Preservation as an e-Infrastructure service:
a Roadmap for cultural heritage

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The DCH-RP Project and the challenges for DCH

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Background
Digital cultural heritage environment

❑ Memory institutions are creating a **large volume of digital content** that needs to be:
  – safely **stored**
  – permanently **accessed**
  – easily **re-used** over time by different end-user groups
❑ Currently national digitization programmes address preservation in a separate manner
❑ Challenge of **a common e-infrastructure for preservation** will bring costs reduced and interoperability enhanced, by shared:
  – **Common procedures**
  – **Workflows**
  – **New skills and competences**

Three integrated projects

The need to offer concrete and robust support to cultural heritage institutions efforts in digital preservation and e-Infrastrucrures 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

Priorities and progamming → **Support and demonstration** → **Roadmap for preservation**

DCH-RP Project

A Coordination Action with cultural institutions, e-Infrastructure providers and a wide network of international organisations willing to contribute to the project

Aims:

- to harmonize data storage and preservation policies in the digital cultural heritage sector at European and international level
- Roadmap for preservation
- Registry of tools and services
- Proof of concepts

Budget: €967.396 (€809.800 from EC)

2012-2014
http://www.dch-rp.eu/

DCH-RP objectives

- ❑ to design a sound Roadmap for the implementation of an e-Infrastructure for preservation of DCH content supported by practical experiments (proofs of concept) in the project partners' countries

- ❑ to progress with the dialogue among DCH institutions, e-Infrastructures, research, and private organisations

- ❑ to establish the conditions for these sectors to integrate their efforts into a common framework

DCH-RP Consortium

- ICCU, IT (coordinator)

- PROMOTER, IT (technical coordinator)

- The National Archive, Sweden

- Service Public Federal de programmation politique scientifique, BE

- Ministry of Culture, Estonia

- Collection Trust, UK

- European Grid Initiative, NL

- EDItEUR, UK

- Italian National Institute of Nuclear and Particle Physics, IT

- Poznan-Supercomputing and Networking Center, PL

- National Information Infrastructure Development Institue, HU

- TERENA, NL

- Michael Culture Association, FR

DCH-RP: a Roadmap for the long-term preservation in DCH

To develop a commonly agreed **vision of distributed digital preservation architecture relying on e-Infrastructures**

Four areas identify the policy domains that require intervention:

- **Harmonisation of data storage and preservation**
- Improved **interoperability, including integration of preservation within the overall workflows for digitisation and online access**
- Establishment of conditions for **cross-sector integration, transferring knowledge and know-how**
- **Governance models** for infrastructure integration, to foster participation in larger e-Infrastructure initiatives, and aggregation and re-use of digital resources

Impact and objectives

❑ The DCH-RP Roadmap will lead to the realization of a **federated preservation infrastructure for digital cultural heritage** taking into account existing solutions and the services and tools of existing and upcoming e-infrastructures.

❑ The Roadmap **will help policy makers** and programme owners to take decisions related to digital preservation and to support CH institutions in defining **practical action plan** with a realistic time frame for its implementation.

Benefits of using e-Infrastructures for distributed digital preservation

- ❑ Backbone connectivity, effective data storage and computing resources,
- ❑ 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
- ❑ Authentication and autorization systems for federated access

DCH-RP Outcomes

❑ **Proofs of Concept.** Through a range of Proofs of Concept, cultural institutions and e-Infrastructure providers work together to experiment with distributed computing and storage infrastructures (NREN, grids, clouds, newer data infrastructures) to store, manage and retrieval cultural digital resources, starting from the targeted specific services identified in the Roadmap.

the ICCU IdP in the Where Are You From (WAYF) service of the IDEM federation part of eduGAIN as results of a PoC

DCH-RP Outcomes

- ❑ **E-Culture Science Gateway** The DCH-RP e-Culture Science Gateway (INFN Catania) aims at proposing a model to enable transparent access to Digital Cultural Heritage contents for as many researchers all around the world as possible.

- ❑ **Partnership with publishers** and journals preservation agencies for investigating which factors or conditions are most likely to encourage publisher participation, such as favourable licensing terms, embargoed access to newly digitised content

DCH-RP Community building efforts

DCH-RP is the only EU project that connects DCH sector to e-Infrastructure

Agreements with EU projects:

- ❑ ARIADNE
- ❑ CHAIN-REDS
- ❑ EUDAT
- ❑ INDICATE
- ❑ Linked Heritage
- ❑ SCAPE
- ❑ SCIDIP-ES
- ❑ APARSEN
- ❑ PRELIDA

7 DCH-RP Workshops

31 Presentations of DCH-RP to other related initiatives, e.g. EGI Forum, EUDAT conference. APARSEN Workshop, …

Project Web site and a show-case on Digital Meets Culture magazine

Social channels on twitter, FB, Google+ and LinkeDIn

Lessons learned

❑ Keep on experimenting services developed by e-Infrastructure

❑ Intensifying the cooperation with the stakeholders

❑ Need for raising awareness about the value chain by making use of e-infrastructures for preservation and need for training

❑ Importance of requirements for data e-Infrastructure about integration, interoperation, access, high trust and security, federated AAI, searching information

❑ Importance of use cases and new services: the market for distributed digital preservation services is still in its infancy

❑ Need to establish a clear governance model for infrastructure integration

❑ Gives criteria on what to preserve and strategies for different types of digital objects

❑ Define business model: who should pay for what?

❑ Solve legal issues

Sustainability issues

❑ There are different dimensions of sustainability that the roadmap has to tackle: the sustainability of the roadmap itself and the sustainability (political, financial, organisational, and technological) of the preservation infrastructure to which the roadmap leads.

❑ For the implementation 'Who will pay' is a major question: different national and regional funding systems need to be understood and common elements identified to support joint programming actions.

Italian EU Presidency

The digitisation and online access to cultural heritage represents a strong opportunity to foster the creative industries and the job creation throughout the reuse of the digital resources.

The Presidency supports the development of Europeana as unique access point to the European cultural heritage, and the national aggregators that play a fundamental role in ensuring core quality content to the European portal.

Italian EU Presidency

Develop cooperation between researchers, providers of e-infrastructure and cultural institutions to:
- implement a federated infrastructure devoted to Cultural Heritage and Digital Humanities
- creation of Virtual Research Communities in the field of DCH and Digital Humanities
- development of recommendations and guidelines for the use of digital infrastructures by cultural institutions

Italian EU Presidency: International conferences

Rome, 2 October 2014, National Library

- The re-use of digital culture content in education, tourism and leisure organized in cooperation with Europeana and ATHENAPlus project

Rome, 13-14 November 2014, National Library

- Research infrastructures and e-infrastructures for DCH organized in cooperation with ARIADNE project

Thank you!

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Catania, 20-21 of January 2014