#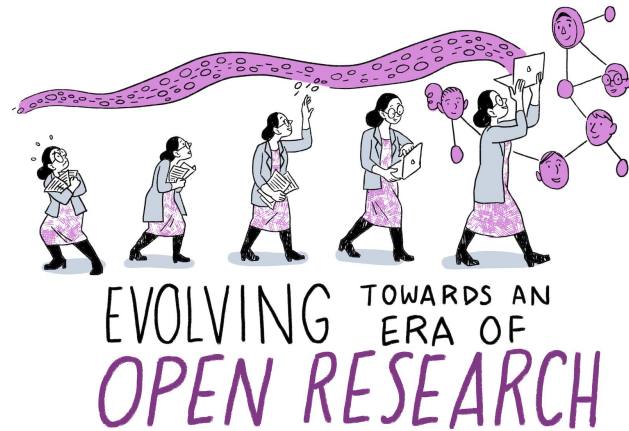 Reflection on *Open Science* practices and Research Software in the Kingdom in alignment with Saudi Arabia's Vision 2030

By Batool Almarzouq (She/her)
Computational Biologist @batool664

EVOLVING TOWARDS AN ERA OF **OPEN RESEARCH**

OSCSA
Open Science Community Saudi Arabia

VISION 2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

Batool Almarzouq

Post-doc in KAIMRC

Community Lead

Committee member + Organisers

Honorary research Fellow

Core contributor

Open Science

"**Open Science** is the movement that aims at more **open** and **collaborative research practices** in which **publications**, **data**, **software** and other types of academic output are shared at the earliest possible stage and made available for reuse"

"Source: NWO"

"Open science will **make science more efficient, reliable, and responsive to societal challenges.**"

https://bit.ly/34lC81e   @OpenSciSaudi, @batool664

This is **urgently needed** in **Arabic-Speaking countries** where its growth and local infrastructure is affected by **instability** in part of the region & **economic recession**.

There are **25 countries** that claim Arabic as an official or co-official language.

Saudi Arabia is fifth-largest country entirely in Asia, the **second-largest in the Arab world**, and the **largest in Western Asia.**

Introduced

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zenodo   https://bit.ly/34lC81e   @OpenSciSaudi, @batool664

Saudi Arabia's Vision 2030 is package of economic and social **policies** designed to free the kingdom from dependence on oil exports in **pursuit of a knowledge-based economy.**

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Saudi Arabia's Vision 2030
focuses on installing values, enhancing knowledge and improving equal access to education.

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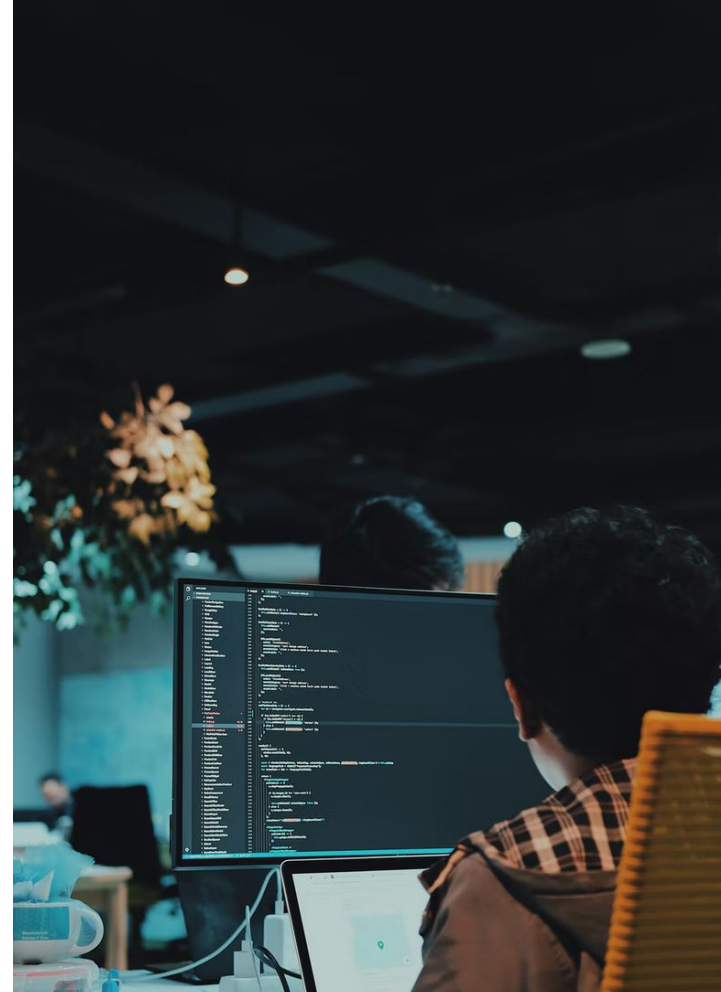المملكة العربية السعودية
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Saudi Arabia's Vision 2030 **makes it clear** that highly advanced **digital infrastructure** is vital to success with the **innovative** and **research**.

Source: Wirefilter

Saudi Arabia introduced **coding** as an **important STEM-based skill** and **supported initiatives** that focus on best practices in coding and **building research softwares**.

Open science in essence refers to the **transformation** that science is undergoing due to **globalization** and Information and communications technology (ICT).

Initiatives & Labs

Carpentries Lessons

KAUST LABS
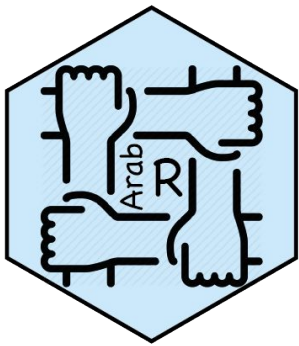CORE
& RESEARCH INFRASTRUCTURE

SSBCB

The Carpentries Community in MENA

R LADIES DAMMAM
SAUDI ARABIA

Arab R

OSCSA
Open Science Community Saudi Arabia

+ R-Ladies Jeddah

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OUR COMMUNITY

WALKING PEOPLE THROUGH THE BASICS

NETWORKING

SHARING BEST PRACTICE

WELCOME!

FULL OF OPPORTUNITIES

TOOLS

HELPING PEOPLE GROW

Scriberia

OSCSA Vision is to provide a place in Saudi Arabia where newcomers and experienced peers interact, inspire each other to **embed open science** practices and values in their workflows and **drive the creation of policies, infrastructures** and **support services**.

@OpenSciSaudi, @batool664

www.osc-ksa.com
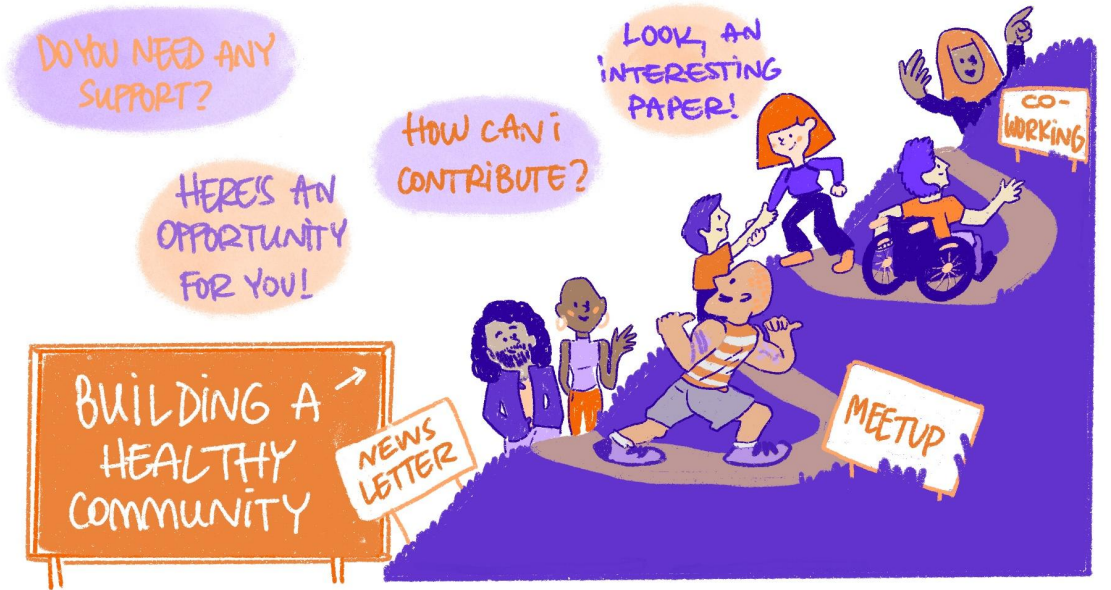
batool@liverpool.ac.uk

The International Network of Open Science Communities (INOSC)

Overview of the current Open Science Communities. As of May 2021, the International Network of Open Science Communities (INOSC) comprises Open Science Communities at 11 locations in the Netherlands, 1 in Ireland, 1 in Sweden, and 1 in Saudi Arabia. Image by Anita Eerland, licensed under CC BY-ND 3.0.

Together working to make Open Science the norm.

- Introduce resources about Open Science in Arabic.

- Connect local researches with the global community and increase their visibility

- **Provide training on best practices on research softwares.**

The Turing Way project illustration by Scriberia. Used under a CC-BY 4.0 licence. DOI: 10.5281/zenodo.3332807

FAIR PRINCIPLES CAN BE READILY APPLIED TO OTHER AREAS

DATA SCIENCE

ASTRONOMY

GENOMICS

NEUROSCIENCE

FINANCE

FAIR

We are exploring limitation of the current digital infrastructure to **adopt FAIR data practice** in Arabic-speaking countries by identifying the needs of the local community towards recommendations that can **drive new policy that fosters a FAIR data culture.**

The research systems is relatively **new** in the Arabic-speaking countries, which makes it easier to incorporate OS principles rather than shifting and shaping established systems.

From article by Sandersan Onie titled "Redesign open science for Asia, Africa and Latin America" DOI: https://doi.org/10.1038/d41586-020-03052-3

Saudi Arabia has the potential to lead in building open science infrastructure in MENA.

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https://bit.ly/34lC81e

@OpenSciSaudi, @batool664

شكرا جزيلا

Thank you!

We will supply and Arabic version of this materials.
All images unless stated are from Unsplash.

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