INDICATE
International Network
for Digital Cultural
Heritage e-Infrastructure

INDICATE
International Network
for Digital Cultural Heritage
e-Infrastructure

Amman, 11 December 2011

Antonella FRESA
DC-NET and INDICATE Technical Coordinator
Central Institute Union Catalogue Italian Libraries

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

Table of content

- The DCH sector and the role of the e-infrastructures in its development
- The INDICATE project
- Future steps and future plans

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

Digital cultural content

The **amount of digitised material** in the European Cultural sector is growing very rapidly

- **National, regional and European programmes** support the digitisation of the content of Museums, Libraries, Archives, Archaeological sites and Audiovisual repositories
- The generation of digital cultural heritage is accelerated also by the impulse of **Europeana** that is fostering the European cultural institutions to produce even more digital content
- Digital cultural heritage content are **complex and interlinked** through many relations

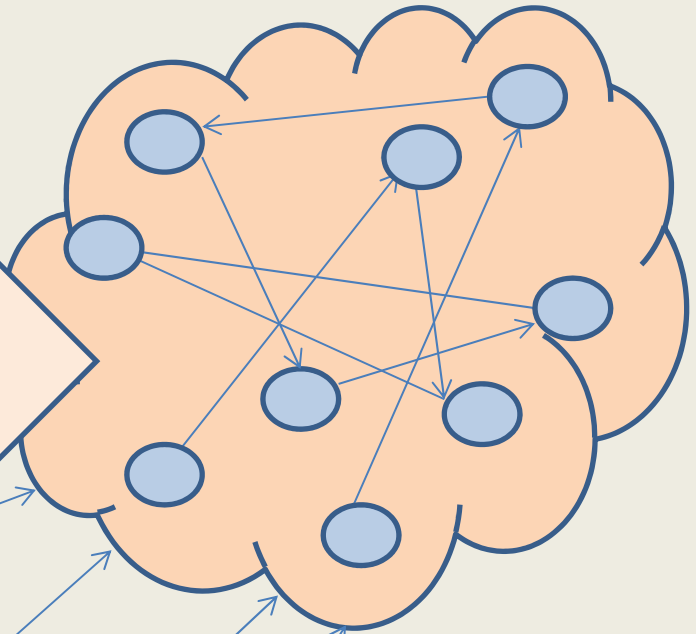
Data Continuum

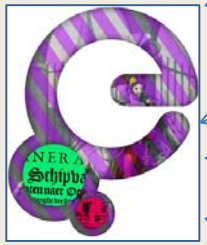
NATIONAL PROGRAMMES

REGIONAL PROGRAMMES

EUROPEAN PROGRAMMES

Digital cultural content





National portals

Regional portals

Thematic portals

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

DCH and e-Infrastructures

- To focus on the use of existing e-infrastructures as a channel for digital cultural heritage data
- Storage, computing, connectivity together with authentication , authorisation and accounting mechanisms offered by the e-infrastructures can serve the needs of the sector: the issue here is to establish factual cooperation among two sectors (the research and the cultural heritage) that are not used to work together
- DCH: Ministries of Culture and cultural institutions
- Cross-domain: museums, libraries and archives together

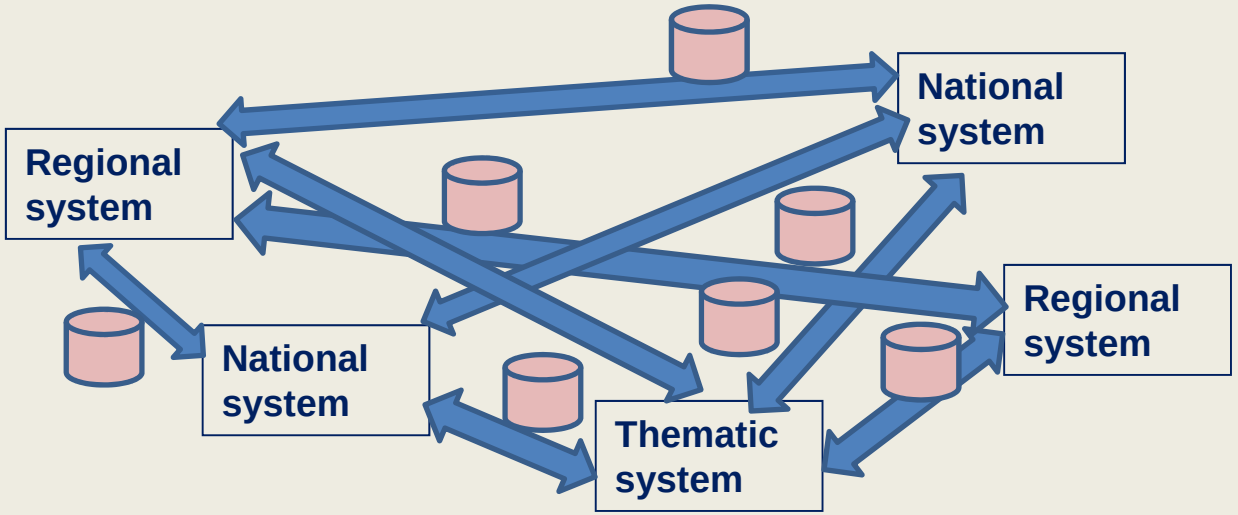
INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

an e-infrastructure for DCH

Not a “new infrastructure”, but instead a “**new approach**”

- based on **national and regional systems**
- valorising **existing resources**

The keyword is **INTEROPERABILITY**



INDICAT
International Network for Digital Cultural Heritage e-Infrastructure

Sustainability of the e-Infrastructure

National and regional programmes in the areas of

- Research
- Cultural heritage
- e-government

European programmes

- Infrastructures
- ICT research
- Innovation (CIP)

→ **Horizon 2020**

Expected impacts

- **e-Infrastructures**

  The adoption of the e-Infrastructures by the digital cultural heritage community will open new scenarios of use and exploitation

- **Cultural Heritage**

  Cultural managers will become more aware about the potential that the e-infrastructures can offer to their work: storage, preservation, access services for the cultural institutions, etc.

- **European research**

  A better integration of the cultural sector with the e-Infrastructures will enable the research of new advanced services and applications

- **Other sectors**

  Digital cultural content will become more usable and re-usable for education, cultural tourism, long-life learning, non-professional cultural interests, creative industry, etc.

INDICAT
International Network for Digital Cultural Heritage e-Infrastructure

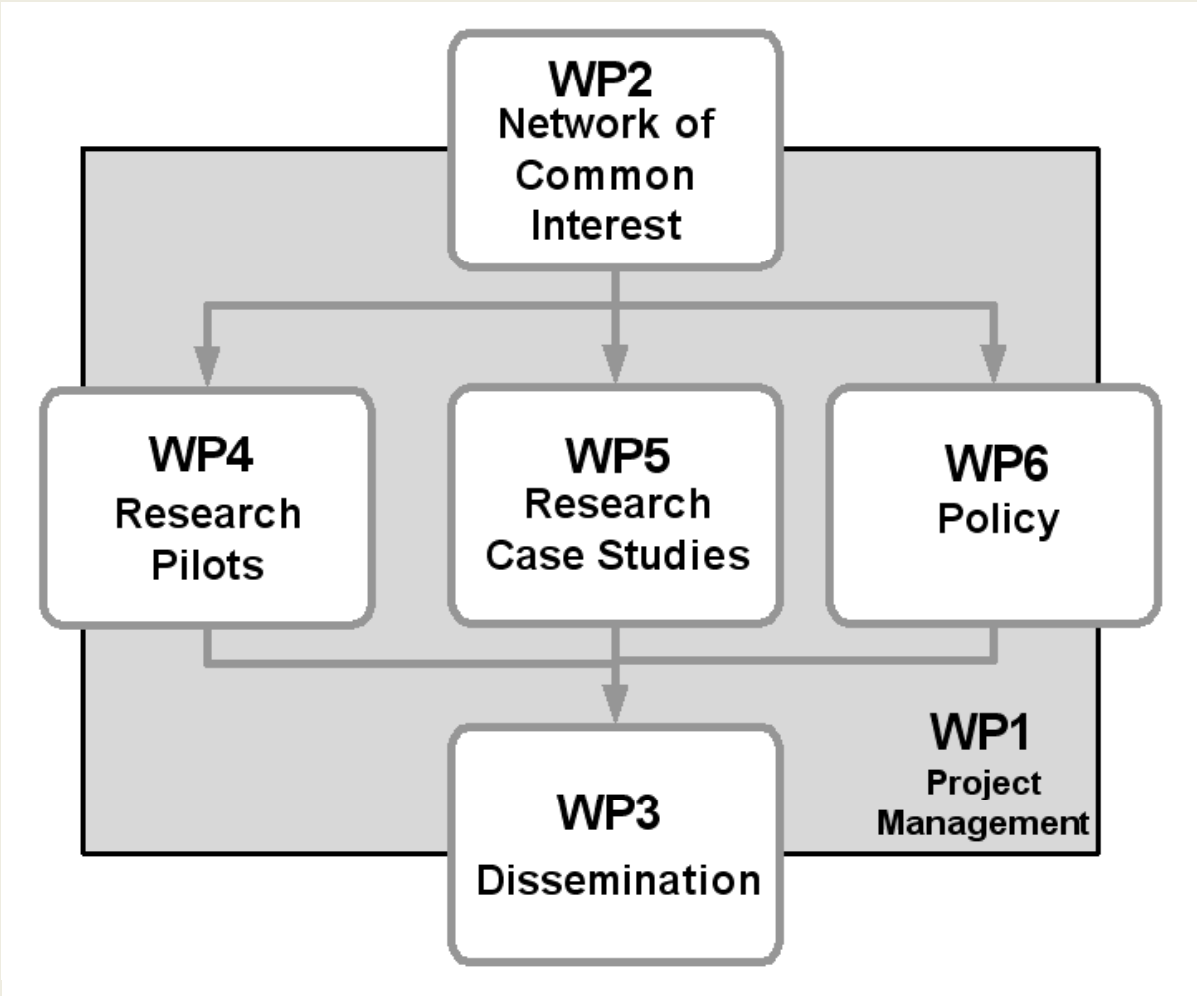
Preparatory actions

- To define **priorities** among the services to be deployed
- To consult with **stakeholders** and to engage programme owners at national and regional level
- To improve **awareness**: needs&offers, standards, who-is-who
- To promote **trust building**, covering different aspects and including organisational, operational and legal issues
- To run **experiments**: pilots and use case studies
- To open **international cooperation**
- To establish an **e-culture community**

INDICATE project

A concrete approach with an international dimension

- Stimulating the international cooperation of eInfrastructures providers and cultural heritage users
- Target areas:
  - Mediterranean region, (Egypt, Turkey and Jordan)
  - Cooperation with China in liaison with the EPIKH Grid School
  - Exchanges with South America, for example, in the frame of experiments for live distributed performances
- Case studies: preservation, virtual exhibitions, GIS
- e-Culture Science Gateway



Project plan

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

The network of common interest

It combines:

- regional, national and international levels,
- bottom-up (working groups) and top-down (Joint Programming) approaches

Working groups: experts seconded by their cultural, research and infrastructure organisations

Cooperation with other networks and projects: EPIKH, CHAIN, EUMEDGRID-Support, EUMEDCONNECT2, LINKED HERITAGE, ….

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

Liaisons with strategic bodies

Factual cooperation is established with:

- **e-IRG** e-Infrastructure Reflection Group
- **ESFRI** European Strategy Forum on Research Infrastructures (SSH thematic working group)
- **EGI** European Grid Initiative
- **TERENA** Trans-European Research and Networking Association
- **MSEG** Member States Expert Group on digitisation
- **ASREN** Arab States Research and Education Network

Research pilots

- To experiment the migration of existing e-Culture applications to the e-Infrastructure platforms
- Results are accessible through the **INDICATE e-Culture Science Gateway**
- To identify problems, solutions, challenges and applicability across national, EU and international borders

Semantic search pilot

- Establish local instance of MICHAEL search system
- Enrich the search system with semantic search capabilities
- Evaluate the feasibility of the these requirements using e-infrastructures
- Additional semantic information is added to the dataset
- Amazon EC2 was used as the initial Cloud environment for deployment and further benchmarking (pricing will be estimated in the next period)

Without parallel computing the enrichment process is not feasible

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

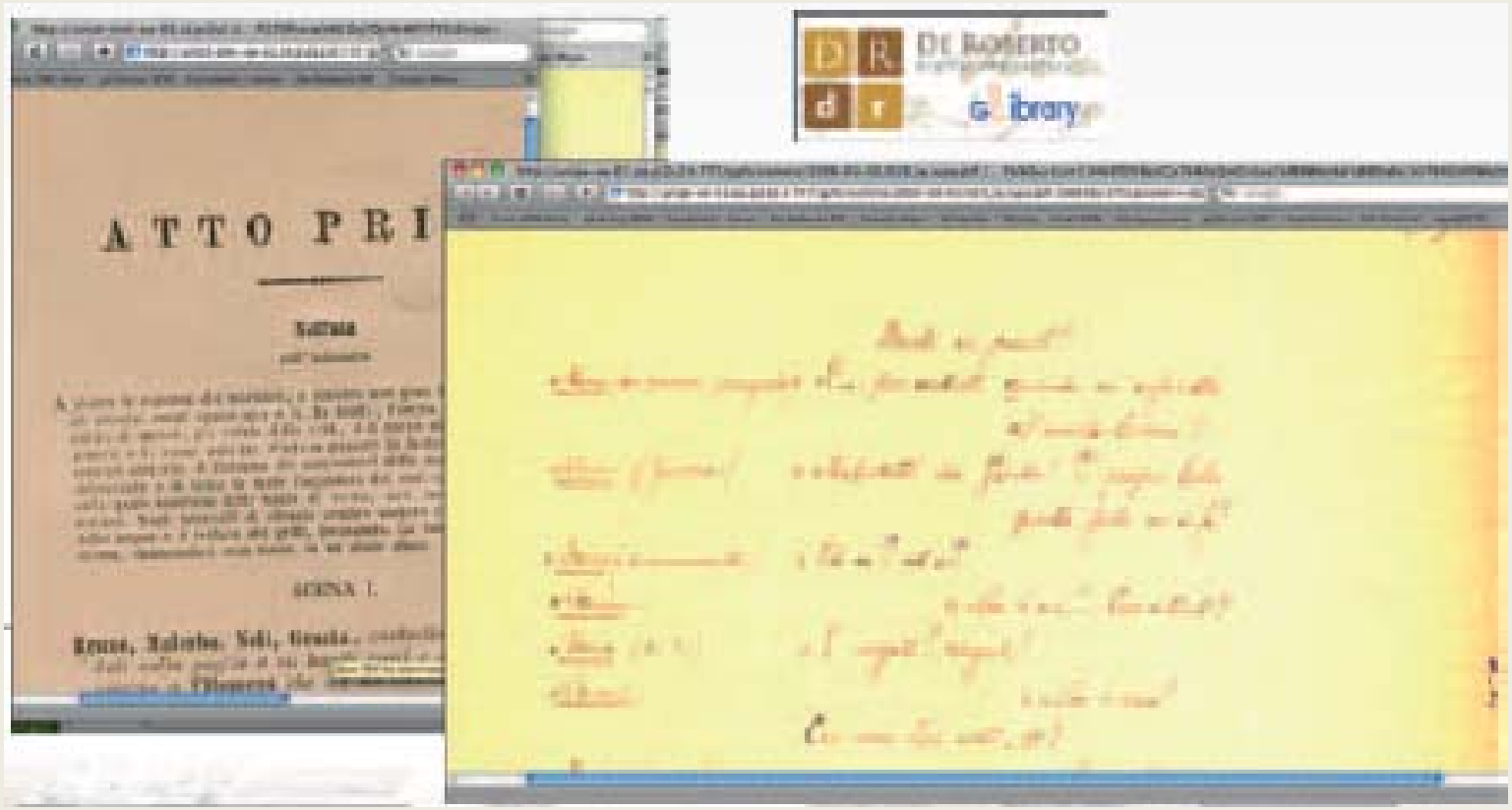
E-Collaborative digital archives

- Cultural Heritage data coming from Italy and China
- Authorisation and Authentication infrastructure to support federations of Identity Providers

Important step forward towards and easier and wider use of e-infrastructures by non-expert users who do not want to deal with the complex Grid Security Infrastructure

INDICATE

International Network for Digital Cultural Heritage e-Infrastructure

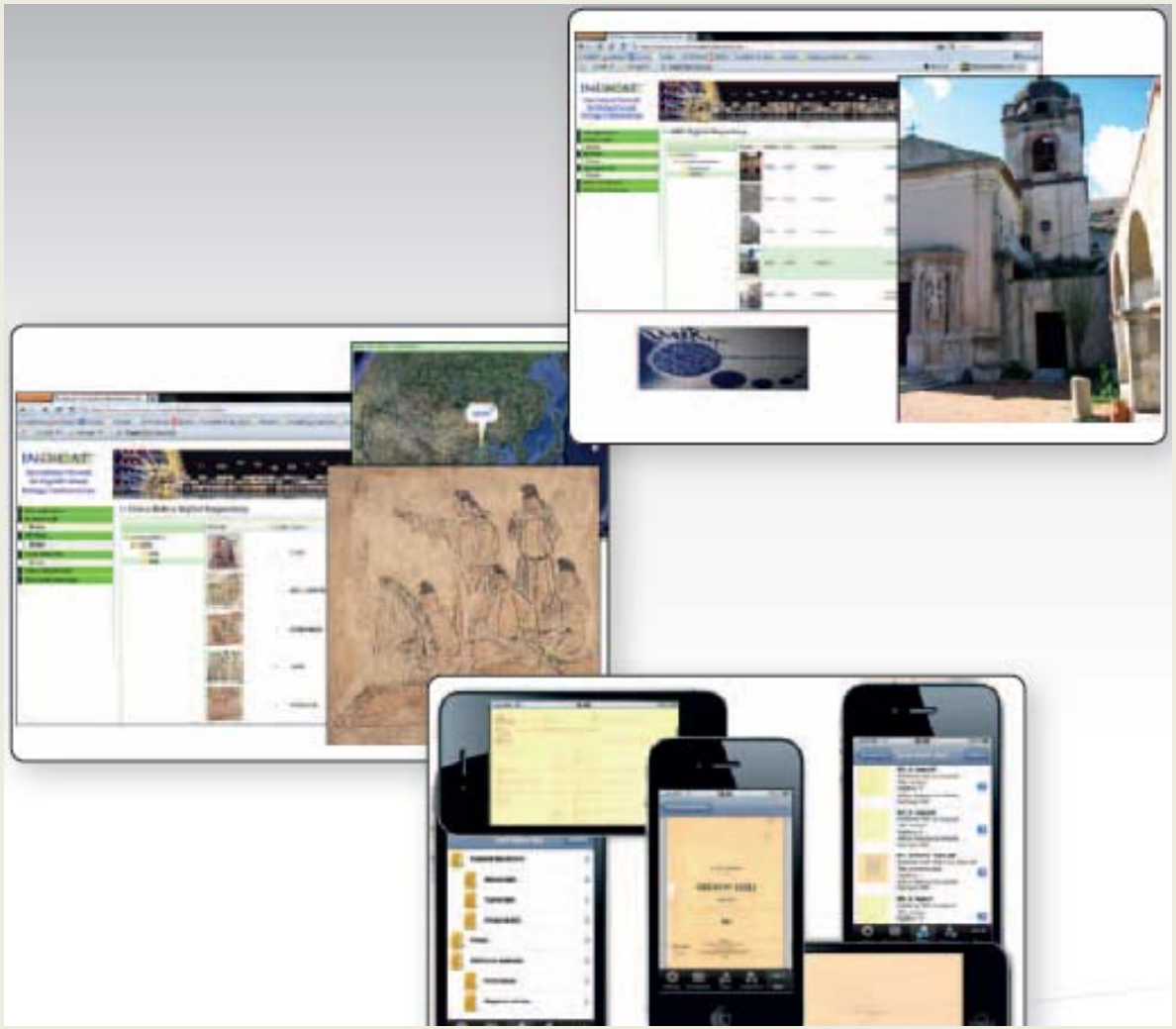


e-infrastructure

Amman, 11/12/2011

INDICATE

International Network for Digital Cultural Heritage e-Infrastructure

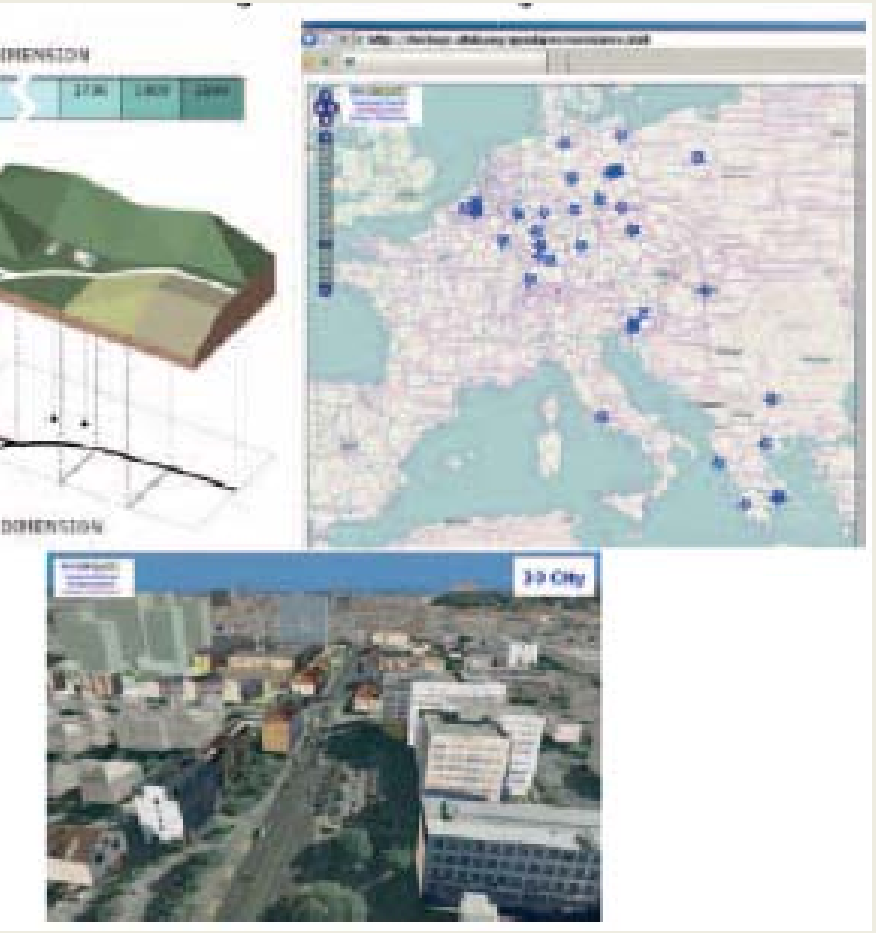


Amman, 11/12/2011

Research case studies

Three key problems and three workshops, one for each theme addressed by the case studies:

- Long term digital preservation; workshop held in Ankara on 7/7/2011; study completed and available on request
- Virtual exhibition; this workshop in Amman
- Geo-coded cultural content; workshop to be held in Ljubljana on 6/2/2012



Geo-parsing and geo-coding experiment in progress.

Results will be discussed at the workshop

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

Policy harmonisation: strategies and future plan

A Policy workshop will be organised in Paris in May 2012:

- to bring together experts from each country and from each domain, namely e-culture, e-Infrastructures and the research
- to explore programmes, policies and plans which exist in each country
- to seek opportunities for harmonisation.

In this context, the relationship with DC-NET and with the Joint Programming Initiative on Cultural Heritage is very relevant

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

Next steps DC-NET & INDICATE

January 2012: release and endorsement of the DC-NET **Joint Activities Plan**

Until March 2012: DC-NET **informative seminars**

8/3/2012, Rome – **final DC-NET Conference**

January-September 2012:

- validation of the INDICATE **e-culture science gateway** (ref. last issue of ISGTW)
- **use case studies** on long-term preservation, virtual exhibitions and geo-coded cultural content

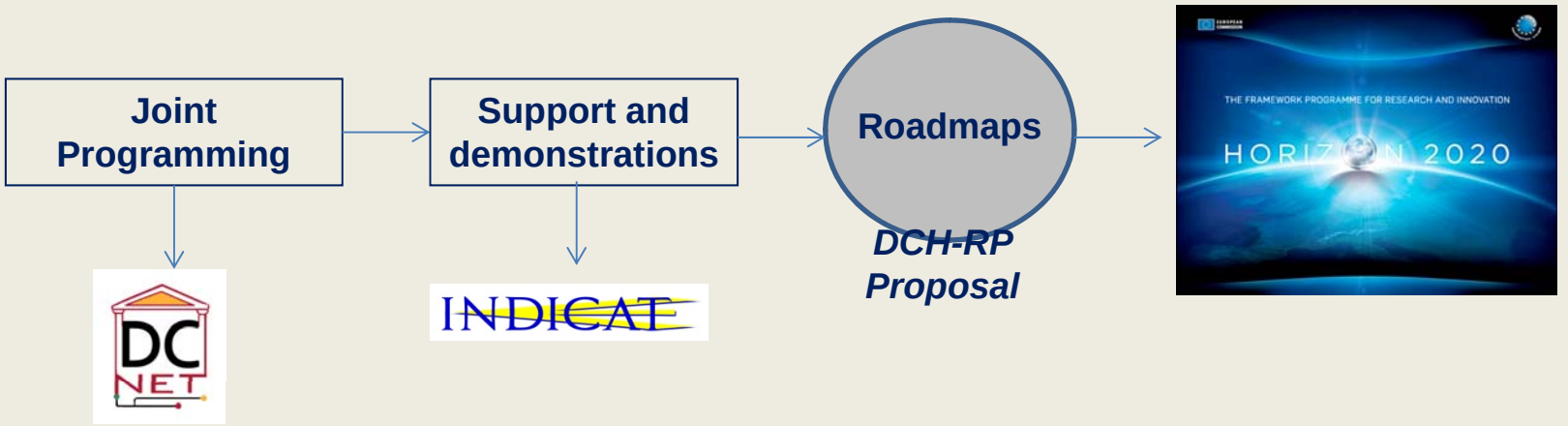
20/4/2012, Catania – INDICATE Technical Conference

July 2012, Cairo – final INDICATE Conference

INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

The future

- INDICATE and DC-NET are part of a wider process, which started 10 years ago among cultural institutions
- This process entered in a new phase joining the research e-infrastructures
- Time is ready to start working towards an Open Science Infrastructure for Digital Cultural Heritage in 2020



INDICATE
International Network for Digital Cultural Heritage e-Infrastructure

Thank you

Antonella Fresa

DC-NET, INDICATE Technical Coordinator

fresa@promoter.it

www.dc-net.eu

www.indicate-project.eu