



Data  
Schools

# RDM & Open Science: further steps & recent developments

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# Take stock!

- How much of what you learnt are you actively following?
- Which parts are most useful to you?
- Is there anything that you feel could be changed to better fit your needs?
- Is there anything you actively decided not to do or use – why not?
- Are there funder and/or host institution mandates on RDM?
- (check the [African Open Science Platform](#))

# Latest developments in FAIR

- EC [report](#) and recent [publication](#) on **implementation considerations**
- dedicated organisation established – [GO FAIR](#)
- large European (multi-million Euro) funded projects devoted especially to FAIR, e.g. FAIRsFAIR, FAIRplus, FAIR4Health
- see also this [FAIR in practice reference list](#) (includes examples from outside Europe!)

# ...and the UN SDGs

- In context of SRDS and its objectives
- UN's sustainable development goals (SDGs) – how can data science play a part?
- Database of SDG indicators can also be found



How data science and analytics can contribute to sustainable development

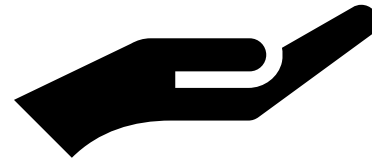


[www.unghabitatdata.org](http://www.unghabitatdata.org)  
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- 1 **NO POVERTY**  
Spending patterns on mobile phone services can provide proxy indicators of income levels
- 2 **CLEAN WATER AND SANITATION**  
Sensors connected to water pumps can track access to clean water
- 3 **REDUCED INEQUALITY**  
Speech-to-text analytics on local radio content can reveal discrimination concerns and support policy response
- 4 **LIFE BELOW WATER**  
Maritime vessel tracking data can reveal illegal, unregulated and unreported fishing activities
- 5 **ZERO HUNGER**  
Crowdsourcing or tracking of food prices listed online can help monitor food security in near real-time
- 6 **AFFORDABLE AND CLEAN ENERGY**  
Smart metering allows utility companies to increase or restrict the flow of electricity, gas or water to reduce waste and ensure adequate supply at peak periods
- 7 **SUSTAINABLE CITIES AND COMMUNITIES**  
Satellite remote sensing can track encroachment on public land or spaces such as parks and forests
- 8 **LIFE ON LAND**  
Social media monitoring can support disaster management with real-time information on victim location, effects and strength of forest fires or haze
- 9 **GOOD HEALTH AND WELL-BEING**  
Mapping the movement of mobile phone users can help predict the spread of infectious diseases
- 10 **DECENT WORK AND ECONOMIC GROWTH**  
Patterns in global postal traffic can provide indicators such as economic growth, remittances, trade and GDP
- 11 **RESPONSIBLE CONSUMPTION AND PRODUCTION**  
Online search patterns or e-commerce transactions can reveal the pace of transition to energy efficient products
- 12 **QUALITY EDUCATION**  
Citizen reporting can reveal reasons for student drop-out rates
- 13 **INDUSTRY, INNOVATION AND INFRASTRUCTURE**  
Data from GPS devices can be used for traffic control and to improve public transport
- 14 **CLIMATE ACTION**  
Combining satellite imagery, crowd-sourced witness accounts and open data can help track deforestation
- 15 **PEACE, JUSTICE AND STRONG INSTITUTIONS**  
Sentiment analysis of social media can reveal public opinion on effective governance, public service delivery or human rights
- 16 **GENDER EQUALITY**  
Analysis of financial transactions can reveal the spending patterns and different impacts of economic shocks on men and women
- 17 **PARTNERSHIPS FOR THE GOALS**  
Partnerships to enable the combining of statistics, mobile and internet data can provide a better and real-time understanding of today's hyper-connected world

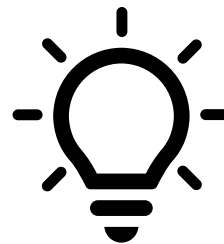
# Building institutional support

- There is a growing trend in institutions looking to provide the necessary tools for researchers
- Increase **ownership**
- Decrease use of third party (commercial) solutions
- Try the research infrastructure self evaluation ([RISE](#)) tool yourself to see how your institution fares



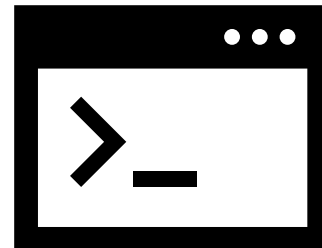
# Sensitive data

- Increasing interest in how to align these data with wider research data
- New, specific rules need to be developed
- Doesn't only mean clinical data – geospatial, IPR, etc
- Some examples: [Reproducible Health Data Services](#), [Raising FAIRness in health data and health research performing organisations \(HRPOs\)](#)



# Software

- Growing movement to apply FAIR to software and code
- Still treated as a “data” object
- [CURE-FAIR](#)
- See also Lamprecht, Anna-Lena et al. ‘Towards FAIR Principles for Research Software’. Data Science, vol. 3, no. 1, pp. 37-59, 2020. [DOI: 10.3233/DS-190026](https://doi.org/10.3233/DS-190026)





# Data Schools

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# Homework

- This diagram is the basic structure of the RISE evaluation described earlier
- Reflect on each of these where applicable/possible in your circumstances – in your country or institution
- We'll discuss what you have reflected upon in the online RDM session
- Don't worry if you don't have anything to say – but hopefully you can provide some insight into your research and the workflows you follow

