What is really needed?

Towards Open Science and Research Data Management
Results of a National Survey in Austria

Paolo Budroni - Rome, 30-31 May 2016
Fact Sheet

Project period: 1 January 2014 - 31 December 2016
Project coordinator: University of Vienna
Project partners: 26 Partner Institutions
Supported by: Federal Ministry of Science, Research and Economics
The landscape of digital resources is heterogenous

The local situation (disciplines, infrastructure, policies, attitudes) is governed by „local traditions“

Research data (multimedia, learning objects) is exposed to structural changes through technological transformations (e.g. mobile devices) and by the appearance of new stakeholders (new generations of researchers) and new methods (e.g. revolution through institutional blogs or social media), requiring new...
Scope of the project

Subproject A
- Construction of document repositories and publication services
- Support project partners with the implementation of document-based repositories ("Orphan Records Repository")
- Documents, Pictures (formats: mainly PDF, JPG)

Subproject B
- Design infrastructure environments for other types of digital objects (research data, e-Learning, and multimedia content)
- Development of additional services for Subproject A
  - Phase 1: Models and workflows for research data
  - Phase 2: Design and begin the construction of one or more repositories
  - Phase 3: Multimedia and Streaming Services
- Docking to publication services

Subproject C
- Construction of a knowledge network for e-Infrastructures Austria
  - Multidisciplinary collaboration by way of Work Packages involving as many stakeholders as possible (scientists, editors)
  - Definition of metadata, interoperability
  - Preparation for Horizon 2020

Common goals: increased visibility, standardized repository environments, harmonization of policies, and where appropriate, joint visualization and presentation Portal
WORK PACKAGES - 12 fields of action

Cluster A: Monitoring and Assessment of Document Repositories within the Partner Network

Cluster B: Planning and Implementation of a "National Survey" for Research Data

Cluster C: Designing a Knowledge Network: Development of a reference structure for the construction of Repositories

Cluster D: Infrastructure

Cluster E: Legal and Ethical Issues

Cluster F: Open Access

Cluster G: Visual Data modeling

Cluster H: Life Cycle Management

Cluster I: Metadata

Cluster J: Permanent backup of the data

Cluster K: Data from scientific and artistic-scientific research processes

Cluster L: Cross-project issues (technical and non-technical)
WHO IS E-INFRASTRUCTURES AUSTRIA FOR?

- All Austrian universities
- Austrian non-university research institutions
- Austrian Research Communities
- Research-funding bodies
- The interested public
National Research Data Survey 2015
Different levels of processing of data
Model for digital archiving

World of data
Raw data (primary data)

- Strata of research data
- Restricted Data
  - Open data
  - Published data
  - Open access published data

Ensuring legal and ethical compliance is key issue in this context
Towards Open Science - Challenges
A new ecosystem of services

High interest in support:
- 60% Technical infrastructure
- 49% Specific support
- 42% Legal advice
- 41% Helpdesk
- 37% Training courses
A common strategic vision

Expectations on the institution: Qualified personnel Guidelines Policies

High interest in...
Data types and formats

97% Text files
81% Graphics
67% Tables
34% Structured text
28% Video
27% Database
23% Sourcecode
21% Audio
20% Software
8% Configuration files
Collaborative data infrastructures

- **Storage volume per year**
  - 55% require an average of more than 50GB
  - 7% require more than 1TB

- **11% No**

- **27% after sign**

- Data Archiving

-e-infrastructures austria
Re-design of re-use scenarios

Are your research data reusable to others?
78% Yes or sometimes
22% No

Do you make user agreements?
36% No
45% Yes:
Cooperation agreements
Open content licenses
Individual agreements
Towards an open science ecosystem
Identification of target groups

**Whom do you grant access to your research data?**

- By request: 57%
- Selected institutional members: 53%
- Scientific community: 28%
- Whole institution: 18%
- Public: 11%
- No one: 9%
- Other: 3%

**Upon request**

**Open Access**
Re-thinking of scientific workflows

54% share their data by using external storage devices or email
Coordination between various e-infrastructure components

How can others access your research data?

- Data carrier/Email: 54%
- Cloud applications: 24%
- Website: 21%
- Remote server/Share: 19%
- Not at all: 19%
- Linked supplementary material: 17%
- Data archive/Repository: 14%
- Other: 3%

Repositories: 14%
Enhancing sustainability

What happens when you leave your institution?

43% Data remain at institution
36% Data are taken
5% Data are deleted
A common e-infrastructure umbrella
Conclusions

• Results conform with international reviews
• Challenges for enabling Open Science Vision
• Embedding in transnational e-infrastructures initiatives

• Need of **know-how transfer** of e-infrastructure **essentials** (project seminar: [http://e-seminar.univie.ac.at](http://e-seminar.univie.ac.at))
• Release of **RDM policies**

• Reference points at local level
• Shared “vertical” services
• Transversal services
Downloads

Download full report:
Zenodo:
DOI 10.5281/zenodo.34005

Phaidra (e-book format):
https://phaidra.univie.ac.at/detail_object/o:409452

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Thank you

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