

Impact and success of research infrastructures

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Success and impact are not the same thing

- Success: To what extent do we manage to do what we promised to do. This is the typical project scenario, with given goal and time frame, where every step is under our control and responsibility.
- Impact: Simon Taller (2012) defines impact as *“the measurable outcomes arising from the existence of a digital resource that demonstrate a change in the life or life opportunities of the community for which the resource is intended”*.
- Taller’s focus was on the impact of Digital Resources, ours will be on Research Infrastructures (RIs) for the Social Sciences and Humanities & Cultural Heritage (SSH&CH).

A layered approach for RIs in SSH&CH

- Economic impact: to what extent do the construction and operation of the RI generate economic activity in or around the RI
- Impact on the scientific landscape: how does the RI affect the life or life opportunities of SSH&CH researchers and practitioners (including students)
- Impact on research results: how does the landscape as changed by the RI affect the research results
- Societal impact: how do the research results that were obtained thanks to the RI affect society at large

Economic impact

- For distributed data infrastructures in SSH&CH there are hardly any significant economic benefits that follow from the construction and operation of the RI (as opposed to hard sciences)
- Commercial exploitation of SSH&CH research results obtained through the use of the RI may be possible, but it may be hard to demonstrate the role of the RI in the final products or services

Impact on the scientific landscape (i)

This is about the facilities and opportunities we as RIs offer to researchers, practitioners and students – and therefore easy to measure qualitatively and quantitatively and to describe, and to formulate KPIs. Below some main features of CLARIN.

- Having a well-developed technical infrastructure populated with data and services is not sufficient, as in SSH&CH the digital transformation has only just started
- In CLARIN we have, parallel to the technical infrastructure, our Knowledge Sharing Infrastructure, which serves to facilitate knowledge transfer between all stakeholders on a European scale, covering a broad range of training activities
- Common standards create optimal opportunities to combine and re-use data and tools from different sources so that researchers can collaborate and build on each other's results, and increase their collective scientific impact

Impact on the scientific landscape (ii)

- Publication of examples of successful use cases should help to attract and inspire new users
- Collection and promotion of special families of language resources (e.g. newspaper texts, parliamentary records, social media and oral history) and tools to work with them should help to bring together researchers from different countries or disciplines for joint research projects

Impact on research output

This is about the uptake of what we offer by our users and the research and education results it leads to.

- What we can measure and formulate KPIs for is the number of users, course participants, visits, downloads, requests, etc
- The extent to which researchers have successfully made use of our facilities for their research will only be visible and measurable if they give credit for it in their publications. Developing and promoting proper citation habits is an important common action point for data RIs.

Societal impact

This is about the extent to which SSH&CH research supported by RIs leads to better understanding of who we are and how society works – but how to measure this and what exactly is the contribution by the RI?

- Uptake by policymakers and media is a clear signal – but RI role largely invisible, as they would normally refer to scientific articles and publications in the best case, but not to their sources
- For the assessment of the impact that we make on society as a whole we are largely dependent on “circumstantial evidence”, such as reputation.
- In this context the DARIAH Impactomatrix is a rich source of inspiration to identify factors that can help boosting the impact, and criteria to (indirectly) measure the effects.

Concluding remarks

- Measuring our own efforts to have an impact is easy, measuring the result is hard.
- European SSH&CH is diverse, and not focused on specific common targets such as putting a man on the moon, using nuclear fusion to produce electricity or solving the cancer problem. This makes notions such as progress and impact hard to define.
- It is my feeling that disciplines are much better off if they are backed by a generally acknowledged societal threat or disaster, such as pollution, energy crisis, ageing population or climate change
- I still hope that Europe will one day see that **social climate change** is as much of a threat as the other ones (as the migration problem clearly illustrates) and that a coordinated Europe-wide SSH&CH research effort is needed to address it
- RIs are in an excellent position to play a role in this and should think about what they could do to facilitate this