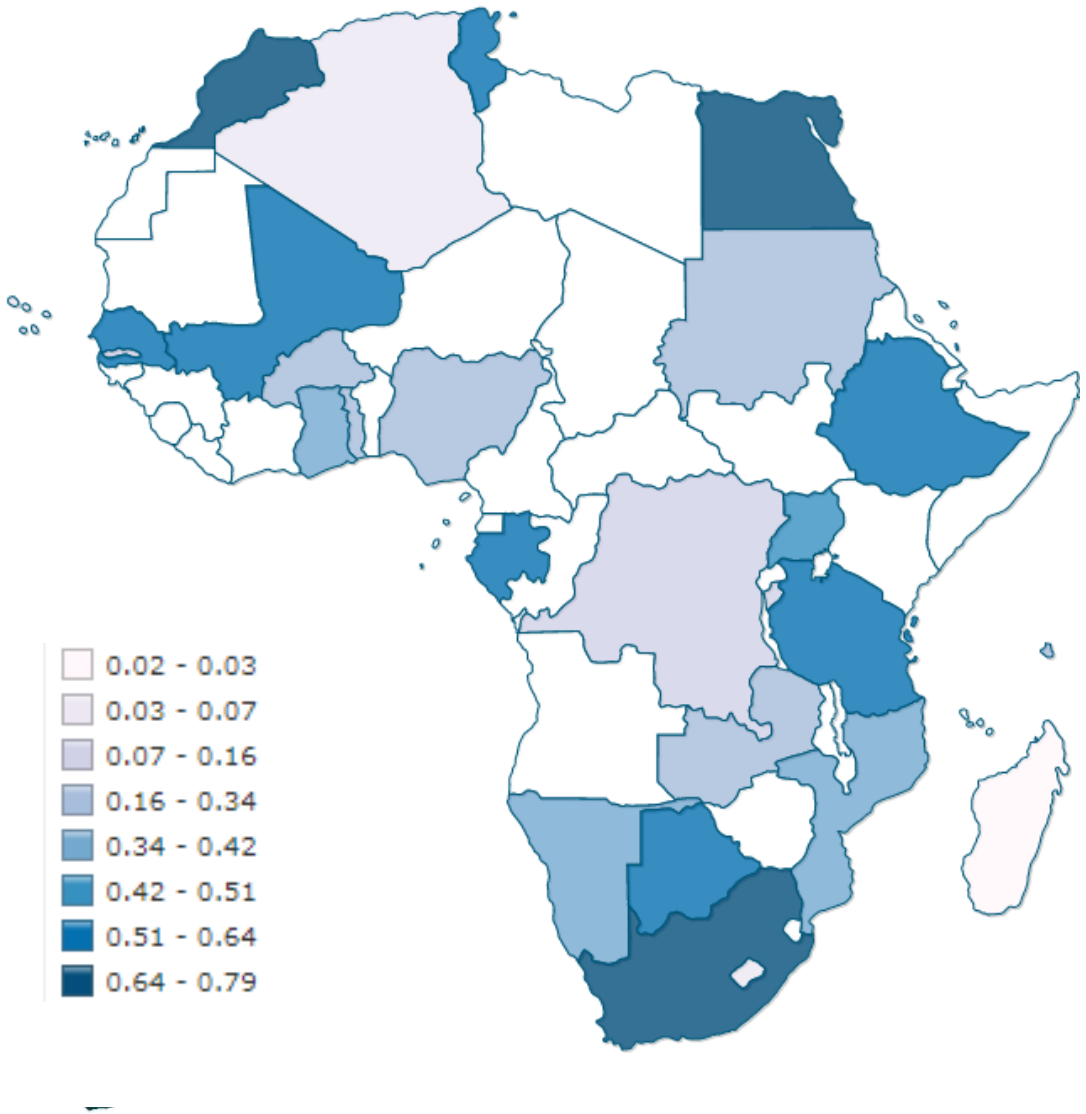
R&D Intensity (GERD as a Percentage of GDP)



- R&D Intensity: 0.4% on average
- R&D intensity target (AU): 1%
- R&D spend per capita: <$100
- Contribution to world research outputs: 2.2%
- Researchers per million of population: 198

AOSP - EVOLUTION

2015 SFSA:

Hosted the first meeting of Science International (ICSU, ISSC, TWAS, IAP) which led to the publication of an **international accord on open data in a big data world**

2016 SFSA:

Launched the **Pilot Phase of the AOSP** as an outcome of the 2015 Science International meeting (ASSAF and CODATA)

2017 SFSA:

Reported on progress in **building an AOSP community of practice** and challenges

2018 SFSA:

Launch of the vision and strategy of the **Operationalization of the AOSP**

2019 Library of Alexandria:

Delivery phase planning; key regional stakeholders and international partners consultation

2020:

Delivery phase implementation; NRF as AOSP Office host (*competitive process*); appointment of Director; AOSP business plan development; strategic partner engagement

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OPERATIONAL PRIORITIES

Six strands of work, divided into two dimensions:

Data and Infrastructure:

- *Hard infrastructure.* Federated computational hardware and communications underpinning an Open Science Cloud.
- *Soft Infrastructure.* Software for research data management, and policies and enabling practices to support open science in the digital era.

Strand 1: A federated network of computational facilities and services
Strand 2: Policies, practices, and tools of research data management
Strand 3: A Data Science and AI Institute at the cutting edge of data analytics.

Programmes:

- A network of excellence in open science that supports scientists and other societal actors

Strand 4*:* Science programmes: e.g. cities, disease, biosphere, agriculture and food
Strand 5: A Network for Education and Skills in data & information
Strand 6: A Network for Open Science Engagement, Dialogue and Policy, including issues on open access

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INSPIRING A GLOBAL DEVELOPMENT

Proposed Governance Structure:

Community of Partnership

Council of partner representatives appointed through the Partnership Agreement

Council:
- Ensure good governance
- Support funding initiatives;
- Stakeholder management;
- Promote the platform on the global stage

Community of Practice:

Charged with giving expression to the AOSP strands through coordination and collaboration with partner countries.

Board Appointment by Council in line with the applicable laws of the host country

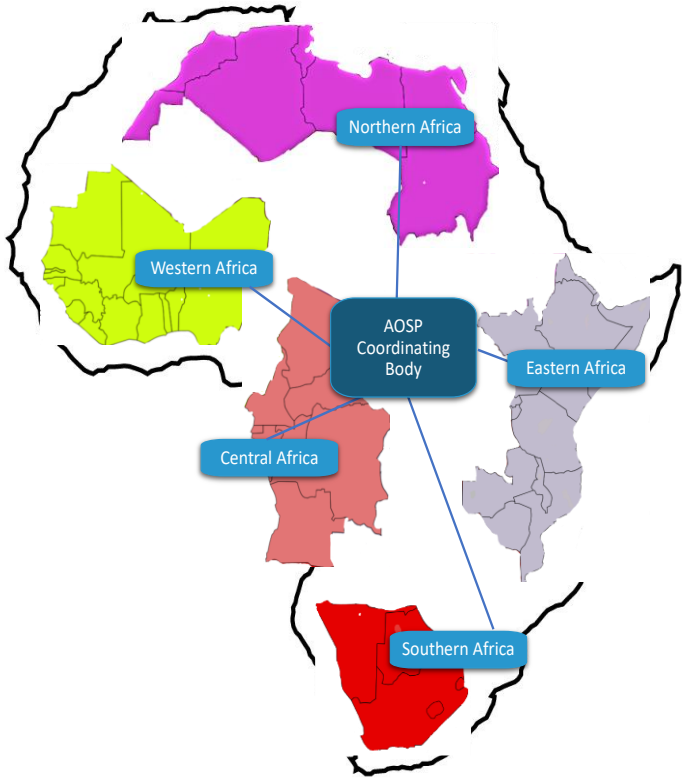
Board:
- Set strategy including prioritising scientific ideas and plans;
- Maintain oversight of effective operation.

Director

charged with operationalizing the AOSP

Director:
- Leadership;
- Accountable for operational management;
- Source of ideas for the Board

Staff through appointment and or secondment from partners



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FUTURE FORWARD

2021 **Operationalisation**

Hosting arrangements
Business plan development
AOSP Director
Initial financial arrangements

2022 **AOSP Implementation**

Node development
Strategic partnerships
Communication/ Lobbying
Continental representative body

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LET'S WORK TOGETHER FOR AFRICA

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International Science Council
Regional Office for Africa

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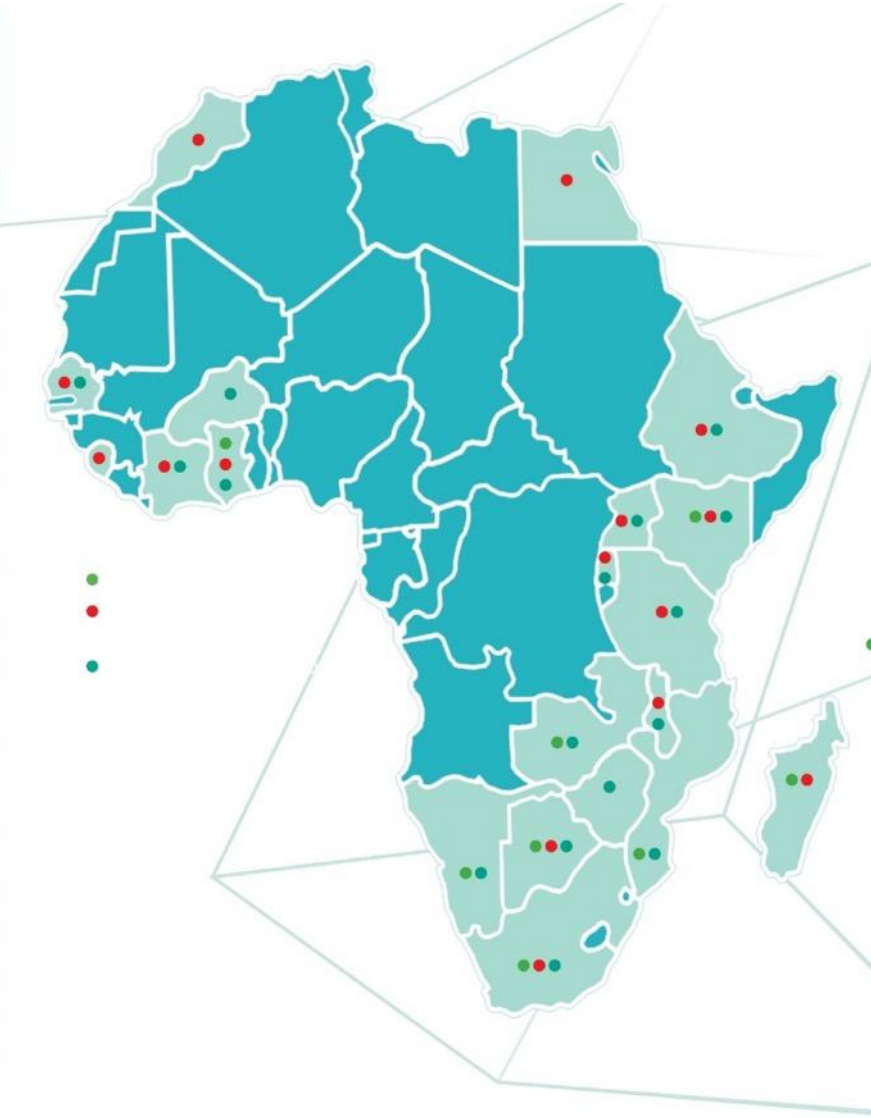
Current Participants of Key Initiatives on the African continent

Country	AVN	AOSP	SGCI
Botswana	●	●	●
Burkina Faso			●
Cote d'Ivoire		●	●
Egypt		●	
Ethiopia		●	●
Ghana	●	●	●
Ivory Coast		●	
Kenya	●	●	●
Madagascar	●	●	
Malawi		●	●
Mauritius	●		
Morocco		●	
Mozambique	●		●
Namibia	●		●
Rwanda		●	●
Senegal		●	●
Sierra Leone		●	
Tanzania		●	●
Uganda		●	●
Zambia	●		●
Zimbabwe			●
South Africa	●	●	●



Thank you

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