



# Authentication and Authorisation in the Cultural Heritage community (the DCH-RP point of view)

*Roberto Barbera*

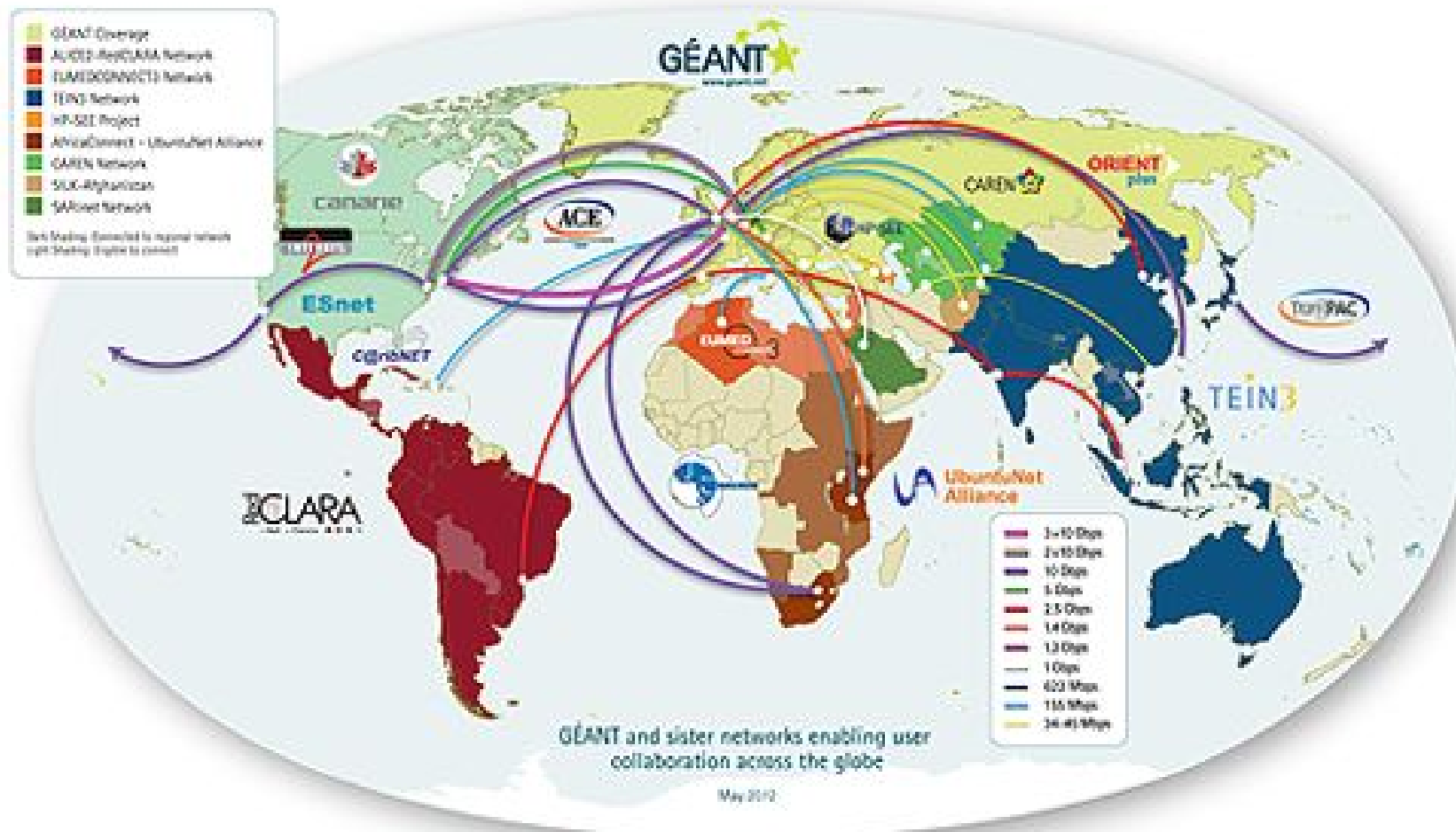
*Univ. of Catania & INFN – Italy*

# Outline

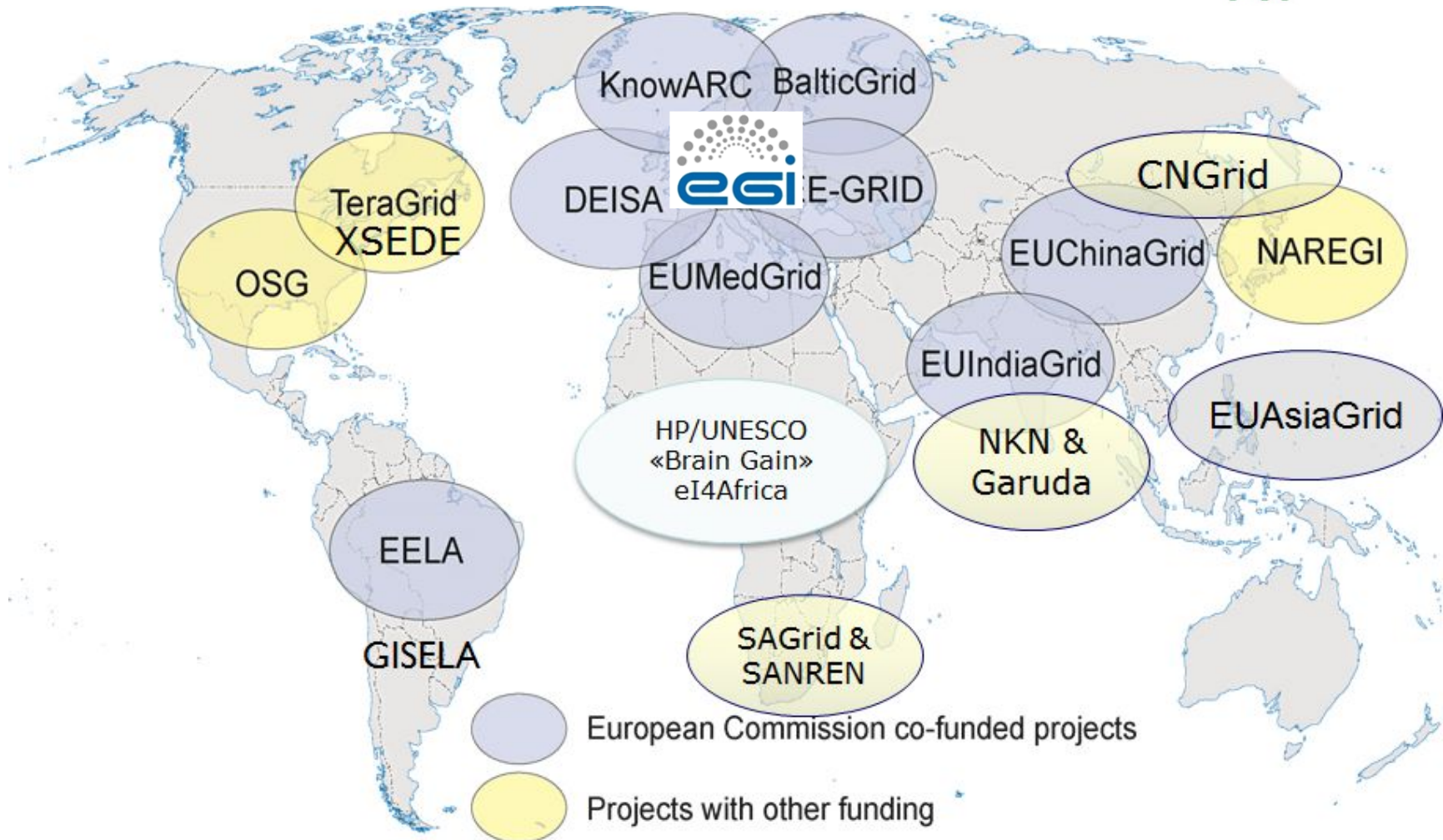


- Introduction and driving considerations
- The DCH-RP AAI Survey
- The DCH-RP e-Culture Science Gateway
- Summary and conclusions

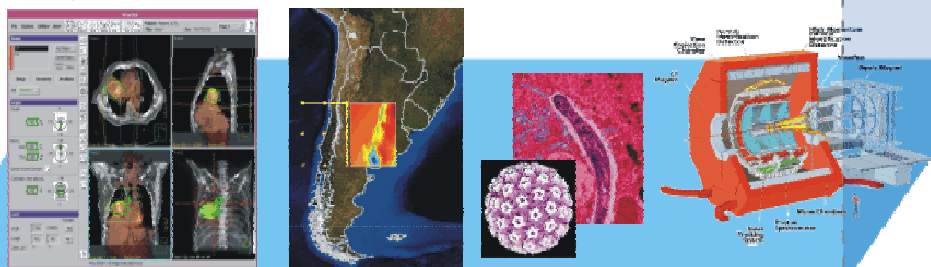
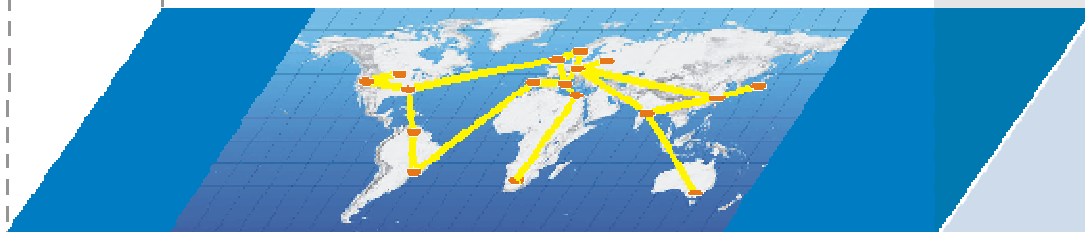
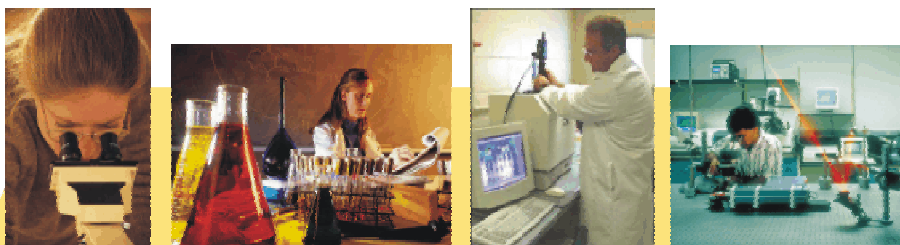
# Research networks at «global» scale



# The "Global" Grid



# e-Science



➔ **Virtual Research Communities**

➔ **e-Infrastructure**

➔ **Applications**

➔ **Data**

➔ **Instruments**

# Why e-Infrastructures also for Arts and Humanities?



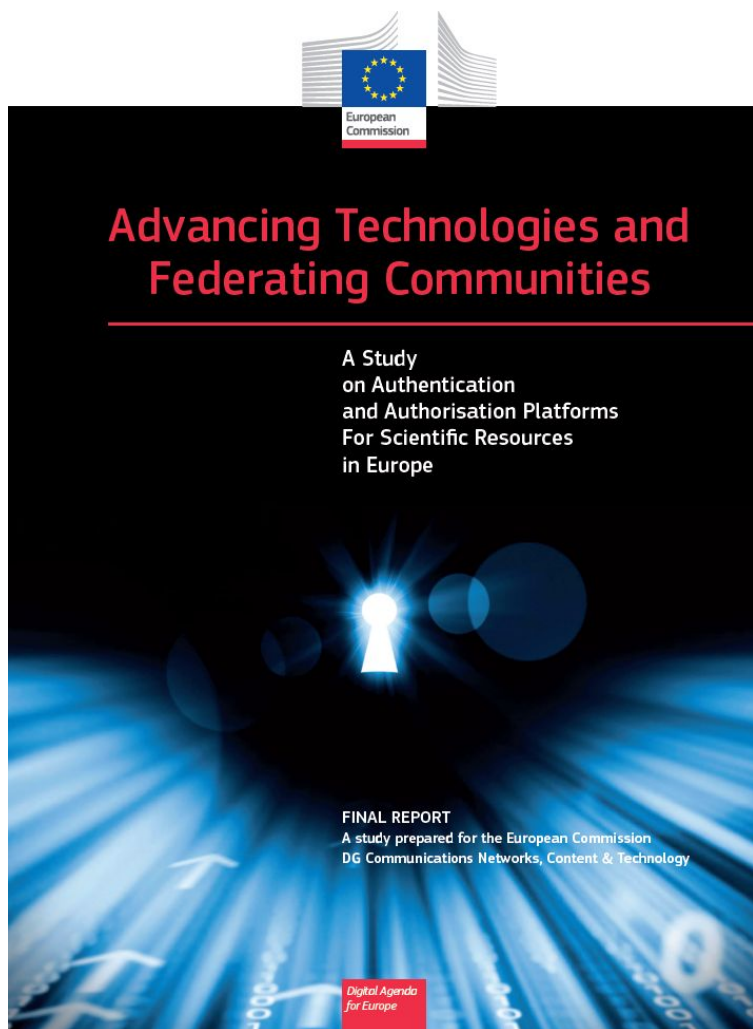
- ❑ High performance/throughput computing systems:
  - Large scale, computationally intensive, problems can be tackled, e.g. “ab initio” sound creation, document/image digital restoration, etc.;
- ❑ High performance storage systems:
  - Geographically distributed replicas of files
    - Fault-tolerant digital preservation;
- ❑ Simplified authentication systems:
  - **Single Sign-On (SSO); support of Identity Federations**
- ❑ Fine-grained authorization systems:
  - Allow to precisely define “who”:
    - Individual user(s), group(s), organization(s), the whole world;
  - And “what”:
    - Read/edit/delete data and metadata;
    - Search, browse;
    - Creation of new repositories;
    - Role assignments, etc.

# The TERENA AAA Study (Objectives)



The goal has been broken down into two objectives:

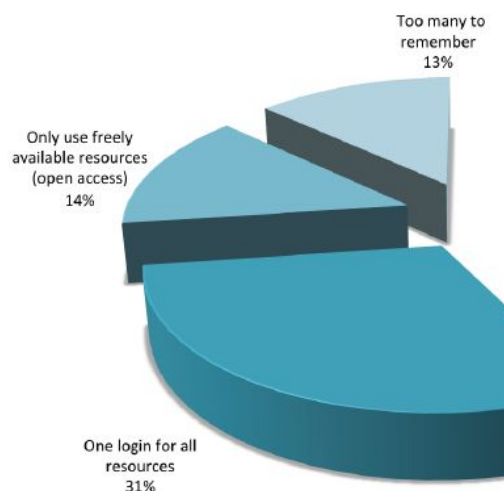
1. A collection of users' access requirements coming from different communities
2. A gap analysis of the existing AAI's used in the realm of research and education, the use-cases they support and the associated challenges



# The TERENA AAA Study (Findings)

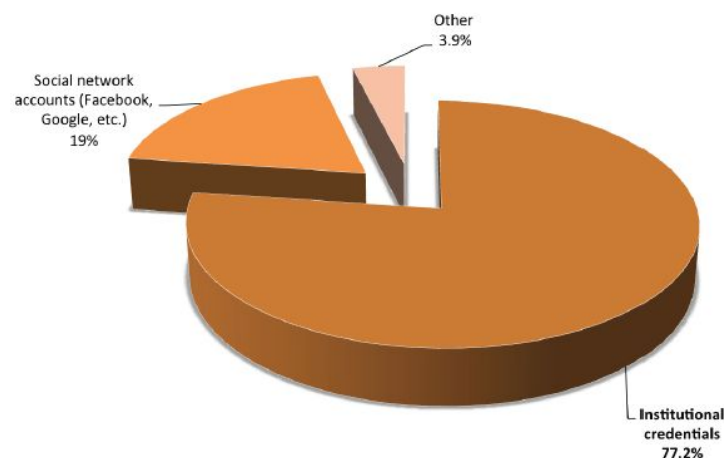


*Nearly half of researchers use more than one credential, but a large majority would prefer to access all resources using their institutional credentials.*



**Figure 2.4: Number of credentials used by researchers**

*Researchers primarily use their institutional credentials for authentication (Figure 2.3), although a not insignificant number (19%), use their social network account credentials to access scientific information.*

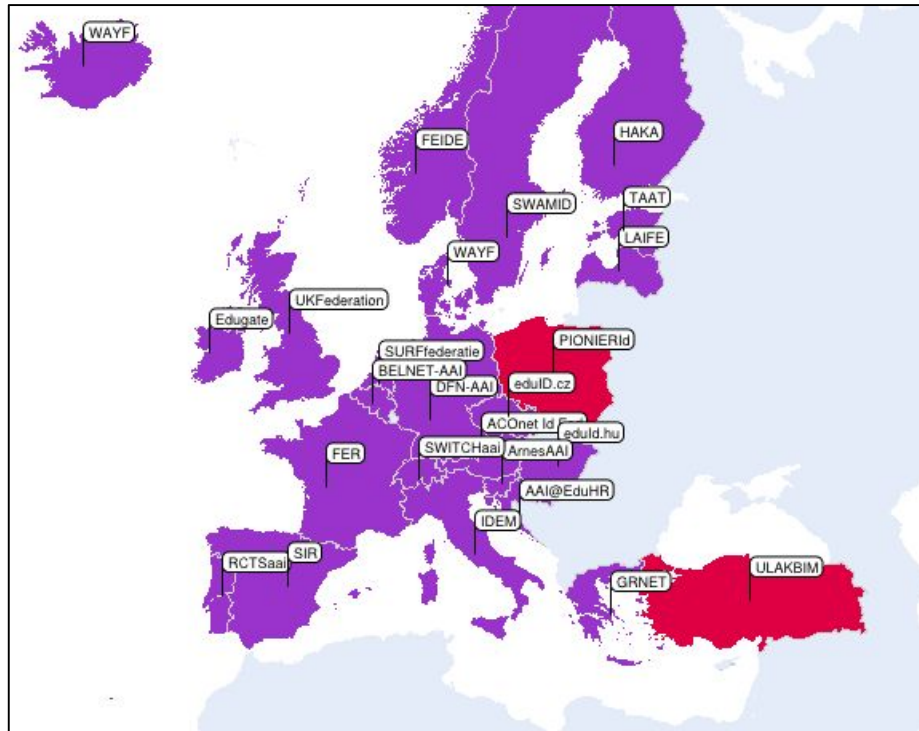


**Figure 2.3: Credentials used by researchers**

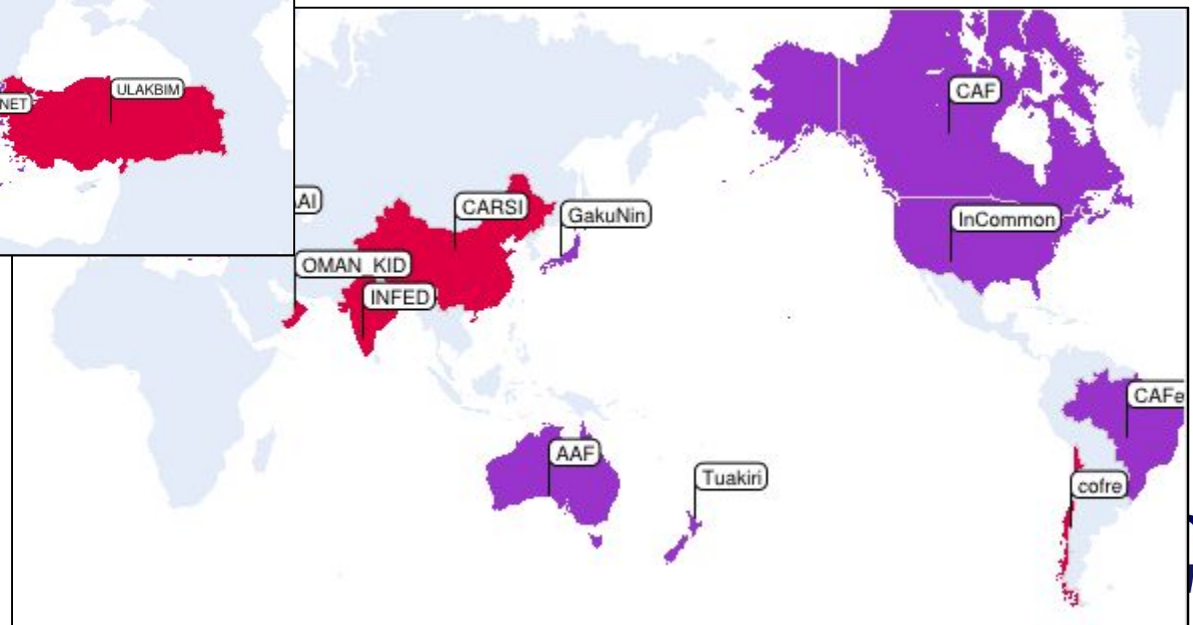


# Identity Federations in the World

(<https://refeds.org>)



1,500 Institutions  
2,100 Services  
>17 million people  
**worldwide**

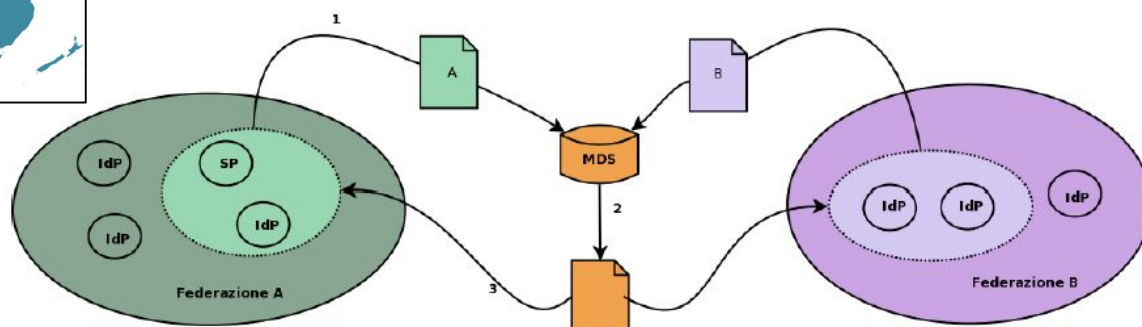
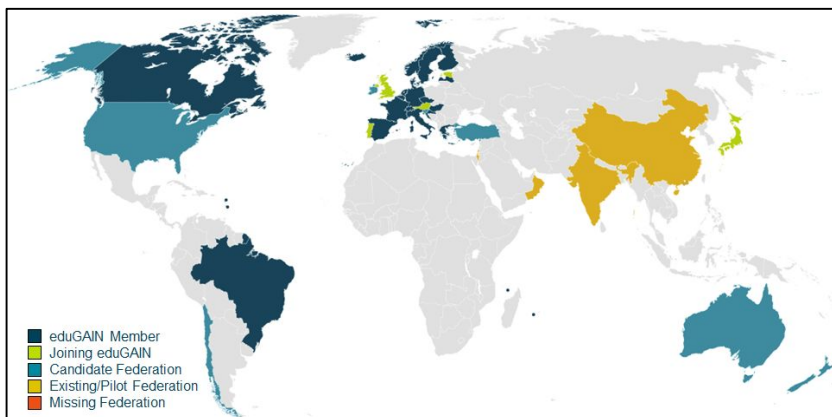
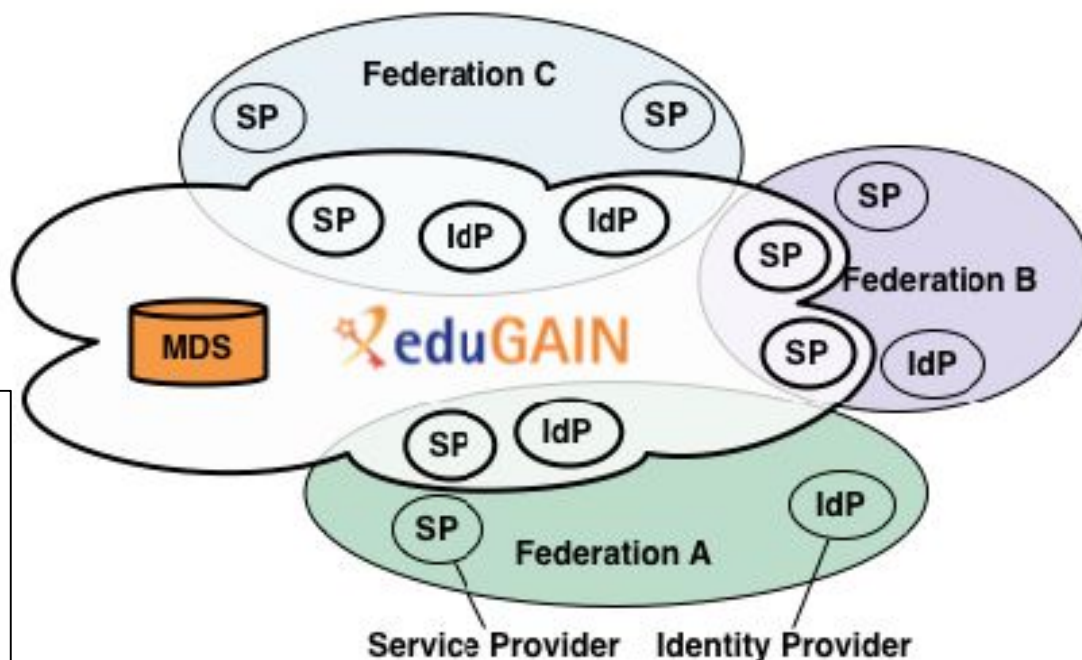


■ Pilot ■ Production

# The eduGAIN inter-federation ([www.edugain.org](http://www.edugain.org))



eduGAIN members



# The TERENA AAA Study (Recommendations)



| Recommendation  | Action Required  | Main Stakeholder(s)  | Area             |
|---|--|--|------------------|
| <p>Enhance existing AA infrastructures to address the demands of research communities for accessing different types of services in a manageable and secure way.</p> | <p>AAA support for mobile access;</p> <p>Support for non-Web browser applications;</p> <p>Develop security token translation services to enable inter-operability of different AAIs;</p> <p>Provide guest IdPs for users that cannot rely on an institutional IdP;</p> <p>Allow for effective resource usage accounting for distributed and heterogeneous environments;</p> <p>Enable the uptake and use of persistent identifiers within AAIs;</p> <p>Support social network identities in combination with institutional identities to address specific use-cases for the SDI.</p> | <p>National Identity Federations, eduGAIN, Research collaborations (i.e., big scientific projects)</p> | <p>Technical</p> |

# DCH-RP AAI Survey

([www.dch-rp.eu](http://www.dch-rp.eu))



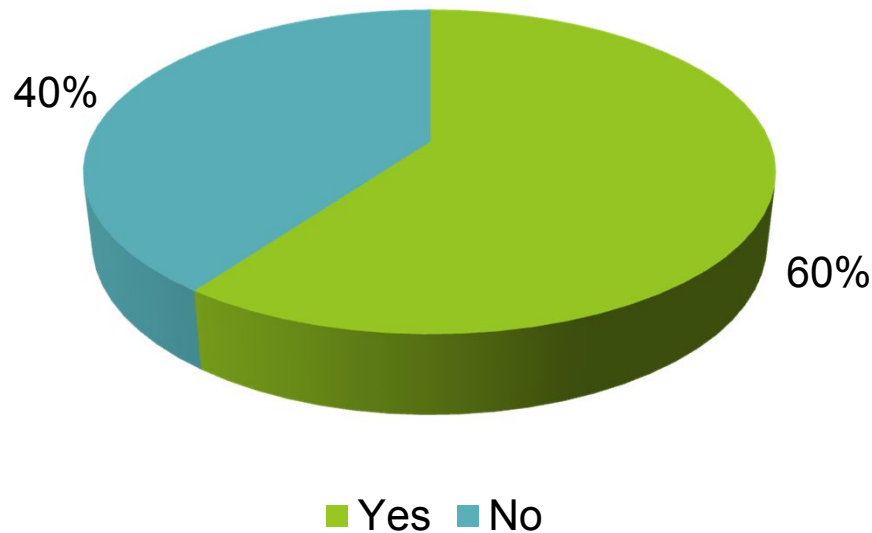
- “Digital Cultural Heritage Roadmap for Preservation” (*DCH-RP*) is a coordination action supported by the European Commission under the e-Infrastructure Capacities Programme of Seventh Framework Programme for Research (FP7)
- A survey about AAI has been started both within and outside the project community
  - <http://dch-rp.eu/index.php?en/71/news-archive/6/dch-rp-questionnaire>
  - 20 organisations already filled the survey
    - Mainly research and cultural organisations

# DCH-RP AAI Survey

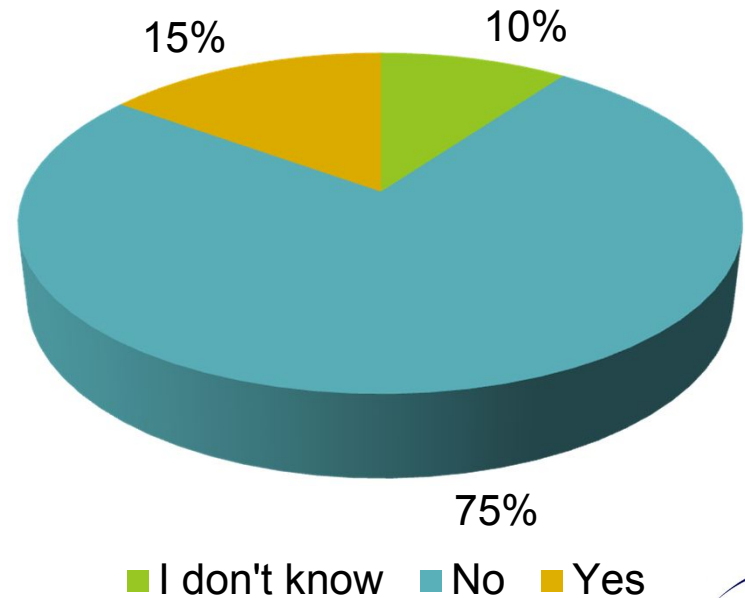
(Current findings)



**Are you aware of federated access or of Identity Federations?**



**Is your institution part of a national Identity Federation?**

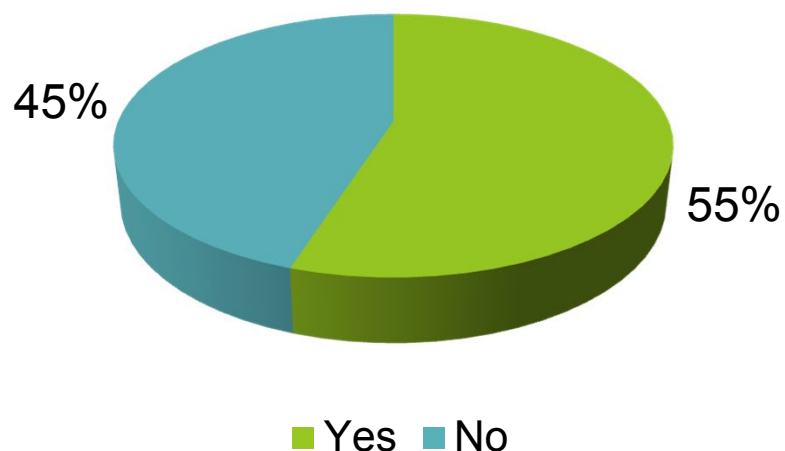


# DCH-RP AAI Survey

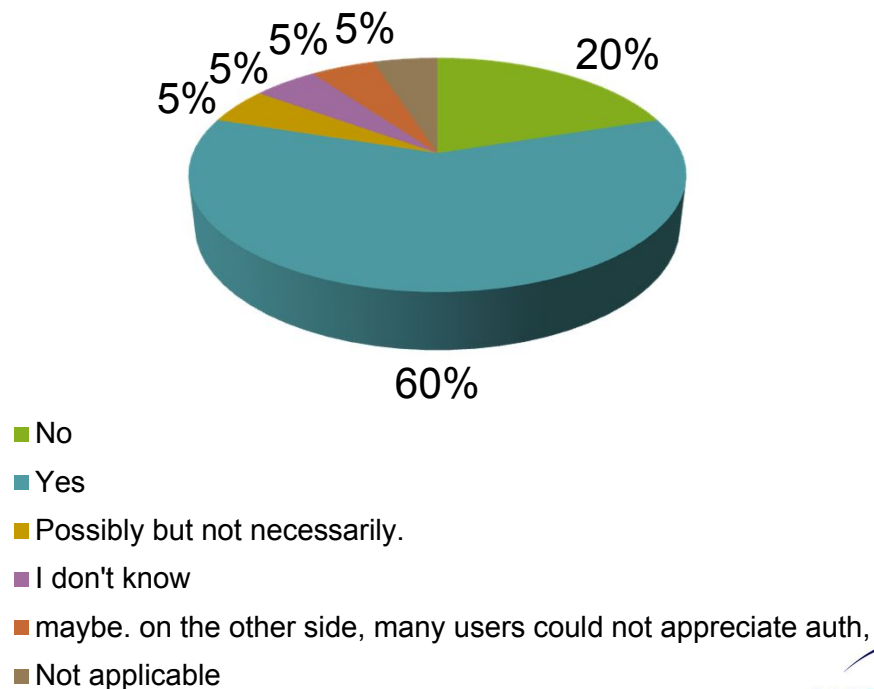
(Current findings)



**Are you aware that in many European countries Identity Federations are operated by the NRENs?**



**Do you think your users would benefit if your service would be part of an existing Identity Federation?**

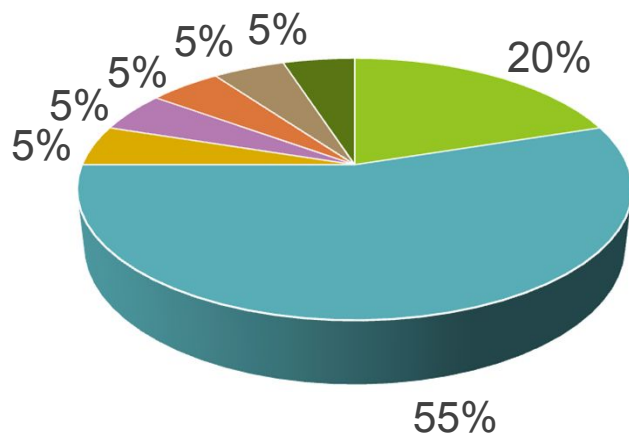


# DCH-RP AAI Survey

## (Current findings)

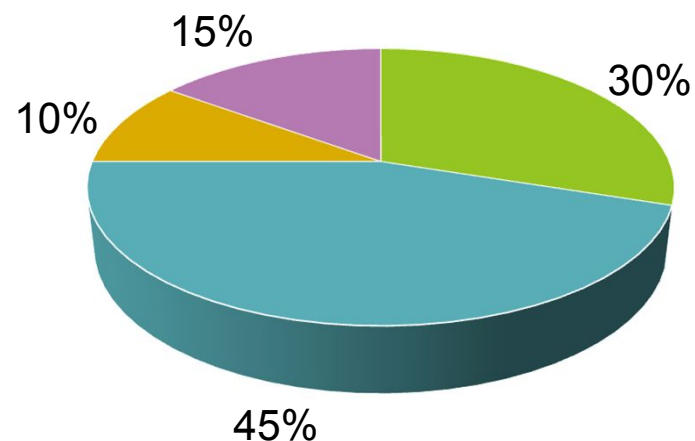


**Do you see any problems if users, in order to access to your service, are authenticated by a "catch-all" Identity Provider?**



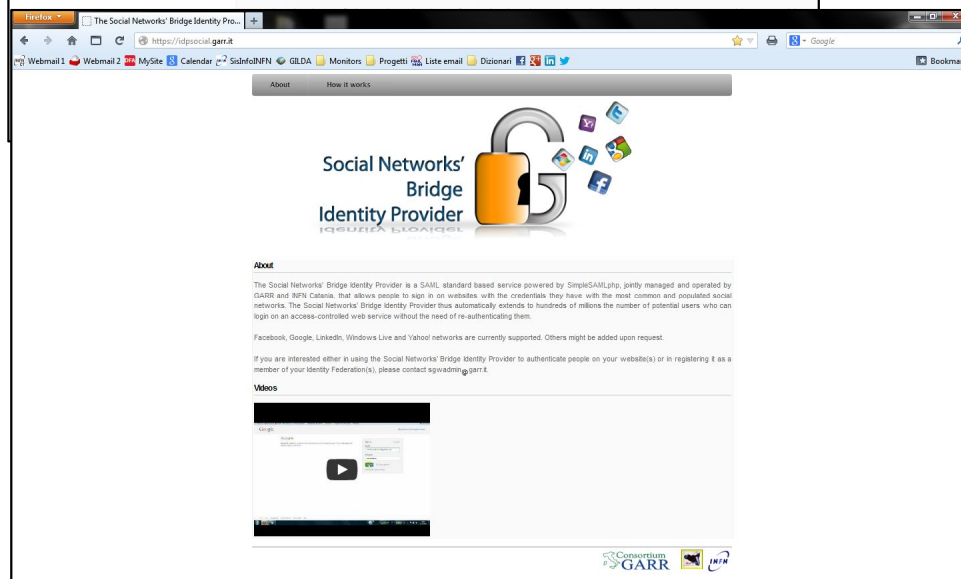
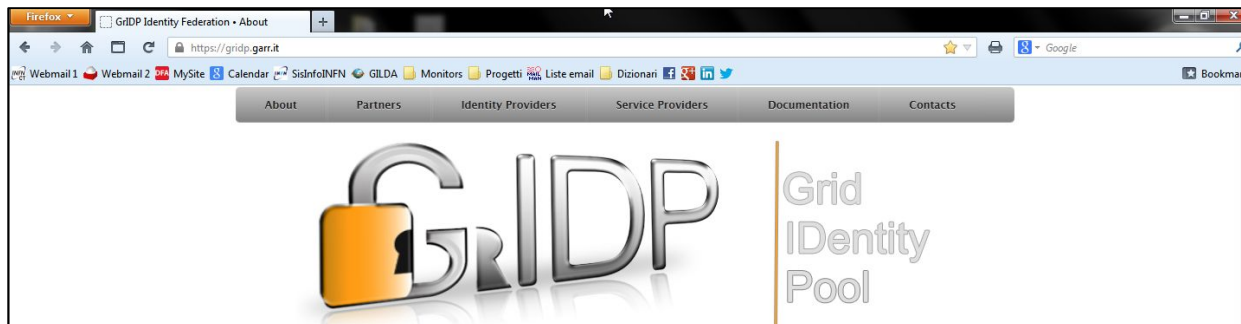
- Yes
- No
- I don't see any problems, but for sure others in my organization will.
- I don't know
- Our users need to be authenticated by us
- Possible issue related to spread of personal data
- Not applicable

**Would you like to get support to create an Identity Provider to manage users accounts for your organization?**



- No
- Yes
- I don't know
- Not applicable

# The GrIDP "catch-all" federation (<http://gridp.garr.it>)



**About**

The Identity Provider Open (IDPOPEN), formerly Identity Provider Catania (IDPCT), is a SAML standard based service powered by Shibboleth and jointly managed by GARR and INFN Catania that allows people to check their identity when they sign in on web pages and Science Gateways that require user authentication.

IDPOPEN is the "catch-all" Identity Provider of the Grid Identity Pool (GrIDP) federation and currently authenticates the users of several Service Providers

If you want to register as member of IDPOPEN, please fill this form

If you are interested in either using IDPOPEN to authenticate people on your website(s) or registering it as an Identity Provider of your Identity Federation(s), please contact [sgwadmin\\_at\\_garr.it](mailto:sgwadmin_at_garr.it)





# The Open and Social IdP's

SELECT YOUR IDENTITY FEDERATION


- Catch-all: GrIDP, GIDP
- Worldwide: eduGAIN, eduGAIN
- Brazil: CAFé
- Italy: IDEM, idem garr-aa
- Spain: SIR, SIR
- Chile: COFRE, COFR
- Portugal: RCTSaai, RCTSaa

SELECT YOUR IDENTITY PROVIDER

- Catch-all: IDPOpen GARR, IDPOpen
- Social: Social Networks' Bridge IdP
- The Netherlands: EGI.eu, EGI
- France: maat-G IdP, maat
- Italy: Istituto Nazionale di Fisica Nucleare, INFN
- Mexico: FIdMex IdP, FIdMex
- Not Sure? Click Here

Social Networks' Bridge Identity Provider

In order to use this service of the portal <https://ecsg.dch-rp.eu>, please sign in using your account on the same social network you specified when you registered.

Developed and maintained by 

In case of problems, please send an email to [system.support@garr.it](mailto:system.support@garr.it) with their description.  
Do not bookmark this page! After login you will be redirected to the web page containing the service of the portal you wanted to use.

Consortium GARR, IMN

IDPOpen The Identity Provider Open

username

password

[Change password](#)

SIGN IN

REGISTER

Powered by Shibboleth

Developed and maintained by GARR, COMETA and INFN

# The DCH-RP e-Culture Science Gateway (<http://ecsg.dch-rp-eu>)



Welcome

- How to Register and Sign-in
- Proofs of Concept
- Mobile Applications
- 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.

Follow

## 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.

If you do not yet have an account, find [here](#) the instructions to register and sign in. Otherwise, click on "Proofs of Concept" in the left frame to browse the repositories available and start browsing them. If, instead, you are interested in the e-Culture Science Gateway mobile apps, click on "Mobile Applications".

Data accessible through the eCSG, both this web-based one and the mobile app, are stored on the European Grid Infrastructure and are accessible through the pan-European GEANT network and the National Research & Education Networks.

DCH-RP Project  
c/o ICCU  
viale Castro Pretorio, 105  
00185 Roma, Italy  
tel. + 39 06 49210427  
Contacts: [account](#) - [project](#) - [support](#)

[Privacy Policy](#) - [Terms of Use](#)

This is a Service Provider of:

Copyright 2013 DCH-RP Project

Developed and maintained by [INFN Catania](#)  
Powered By [Liferay](#)

# eCSG Access Workflow – First Authentication



1. sign in



2. authN

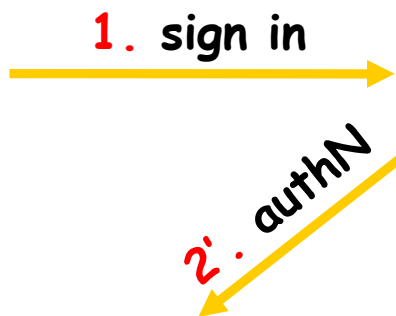
A screenshot of the IDPOPEN registration page. The page has a header with "About", "Service Providers", "Documentation", "Register", and "Account" links. The main content area is titled "IDPOPEN The Identity Provider Open" and "Register". It contains a "Personal information" section with fields for: Given Name, Family Name, Title, Address, Phone, Desired username, Password, Confirm password, Country (dropdown), Organisation (dropdown), and Email Address. There is also a field for "Additional Email Addresses". Below this is a "Validation" section with a CAPTCHA and a "register" button. At the bottom, there is a "Note" section with a link to the account page.

A screenshot of the "SELECT YOUR IDENTITY FEDERATION" screen. It features a dark blue header with a downward arrow icon. Below the header are three rows of identity federation options: "Catch-all" with GrIDP logo, "Worldwide" with eduGAIN logo, and "Italy" with IDEM logo. At the bottom, there is a red-bordered box containing a "Not Sure? Click Here" button with a star icon and a right-pointing arrow. The footer includes logos for Consortium GARR and INFN, and text "Developed and maintained by" and "Powered by Shibboleth".

Registration to IDPOPEN GARR



# eCSG Access Workflow – First Authorisation



SELECT YOUR IDENTITY FEDERATION

SELECT YOUR IDENTITY PROVIDER

IDPOPEN GARR

Social Networks' Bridge IdP

username

password

SIGN IN

REGISTER

Powered by Shibboleth

Developed and maintained by Consortium GARR and INFN

Registration to the eCSG

Welcome to the DCH-RP e-Culture Science Gateway

Dear user, you have been successfully authenticated by your Identity Provider to access this service but, in order to use it, you have to complete and submit the authorisation form you find below.

Authorisation Request

Please, enter your data

Title: [dropdown] Country: [dropdown]

Name: Roberto Organisation: [dropdown]

Surname (or Family name): Barbera Address: [input]

Skype Contact: [input] Telephone: [input]

E-mail: roberto.barbera@ct.infn.it If you are already a member of an Identity Federation, please specify the 'same' email address you are registered with in the Federation

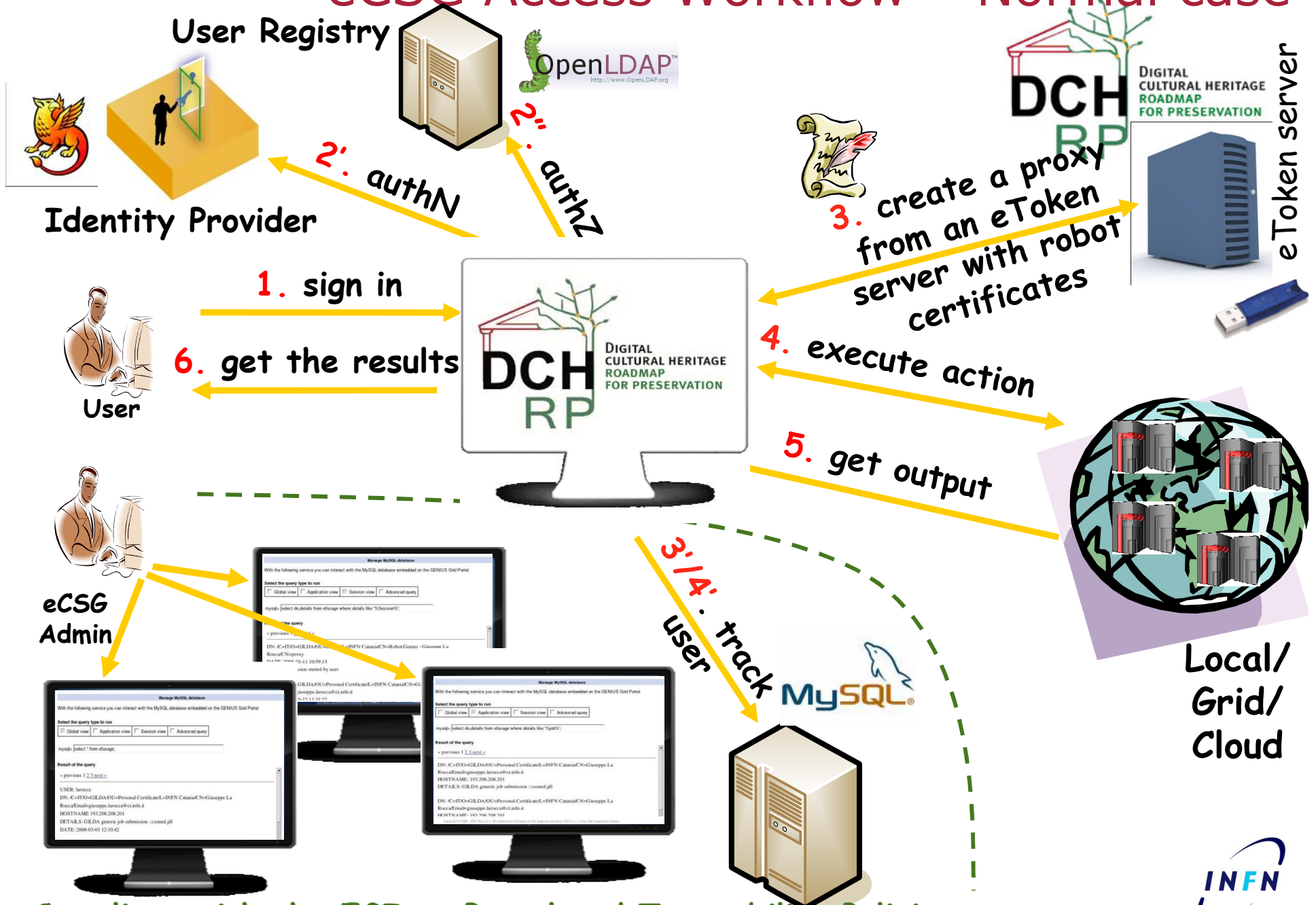
A comma separated list of email to associate with this account: roberto.barbera.ct@gmail.com

Send Reset

User Registry



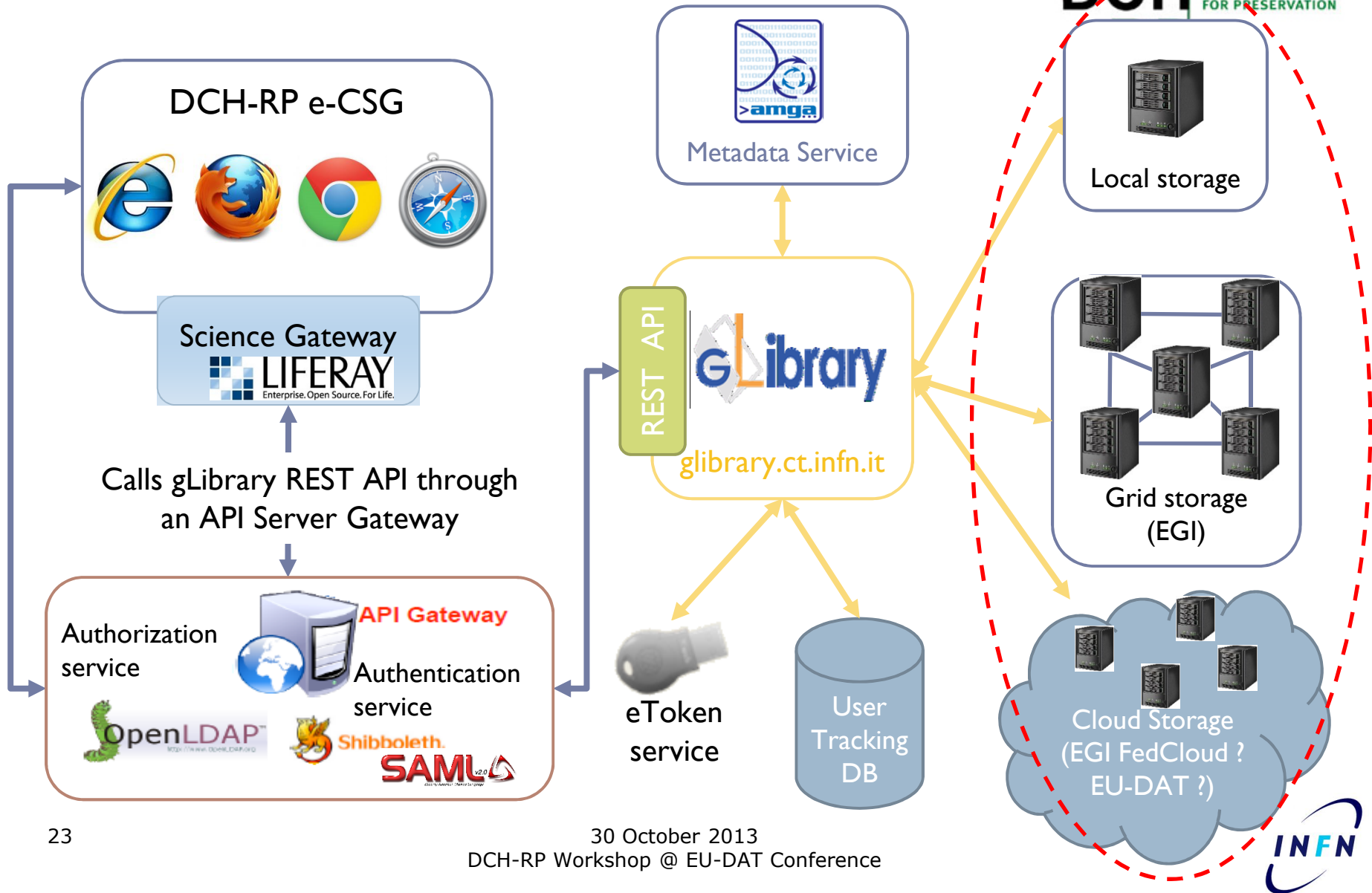
# eCSG Access Workflow – Normal case



Compliant with the EGI.eu Portal and Traceability Policies



# The e-CSG Architecture





- gLibrary is a **framework** developed by INFN that provides a simple yet powerful system to **store, organize, search** and **retrieve** “**digital assets**” in distributed repositories built on grid/cloud/local storage infrastructures
  - hides the underlying technical details to the users
- “**digital asset**”:
  - digital object + corresponding metadata



# The DCH-RP Proofs of Concept (<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
  - BELSPO PoC**
  - ICCU PoC
  - INDICATE Use Cases
- Mobile Applications
- 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 You and one other 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.

If you do not yet have an account, find [here](#) the instructions to register and sign in. Otherwise, click on "Proofs of Concept" in the left frame to browse the repositories available and start browsing them. If, instead, you are interested in the e-Culture Science Gateway mobile apps, click on "Mobile Applications".

Data accessible through the eCSG, both this web-based one and the mobile app, are stored on the European Grid Infrastructure and are accessible through the pan-European GEANT network and the National Research & Education Networks.

DCH-RP Project  
c/o ICCU  
viale Castro Pretorio, 105  
00185 Roma, Italy  
tel. + 39 06 49210427  
Contacts: [account](#) - [project](#) - [support](#)

Privacy Policy - Terms of Use

This is a Service Provider of:

GRIDP idem garr aai eduGAIN

Developed and maintained by [INFN Catania](#)  
Powered By [Liferay](#)

Copyright 2013 DCH-RP Project



# The BELSPO PoC



BELSPO Repository

| Thumb | object_nu... | object_name  | institution_name | preref          | creator                             | material | alterna |
|-------|--------------|--------------|------------------|-----------------|-------------------------------------|----------|---------|
|       | d000799      | negatief z/w | KIK-IRPA         | 52132,<br>52132 | onbekend,<br>A.C.L.                 | plaat    | 287     |
|       | d000755      | negatief z/w | KIK-IRPA         | 52133,<br>52133 | onbekend,<br>A.C.L.                 | plaat    | 287     |
|       | d000414      | negatief z/w | KIK-IRPA         | 55270,<br>55270 | onbekend,<br>K.M.S.K.,<br>Antwerpen | plaat    | 304     |
|       | d000034      |              | KIK-IRPA         | 55871,<br>55871 |                                     |          | 308     |
|       | d000035      |              | KIK-IRPA         | 55872,<br>55872 |                                     |          | 308     |
|       | d000039      |              | KIK-IRPA         | 56228,<br>56228 |                                     |          | 310     |
|       | d000036      | negatief z/w | KIK-IRPA         | 57731,<br>57731 | onbekend                            | plaat    | 319     |

Page 1 of 9 Clear All Filters Displaying 1 - 50 of 450

# The ICCU PoC



ICCU Collections

- ICCU Collections
  - Periodici BUAR
  - Testo a stampa
  - Fondo Urbinate

| Thumb | bib_dc_title   | bib_dc_description   | bib... | se | nomenci...      | bib_c |
|-------|--|--|--------|----|-----------------|-------|
|       | Tractado dela caualleria, dela gineta y brida: e nel qual se contienen muchos primores, assi en las señales delos cauillos, ... Compuesto por don Iuan Suarez de Peralta, .. | marca (E00300) in fine, Cors. ; rom, Segn.: ¶4, A-L8 M10 (M10 bianca), Iniziali xil. ornate, Stemma xil. n.i. a c. ¶2v. e dell'A. a c. ¶3v, 1 v. - Fondo Urbinate. - Taglio colorato di rosso, 'provenienza:' Provenienza: Libreria impressa dei duchi di Urbino., 'marca:' BVEM001322 In cornice figurata: una doppia croce su una sfera. Ai lati iniziali F.D. In fine   | 1580   | 12 | Illustrazione   | R     |
|       | Tractado dela caualleria, dela gineta y brida: e nel qual se contienen muchos primores, assi en las señales delos cauillos, ... Compuesto por don Iuan Suarez de Peralta, .. | 'impronta:' soY. o,or a,on nodo (3) 1580 (A), Marca (E00300) in fine, Cors. ; rom, Segn.: ¶4, A-L8 M10 (M10 bianca), Iniziali xil. ornate, Stemma xil. n.i. a c. ¶2v. e dell'A. a c. ¶3v, 1 v. - Fondo Urbinate. - Taglio colorato di rosso, 'provenienza:' Provenienza: Libreria impressa dei duchi di Urbino., 'marca:' BVEM001322 In cornice figurata: una doppia croce su una sfera. Ai lati iniziali F.D. In fine | 1580   | 13 | Pagina 4 recto  | R     |
|       | Tractado dela caualleria, dela gineta y brida: e nel qual se contienen muchos primores, assi en las señales delos cauillos, ... Compuesto por don Iuan Suarez de Peralta, .. | 'impronta:' soY. o,or a,on nodo (3) 1580 (A), Marca (E00300) in fine, Cors. ; rom, Segn.: ¶4, A-L8 M10 (M10 bianca), Iniziali xil. ornate, Stemma xil. n.i. a c. ¶2v. e dell'A. a c. ¶3v, 1 v. - Fondo Urbinate. - Taglio colorato di rosso, 'provenienza:' Provenienza: Libreria impressa dei duchi di Urbino., 'marca:' BVEM001322 In cornice figurata: una doppia croce su una sfera. Ai lati iniziali F.D. In fine | 1580   | 25 | Pagina 10 recto | R     |
|       | Tractado dela caualleria, dela gineta y brida: e nel qual se contienen muchos primores, assi en las señales delos cauillos, ... Compuesto por don Iuan Suarez de Peralta, .. | 'impronta:' soY. o,or a,on nodo (3) 1580 (A), Marca (E00300) in fine, Cors. ; rom, Segn.: ¶4, A-L8 M10 (M10 bianca), Iniziali xil. ornate, Stemma xil. n.i. a c. ¶2v. e dell'A. a c. ¶3v, 1 v. - Fondo Urbinate. - Taglio colorato di rosso, 'provenienza:' Provenienza: Libreria impressa dei duchi di Urbino., 'marca:' BVEM001322 In cornice figurata: una doppia croce su una sfera. Ai lati iniziali F.D. In fine | 1580   | 30 | Pagina 12 verso | R     |
|       | Tractado dela caualleria, dela gineta y brida: e nel qual se contienen muchos primores, assi en las señales delos cauillos, ...  | 'impronta:' soY. o,or a,on nodo (3) 1580 (A), Marca (E00300) in fine, Cors. ; rom, Segn.: ¶4, A-L8 M10 (M10 bianca), Iniziali xil. ornate, Stemma xil. n.i. a c. ¶2v. e dell'A. a c. ¶3v, 1 v. - Fondo Urbinate. - Taglio colorato di rosso, 'provenienza:' Provenienza: Libreria  | 1580   | 47 | Pagina 21 recto | R     |

Page 1 of 651 Clear All Filters Displaying 1 - 50 of 32516

# The ICCU PoC



# The DCH-RP eCSG Mobile



❑ Native Android App

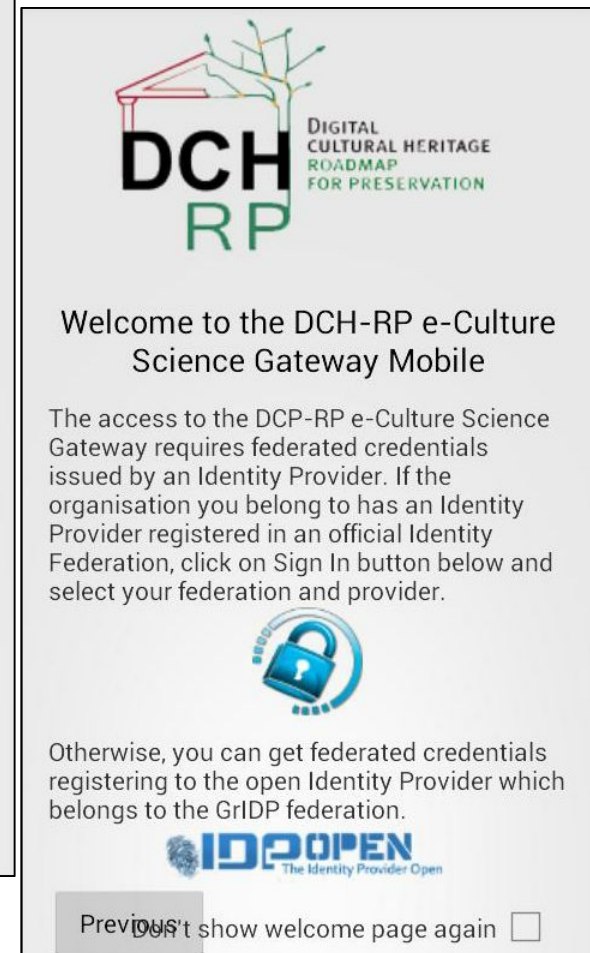
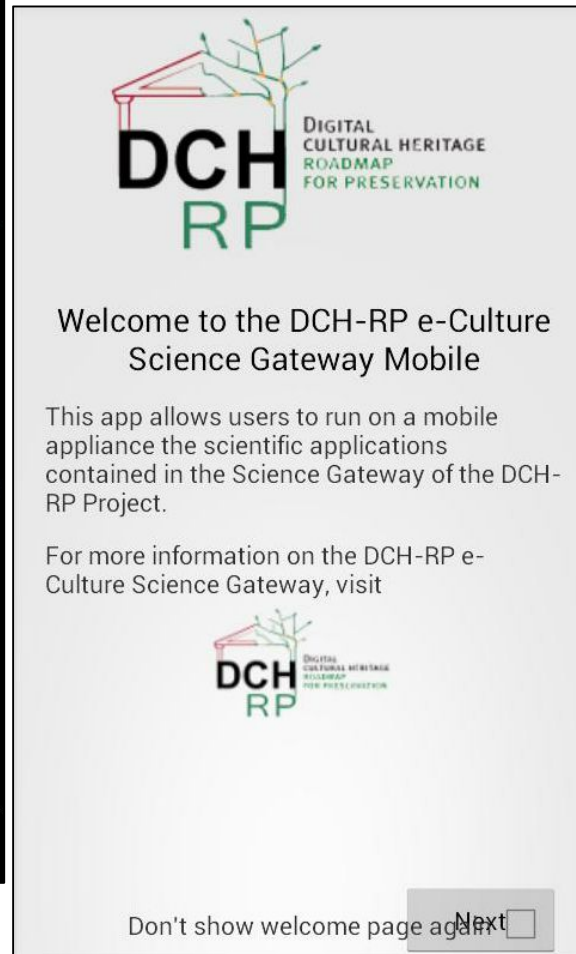
❑ Uses  framework:

- Retrieves digital assets metadata “on the move”
- Seamlessly access in mobility several kinds of storages where digital contents are stored

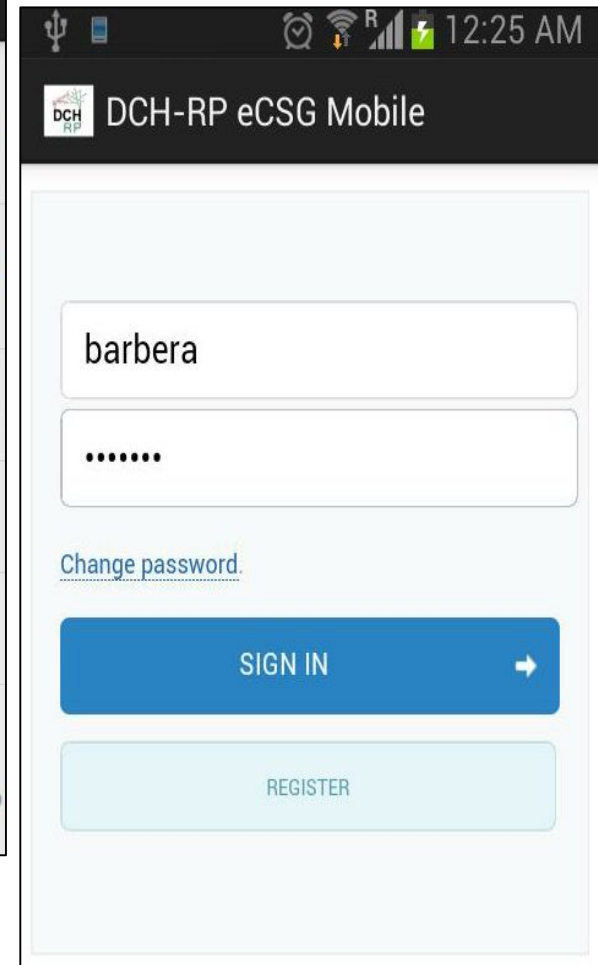
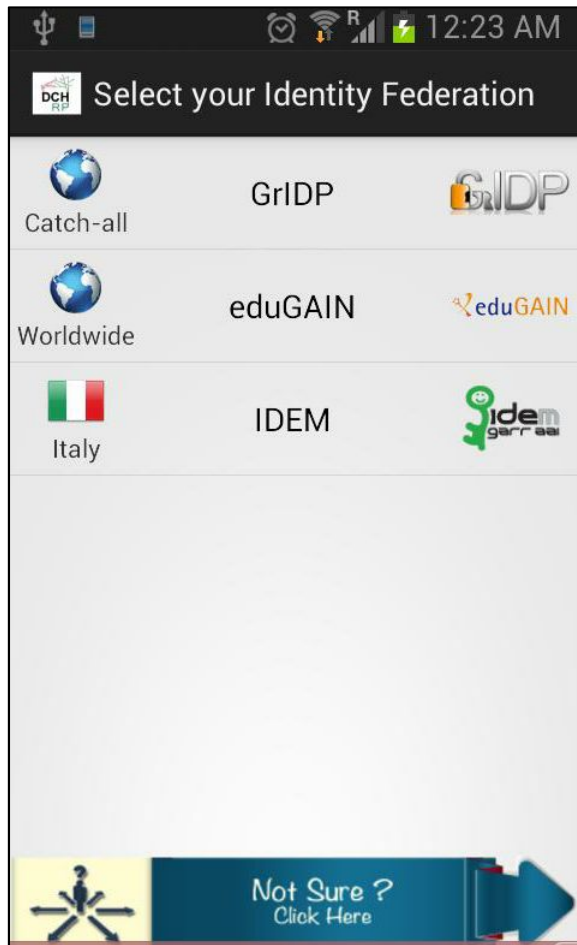
❑ Available on Google Play at:

- <https://play.google.com/store/apps/details?id=it.infn.ct.dchrgmobile>

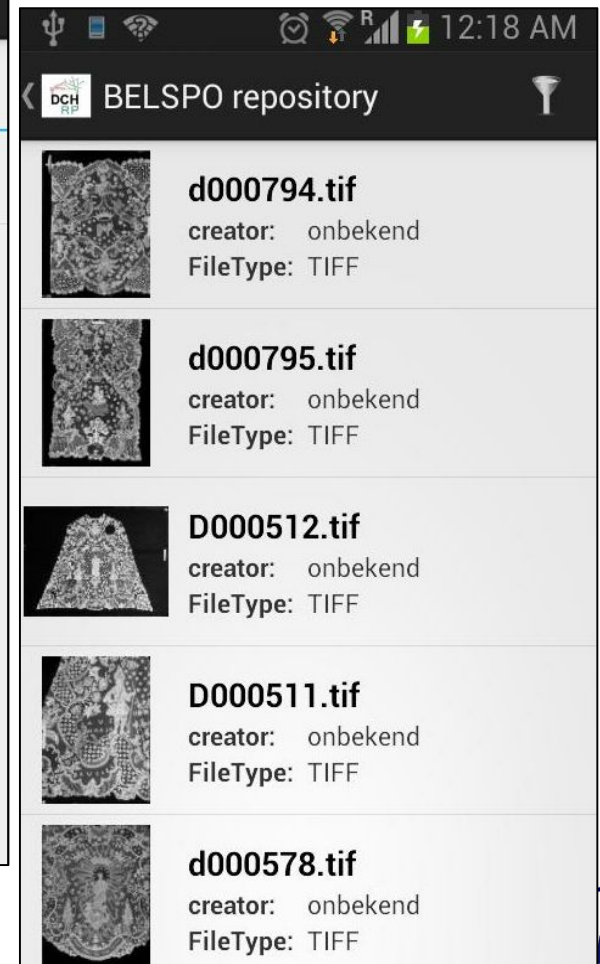
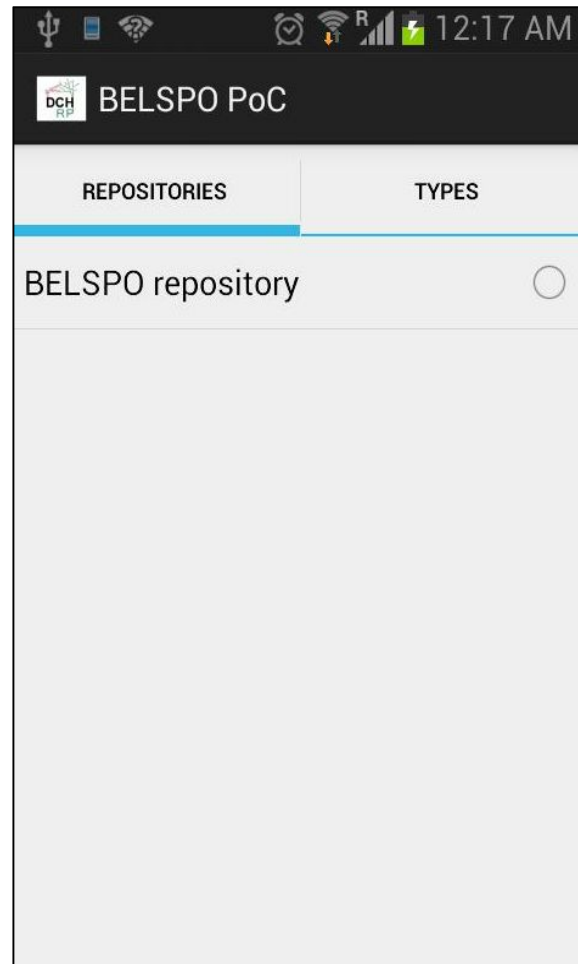
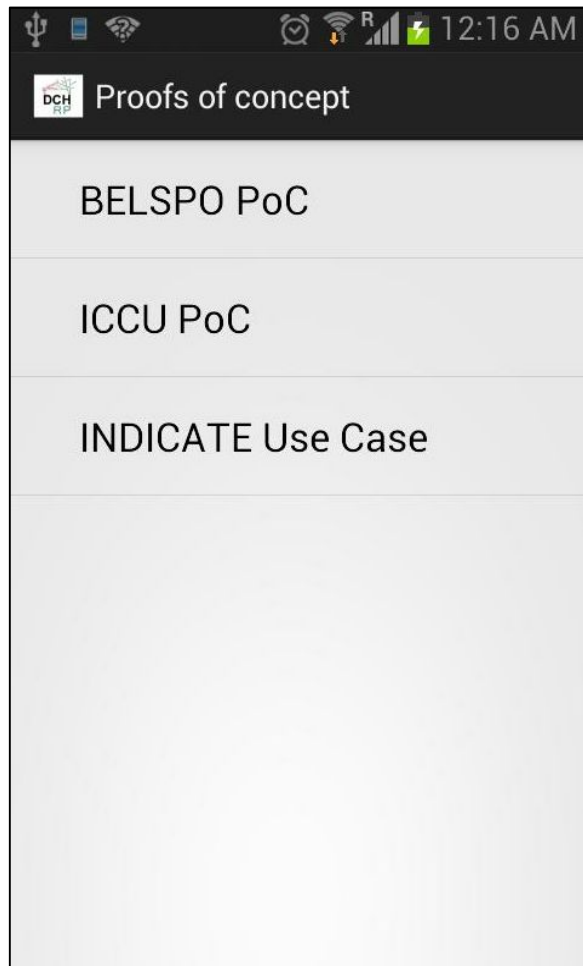
# eCSG Mobile in action



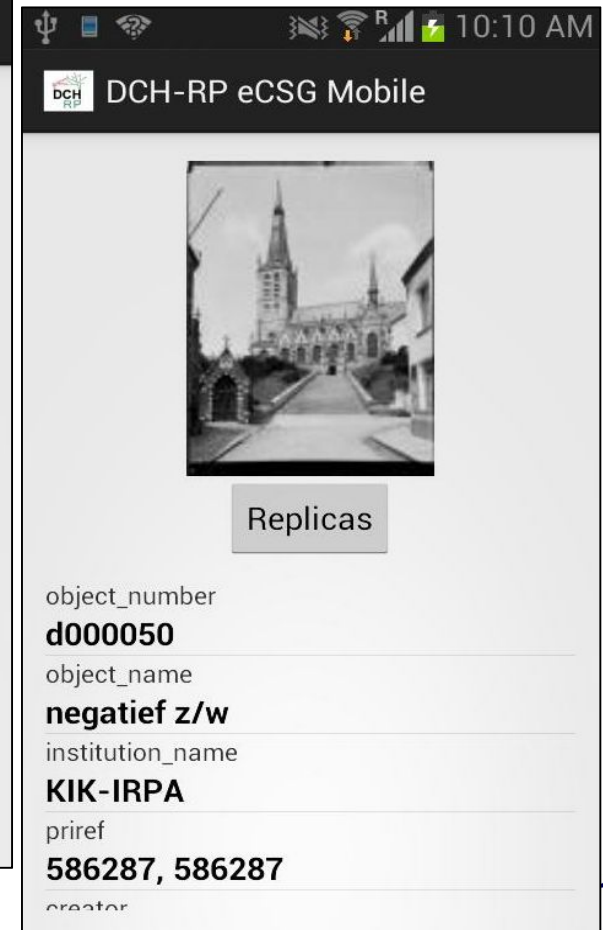
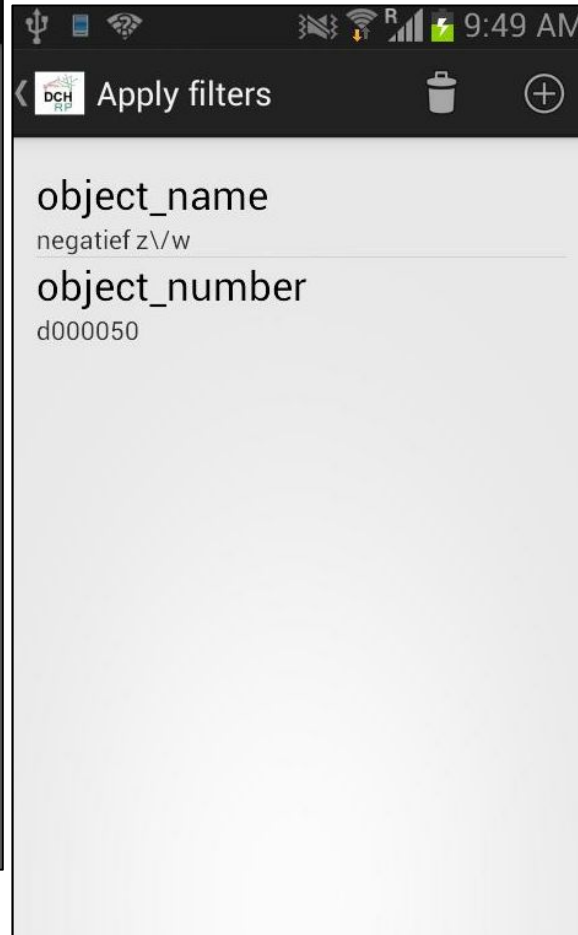
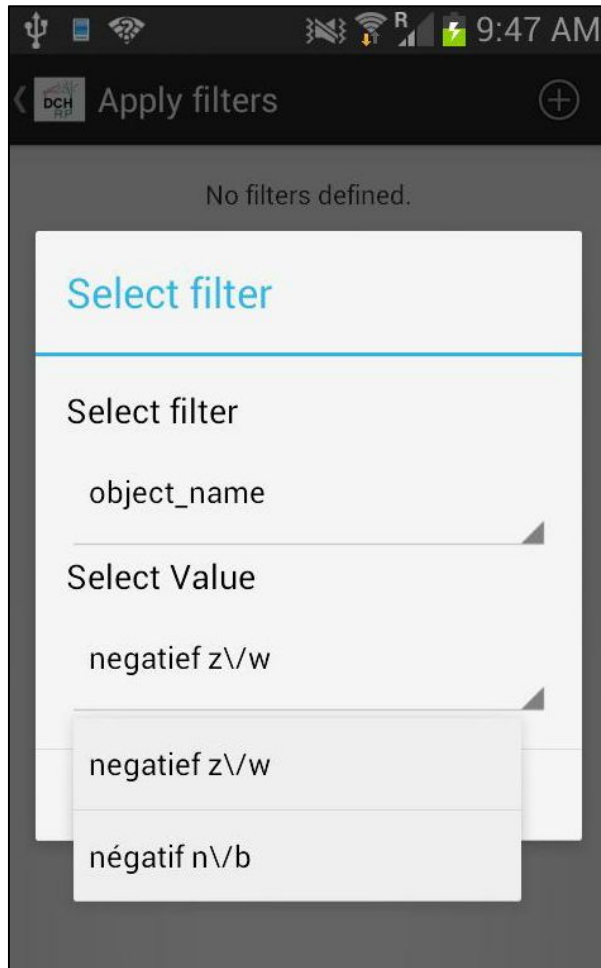
# eCSG Mobile in action



# eCSG Mobile in action

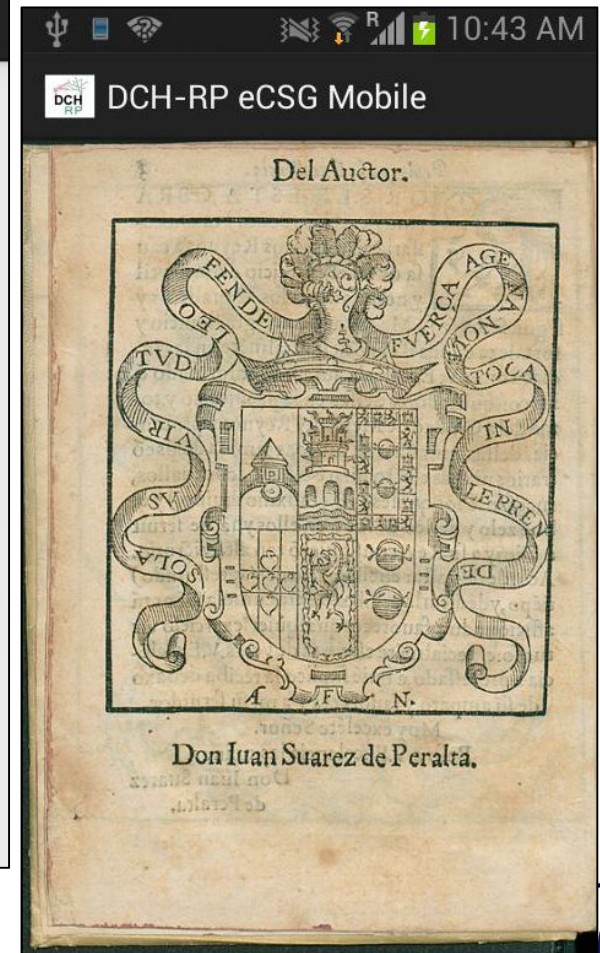


# eCSG Mobile in action





# eCSG Mobile in action



# Summary and conclusions



- ❑ The DCH-RP e-Culture Science Gateway is a major step forward towards the uptake of Grid technology by the DCH community
- ❑ The adopted Science Gateway Framework, supporting Identity Federations, Social Networks and mobile access, changes the way e-Infrastructures can be used, especially by non-IT experts
- ❑ The adoption of standards is a concrete investment towards sustainability



Thank you!

*Roberto Barbera*  
*Univ. of Catania & INFN*  
[roberto.barbera@ct.infn.it](mailto:roberto.barbera@ct.infn.it)