

# Research Infrastructures in the Digital Humanities

## Executive Summary

Milena Žic Fuchs\*, Marko Tadić<sup>+</sup>

\*European Science Foundation, Standing Committee for the Humanities  
1, quai Lezay Marnésia, F-67080 Strasbourg Cedex  
France  
mzicfuch@ffzg.hr

<sup>+</sup>University of Zagreb, Faculty of Humanities and Social Sciences  
Ivana Lučića 3, HR-10000 Zagreb  
Croatia  
marko.tadic@ffzg.hr

### Abstract

This contribution is an overview of the ESF Science Policy Briefing under the title *Research Infrastructures in the Digital Humanities*. This Science Policy Briefing was initiated and completed under the auspices of the Standing Committee for the Humanities (SCH) with professor Claudine Mulin as chair of the SCH Expert Working Group on Research Infrastructures. This Executive Summary presents the main points of the Science Policy Briefing that tries to formulate priorities for policy and research: (1) State of the Art and Needs; (2) Physical and Digital RIs; (3) Strategic Directions; (4) Partnerships and Networking; (5) Academic Recognition; (6) Dissemination and Outreach; (7) Evaluation of RIs.

### Introduction

Without Research Infrastructures (RIs) significant strands of Humanities research would not be possible. By drawing on a number of case studies the ESF Science Policy Briefing (SPB) *Research Infrastructures in the Digital Humanities* demonstrates that digital RIs offer Humanities scholars new and productive ways to explore old questions and develop new ones, opening the way to addressing ‘grand challenges’ in Humanities research and at the interface with other research domains.

This SPB positions itself in terms of priorities and future research directions for a common strategy on RIs in the Humanities at the European level. It is aimed at researchers and information professionals (including librarians, archivists, etc.) as well as institutions such as funding bodies, those responsible for management and administration of research organisations and RIs, selection and promotion committees. It is also addressed to faculty and curriculum accreditation committees responsible for developing courses in the area of RIs.

Work on this SPB began in early 2009 following the decision of the ESF Standing Committee for the Humanities (SCH) to make RIs one of its top priorities. Having identified RIs as an area of strategic importance, the SCH set up an SCH Expert Group on RIs which has for the last two years been deeply involved in the creation of this paper. In addition, the SPB also incorporates views put forward by members of different communities involved in Humanities RIs, views expressed at the *Strategic Workshop on Research Communities and Research Infrastructures in the Humanities* organised by the SCH in October 2010 in Strasbourg. Furthermore, the report was reviewed by some of the leading experts in the field and by three anonymous referees.

### Priorities for Policy and Research

#### State of the Art and Needs

- The production of a detailed inventory of **current research activities and future needs** in terms of infrastructural support (e.g., standards, tools, licences).
- The fostering of **partnerships** across communities and institutions (scholarly community, libraries, archives, museums, private institutions and, where appropriate, public bodies and the commercial sector) to achieve better coordination of funding and activities at European level.
- The recognition and establishment of **RI ecosystems** where multiple levels of RIs (pan-European, local, community-driven, institutional) co-exist and collaborate harmoniously. Within such ecosystems, the development of **multilingual, multimodal and multidimensional** frameworks should be supported.
- The development of **higher education programmes** and training opportunities at fundamental, intermediate and expert levels.

#### Physical and Digital RIs

- The constant examination of recurring, perceived and actual **challenges** in integrating physical research infrastructures in Humanities and digital research infrastructures and hence the identification of means to **bridge ‘physical’ with ‘digital’**.
- Increased support for **interdisciplinary profiles** that are able to act as ‘translators’ between Computer Science/Engineering and Humanities approaches and traditions..

## Strategic Directions

- The development of RIs that build on existing communities and research questions, in order to facilitate research *beyond monodisciplinary interests* and across different communities. Infrastructures have the potential to act as ground for cross-fertilisation between the Humanities and other sciences.
- The development of RIs that connect the ‘silos’ of isolated project-based data and resources so as to reach a reliable and dynamic *correlation* across resources and data responding to the complexity of scholarly material and relevant interpretative process.
- The fostering of research programmes that identify and promote *good practices* with respect to interoperability, usability and collection curation (including sustainability and preservation) within and across national boundaries.
- The development of RIs that offer *open access* to processed as well as original data, with regulation by funding agencies of public access to research sources and outcomes of publicly financed projects (*public access to publicly funded research* including permission to reuse data).
- The development of RIs in the Humanities that reach across linguistic borders and provide access to large *multilingual* datasets from different cultures to inform comparative and transnational research.
- The development of *legal instruments* (copyright regulations and relevant policies) on a national and international level in order to respond to and steer the digital environment potential according to an open access policy.
- The *sustainability* of RIs through long-term funding commitment beyond thematic or project-based models and their development.
- The deposit of data in *certified repositories*, in order to avoid in future non-accessibility or even loss of primary source materials..

## Partnerships and Networking

- The establishment of partnerships and productive alliances *across communities and institutions* (scholarly community/libraries/ archives/museums and private institutions) based on equality. Cooperation agreements, joint access policies, coordination of depositing rules (as regards, notably, processed data in databases and other forms of research output) are all elements that can only be tackled by the Library, Archive and Information Studies sector and research organisations together.
- The identification of *obstacles to alliances* to date between *RIs providers* (e.g., librarians and archivists) and the academic community (e.g., potential conflict between libraries’ requests for free, reusable data and researchers seeking to add value and retain recognition of their work).
- The fostering of relevant partnerships with the private sector to contribute to *innovation society* and ‘smart economy’ strategies with potential to foster social and economic benefits, including market innovation.

- The enhancement of the *networked dimension* of RIs (e.g., across CLARIN/DARIAH and other international infrastructures).

## Academic Recognition

- The change towards a *culture* of recognition that accepts the process-oriented character of digital publications.
- The establishment of more comprehensive clearing and authoritative *mechanisms* (including peer review) to secure scholarly reliability and recognition of research across international and interdisciplinary collaborations.
- The fostering of *interdisciplinary tools and teams* where all contributing specialist roles and competences are recognised and rewarded.
- The implementation of *targeted advocacy* (e.g., for emerging cross-disciplinary fields and relevant academic recognition).

## Dissemination and Outreach

- The development of RIs that have outreach built into their management plans in order to foster the emergence of a *new culture* that looks beyond established academic circles.
- The demonstration and dissemination of *scholarly results* of research products arising from/facilitated by RIs.
- The dissemination of existing models of good *community of practice* in order to provide education to researchers on how to build new and effective community infrastructures and use existing ones.

## Evaluation of RIs

- The implementation of improved and agreed *systems for evaluation* of RIs.
- The expansion of current evaluation requirements to include, when appropriate, expectations associated to the development of RIs as well as to their consequent *economic and social benefits*.
- Proper recognition and credit of *interdisciplinary contributions* across research project partners by the European funding agencies and academic professional organisations.
- Proper recognition, credit and career perspectives to foster and promote a *new generation of young researchers* who will be able and willing to take on the challenges discussed in this document.

## List of Authors and Contributors

This ESF Science Policy Briefing has been written by the following experts:

- **Professor Claudine Moulin** (Chair of the editorial group), Trier Center for Digital Humanities, Universität Trier, Germany – SCH member (LU)
- Dr Julianne Nyhan, Trier Center for Digital Humanities, Universität Trier, Germany/ Department of Information Studies, University College London, United Kingdom
- Dr Arianna Ciula, Humanities and Social Sciences Unit, European Science Foundation, France
- Professor Margaret Kelleher, An Foras Feasa, National University of Ireland Maynooth – SCH member (IE)

- Professor Elmar Mittler, Göttingen University, Germany
- Professor Marko Tadić, Department of Linguistics, University of Zagreb – SCH member (HR)
- Professor Maria Ågren, Department of History, Uppsala University – SCH member (SE)
- Professor Andrea Bozzi, Istituto Linguistica Computazionale, CNR – SCH member (IT)
- Professor Kristin Kuutma, Institute of Cultural Research and Fine Arts, University of Tartu – SCH member (EE)

The following experts contributed to the Science Policy Briefing (including Case Studies) with their knowledge and expertise:

- Professor David Arnold, Faculty of Management and Information Sciences, University of Brighton – UK
- Dr Elton Barker, The Open University – UK
- Mr Michael Bender, Institut für Sprachund Literaturwissenschaft, Darmstadt University of Technology – DE
- Dr Joachim Berger, Institute of European History, Mainz – DE
- Mr Brett Bobley, US National Endowment for the Humanities, Office of Digital Humanities – USA
- Professor David J. Bodenhamer, School of Liberal Arts, Indiana University Purdue University Indianapolis – USA
- Dr Stefan Bouzarovski, Department of Geography, Earth and Environmental Sciences, University of Birmingham – UK
- Professor Ewa Dahlig-Turek, Institute of Arts, Polish Academy of Sciences and Humanities – PL
- Mr Shawn Day, Digital Humanities Observatory – IE
- Dr Graeme Earl, Archaeological Computing Research Group, University of Southampton – UK
- Professor Gudrun Gersmann, German Historical Institute, Paris – FR/ DFG committee on electronic publications – DE
- Dr Ian N. Gregory, Faculty of Arts and Social Sciences, Lancaster University – UK
- Mr Leif Isaksen, School of Electronics and Computer Science, University of Southampton – UK
- Professor Elisabeth Kieven, Bibliotheca Hertziana, Max Planck Institute for Art History – DE/IT
- Dr Andreas Kunz, Institute of European History, Mainz – DE
- Dr Lilian Landes, Bavarian State Library, Center for Electronic Publishing – DE
- Dr Faith Lawrence, Digital Humanities Observatory – IE
- Professor Louisa-Irene Loukopoulou, Institute for Greek and Roman Antiquity, National Hellenic Research Foundation – GR
- Professor Christopher Pelling Christ Church, Oxford – UK
- Professor Andrea Rapp, Institut für Sprach- und Literaturwissenschaft, Darmstadt University of Technology – DE
- Mr Oliver Schmid, Institute of Economics, Darmstadt University of Technology – DE
- Dr Dietrich Schüller, Phonogrammarchiv, Austrian Academy of Sciences – AT/UNESCO Working Group on Information Preservation
- Mr Robert Stein, Indianapolis Museum of Art – USA
- Ms Dana Wheelles, Networked Infrastructure for Nineteenth-Century Electronic Scholarship, University of Virginia – USA

In addition, the following experts gave invaluable input following a wide consultation process:

- Mr Arno Bosse, Research and Development Department, Göttingen State and University Library, Georg-August-Universität Göttingen – DE
  - Dr Milena Dobрева, Computer and Information Sciences Department, University of Strathclyde – UK
  - Dr Peter Doorn, Data Archiving and Networked Services, Royal Netherlands Academy of Sciences – NL (ESFRI DARIAH)
  - European Library Management Committee c/o the National Library of the Netherlands, The Hague – NL
  - Professor Jost Gippert, Vergleichende Sprachwissenschaft, Institute for Linguistics, Universität Frankfurt/Main – DE
  - Mr Steven Krauwer, Utrecht Institute of Linguistics, Utrecht University – NL (ESFRI CLARIN)
  - Professor Rūta Marcinkevičienė, Center of Computational Linguistics, Vytautas Magnus University – LT (SCH member)
  - Dr Cristina Marras, Istituto per il Lessico Intellettuale Europeo e Storia delle Idee, CNR, Roma – IT
  - Professor Louise McNally, Departament de Traducció i Ciències del Llenguatge, Universitat Pompeu Fabra, Barcelona – ES (ESFRI SSH working group 2007-2008)
  - Professor Jan Christoph Meister, Department of Language, Literature and Media, University of Hamburg – DE
  - NeDiMAH Steering Committee, ESF Research Networking Programme [<http://www.esf.org/nedimah>]
  - Professor Franco Niccolucci, Science and Technology in Archaeology Research Centre, The Cyprus Institute – CY
  - Professor Christian-Emil Ore, Unit for Digital Documentation, Faculty of Humanities, University of Oslo – NO (CIDOC-CRM)
  - Professor David Robey, Oxford e-Research Centre – UK
  - Professor Tomojoy Tabata, Graduate School of Language and Culture, University of Osaka – JP
- This ESF Science Policy Briefing has been prepared under the responsibility of the Standing Committee for the Humanities (SCH):
- Chair: **Professor Milena Žic-Fuchs**
  - Head of the Humanities and Social Sciences Unit: Dr Nina Kancewicz-Hoffman
  - Science Officer: Dr Arianna Ciula
  - Editorial support: Mr Diego De La Hoz Del Hoyo, Science Officer