

Managing the Data Landscape: A Case for Data Stewardship

Dierkes, Jens | Glasenapp, Yvana | Kalová, Tereza | Lindstaedt, Birte

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#OSF2023DE

Jens Dierkes

Yvana Glasenapp

Tereza Kalová

Birte Lindstädt

Gefördert vom



Bundesministerium
für Bildung
und Forschung

Managing the Data Landscape: A Case for Data Stewardship



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15:50-16:15	Break
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17:15-17:30	Wrap up

Contents - DataStew

- ◇ Project in a Nutshell
- ◇ Overview Project Results
- ◇ Data-Steward-Profiles
- ◇ Implementation in Research Institutions

Project in a Nutshell

DataStew:

Data Stewardship in German Academic Research Institutions - Investigation of the Status Quo and Recommendations for Training and Profiling

- ◇ funded by Ministry of Science and Education BMBF Feb. - Nov. 2022 (10 month)

- ◇ projectteam:

USB Köln

Dr. Jens Dierkes (PI)

Fabian Hoffmann

Ralf Depping

ZB MED

Birte Lindstädt (PI)

Dr. Eva Seidlmayer

Prof. Konrad Förstner

- ◇ report DOI [10.4126/FRL01-006441397](https://doi.org/10.4126/FRL01-006441397)

Project in a Nutshell

Aims:

- ◇ Situation and needs analysis
 - ◇ Analysis and classification of the current national RDM landscape in Germany
 - ◇ Needs of practitioners and responsible persons
 - ◇ Identify individual structures
- ◇ Recommendations for policy and practice
 - ◇ on structures and contents of education and training opportunities
 - ◇ on the establishment of a data stewardship structure at universities and non-university research institutes

Curdt, Constanze, Jens Dierkes, Kerstin Helbig, Birte Lindstädt, Jens Ludwig, Janna Neumann, and Uta Parmaksiz. "Data Stewardship im Forschungsdatenmanagement - Rollen, Aufgabenprofile, Einsatzgebiete: Überblick: 11. DINI/nestor Workshop, 16. und 17.11.2020." *Bausteine Forschungsdatenmanagement*, no. 3 (October 21, 2021): 70–81.

<https://doi.org/10.17192/bfdm.2021.3.8347>.

Steps and Methods

1. Literature and information research/analysis
2. Job advertisement research/analysis (N=60)
3. Expert interviews (N=9)
4. Thesis generation
5. Focus group discussions (2 rounds, N=23)
6. Data Steward profiling
7. Derivation of recommendations for action



Data Stewards



infrastructure



political consultants



researchers

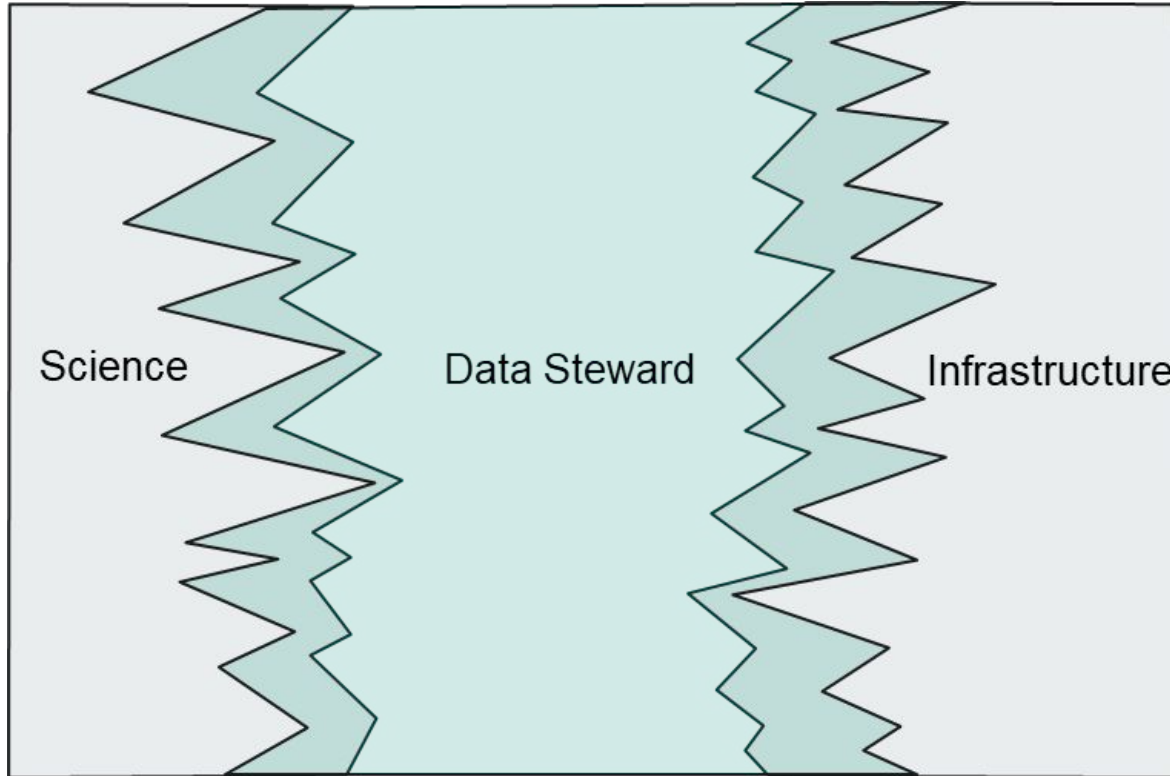


education

Overview Project Results

- ◇ There is no such thing as "the" Data Stewardship
- ◇ Find local answers to local needs: assemble a team from profiles using a modular approach
- ◇ Continuous learning
- ◇ Recommendations
 - ◇ Instead of generic data steward training:
Basic training + specializations
 - ◇ More RDM across curricula
 - ◇ Clarify quantitative needs of the different data steward profiles

Bridging the Gap between Science and Infrastructure Providers



Data Stewards: researchers or infrastructure staff?

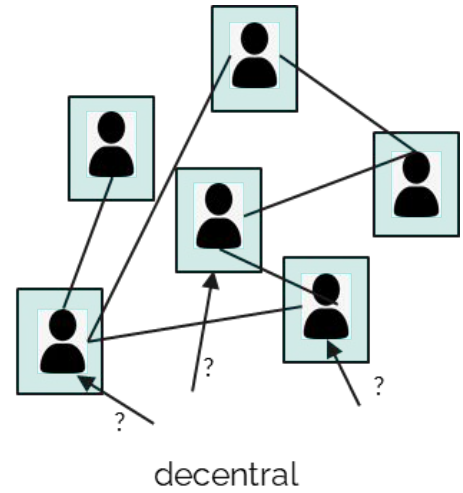
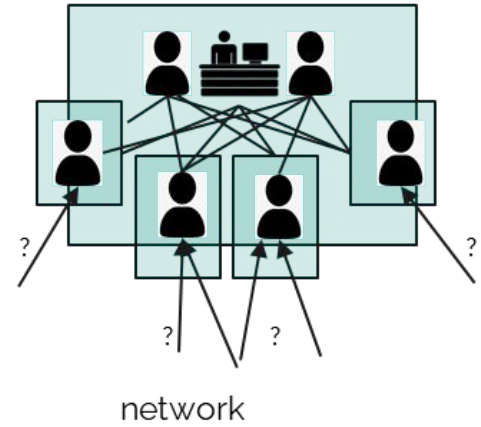
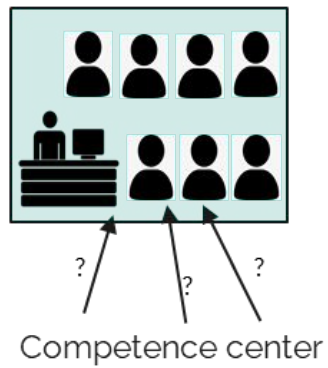
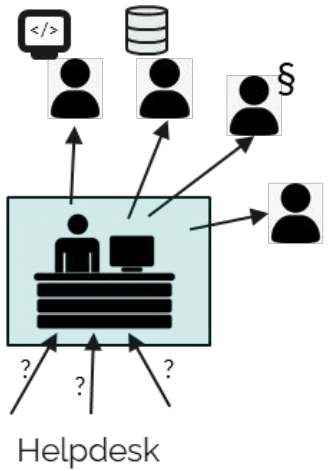
Tasks of Data Stewards

	service	science
RDM	<p>RDM-service</p> <p>e.g. general consulting and training concerning FAIR, support of information tools, legal aspects, IT security z</p>	<p>RDM-research</p> <p>e.g. development of information tools and infrastructure, standards</p>
discipline	<p>Discipline specific service</p> <p>e.g. support of researchers and their data, consulting, implementation of discipline specific RDM tools</p>	<p>Discipline specific own research</p> <p>e.g. own research with data, development of discipline specific standards and information tools</p>

coordination tasks

e.g. networking in the institution, regional or national

Location in the Institution



Competence Building

Legal knowledge

**Discipline
specific
knowledge**

**IT-know how/
scientific
programming**

**Complex project
management**

Basic knowledge

Information science:

FAIR, Open Access, data description, privacy.
Licences, data bases, information tools, critical reflexion on open science

science:

scientific system, scientific work, statistics

IT / programming:

Python and R , metadata structures, Request languages (SQL, SPARQL), long term achiving, implementation and curation of data bases

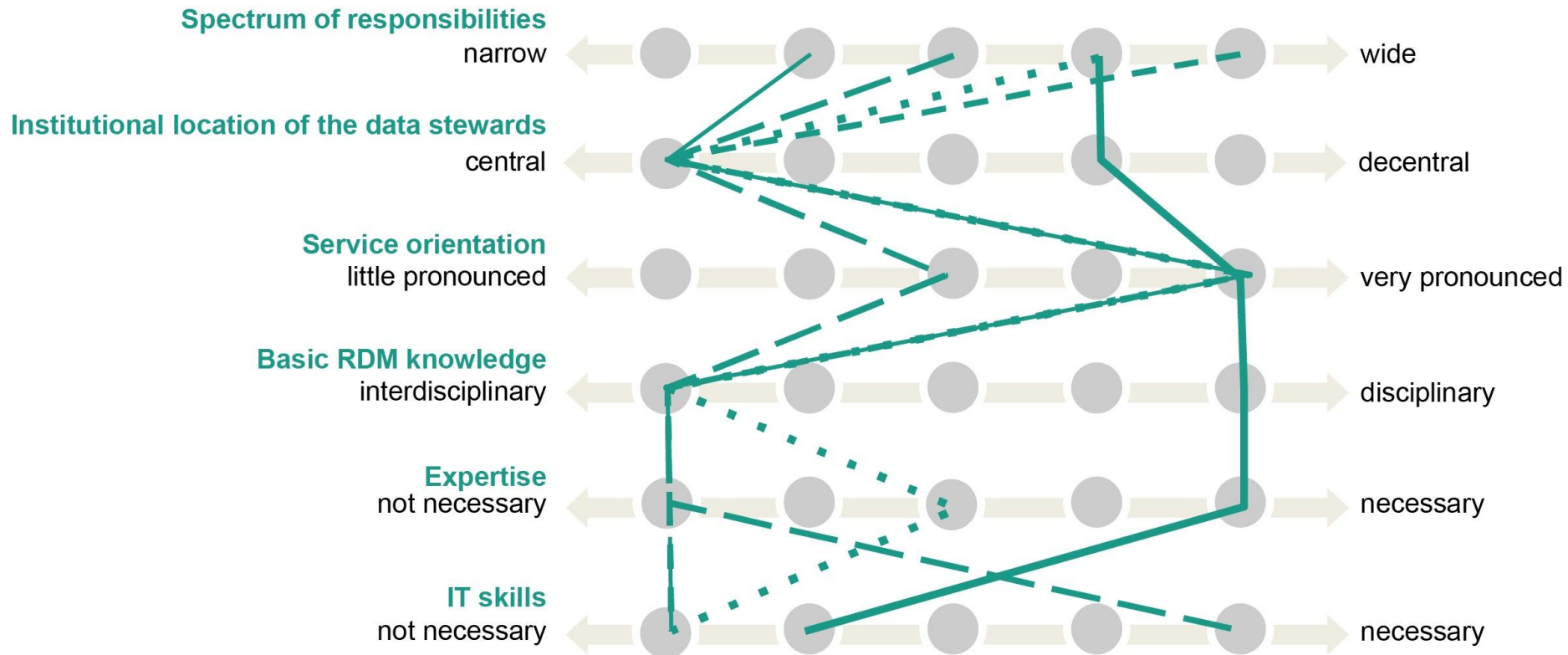
methods:

consulting, project management, consulting, projectmanagement, didactics

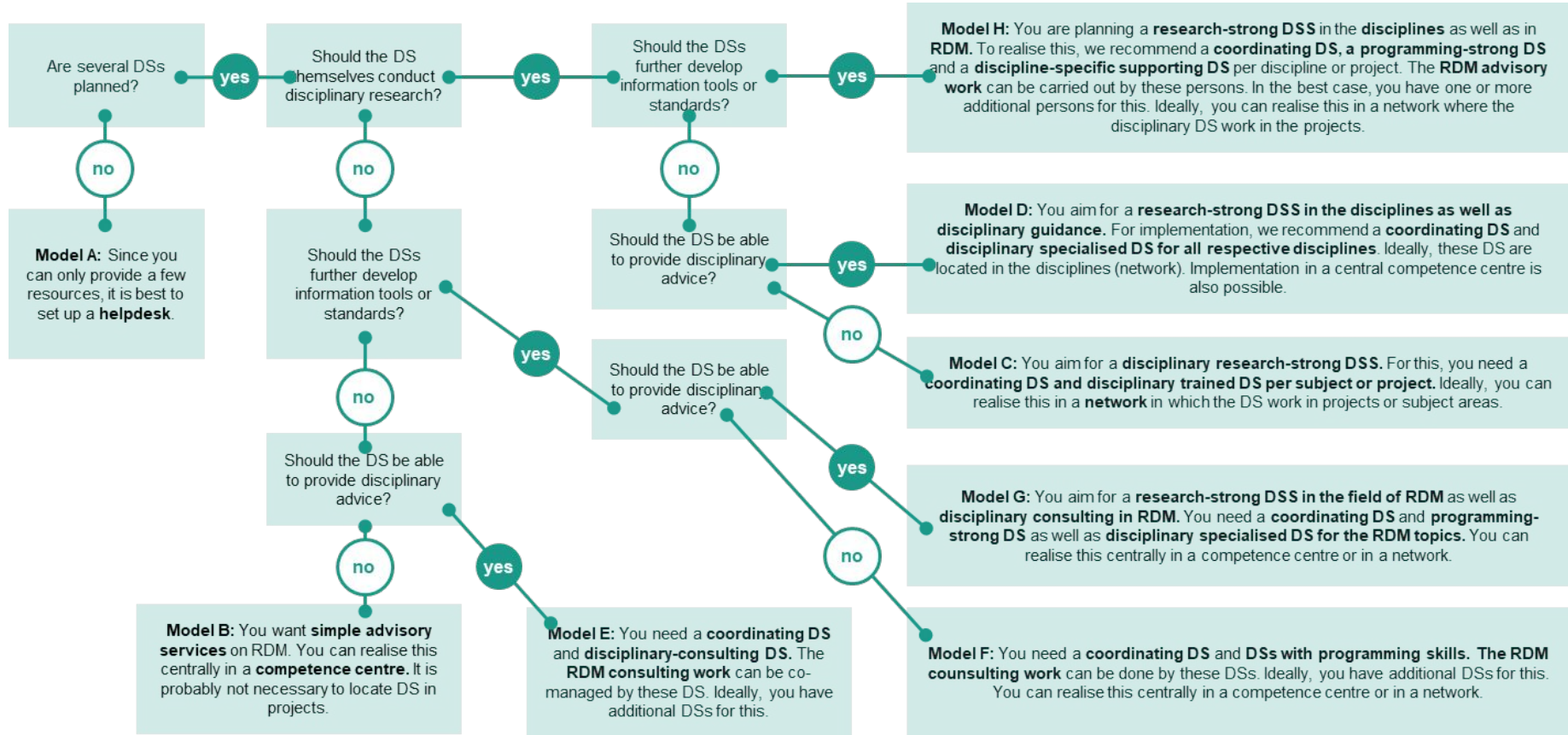
Data-Steward-Profiles

- ◇ Data stewardship is always a team effort
- ◇ Five prototypical profiles of data stewards:
 1. Data stewards as generalists
 2. RDM-consulting data stewards
 3. Discipline specific-supporting data stewards
 4. Data stewards as coordinators
 5. Infrastructure-oriented data stewards
- ◇ Six dimensions form the profiles

Data-Steward-Profiles: Overview



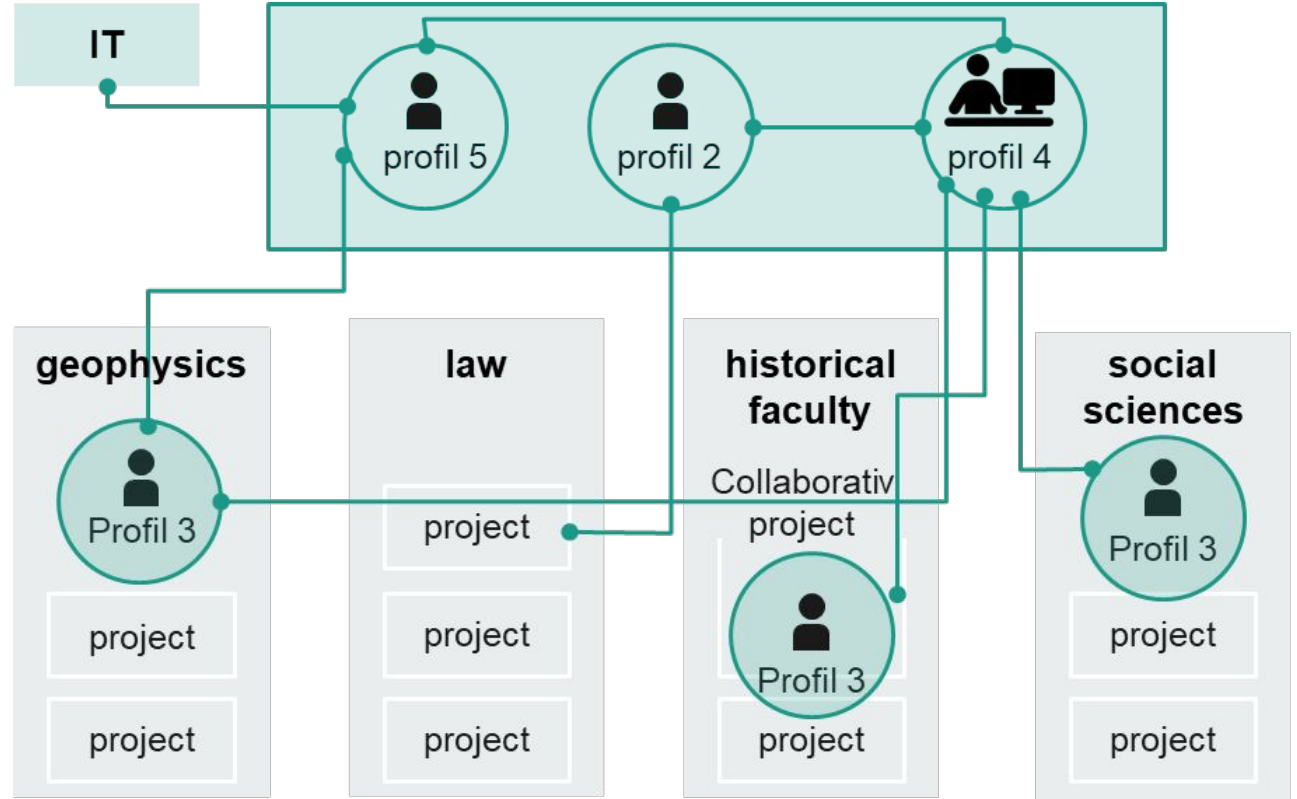
Implementation in Institutions: Decision Tree



Example: Model G

Discipline specific support and infrastructure development

- ◇ RDM-consulting (2)
- ◇ Discipline specific support (3)
- ◇ networking(4)
- ◇ infrastructure development (5)



DataStew Report



<https://repository.publisso.de/resource/fri%3A6441397>

Eva Seidlmayer, Fabian Hoffmann, Jens Dierkes, Birte Lindstädt, Ralf Depping, Konrad U. Förstner (2023): Forschung unterstützen: Empfehlungen für Data Stewardship an akademischen Forschungsinstitutionen, Köln, doi: 10.4126/FRL01-006441397.



Forschung unterstützen:
**Empfehlungen für Data Stewardship an
akademischen Forschungsinstitutionen**

Ergebnisse des Projektes DataStew
(Stand: 02.02.2023)

Group Work: Data Stewardship Profiles

Step 1: Choose one of the profiles

Step 2: go through the guiding questions

Step 3: Presentation of results and group discussion

Group work: Data Stewardship Profiles - Guiding Questions

- Are the **profiles** explained in an understandable way?
- Is the naming of the **dimensions** understandable?
- Are the **dimensions** relevant?
 - Is one of the dimensions to be changed?
 - Is there a dimension to add?
- Are the **profiles** sufficient?
 - Is one of the profiles to be changed?
 - Is there a profile to add?

Group Work: Data Stewardship Models

Step 1: Choose a research institution (a real example or fictional)

Step 2: Write down the key facts for this institution:

- ◇ Type of funding (public or private)
- ◇ Number of students
- ◇ Number of employees
- ◇ Policies (Open Access, RDM, ...)
- ◇ RDM-related infrastructure (Repositories, electronic lab notebook)
- ◇ Already existing RDM/Data Steward staff

Step 3: Go through the decision tree and choose a DSS-model

Step 4: Present your results and discuss with the group

Group Work: Data Stewardship Models - Guiding Questions

- Is the **decision tree** helpful and practicable?
- Would you suggest any changes based on your discussions today?

Example 1 (Tereza): A large university is looking to start a data steward program and hire several embedded data stewards. The program is coordinated by the data steward coordinator at the university library who had offered generic RDM support to the whole university for the past five years. The goal of the university is to further develop the existing services based on the discipline-specific demands of researchers. The university expects the data stewards to focus broadly on designing support services, training and contributing to the further development of IT services for research in order to achieve this goal.

Key facts – university:

- Funding: public
- Students: 40.000
- Staff: 10.000
- Policy on Open Access and RDM available
- Some generic RDM training and support available – provided by the head of RDM /data steward coordinator from the library in collaboration with the IT and legal department; focus on writing data management plans)
- No institutional data repository

Example 2 (Yvana) A middle sized university wants to set up a new data stewardship concept. The spectrum of research fields covers humanities and natural sciences, with a main focus on the natural sciences like physics and engineering. The new data stewardship concept should address the needs of all research fields. The university has an established RDM-service, which works cooperatively with the library and the computer centre. This service offers general training and support. Individual solutions like the setup and implementation of a new software cannot be supported. The new data stewardship concept should offer solutions for field-specific problems, trainings and support the setup of new infrastructures.

Key facts – university:

- Funding: public
- Students: 25.000
- Staff: 5.000
- Policy on Open Access and RDM available
- Some generic RDM training and support available – provided by RDM-team (Research service, library, IT and legal department)
- Institutional data repository is available