



- Skills for the European
- Open Science
- Commons

Minimum Viable Skillset profiles

Dominique Green
WP2 Leader
Digital Curation Centre



(with thanks to Angus Whyte, DCC & Sara Di Giorgio,
GARR)

Supporting



The Minimum Viable Skillset profiles

i
i
i
i
i

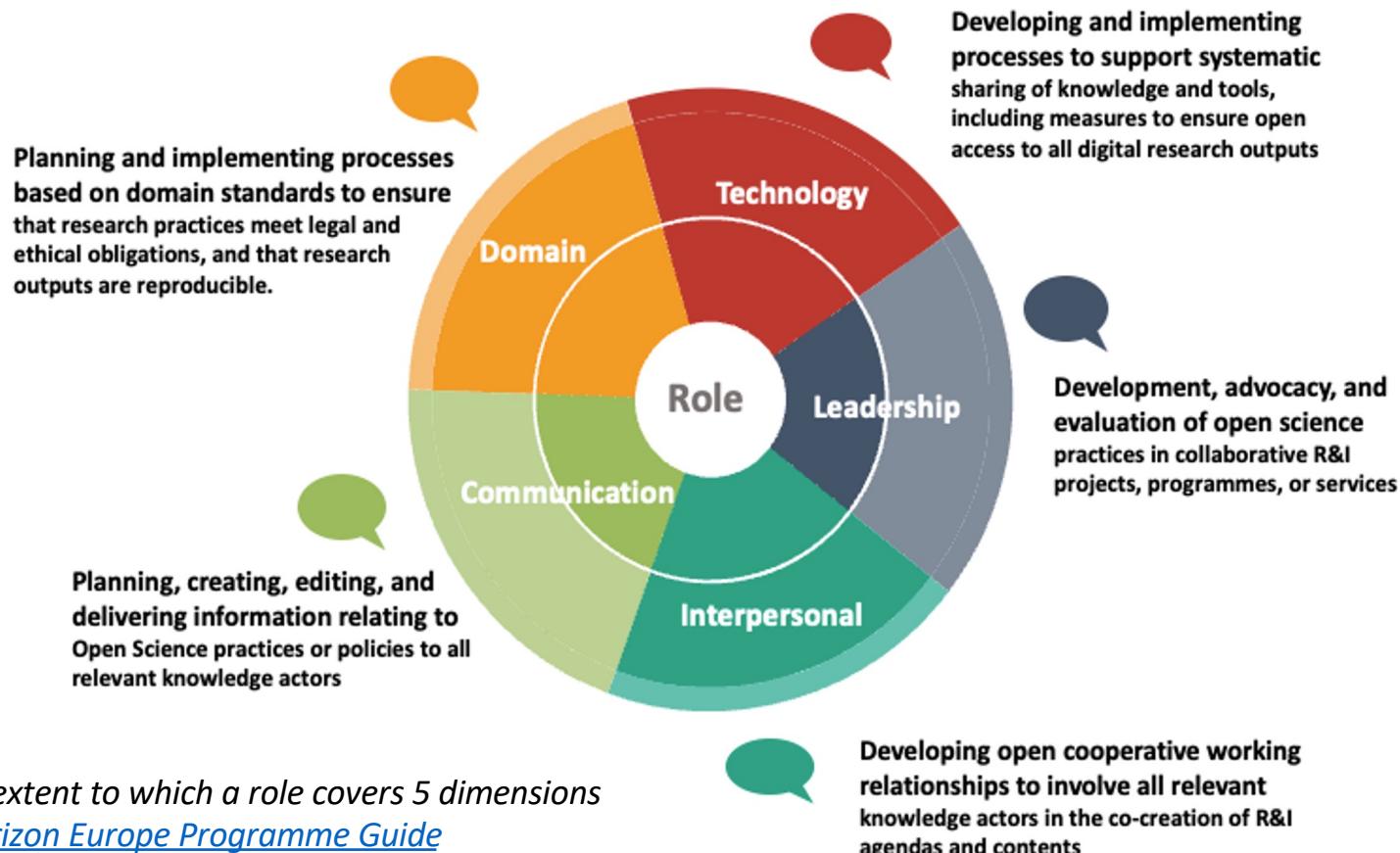
Summarise **OS essentials** based on review of competence frameworks and skills resources.

Profile the **skills needed** for EOSC actor roles, considering the OS mission, outcomes, activities they are expected to contribute to.

Compatible with skills ontologies: ESCO, terms4FAIRskills, & European Competence Framework for Researchers (ResearchComp).



Dimensions of the Open Science Mission



Skills
4 eosc

Supporting

eosc



Co-funded by
the European Union



UK Research
and Innovation

Minimum Viable Skillset - MVS

Provide **high level guidance** to inform curricula, learning paths, materials.

Adaptable to organisational & domain contexts.



MVS Describe Diverse Roles

Available *

Data Steward
Legal Expert
Ethics Advisor
Knowledge Broker
Masters Student
Undergrad Student
Senior Researcher
Early Career Researcher
Policymaker – Research/ General
Research Infrastructure Professional



In progress

Scholarly Communications Specialist
Digital Collections Curator

Considering

Data Analyst
Data Scientist
Data Engineer
Research Manager
Research Software Engineer
Digital Preservation Specialist

* Currently published MVS are here: <https://zenodo.org/records/8101903>



Skills
4 eosc

Main ref: report Digital skills for FAIR and Open Science

Supporting

eosc



Co-funded by
the European Union



UK Research
and Innovation

MVS Template

Template for a Minimum Viable Skillset, April 2024, DOI
<https://zenodo.org/records/10977747>

This template provides guidance on structuring a Minimum Viable Skillset (MVS) Profile, outlining key skills and competencies essential for practicing Open Science (OS).



Skills
4 eosc



Supporting

eosc

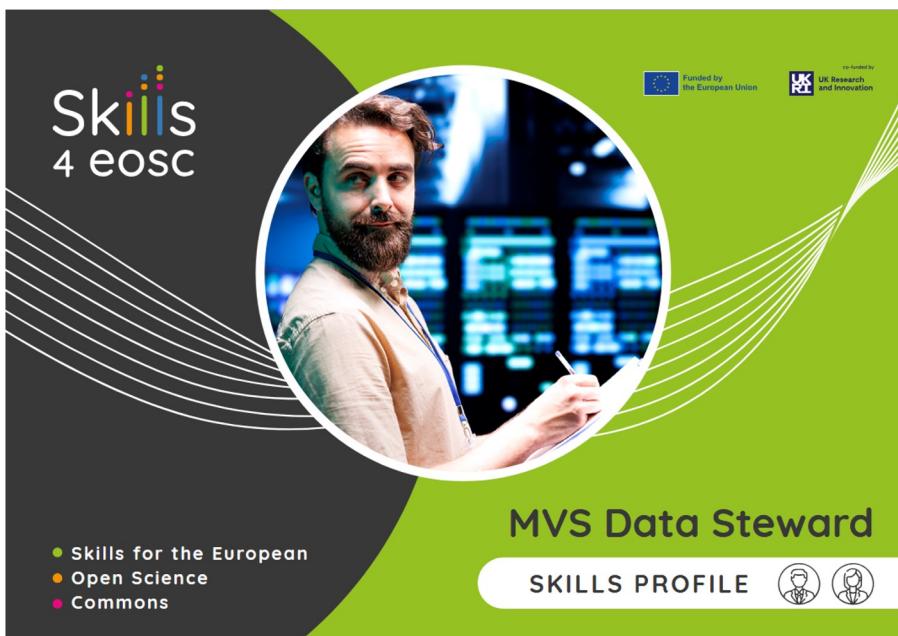


Co-funded by
the European Union



UK Research
and Innovation

Example: MVS Data Steward



The banner features the Skills4eosc logo at the top left. In the center is a circular portrait of a man with a beard, wearing a white t-shirt and a lanyard, standing in front of a server rack. Below the portrait, the text "MVS Data Steward" is displayed in large, bold letters. At the bottom left, there is a list of three bullet points: "Skills for the European", "Open Science", and "Commons". At the bottom right, there is a "SKILLS PROFILE" button with two small icons: a person in a suit and a person in a lab coat.



The page header includes the Skills4eosc logo and the title "MVS Data Steward Skills Profile". On the right side, there is a vertical sidebar with icons for a graduation cap, a gear, a diamond, and a checkmark. The main content area starts with an "INTRODUCTION" section, followed by a heading "Open Science mission for this role". Below this, there is a paragraph about the Minimum Viable Skillset (MVS) and its purpose. Another paragraph describes the role of Data Stewards in putting Open Science principles into practice. A final section discusses the Data Stewardship expertise required for the role.

DATA STEWARD COORDINATOR

Coordinator Data Stewards act as a 'centralised knowledge and communication hub' for researchers. They advise and train on policy, guidelines, data management plans and institutional infrastructure and tools implement FAIR and CARE principles across the organisation.

ASSOCIATED FUNCTION TITLES:

Data Steward, Data Librarian, Research Data Management Specialist, Research Data Manager, Research Data Management Consultants, Reproducibility Librarian.



EMBEDDED DATA STEWARD

Embedded Data Stewards serve research teams, faculties, departments, sections of organisations directly involved in producing research outputs, supporting them to plan and implement FAIR and CARE principles, meeting needs of researchers as they arise, and working with others to ensure outputs are preserved and reusable in the long term.

ASSOCIATED FUNCTION TITLES:

Data Steward, Data Manager, Data Curator, Research Data Manager



ESSENTIAL SKILLS AND COMPETENCES

- Cross-domain/ domain-specific knowledge on Open Science practices, policies and regulation and translating these (when necessary) to the appropriate levels of the organisation.
- Service provision to support cross-domain/domain specific Open Science practices including: use of FAIR and CARE principles, Open Access, data optimization, data preservation, archiving and responsible re-use.
- Knowledge about Research Data Management, (personal) data governance and ethics, Open Science data publication and exchange(sharing)services, information security and risk management.
- Raising awareness of the value of good data management among data creators and users, researchers, organisational colleagues, and decision-makers.
- Advise/provide support on the use of infrastructure and tools at the appropriate levels of the organisation, e.g for data storage, data versioning and documentation, FAIR software and databases.
- Training design and delivery to support Open Science practices, policies and practices.
- Monitor the research and funding ecosystem, including possible conflicting motivations, drivers and incentives among different stakeholders.
- Knowledge/awareness of programming, FAIR code and FAIR software and use of standards and ontologies.

MVS Data Steward Skills Profile



SOFT / TRANSVERSAL SKILLS

- Communication.
- Conflict management/mediation (with a patient, empathic approach).
- Critical and analytical thinking.
- Stakeholder engagement and networking to translate and bridge needs.
- Creativity, curiosity and openness (willingness to learn).
- Team management and project management (results oriented planning and organising).



MAIN ACTIVITIES - COORDINATOR ROLE

- Contributes to Open Science policy development by engaging with (inter)national policy-making, bringing the cross-disciplinary expertise needed for local policy development, implementation and monitoring.
- Understands research stakeholder needs and contributes to developing, implementing and monitoring institutional RDM policy and Data Governance, along with tools and services to support these. Promotes and communicates the importance of Open Science and FAIR to all levels within the organization (e.g. policy makers, senior management, researchers, postgraduates etc.).
- Analyses trends in data management infrastructure, tools, and methods that potentially improve the organisation's implementation of FAIR and CARE principles to enhance support for decision-making on Open Science. Advises on (meta)data standards and contextual documentation for data archiving.
- Monitors RDM skills of researchers and research support staff in the institute and refers researchers to RDM related facilities and services.
- Develops and delivers training tailored to learners' needs, aligned with wider institutional policies and plans.
- Maintains networks of RDM and research support related colleagues.

**MAIN ACTIVITIES - EMBEDDED ROLE**

- Develops Data Management Plans templates tailored for research teams and supports researchers in writing a DMP according to the relevant template. Includes provision for post project archiving and FAIR sharing (standards, metadata, licensing, repository selection).
- Supports researchers in good practice on data and/or software/code when writing applications to funders, implements this good practice as a regular aspect of doing research, and liaises with (technical) RDM experts inside and outside the institute to adopt effective solutions to challenges.
- Advises and supports researchers on data-infrastructure and tools, and adoption of innovative techniques or tools, including those provided by relevant (inter)national data-infrastructure and tools.
- Identifies gaps and takes action if needed to ensure ethical conduct and awareness of the potential impacts of data reuse, management and sharing on wider society.
- Advises on the use of disciplinary standards and ontologies, and relevant community practices that are applied in producing FAIR research outputs.
- Supports researchers on legal and regulatory compliance aligning local practices with ethical conduct through connections with the institutional privacy officers, legal advisers, and research ethics bodies.
- Develops and delivers training tailored to learners' needs, aligned with wider institutional policies and plans.
- Maintains networks of RDM and research support related colleagues.





CONTRIBUTES TO WHICH OPEN SCIENCE OUTCOMES?

- Digital research objects are as FAIR and open as possible and as closed as necessary.
- Opportunities are identified for creating or connecting with professional Open Science networks at institutional, cross-institutional, regional, national, or international levels.
- Relevant competence centres with a FAIR data and Open Science support role are utilised effectively according to local needs and policies.
- Open Science skills and practices are facilitated and enhanced using, where appropriate, EOSC resources and services, including any relevant Open Educational Resources .
- Research data and other digital objects are effectively managed to ensure their suitability for archiving and sharing, and advancement of research methods appropriate to the discipline(s).

