

Presidenza Italiana
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**ITALIAN SEMESTER OF PRESIDENCY
OF THE EUROPEAN UNION
INTERNATIONAL CONFERENCE**
Research Infrastructures and e-Infrastructures
for Cultural Heritage

**PRESIDENZA ITALIANA
DEL CONSIGLIO DELL'UNIONE EUROPEA
CONFERENZA INTERNAZIONALE**
Infrastrutture di Ricerca e Infrastrutture
digitali per il patrimonio culturale

Roma, **13/14** November/Novembre 2014



Ministero
dei beni e delle
attività culturali
e del turismo



PIN

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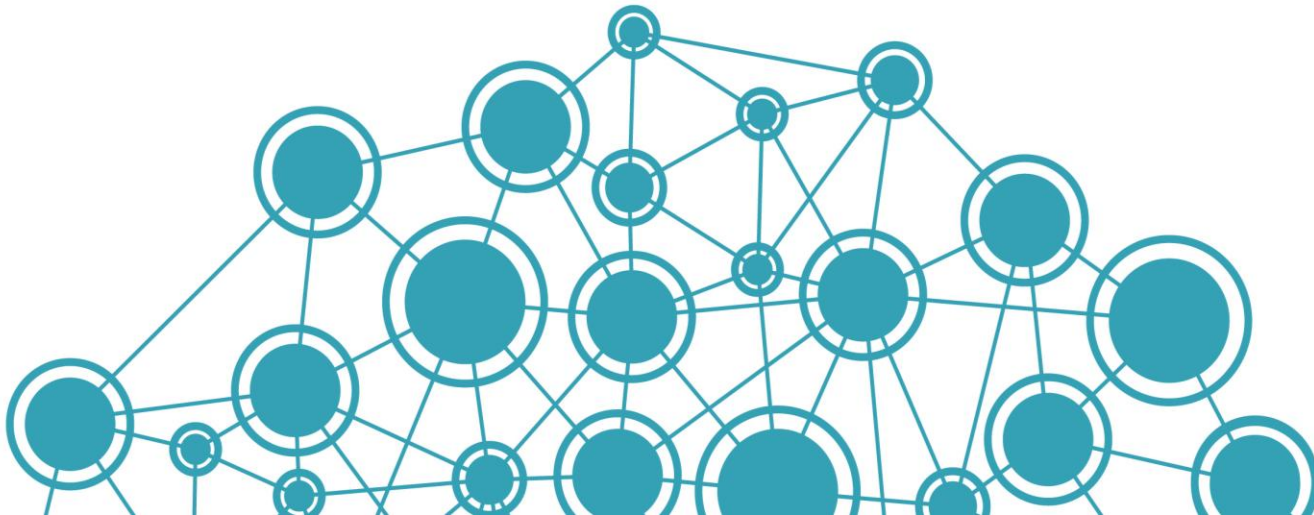
ARIADNE

Roma 13/14.11.2014

Cultural Heritage communities and e-Infrastructures

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Director of ICCU / MiBACT



Digital cultural heritage enviroment



- Memory institutions are creating a **large volume of digital content** that needs to be:
 - safely **stored** and **preserved**
 - permanently **accessed**
 - easily **re-used** over time by different end-user groups
- Challenge of **a common e-infrastructure for cultural heritage** will bring costs reduced and interoperability enhanced, by shared:
 - **Common procedures**
 - **Workflows**
 - **New skills and competences**

The main Italian National infrastructures for CH



SBN, Servizio Bibliotecario Nazionale

www.sbn.it (5.800 libraries 13 M bibliographic records)



Internet Culturale, the Digital Library for the libraries' collections

www.internetculturale.it (1 M records, 10 M digital objects, 142 libraries)



CulturaItalia, the National Aggregator

www.culturaItalia.it (2.7 M metadata)



SAN, Sistema Archivistico Nazionale

<http://san.beniculturali.it/> (835.321 resources)



SIGEC Web, Sistema Informativo Generale del Catalogo (10M records, 2.489.449 published records, 578 institutes participant)

<http://www.iccd.beniculturali.it/>



SITAR, Sistema informativo territoriale di Roma

<http://sitar.archeoroma.beniculturali.it/> (100.000 digital objects)



European infrastructures for CH, arts & humanities



ARIADNE, Advanced Research Infrastructure for Archaeological
Dataset Networking in Europe

www.ariadne-infrastructure.eu/



DARIAH, Digital Research Infrastructure for the Arts and
Humanities

www.dariah.eu/

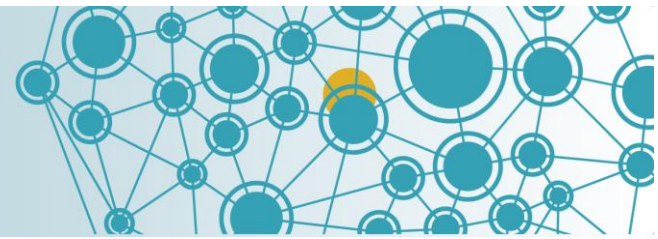


CLARIN, Common Language Resources and Technology
Infrastructure,

www.clarin.eu/



European infrastructures for CH, arts & humanities



CHARISMA, Cultural Heritage Advanced Research
Infrastructures, Synergy for a Multidisciplinary Approach to
Conservation/Restoration

www.charismaproject.eu/



CENDARI, Collaborative European Digital Archive Infrastructure

www.cendari.eu/



EUROPEANA, the European aggregator

www.europeana.eu/



Key points:

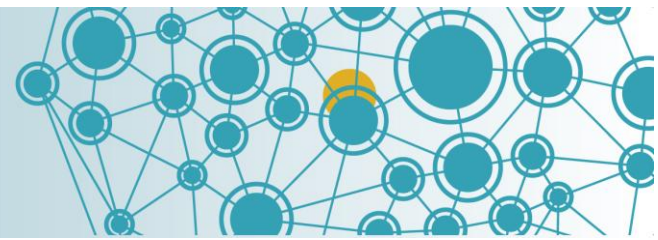
What is a Research Infrastructure?



A research infrastructure is a system comprising resources, services, and facilities, can be composed of:

- a single research centre of particular importance (such as CERN),
- a network of complementary institutes – **such as museums, libraries and archives** – and competence centres that carry out shared programmes, or it can be virtual, and thus provide online services.

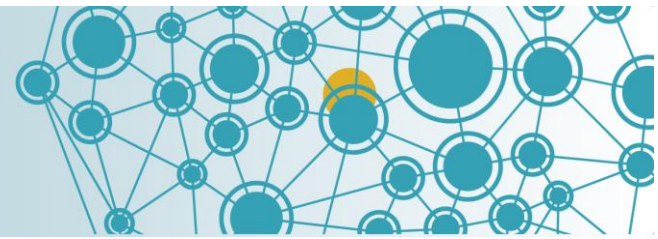
Key points: What is an e-Infrastructure?



E-Infrastructure makes available to researchers and cultural institutions:

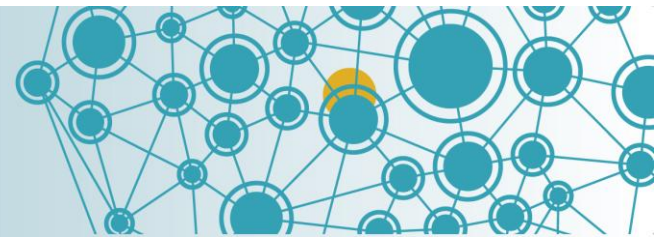
- backbone connectivity
- effective data storage and long term preservation
- computing resources for allowing simple and controlled on-line access to services
- resources and collaboration tools
- authentication and authorization systems for federated access

Benefits by using e-Infrastructures



- Cost reduction on digital curation workflows
- Access to high-end distributed computing and to large-scale distributed databases
- Access to new software/applications, standards, advanced visualization or remote instruments
- A cross-disciplinary approach and sharing of best practice between disciplines

Three integrated EU projects led by ICCU



The need to foster cooperation between cultural heritage institutions research infrastructures and e-Infrastructures was identified by:

1. **DC-NET (2009-2012)**: joint activities plan for DCH e-infrastructure implementation
2. **INDICATE (2010-2012)**: international cooperation, use case studies, pilots, policy harmonisation
3. **DCH-RP (2012-2014)**: developing and validating a Roadmap for digital preservation



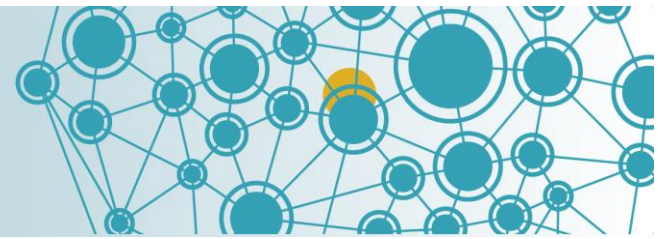
The vision



There is a need to establish common policies, processes, services, tools and protocols which will allow DCH organisations:

- to access e- Infrastructures
- to create **Virtual Research Environment** (VRE) that can meet the demands of modern forms of scientific collaboration.

Virtual Research Environment (VRE) for CH, Arts and Humanities



- VRE will be based on services delivered by e-infrastructures and domain specific services co-developed and co-operated by researchers, technology and e-infrastructure providers
- VRE will be a kind of ecosystem providing access to content produced by involved communities as well as services and applications
- VRE will support capacity building in interdisciplinary research communities
- These services will enable the implementation of innovative workflows in research and data management

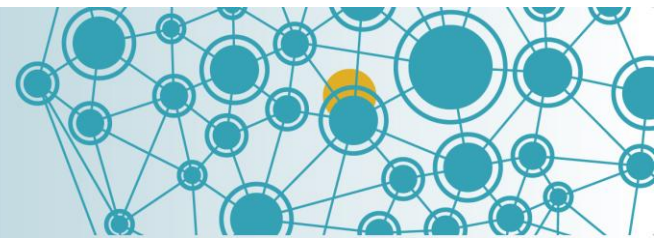
Virtual Research Environment (VRE) for CH, Arts and Humanities



Services to be realized:

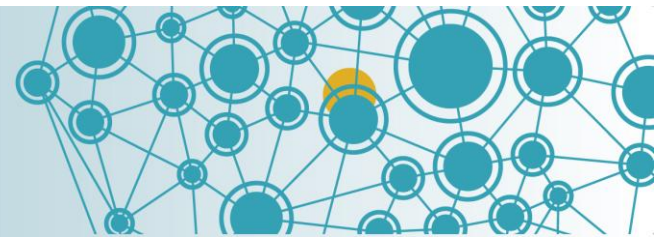
- Data services: from acquisition to access, management, curation, storage and long-term preservation
- Data access policies and services: authentication, authorization, access including IPR management and quality control
- Services for collaborative research
- Definition and management of common semantics and ontologies
- Standardization of procedures and protocols
- Visualization and other data synthesis services

Overall goals for the next future



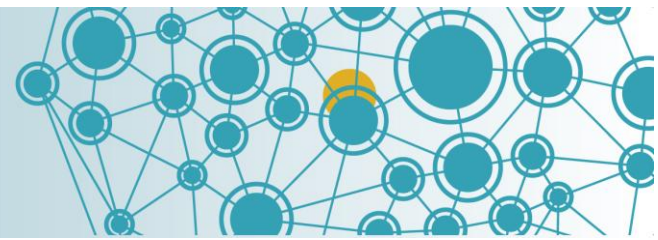
- Go ahead in collaborating with e-Infrastructures providers
- Integration facility data with e-Infrastructure, based on customized policies for research infrastructures
- Joint policies and solutions for the cultural and humanities data lifecycle, from acquisition to access, management, curation, and long-term preservation
- Strengthening the cohesion of research in the broad sector of humanities, cultural heritage, archaeology and related fields belonging to e-Science

Priorities to develop



- Coordination of joint activities at national and European level
- Definition and implementation of joint policies
- Requirements gathering
- Definition of common standards to enable real cross-discipline integration
- Implementation of interoperability:
 - at the level of middleware components: common interfaces and methods
 - at application level: when the interoperability is achieved at the level of user applications
 - at semantic and multilingual level

Conclusion



- The goal is to extend the use of e-infrastructures to the communities and the research infrastructures working in the field of Cultural heritage
- The e-infrastructure can support the creation of a Virtual Research Environment involving large communities operating in cultural heritage, arts, and humanities and other sectors in a trans-disciplinary cooperation
- The benefits of a shared e-Infrastructure for cultural heritage, arts and humanities are not only in advancing our understanding of the research in all these field, but also in technological, financial, cultural and educational terms.

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Thanks!

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