

Workshop on Science, Technology and Innovation for the SDGs

Meeting of the IATT and 10-Member group under the TFM in preparation of the Multi-Stakeholder Meeting on Science, Technology and Innovation for the SDGs 2020

Room C1, Vienna International Centre, Vienna, Austria, 3 – 5 February 2020

Co-organized by DESA, UNCTAD, UNOSD, OOSA, and UNIDO.

Towards Inclusive Innovation: The Role of Open Science

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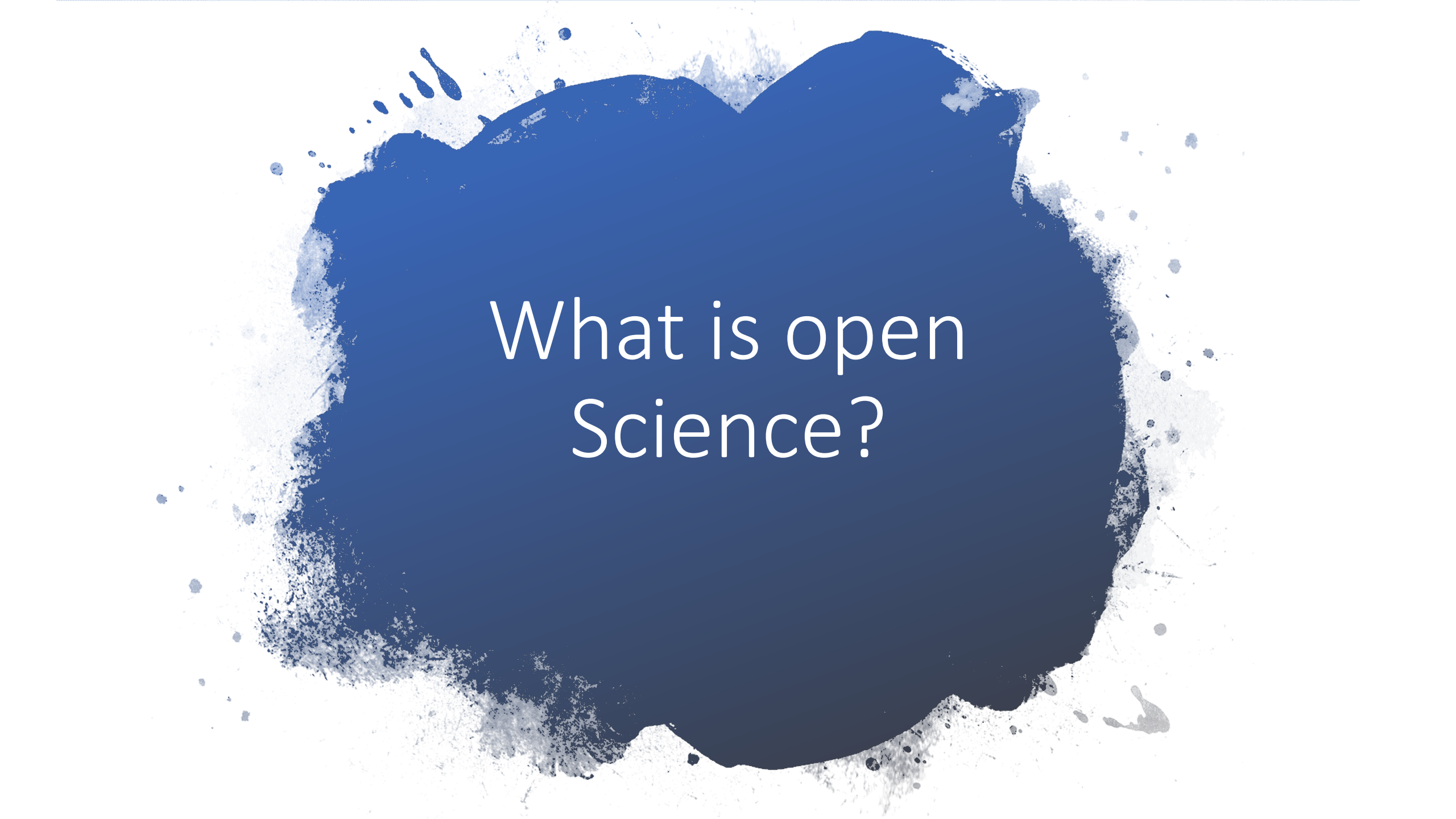
Queen Elizabeth II Scholar, Open African Innovation Research (Open AIR)

Africa Open Science and Hardware (AfricaOSH)

Mboalab

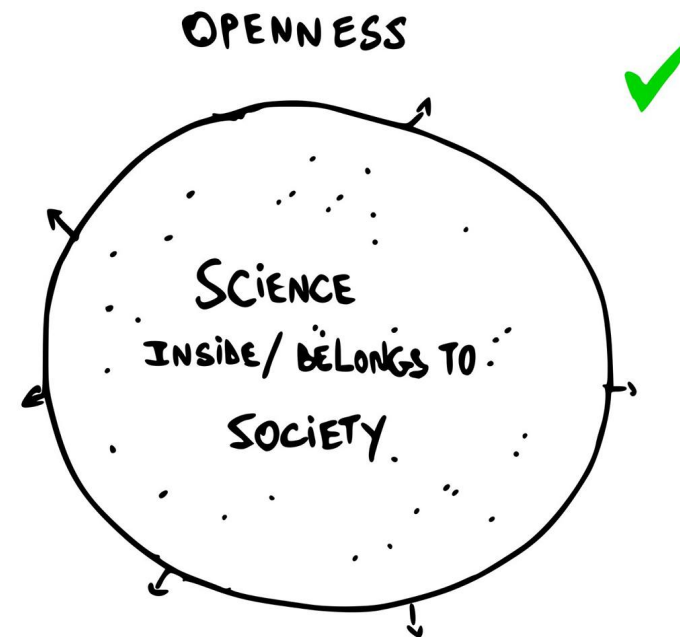
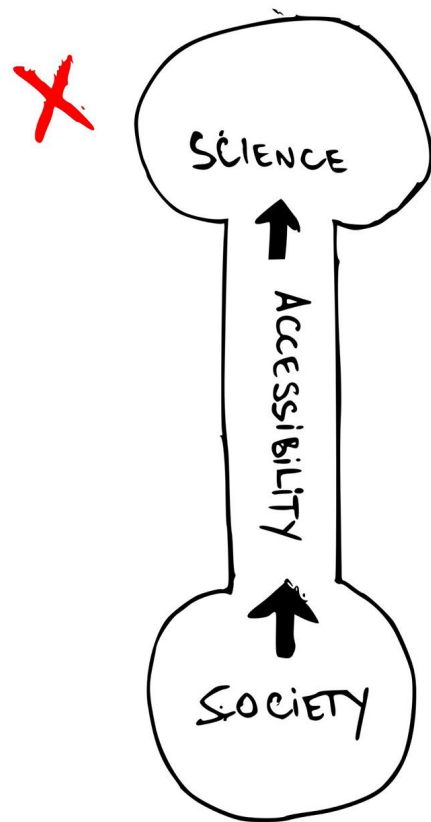
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What is open
Science?

Open science is more than research, accessibility and scholarly communication



OPEN SCIENCE IS MORE THAN ACCESSIBILITY

Thomas Hervé Mboa Nkoudou - Projet SOHA (Open Science / Biohacking, Cameroon)

Contextualizing Openness



Edited by Leslie Chan

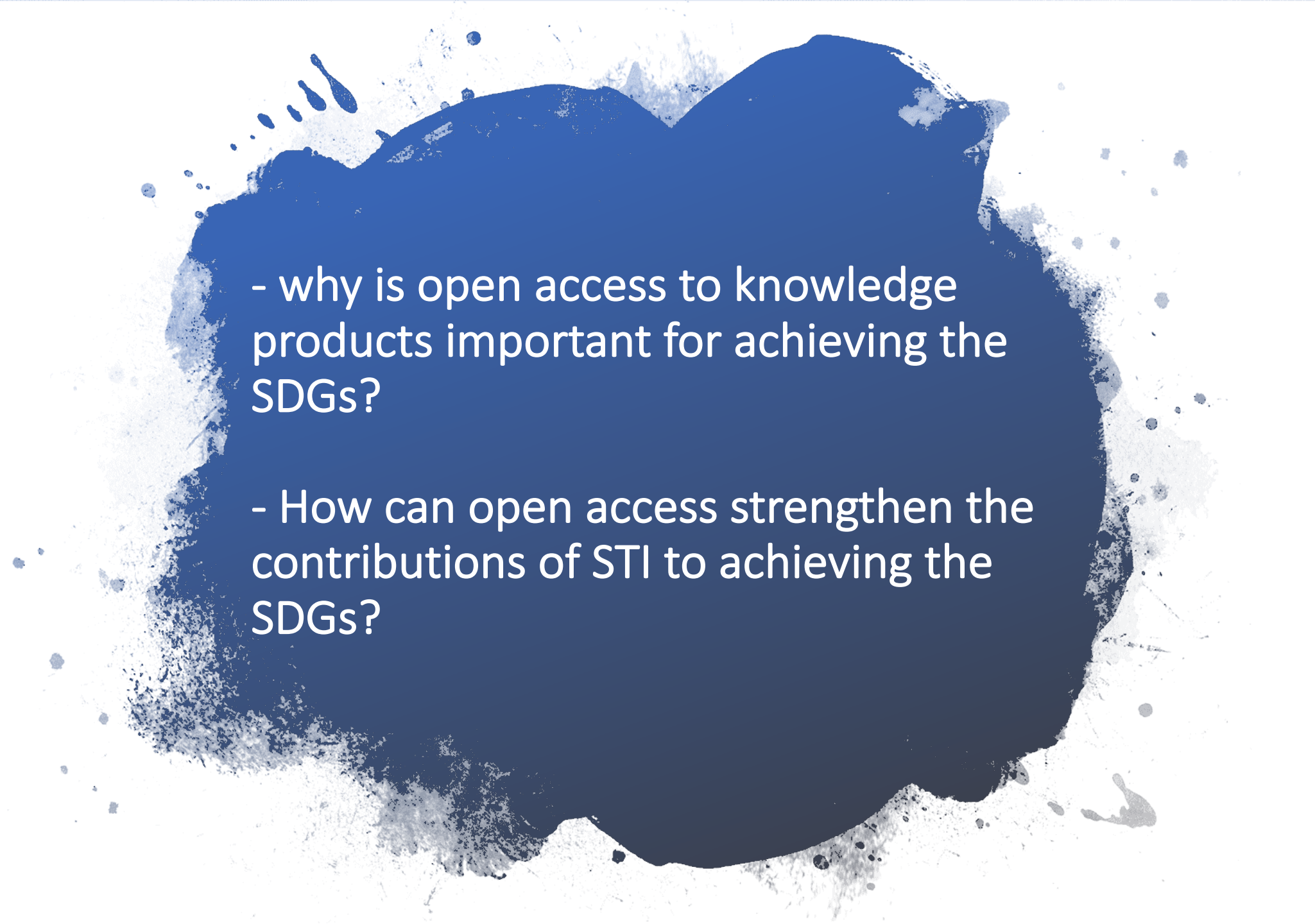
Angela Okune, Rebecca Hillyer, Denisse Albornoz and Alejandro Posada

University of Ottawa Press

Open science is a dynamic combination of 03 trends...

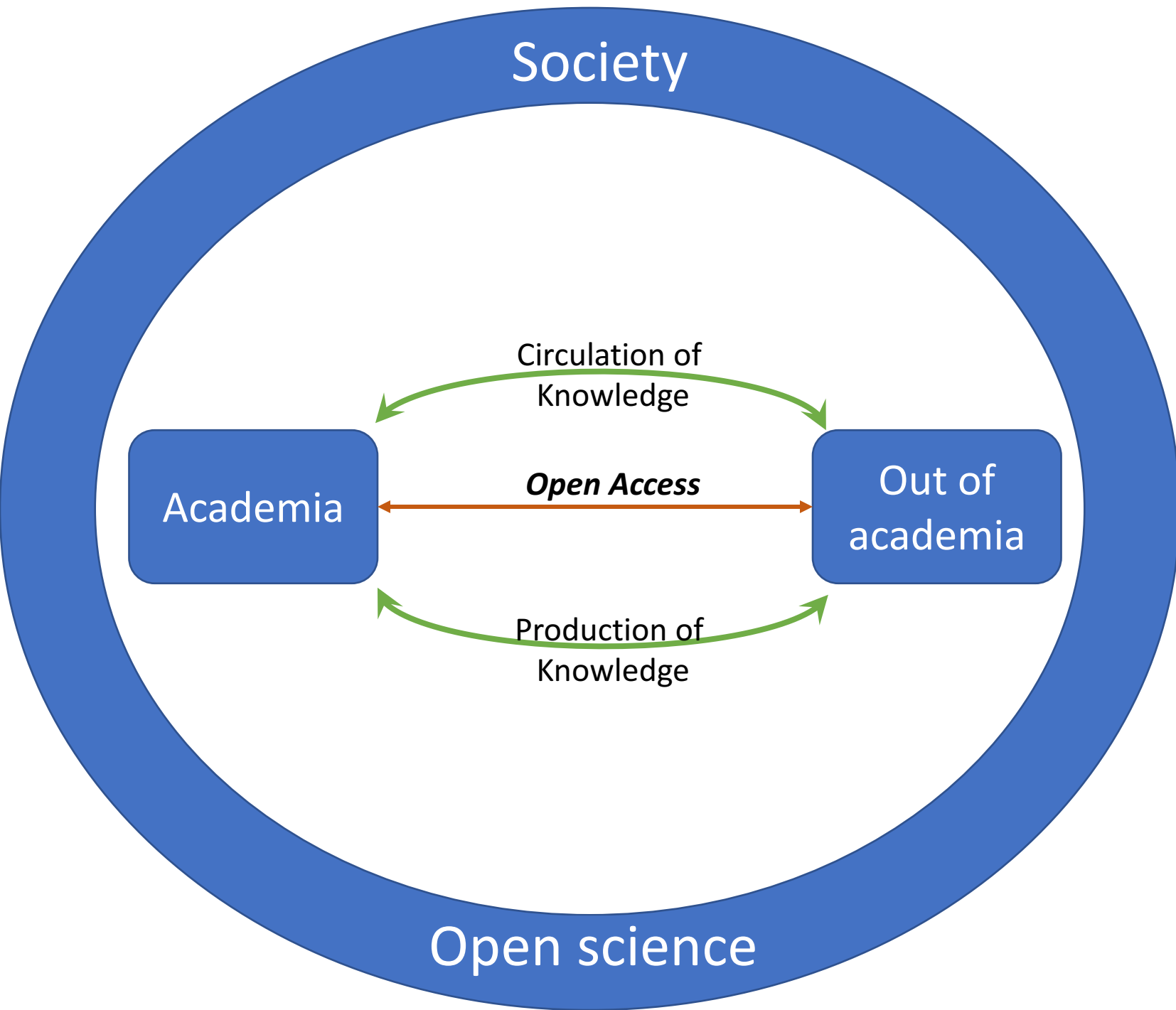
- Open Science as: **Open access and scholarly communication**
- Open science as : **the maker movement (Makerspace, Fablab, Biohackerspace...DIY, DIYBio)**
- open science as : **citizen science.**

... and core values related to openness

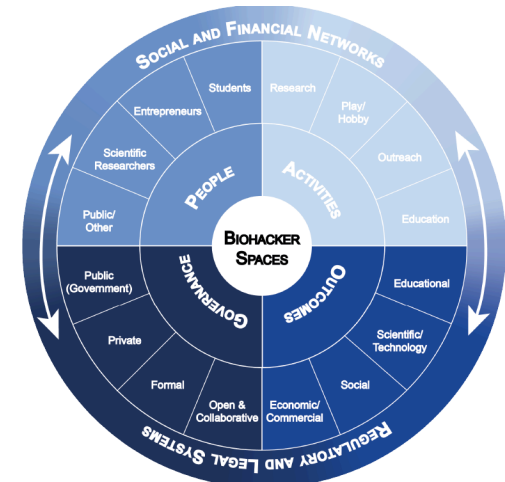


- why is open access to knowledge products important for achieving the SDGs?

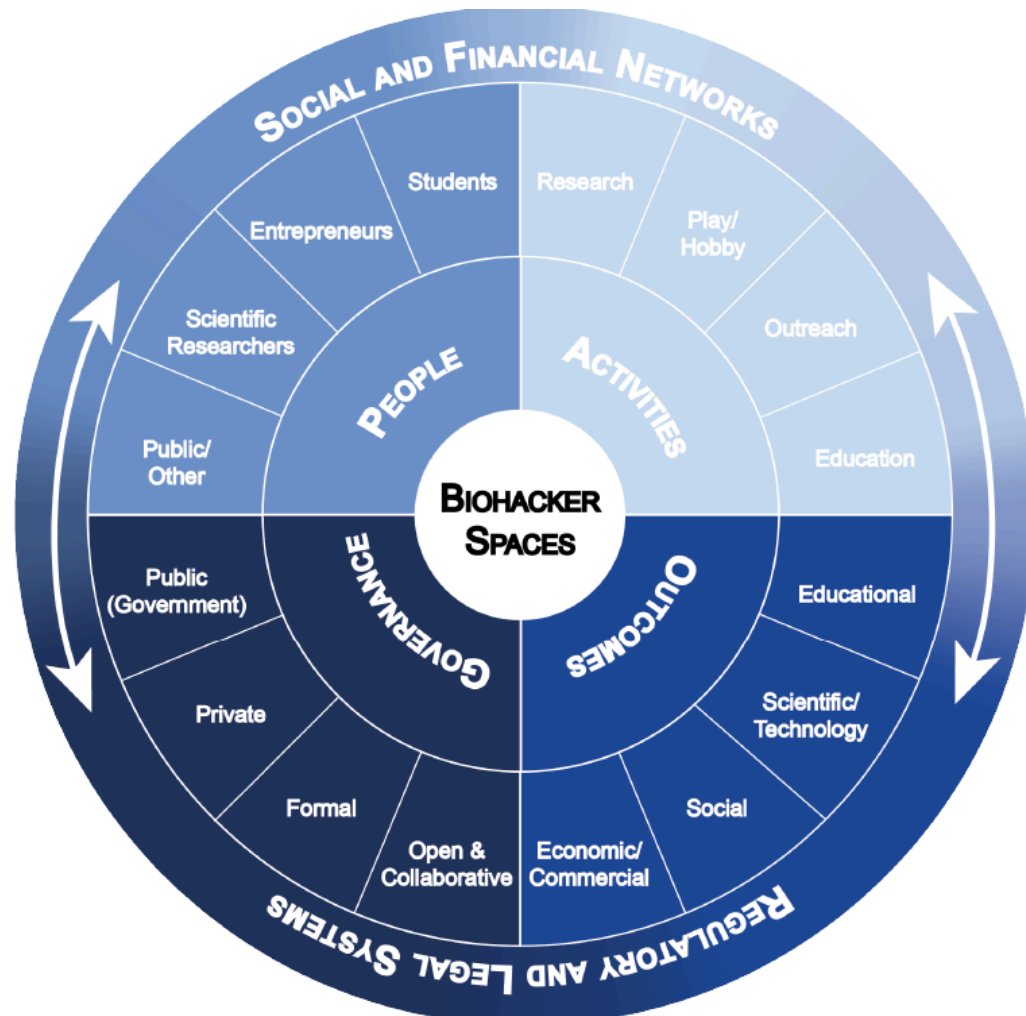
- How can open access strengthen the contributions of STI to achieving the SDGs?



Leads to
inclusive innovation




Open science leads to inclusive innovation



" Inclusive innovation requires that opportunities for participation are broadly available to all and that the benefits of innovation are broadly shared by all (Centre for the Study of Living Standards, 2016)."



Context and constraints for inclusive innovation seen from biohackerspaces
By De Beer and Jain (2018)



Are there examples of successful initiatives for advancing open science? What steps need to be taken to scale up and expand these initiatives? Are there any risks that need to be addressed?

Making
Open Science
Hardware
ubiquitous
by 2025



GLOBAL OPEN SCIENCE HARDWARE ROADMAP

Lessons from 02 African initiatives



**AFRICA OPEN SCIENCE & HARDWARE SUMMIT
(Africa OSH)**



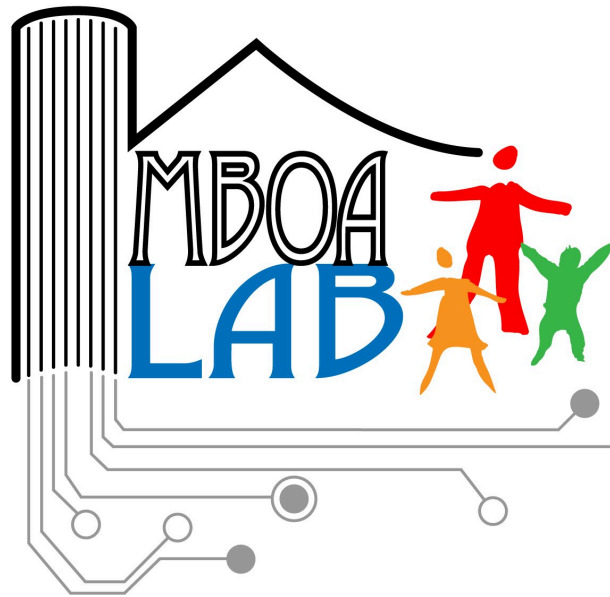
<http://africaosh.com/>

Africa OSH Summit is a grassroots effort to explore alternative paths to education, research, scholarly communication, science and technology.

Africa OSH is a community of makers, hackers, practitioners and researchers of government officials, private sector players and civil society across the African continent, the global south and the world.

Africa OSH Summit

- 2018 – Kumasi, Ghana (Kumasi Hive)
- 2019 – Dar es Salaam, Tanzania (STICLab)
- 2020 (14 – 16 May) – Yaounde, Cameroun (MboaLab)



<https://www.mboalab.africa>

MboaLab (since 2017) is a Research Center on Open Science and a community laboratory for social innovation, community-based education, collaboration and mediation. Based in Yaoundé (Cameroon), the MboaLab aims to provide a better life to local populations through research.

Some activities of the Mboalab

Community education



Library



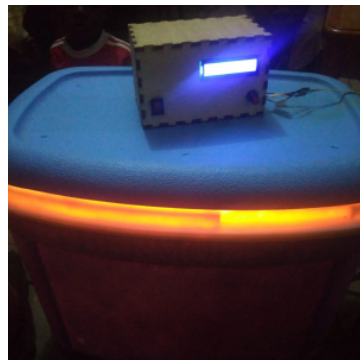
Training for promoters of scientific journals



Open science for peacebuilding



DIYBio



Medical diagnostic

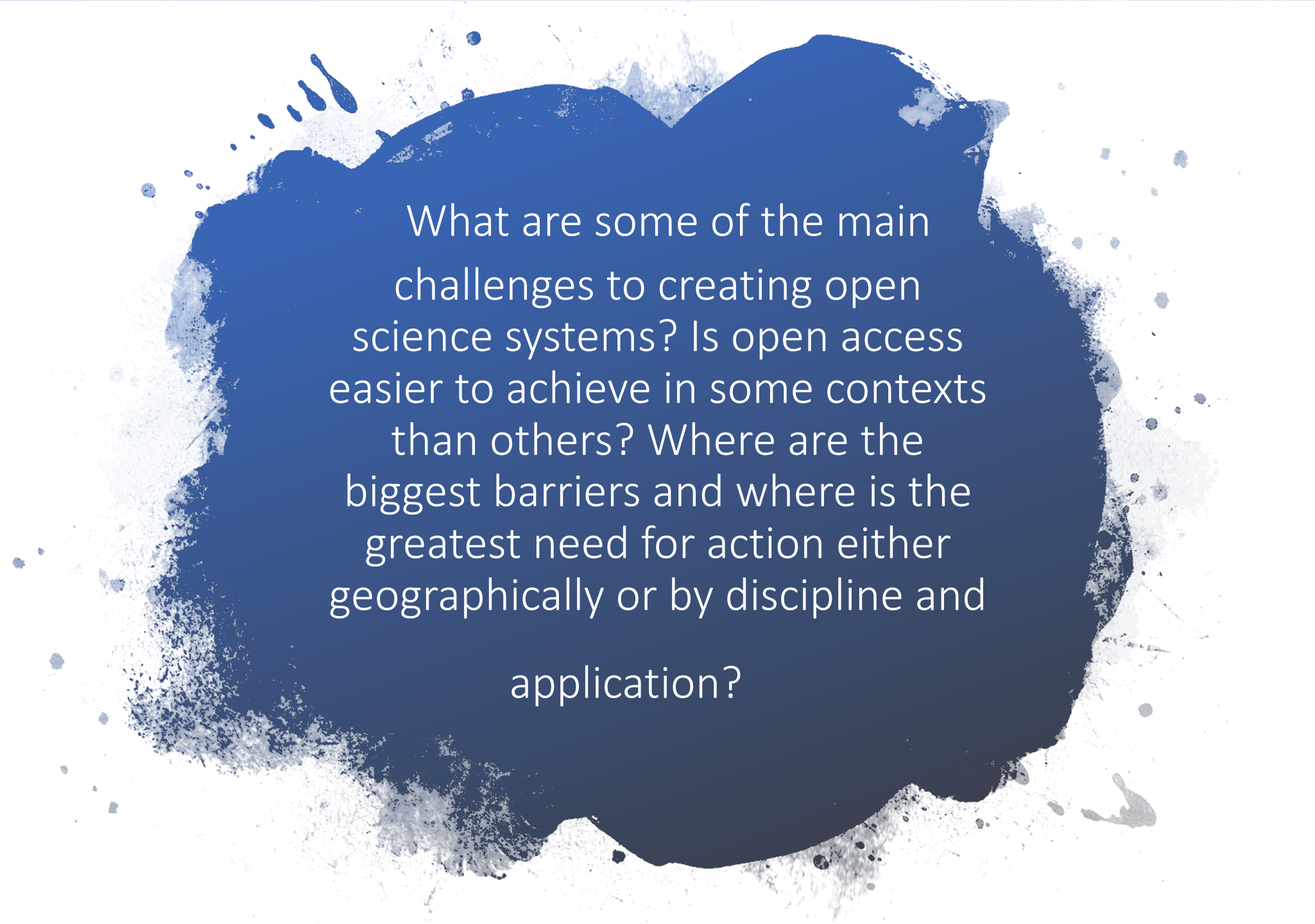


Enzyme production



Collaboration with local universities





What are some of the main challenges to creating open science systems? Is open access easier to achieve in some contexts than others? Where are the biggest barriers and where is the greatest need for action either geographically or by discipline and application?



<https://www.projetsoha.org/>

What are the concrete barriers to the adoption of open and collaborative science by graduate students in African and Haitian universities? How could we overcome these barriers?



Justice cognitive, libre accès et savoirs locaux

Pour une science ouverte juste,
au service du développement
local durable

Sous la direction de :

Florence Piron

Samuel Regulus

Marie Sophie Dibounje Madiba

Cognitive injustices

- An epistemological, ethical and political ideal aiming at the creation of socially relevant knowledges across the globe, not just in the North, within a science practicing inclusive universalism, open to all knowledges and epistemologies.
- From this perspective, we consider the difficulties faced by African and Haitian scholars and students to do research and to publish as **cognitive injustices** since it reduces their ability to deploy the full potential of their intellectual skills, of their knowledge and of their scientific research capacity to serve sustainable local development of their community or country.

Epistemic
Alienation:
example of
cognitive injustice

Book chapter by Thomas Mboa :
Epistemic Alienation in African
Scholarly Communications: Open
Access as a Pharmakon. In
“Reassembling Scholarly
Communications: Histories,
Infrastructures, and Global Politics of
Open Access”. By [Martin Eve](#), MIT Press
(in Press, to be published in 2020).

How could this theme feature in the STI forum, leading to potentially high priority recommendations for action?

Open science



Inclusive innovation



- Open science is a catalyser of STI.
- But, many decision makers and policymakers are not aware of its full potential; leading to a lack of policy sensitive to Open Science.
- I highly recommend to UN policymakers, to bring awareness on open science; specifically for developing countries.



Thank you