An overview of SwissDS-ENV – Swiss Data Stewardship Environment Profile – Training – Network

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SRDSN Spring meeting – 17 April 2024, University of Bern

Outline

Context, motivations and objectives

WP

Results

Next steps

Challenges

Context

2023-2024

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Action line B5.2 of the Swiss National ORD strategy measurement plans on Data Stewardship

Leading house

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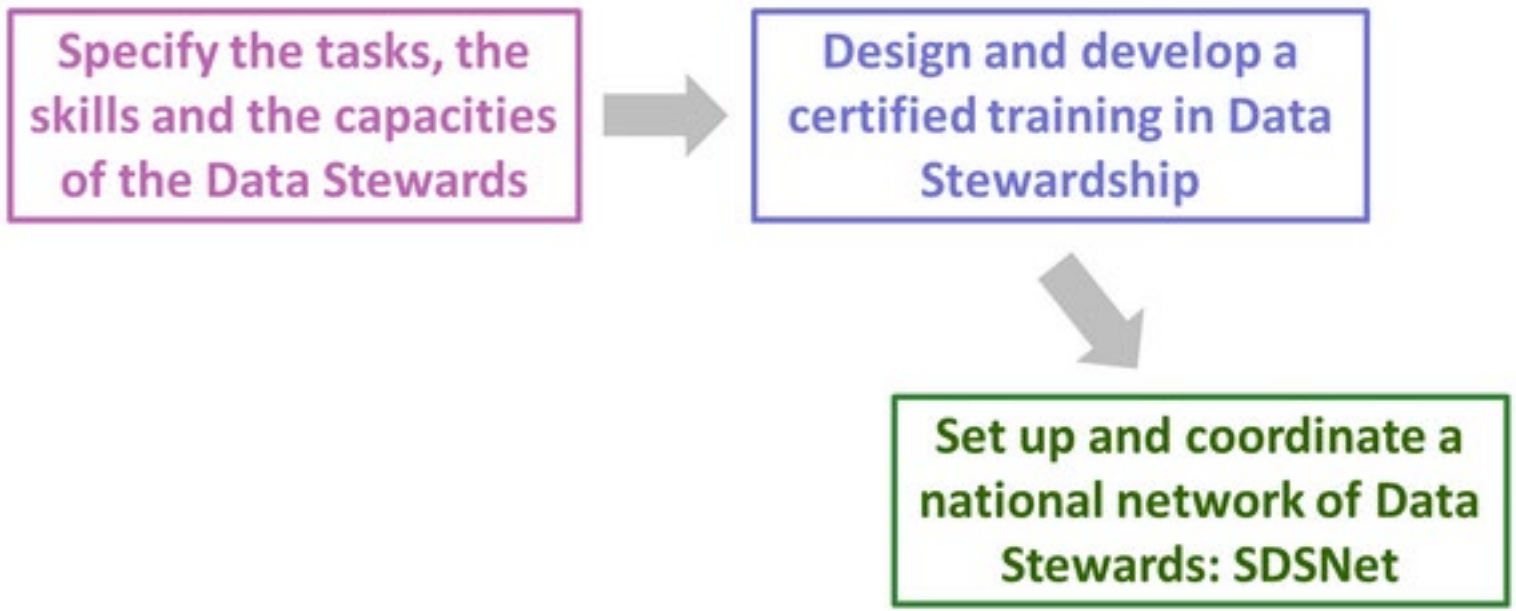
Motivations and objectives

Better recognition of the role of Data Stewards

Professionalisation of Data Stewards

Community of practice at the national scale



1. Definition and profile

Early 2023 — Summer 2023

2. Certificate course

Autumn 2023 — Summer 2024

3. Community of practice

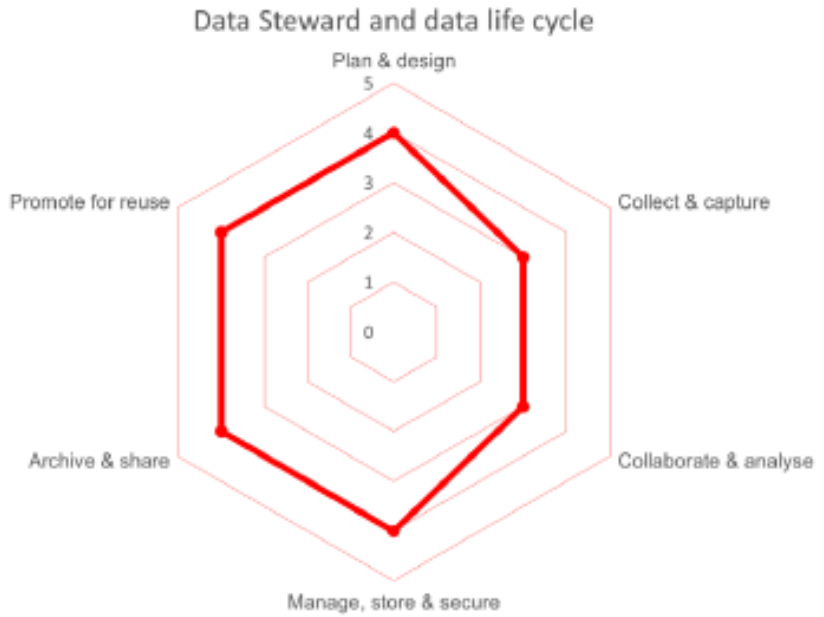
Spring 2024 → SDSNet → SRDSN

1. Definition and profile

Description of:

Data librarian
Data curator
Data scientist
Data archivist
Data coordinator
Data Steward

Definition
Mission and responsibilities
Examples of tasks
Steps of the data lifecycle



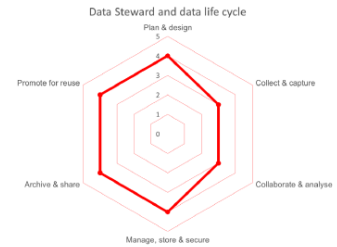
3.6.Data Archivist

Other name(s)	/
Keywords (tags)	Data archiving and preservation
Definition	
Data Archivists carry out the tasks required for the long-term preservation of research data. *Data Archivists* are responsible for archiving research data indiscriminately; they do not deliberately select data but treat it as an asset in its ow	

3.5.Data Curator

Other name(s)	/
Keywords (tags)	Data collection, selection, processing, enrichment, documentation and archiving
Definition	
Data Curators carry out data processing tasks with the perspective of long-term preservation and reuse. Their activities enable data to be discovered and accessed, including ensuring that data coherence and quality, so that it can be accessed andan enrichment, preservatio data archive by the curat	

3.2.Data Steward

Other name(s)	*Data Consultant, (Research) Data Manager, Research Data (Management) Specialist*
Keywords (tags)	Support for researchers, provide best practices in research data management and openness, ensure compliance with requirements
Definition	
Through research research.	
Data Ste attached a solid k support institutio	
Generic D data mar questions and redirect researchers to other competent institutional services if necessary.	
Mission(s)	• Promote best practices in research data management within the institution and among researchers; provide advice, support and expertise in data management practices to researchers • Participate in the development of institutional projects regarding research data management and openness
Examples of tasks	• Promote strategies, institutional policies and best practices for managing and opening up research data • Support researchers in managing research data throughout the research life cycle • Inform researchers about existing infrastructures/tools for managing and opening up research data • Co-develop training materials for research data management skills • Relay researchers to other experts (technical, DPO, ethical, legal, ...) as needed
Life cycle stages • Plan and design • Collect and capture • Collaborate and analyse • Manage, store and secure • Archive and share • Promote for reuse	

Mission(s)
- Collect and capt
- Collaborate and
- Manage, store a
- Archive and sha

Life cycle stag
- Manag
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- Prom

Examples of t

Mission(s)

Examples of tasks

Life cycle stages
- Collect and capt
- Collaborate and
- Manage, store a
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see [SwissDS-ENV website]

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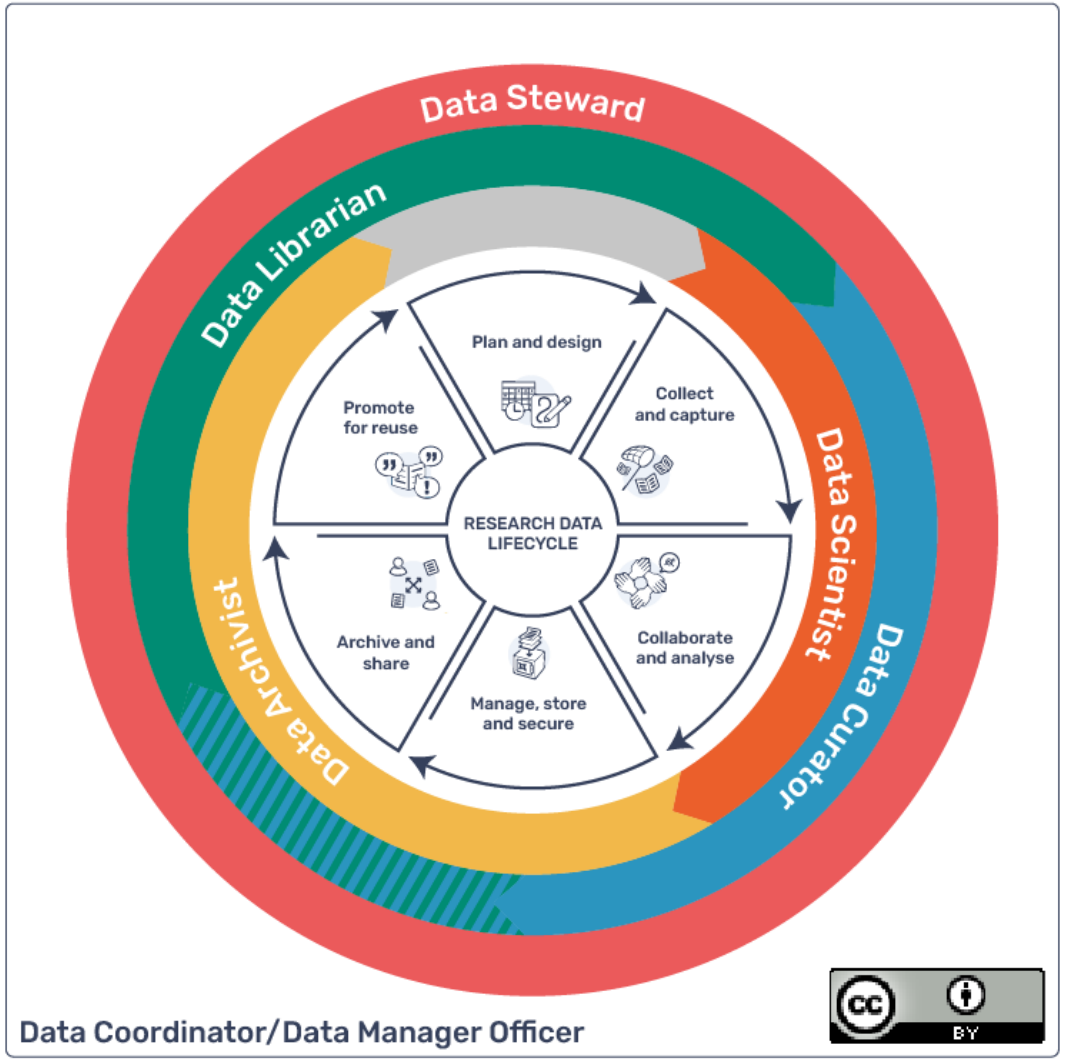
1. Definition and profile



SwissDS-ENV project: Data-related professional roles and data lifecycle (lifecycle adapted from FORS). University of Lausanne, 2023.

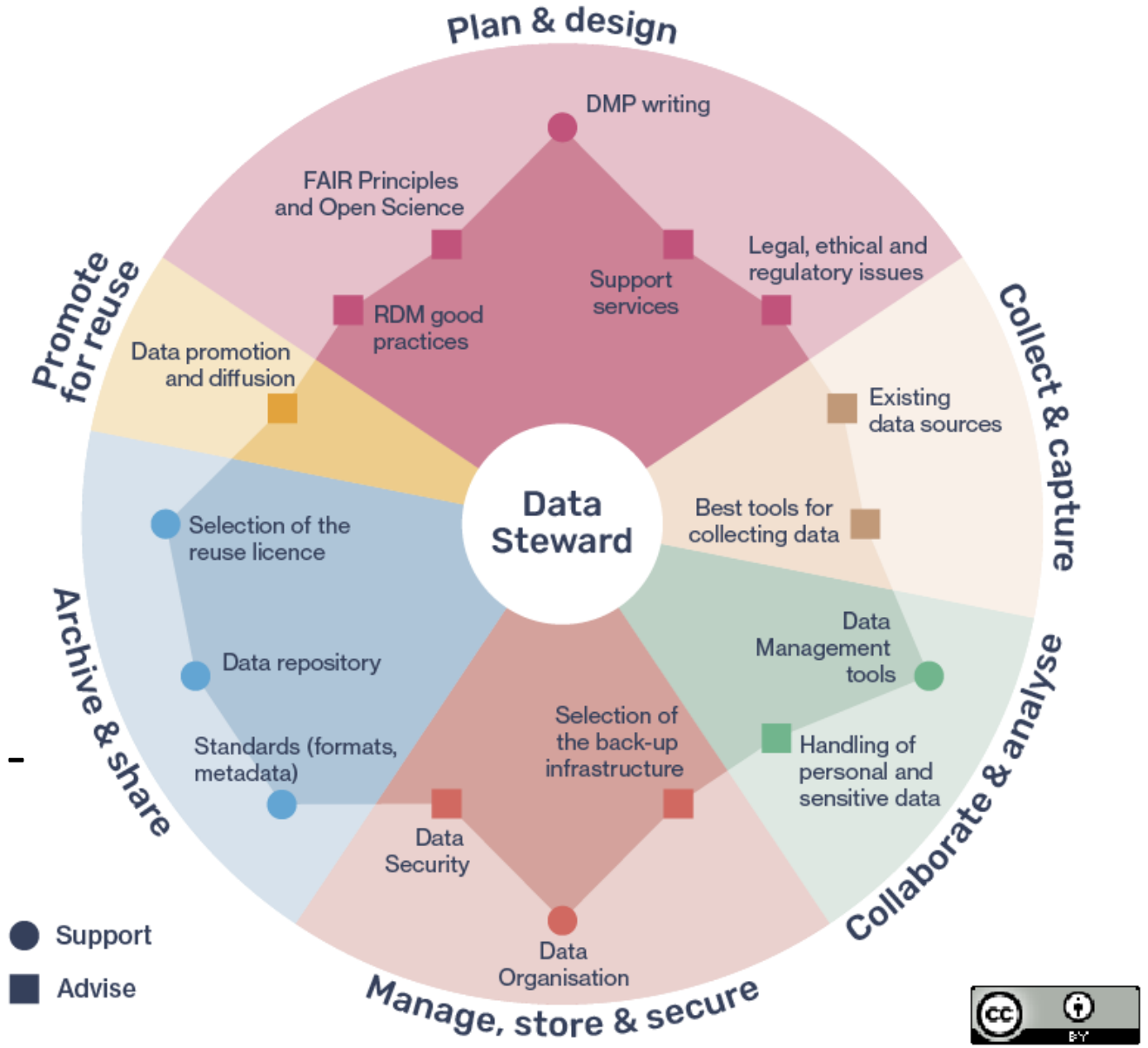
see SwissDS-ENV website

1. Definition and profile

Data lifecycle:

- Which task
- What level of involvement

- Approved by UNIL Data Stewards -



SwissDS-ENV project: Data Stewards tasks and contributions at each step of the data lifecycle (lifecycle adapted from FORS). University of Lausanne, 2023.

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1. Definition and profile

From tasks to competences

Step of the data lifecycle

Precise wording

Training target level

- Approved by UNIL Data Stewards -

Ref.	Data lifecycle step	Skill / Ability	Level according to Bloom's taxonomy	Definition
CP		**Professional skills**		
CP1		research operations and challenges	Understand	Understand the functioning and challenges of the research process in an institutional context, including policies, organization and strategy. Be familiar with research-related professions and their interaction within an institution.
CP2		ethical and deontological issues in research, including informed consent	Analyze	Identify and analyze the ethical and deontological issues inherent in research, focusing on aspects related to the management of research data, including informed consent
CP3		institutional context for research (policies, organization, RDM and ORD strategy, related professions)	Get to know	Identify the institutional context of research (policies, organization, RDM and ORD strategy, related professions) in the context of the position
CP4		research life cycle	Understand	Understand the research life cycle and how it relates to research data management, including in specific contexts
CP5	Plan & design	data life cycle	Analyze	Analyze the data lifecycle and its various stages
CP6	Plan & design	developing an understanding of the discipline-specific aspects of data management	Apply	Implement strategies to develop an ad-hoc understanding of research data management practices and issues specific to the disciplines concerned
CP7	Plan & design	legal issues (protection of personal and/or sensitive data - copyright - user licenses - intellectual property rights)	Apply	Determine which legal issues play a role in data management, in general and at the level of a specific project Advise researchers on how to understand the legal issues surrounding their project's research data
CP8	Plan & design	Open Science issues, with a particular focus on Open Research Data	Understand	Understand the challenges of Open Science and Open Research Data and what they mean for research data management
CP9	Plan & design	FAIR principles & implementation	Apply	Putting the FAIR Principles into practice by advising researchers on good practice related to these principles and proposing solutions to enable researchers to apply these principles, including making requests for the institution or department to make these tools available
CP10	Plan & design	Data Management Plan (use, content quality, corrections, development of disciplinary models, etc.)	Evaluate	Design DMP templates (disciplinary and/or institutional), assist in their use, revise DMPs, etc.
CP11	Collect & capture	data re-use assistance		
CP12	Collect & capture	understanding the practices tha		and consistency
CP13	Collect & capture	assistance in setting up a data with best practices in research issues		l research data management practices and legal issues
CP14	Collaborate & analyse	treatment of sensitive data, da identification		ion and data de-identification. proper handling of sensitive data, data anonymization and data de-
CP15	Manage, store & secure	documentation and data organ		nizing data
CP16	Manage, store & secure	database operation		research data
CP17	Manage, store & secure	management and storage infrastructures	Get to know	Know the different types of data management and storage infrastructures Advise researchers on the choice of backup infrastructures
CP18	Manage, store & secure	data security	Apply	Know the protocols in force in the institution Advise researchers on data security issues
CP19	Archive & share	use of standards (formats, metadata schemas, etc.)	Apply	Use current standards in terms of formats and metadata schemas, depending on the discipline.
CP20	Archive & share	long-term preservation	Get to know	Be familiar with best practices and the specifics of long-term data preservation (formats, standards, infrastructures, data preparation and selection, etc.).
CP21	Archive & share	help in using data repositories for sharing (choosing and using repositories and preparing data)	Understand	Learn about existing deposits, their advantages and disadvantages, when to use them, etc.
CP22	Promote for reuse	data valorisation	Apply	Advise researchers on how to make the most of their data, in particular by publishing it for re-use.
CP23		communicating the data management policy, explaining the implications and promoting awareness of the issues at stake	Apply	Communicate about data management policy (lab/departmental, institutional, national, etc.), explain its implications and raise awareness of the issues at stake.
CG		**Management skills (methods)**		
CG1		project management	Apply	Apply project management principles to Data Steward projects
CG2		managing a research project	Get to know	Understand the specifics of research project management
CG3		change management	Apply	Supporting researchers through change (new MDM culture, new practices, etc.)
CG4		coordination of research data management needs and requests for a department or institution	Apply	Coordinate research data management needs and requests within a department or institution
AP		**Personal abilities**		
AP1		willingness to continue training and update knowledge		Willingness to take part in ongoing training and to keep abreast of new developments in the field of research data management
AP2		affinity with digital technology		Have an affinity and familiarity with digital tools and technologies, possibly those used in research data management
AP3		versatility, adaptability, flexibility and ability to handle		Demonstrate versatility and the ability to adapt to change, be flexible and handle unforeseen situations in the context of research data

see SwissDS-ENV website

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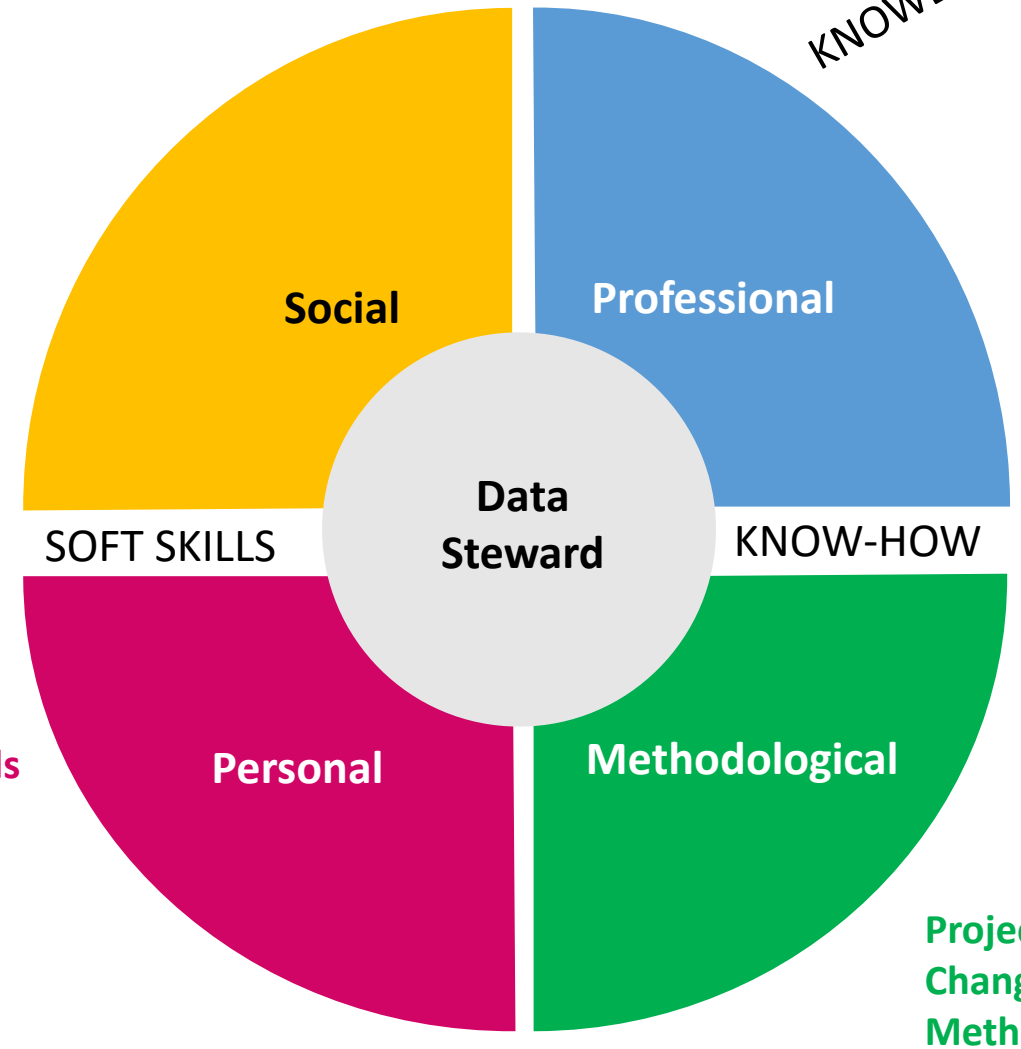
1. Definition and profile

Knowledge, skills and abilities, attitudes



RDM, OS, ORD
Legal and ethical issues
Discipline(s)
Institution
Tools

Sense of service and support
Good listener
Problem solver
Team worker
Taste for transmission and ability to train
Persuasion and motivation skills

Data Management Plan
FAIR principles
Standards, formats, metadata
Databases
Handling of sensitive and personal data
Data organization and handling
Security, preservation and sharing
Data valorization

Willingness to learn
Affinity for digital technology
Organizational and time management skills
Versatility, adaptability, flexibility

Project planning and management
Change management
Methods in research

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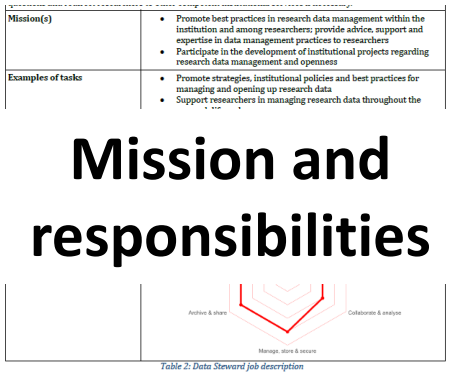
1. Definition and profile

2. Certificate course



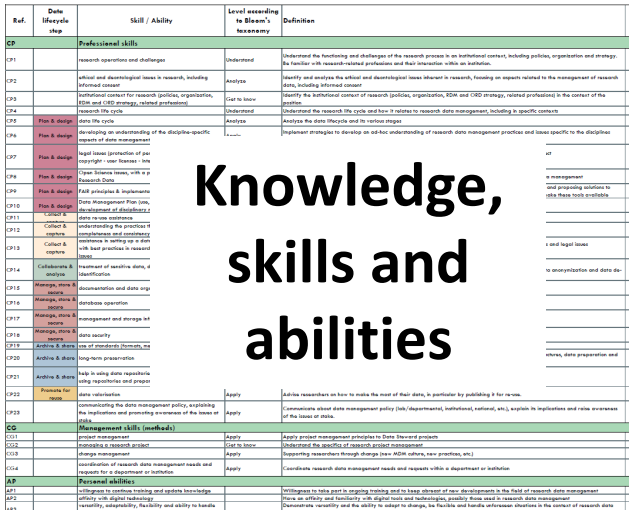
Mission(s)	• Promote best practices in research data management within the institution and among researchers: provide advice, support and expertise in data management practices to researchers • Participate in the development of institutional projects regarding research data management and openness
Examples of tasks	• Promote strategies, institutional policies and best practices for managing and opening up research data • Support researchers in managing research data throughout the

Table 2: Data Steward job description

Definition and profile of Data professions
SwissDS-ENV Project - Action 1: Definition and profile of Data Stewards
02.08.2023

Mission and responsibilities

SwissDS-ENV project: Data Stewards tasks and contributions at each step of the data lifecycle (lifecycle adapted from FORS). University of Lausanne, 2023.



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CP13	Collect & capture	assistance in setting up a data… with best practices in research… ideas		…s and legal issues
CP14	Collaborate & analysis	treatment of sensitive data, d… identification		…to anonymization and data de-
CP15	Manage, store & secure	documentation and data orga…		
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CP17	Manage, store & secure	management and storage int…		
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Knowledge, skills and abilities

Learning objectives

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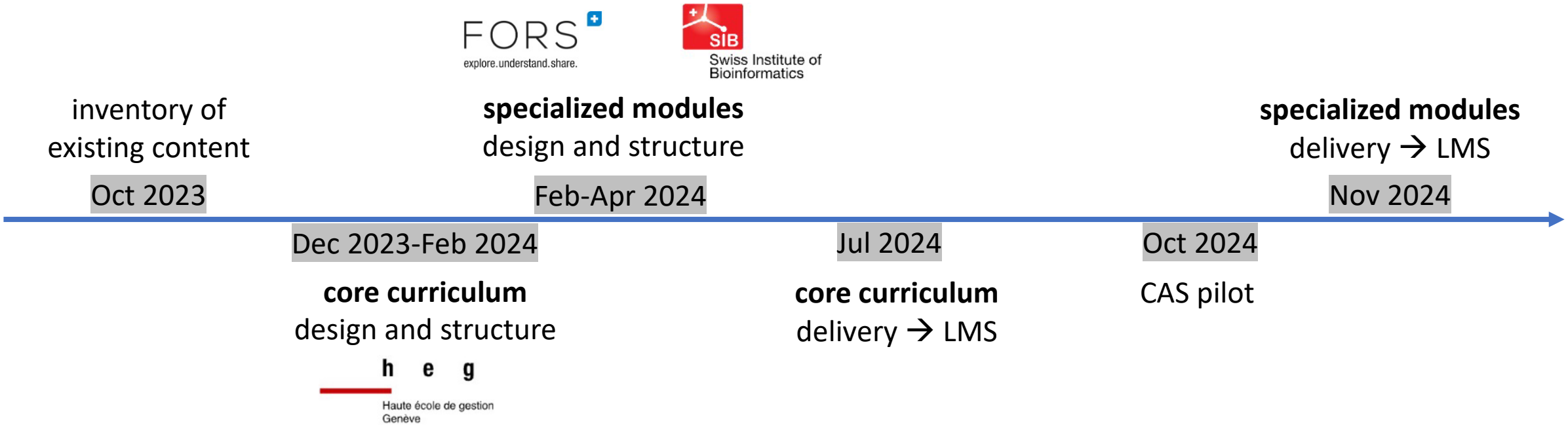
2. Certificate course



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2. Certificate course

Transdisciplinary core curriculum

Project work

Life sciences Module

Social and Human Sciences Module

Data Steward generalist

Data Steward specialised in Life Sciences

Data Steward specialised in Social and Human Sciences

Certification:
12 ECTS

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2. Certificate course

Transdisciplinary core curriculum

M1 - RDM

- M1a
  Introduction and context
- M1b
  Legal basis and good practice
- M1c
  Storing, preserving, sharing

M2: visibility of Data Stewardship activities

- M2a
  Networking with professionals (panel and speed dating)
- M2b
  Visibility of RDM services

M3: technical skills and support

- M3a
  Data processing
- M3b
  Standards and metadata
- M3c
  Data visualisation
- M3d
  AI and RDM

2. Certificate course

- Data Stewards and other data professionals – IS, IT and researchers
- About 20 students
- 2 semesters (2 days/week)
- on-site and online – lessons and personal work
- English (DE/FR)
- OER

2. Certificate course

Pilot :

- October 2024 – June 2025
- Data Stewards from UNIL and other SwissDS-ENV partners
- Feedback expected → future editions
- Certification (UNIL)

Challenges

SwissDS-ENV

Diversity of partners:

- Consensus
- Complementarity
- Representativity

CAS pilot

- Schedule
- Participants

Challenges

CAS in the future

Long-term sustainability:

- Enough candidates
- Evolution, adaptability and flexibility
- More institutions of affiliation

… Consolidation of DS positions

Thank you for your attention

Project web site: https://unil.ch/swissds-env

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Gérard Bagnoud (project leader): gerard.bagnoud@unil.ch

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