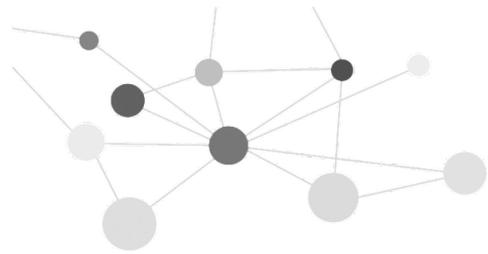# e-infrastructures austria

About Knowledge Convergence

e-Infrastructures Austria
an interdisciplinary case study concerning
research resources and their management
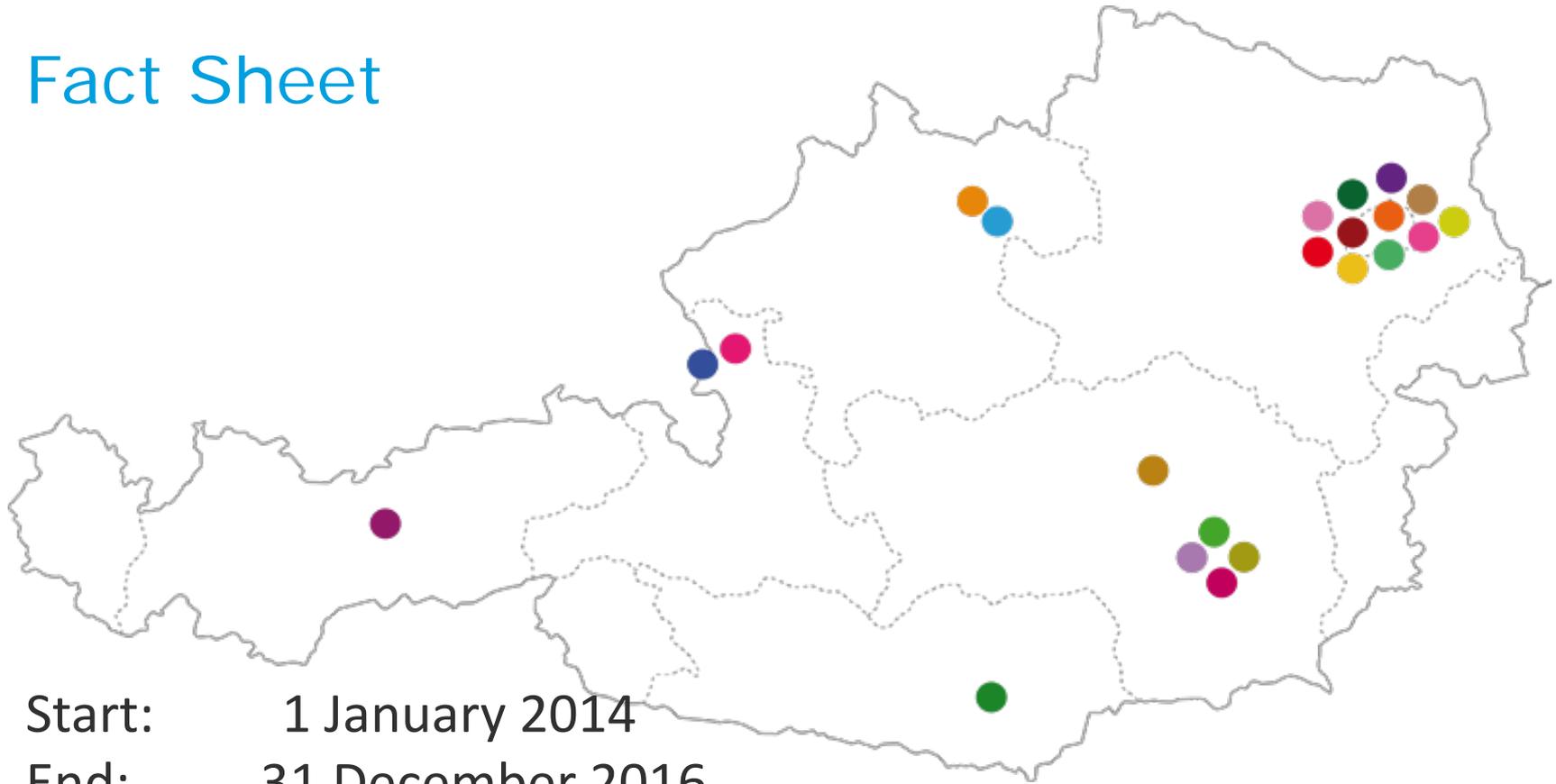
Paolo Budroni

The Munin Conference – Tromsø, 27th November 2014
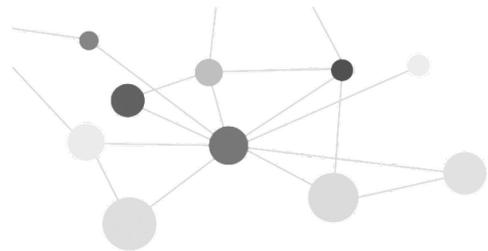
THE CONTEXT

Fact Sheet

Start: 1 January 2014
End: 31 December 2016
Project coordinator: University of Vienna
Project partners: 25 Partner Institutions
Client: Federal Ministry of Science, Research and Economics

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e-Infrastructures Austria is an initiative designed to foster the coordinated and on-going development of Austria-wide infrastructures for digital resources in research and academic teaching

→ build up open infrastructures for research, teaching and mgmt. of research data
→ enhance free access to knowledge
→ foster open science, open access, re-use of research data
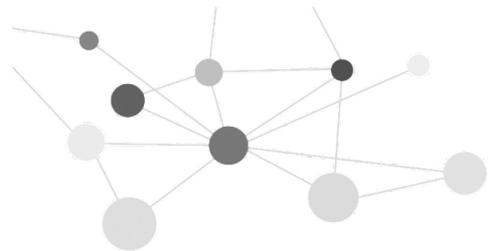
WHO IS E-INFRASTRUCTURES AUSTRIA FOR?

- All Austrian universities

- Austrian non-university research institutions

- Austrian Research Communities

- Research-funding bodies

- The interested public

e- Infrastructures Austria at a glance

[*Abstract:* A key objective of the initiative is to include research communities, libraries and IT services of all national universities and other scientific institutions, and to jointly develop knowledge for the construction of local repositories in order to pool existing expertise and resources. The intended goal is then to make this knowledge available to all of the project institutions involved. Within the three-year project period, all partner institutions are to set up a local document server or be granted access to a shared document server. A parallel objective is the design and eventual establishment of either a central or several decentralized Austrian repositories for advanced applications and digital objects, including research data, documents, and multi-media content.]
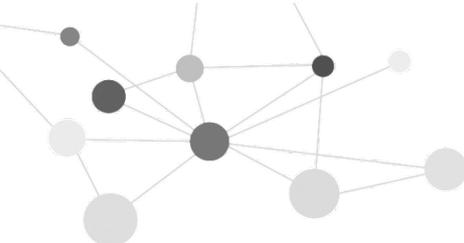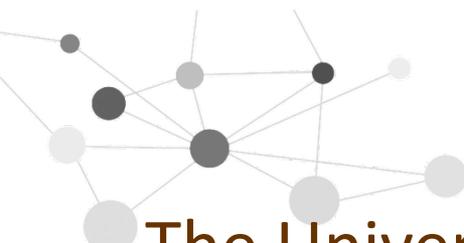
WORLDS OF DATA
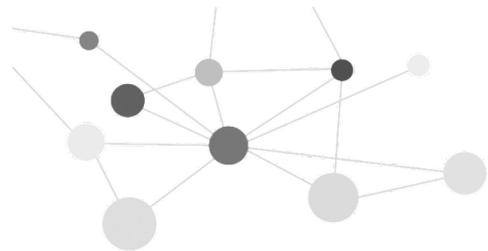
The Australian Griffith University presents the following definition (*):

"Research data are factual records, which may take the form of numbers, symbols, text, images or sounds, which used as primary sources for research, which are commonly accepted in the research community as necessary to validate research findings."

The University of Minnesota about research data [*]:

Research data are data in any format or medium that relate to or support research, scholarship, or artistic activity. They can be classified as:
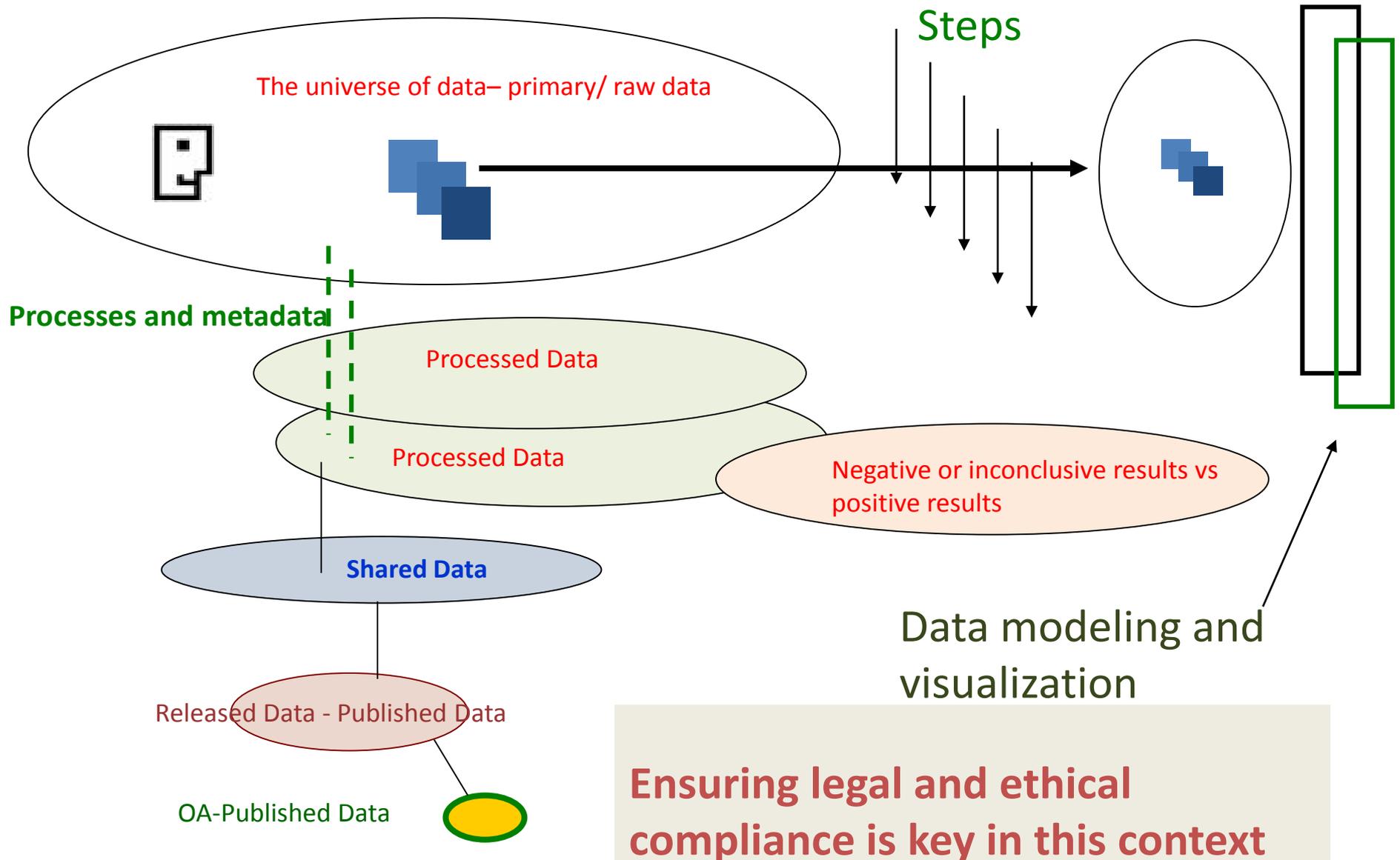
- *Raw or primary data: information recorded as notes, images, video footage, paper surveys, computer files, etc.*
- *Processed data: analyses, descriptions, and conclusions prepared as reports or papers*
- *Published data: information distributed to people beyond those involved in data acquisition and administration*

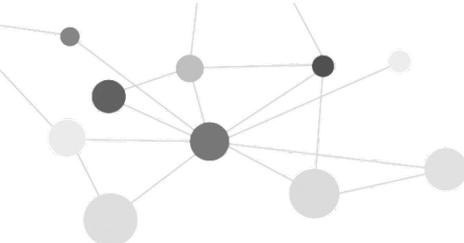This definition also incorporates
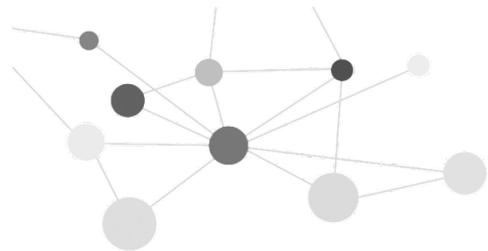**the different levels of processing of data**

[*] **Ingrid Dillo – Data Archiving and Networked Services (DANS), Certification as a means of providing trust, Florence , Fondazione Rinascimento Digitale, 2012**
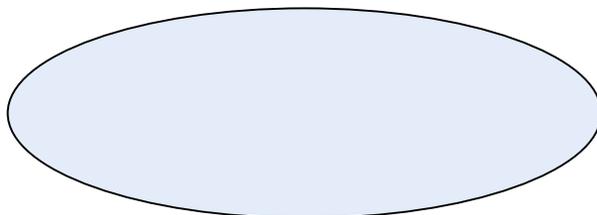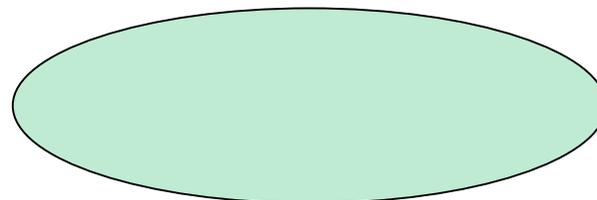
Levels of processing data

Steps

The universe of data– primary/ raw data

Processes and metadata

Processed Data

Processed Data

Negative or inconclusive results vs positive results

Shared Data

Data modeling and visualization

Released Data - Published Data

OA-Published Data

Ensuring legal and ethical compliance is key in this context

THE MAIN STAKEHOLDERS

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FOUR MAIN STAKEHOLDERS INVOLVED IN THE MGMT OF RESEARCH DATA

IT-Services

Research Libraries

Researchers

Funders / Funding services

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FOUR **MAIN STAKEHOLDERS ARE INVOLVED IN THE MGMT OF RESEARCH DATA**
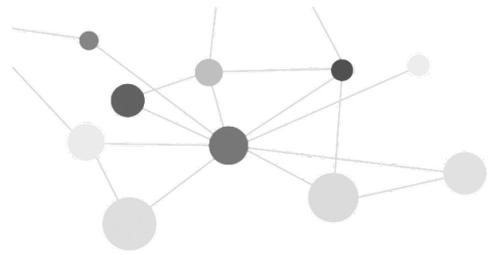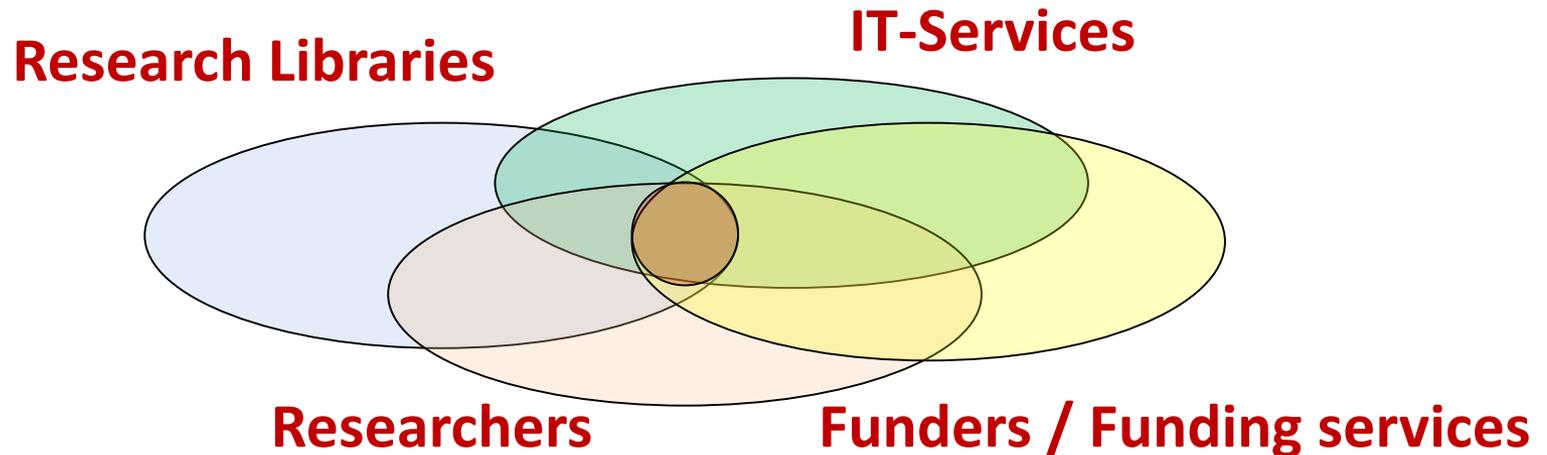
Research Libraries   **IT-Services**

Researchers   **Funders / Funding services**

CHALLENGES
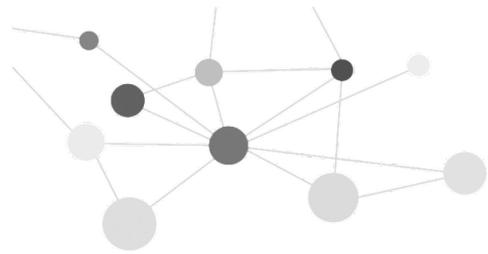
e-infrastructures
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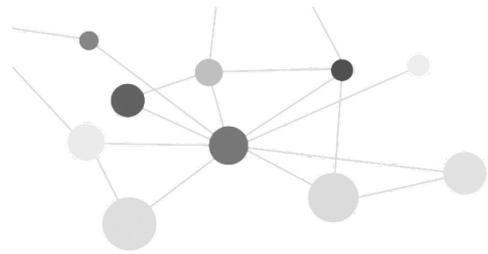
- The landscape of digital resources is heterogenous

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

- Research data (multimedia, learnig 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 roles and new forms of management

ARISING CHALLENGES REQUIRE….
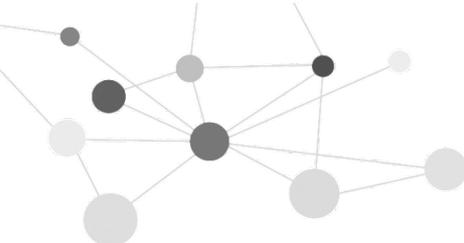
… FURTHER APPROACHES AND NEW CONDITIONS THEREFORE

- Policies should be harmonized (institutional and national)

- The basic structure for communications needs to be re-evaluated, identifying new optimized forms of sharing and spreading knowledge within the four stakeholders

Research Libraries

IT-Services

Researchers

Funders / Funding services

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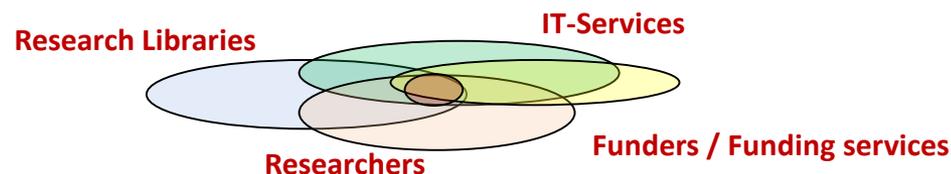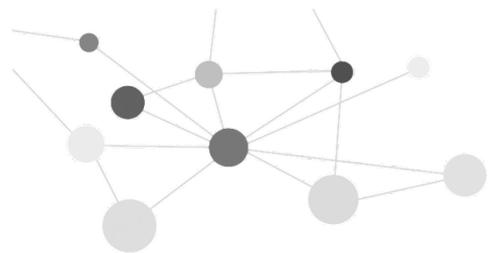
e-Infrastructures Austria: Guiding Principles
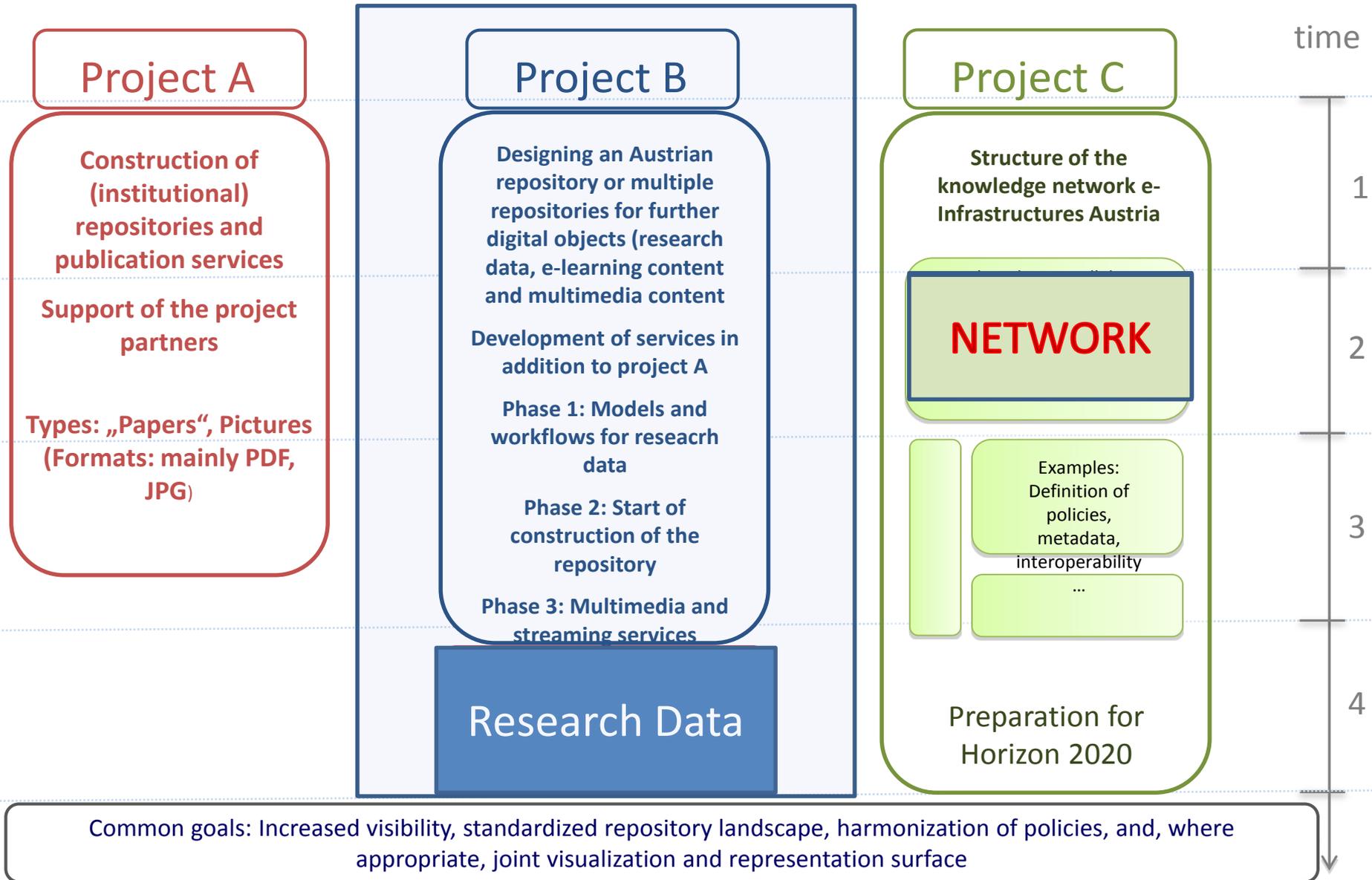
Openness

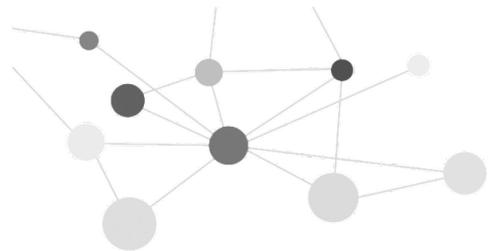**Free access to the results** of the joint work in the project

Regulated ownership of rights within and outside the consortium (starting with the project and beyond)

Regulated relationship of all partners, defined organizational units and work processes

Project-oriented entity **Think Tank** for external stimulus [*"thinking out of the box"*], connection between research, IT-services and libraries

The three sub-projects

Project A

Construction of (institutional) repositories and publication services

Support of the project partners

Types: „Papers", Pictures (Formats: mainly PDF, JPG)

Project B

Designing an Austrian repository or multiple repositories for further digital objects (research data, e-learning content and multimedia content

Development of services in addition to project A

Phase 1: Models and workflows for reseacrh data

Phase 2: Start of construction of the repository

Phase 3: Multimedia and streaming services

Research Data

Project C

Structure of the knowledge network e-Infrastructures Austria

NETWORK

Examples: Definition of policies, metadata, interoperability ...

Preparation for Horizon 2020

1

2

3

4

Common goals: Increased visibility, standardized repository landscape, harmonization of policies, and, where appropriate, joint visualization and representation surface

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New conditions and their instruments: What is needed?

optimized forms of interaction, created and accepted by all partners

a multilingual **information platform**

general accepted ways of **regulated communication**

**guaranteed fairness and openness** concerning particularly the deposited material

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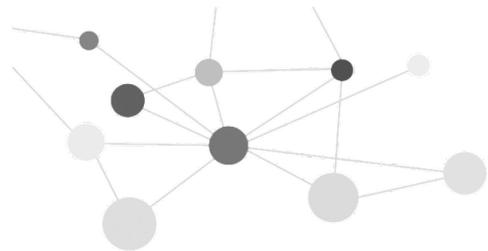
GOVERNANCE

1. Optimized forms of interaction within the partners, with common understandings, **created** and **accepted** by all partners of e-Infrastructures Austria

2. Bodies empowered to act recognized by all partners (Project Management, General Assemby, Steering Committee, Synergies Team, Working Teams, Think Tank/ "thinking out of the box")

GOVERNANCE
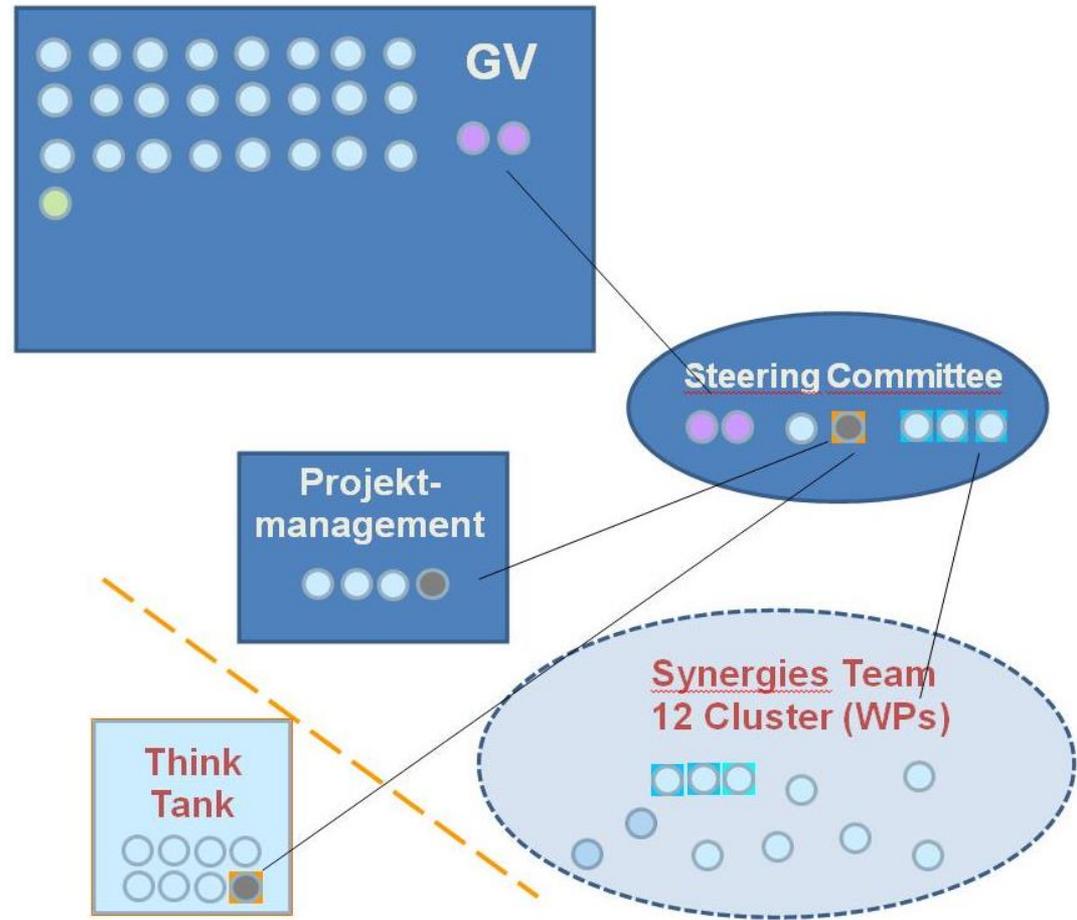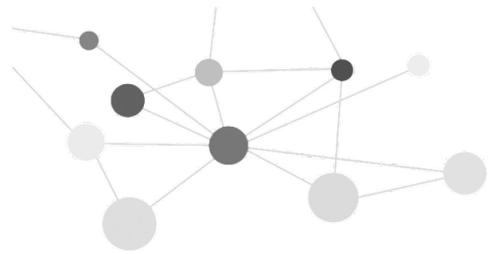
INFORMATION PLATFORM

1. A multilingual information platform combining functionalities for Project Management Administration:

→ WIKI → Ticketing System → Calendar → GANTT

2. General Terms of Use adopted by all partners guaranteeing fairness and regulating → knowledge management within the information platform → the depositing of material in the WIKI → the sharing of information

Wiki Calendar Gantt Ticketing-Sys

GANTT CHART AND CALENDAR OF PROJECT ACTIVITIES

Projektleitung

WP 1: Status Quo		WP 11: LZA
WP 2: National Survey		WP 12: LZA
WP 3: Netzwerk		WP 13: Übergreifende Fragen
WP 4: Terminologie		WP 14: Infrastrktur
WP 5: Legal		WP 15: Umsetzung
WP 6: Open Access		WP 16: Multimedia
WP 7: Marketing		WP 17: Metadaten
WP 8: Training		WP 18: Support &Operation
WP 9: Metadaten		WP 19: Daten der Forschung
WP 10: Zertifizierung		WP 20: Visuelle Datenmodelle

Legend:
- Projektleitung
- Nicht-Technisch
- Technisch
- Technisch/Nicht-Technisch

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)
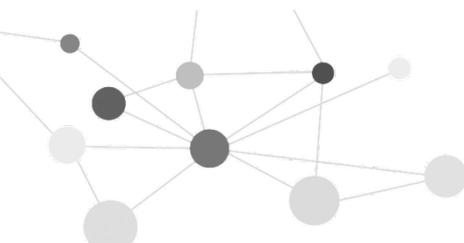
Designing a knowledge network

Development of a reference model for the construction of local repositories with consideration of all technical and non-technical aspects

Jointly develop knowledge, pool existing expertise and resources, and make available to all institutions
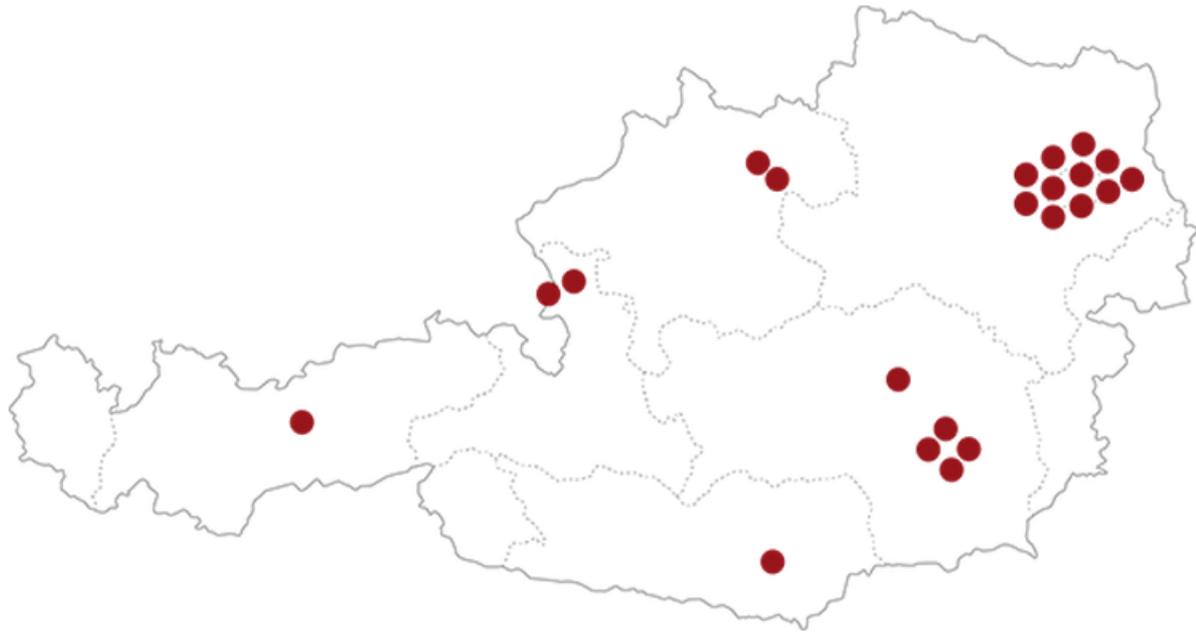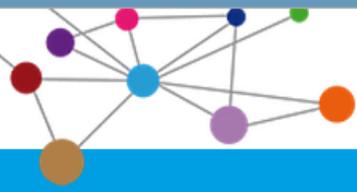
Advice and support in developing local repositories (organizational, technical, legal, content-related)

Transdisciplinary collaboration in the context of Work Package clusters with as many stakeholders as possible (libraries, research communities, publishers, IT services, and so on)

Collaboration at technical and non-technical levels
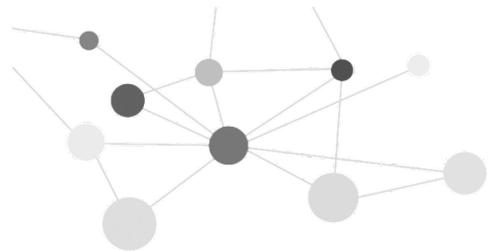
Partner events and workshops

Monitoring of processes in *e-Infrastructures Austria*

PLEASE VISIT OUR WEBSITE

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www.e-infrastructures.at

THANKS !