Competency framework for data management in Norway

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The project: https://osf.io/52zub/
Competency framework

Define a set of skills and competencies.
Applied in development of education for a profession.
Used by organisations for recruiting and further education.
The competency framework for data management define a set of expertise needed to deliver research data services.
Different levels of expertise in the described areas are needed to deliver high quality services.
Needs
- Reproducibility
- Cultural change
- Transparency
- Digitalisation
- Trust

Requirements
- FAIR data
- Open Research

Libraries
- Skills for data management

Resources
- Research advisors
- Legal competence
- Data stewards
- Research ethics
- IT

Infrastructure
- Domain specific
- Institutionally
- Nationally
- Generic

Development
- International collaborations
- Library collaboration

FAIR data

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1. Administration

- Policy development
- Strategy development
- Stakeholder support
- Project management
- Highlight needs
- Apply for funding
- Implementation of policy
2. Mediation

Pedagogy
Instruction
Presentation
Communication
Culture change
Instruction in guidelines
Disclosure of policy
Create space for learning
3. Data management support

- Data stewardship experience
- Metadata
- Ontologies
- Curation
- Long-term perspective
- Documentation
- Persistent Identifiers
- Cultural heritage perspective
4. Ethics & Law

Copyright
Licensing
Intellectual property rights
Privacy and GDPR
Research ethics
The Health Research Act
Contract law
5. Technical skills

- Programming skills
- Software knowledge
- IT security
- Data visualization
- System understanding
- Operation and maintenance of infrastructure
6. Domain knowledge

Research experience
Research methods
Experience in curation
Training and Guidance
Terminology
Translate between different subjects
Level of expertise

Specialist Tacit Knowledge
Contributory expertise
Interactional expertise
Ubiquitous Tacit knowledge
Primary source knowledge

Internal Metaexpertise
Referred expertise

(Rethinking Expertise, Collins & Evans, 2007, p. 14)
Personal skills

- Exploratory
- Network builder
- Independent
- Collaborative
- Organized
- Patient
- Ability to listen & learn
- Detail oriented
- Professional updates
Recommendations for the education of data stewards

Establish study subjects based on the competence areas in the framework in regular education programmes.

Establish offers for further and advanced training based on the six competence areas described in the framework.

Coordinate education programmes with courses and certification work from other actors nationally and internationally.
Recommendations to the libraries' management

Regard research data management as focus area in the work with open research and research quality.

Map the competence internally in the organizations based on the six competence areas described in the framework.

Invest in continuing education, recruitment, and collaboration to build expertise in the areas that are not currently covered.
Recommendations to the libraries' management

Invest in subject area knowledge and research experience to build up dual expertise in the subject area and data handling, respectively.

Further develop existing knowledge within subject areas, collection management and metadata in the work with data management.

Act as contact point for data managers who work in the professional environment.

Pilot models for data steward positions, coordinated by the library. Based on models from pioneering institutions in the field.
Recommendations to the libraries' management

Bring in external funding for development of projects that will increase knowledge about data management.

Stakeholder support for responsibility for data management locally at the research libraries and collaborate nationally.

Participate in international networks and contribute to developments in the field.
Challenges

Role and expectations
Accreditation
Career path(s)
Acknowledgement and recognition
Keeping up to speed on multiple domains
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