LIBRARIES AS ENABLERS OF OPEN SCIENCE

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AGENDA

Defining “Open” and “Science”
Selected Policies and Initiatives
Libraries as Enablers
A Call to Action for HEIs and Academic Libraries in SL
UNPACKING THE TERM

• ‘Open’ = easily/freely accessible, not behind paywalls, democratic, transparent, collaborative

• Here, the term ‘science’ is somewhat of a misnomer as it encompasses more than what we generally think of science
OPEN SCIENCE IS THE MOVEMENT TO MAKE SCIENTIFIC RESEARCH, DATA AND DISSEMINATION ACCESSIBLE AT ALL LEVELS OF AN ENQUIRING SOCIETY.

12 ELEMENTS OF OPEN SCIENCE

UNESCO 2021
Open Data
Free digital research data

Citizen Science
Public participation in scientific research

Open infrastructures
Free access to Scholarly communication resources and services eg repositories

Open Source
Free available, accessible& transparent software, models, and data sets

Open Access
Free and full access to scientific outputs including resources and data

Open Innovation
Trans/Interdisciplinary collaboration and knowledge flow in scientific research

Open hardwares
Free hardwares/designs for collaborative and external use and distribution

Open Notebook
Free digital research records, plans & protocols

Open labs
Free digital representation of research activités

Open Evaluation
Transparent and external participation in research assessment

Crowdfunding
Public participation in funding scientific activities

Open Educational Resources
Free access to teaching, learning and research materials
OPEN AFRICA?

- DOAJ — 136 journals indexed
- DOAR — 16 countries with repositories
- DOAB — only a handful of publishers (e.g. ABC, African Minds)
THE CHALLENGE IS NOT THE TECHNOLOGICAL CAPACITY OF SUCH REPOSITORIES BUT RATHER THE CREATION OF ADEQUATE METADATA AND POLICIES ENSURING SUSTAINED ACCESS TO THE DATA.
SHIFTS IN KNOWLEDGE PRODUCTION AND CONSUMPTION

- From Gutenberg to WWW
- From Open (17th c invisible college of science) to Secret (via nationalized academies) to Open (open science)
- From Laboratory to Collaboratory
- From Consumers to Prosumers
- From Social Asymmetries to Social Justice (“commons thinking”)
FRAMING OPENNESS

AUGUST 2015

MAY 2016

2016

NOVEMBER 2021

AUGUST 2022

OECD Report *Making Open Science a Reality*

EU Report *Open innovation, open science and open to the world*

WACREN’s LIBSENSE Initiative

UNESCO’s Recommendation on Open Science

WH OSTP mandates open access for tax-funded research
LIBRARIES AS ENABLERS OF OPEN SCIENCE

A PHILOSOPHICAL SHIFT
LIBRARIES’ FOCUS

- open data
- open infrastructure
- open access (OA)
- open hardware
- open laboratories
- open-source

- open innovation
- open notebook
- open evaluation
- open educational resources (OERs)
- crowd funding
- citizen science
EX-GATEKEEPERS LEAD THE CHARGE

• Early promoters of open access publishing: ETD repositories; institutional repositories (breaking the tyranny of journal publishers)

• Libraries as publishers (e.g. Highwire from Stanford, UCL Press) – an extension of traditional knowledge dissemination service; adding high value OA materials esp those passed over by commercial publishers

• Promoters of alternative copyright protocols -- Creative Commons licences (breaking restrictive copyright prohibitions)

• Paying APCs for researchers
OS IN THE RESEARCH CYCLE

(Ayris & Ignat, 2017)
OTHER ROLES

- Librarians Re/upskilling
  e.g. IT, Data Science degrees
- Advocacy and Training (engaging HEI leaders, leading campus-wide initiatives etc)
- Policy development
“BUSINESS LIBRARY OPPORTUNITIES ARE LIKE BUSES. THERE'S ALWAYS ANOTHER ONE COMING.”

(Adapted from Richard Branson)
HOW WE CAN GET THERE

ROE (RETURN ON ENGAGEMENT)
• Rethinking and Prioritising Libraries

NICHE LIBRARY SERVICES
• Assist researchers organize their data
• SDI of new tools and services

“BE OPEN TO CHANGE”
RESEARCH LIBRARIES, GUIDED BY THE VALUES OF OPENNESS AND EQUITY, HAVE A CRITICAL ROLE TO PLAY IN STRENGTHENING OPEN SCIENCE PRACTICES…

INTERNATIONAL LIBRARY ASSOCIATIONS APPLAUD UNESCO OPEN SCIENCE RECOMMENDATION – IARLA
THANK YOU

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