Competencies 4 NFDI

Compe NDI

A NFDI Service for Education and Training in Data and Digital Literacy

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On behalf of the consortium members

Expert Statements supporting the importance of Future Skills

EOSC „Turning FAIR into reality", rec 11 (2018):
*„**Implement curriculum frameworks and training**: A concerted effort should be made to coordinate and accelerate the pedagogy for professional data roles. To support uptake, skills transfer schemes, fellowships, staff exchanges and informal training opportunities are needed, as well as formal curricula."*
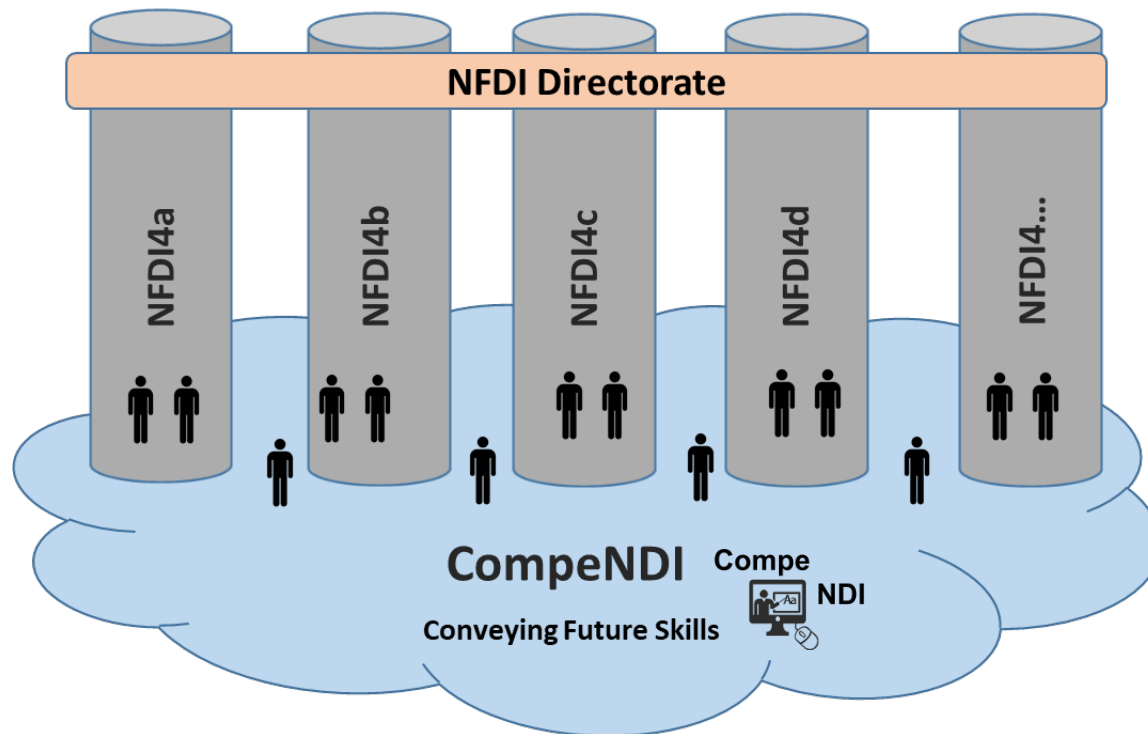

RfII, „Leistung aus Vielfalt" (2016):
*„Es sind die ‚**Köpfe**', die durch Integration von Daten, Informationen und Wissen aus heterogenen Quellen und über Domänengrenzen hinweg für die Entstehung neuen wissenschaftlichen Wissens und damit für die Wertschöpfung aus den Daten sorgen."*

RDA Mission (since 2013):
*„**Building** the **social** and technical **bridges** to enable open sharing and re-use of data."*

Lesson for the NFDI

To create Data Stewards and support the Data Scientists of the future, we need a better and more integrated Data and Digital Literacy Education as part of the NFDI.

CompeNDI Mission

CompeNDI's mission is, to **develop and deliver services and concepts enhancing people's skills in dealing with research data**.

CompeNDI integrates competence development **across disciplines** and in cooperation with its partners from different disciplines.

CompeNDI strives to expedite a **cultural change** in the area of teaching, education and lifelong learning with respect to research data management skills.

CompeNDI originates from …

RDM projects, state initiatives, RDM-staff, members of NFDI consortia

The consortium was founded by

– Third party funded RDM projects

– State Initiatives for Research Data

– Members of disciplinary NFDI Consortia

– Teaching RDM Staff from Universities

We cover many disciplines already.

We offer …

…to work for the NFDI as a whole:
- offer services, concepts and support conduct of Data Science implementation
- develop the Future Skills of the Scientific Community
- address *every* student through their curriculum

… to cover the demands of
- Researchers
- Lecturers
- Students (**Ba-PhD**)
- Technical-librarian staff
- Other personnel on professional training

FAIR4S competences and capabilities (excerpt)

Category	Competence
Plan and design	Plan stewardship and sharing of FAIR outputs
	Model data structures and define database needs …
Capture and process	Reuse data from existing sources
	Manage databases …
Integrate and analyse	Use or develop open research tools/services
	Critical thinking and theory building
Appraise and preserve	Prepare and document data/code to make outputs FAIR
	Data quality assurance using open standards
Publish and release	Publish FAIR outputs on recommended repositories
	Access control and management
Expose and discover	Recognise, cite and acknowledge contributions
	Metadata and persistent id. exposure
Govern and assess	Develop open research strategy and vision
	Apply policies to comply legal requirements, ethical & FAIR principles
Scope and resource	Secure funding for open science /support
	Perseverance delivering diverse open research projects
Advise and enable	Lead good practice by example
	Engaging with research users and stakeholders

EOSCpilot framework of FAIR data stewardship skills for science and scholarship
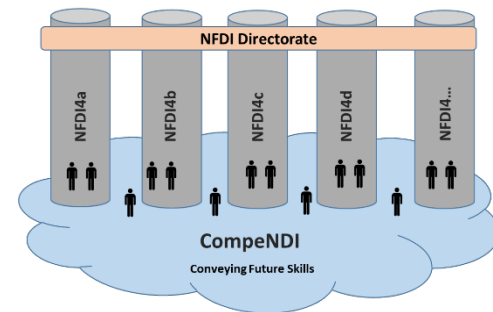
We offer
...to support the NFDI-Consortia

CompeNDI

- will help you to organize your **nationwide** teaching
- will support you with **didactic concepts**
- will develop innovative **teaching materials**
- will **educate** your future customers
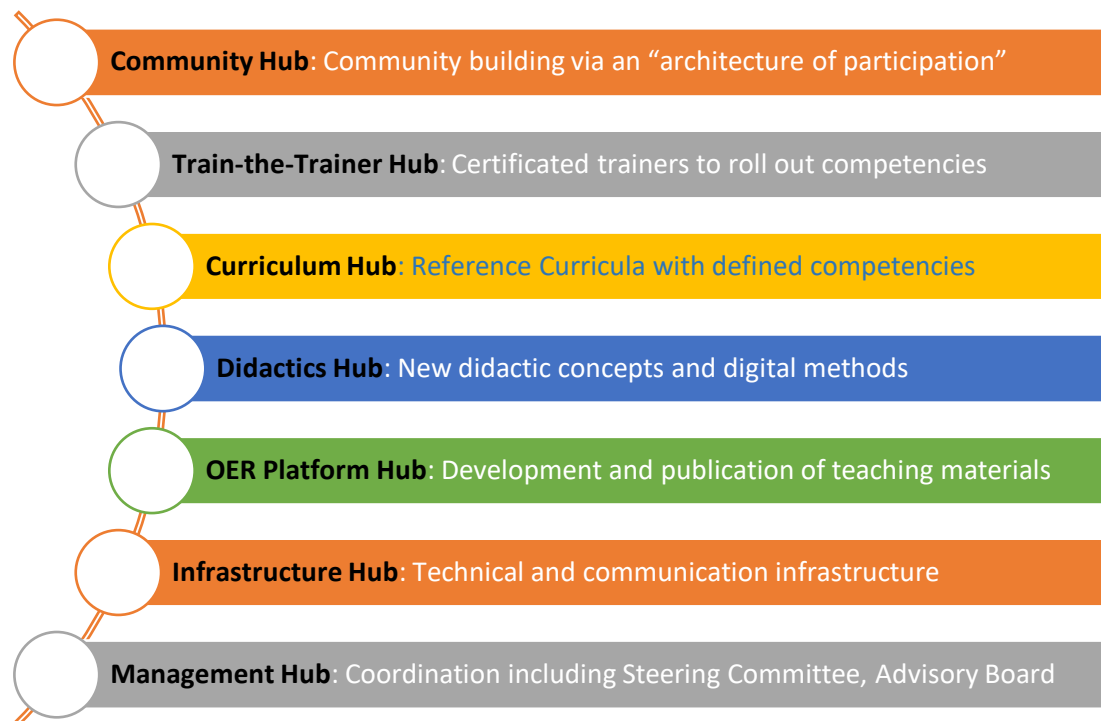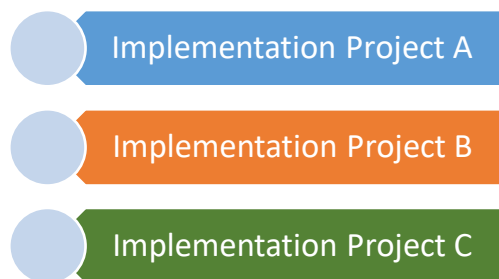- will **train your trainers**

Note:
We will work with your
Data Scientists / Data Advisors / Data Service Providers
in your consortium!

Data Service Provider — Data Advisor — Data Scientists

The Service Hub Concept

Temporary Activities

Implementation Project A

Implementation Project B

Implementation Project C

Permanent Service Activities

Community Hub: Community building via an "architecture of participation"

Train-the-Trainer Hub: Certificated trainers to roll out competencies

Curriculum Hub: Reference Curricula with defined competencies

Didactics Hub: New didactic concepts and digital methods

OER Platform Hub: Development and publication of teaching materials

Infrastructure Hub: Technical and communication infrastructure

Management Hub: Coordination including Steering Committee, Advisory Board

The Cultural Change needed will not just happen!

It has to be thoroughly embedded within the teaching of the future generation.

Compe

NDI

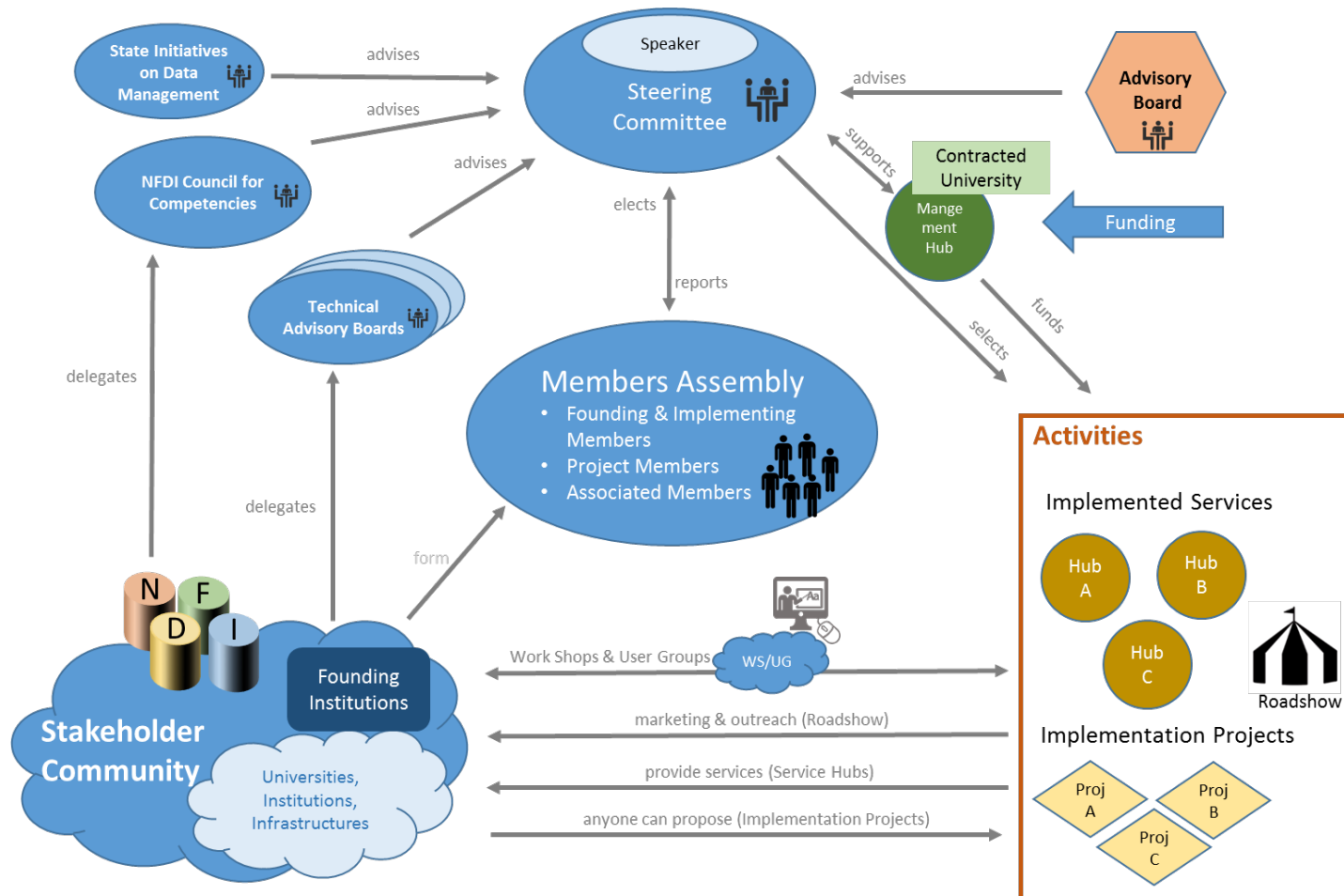**To join CompeNDI,
contact info@compendi.org**

Compe **NDI**

Backup

Tentative Organizational Structure

The Spirit of CompeNDI

- We provide …
  innovative open structures, agile implementation of new partners etc., close cooperation with all disciplinary consortia, best practices/blueprints for disciplines and (applied) universities etc., link to international initiatives, results etc.

- We act …
  flexible to implement projects on demand and to overcome certain obstacles (financial, structural etc.)

- We invite …
  learned societies, (applied) universities, associations, legal bodies etc. to support and participate in CompeNDI

Target Groups, Demand and Motivation

- **Researchers** want
  - to comply to rules of good scientific conduct to successfully apply for research projects,
  - to improve documentation of their projects and data to improve collaboration in large scale projects,
  - to easily re-use or critically assess research results of others.

- **Lecturers** want
  - to offer their students the best possible education,
  - to make their discipline attractive by devising exciting new fields of research.

- **Students** want
  - a blueprint/simple instructions on how to deal with research data,
  - to learn how to develop their own data-driven (interdisciplinary) research questions,
  - to build up vocational competences within the framework of their degree program.

- **Technical-librarian staff and personnel on professional training** want
  - technical support and workflows for their laboratories / infrastructures,
  - better documentation of data and records of their own performance,
  - an understanding of rights and obligations with produced data.

- **Staff from the central institutions or the RDM team** would like to
  - provide the best possible (RDM) service to scientists and students,
  - enhance the use of own data infrastructure.

CompeNDI Praxis Statements

Umfragen zeigen den Bedarf an Schulungen / Trainings

Umfeldbedingungen beachten: Die Verankerung von Forschungsdatenmanagement findet im Umfeld der „Replikationskrise der Wissenschaften", der methodischen Ausbildung der Studierenden und der Befähigung von Bachelor- und Master-Studierenden für zukünftige Berufsfelder statt (future skills!).

Ohne die Praxis zu berücksichtigen, besteht die Gefahr, nicht die angezielte Breitenwirkung zu erzielen.

more/better data scientists; enhance digital literacy

Interested in Advanced Training?

- Your consortium can **Support** CompeNDI!
    - Let's work together in education and training
    - You can **join** CompeNDI!
    - If you are a person or Institution – either join, or provide a LOI to show your support!

- **We** will support **your** Consortium …

    … with an LOI if you install disciplinary structures for training we can connect to.

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