

D2.4 Organise DESIR final event

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D2.4

Organise DESIR final event

DESIR

DARIAH ERIC Sustainability Refined

INFRADEV-03-2016-2017 - Individual support to ESFRI and other world-class research infrastructures

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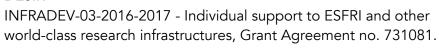
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Executive Summary

The DESIR Final Event took place in Zagreb on 6-7 November 2019, alongside the DARIAH General Assembly. The DESIR Final Event brought together the whole consortium and involved several Bodies of the ERIC to maximise the impact of the event. The aim of the meeting was two-fold. First, it was to opportunity to summarise the activities conducted throughout the project and showcase results towards the DARIAH community. Secondly, it proposed a wider discussion over sustainability and funding models with National Representatives prior to the General Assembly.

Overall, 57 participants attended the event. The schedule has been structured to present the outcomes of each Work Package. As the project DESIR was divided into an evolving 6-dimensional process, main results can be summarised as follows:

Dissemination and Innovation: the aim of this Work Package was to ensure a continuous dissemination of DARIAH service improvements, activities and research results within the relevant communities, academic stakeholders and other interested parties. Furthermore, the Work Package was in charge of organising main dissemination activities during the project and the DARIAH Beyond Europe workshop series (Stanford University, Library of Congress, National Library of Australia).

Growth: this Work Package was concerned with the enlargement of the DARIAH membership targeting six countries (Czech Republic, Finland, Israel, Spain, Switzerland, United Kingdom). Membership could only be achieved in Czech Republic, the application was submitted and ratified by the General Assembly in November 2019. Nevertheless, in other countries, collaboration with DARIAH has been greatly strengthened and significant progress regarding DARIAH membership has been achieved.

Technology: the Work Package delivered three demonstrators focused on bibliographical metadata. The demonstrators show the usage of tools for bibliographical metadata in various stages of the research process, e.g. extraction of entities, the collection and sorting of citations, visualisation of selected aspects of the data. These demonstrators were built with the involvement of the community of researchers through two Code Sprints organised in Berlin.

Robustness: the aim of this Work Package was to strengthen the organisational structure of DARIAH. The activities undertaken had a multifaceted nature: the relationship with the user community was improved through the implementation of a centralised helpdesk; preliminary work towards the Marketplace was conducted; the EURISE Network (European Research Infrastructure Software Engineers' Network) was established with CLARIN and

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CESSDA; finally a renewed business plan building on existing strategic documents was developed.

Trust: this Work Package contributed to DARIAH's long-term sustainability by measuring acceptance and impact of DARIAH in new cross-disciplinary communities and core groups through a survey, in-depth qualitative interviews and strategic meetings. The analysed information collected from each source led to a recommendations and community engagement tool developed to share and translate the recommendations dataset for a broader audience.

Teaching: the work carried out during the course of the project led to the implementation of a discovery framework and hosting platform for DARIAH learning resources, DARIAH-Campus. The platform was officially launched during the event. The goal of DARIAH-Campus is to widen access to open, inclusive, high-quality learning materials that aim to enhance creativity, skills, technology and knowledge in the digitally-enabled arts and humanities.

	Nature of the deliverable					
	R	Document, report				
	DEM	Demonstrator, pilot, prototype				
✓	DEC	Websites, patent fillings, videos, etc.				
	OTHER					
	Dissemination level					
✓	Р	Public				
	CO	Confidential only for members of the consortium (including the Commission				
		Services)				
	EU-RES	Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)				
	EU-CON	Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)				
	EU-SEC	Classified Information: SECRET UE (Commission Decision 2005/444/EC)				

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DESIR



Introduction

DESIR, DARIAH-ERIC Sustainability Refined, is a 3-year project (1 January 2017 - 31 December 2019), funded as a Coordination and Support Action (INFRADEV-03-2016-2017) under the European Commission's Horizon 2020 Programme. Coordinated by DARIAH-EU, the DESIR consortium includes 16 partners from 12 countries (Belgium, Czech Republic, Finland, France, Germany, Israel, Poland, Portugal, Serbia, Spain, Switzerland and the United Kingdom). The aim of DESIR is to strengthen the sustainability of DARIAH, Digital Research Infrastructure for the Arts and Humanities, and firmly establish it as a long-term leader and partner within arts and humanities communities.

The organisation of a final event is described in task 2.4 of the project with the aim of presenting final reports of the Work Packages as well as strategies for DARIAH sustainability beyond the project lifetime. Originally, the final event was planned to be held in December

2019 in Paris. Nevertheless, the Consortium believed that organising the final event alongside the annual face-to-face DARIAH General Assembly would maximise the impact of the event. Therefore, the DESIR Final Event took place on 6-7 November 2019 at the Rectorate of the University of Zagreb, Croatia. The event was preceded by DARIAH National Coordinators Committee (NCC) meeting and followed by the DARIAH General Assembly. Due to the seating capacity of the venue, the registration of the event could not be publicly opened. Invitations to the event have been sent to DARIAH National Coordinators, DARIAH National Representatives, project partners and members of the DARIAH-HR consortium. The attendance on the first day was 51, while on the second day the number of participants was 50 with a slightly different composition in comparison with the day before. In total, 57 participants attended at least one day of the DESIR Final Event.



Figure 1 Toma Tasovac and Marco Raciti introduce the event

The aim of the event was two-fold: the first day focused on presenting the results of the project to the audience through a detailed description of the activities of each Work Package. The agenda of the second day included two presentations on sustainability and

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funding models: the first focused on the notion of valuing and sharing knowledge in arts and humanities, while the second took the point of view of the NCC to launch a reflection on how to optimise national and European SSH Research Infrastructure investment. The idea was to involve DARIAH National Representatives in the discussion with the purpose of gathering important input for fine-tuning strategies for DARIAH's medium and long-term sustainability. Later on, the General Assembly generated one important outcome of the project when it approved the Czech Republic as the 19th Member of DARIAH.

Despite the name of the event, not all project activities were completed at that time (for example a final version of the Business Plan, some training measure in accession countries and the Winter School in the framework of Work Package 7: Teaching). Hence, supplementary communication activities will be deployed to promptly inform DARIAH Bodies and stakeholders of full project's results.

1. Agenda

Part 1 – 6 November, Rectorate of the University of Zagreb

- 14:00 14:15 Welcome and Introduction (Toma Tasovac, DARIAH Director, BDCH)
 Sustainability for DARIAH: Key Challenges
 - Dissemination
 - Growth
 - Technology
 - Robustness
 - Trust
 - Education
- 14:15 15:15 Sustainability for DARIAH: Key Solutions part 1
 - Dissemination: DARIAH Beyond Europe (Sally Chambers, Ghent University)
 - Growth: DARIAH Accession Countries (Jakub Szprot, University of Warsaw)
 - **Technology**: Presentation of demonstrators, Code Sprints and EURISE Network (Stefan Buddenbohm, University of Göttingen)
 - Robustness: DARIAH Marketplace and DARIAH Helpdesk (Yoann Moranville, DARIAH ERIC)
- 15:15 15:45 Coffee Break and Interactive showcase of demonstrators in the framework of Work Package 4: Technology
- 15:45 16:15 Sustainability for DARIAH: Key Solutions part 2
 - Robustness: DARIAH Business Plan (Sally Chambers, Ghent University)
 - Trust: Trust in DARIAH (Rosário Jorge, FCSH NOVA)
- 16:15 16:30 Official launch of DARIAH Campus (Toma Tasovac, DARIAH Director, BCDH)
- 16:30-17:30 Keynote: "Cultural Innovation, a notion taken for granted" (Riccardo Pozzo, University of Rome Tor Vergata)
- 17:30 18:00 Wrap-up and closing discussion: what's next?





Part 2 – Discussion with the DARIAH General Assembly, 7 November, Rectorate of the University of Zagreb

- 09:00 09:15 Welcome & Introduction
- 09:15 09:45 "Towards a Sustainable DARIAH: valuing and sharing knowledge in arts and humanities"
- 09:45 10:15 Optimising National and European SSH Research Infrastructure Investment 10:15 10:30 Discussion

2. PART 1 - 6 November 2019

The first day of the final event was devoted to showcase the results of the project, notably to DARIAH national coordinators who had met in the morning. Establishing a fruitful communication with the National Coordinators Committee is crucial for DARIAH to ensure mutual exchange between the national and European levels. Toma Tasovac introduced the key challenges of the project which were built upon DESIR's 6 core infrastructural sustainability dimensions: the ability to disseminate information and knowledge to users, grow the community of users, augment the offer of services with state-of-the art technologies, ensure robustness of the governance, gain trust from its users and communities, build access to education and training.

2.1 Work Package 2: Dissemination

Sally Chambers (UGENT), Work Package 2 leader, gave a description of the activities undertaken during the last three years of work. The objectives of Work Package 2 could be summarised in four points:

- 1. Organise the DESIR kick-off event in Berlin
- 2. Ensure a continuous dissemination of DARIAH service improvements, activities and research results within the relevant communities, academic stakeholders and other interested parties;
- 3. Host three international workshops in the US and Australia to raise DARIAH's profile;
- 4. Organise the final DESIR event in Paris.

The DESIR kick-off meeting took place on 25 April in Berlin alongside the DARIAH Annual Event to reach a wider audience and maximise the impact towards DARIAH communities and beyond. The topic was extremely relevant to DESIR as the DARIAH Annual Event 2017 focused on the subject of sustainability of Research Infrastructures. The kick-off event was an important occasion to bring together the whole consortium, facilitate networking and successful cooperation throughout the project lifetime.

The successful organisation of the meeting led to the submission of deliverable D2.1 *DESIR Kick-Off Meeting Report*¹ which reported in detail all presentations and outcomes of the event.

Task 2.2. focused on disseminating DARIAH and DESIR activities in order to make the project findings available to the DARIAH community and to the wider public. In terms of external communication, the objectives of this task were to make DESIR achievements visible and accessible, raise awareness of DARIAH (e.g. nationally, in Europe,

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¹ https://www.dariah.eu/wp-content/uploads/2017/03/20170630 DESIR D2.1 DESIR Kick-off Meeting Report final.pdf

internationally), address stakeholder groups specifically with key messages (e.g. DESIR partners, DARIAH Members and future members, arts and humanities researchers) and monitor dissemination activities. A dissemination and monitoring compliance strategy was produced at the beginning of the project in deliverable D2.2 DESIR Dissemination Strategy Report. Dissemination activities and communication tools (such as conferences, articles, blog posts, posters, tweets) have been listed. An extensive monitoring report has been produced for the first reporting period and will be updated for the final periodic report.

To present activities and latest news of the DESIR project, various means of communications have been used. The DARIAH website ² includes a dedicated page ³ in which basic information about the project can be found (duration, partners, contribution, topic, summary), as well as public deliverables, major results and activities. All project related news are also tagged for easy retrieval. Information about the DESIR project can also be found on partner websites⁴. Regular updates are also given to subscribers of the DARIAH newsletter issued monthly. Public deliverables are also uploaded to the open archive HAL⁵. DESIR and DARIAH have also been presented to several conferences and workshops. Recently, two posters and have been presented to the DH2019 Conference in Utrecht, the major event in Digital Humanities with more than a thousand participants.

The organisation of three international workshops was an important building block of the Work Package. These workshops served as fora for cross-cultural exchange and introduced many non-European DH scholars to DARIAH; each of the workshops included a significant delegation from various DARIAH bodies, together with a larger number of local presenters and participants. The local contexts for these workshops were significantly different in their embodiment of research infrastructures: on the one hand, in the U.S., Stanford University and the Library of Congress, both in a country with a with a history of national infrastructural challenges; and in Australia, which has invested substantially in coordinated national research infrastructure in science and technology, but very little on a national scale in the arts and humanities.

The **Stanford** workshop had four main topics of focus: corpus management; text and image analysis; geohumanities; and music, theatre, and sound studies.

The main theme of the Library of Congress workshop was "Collections as Data," building on a number of U.S.-based initiatives exploring how to enhance researcher engagement with

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² https://www.dariah.eu/

³ https://www.dariah.eu/activities/projects-and-affiliations/desir/

⁴ Some examples: University of Göttingen (https://www.sub.uni-goettingen.de/en/projects-research/project-details/projekt/desir/), King's College (https://www.kdl.kcl.ac.uk/our-work/dariah-desir/), Ghent University (https://www.ghentcdh.ugent.be/projects/desir-dariah-eric-sustainability-refined-0)

⁵ https://hal.archives-ouvertes.fr/

digital collections through computationally-driven research. Knowledge exchange sessions focused on digitised newspapers and text analysis, infrastructural challenges for public humanities, and web archiving.

In late March 2019, DARIAH organised the third DARIAH beyond Europe event in conjunction with the second annual Humanities, Arts and Culture Data Summit at the **National Library of Australia** in Canberra. This three-day event included several panel discussions and presentations on topics such as the sustainability of digital projects, crossfertilisation of research and knowledge exchange on infrastructures in Australia and Europe.

A research blog⁶ to report on the DARIAH Beyond Europe workshops has been opened on hypotheses.org⁷, a platform that hosts several thousand blogs covering all areas of the humanities and social sciences. Individual pages were set up for each workshop with a description of the program, keynotes, registration and practical information. The blog also redirects to the community notes of each workshop, taken collaboratively by participants, and provides links to videos of the events.



Figure 2 Sally Chambers presents Work Package 2

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⁶ https://dbe.hypotheses.org/

⁷ https://hypotheses.org/

2.2 Work Package 3: Growth

This Work Package is concerned with the enlargement of the DARIAH membership targeting six countries, Czech Republic, Finland, Israel, Spain, Switzerland and the United Kingdom. Work Package leader Jakub Szprot (UNIWARSAW), gave a short report on the current state of play before introducing each accession country representative for a lightning talk.

Martin Lhotak, DESIR representative of the Czech Republic, presented the current situation which is characterised by the submission of the application for becoming a DARIAH member. DARIAH-CZ successfully passed a research infrastructure evaluation and in 2018

was approved on the National roadmap the same year, obtaining national funding for 2019-2022. The newly formed LINDAT-CLARIAH-CZ consortium brought together the LINDAT/CLARIN and DARIAH initiatives. The DARIAH ERIC application was submitted in June 2019. The planned construction phase will identify and inventorise projects and will provide metadata unification and technology development for access.

Tuuli Tahko introduced the DARIAH-FI consortium, which consists of major universities in Finland. Tuuli presented DARIAH-FI researcher-driven as а ecosystem of services for data-intensive social sciences and humanities research. DARIAH-FI submitted an application for entering the Finnish roadmap for Research Infrastructures. The outcome will be known at the beginning of 2020. Currently, Finland is member of three ERICs in the field of social sciences and humanities: CLARIN, CESSDA and ESS.



Figure 3 Martin Lhotak introduces the activities of DARIAH-CZ

Daphna Erdinast-Vulcan from the University of Haifa, highlighted the context in **Israel**. Throughout the whole project, the political situation has not been particularly favourable, except during the final months of the project in which promising contacts with the Ministry of Science and Technology have been made.

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The University of Haifa worked nationally towards the establishment of a Consortium and awareness-raising initiatives. In this respect, particularly important were the "DARIAH-IL" event held on 7 October 2018 which provided a starting point for a national consortium, the collaboration with the "Young Academy of Israel" and a training workshop "Introduction to Text Encoding and Digital Editions" that took place on 24 October 2019 in Haifa with the participation of Toma Tasovac and Sinai Rusinek. This event was preceded by a meeting between Toma Tasovac, on behalf of the Board of Directors, and the Israeli representative in charge of the humanities and the social sciences at the Ministry of Science and Technology.

The situation in **Spain** was presented by Salvador Ros, Maurizio Toscano and Aroa Rabadán Reyes. The political and financial situation in Spain has been particularly challenging during the course of the project. Nevertheless, UNED managed to achieve considerable progress on the road to Spanish DARIAH membership. UNED carried out a study to describe the current state of digital research infrastructures in the field of arts and humanities in Spain in order to promote DARIAH membership in Spain. The aim is to write a report, in the format of a white paper, to provide a greater understanding of the current Spanish scenario. The study allowed to map researchers, research projects, tools, resources, training courses, bibliography and journals in Spain.

Claire Clivaz of the Swiss Institute of Bioinformatics (SIB) briefly explained the situation in **Switzerland**. The construction of DARIAH-CH has been progressing steadily since 2013. The first cooperating partners in DARIAH were accepted in 2015 and the consortium now counts 9 institutions (University of Basel, University of Bern, University of Geneva, University of Lausanne, University of Zurich, Swiss Academy of Humanities and Social Sciences, Swiss Institute of Bioinformatics, École polytechnique fédérale de Lausanne, University of Neuchâtel).

According to the new position expressed by the State Secretariat for Education, Research and Innovation (SERI), Swiss full membership in smaller ERICs like DARIAH could be discussed only during the period 2021-2024. A potential observer membership could be explored in 2021. Within DESIR, a DARIAH-CH workshop took place in Neuchâtel on 29-30 November 2018⁸. A training workshop "Sharing the experience: Workflows for the Digital Humanities" was held at the University of Neuchâtel on 5-6 December 2019⁹.

Arianna Ciula, Deputy Director at King's Digital Lab, outlined the activities towards accession of the **United Kingdom** in DARIAH. Even though the political situation is not ideal

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⁸ https://www.unine.ch/dariah-ch/home/keynotes.html

⁹ https://www.dariah.eu/2019/07/15/dariah-ch-workshop-2-sharing-the-experience-workflows-for-the-digital-humanities/

considering the withdrawal of the United Kingdom from the European Union, known as Brexit, nevertheless, the Consortium is growing steadily. From two Cooperating Partners in 2016, the United Kingdom grew to 6 in 2016: Glasgow University, King's College London, Lancaster University, University of London, Swansea University, University of Exeter.

From the beginning of the project, one of the objectives was to involve key stakeholders. As a consequence, a workshop to discuss the Digital Humanities landscape in the UK and a strategic meeting were organised respectively in London and Glasgow. The UK DESIR partners have been in ongoing engagement with policy makers (primarily UKRI and AHRC) on the emerging UK national roadmap for research infrastructures. Another activity was coordinated by the newly hired King's Digital Method Lead to include a Research Software Engineering training in DARIAH-Campus (see Work Package 7) and organise an advanced training workshop on Research Software Engineering and Digital Humanities on 9 December 2019.

2.3 Work Package 4: Technology

On behalf of Work Package 4: *Technology*, Work Package leader Stefan Buddenbohm from the University of Göttingen reported on tasks carried out during the course of the project. Alongside the University of Göttingen, the WP4 team consists of ICM (Interdisciplinary Centre for Mathematical and Computational Modelling at the University of Warsaw), L3S (Research Center L3S at Leibniz University Hannover), INRIA (French Institute for Research in Computer Science and Automation) and DARIAH. The objectives of this Work Package were to:

- Ensure DARIAH's long-term sustainability by technologically enhancing its research infrastructure and services
- Shape DARIAH's profile in four technology areas:
 - entity-based search
 - scholarly content management
 - text analytic services
 - visualisation
- Coordinate the overall technological contribution to DARIAH.

The first step was to carry out a gap analysis of the DARIAH Research Infrastructure. The task was intended as a gap analysis to identify potential community requirements for services. The study showed 82 different services ranging from basic infrastructural components to very specialised research tools. However, for a significant number of resources, the issue was to determine whether the service is maintained, how it can be used,

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which conditions apply and for what purposes and data it is useful. The report showed also that there is a large demand in the DH community for comprehensive information, which is currently being addressed by the project SSHOC¹⁰. Ultimately, the gap analysis led to the decision of working on bibliographical data and the enhancement of already existing services revolving around this topic. The whole activity led to deliverable D4.1 *Gap Analysis of the DARIAH research infrastructure*¹¹.

Another recurrent issue concerns research software sustainability in terms of quality and reusability. The aim of this task was to create a DARIAH Technical Reference, which later became a coordinated effort of three ERICs, CESSDA, CLARIN and DARIAH under the umbrella of the EURISE Network¹². The EURISE Network Technical Reference is a collection of basic guidelines and references for development and maintenance of infrastructure services. An associated deliverable has been submitted in June 2018: D4.2 Conceptual Models of Integration of New Services¹³.

The services chosen after the gap analysis were the following:

- GROBID¹⁴ for text mining: GROBID is a machine learning library for extracting, parsing and re-structuring raw documents such as PDF into structured XML/TEI encoded documents with a particular focus on technical and scientific publications.
- BibSonomy¹⁵ for scholarly content management: BibSonomy is a social bookmarking and publication-sharing system. It aims to integrate the features of bookmarking systems as well as team-oriented publication management.
- VisNow/VIStory¹⁶ for visualisation: VIStory is a tool for visualisation of processed data with added dimensions for journals, topics, or dependency graphs.

During the course of the project two Code Sprints were organised. The first one took place in Berlin from 31 July to 2 August 2018¹⁷. The event focused on bibliographical and citation metadata and was divided into four tracks: extraction from PDF with GROBID; management with BibSonomy; visualisation with VisNow and an extra track on bringing services into the

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¹⁰ https://sshopencloud.eu/

¹¹ https://halshs.archives-ouvertes.fr/hal-01663594

¹² European Research Infrastructure Software Engineers' Network: https://eurise-network.github.io/

¹³ https://halshs.archives-ouvertes.fr/DARIAH/hal-01825919v1

¹⁴ https://grobid.readthedocs.io/en/latest/Introduction/

¹⁵ https://www.bibsonomy.org/

¹⁶ http://vistory.icm.edu.pl/ (under development)

¹⁷ Documentation is available here: https://desircodesprint.sciencesconf.org/resource/page/id/7

DARIAH's Single Sign-On, AAI (Authentication and Authorisation Infrastructure). Following the success of the first Code Sprint, the Consortium decided, following the suggestion of the mid-term project review report, to plan a second event during the second half of the project. The second Code Sprint on Bibliographical Metadata was organised at the Forum Factory in Berlin on 24-26 September 2019¹⁸. The event had the objective of enriching GROBID functionalities by adding a parser for acknowledgment for raw text and PDF files¹⁹, extend BibSonomy for the automatic import of bibliographic data²⁰ and extending VIStory with time dependent graphs of relations with new data formats and use cases²¹.

During one of the coffee breaks at the DESIR Final Event, participants had the possibility to test main functions of demonstrators. Demo session have been conducted by Yoann Moranville (DARIAH) for GROBID, replacing Tanti Kristanti (INRIA) who was unable to attend the meeting, Christoph Hube (L3S/Leibniz University of Hannover) for BibSonomy and Bartosz Borucki for VIStory.

2.4 Work Package 5: Robustness

The key objective of this Work Package, presented by Yoann Moranville (DARIAH) and Sally Chambers (UGENT), was to increase the sustainability of DARIAH, not only by broadening the geographical and diversified community reach of DARIAH, but also by augmenting its organizational structure through the development of a business plan, a centralised helpdesk and the development of requirements for a marketplace.

Yoann Moranville outlined the process that led to the implementation of a centralised helpdesk. The idea was to replace the current contact form in the DARIAH website. The helpdesk, built with the help of CLARIN-D (the German node of CLARIN ERIC), will be the main entry point to provide users with a personalised support service. The helpdesk is currently structured around 7 categories: General, Education and Training, Join DARIAH, Open Science, Technical Issues, Tools and Services, Working Groups. A person responsible for each category has been appointed. It is based on OTRS²², a ticketing system, to ensure an organised, efficient and centralised mechanism to support user requests. A potential use in the near future would be to link the helpdesk with the marketplace to handle related user requests.

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¹⁸ https://desircodesprint.sciencesconf.org/

¹⁹ https://github.com/DARIAH-ERIC/DESIR-CodeSprint-TrackA-TextMining

 $^{^{20} \ \}underline{\text{https://github.com/DARIAH-ERIC/DESIR-CodeSprint-TrackB-BibliographicMetadata}}$

²¹ https://github.com/DARIAH-ERIC/DESIR-CodeSprint-TrackC-Visualization

²² Open-source Ticket Request System: https://otrs.com/.

The marketplace is currently being developed in the framework of Work Package 7 of the Horizon 2020 funded project SSHOC. The objective of task 5.5 was to prepare the ground for the SSHOC Consortium (before the kick-off of the project) by providing elements of discussion. In particular, in DESIR, partners focused on the contextualisation of solutions (tools, services, learning and teaching materials, datasets, repositories), an overview of the current landscape (including TERESAH²³, TAPoR²⁴, DiRT²⁵, EOSC-Hub Marketplace²⁶) and identification of common functionalities, development of user stories, description of requirements. Furthermore, mockups have been created by a UX designer. As a result of these activities, D5.4 Develop a centralized helpdesk and marketplace mockup was submitted in March 2019²⁷.

Task 5.2 had the objective of organising at least one workshop exploring generic challenges for RIs in order to learn about best-practice examples. Initially, the focus area concerned funding, governance and structure of DARIAH. However, to avoid duplication of efforts with the newly formed ERIC Forum²⁸, the Consortium decided to connect this task with Work Package 4 and rather concentrate on technology and in particular software development. The first workshop "Software Sustainability: Quality and Re-usability" was held in Berlin on 9-10 October 2017. During the workshop, CLARIAH-NL Software Quality Guidelines, CESSDA Software Maturity Model, and DARIAH-DE Service Life Cycle were presented. The meeting led to the creation of the EURISE Network. An additional workshop "Software Sustainability within Research Infrastructures" took place on 12-13 March 2019 in Utrecht. A detailed report of the workshop was submitted in the framework of deliverable D5.1 Workshop with research infrastructures²⁹.

Sally Chambers introduced the business plan developed in the context of task 5.3. A business plan in the context of DARIAH should take into account the financial sustainability of the infrastructure, its value and how it can bring value to its members. Furthermore, the business plan should be complementary to other DARIAH strategic documents such as the Strategic Plan³⁰, Strategic Action Plan (STRAPL), Statutes³¹, Internal Rules of Procedures etc. Ideally, such a document should situate DARIAH at present and outline where the infrastructure shall be in 3-5 years-time. A number of scientific challenges and gaps that

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²³ http://teresah.dariah.eu/

²⁴ http://tapor.ca/home

²⁵ https://digitalhumanities.berkeley.edu/projects/dirt-digital-research-tools

²⁶ https://marketplace.eosc-portal.eu/

²⁷ https://hal.archives-ouvertes.fr/hal-02088278

²⁸ https://www.eric-forum.eu/

²⁹ https://hal.archives-ouvertes.fr/hal-02081139

³⁰ https://www.dariah.eu/wp-content/uploads/2019/08/Strategic-Plan 2019-2026.pdf

³¹ https://www.dariah.eu/wp-content/uploads/2019/03/DARIAH-ERIC_Statutes_March2019.pdf

affect the digital arts and humanities and could be addressed by DARIAH were identified. The document formulates a value proposition for DARIAH and describes the current user communities and potential and/or future users. However, an important starting point, is also to define what a humanities (data) infrastructure is. A peer-reviewed publication of the Science Policy Briefing (SPB) on "Research Infrastructures in the Digital Humanities", published in September 2011 reflected on "the centrality of Research Infrastructures (RIs) to the Humanities" and claimed that "without Research Infrastructures (RIs) significant strands of Humanities research would not be possible"³². To cite Jennifer Edmond "a more useful approach to defining infrastructure, therefore, is to capture not what it is, but what it does; or to be more exact, how it does what it does. Real infrastructure, when it is working properly, disappears from view"³³.

In the broadest sense, DARIAH's core audience is arts and humanities researchers in Europe and beyond who are interested in using digital methods, data and tools in their research and teaching, based on an inclusive approach.

Efforts to visualise the DARIAH community have been made and one of the objectives is to stimulate a virtuous circle between DARIAH members and DARIAH-EU National communities.

In conclusion, the current landscape of Research Infrastructure is becoming crowded and the find solutions to optimise National & European Investment is crucial for the future sustainability of the ERIC.

An initial draft of the Business Plan was submitted to the European Commission in December 2018, which was iteratively developed as a "living document" by the Business Plan team throughout 2019, prior to the final submission by the end of December 2019.

2.5 Work Package 6: Trust

Filipe Guimarães da Silva, Inês Castaño, João Fernandes and Maria do Rosário Jorge from NOVA University Lisbon, Faculty of Social Sciences and Humanities, outlined the work carried out in the content of Work Package 6: Trust. The objectives of this Work Package are to measure trust in cross-disciplinary DARIAH communities and new core groups, develop strategies to increase confidence in DARIAH's services and infrastructure and enlarge DARIAH by engaging new cross-disciplinary communities.

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³² European Science Foundation (2011). *ESF Science Policy Briefing 42, Research Infrastructures in the Digital Humanities*, Strasbourg, pag. 2.

³³ Schreibman, S., Siemens, R. G., Unsworth, J. (2016). A new companion to digital humanities, John Wiley & Sons, Ltd.

As a first step, an outline of the survey was provided in deliverable D6.1 *Prepare for the DESIR kick-off event* in order to measure trust of three cross-disciplinary communities in the DARIAH network (organisational perspective), the DARIAH membership base (individuals) as well as infrastructure and services (offer). The document described the aims and scope of the experimental survey, defined its methodological approach and presented an outline of the questionnaire.

A survey was conducted from 11 January to 18 April 2018 and targeted researchers, professors, MA and PhD students within the arts and humanities community, users and potential users of Digital Humanities infrastructures, from universities or other research institutions, with or without any permanent institutional affiliation. Afterwards, the first step of the survey data treatment and analysis was the data validation and codification of the answers. Next, the analysis used the statistical techniques, allowing the quantitative univariate, bivariate and multivariate analyses. In total, 506 questionnaires were taken into account to the data analysis.

The survey gave insights on the characterization of the DARIAH use and socio-professional characterization of the users. The survey showed for example the low use of infrastructures within early-career researchers and the fact that the use of DH infrastructures or DARIAH is more associated with cross-disciplinary approaches. A report on the survey, D6.2 *Empirical investigation of trust, gender and diversity in crossdisciplinary DARIAH communities*, has been delivered in June 2018.

With the purpose of providing proposals and policy recommendations in view to a sustained growth of DARIAH, WP6 partners conducted individual interviews with key informants in three levels of decision-making:

- Regular users of digital humanities;
- Institutional decision-makers (universities, research units, cultural heritage organizations);
- National decision-makers (funding agencies, national infrastructures managers).

To represent the geographical coverage of DARIAH, interviews were conducted in Portugal, Germany and Croatia. Another layer of information was given by continuous exchanges with DARIAH Bodies and in particular the National Coordinators Committee (NCC).



Figure 4 Screenshot of the Recommendations and community engagement tool

These activities led to a Recommendations & community engagement tool, available online for the DARIAH community³⁴, in which data can be sorted out and filtered to visualise recommendations. This tool could be intended as a community service in DARIAH to streamline priorities and action plans. The last document D6.3 *Policy recommendations and strategy report* is expected to be submitted in December 2019.

2.6 Work Package 7: Teaching

Work Package 7 leader Toma Tasovac (BCDH) presented for the first time in public DARIAH-Campus³⁵, a discovery framework and hosting platform for DARIAH learning resources. This resource is an indirect consequence of D7.2 *DARIAH training materials assessment report*. Content can be browsed through categories such as resources, events and pathfinders, a collection of external learning resources, curated and contextualized by the DARIAH team. Users can also browse learning resources based on their topic. In addition to DARIAH-Campus, a template for capturing events for the benefit of those who could not attend is also proposed. For this purpose, the example of a synthesis template prepared for a Winter School³⁶ organised by DARIAH and CNRS in 2016 in the framework of the Humanities at Scale project has been adapted and updated.

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³⁴ https://dariah.peopleware.pt/

³⁵ https://campus.dariah.eu/

³⁶ https://campus.dariah.eu/resource/ws2016

Besides DARIAH-Campus, Work Package 7 organised training measures in accession candidate countries as part of task 7.4 as well as a Winter School "Shaping new approaches to data management in arts and humanities" which took place on 10-13 December 2019 in the premises of the Faculty of Social and Human Sciences of the University NOVA of Lisbon. Previously, a report based on in-depth interviews with representatives from the six DARIAH Accession countries (Czech Republic, Finland, Israel, Spain, Switzerland and the United Kingdom) as well as members of the DARIAH Board and Chair of the DARIAH VCC2³⁷ on the role and modalities of training and education in the development, consolidation and sustainability of digital research infrastructures was submitted in the framework of D7.1 Report about the skills base across existing and new DARIAH communities³⁸.

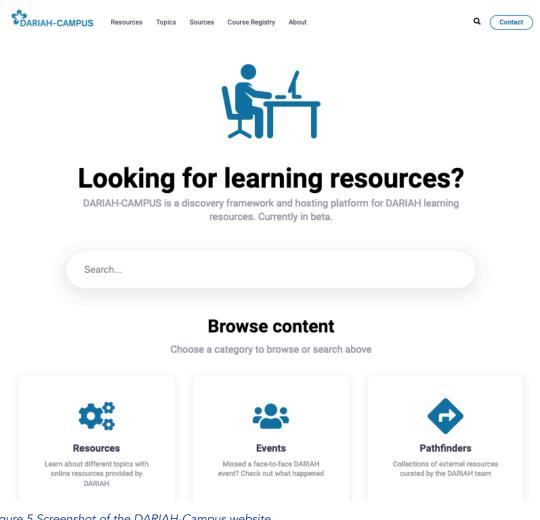


Figure 5 Screenshot of the DARIAH-Campus website

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³⁷ https://www.dariah.eu/about/organisation-and-governance/#vcc2

³⁸ https://hal.archives-ouvertes.fr/hal-01857379

2.7 Keynote: "Cultural Innovation, a notion taken for granted", Riccardo Pozzo.



Figure 6 Riccardo Pozzo

The concluding session of the meeting was dedicated to a keynote speech delivered by Riccardo Pozzo, Professor at the University of Roma Tor Vergata and Chair of the DARIAH Scientific Board ³⁹. The inspiring keynote focused on how building stable research infrastructures and innovation can go hand in hand and how we can define cultural innovation.

The term cultural innovation has been used for creativity, marketing and migrations, however, there are currently no agreed definitions of cultural dimensions of innovation.

If we look back at history, we perceive different models of innovation: first of all, a linear model of innovation in which innovation is conceived as new products and new processes that encompass some novel technological step. In this model a prototype

would eventually become a product, stopping the research phase and generating what we could call a "knowledge to money" process. Later, this model has been criticised in favour of a chain model of innovation in which innovation is seen as a recursive chain in which technology can also pull science towards specific problems and domains, which eventually are translated into innovation in the market as products. In recent times, open innovation has been described as a collective process aimed at generating innovation. In this case, innovation is not only seen as a process needed to create market-oriented products in order to make a profit, but rather as a creation of services that bring costs down.

There is a recurrent question that concerns the arts and humanities area: how is innovation possible?

In order to describe the cultural dimensions of an innovation in public spaces, a first step is to have a look at social innovation. Social innovation takes place when a new product answers the following questions:

³⁹ https://www.dariah.eu/about/organisation-and-governance/#scientific-board



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- 1. Does it solve a specific societal problem?
- 2. Does it have a fair cost?
- 3. Is it universally acceptable?

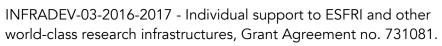
An example of successful social innovation is the regional healthcare card introduced by Region Lombardy in 1999, as it solved the problem of providing access to data, enabled substantial savings and was universally accepted. However, cultural innovation, while it implies social innovation, also includes a number of processes that encompass co-creation:

- 1. Granting access (e.g. to an infrastructure);
- 2. **Participation** (an example in DARIAH could be Working Groups as communities of practice, a space of exchange for all kinds of initiatives);
- 3. Use, which has an impact on public policies;
- 4. **Reflection**, which describes a process that relies on individuals who reflectively appropriate culture and become producers of new knowledge. Reflection implies the notion of thinking about diversity. In research policy it has been used for example in Horizon 2020 societal challenge calls for 'Inclusive, Innovative and Reflective Societies'.
- 5. **Inclusion**, which means granting access to the social process of sharing one's own reflection in participatory co-creation processes. On a societal level, the places where co-creation takes place are spaces of exchange, such as libraries, museums, science centres, research infrastructures. In this context, citizens engage in the process of sharing experiences while appropriating common goods content.

Outcomes of cultural innovation influences behaviour change. Therefore, we can define outcomes of cultural innovation as follows:

- 1. It **fosters open innovation**. Culture is understood as shared in the society. Therefore, cultural innovation is necessarily open innovation;
- 2. It improves welfare;
- 3. It transmits heritage;
- 4. It fosters creativity;
- 5. It makes possible the experience of beauty.

In conclusion, cultural innovation can be understood as the outcome of complex co-creation processes that involve the reflection of knowledge flows across the social environment within communities of practices while fostering the inclusion of diversity within society. It takes a critical stance against inequalities in the distribution and use of knowledge and builds innovation for improving the welfare of individuals and communities.





3. PART 2 - 7 November 2019

3.1 "Towards a Sustainable DARIAH: valuing and sharing knowledge in arts and humanities", Maria Fernanda Rollo

Maria Fernanda Rollo, Professor and Coordinator of the Doctorate in History, Archeology and Documentary Sciences in the Faculty of Social Sciences and Humanities, NOVA University of Lisbon, gave an inspiring presentation based on the results of Work Package 6: Trust.

DARIAH is a special platform where knowledge comes together, happens and it's shared. However, in the context of digital humanities challenges grow in complexity. In October 2003, UNESCO adopted the Charter on the Preservation of Digital Heritage⁴⁰, which consists of unique resources of human knowledge and expression. Among the challenges addressed by the Charter the following need to be mentioned: the access to digital heritage, the fair balance between the legitimate rights of creators and the interests of the public to access digital heritage materials, the risk of losing world's digital heritage to posterity and the attitude of institutions and governments that have been faced too rapidly with the digital evolution to develop timely and informed preservation strategies.

Much has been achieved thanks to the digital humanities but there is still a lot to do. Collaboration is key for the reliable preservation of digital heritage and the safeguarding of memory. The organisation of digital heritage requires multidisciplinary work. Furthermore, the development of digital skills and training is decisive to address these challenges. The inclusion of courses and university curricula is still very limited nowadays. Furthermore, one of the findings of the survey conducted in the framework of Work Package 6 is that the use of digital infrastructure is very low in the case of early-career researchers. There can be a huge gap between knowledge, available training and on the other hand lack of access to those who do not have the means for preserving and guarding against loss of heritage. The role of digital infrastructure and digital humanities in general is to contribute to the development of awareness and training.

The role of Open Science is also crucial for preserving information, sharing knowledge, democratising access and contributing to building a fairer society. Open Science unblocks a new scientific process of production and use of knowledge as a whole, but it requires a cultural change.

⁴⁰ UNESCO (2003): Charter on the Preservation of Digital Heritage, URL: http://portal.unesco.org/en/ev.php-URL_ID=17721&URL_DO=DO_TOPIC&URL_SECTION=201.html



DESIR a DARIAH-FU project



figure 7 Rectorate of the University of Zagreb

Knowledge production is continuously changing and Research Infrastructures have a vital role in supporting research but they have to reinvent themselves. The DARIAH Strategic Plan for the next 7 years is an important step towards this direction. The work in DESIR was strategic in DARIAH's sustainability in order to measure the impact and excellence of DARIAH and how to increase trust. It represented a unique opportunity to engage transparently with the community. Work Package 6 used several sources to draw a set of recommendations. A survey addressed to users and potential users was launched in 2018 and individual interviews with policy makers and DH researchers have been collected in Germany, Croatia and Portugal. Furthermore, Work Package 6 members had the chance to exchange with DARIAH Bodies throughout the project. Data has then been processed analytically to suggests key strategic and mission-oriented recommendations:

KEY RECOMMENDATION #1

Promote research excellence with inclusive, collaborative, bureaucracy free and community-driven approach.

KEY RECOMMENDATION #2

Ensure the integration of tools, services, data and resources within DARIAH community and with other Research Infrastructures (e.g. by gathering them on a platform such as the Marketplace).

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KEY RECOMMENDATION #3

Foster a collaborative learning environment and anticipate the skills of the future through a joint strategy for education and training (e.g. DARIAH-Campus).

KEY RECOMMENDATION #4

Establish a flexible, participatory and effective governance model with a clear and sustainable business plan.

KEY RECOMMENDATION #5

Strengthen DARIAH's representation in European and International policy arena, expanding its visibility and cooperation outside EU borders.

KEY RECOMMENDATION #6

Broaden and extend DARIAH's role, action and benefits towards the strengthening of scientific citizenship in Europe.

KEY RECOMMENDATION #7

Set up means for monitoring and bringing communities together, while respecting diversity on an institutional, scientific, disciplinary and methodological level.

In conclusion, the sustainability of DARIAH should be guaranteed by its quality. Three areas of action are therefore crucial in this respect:

- 1. Stimulate, inspire, help young researchers to make science;
- 2. The relationship with society is crucial (citizen science, shared science). Improving the visibility of arts and humanities is extremely important and DARIAH should play an advocacy role, e.g. by defining positions, commenting, producing recommendations and advocating best practices;
- 3. Make science happen.

3.2 "Optimising National and European SSH Research Infrastructure Investment", Sally Chambers

Sally Chambers, Work Package 2: Dissemination and Innovation leader and Chair of the DARIAH National Coordinators Committee (NCC), gave a presentation on how to optimise national and European Research Infrastructure investment in the Social Sciences and Humanities. The role of the General Assembly is crucial in this context to further strengthen the work already undertaken.

The business plan is an important document in this respect. It will guide the discussion on how DARIAH can bring value to its members. Several dimensions should be taken into account. One aspect is the calculation of the additional funding that the infrastructure is

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able to bring in at European level through funded projects and other initiatives. One of the issues when we look at the DARIAH community, which is composed of 19 countries, 152 partner institutions, 352 Working Group members and a great number of stakeholders, is how to efficiently mobilise the network.

The perspective from the point of view of the Ghent Centre of Digital Humanities (GhentCDH)⁴¹ gives a perfect example of the challenges for securing funding on the national level. The funding structure in Belgium is particularly complex and funding is available at many different levels. Looking at the Flemish side of Belgium, Research Infrastructure funding is available for access to medium-scale RIs, large-scale RIs and international RIs. Furthermore, at GhentCDH, successful projects have received funding from European

Research Council (ERC) Starting Grants and through the research programme BRAIN-be Research Action (Belgian through Interdisciplinary Networks). Also, international collaborations new open up possibilities. With the purpose of increasing SSH funding at European level, a SSH Working Group has been formed at Ghent University to help and provide feedback to policy-makers and play an advocacy role. Such an effort would be particularly useful for DARIAH if replicated in other countries.

In conclusion, the SSH research infrastructural landscape is becoming crowded with new the **ESFRI** initiatives on roadmap. Nevertheless, there is a need for DARIAH to collaborate with them in the most effective way. It is extremely important at NCC level to work closely together. Furthermore, a stronger collaboration between the NCC and the DARIAH General Assembly is necessary in order to optimise a financial and sustainable Figure 8 Presentation given by Sally Chambers future for DARIAH.



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⁴¹ https://www.ghentcdh.ugent.be/

⁴² The acronym stands for European Strategy Forum on Research Infrastructures. This strategic instrument was formed in 2002 at the behest of the European Council and it supports a coherent and strategy-led approach to policy making on Research Infrastructures in Europe

Conclusion

The presentations were followed by a brief discussion and debate with the National Representatives. One recurring question focused on the complex and dense Research Infrastructure landscape in Social Sciences and Humanities and how DARIAH is strategically dealing with it. Nevertheless, this crowded landscape should be seen as an opportunity for collaboration rather than competition. DARIAH has strengthened links with CLARIN, E-RIHS, CESSDA and several other Research Infrastructures. To run a sustainable infrastructure and fruitfully contribute in such an overcrowded landscape, it will be necessary to work on specific workflows overseen by different Research Infrastructures and consolidate the expertise.

An interesting comment from the crowd reflected on the question of proposing a clear set of impact indicators and also to advocate toward ESFRI the specificities of Social Sciences and Humanities and propose new impact concepts which are more appropriate to SSH Research Infrastructures. The internal DARIAH Strategic Meeting that will take place in January 2020 will be partly dedicated to this issue.

The recommendation tool developed in the context of Work Package 6 led to some questions from the crowd, in particular about the next steps needed for implementing the outcomes of the policy recommendations. Preliminary work has already been done in the framework of the NCC and some recommendations are part of the DARIAH Strategic Actions Plan. The recommendations reflect the current situation and there is a will in DARIAH to continue working collaboratively to adapt recommendations to future challenges. The tool will help DARIAH in shaping its policy and prioritise actions.

The question of funding was also discussed. The Social Sciences and Humanities are fragmented fields, but they have learned to be very creative. The challenge for DARIAH will be to explain what Social Sciences and Humanities are and what disciplines are underneath. A suggestion from the crowd would be to focus on a limited number of key projects rather than dispersing efforts to run many projects with a limited scope. Furthermore, cultural frameworks should be the main focus of funding for DARIAH.

Overall, we consider the DESIR Final Event as successful. The project *per se* is an important building block towards a mature and operational infrastructure. Therefore, presenting the outcomes of the project to many DARIAH stakeholders had certainly raised the profile and increased the impact of the event.

