This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 632694

CIVIC EPISTEMOLOGIES

Civic Epistemologies: Development of a Roadmap for Citizen Researchers in the age of Digital Culture

A Roadmap on citizen science for digital cultural heritage

The Roadmap (proposed actions and recommendations)

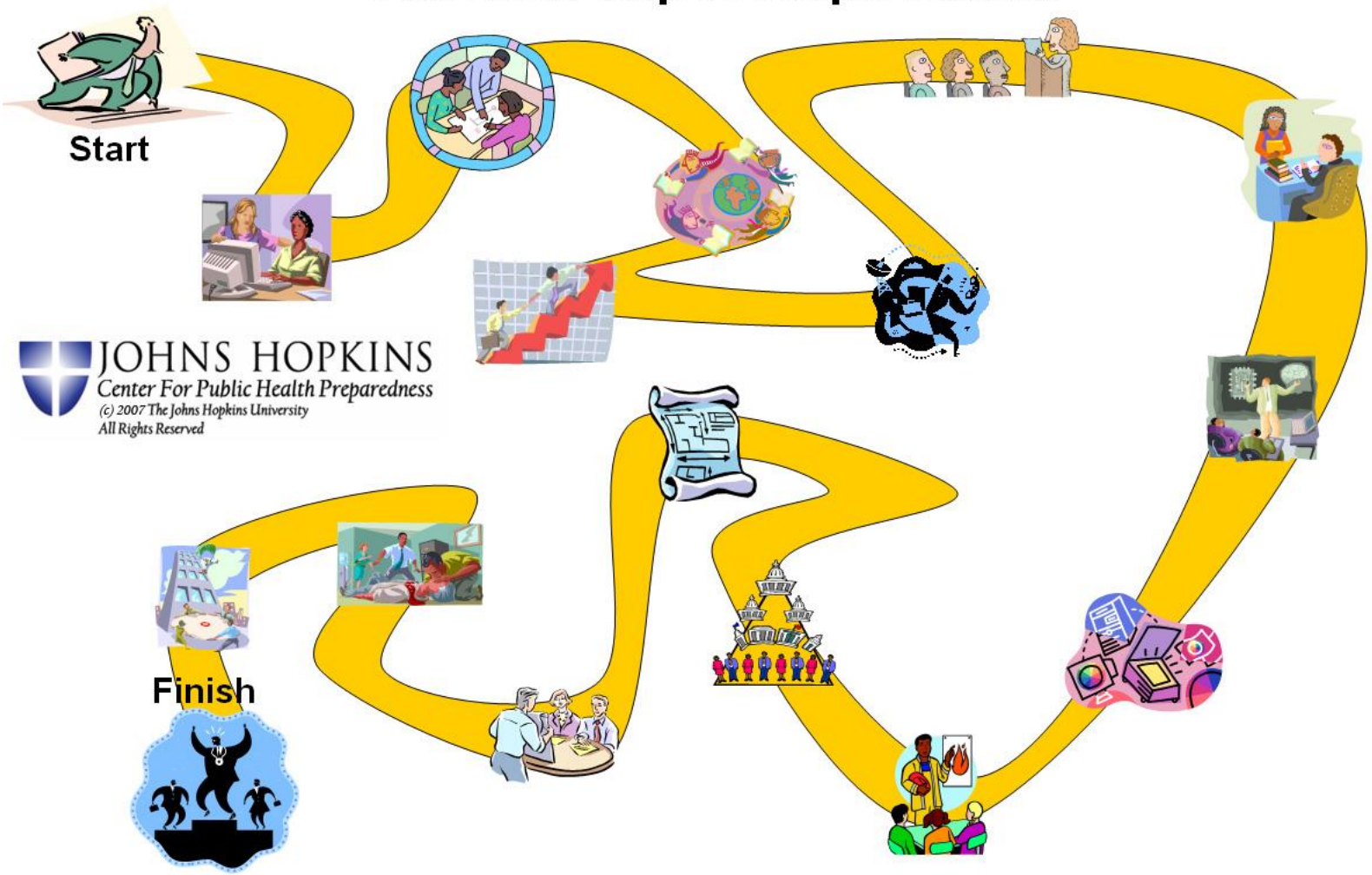
Borje Justrell, National Archives of Sweden(Riksarkivet)

Berlin November 13, 2015

Grant agreement: 632694

Final conference

The Road Map to Preparedness



Grant agreement n. 632694

Who are the stakeholders?

These are the key ones, all with different roles to play:

- **Cultural heritage institutions and academic institutions** (e.g. the research communities)

- to identify clear protocols of interaction with citizen scientists and internally

- as programme owners and decision makers on different levels, allocate budgets and implement good governance

- **E-Infrastructure providers**

- to plan for future deployments

- **Citizen organisations**

- to associate and organise activists into representative bodies

- **Policymakers**

- to support institutional conditions and make necessary financial resources available

Grant agreement n. 632694

Official Media Partner

DIGITAL MEETS CULTURE

www.digitalmeetsculture.net

Who are the stakeholders?

Other identified complementary stakeholder groups are:

- **Artists and the creative sector in general**
- **Schools and the education sector in general**

For them citizen science is not expected to be considered as a core activity

Grant agreement n. 632694

The Main Components of the Roadmap

Seven areas of action

Based on an analysis of the state of the art and the requirements expressed by different stakeholder groups, seven main areas have been selected for actions:

1. **Empowering existing e-Infrastructures with new services**
2. **Tailoring new services to the requirements of each research community**
3. **Improving interoperability and re-use**
4. **Establishing the conditions for cross-sector integration**
5. **Developing governance models for infrastructure integration**
6. **Exploring artistic and creative practices as an instrument for engagement**
7. **Developing ad-hoc training and awareness opportunities for targeted users**

Grant agreement n. 632694

Proposed actions

Short-term (2016- 2017)

STEP 1: TO START UP (basic considerations to be taken into account)

STEP 2: TAKE ACTIONS IN IDENTIFIED AREAS OF THE ROADMAP

STEP 3: CHOOSE SERVICES TO ADDRESS

Medium-term (2018-2019)

STEP 1: WHERE ARE WE NOW AND WHICH ARE THE NEXT STEPS

STEP 2: TAKE FURTHER ACTIONS IN THE MAJOR AREAS OF THE ROADMAP

STEP 3: PLAN FOR ACTIONS DURING THE LONG-TERM STAGE

Long-term (2020 and beyond)

The focus of the long-term action plan should be to

- Review the plan established in the previous phase
- Implement services and tools identified and developed in earlier stages
- Fill in remaining gaps in cross-sector interaction
- Offer a mature business model for the use of chosen services provided by e-Infrastructure

Grant agreement n. 632694

Official Media Partner

DIGITAL MEETS CULTURE .net

www.digitalmeetsculture.net

Short-term (2016- 2017)

STEP 1: TO START UP

Some basic considerations to be taken into account:

- Project management, participants engagement and data management are three ground pillars that need to be addressed in setting up a citizen science project. This will include establishing a community management charter (which will address also how to manage 'rogue' users falsifying or disrupting data collection)

- Procedures for establishing goals and for planning how to achieve them are needed Objectives of the project must be clearly defined and they should be SMART: S(pecific) M(easurable) A(chievable) R(elevant) and T(ime limited)

- Plans are required for recruitment of the necessary scientific and human resources, funding, and communication and marketing

Grant agreement n. 632694

Official Media Partner
DIGITAL MEETS CULTURE
www.digitalmeetsculture.net

Short-term (2016- 2017)

STEP 1: TO START UP

In this preparatory phase important activities are also:

- Establishing key partnerships with relevant e-Infrastructure
- Establishing key partnerships with citizen science networks
- Analysing innovation drivers (economic, technical, other drivers)

Grant agreement n. 632694

Short-term (2016- 2017)

STEP 2: TAKE ACTIONS IN IDENTIFIED AREAS OF THE ROADMAP

1. Empowering existing e-Infrastructures with new services

The implementation of new services should refer to the 'three linked S': Setup services (needed to simplify the construction of online digital CH resources), Stable platforms (needed for hosting, backup, preservation, etc.), Scalability (needed when the amount of material grows and the levels of usage increase).

Grant agreement n. 632694

The following areas of services should be considered:

Services for content providers (i.e. services related to the creation of online data resources for research in CH). A recommended list of priority services follows:

- Interoperation (required to simplify the interoperation of online digital CH resources)
- Aggregation (can harvest and combine material from several digital CH resources and therefore needed to enable delivering multisource facilities to users)
- Cross-search (needed to enable searching across multiple online digital CH resources)
- Semantic search (needed to take advantage of semantic web technologies such as linked data and ontologies)
- Persistent identification (needed to simplify or automate the maintenance of persistent identifier and their mapping to specific locations within digital CH resources)
- IPR and Digital Rights Management

Grant agreement n. 632694

Services for adding value to the content (i.e. services focusing on ways to enhance data, to make it more accessible, user-friendly and attractive in order to facilitate re-use of data in different contexts). A recommended list of priority services follows:

Services for user management (i.e. services that support virtual research communities and activities of content consumers; the latter are those who consume content for research like academic and citizen researcher and staff members at DCH institutions). A recommended list of priority services follows:

Grant agreement n. 632694

Before entering in the development of new services, first explore the catalogues of existing services provided by relevant e-Infrastructures; if the required service already exists, take no action; if not, define the technical specifications of the new service in cooperation with the e-Infrastructures; try in the first place to fill identified gaps.

The design of these new services needs to be planned and developed based on practical case studies and pilots that, if possible, should include proof-of-concepts.

Grant agreement n. 632694

Short-term (2016- 2017)

STEP 3: CHOOSE SERVICES TO ADDRESS

The outcome of step 2 should be a number of identified new services and services already available, tailored to the requirements of the specific research community. In order to choose services to address, the following aspects should be considered:

- Prioritise: which ones of the listed services are the most needed?
- Check if those prioritised are so called common services already delivered by e-Infrastructures and used by other projects with citizen
- Evaluate how the e-Infrastructures are able to handle the requested services in a context of citizen science.
- Set up an agreement to be shared by all parties

Grant agreement n. 632694

Official Media Partner
DIGITAL MEETS CULTURE
www.digitalmeetsculture.net

Recommendations

This is a list of recommendations aggregated around targeted stakeholder groups.

The recommendations can be seen as general requirements for fulfilling a citizen science project and are based on the results of the user studies conducted during the CIVIC EPISTEMOLOGIES project.

For each stakeholder group the recommendations are connected to the three stages of a generic citizen science project, namely: preparatory, deployment, and monitoring stages.

Grant agreement n. 632694

Official Media Partner

DIGITAL MEETS CULTURE .net

www.digitalmeetsculture.net

CH Institutions

PROJECT STAGES AND REQUIREME

E-Infrastructure Providers

PROJECT STAGES AND REQUIREMENTS

Academic Institutions

PROJECT STAGES AND REQUIREMENTS

Citizen Organisations

Policymakers

Grant agreement n. 632694

Recommendations

CH Institutions

PROJECT STAGES AND REQUIREMENTS

Preparatory stage

CH institutions should:

- Gather sufficient experience to advice on the tasks within their citizen science initiative and be able to resolve concerns related to scientific questions that should arise
- Have a clear value proposition for the types of citizens they seek to engage in their citizen science initiative; they also need to implement suitable incentives to create long-term relationships with engaged public members
- Define the desired quality of volunteers' contributions and make sure the volunteers understand what the citizen science concept entails when recruiting novices

Grant agreement n. 632694

Official Media Partner

DIGITAL MEETS CULTURE .net

www.digitalmeetsculture.net

- Have a responsibility for ‘technology watch’, monitoring the technology evolution
- Liaise with e-Infrastructure providers to guarantee that the facilities are actually full available for the project
- Select appropriate communication channels to reach volunteers, and maintain contacts with other stakeholders, including academics
- Define policies, job assignments and terms of reference regulating their citizen science activities and, more important, choose and implement a strategy for training their staff
- Encourage, via suitable incentives, new volunteers to join the network. Volunteers whose inputs meet or even exceed the established quality standards could be considered potential champions of the citizen science initiative and be promoted in the network for their results. CH institutions should create a culture of appreciation of different personal motivations and introduce suitable rewarding mechanisms

Grant agreement n. 632694

- Decide early on the granularity of tasks where citizen's contribution is expected and together with intermediaries (e.g. associations of citizens) become familiar with main attractors and factors helping engagement that they are properly serving the requirements of the running citizen science initiative
- Identify the goals they aim to achieve and plan their citizen science activities accordingly, making regular audits of the tools and services that are used in the project in order to ensure that they are properly serving the requirements of the running citizen science initiative
- Choose and implement a dissemination strategy, taking in particular account also any relevant dissemination requirements of funders, and monitor the extension of the network

Grant agreement n. 632694

Deployment stage

CH institutions should:

- Be able to train the citizen-members of the project on their specific tasks, have the capacity to attract new citizens, and, as a result of that, be able to sustain the citizen community involved in the project
- Jointly with the e-Infrastructure providers, identify the most useful workflow, monitor quality issues and revise accordingly workflows adopted within particular projects
- Have a clear business model for the citizen science project

Monitoring stage

CH institutions should:

- Provide feedback on the workflow to their e-Infrastructure provider(s)
- Monitor citizen science experiences, evaluate the experiences of using technological tools within this context, and plan for any necessary future change either of the tools, or of other aspects such as training

All stages

CH institutions should:

- Be able to plan, obtain and maintain the budget necessary for the citizen science project
- Be familiar with the characteristics of the targeted crowd
- Identify and apply quantitative and qualitative evaluation metrics to follow the development of the project
- Incorporate the project outcomes into their own collections or their digital presentation, depending on the nature of the project
- Pay attention to the dynamics of satisfaction of volunteers

Grant agreement n. 632694

Official Media Partner

DIGITAL MEETS CULTURE .net

www.digitalmeetsculture.net

Follow us on:

www.civic-epistemologies.eu

www.digitalmeetsculture.net

Contact us on:

info@civic-epistemologies.eu

Grant agreement n. 632694