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CIVIC EPISTEMOLOGIES

A Roadmap for Citizen Researchers in the Age of Digital Culture

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Rome, January 13, 2016

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The CIVIC EPISTEMOLOGIES Project

CIVIC EPISTEMOLOGIES is about the participation of citizens in research on Digital Cultural Heritage and Digital Humanities. The project's main outcome is a sound Roadmap for the implementation of an e-infrastructure

- to enable creation, access, use and re-use of digital cultural heritage and humanities content
- to provide learning resources
- to provide communication services to multidisciplinary research teams located in different geographic places
- to enable citizens to participate in a range of research goals established at European level together with cultural institutions and universities.

Creativity and arts can have a role as facilitator for establishing a dialogue that brings together a range of different actors and citizens from across the society.

Main Challenges

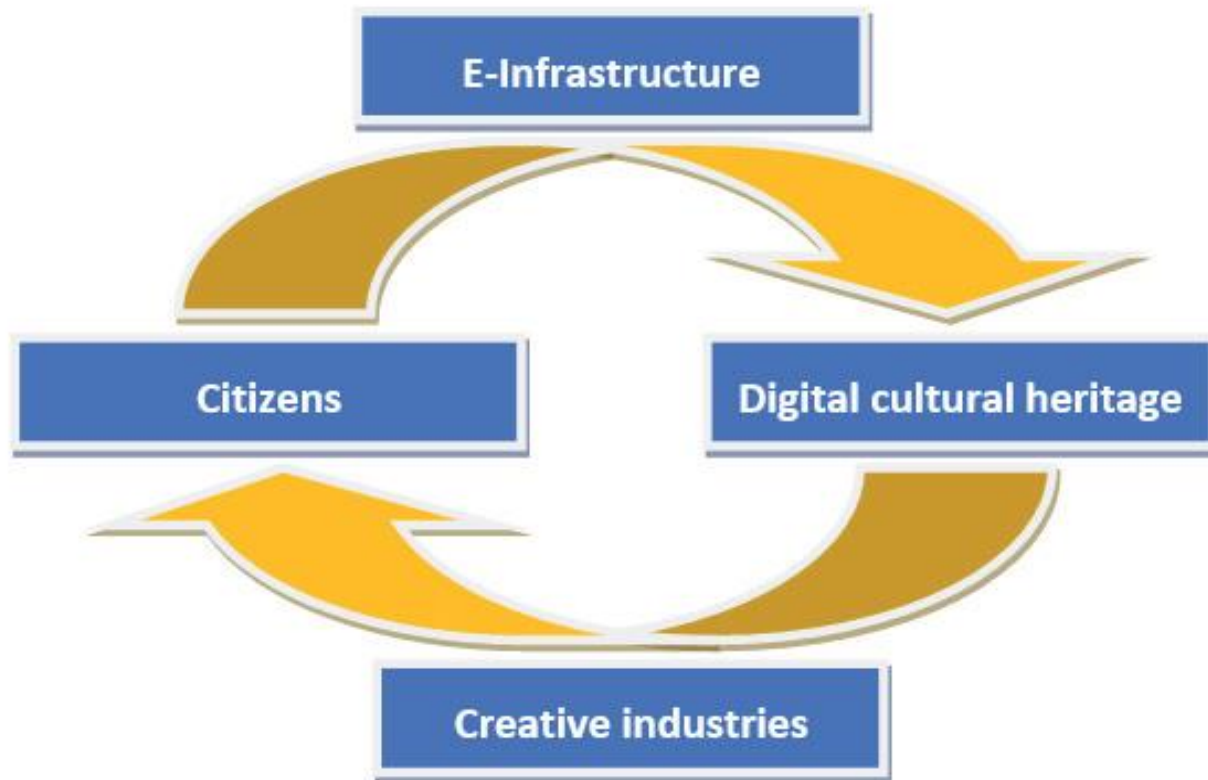
CIVIC EPISTEMOLOGIES has identified three main challenges:

1. Turning the wheel of citizen engagement

The participation of Europe's citizens in scientific research represents an important opportunity for improving European competitiveness, but this opportunity has not yet been fully developed. In this framework, CIVIC EPISTEMOLOGIES **targets use and usefulness of citizens' engagement** in cultural heritage practices and humanities research; such engagement has a twofold benefit for culture:

- To be enriched by the **citizens' contributions**
- To become more **widely used and exploited** (for example with the participation of creative industries)

The Wheel of Citizen Engagement



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Main Challenges

2. Co-producing and co-creating knowledge

There is a considerable interest among the public in exploring, recording and cataloguing their own cultural heritage or that of their community or locality.

For cultural heritage institutions and academies citizen engagement offers occasions **to be closer to citizens** who are actually **their audience**. For cultural heritage institutions it also **adds to the knowledge base of their collections**, and opens up **new ways for their collections to be used**.

But it does also create challenges, raising issues about **curatorial authority** over interpretation and on **skill development** to empower citizens to participate in research etc.

Main Challenges

3. Ethical and social issues

Citizen science demands a thorough **awareness of the roles of each actor** in the research and a **clear allocation of responsibilities**. This is even more complex when several players are involved: academies, citizens, and cultural heritage institutions.

The dialogue between these groups is not always simple; they use different specialist languages and jargon.

Also **the interests of each group** are different: academies look for improving their knowledge, cultural heritage institutions aim is to preserve the knowledge of the past, and citizens look for a deeper involvement in interpretation of their culture and for exciting experiences.

Artists are looking for **new interactions** for their creativity.

Developing sound **terms of reference** of citizen science projects is an important challenge to be faced by the concerned stakeholders.

EXISTING INITIATIVES INFORMING THE PROJECT

CIVIC EPISTEMOLOGIES has looked into other domains for experiences of distributed services in digital culture heritage and humanities transferrable to the field of citizen science. Apparently, very little has been done so far, but **digital preservation** seems to be the area in which distributed services offered by e-Infrastructure for the digital cultural heritage sector has been mostly explored.

The need for robust support in digital preservation was identified by **the INDICATE project** and its “sister” project **DC-NET**. A succeeding project, **DCH-RP**, developed a Roadmap for preservation of digital cultural heritage content, mainly by using distributed services (e-Infrastructure).

The **Europeana Cloud project** also addresses the problem of storage and permanent accessibility of cultural data records. An initiative with the aim to facilitate long-term access and use of European Arts and Humanities digital data is also **DARIAH**, the Digital Research Infrastructure for the Arts and Humanities, established as a European Research Infrastructure Consortium (ERIC) in 2014.

EXISTING INITIATIVES INFORMING THE PROJECT

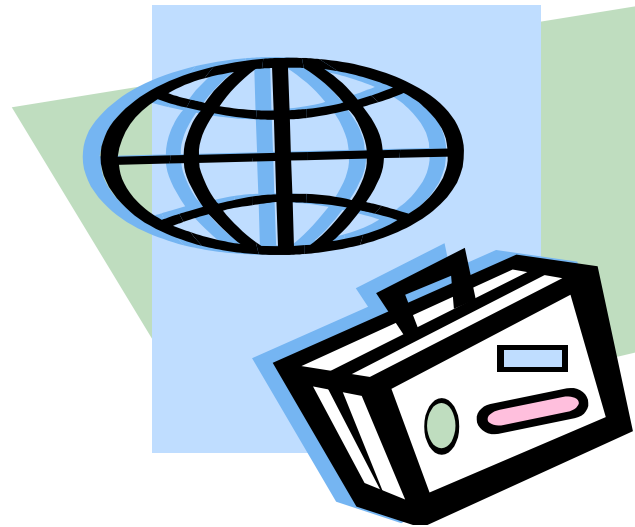
The advancement of Information and Communication Technologies (ICT), the Internet and mobile technologies opens a new perspective for bringing together different communities, unified by their interest to contribute to research.

Result: A rapid growth of citizen science initiatives/projects around the globe; the interest has grown to such an extent that **specialised platforms** have been created which **allow defining research tasks and involving users**; e.g. *Zooniverse* and *CrowdCrafting*.

The *Socientize* project has identified a number of drivers and barriers for citizen science, some of them with bearing on the use of e-Infrastructure.

Citizen Cyberlab, an EU ICT project funded under the EC FP7 Programme, belonging to the *Citizen Cyberscience Centre*, which has its central focus of research on creativity and learning in on-line citizen science.

The Roadmap



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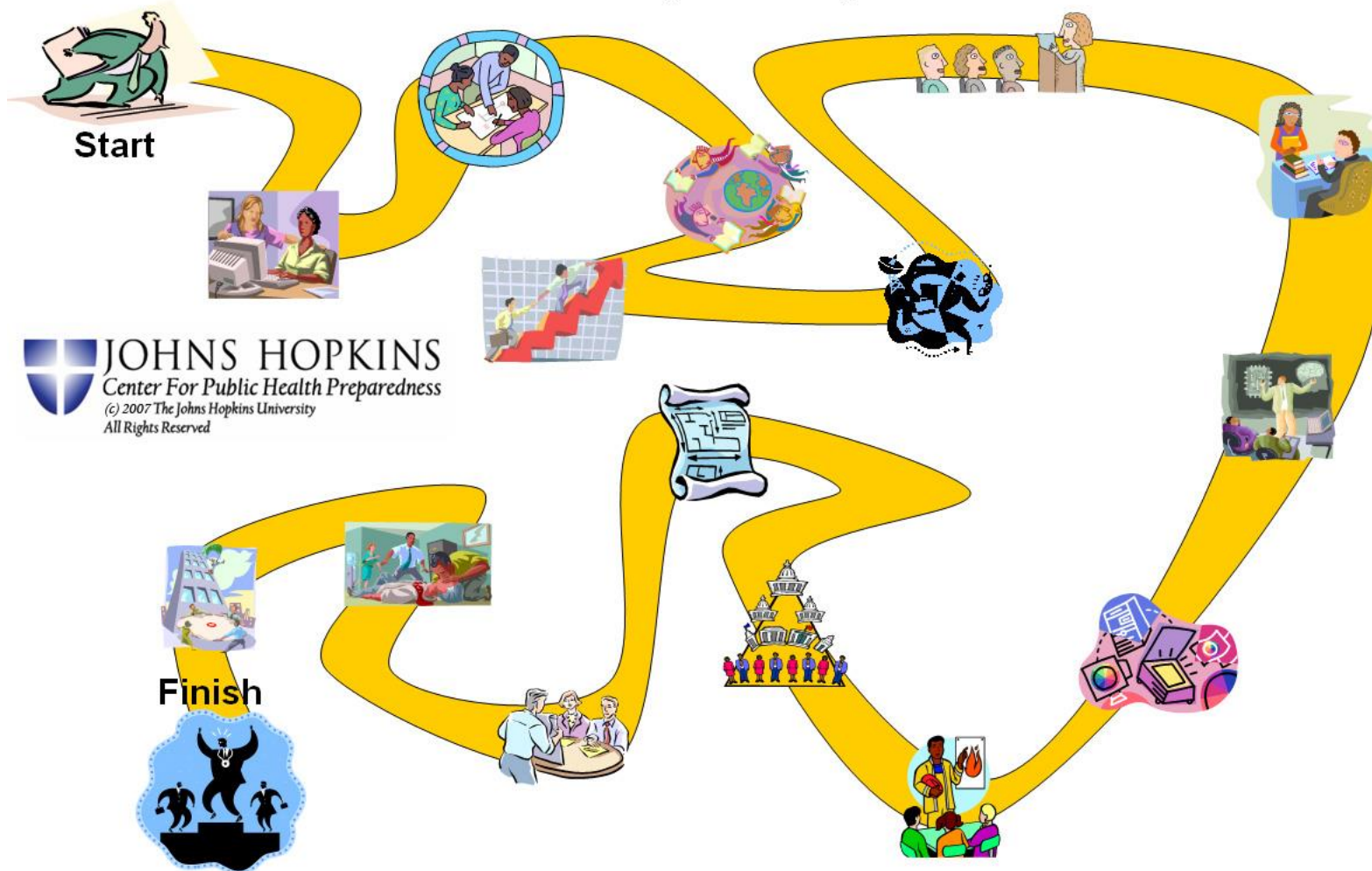
The Aim

The aim of this Roadmap is to illustrate **a path towards the engagement of citizens** in the research and valorisation of cultural heritage, by using distributed services like digital tools and online communication offered by the e-Infrastructures.

But, these services are meant not only for the participation of citizens (together with cultural and academic institutions) in the research processes. These services shall also support

- the participation of **creative industries** in the exploitation of digital cultural content
- **artists** in their role of mediator between sectors not used to work together
- providers of cultural value for the benefit of the **society at large**

The Road Map to Preparedness



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Center For Public Health Preparedness
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The Roadmap – an ongoing process

The Roadmap is intended to be a **living document**, open to contributions from researchers, e-Infrastructure providers, cultural managers, artists, students, teachers, and citizens interested in the matter.

An **online version** of the document is published on the CIVIC EPISTEMOLOGIES website where visitors can deliver their comments to improve and ameliorate; it is in other words an instrument offered to the community for free use and re-use.

<http://www.civic-epistemologies.eu/roadmap>

Some Basic Elements and Assumptions

Elements

- The 'map' draws the landscape of citizen science for the digital cultural heritage and humanities research – in this case much depends on **the maturity of the scientific processes** in this domain and on **the flexibility and usefulness in services provided by e-Infrastructures**.
- The 'road' points to an action plan – in this case also to a set of recommendations aggregated around each targeted stakeholder group.

Assumptions

The Roadmap is built on two implicit assumptions:

- Existing e-Infrastructures for research and academia are efficient channels also for the delivery of distributed services to be used by the cultural heritage and humanities domain for supporting citizen science
- It would be possible to establish common policies, processes and protocols

Defining who the stakeholders are

These are the key stakeholders, 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

Defining who the stakeholders are



Other important 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

Artistic and creative practices contribute to the establishment of engagement processes. Artists can act as mediators between the cultural institutions and citizens, inspiring co-creation initiatives which can take place both online and in the physical premises of museums, libraries and archives.

Schools and educational practices can successfully host citizen science initiatives, contributing to attracting youngsters' interests and creating new liaisons between the schools and the society.

In a broader sense, stakeholders are all the European citizens.

Disparate needs and requirements makes the question of dialogue and establishing a common framework particularly important. A valuable reference is the RICHES Taxonomy (www.riches-project.eu)



RICHES
RENEWAL, INNOVATION AND CHANGE
HERITAGE AND EUROPEAN SOCIETY



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Gaps

Some gaps are expected to be filled when implementing the Roadmap:

1. THE LAST MILE

- Lack of know-how
- Better uptake of intangible cultural heritage
- Better focus on business value
- Need for enhancing cohesion and inclusion
- Need for new opportunities of funding
- Need for digital tools and technical platforms for including the public

2. E-INFRASTRUCTURE SERVICES FOR CITIZEN SCIENCE

3. NEED FOR A NEW MIND-SET

The Two Main Components of the Roadmap

Firstly: A timeframe

The CIVIC EPISTEMOLOGIES Roadmap should make it possible for each institution in the cultural heritage and humanities domain to define its own practical action plan with a realistic timeframe for the implementation of its stages.

Three time frames have been considered:

- **Short-term (2016- 2017).** The purpose of proposing a short-term action plan (2016) is to initiate the development of e-Infrastructure services on a level that will be self-sustainable and continue to progress on its own.
- **Medium-term (2018-2019).** The medium-term action plan covers the two years after the end of the CIVIC EPISTEMOLOGIES project and it concerns the production phase, when the developments initiated during the short-term action plan are deployed.
- **Long-term (2020 and beyond)** for the logical continuation of the work and full implementation of the citizen science initiative.

The Two Main Components of the Roadmap

Secondly: Seven selected areas for actions

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.

This action aims to develop and make available the specific new services that can satisfy the needs of digital cultural heritage and humanities research communities.

2. Tailoring new services to the requirements of each research community.

This action aims to customise the new services on the basis of the individual specifications of the research project where the services are going to be used. Terms of reference, definition of roles and responsibilities, and guidelines will be important components.

The Two Main Components of the Roadmap

3. Improving interoperability and re-use.

This action concerns the implementation of a better integration of internal and external digital resources within the overall workflows for handling research data. This action is important in order to put in place a set of measures to avoid building 'digital silos' within the organisations participating in the research.

4. Establishing the conditions for cross-sector integration.

Cross-sector integration is a key condition for maximising the efficiency of successful solutions, transferring knowledge and know-how between different sectors. A scalable and modular approach to the e-Infrastructures deployment is needed that will allow serving research better and reduce costs of development.

The Main Components of the Roadmap

5. Developing governance models for infrastructure integration.

The agreement on governance modules is a necessary condition for successful institutional participation in larger e-Infrastructure initiatives. This includes also aggregation and re-use of digital resources.

6. Exploring artistic and creative practices as an instrument for engagement.

This is an area which still requires to be recognised and exploited in terms of its potential for social innovation and cohesion.

7. Developing ad-hoc training and awareness opportunities for targeted users.

Training and awareness of target users is a key pre-condition for the successful implementation of a citizen science initiative. The actors involved come from different background and have different experiences, therefore they should reach a compatible level of knowledge that can allow sharing information and understanding instructions from the project leaders.

A Proposed Action Plan



The action plan consists of two parts:

- A list of **proposed actions**, following the timeframe and the selected areas for actions
- A list of **recommendations** aggregated around each targeted stakeholder group

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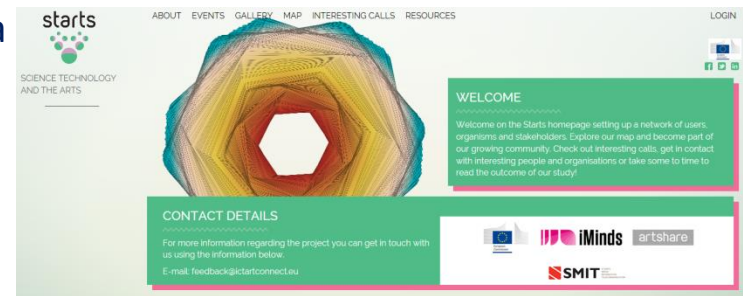
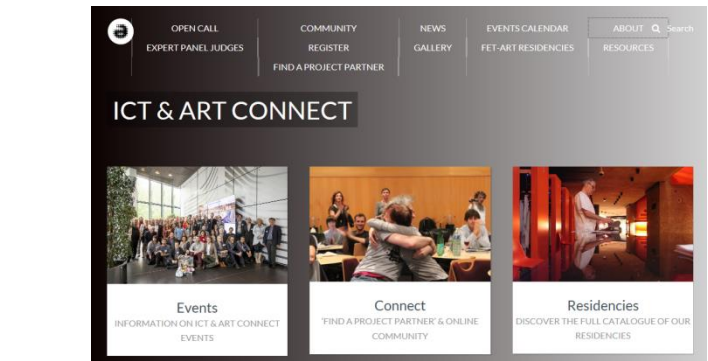
Conclusions

1. Over the past decades we have witnessed a sustained **growth in the scope and scale of participation of people from outside established research organisations** in all aspects of scientific research. Cultural heritage and humanities are not an exception, although the number of projects is not as high as in other domains of science.
2. One of the most important lessons learned is the **necessity to consider a shift in mentality in both the cultural heritage and the academic sector**. The participation of non-professional curators in the development of new knowledge has to be fully accepted, and appropriate procedures and guidelines have to be designed and applied in line with that. Otherwise, there is a risk in missing a big opportunity in mobilise additional non-conventional resources for the research on cultural heritage and humanities.
3. Finally, the **exploration of how artistic and creative practices can support the research on cultural heritage and humanities has started**. It is a process that will require time to become actually a standard approach, but its potential, also in the domain of the citizen science in digital cultural heritage, is high and very worthwhile to be pursued.

Conclusions

EC has funded the *ICT & ART CONNECT* study (www.ict-art-connect.eu/), in order to characterize and connect artistic communities of ICT researchers at all levels, including institutions, companies and individuals. The study created a map of individuals and institutions engaged in artistic practices within ICT research projects in Europe and world-wide.

STARTS is the logic consequence of the study.



In order to facilitate the necessary changes, specific topics on citizen science in CH, should be funded in the next work programmes, at regional, national and European levels, with particular regard to the EC framework programmes, e.g. in H2020, Creative Europe, Connecting European Facilities.

We will continue to advocate our principles in our daily work, in the research, on curations, on business activities,

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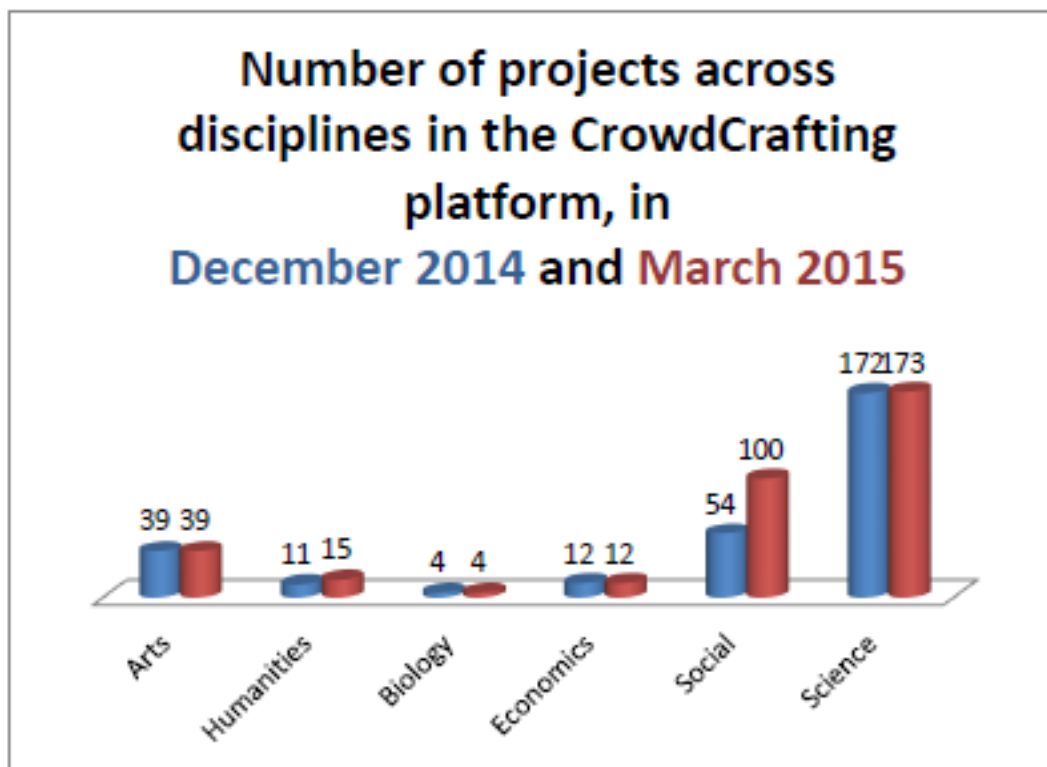
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Why are Humanities not using citizen science more actively?



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