



An e-infrastructure for the Digital Cultural Heritage sector and the humanities research

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Needs and requirements

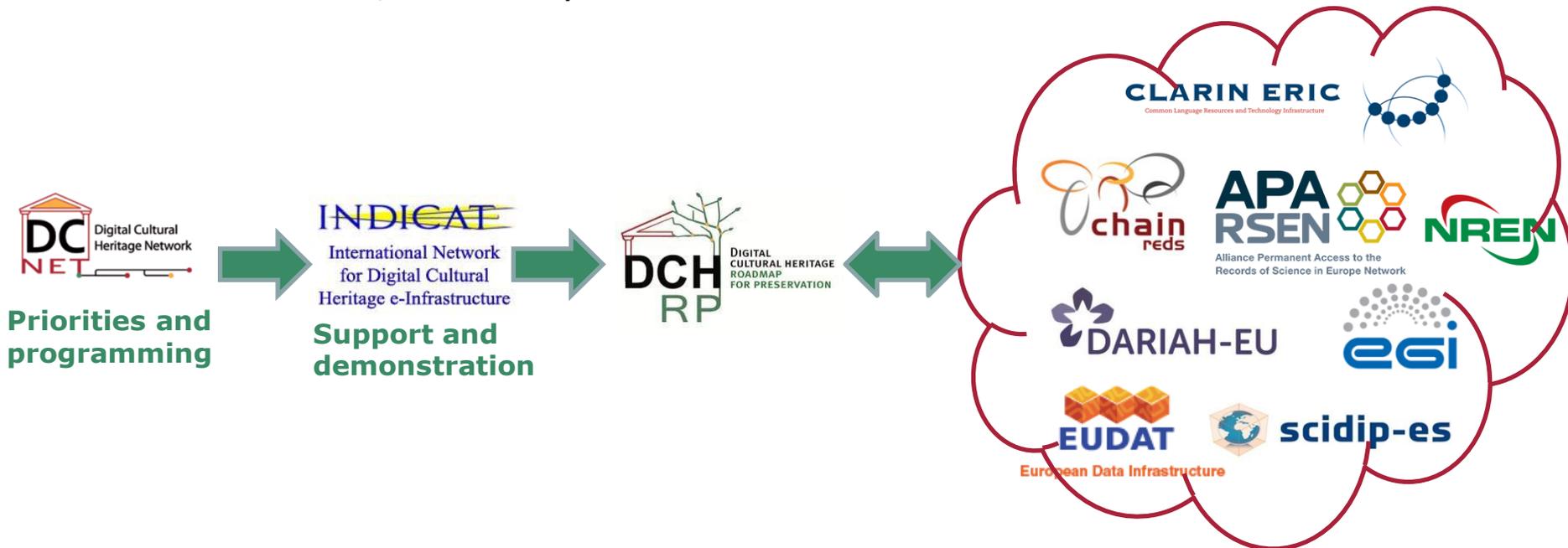


- ❑ Medicine and Natural sciences, including astronomy, biology, chemistry, earth sciences and physics, already make use of e-Infrastructure
 - To generate, curate and analyse research data
 - To develop and explore models and simulations
 - To enable dynamic distributed virtual organisations, facilitating collaboration with information and resource sharing
- ❑ Need for novel e-Infrastructure services are increasing also in Social Science and Humanities, in particular for:
 - research in the digital humanities (what DARIAH deals with)
 - storage and preservation (which is what we are investigating in DCH-RP)
 - semantic search (which is what we have studied in INDICATE),
 - 3D modelling and VR representations

Background and context



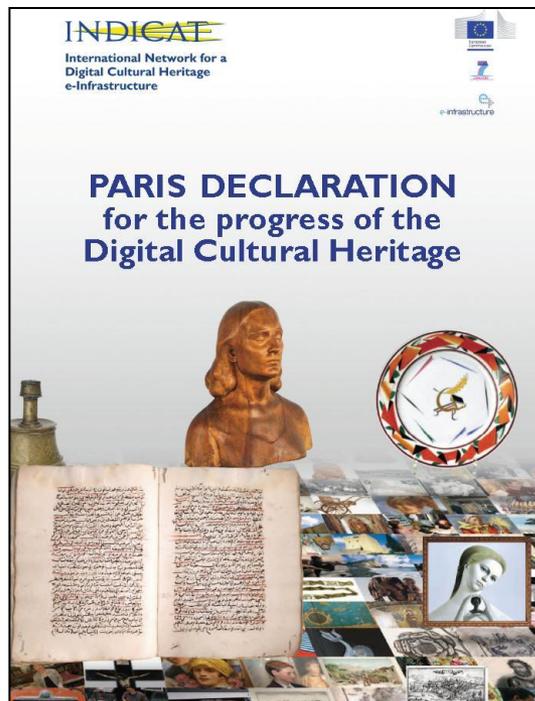
- ❑ e-Infrastructures and DCH communities entered a dialogue
- ❑ several data-infrastructure projects exist and look how to set up data infrastructures, and many include DCH use cases



Paris Declaration



“Our shared vision is that in ten years’ time, access and use of digital cultural heritage should be available to all and that collaboration with the e-Infrastructures community will facilitate realisation of this vision. Dialogue and collaboration between cultural heritage, ICT and e-Infrastructures stakeholders offer important benefits for all sectors.” (<http://www.digitalmeetsculture.net/article/paris-declaration>)



Current state of digitization of CH in Europe



□ Digitisation activity

- 83% of institutions said curatorial care is part of the mission
- 83% of institutions have a digital collection or is currently involved in digitisation activities
- 20% of all collections, that need to be, are digitised
- 89% of audio visual institutions have born digital collections, while 43% of museums of art and history have them
- 34% of institutions have a written digitisation strategy
- About one third of the institutions are included in a national digitisation strategy, for national libraries more than half are included

□ Digital access

- 31% of the institutions have a policy on the use of the digital collections, figures range from 60% for national libraries to 22% for archaeology museums
- 42% of institutions monitor the use of their digital collection
- 85% of institutions use web statistics to measure the use of their digital collections
- By 2014 institutions estimate to make twice as much of their collections accessible through Europeana when compared to today

Current state of digitization of CH in Europe



□ Digital preservation

- 23% of institutions have a written digital preservation strategy, figures range from 44% for national libraries to 12-25% for museums
- About a third of the institutions are included in a national preservation strategy
- 40% of national libraries say there is no national digital preservation strategy
- 30% of the institutions are included in a national digital preservation infrastructure

□ Expenditures

- The estimated total cost of digitising the collections of Europe's museums, archives and libraries, including the audiovisual material they hold is approximately €100bn, or €10bn per annum for the next 10 years
- The cost of preserving and providing access to this material over a 10-year period after digitisation would be in the order of €10bn to €25 bn, provided that centralised repository infrastructure is made available for the purpose

□ Sources

- NUMERIC Study Report: http://cordis.europa.eu/fp7/ict/telearn-digicult/numeric-study_en.pdf
- ENUMERATE Survey Report on Digitisation in European CH Institutions 2012: <http://www.enumerate.eu/fileadmin/ENUMERATE/documents/ENUMERATE-Digitisation-Survey-2012.pdf>
- EC Comité des Sages Report on Cost of Digitising Europe's CH: http://ec.europa.eu/information_society/activities/digital_libraries/doc/refgroup/annexes/digiti_report.pdf

Benefits for CH to use e-infrastructure



- ❑ e-Infrastructures can contribute to faster realise **data infrastructures** that can be accesses at international scale and this is valuable for DCH too
- ❑ e-Infrastructures can contribute to **standardisation** in the data world; for DCH not only “row” scientific data are relevant, but even more information processing, images, AV recording, e-books, etc.
- ❑ e-Infrastructures can support experiments of **new technologies** and provide in this way new services to the embedded data infrastructures (e.g. advanced visualisation of DCH)
- ❑ e-Infrastructures allow for **cost reduction** by avoiding parallel activities in investing for higher volume/throughput and substituting expensive human workforce by cheap machine processes (e.g. cataloguing, linking data)
- ❑ e-infrastructures enhance **processing** and **visualisation** of **complex cultural data** (3d models, virtual reconstructions, etc.)
- ❑ e-infrastructures can offer **connecting facilities** and information services based on these facilities, e.g.: virtual conferences, document sharing, blog and cooperation platforms, etc.

DCH and digital preservation



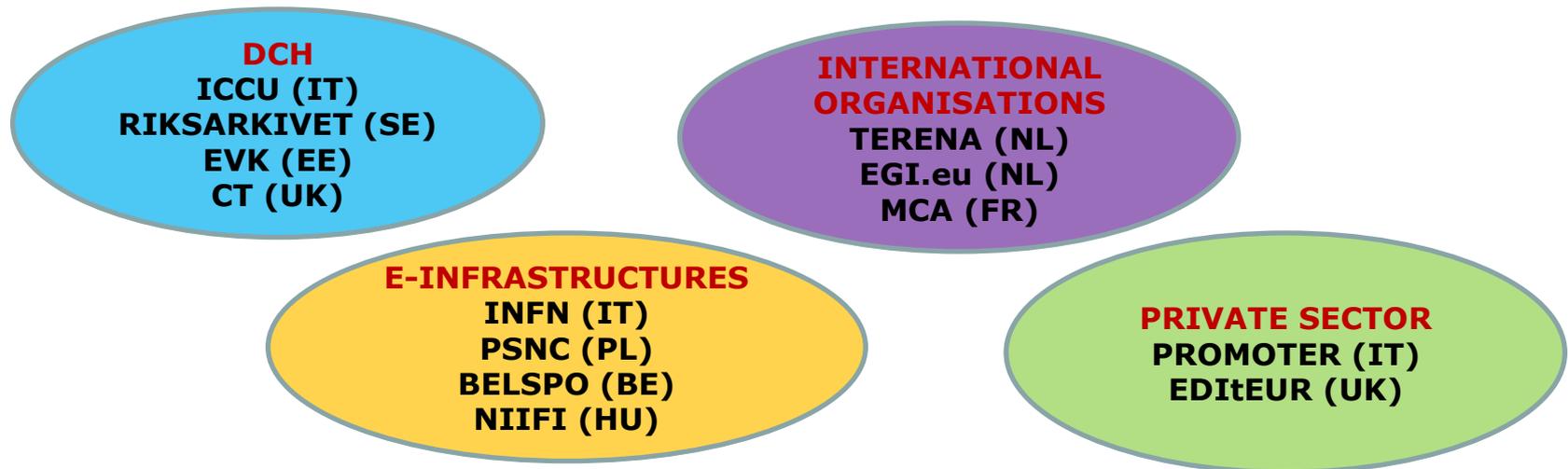
- ❑ The investment in the production of the DCH data is extremely high due because the description of each object requires the **human intervention** of experts in the sector
- ❑ For cultural data the digitisation process **cannot be** just **replicated** (as a physical experiment, for example).
- ❑ Born digital cultural heritage is more and more a reality in the artistic scenario and the data are **complex** and **precious** (e.g. 3D models)

- ❑ **DC-NET** conducted a research and analysis on how the DCH sector can benefit from the use of the e-Infrastructures: the service which was identified as having the highest priority was that of **long term preservation**
- ❑ Each digitisation programme is currently addressing the issue of preservation in a separate manner, a **shared implementation** of common e-Infrastructure layers could be beneficial and cost effective

E-infrastructures for Digital Preservation: DCH-RP case



- ❑ Build upon the knowledge generated by **DC-NET** and **INDICATE**
- ❑ **Preservation** is defined in this context as the combination of preservation of digitised and born-digital content as well as preservation of the metadata associated with that content.
- ❑ **Consortium** composed of 13 partners from 7 European Countries:

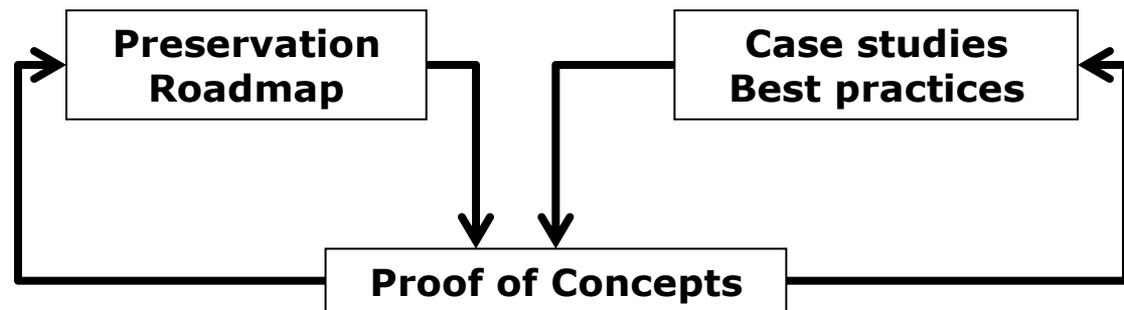


Expected outcomes



- ❑ A **Roadmap** for the implementation of a preservation infrastructure for DCH, intended as the first instance of the Open Science Infrastructure for DCH in 2020
- ❑ Six **Proofs of Concepts**, where cultural institutions and e-Infrastructure providers experiment the actual use of distributed computing and storage infrastructures (NREN, grids, clouds, newer data infrastructures) to store and manage cultural digital resources, starting from the targeted specific services identified in the Roadmap and from real scenarios and user stories provided by the cultural institutions

- Italy
- Poland
- Hungary
- Sweden
- Belgium
- Estonia



The eCulture Science Gateway



- The execution of the experiments is based on the evolution of the **eCulture Science Gateway** developed by the INDICATE project and further improved in DCH-RP: <http://ecsg.dch-rp.eu/>

Register Sign In

DCH RP DIGITAL CULTURAL HERITAGE ROADMAP FOR PRESERVATION

Welcome

- How to Register and Sign-in
- Proofs of Concept
- Back to the DCH-RP website

Follow us on the Social Networks, including the possibility to access the e-Culture Science Gateway from within the Social Network page.

Like Follow

You like this.

DIGITAL CULTURE

Welcome to the DCH-RP e-Culture Science Gateway

The DCH-RP e-Culture Science Gateway (eCSG) is a standard-based web 2.0 demonstrative platform to show the Proofs of Concepts (PoCs) identified by the DCH-RP project and how they fit with the requirements defined in the Roadmap.

Data contained in the eCSG are stored on the European Grid Infrastructure and are accessible through the pan-European GEANT network and the National Research & Education Networks.

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Tools for collaboration in DCH-RP



esi DCH-RP Discussion Read View source View history Go Search

DCH-RP:Main Page

Contents (hide)

- Welcome to the DCH-RP Wiki
- DCH-RP collaborative tools overview
 - EGI SSO
 - Mailing lists
 - Document database
 - Wiki
 - Indico meeting planner
 - Discussion forum
 - EGI blog

Wiki

Welcome to the DCH-RP Wiki

The DCH-RP has just been created, and no general structure has been devised yet. Work Package 5 deals with carrying out the Proofs of Concept (PoC) for this project, and chose the Wiki as one of its collaboration tools. A DCH glossary is currently being developed and will be successively migrated to this Wiki.

DCH-RP collaborative tools overview

The DCH-RP Wiki is part of a set of collaborative tools that EGI.eu as partner in the DCH-RP Wiki contributes (as is) to the project, serving two purposes:

- Facilitate collaboration between partners for the duration of the project
- Be assessed as collaborative tools for inclusion in (or exclusion from) the DCH Roadmap

This section provides an overview of the collaborative tools and their intended use.

EGI SSO

EGI SSO is primarily used as a identity provisioning and group management system. Every collaborative tool used in EGI is integrated with EGI SSO. You can reach EGI SSO to review and manage your account at <https://www.egi.eu/ssso> which is at the same time the entry point for any group administrator to manage group membership.

INDICO Integrated Digital Conference Europe/Amsterdam English Login

Home Create event Help

Home » DCH-RP » Proofs of Concept

Proofs of Concept

The Proofs of Concept team will record its regular meetings here.
Managers: fresa, A.; Prandoni, C.; Drescher, M.

Event Planner

Go to parent category | iCal export | View

August 2013

- 13 Aug Sprint 11 planning meeting

July 2013

- 29 Jul Sprint 10 planning meeting
- 15 Jul Sprint 9 planning meeting

There are 8 events in the past. [Show them.](#)

esi EGI discussion forum

Forum

Welcome to EGI discussion forum! EGI discussion forum is currently in its early design phase. More categories will be added according to your needs. Your contribution, knowledge and comments are warmly welcome.

EGI SSO Login

FAQ Search

It is currently 29 Aug 2013, 19:22

View unanswered posts | View active topics

Board index » Community » DCH-RP All times are UTC + 1 hour [DST]

Forum			
	Topics	Posts	Last post
DCH-RP General Discussion DCH-RP General Discussion	3	3	18 Apr 2013, 16:13 Rosette Vandenbroucke
DCH-RP Case Studies and Best Practices (WP4) Moderator: Rosette Vandenbroucke	1	4	17 May 2013, 17:42 Marco de Niet

Board index » Community » DCH-RP All times are UTC + 1 hour [DST]

Who is online

Users browsing this forum: No registered users and 1 guest

esi European Grid Infrastructure Towards a sustainable grid infrastructure

Document DB

About us User Support Technology Policy Infrastructure Publications Projects Collaborations

Document Server Restricted area Libtool Logged in as Claudio Prandoni

Home » About EGI.eu » Intranet » DocDB

Document List by Topic

[DocDB Home] [New] [Search] [Last 20 Days] [List Authors] [List Topics] [List Events] [Help]

These documents on DCH-RP project and sub-topics are available:

Restrict search by topic to the most recent versions only:

EGI-doc-#	Title	Author(s)	Topic(s)	Last Updated	Status
1916-v1	Proof of Concept 1 Report Sweden	Eva Toller	WP5 DCH-WP5	26 Aug 2013	DRAFT
1699-v11	Material for testing scenario 2.4	Eva Toller	DCH-WP5	19 Aug 2013	DRAFT
1892-v3	Proof of Concept phase 1 reporting template	Michel Drescher	DCH-WP5	12 Aug 2013	DRAFT
1765-v10	Work Progress for scenario 2.4 (internal)	Eva Toller	DCH-WP5	08 Aug 2013	DRAFT
1697-v12	Material for testing scenario 1.3	Eva Toller	DCH-WP5	08 Aug 2013	DRAFT
1722-v17	Work Progress for scenario 1.3 (internal)	Eva Toller	DCH-WP5	08 Aug 2013	DRAFT
1698-v15	Material for testing scenario 2.2	Eva Toller	DCH-WP5	07 Aug 2013	DRAFT
1764-v11	Work Progress for scenario 2.2 (internal)	Eva Toller	DCH-WP5	07 Aug 2013	DRAFT
1677-v3	DCH-RP. Proofs of Concept Scenarios	Michel Drescher	DCH-WP3 DCH-WP6	16 Jul 2013	DRAFT

Communication Platform



www.digitalmeetsculture.net

Interactive online platforms for cooperation and information in the field of digital technologies applied to cultural heritage and the arts

PROMOTER DIGITAL CULTURE Thursday, 29 August 2013, 17:19 UTC

Home Our Mission Events Register / Edit Profile Contacts People Sitemap

PROMOTER DIGITAL MEETS HERITAGE PROMOTER

DIGITAL HERITAGE DIGITAL ART

Login Status
Not currently logged in
Username:
Password:
[login](#) [Forgot?](#) [Register](#)

Send your NEWS

VISIBILITY
Increase the VISIBILITY of your projects or activities

Free text [search](#)

Topics

- 3D imaging & simulation
- architecture
- art and new media technologies
- audio video & music
- computer animation
- digital archive
- digital preservation
- e-infrastructures
- e-learning
- EU projects
- exhibitions
- fine arts
- graphic design
- history & archaeology
- intellectual property rights
- interactivity
- internet
- media

Project Presentation

DCH RP DIGITAL CULTURAL HERITAGE ROADMAP FOR PRESERVATION

DCH-RP will drive the dialogue among DCH institutions, e-infrastructures, research and private organizations, to integrate their efforts into a common work.

DCH-RP
DCH-RP is a coordination action expected to start in October 2012 and lasting 2 years, which will be adding more concrete results in the specific area of the digital preservation of cultural heritage. The main objectives of DCH-RP are: "... Continue reading ..."

Questionnaire
Authentication and Authorisation in the Cultural Heritage community

DCH-RP e-Culture Science Gateway

EDITORIALS

INTERVIEWS

Partners

- ICCU
- belspo
- EDITEUR
- INFN
- ESI
- Michael Culture
- mit
- PROMOTER
- Riksarkivet
- TERENA
- fondazione sistema toscana
- europæana eagle project
- DCH RP
- HARMOSEARCH

Longer term plans towards a DCH infrastructure for preservation



- ❑ The longer term plan is to implement a dedicated infrastructure able to provide **distributed safe storage** and **seamless access** to a “continuum” of data coming from the largest number of small and big cultural institutions in Europe and internationally.
- ❑ **Preservation** services, that are at the core of the DCH-RP project represent one part of the problem, that in fact relies on the fact that the problem of the distributed storage has been solved.

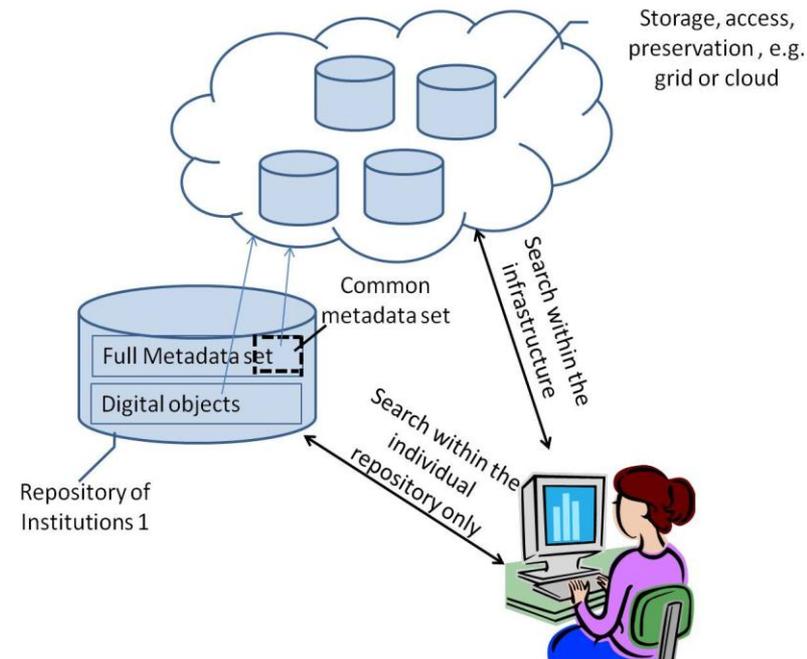
Target Users



- ❑ **researchers** in the humanities
- ❑ **teaching and learning actors** (schools, training centres, university courses)
- ❑ **cultural and creative industry** for the creative use and re-use of the digital cultural content (in this sense, the networks of the creativity projects launched under CIP ICT-PSP in the “Europeana family” would be an interesting target group)
- ❑ And then...
 - **Content providers** (e.g. cultural managers of national institutions and libraries, small institutions, private and public publishers, etc.).
 - **Policy makers** and programme owners
 - **Final users** (e.g. researchers, practitioners, students and amateurs)
 - **e-infrastructure providers** and the R&D institutions

Features and Services

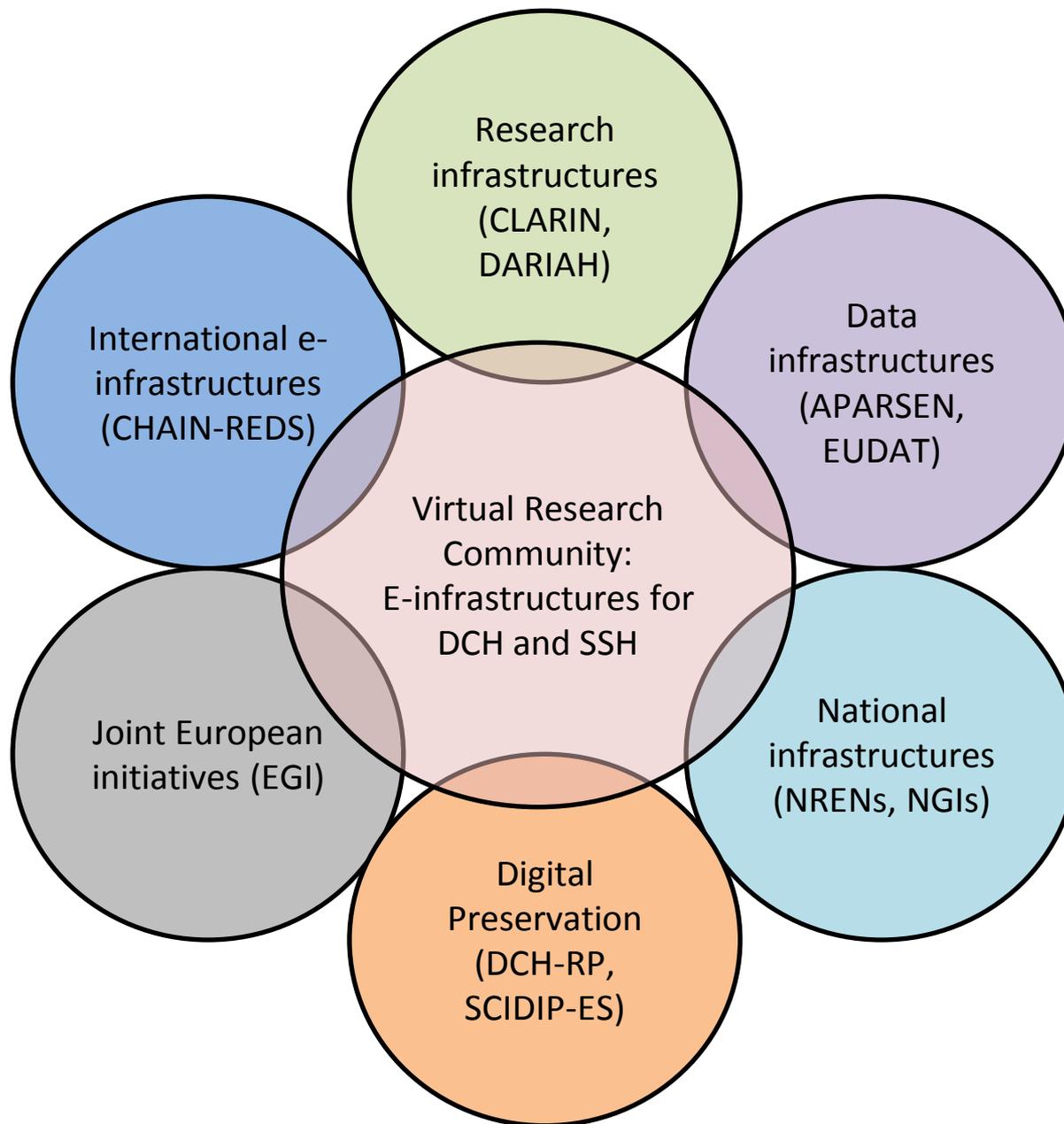
- ❑ **AAA services** to authenticate the users and grant them different types of authorisation to access data
- ❑ Powerful **search engine** (e.g. semantic search)
- ❑ Identification of the best common **metadata model**
- ❑ **Scalability** to adapt on the basis of the increase of the number of users and of data
- ❑ Automatic **extraction** of metadata
- ❑ **End-user interfaces**
 - To owners of cultural digital repositories who want to join the infrastructure (both big and small institutions, e.g. museums, libraries, archives)
 - To individuals, with different access rights (e.g. researchers, teachers, students)
 - To educational institutions (e.g. to manage groups of users associated to a university, a school, a training center)
 - To private enterprises, providing testing access and commercial access to content



Virtual Research Environments & Virtual Research Communities



- ❑ **VRE** and **VRC** are key new paradigms and practical opportunities for doing research
- ❑ Virtualisation and large-scale collaboration play key roles in handling born digital and digitised cultural content
- ❑ VRE brings into close vicinity the resources, VRC brings into close vicinity the partners. They help research in Humanities by:
 - Simplifying the **access** to diverse resources
 - Helping to **extract/uncover/link** useful/important/valid information from spread data archives
 - Enhancing **visualisation** of complex cultural data (3D, virtual environments)
 - Enabling the connection of diverse parallel activities on separate DCH segments
 - Supporting management, administration, documentation, dissemination, cooperation
- ❑ VRCs can also serve as **competence centres** facilitating European and global collaboration in the DCH and humanities research and enabling joint activities between diverse organisations, projects and networks



Conclusions



- ❑ The vision for the next two decades is to implement a **federated infrastructure** to support the application of open science in the arts and the humanities
- ❑ The use of existing **e-infrastructure** for research and academia (including NREN, NGI and the newer data infrastructures) would be an efficient channel for the delivery of advanced services to the DCH
- ❑ VRE and VRC can contribute towards establishing a **European platform of integrated services in DCH**
- ❑ Such European platform will combine **flexible organisation** and **technical framework** to make interoperable related local-national-international activities
- ❑ **Federated collaboration** of cultural institutions, humanities research and e-Infrastructures providers can result in true VRCs that use for their operations the European platform with new organisational, operational and business models

Next appointments



- ❑ October 30th, 2013 – Rome
 - Preservation Workshop at the 2nd **EUDAT Conference**

- ❑ November 7th, 2013 – Vilnius
 - Networking Session at the **ICT 2013 Conference**



Thank you!

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