

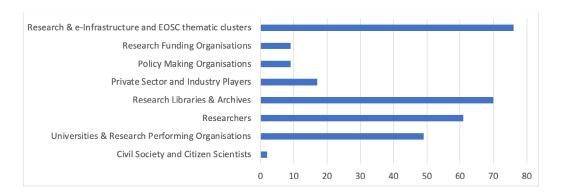


Advancing SSH Research with SSHOCingly good and sustainable resources

From January 2019 to April 2022 SSHOC transformed the current social sciences & humanities data landscape with its disciplinary silos and separate facilities into an integrated, cloud-based network of interconnected data infrastructures.

The final conference programme was designed to showcase the results achieved, lever on the valuable synergies built and learn about user stories from the community. There was also time to reflect on policy & sustainability issues and look towards the future.

The SSHOC Final Conference brought together **290 of which 90+ joined in Brussels** from Research infrastructures, Researchers, Research Libraries and Archives, EOSC key-players, industry and policymakers from the Social Sciences and Humanities and beyond, as shown in the figure below.





Scan the QrCode Watch the summary video!



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#SSHOCinglyFinal Conference

Organising committee













Welcome Plenary: Connecting the dots for SSH implementation in EOSC

Start the day with multi-faceted views on SSH and complementary EU initiatives.

SSHOC has been creating synergies for interdisciplinary research in the diverse SSH community, connecting emerging and existing SSH ERICs and, for the first time, bringing SSH researchers together.

Moderator Marieke Willems (Trust-IT)



Speakers

ESFRI point of view Ivana Ilijasic Versic (CESSDA)



EC & EOSC point of view Blagovesta Cholova (EREA, Unit REA.C4)



Researcher point of view Edward J. Gray (Huma-Num CNRS, DARIAH ERIC)



Main Takeaways

- Share SSHOC with your own communities to keep the tools and services alive, Ivana Ilijašić Veršić CESSDA and SSHOC Coordinator.
- The research infrastructures will still be here in 5 years time and beyond. This is what EOSC was designed for. The priority for the European Commission is to focus on the next steps in terms of researcher needs, now and in the future, Blagovesta Cholova, European Commission and SSHOC Project Officer.
- We have to meet the needs of SSH researchers, know where the researchers are, who they are and what they need. We mustn't blind them with European infrastructure terminology. Our role is to make sure we impactfully reach them and enable them to do their research in the digital world, Edward Gray, Huma-Num

Recommendations for the Future

- Next steps include doing more integration work in EOSC, focusing on interoperability of data, improving standards, developing new digital tools, existing and new databases, interdisciplinarity, open access, and growing the community.
- SSH is about understanding history, society and culture, helping us to make the right decisions about the future. To do this, the researcher needs must be right at the centre.
- Work will continue through the MoU, which is an agreement to maintain the project achievements, and define new plans and new funding to sustain it moving forward.









Policy Session

This session was an invitation only discussion with EC and EOSC policymakers and the five ESFRI Cluster projects, to address collaborations, contributions to EOSC and next steps towards sustainability. The discussion was based on the **SSHOC Project Brief to support the EC Programme** and policy activities and the **SSHOC Legacy Booklet**.

Main takeaways and considerations for the Future

- **1. Sustainability of the ESFRI Science clusters is a must**. While the funding cycle of SSHOC comes to an end, a new pathway has been established to further strengthen collaboration and communication, to keep working together on a federated service offer and the Marketplace as our common shop window. We are ready for the next level but we also need to support an individual level of RI operations, and focus on our existing missions (in alignment with the model of network of repositories).
- **2.** There is a need for a structured dialogue with stakeholders. We have magnified our voice at all levels of European policy formation, both within and beyond the clusters. The time has now come to share impacts and visionsat the policy level.
- **3. There is a need for stable support**, and funding for the communication and activities built up through the projects.
- 4. The EC highlights the importance of tracking the impact of the results and uptake also beyond academia as a key contribution to the overall digital transformation. The next programme should look at uptake in research communities and impact on society. The question arises as to whether such an initiative could go all the way down to teachers and schools for example, raising early awareness of SSH.
- **5. EOSC Association** recognises the high value of the thematic angle provided by the clusters: "without thematic services there is no EOSC". A next step is to set up communication channels with clusters.

Watch the interviews

Blagovesta Cholova, European Commission and SSHOC Project Officer and Ivana Ilijašić Veršić, CESSDA and SSHOC Coordinator gave short interviews on SSHOC, EOSC and future cluster collaborations.







Discovery gateways and the SSH Open Marketplace

Join fellow intrepid explorers for a tour of SSH synergies in the EOSC Context.

SSH Open Marketplace, one of the largest SSHOC results, is a discovery platform that curates and contextualises tools and services for SSH researchers by linking them with related publications, datasets, training materials, and workflows. The session placed the Marketplace in the context of other SSH discovery platforms and discussed curation and sustainability.

Main Takeaways

- SSH Open Marketplace is one of the key SSHOC services
 a discovery platform that curates and contextualises
 tools and services for SSH researchers by linking them
 with related publications, datasets, training materials,
 and workflows. Three guiding principles in creating
 the SSH Open Marketplace were contextualisation,
 curation, and community, this means trusted sources,
 assuring the quality of metadata that is crucial for update
 and usage. It is important to involve the community, but
 there needs to exist a balance between curation and
 contributions from the community.
- **EOSC Portal is a gateway for information on EOSC**. For users, it is an entrypoint for discovering and accessing resources via the EOSC Portal Catalogue and Marketplace. Service providers can onboard resources and find new users on the Portal.
- Gotriple is a multilingual discovery platform for social sciences and humanities, based on the Isidore search engine. It offers a single entry point for exploring, discovering, and accessing literature, data, projects and researcher profiles at European level, across subject and language boundaries.

Moderator Edward J. Gray (CNRS, DARIAH)



Speakers

Launch of SSH Open Marketplace Matej Ďurčo (OEAW, DARIAH)



EOSC Portal, the universal access channel to EOSC services and resources Matthew Viljoen (EGI, EOSC Future)



GoTriple Yannick Legré (OPERAS)



Discover inspiring cultural heritage at Europeana Valentine Charles (Europeana)



Data Catalogues in SSHOC Carsten Thiel (CESSDA)



- Europeana hosts over 51 millions of digital objects from the cultural heritage sector. Materials are diverse and multilingual; quality criteria for content and metadata have been established. Users can access the data through many entry points. Europeana also focuses on capacity building.
- SSH data is available through various data catalogues that often have institutional basis, are designed for domain data and focus on target users. The challenge lies in finding the balance between specific discovery portals and catalogues with a wide variety of data, and clarifying who these are targeting.
- ERICs support the longevity of the platforms. Usage and networks of users and supporters are key in the sustainability of services.

Dive into the SSH Open Marketplace > marketplace.sshopencloud.eu



Download the Presentation





Parallel session 1: Opportunities for cross-disciplinary interoperability in SSH research data management

This session examined the practicalities of interoperability (IO) in the context of cross-discipline or cross-domain research. In addition to the obvious benefit of achieving FAIRness, interoperability is also essential for RIs to scale and to support interdisciplinary research. The four presentations covered topics from conversions among metadata standards across disciplines to tools for assembling virtual collections that researchers can customise.





Speakers

ConversionHub Mari Kleemola (Tampere University, CESSDA)



Switchboard Claus Zinn (CLARIN)



<u>Virtual Collection Registry</u> Willem Elbers (CLARIN)



SSH Vocabulary Platform Matej Ďurčo (OEAW, DARIAH)



Main Takeaways

- Although IO requires various kinds of standardisation, there are good reasons for discipline diversity. And these have to be accepted and worked with, not overridden (e.g. domain specific metadata standards).
- Pragmatic conversions are better than "one best" solutions.
- Good collaboration with researchers helps to produce tools that support actual work practices in research, e.g., a virtual collection tool that searches across domains, and enables the collection of the actual data and resources, not only links or metadata to those sources.
- Wocabulary is the semantic glue that allows cross domain understanding, making vocabularies FAIR.

Considerations for the Future

- The right goal is of course more machine actionable content, (e.g. for Vocabulary Commons), but this takes resources.
- Sustainability is still a challenge, some of the RIs shown at this session are being sustained but by individual institutions. How can funding models address this?
- There is an ongoing tension of scaling: what to centralise, and what has to remain decentralised to support very different communities?
- Action is needed on policy level, as well as at the technical infrastructure level, such as cluster governance, the Memorandum of Understanding (MoU), and legally binding agreements.







Parallel session 2: Multilinguism: A tour of new SSH research enablers

Presentations and discussions were focused on multilingualism, the tools and services developed through SSHOC, the opportunities for SSH researchers and the challenges identified. Each presenter discussed the particularities of the tool or service they worked on. Common challenges identified were the different terminologies used in different languages, the lack of human resources to support a large scale tool or service and the sustainability of the results produced. Further effort (e.g., funding) is deemed needed in order for dissemination activities to take place and reach a large base of end users.

Main Takeaways

- SSHOC has assured that the services and tools produced would be sustainable and provided a platform for collaboration between partners supporting with their expertise (e.g. dissemination).
- End users and other related groups (e.g., NGOs, policy) related communities) feedback and advice is deemed useful and needed.
- (a) A common challenge identified is the sustainability of the results, mainly by maintaining and expanding the user's base.

Considerations

- Adding extra tools to the researchers' toolbox
- Ensuring quality of and harmonisation in the tools provided





Speakers

Machine translation for multilingual terminologies Francesca Frontini (CNR)



A prototype for TDM and statistical analysis on legal texts Daniela Ceccon (WageIndicator)



Automatic verification Yuri Pettinicchi (SHARE)



Ethnic Minorities and Migration Question DataBank Ami Saji (SciencesPo)













Parallel session 3: In practice: interoperability and data management in SSH

The session gave an overview of the challenges in solution for removing disciplinary, linguistic, and technological barriers for making data services and digital resources from being truly interoperable and accessible.

Main Takeaways

- Clusters such as SSHOC can provide awareness of solutions and problems to the fragmented ecosystem of cultural heritage science and can bring the right stakeholders to the discussion about these issues. Interoperability is a process where the aim is to move from a sea of data islands to an organised information data graph.
- The RESTORE platform enables smart access to digital heritage and memory, building from the heterogeneity of formats and lack of semantic interoperability. Latest improvement is visualisation possibility of virtual exhibitions on the platform.
- Starting point of the Alïoli, web service for the reality-based 3D annotation, was the idea of many stakeholders describing the object for multidisciplinary observation. Many technical innovations were included: 3D mapping and annotation process, morphology-based data structuring approach, many sharing and visibility options.
- New recommendations on data citation were adapted for specific needs of SSH, based on the Force11 data citation principles, to support findability of datasets. The data citation prototype also support machine interoperability and actionability of citations by linking information from different sources, bringing the community closer to a fully operational
- Web Panel Sample Service, a web application for high-quality cross-national probability-based online panels, is a tool for SSH and beyond, removing linguistic barriers. EOSC and SSH Open Marketplace have already contributed to its visibility and uptake.

Moderator Emiliano Degl'Innocenti (CNR, E-RIHS)



Speakers

Platforms for GLAM institutions: <u>AïOLI</u> - Adeline Manuel (CNRS) <u>RESTORE</u> - Emiliano Degl'Innocenti



Citation prototype as a data management tool Nicolas Larrousse (CNRS, DARIAH)



The Web Panel Sample Service (WPSS) for cross-national surveys and panels Geneviève Michaud (SciencesPO, CDSP)



The 'Archive in a Box', based on Dataverse - Marion Wittenberg



- Archive in Box adapts Dataverse, an open repository software, for SSH needs, offering simple implementation to institutions with limited technical capacities. The solution can be adapted to specific communities, allows for specific metadata schemes, support interoperability with external vocabularies, and will contribute to breaking down the silos through a network of linked data repositories in the future.
- The focus of making tools interoperable is not to have researchers being forced to use tools but to motivate them to use the tools.







Parallel session 4: SSHOC practical prompts for data and research

This session gave a short overview on developments of two surveys from **ESS** and **SHARE**, and presented tools that can be used to facilitate survey work. Presented workflows and tools have been found very useful by the audience and provide a good base for modernisation, enhancement, and upgrade of survey work in the SSH community.





Speakers

The new ESS data repository: Recommendations for a FAIR complient integrated data and metadata repository - Archana Bidargaddi (Norwegian Agency for Shared Services in Education and Research)



Adding biomedical data to the SHARE repository - Fabio Franzese (Max Planck Institute for Social Law and Social Policy, SHARE)



surveycodings.org Rodrigo Reyes (European Values Study, Tilburg University)



The Multilingual Corpus of Survey Questionnaires Lidun Hareide (Møreforsking)



Main Takeaways

- **ESS ERIC** is registered as a service on the EOSC Portal, as well as on the SSH Open Marketplace.
- Adding new data is always complex, the process needs to be reviewed and adapted to new circumstances.
- Surveycodings.org is an online tool for the coding and measurement of crucial social science variables, available in different languages for multiple countries and beneficial for public opinion surveys, social science projects, data archives, researchers, and any other interested parties
- The Multilingual Corpus of Survey Questionnaires (MCSQ) is the first publicly available corpus of survey questionnaires and a powerful instrument for the further development of best practice in the design of

Considerations for the future

- As ESS is registered on EOSC as a service, application of the ESS workflows and recommendations are described in the SSHOC deliverables D5.13 Recommendations for a FAIR compliant integrated data and metadata repository (ESS as a service) and D5.14 Report on preparing the ESS for Services in the EOSC (ESS as a service). This is useful for all other surveys that plan to go through the same process.
- Presented tools surveycodings.org and The Multilingual Corpus of Survey Questionnaires are useful tools for researchers and questions were posed on the possibility of their integration as that could be compatible and could deliver all the responses for longlasting questions coordinating with each other.







Opening plenary: Breaking down silos on the road to the SSH Open Cluster

Main Takeaways

- The silos metaphor is useful, but suggests too much uniformity, masks substandard practices, and overshadows the actual problems of the research communities. Silos allow the data communities to work properly in their specialisations. Both specialised and cross-specialisation research are needed. We must look for ways to connect them, but not at a cost of one or another.
- An MoU, signed by the SSHOC consortium, will strengthen internal connections, support common interests, and represent the community. It will also support the incoming communities, share visibility and branding, advocate for the needs of the community, act as a single point of contact, and foster impact of SSH research.
- The transition from SSH Open Cloud to the SSH Open Cluster means a new model of future collaboration: structural collaboration with other RI clusters based on joint thematic agendas and preparing an SSH-wide RI agenda. The partnership must promote the relevance of SSH for public policy, longitudinal value of research data, and organise a strong program for educating and training next generations.
- The SSH Open Marketplace will be sustained by an agreement of CESSDA, CLARIN and DARIAH that will provide the resources needed for maintaining and further development. User community will contribute or enrich the content, while the editorial board will oversee day-to-day operations.

Moderator Astrid Verheusen (LIBER)



Speakers

Bridging the silos & cross disciplinary use of tools - Cees van der Eijk (The University of Nottingham)



The SSH Open Cluster, future collaboration and a Memorandum of Understanding - Ivana Ilijasic Versic (CESSDA, SSHOC)



SSHOC Governance and Sustainability -Franciska de Jong (CLARIN)



SSH Open Marketplace Governance -Laure Barbot (DARIAH)









Parallel session 5: Deep dive: training resources FAIRification, community and future opportunities

SSHOC Training in conversation with the wider ecosystem

The focus of this session was on the FAIRification of training materials, those developed in SSHOC, but also materials from the community in general.

Main Takeaways

- The RDA focus group on the minimal metadata of training resources addresses specific challenges on the findability of learning resources and on relevant descriptors. The **recommendations** for this minimal set of metadata with 14 identified elements for descriptors of training materials, aims at reducing duplication & identify gaps among existing and prospective learning resource service providers.
- The community-led approach followed by the presented initiatives, such as the RDA focus group and the SSHOC project, brought together different backgrounds, viewpoints and levels of expertise that were invaluable for the work progress, but also in the building and validation of SSH training standards and tools. Feedback loops from the extended SSH training community also ensured that real needs are met and challenges are addressed in a pragmatic way. The SSH Training Discovery Toolkit currently contains 99 sources and 261 examples on reusable training resources.
- Following an analysis of the CLARIN training resources under the SSH Training Discovery Toolkit, several conclusions came up in terms of future development, quality, reusability and FAIRification of resources. The implementation of FAIR training materials in the EOSC Future project uses the RDA minimum metadata for training resources. It is approached in four pilot cases, adapted with criteria varying for aggregated pre-existing materials vs new directly added materials. It follows a pragmatic approach to ensure inclusivity and puts significant effort in ensuring FAIR by design. CESSDA's path in making training materials FAIR focuses on discovering and using data, managing research data, and preserving data and using CESSDA's tools and services.





Speakers

Elizabeth Newbold (STFC)



Ellen Leenarts (SSHOC, DANS)



Iulianna van der Lek (SSHOC, CLARIN)



Shanmugasundaram Venkataraman (EOSC Future, OpenAIRE)



Irena Vipavc Brvar (Univerza v Ljubljani, CESSDA)



Recommendations for the Future

- FAIRification of training materials needs to be thought about at the beginning of the process, as well as sustainability aspects of training resources and training support tools.
- Extended metadata and documentation are vital in filling in gaps and possible limitations of the RDA minimal metadata set.
- A community-led, bottom-up approach and enough effort in developing tools, but also in the curation of training materials is key. A good quality catalogue is hard work and needs community effort/feedback and community standards. The curation needs to be done by a team of people coming from the community with different kinds of expertise.
- An agreement on controlled vocabularies to be used at the level of the relevant research infrastructures would be very useful.
- Harmonisation, common standards and communityled effort are important for increasing usability and ensuring sustainability.



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Parallel session 6: How to become a SSHOCingly trustworthy environment for SSH data

This session provided tips & tricks for Research Infrastructures on how to become a trustworthy environment for SSH data. Use cases showed how SSHOC trusted repositories addressed certification issues for specific communities.

Main Takeaways

- Without **SSHOC support**, the process of applying to get certification would be much more complicated and longer for the selected SSH repositories. These applications are usually time consuming and require the involvement of different experts in the repository. It's a challenge to find a certification solution that works for all repositories. Note that Trusted Digital Repository (TDR) certification improves repository practices (Henri Ala-Lahti, Tampere University).
- SSHOC Code of Conduct will facilitate SSH repositories to reach GDPR. This will require a monitoring body as well. A SSH code of conduct will benefit EOSC (Marianne Høgetveit Myhren, SIKT).
- We need to train people on remote safe desktop systems. We created an "international secure data facility professionals network" to help people and small teams in having secure connections thanks to our remote connection. Two outputs should be mentioned: D5.20 Training Materials of workshops for secure data facility professionals, and D5.12 International Secure Data Facility Professionals Network. Aim of the network is to provide support & knowledge exchange (Deborah Wiltshire, GESIS).
- Opening access to research data in the archaeology domain digital data is fragile, as well as archeological data. A report on challenges to access archeological FAIR Data and solutions to overcome them is available. Overall, undertaking the FAIR audit and research was very useful for the Archaeology Data Service (Holly Wright, University of York).

Moderator Mari Kleemola (Tampere University, CESSDA)



Speakers

SSHOC Trusted Repositories user stories and certification issues for specific communities - Henri Ala-Lahti (Tampere University, CESSDA)



Initiate to create SSH GDPR Code of Conduct and legal data protection issues - Marianne Høgetveit Myhren (SIKT, NSD)



GESIS and UKDA Pilot on secure connection - Deborah Wiltshire (GESIS)



Opening access to research data in the archaeology domain - Holly Wright (University of York)









AfterSSHOC: synergies along the journey to EOSC and a view into the future

An interactive panel discussion on the added value for researchers, governance, collaboration in EOSC, future collaboration and a collaborative future.

Ivana Ilijasic Versic (CESSDA, SSHOC)



Speakers

Moderator

Collaboration opportunities after SSHOC and Agreements Franciska de Jong (CLARIN)



ESFRI Cluster projects Giovanni Lamanna (ESCAPE) & Rudolf Dimper (PANOSC)



EOSC Association Ute Gunsenheimer (EOSC Association)



EOSC Future Ron Dekker (Technopolis Group)



Data Communities Laura Morales (SciencesPo, SSHOC)



Main Takeaways

- The clusters are now working towards a more sustainable form of collaboration with federated services and a marketplace as shared goals underpinned by some degree of future funding support. Cross-fertilisation is enabled byop-down approach through federation, ESFRI legal entities and supported bottom-up by the various scientific communities that need continuity and sustainability.
- The long-term perspectives for the clusters are now high on the agenda, acknowledging the success of overcoming socio-technological barriers to much wider collaboration. As a result, we are now moving towards several interdisciplinary actions among the clusters. Open data is evolving towards a web of FAIR science. Meeting the real needs of data producers and data consumers enables the integration of digital objects in research papers and the generation of new science endeavours on top of this.
- EOSC is not about building new RIs but about better connecting them to improve the way we do science via federation with a core set of EOSC functionalities. The ultimate goal is creating a network of people with strong support for researchers. The SSH Cluster MoU is a strong sign of commitment and a major step in the right direction.
- SEOSC has the potential to become a one-stop-shop for researchers beyond SSHOC for data services, training materials and other resources, enabling new ideas in SSH or other disciplines. However, on-the-ground researchers only need a basic understanding of EOSC. However, there is still a lot of general awareness to be done.

Considerations for the Future

- Open science, data and the adoption of FAIR principles are not yet a done deal. This is where the cluster comes into play, also in terms of supporting alignment across the SSH community, including small-scale support.
- Outreach to end-users via EOSC should target MA and PhD schools across the EU to train researchers in FAIR principles. Such an approach would give us fully trained researchers several years from now. EOSC-related funding combines both EC investments and in-kind contributions. Calls are informed by advice from the EOSC Association via its members and task forces. RI funding is deeply informed by thematic cluster approaches and research agendas. This remains key moving forward.
- The future post-SSHOC will see a shift from supply- to demand-driven approaches. This is an opportunity to increase inclusiveness, including the on-boarding of the so-called "long tail of science", citizen scientists and related initiatives, schools, etc, combining bottom-up and top-down approaches.
- Cross-disciplinary research is gaining momentum because the problems we are facing are becoming very complex. Hence the need for collaboration. However, researchers and RIs need time to build up and mature and more bottom-up approaches should first be underpinned by basic research.



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SSHOC'n Tell Challenge

From January 2019 to April 2022 SSHOC transformed the current social sciences & humanities data landscape with its disciplinary silos and separate facilities into an integrated, cloud-based network of interconnected data infrastructures. To promote synergies and open science initiatives between disciplines, and accelerate interdisciplinary research and collaboration, SSHOC data infrastructures are supported by the tools and training which allow scholars and researchers to access, process, analyse, enrich and compare data across the boundaries of individual repositories or institutions.

The SSHOC'n Tell Challenge took place online on 6 & 7 April, as part of the SSHOC Final Conference. Social Science and Humanities (SSH) researchers, data experts, trainers, research librarians and archivists, research infrastructure professionals and citizen scientists were invited to try out the SSHOC tools and tell their user story!

Fun challenges across four topics:

- 1. SSH Open Marketplace
- 2. Interoperability and Multilinguality
- 3. SSH training
- 4. Wild Card. Advance your own research

"SSHOC'n Tell mentors"

- Laure Barbot (DARIAH)
- Cesare Concordia (CNR, ISTI)
- Stefan Buddenbohm (UoG)
- Irena Vipavc Brvar (ADP)
- Klaus Illmayer (OEAW ACDH-CH)

"SSHOC'n Tell judges"

- Veronika Heider (AUSSDA)
- Karla Boersma (RESILIENCE)
- Holly Wright (University of York)

Six teams were formed and told their stories during the SSHOC'n Tell User Stories Parade at the Final Conference. Their stories have been graphically designed and published in the SSHOC channels. The stories are shown below, also indicating the top 3 winners.



Winner 1st prize











Winner 3rd prize



Social Sciences & Humanities Resources

SSHOC has become the SSH Open Cluster



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