CIVIC EPISTEMOLOGIES
Civic Epistemologies: Development of a Roadmap for Citizen
Researchers in the age of Digital Culture
Workshop on the Roadmap

Introduction to the Roadmap
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Background and objectives

The main objective of the Civic Epistemologies project is to produce a validated Roadmap for the use of e-infrastructures

- to support the participation of citizens in the research processes and
- the participation of creative industries in the exploitation of digital cultural content.

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Background - the Roadmap

WP3

Based on the work done in the other workpackages, this workpackages will design the Roadmap for broadening e-Infrastructure deployment to support citizen researchers in digital culture.

A first draft version of the Roadmap was released in month 6 as an internal document for discussion. The preliminarily of it derives from the fact that most of the input to the roadmap will occur later in the project as output from different activities carried out in the other WPs (case studies, pilot study, questionnaires etc).

The final version of the Roadmap will be presented in a deliverable D3.2 in the end of 2015.

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Background – the Roadmap

This first draft version of the Roadmap has the ambition

- to provide a description of what a Roadmap for the use of e-infrastructure to support citizen research could look like;

- be used as a basic document for discussions.

It raises more questions than it can answer. It sketches the profile of a possible Roadmap, in an attempt to cover the most important issues to be handled by the Civic Epistemologies project.

It is a work in progress.

Some Basic Assumptions

The so-called 'hard sciences' are already demonstrating that research can advance its capability by the use of e-Infrastructures.

A basic assumption is, therefore, that existing e-Infrastructures for research and academia (including NREN, NGI and other data infrastructures) could be efficient channels also for the delivery of advanced services to the DCHH domain in the field of citizen science and crowd sourcing.

Some basic assumptions

Another assumption is that it will be possible to establish common policies, processes and protocols which will allow cultural heritage organisations to access e-Infrastructures, despite the fact that e-infrastructures (like NRENs and NGIs) are national entities, often with different policies and procedures for access and usage.

Some conclusions

A ground breaking part of the concept that the project is aiming to introduce, is the possibilities to customise the citizen science focus services provided by e-Infrastructure, i.e. tailoring the service portfolio and characteristics to the actual tasks and requirements.

However, even if the e-Infrastructure resources seems to be allocated in ways that could support citizen science activities quite well, the general conclusion must be that the market for those distributed services is still in its infancy, even if this market is developing quiet rapidly with a focus on the research domain.

Some Conclusions

We now that ICT are powerful drivers of creativity in a number of areas, but technical know-how is still often lacking. An important issue is, therefore, the level of maturity in the DCHH domain to handle distributed services for citizen science and/or crowed sourcing.

E-Infrastructures can reach their maximum potential in serving the DCHH domain in practice only if the domain is prepared to exploit the opportunities offered by using e-infrastructures.

From contacts with different stakeholders it is seems that parts of the DCHH domain is not yet taking full advantage of technologies to engage with wider audiences.

What is Citizen Science?

There is difference between citizen science and crowd sourcing which is to some extent blurry. Both concepts refer to activities which include contributions from multiple volunteers who are not professionals in the tasks they contribute to.

However, there is one aspect which allows differentiating between them:

- Citizen science involves activities and people with a specific research focus and they are organised in a project which is led by a professional researcher.

- Crowd sourcing benefits instead from the time and skills investment of volunteers but does not aim necessarily in the first place to achieve research outcome and it is often not coordinated by a professional researcher.
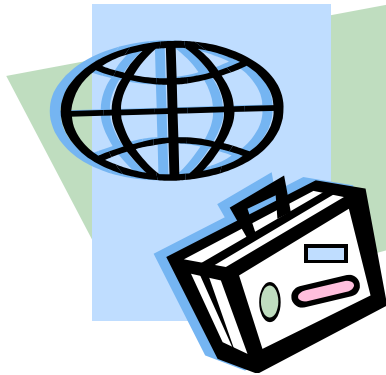
The Roadmap

LET´S START!

Form and Content of the Roadmap

WHY   -   overall objectives for making a roadmap

WHO   -   who to address: target groups and/or user groups, stakeholders in general, members of society

WHERE   -   where to go (specific objectives and goals for the roadmap to be a basis for requirements like improving access, enhance quality of holdings/collections, social inclosure or…?)

WHEN   -   when shall these specific objectives and goals be reached (time line for implementing the roadmap)

WHAT   -   what to produce: a roadmap, but what are the basic drivers and the added values of citizen research and crowd sourcing as a method and what are benefits of using distributed e-infrastructure

HOW   -   how shall the roadmap be structured (address each target group and/or user group or be structured on general level)

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The Roadmap as an Instrument

Main elements:

- Vision and goals (where to go?)

The Roadmap as an Instrument

The "map" in the roadmap draws the landscape based on the current situation.

The Roadmap as an Instrument

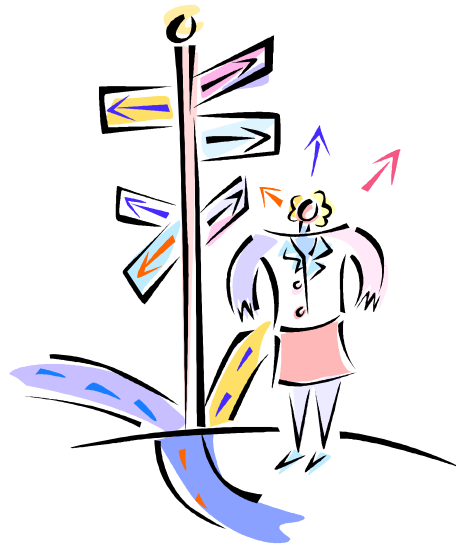Needs also to take into account future changes (a look around the corner)

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The Roadmap as an Instrument

-The "road" in the roadmap points at an action plan, and actions are of course needed in a number of areas.

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The Roadmap as an Instrument

Many cultural heritage institutions have in-house solutions for processing their digital collections and holdings but also their research applications. When comparing in-house solutions with distributed e-Infrastructure services, it is inevitable that some discrepancies will appear, such as incompatibility of purposes or scope, lack of technical or semantic interoperability, reliance on different standards, and jurisdictional and legal barriers, etc. Therefore, the Civic Epistemologies roadmap has a strong focus on what to do and on the usability of services and technologies.

The Roadmap as an Instrument

In order to achieve this, the project has adapted the following - very simple - structure of the roadmap:
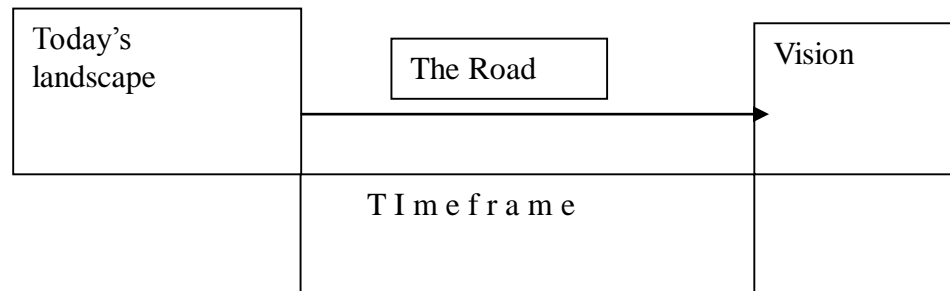
Today's landscape		

The Road

Vision

T I m e f r a m e

DESCRIBING THE LANDSCAPE – TO MET STAKEHOLDERS   NEEDS

Focus groups

Questionnaires

Pilot study

Case studis

Work shops with stakeholder groups

Etc.

Vision

The project's over-riding strategic objective is to support the development of a policy on the role e-Infrastructures can play in encouraging and facilitating the mediation process of citizen science in the area of DCHH, in order to bring about a closer alignment between the private and public spheres. It seeks to identify and deploy new services and protocols enabled by e-Infrastructures, which will in turn support Europe's citizens, its creative enterprises and its wider cultural industries to enter into productive technology-enabled dialogue with cultural heritage institutions and Humanities research.

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Timeframe

The Civic Epistemologies roadmap should make it possible for each institution in the DCHH domain to define its own practical action plan with a realistic timeframe for the implementation of its stages.

- Short-term (2015 - 2016)

The purpose of proposing a short-term action plan (2015) is to initiate the development of e-infrastructure services on a level that will be self-sustainable and continue to progress on its own. This further progress is defined in terms of two further proposed time spans:

- Medium-term (2017-2018), i.e. two years after the end of the Civic Epistemologies project), and

- Long-term (2019 and beyond) for the logical continuation of the work.

E-INFRASTRUCTURE SERVICES FOR CITIZEN SCIENCE

Different parts of the DCHH domain have different needs, depending on if they are small or large, the kind of projects they have etc. The conditions (e.g. resources) for managing these projects differ also quite much. Services for supporting citizen research and crowd sourcing, therefore, have not only to be flexible, but also easy to adapt and utilise, and address several areas. That is a clear message from most stakeholder groups.

E-infrastructure services for citizen science and crowd sourcing are normally structured around development of tools, but need also to involve policy instruments necessary to achieve efficient intervention in the DCHH sector.

E-INFRASTRUCTURE SERVICES FOR CITIZEN SCIENCE

Important actions to be covered by a Roadmap will be:

- Define the product that the Roadmap focuses on

- Define stakeholders, and their needs, scenarios, business models etc;

- Define critical system requirements and map them to technology drivers as well as key performance indicators;

- Analyse current technological offers and gaps;

- Define drivers for making a shift in institutional practices in the cultural heritage sector and the Humanities research.

Supporting actions to the Roadmap will be:

- Planning of the structure of a registry of services;

- Develop and agree on a common Strategic Research Agenda

- Assessing new approaches in a pilot experiment and in case studies.

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THE MAIN COMPONENTS OF THE ROADMAP

Empowering existing e-Infrastructures with new services: targeted to the needs of specific research domains;

Tailoring new services to the requirements of each research community;

Improved interoperability: includes better integration of internal and external digital resources within the overall workflows for handling research data; in a way this is a set of measures to avoid building 'digital silos' within the organisation;

Establishment of conditions for cross-sector integration: a key condition for maximising the efficiency of successful solutions, transferring knowledge and know-how; a scalable and modular approach to the e-Infrastructures deployment is needed that will allow serving research better and reduce costs of development.

Governance models for infrastructure integration: a necessary condition for successful institutional participation in larger e-Infrastructure initiatives, and aggregation and re-use of digital resources.
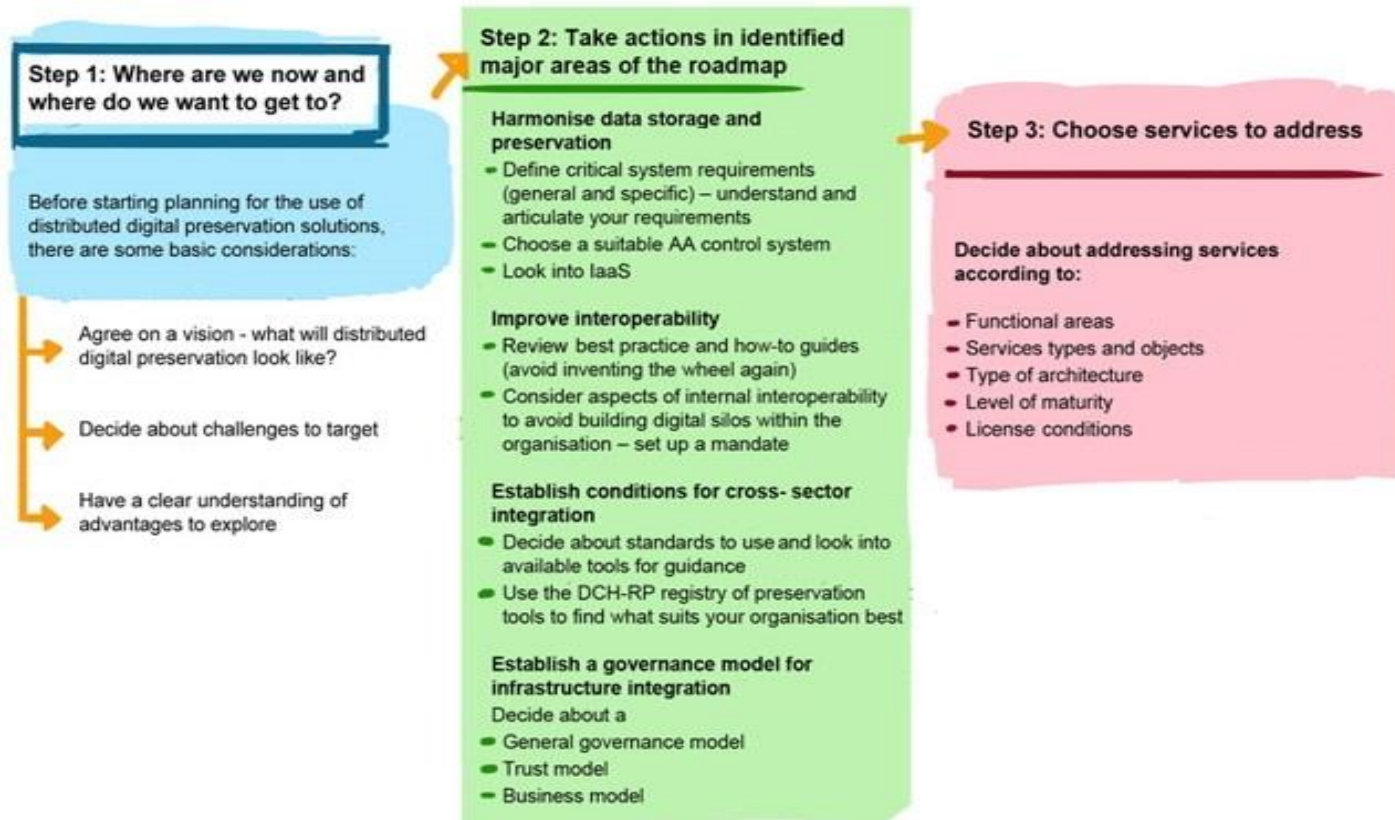
For each area a set of prioritised actions are suggested.

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Structure of the Roadmap – A General version

Step 1: Where are we now and where do we want to get to?

Before starting planning for the use of distributed digital preservation solutions, there are some basic considerations:

→ Agree on a vision - what will distributed digital preservation look like?

→ Decide about challenges to target

→ Have a clear understanding of advantages to explore

Step 2: Take actions in identified major areas of the roadmap

Harmonise data storage and preservation
- Define critical system requirements (general and specific) – understand and articulate your requirements
- Choose a suitable AA control system
- Look into IaaS

Improve interoperability
- Review best practice and how-to guides (avoid inventing the wheel again)
- Consider aspects of internal interoperability to avoid building digital silos within the organisation – set up a mandate

Establish conditions for cross- sector integration
- Decide about standards to use and look into available tools for guidance
- Use the DCH-RP registry of preservation tools to find what suits your organisation best

Establish a governance model for infrastructure integration
Decide about a
- General governance model
- Trust model
- Business model

Step 3: Choose services to address

Decide about addressing services according to:
- Functional areas
- Services types and objects
- Type of architecture
- Level of maturity
- License conditions

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Structure of the Roadmap - Addressing Target Groups

Who	What	2015	2016	When 2017	2018	2019
Curation Practitioners	Lobby management into proper resourcing of selection and appraisal practice and focus on cost-effective digital curation activity	●	●			
Curation Researchers	Conduct research into automatic appraisal and selection techniques based on codified value criteria	●	●	●		
Data Users	Content experts to work with technologists to establish value criteria and represent 'designated communities'	●	●			
Managers	Incorporate the concept of 'value' into strategic and tactical decision-making		●	●	●	
Member Organisations	Help establish relationships between organisations to facilitate the transfer or 'handoff' of digital assets	●	●	●	●	●
Policy Makers	Establish requirements for digital asset value assessment as part of data management and curation planning			●	●	●
Solution Providers	Build on existing tools (e.g. file format registries) to provide automated selection & appraisal tools		●	●	●	

AN ACTION PLAN

Main points:

ESTABLISH A VALUE CHAIN: Cost will clearly be a key variable when deciding whether or not to contract out services to an external service provider (e-infrastructure). But there are also other factors to consider, and the advantages and disadvantages of each of them need to be balanced against the overall mission of the institution.

ACTIONS TO TAKE

A WEB-SPACE FOR THE ROADMAP

Furthermore, a Roadmap cannot be considered as a final step. It has on the contrary to be considered as a living document that needs to be continuously maintained, updated and improved as time passes, technology changes, new requirements have to be taken into account, and so on.

It is for these reasons that the Civic Epistemologies project plan to create a dedicated web-space where it is possible to download the last version of the Roadmap, but also where it is possible for everyone to provide feedback and comments, a kind of Forum dedicated to the use of e-infrastructure services and facilities for citizen science and crowd sourcing targeting the DCHH domain.

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