EOSC Federation Handbook Introduction

by **Andy Götz** (**EOSC-A** + ESRF) on behalf of the

Editors, **Writers** and **Reviewers**

Why a Handbook?

The **How To manual** for building the EOSC Federation

1. Most **Deliverables** from EOSC projects are not **How To's**

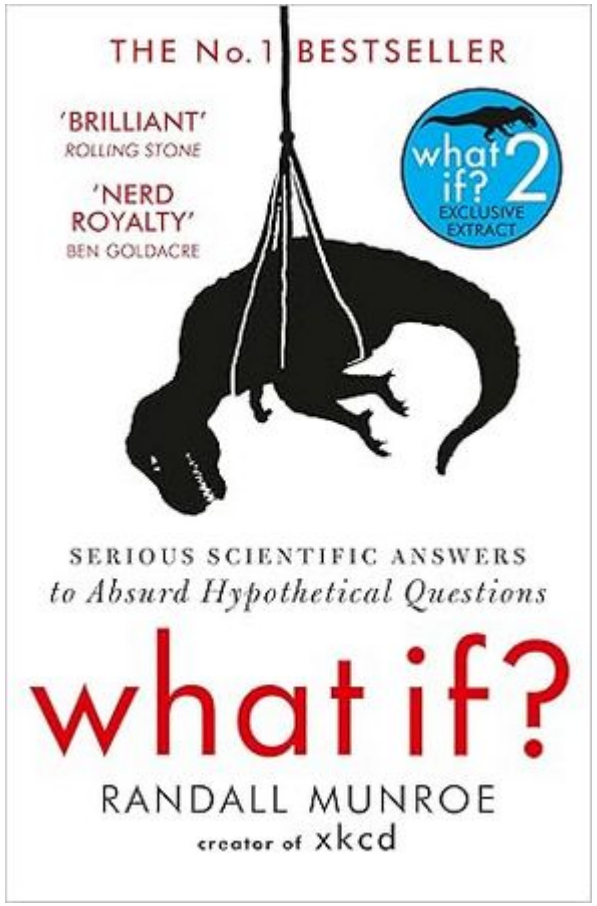
2. **EOSC Federation** and **Node** concepts (2023) not well defined

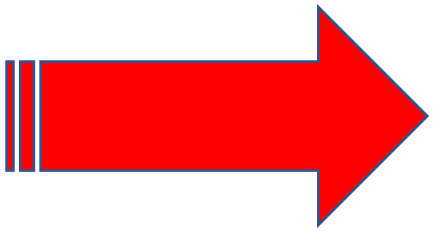
3. Goal to build the **1st Federation** in **2025** is very ambitious

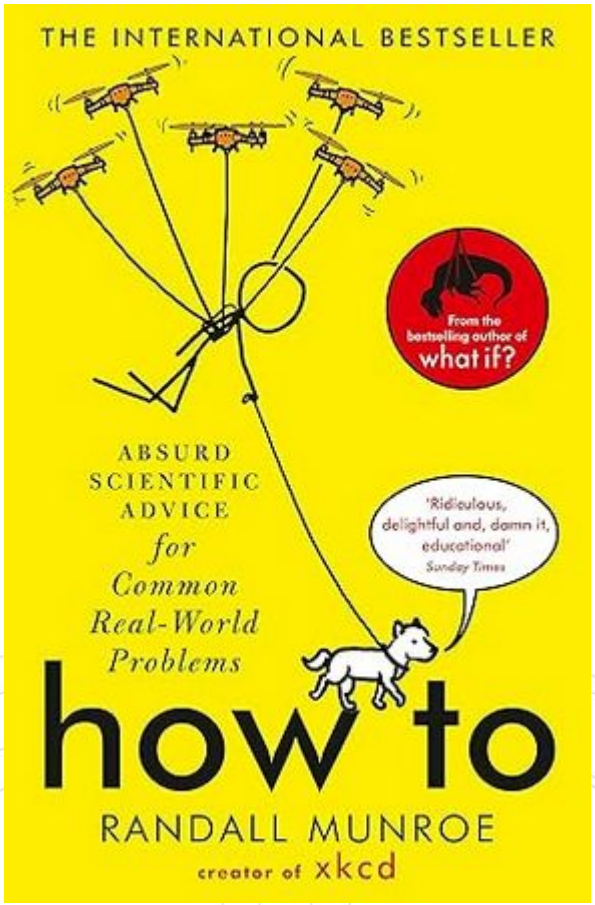
4. **Need a clear manual** (+ guides) **on how to build the Federation for Nodes to commit to joining the Federation**

Going from “What If” to “How To”

Books and their covers are an inspiration for us all …







Handbook language has to be clear

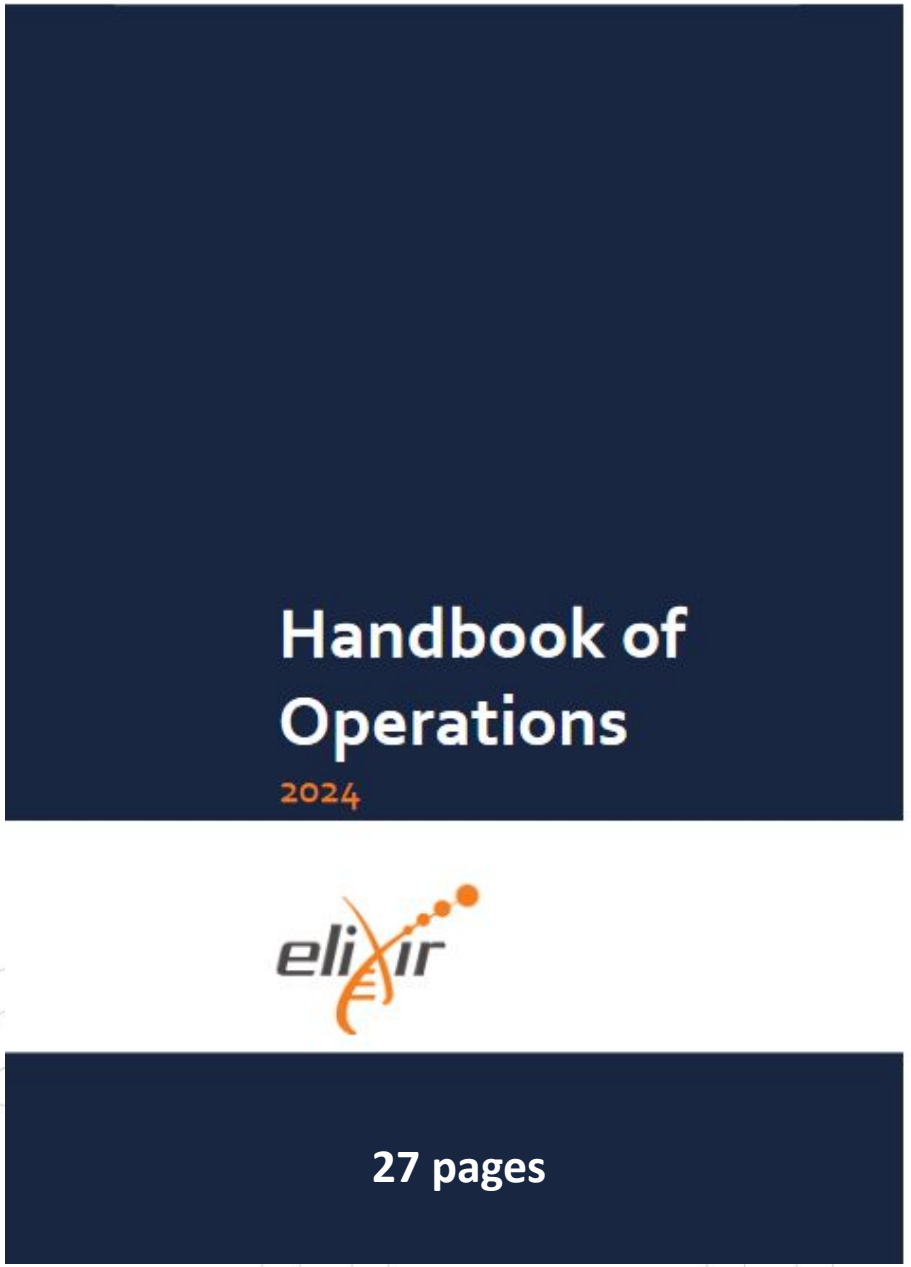
My role is to avoid typical Deliverable speak

A **modal verb** is a type of verb that an auxiliary verb that expresses necessity or possibility. English modal verbs include *must*, *shall*, *will*, *should*, *would*, *can*, *could*, *may*, and *might*.

preferrred modal verbs in Handbook

Example of a Handbook

The goal of ELIXIR is to coordinate resources so that they form a single infrastructure.



https://elixir-europe.org/about-us/governance/handbook-operations

Who and How is the Handbook being written

Written collectively by volunteers

- **Writers** - 22
- **Reviewers** – 10
- **Editors** – 5
- **Tripartite Group** – 3
- **Tripartite Governance** – 3
- **Open Consultation – YOU**

How the Handbook is being written

Outline of Handbook

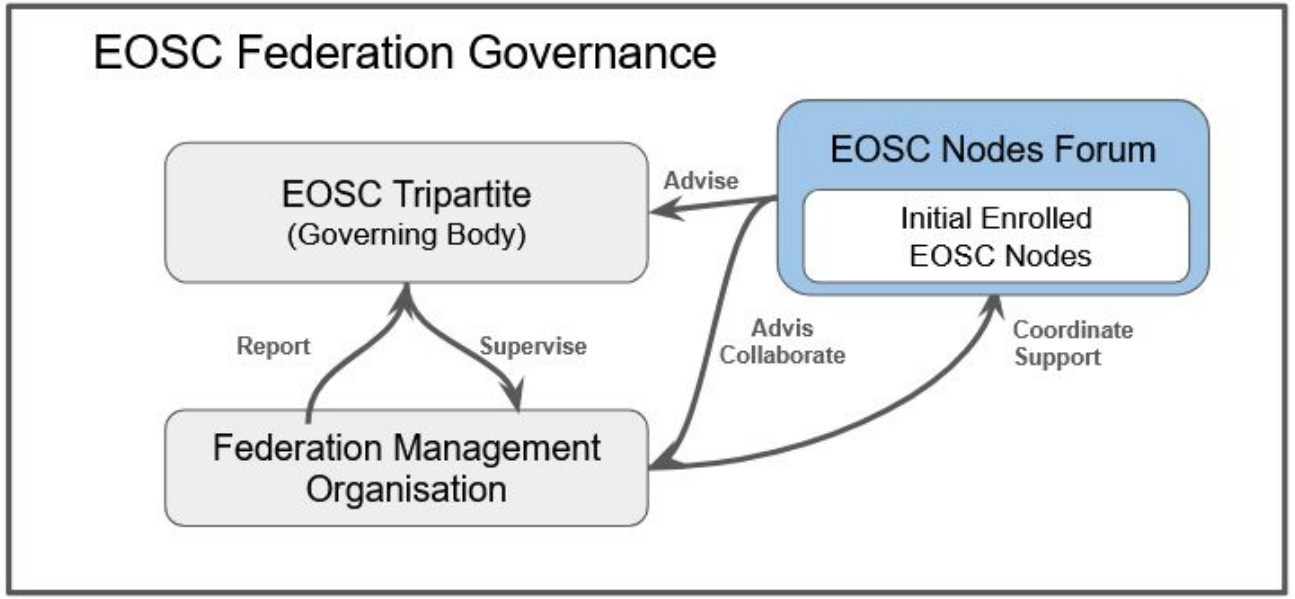
- Chapter 1 – Purpose
- Chapter 2 – Governance
- Chapter 3 – Operations
- Chapter 4 – Architecture
- Chapter 5 – Scientific Resources
- Chapter 6 – Policies

Purpose of 1st version of Handbook

1. How to build the EOSC Federation during the period **2025 to 2027**
2. What will the EOSC Federation enable and provide for researchers
3. How will the success of the EOSC Federation be measured

Chapter 2 - Governance

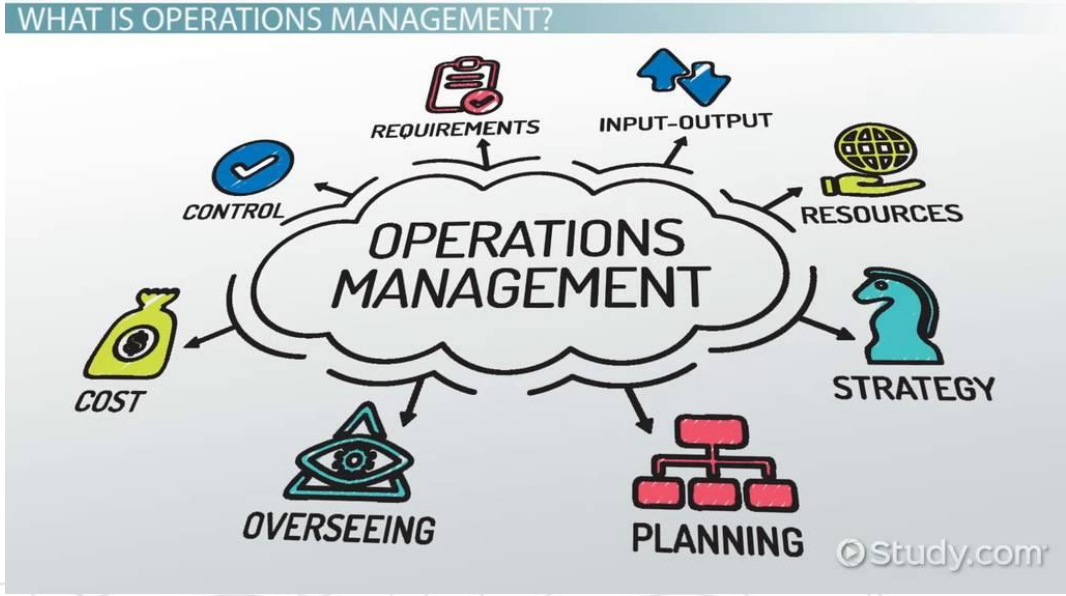
- Governance has been the trickiest chapter to write because:
  - Long-term view depends on newly formed Commission e.g. FP10 or not
  - Additional funding is coming from the European Commission
  - Resources are coming from the Nodes
- Clearly the **Tripartite Governance** is in charge of governance today and determines the roadmap and timeline
- However the Federation needs a dedicated organisation to operate and manage it on a daily basis – **Federation Management Organisation**



Chapter 3 - Operations

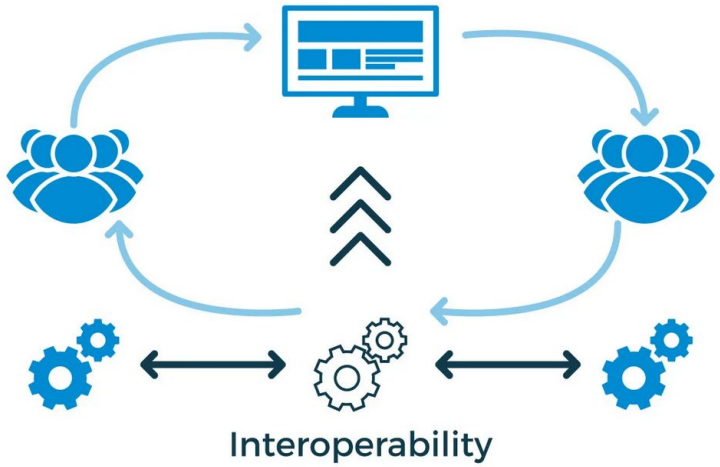
"Operations management (OM) is the administration of business practices to create the highest level of efficiency possible within an organization." [Investopedia]

- Chapter describes what is needed to operate the Federation :
  - **Day-to-day** operations
  - Regular **management** activities
  - How to **Apply to become a Node**
  - **EOSC Node roles** identified
    - Coordinator
    - Operation Manager
    - Technical Coordinator
    - Security Officer
    - **Scientific Officer** (for Thematic Nodes)



Chapter 4 - EOSC Federation Platform / Architecture

- Describing the EOSC Node architecture covering:
  - EOSC **Node Architecture**
  - EOSC **Federation Interoperability Framework**
  - EOSC **Federating Capabilities**
  - EOSC **EU Node** Federating Capabilities and Exchange Services
  - **Technical Operations**
  - **Compute** and **Storage** Resources
  - **Cybersecurity**
  - Links to **External Entities**
  - **Training**

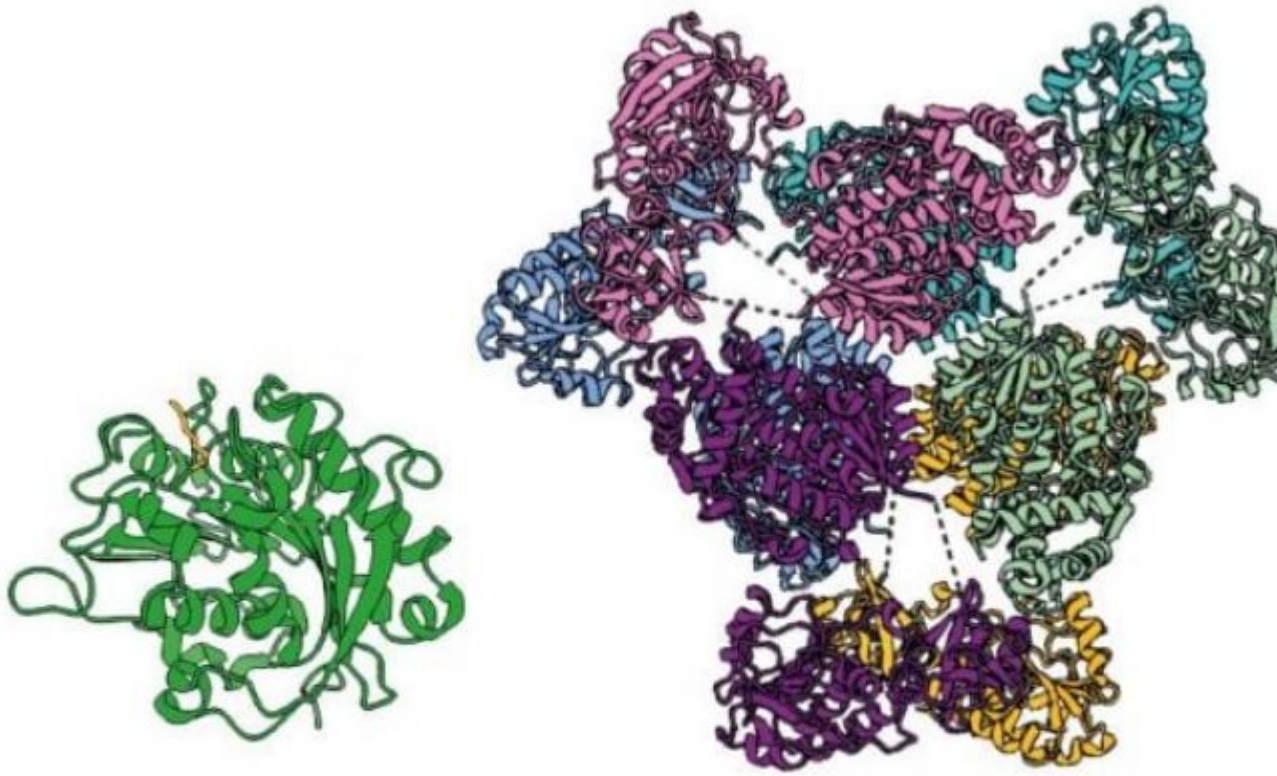


Chapter 5 - Scientific resources

My favourite chapter – at last Science for EOSC!

- EOSC is supposed to be the Web of Scientific FAIR Data
  - □ it should therefore federate [**eventually all**] Scientific FAIR Data in Europe
- The chapter will describe what Scientific Resources will be accepted in EOSC Nodes:
  - Data Repositories
  - Metadata standards
  - Training material for FAIR
  - Scientific productivity tools
  - Fostering domain specific communities
- It will describe how to connect them and make them visible in the EOSC Federation
- Challenges – how to attract main trustworthy scientific resources for each domain

EOSC □ A Cloud to boost Scientific Knowledge by supporting open databases of FAIR data



2022: Natural enzymes that can decompose plastic. The aim is to design proteins that can be used to recycle plastic.

2023: A bacterial enzyme that causes antibiotic resistance. The structure is important for discovering ways of preventing antibiotic resistance.

"More than **60,000 PDB depositors** have submitted experimental data that are carefully reviewed, validated, and biocurated by the wwPDB team. **wwPDB partners adhere to the FAIR principles of Findability, Accessibility, Interoperability, and Reusability**, and **ensure that all archival data can be accessed at no charge and with no limitations on usage** under the most permissive Creative Commons CC0 1.0 Universal License." - rcsb.org

"Google DeepMind has also made the **code for AlphaFold2 publicly available**, and anyone can access it. The AI model has become a gold mine for researchers. By October 2024, **AlphaFold2 had been used by more than two million people from 190 countries**. Previously, it often took years to obtain a protein structure, if at all. Now it can be done in a few minutes." - nobelprize.org

Chapter 6 - Policies

- Rules of Participation for Nodes
  - Must be Open, FAIR, follow standards e.g. cybersecurity
  - Includes requirements to help sustain EOSC Federation
- Access Policy
  - Defines who can access EOSC Resources
- Acceptable Usage Policy
  - Ethical, Legal and Social Implications (ELSI) Policy
  - Cybersecurity, Privacy and Data Protection Policy
  - Intellectual Property (IP) Policy
  - Code of Conduct

Open consultation from 14 October to 31 October

We need your input to ensure it answers your questions

eosc | Tripartite

Consultation on the EOSC Federation Handbook

Deadline: 31 October 2024 (23:59 CET)

https://ec.europa.eu/eusurvey/runner/eoschandbookfeedback

Conclusion and next steps …

- The Handbook is being written by an group of people (without using genAI) with a wide range of competences and experience building EOSC
- The first 3 chapters are ready for feedback even if a number of questions can only be answered once the first phase of the Federation is created
- Our goal is to have **6 chapters** ready for reviewing end of **November 2024**
- The Handbook will continue to be improved while implementing the Federation

The Handbook needs your input,
please give your feedback to the
Open Consultation !

Acknowledgements

	Name
Owner	EOSC Tripartite Governance
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The Handbook must balance the needs of all stakeholders

But we are confident the Handbook can make the Federation really happen!