Research and Innovation Action

Social Sciences & Humanities Open Cloud

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Deliverable 1.5 Final Annual Progress & Activity Report

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Abstract:

This document is a periodic report presenting the project's progress in the third year of the SSHOC project. It includes an overview of planned and completed activities and use of resources of the project partners and defines the current status of the SSHOC work plan.

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1.0	31/03/2022	Final version for submission	Panagiota Starida, CESSDA

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Executive Summary

This deliverable is the third annual progress report for the SSHOC project. It states the progress and status of work in the third year of the SSHOC project (M25-M36).

The report starts with a general plan for the SSHOC project in Year 3 (2021), and lists the main objectives set up to be achieved. The next section is the main part of this deliverable and focuses on the activities implemented in each Work Package, and describes the progress done in 2021. The section also contains a reference to the deviations from the DoA that happened in this period, and risk assessment status.

The final chapter contains the summary on the delivery of project outputs (namely deliverables), achievement of project milestones, use of resources. An overview of all the SSHOC 2021 relevant events is added to the document as an appendix.

Abbreviations and Acronyms

API	Application Programming Interface
Athena	Athena Research and Innovation Center
AUSSDA	The Austrian Social Science Data Archive
CESSDA	Consortium of European Social Science Data Archives
CLARIN	Common Language Resources and Technology Infrastructure
CNR	National Research Council of Italy
CNRS	French National Centre for Scientific Research
D.	Deliverable
DAI	The German Archaeological Institute
DANS	Data Archiving and Networked Services
DARIAH	Digital Research Infrastructure for the Arts and Humanities
DBSS	Dried Blood Spot Samples
EC	European Commission
EKUT	The Eberhard Karls Universitaet Tuebingen
EMM	Ethnic and Migrant Minority
EOSC	European Open Science Cloud
EQB	European Question Bank
ERIC	European Research Infrastructure Consortium
ESFRI	European Strategy Forum on Research Infrastructures
ESRA	European Survey Research Association
ESS	European Social Survey
FAIR	Findable, Accessible, Interoperable, Reusable
FORS	Swiss Centre of Expertise in the Social Sciences
FORTH	Foundation For Research And Technology Hellas
FSCIRE	Fondazione per le scienze religiose
GDPR	General Data Protection Regulation
GESIS	Leibniz Institute for the Social Sciences
IDSC	International Data Service Centre
InfAI	Institute for Applied Informatics (InfAI) at the University of Leipzig

ISCO	International Standard Classification of Occupations
IZA	Institute of Labour Economics
KER	Key Exploitable Results
KNAW	Royal Netherlands Academy of Arts and Sciences
LIBER	Association of European Research Libraries
LoD	League of Data
MCSQ	Multilingual Corpus of Survey Questionnaires
MoU	Memorandum of Understanding
MPISOC	Max Planck Society for the Advancement of Science
MS	Milestone
NACE/ISIC	International Standard Industrial Classification of All Economic Activities
NSD	Norwegian centre for research data
OPERAS	Open Access in the European Area through Scholarly Communication
PMB	Project Management Board
PSNC	The Poznan Supercomputing and Networking Center
RESTORE data pilot	smaRt accESs TO digital heRitage and mEmory
Sciences Po	National Foundation of Political Sciences
SHARE ERIC	European Research Infrastructure Consortium for the Survey of Health, Ageing and Retirement
SND	Swedish National Data Service
SSH	Social Sciences and Humanities
SSHOC	Social Sciences and Humanities Open Cloud
SWC	Semantic Web Company
T.	Task
TAU-FSD	Tampere University - Finnish Social Science Data Archive
TDT	Trainers Discovery Toolkit
TiU-EVS	Stichting Katholieke Universiteit Brabant - European Values Study
TMT	Translators Management Tool
TRIPLE	Transforming Research through Innovative Practices for Linked Interdisciplinary Exploration
TRUST-IT	TRUST-IT SERVICES LIMITED

UCL	UNIVERSITY COLLEGE LONDON
UGOE	University of Göttingen Public Law Foundation
UKDS	UK Data Service
UL-ADP	University of Ljubljana - Slovenian Social Science Data Archives
UniVe	University of Venice
UNOTT	The University of Nottingham
UoY-ADS	University of York - Archaeology Data Service
UPF	Universitat Pompeu Fabra
VCR	Virtual Collection Registry
WP	Work Package
WPSS	Web Panel Sample System

Table of Contents

1. Introduction

The SSHOC project has three mandatory reporting periods. In addition to the official reports to be submitted to the EC, internal reporting has also been set up. This is to ensure that all project obligations are being fulfilled, and the progress of each Work Package is documented and on track. The practice of regular reporting has been set and the collected information is used to prepare three annual progress & activity reports planned as project deliverables covering each project year. These reports include the plan and objectives relating to the year, progress across WPs, risks and contingency plans, planned versus actual deliverable submission, and the use of resources status. This deliverable is the third SSHOC annual report, and focuses on the year 2021. It provides an overview of the work performed from M25 to M36 of the SSHOC project and all the challenges and successes of the implementation.

Year 3 of the SSHOC project

In 2021, the global situation of COVID-19 pandemic crisis continued, and the health concerns related to the spread, as well as travel restrictions introduced, or the Europe-wide social restrictions did not bypass the project, and the more than 230 people involved in this project.

However, as is presented in this report, after risk assessment being implemented, the project has not suffered in terms of its impact and its achievements, and continuing with its agile approach, the partners were able to continue the work planned. As in the previous year, working in virtual areas, remotely, reformatting events, still adapting activities and adjusting the timelines, while prioritising effective and constant communication among partners made this possible.

In this year the focus shifted towards project results sustainability and preparations for the post-project activities, and making sure the project creates a real impact. SSHOC has thus worked intensively to create an updated SSHOC Exploitation plan as a separate project document updating the initial plan from the project proposal by considering all the current results. SSHOC has also updated its Data Management Plan to provide a Strategy for data management during and after the project.

Finally, over the course of the SSHOC project lifetime, the consortium has been positioned as the point of reference for SSH in EOSC. The growing consortium has agreed to continue to collaborate under the SSHOC Memorandum of Understanding. The overall objective is to establish the **SSH Open Cluster** as an instrument of further collaboration between different SSH community stakeholders taking an active role in promoting quality and impact of SSH within the European Research Area and beyond. The purpose of the memorandum is to enhance mutual interaction, build upon and expand existing synergies and expertise, and support sharing of know-how in all areas of common interest. Building on the well-established visual identity of the SSHOC project, a sustainable branding expanding SSHOC to SSH Open Cluster (which will be implemented for SSHOC results in the SSH Open Marketplace, tools and EOSC Portal) has been created.

Most of the Tasks lasted through the year and the Consortium planned a total of **40 Deliverables** and **16 Milestones**[1] (see *Table 1* below).

Table 1. *Planned Deliverables, Milestones and EC report in Year 3 of the SSHOC project.*

PLANNED

Year 3 - 2021											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
25	26	27	28	29	30	31	32	33	34	35	36
WP1 Project Management and Administration											
D1.4											
WP2 Communication and Dissemination											
		D2.2									
				MS 6							MS 7
WP3 Lifting Technologies and Services into the SSH Cloud											
	D3.4						D3.5				D3.8
							D3.6				D3.9
WP4 Innovations in Data Production											
		D4.7			D4.8	D4.9		D4.10			D4.2
	MS 16										D4.5
											D4.11
											D4.13
											D4.15
											D4.17
WP5 Innovations in Data Access											
D5.9				D5.1	D5.8		D5.3		D5.20		
				D5.7							
				D5.19					MS 26		
				MS 32		MS 31	MS28	MS 36	MS 33	MS 35	MS 34
WP6 Fostering Communities, Empowering Users, & Building Expertise											
									D6.5		D6.3
									D6.12		D6.8
											D6.13
WP7 Creating the SSH Open Marketplace											
	D7.6							D7.5			D7.2
											D7.3
											D7.4
											MS 44
WP8 Governance/ Sustainability/ Quality Assurance											
					MS 48				MS 46		MS 47
WP9 Data Communities											
	D9.9				D9.2		D9.10			D9.11	D9.3
		MS 49									D9.5
WP10 Ethics requirements											

Agenda

2021 Planned Deliverable

Deliverable postponed from 2020

2021 Planned Milestones

Milestones postponed from 2020

[1] This information includes the changes introduced by 2 Amendments (SSHOC GA 2nd Amendment - AMD-823782-35, and SSHOC GA 3rd Amendment - AMD-823782-42, as well as the Deliverables pending submission from the previous year.

2. Progress and activity reports per WP

2.1. WP1 - Project Management and Administration

2.1.1. WP1 progress

2.1.1.1. Task 1.1 Administrative Project Management

Work Package 1, led by CESSDA ERIC, included work done by all other beneficiaries and Linked Third Parties, with the aim to continue a high-level quality of conduct and efficient management of the SSHOC project. The focus remained on (1) administrative procedures and tools (now maintenance and update), (2) organisational activities and management of the Consortium, and (3) strategic and scientific management of the project activities closely related to its collocation and adjustment to a broader EOSC landscape.

The Coordinator maintained a collaborative platform (using Basecamp), regular project management calls, internal project document repository, conducted 3 internal financial and use of resources reports (semi-annual), and performed a use of resources revision. Close cooperation of Work Package leaders from CESSDA ERIC , ESS ERIC, CLARIN ERIC, DARIAH ERIC, CNR, Trust-IT (and its LTPs), LIBER, and CESSDA/AUSSDA, continued in regular fortnightly meetings of the **Project Management Board (PMB)**, responsible for ensuring day-to-day sound and cost-effective management and delivery of the project outputs. The Work Package leaders have managed to efficiently coordinate work in their respective WPs and teams, reporting to PMB in regular virtual calls. In total, **16 virtual meetings** were held in 2021.

The Coordinator and the PMB co-organised **2 Consortium meetings**, both virtual. The 5th SSHOC Consortium meeting was held on 23rd-24th March 2021, hosted by DARIAH ERIC; and the 6th Consortium meeting was held on 5th-6th of October 2021, hosted by LIBER. These events, being virtual, allowed participation of all partners in the project. The main aim was to discuss the planned activities, ongoing work, outputs, and continue cross-WP collaboration considering the overlapping themes and alignment of work.

Figure 1. *The Consortium managed to organise two Consortium meetings in the virtual environment*

In this task, the 1st Tier members gathered in the **Scientific Board** kept their regular meetings, with the purpose of advising the Coordinator and the Consortium on strategic issues related to the project and extending beyond the project. The Scientific Board held **18 virtual meetings** in this reporting period. The discussions focused on the wider EOSC ecosystem and making sure there is a proper level of alignment with it through engagement in relevant governance bodies such as EOSC Executive Board, EOSC Working Groups or by collaborating with the newly established EOSC Association and connecting with other relevant projects, EC departments, and data communities in the SSH area. Specific attention continued to be given to close collaboration and **alignment of efforts with other cluster projects**: EOSC-Life[2], ESCAPE[3], ENVRI-FAIR[4], and PANOSC[5]. An expected shift of focus happened towards sustainability of results coming from the project. All of these efforts resulted in preparation of a **Memorandum of Understanding** between the SSHOC partners, which will ensure the post-project collaboration and sustainability of results.

The described network building resulted also in the addition of 2 new partners to the project (**The Foundation for Religious Studies John XXIII (FSCIRE)** and **The Institute for Applied Informatics Association (InfAI)**), who represent the connection between the RESILIENCE project (aiming to create European community on Religious Studies providing access to data related to historical-religious sciences) and SSHOC, and will contribute to the community pilots in WP9. After this valuable addition, WP1 team continued the effort to ensure more connections with the SSH research communities, and layed grounds for addition of another three partners connecting SSHOC WP9 with COORDINATE project, gathering the GUIDE/EuroCohort community[6], dedicated to improvement of the health and wellbeing of children and young people through better evidence-based policy making across the EU and OPERAS infrastructure dedicated to open scholarly communication in the SSH thematic communities[7].

[2] EOSC-Life project website: https://www.eosc-life.eu/ [Jan 2022]

[3] ESCAPE project website: https://projectescape.eu/ [Jan 2022]

[4] ENVRI-FAIR project website: https://envri.eu/about-envri-fair/ [Jan 2022]

[5] PANOSC project website: https://www.panosc.eu/ [Jan 2022]

[6] COORDINATE has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101008589. The research that COORDINATE will complete, using a child-centric approach, continues the research initiated in MyWEB and ECDP projects, which will support elements of the preparatory phase of Europe's first cross-national accelerated birth cohort survey of child well-being: EuroCohort - Growing Up in Digital Europe (GUIDE/EuroCohort)

[7] The OPERAS-P project is funded by the European Commission, under Grant Agreement No. 871069.

SSHOC Project Brief
To support the EC Programme and policy activities

Abstract

SSHOC Thematic cluster project [2019-2022] has built a strong and recognisable brand around a consortium of **6 well-established ESFRIs, 7 onboarded Social Science and Humanities (SSH) data communities, an SSH Open Marketplace testers' community and an SSH Training Community** actively breaking down the silos through the sharing of knowledge, tools and services with significant potential for further capacity-building as an important building block for EOSC.

Through a solid and continued outreach programme it has engaged over 5000 stakeholders in 65+ events organised, with a social media community of 2200+ members, and 470 newsletter subscribers.

Niche scientific communities have been supported by providing 6 additional targeted training events offering a valuable platform to support the onboarding of new communities to present themselves as well as to connect their members from all over the world. The SSHOC website acts as a main communication channel and is the gateway to its array of services including the SSH **catalogue of services,** connecting its 60+ official reports to each single Key Exploitable Result (KERs) actively consulted by the SSH community (i.e. the System Specification of the SSH

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Figure 2. *SSHOC Project Brief was submitted to the EC and published in Zenodo*

In November 2021, the project was approached by the EC with a request to submit a collaborative document as a cluster to help with the process of defining the strategic orientations for the EOSC implementation during the period 2023-2024. The combined efforts of PMB and the 1st Tier prepared and submitted concrete recommendations summarised in the **SSHOC Project Brief**[8]**.**

2.1.1.2. Task 1.2 Quality Assurance & Risk Assessment

After defining and specifying the appropriate mechanisms and processes for high-quality level outcomes, in 2021 the Consortium continued to implement the procedures through:

1) maintaining tools and procedures for risk and quality management, and adapting where proved necessary (e.g., introducing more levels of deliverable review if initial drafts were of poorer quality, then expected, or organising additional use of resources review with all project partners);
2) maintaining internal platforms to make sure all the SSHOC partner are being informed about the developments and procedures in the project and adjusting where necessary (e.g., direct invitations and additional meetings with partners with regards to specific events, outcomes, and follow-ups on general messages);
3) developing means to keep up with the events surrounding SSHOC and making sure it is aligned with the EOSC-related developments at all times; and (e.g., additional meetings with cluster projects, EC, and participation in main events, cross-collaboration with other projects that will

[8] Ron Dekker, Martina Drascic Capar, Ivana Ilijasic Versic, Vanja Komljenovic, Veronika Heider, Mari Kleemola, Elizabeth Lea Bishop, Mathilde Steinsvåg Hansen, Daan Broeder, Franciska de Jong, Maria Eskevitch, Darja Fišer, Emiliano Degl'Innocenti, Carmen Di Meo, Monica Monachini, Luca Pezzati, Jana Striova, Nicolas Larrousse, Laure Barbot, … Holly Wright. (2021). ***SSHOC Project Brief To support the EC Programme and policy activities***. Zenodo. https://doi.org/10.5281/zenodo.5769762

last after SSHOC finalisation, or working on MoU for sustainability purposes, further technical and communications alignment with cluster projects);

4) implementing all the listed above, both in reporting and in collaboration among partners.

Following the identification of SSHOC Services and tools to be delivered by the end of the project, the existing services and tools were supported in onboarding to EOSC as pilots in late 2020 and in 2021. Through these efforts, it became clear that the onboarding of all SSHOC services imposed more challenges than anticipated. As per the EOSC Rules of Participation (RoP), onboarding to the EOSC Portal must be done by the legal entity providing the service to users. For many smaller institutions, clarifying the institutional commitment and agreement to compliance with the RoP could be challenging. Onboarding of services at the maturity and Technology Readiness Levels required by EOSC, including providing user support, is therefore only done for those whose commitments beyond the SSHOC project have been affirmed. The efforts were combined with the discussions on sustainability.

To support the service providers, a **webinar on onboarding** was organised in May 2021 together with the EOSC Enhance project[9] addressing the requirements of the RoP and the practical process. Since then, the CO has been supporting institutions in their efforts to gather the information needed for onboarding and provides support regarding practical steps. This process is ongoing, and more services are expected to be onboarded by the end of the project.

2.1.1.3. Task 1.3 Project Reporting

Regular communication with the EC/REA was secured, the continuous reporting on the EC portal was continued, and two internal financial reports conducted by the Coordinator. Continuous reporting was done via regular calls for Tasks, Work Packages, and PMB or in direct communication between the Coordinator and the Consortium partners, while periodic internal reports were conducted every 6 months. The Coordinator maintained regular communication with the Project Officer, to inform and report on any issues or delays. The task resulted in submission of ***D1.4 Second Annual Progress & Activity Report***[10] in March 2021, an extensive public document which laid out the outputs and work done in the second year of the project.

2.1.2. Note on deviations from the plan and risk monitoring

Initially, the Consortium meetings were planned to be held face to face, hosted every time by a different member of 1st Tier partners, but because of the escalating health concerns relating to the spread of the

[9] EOSC Enhance has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no. 871160. It is tasked with progressing the vision for the European Open Science Cloud (EOSC). It kicked off in December 2019 and ran until November 2021.

[10] Martina Drascic, Ivana Ilijasic Versic, Libby Bishop, Mathilde Steinsvåg Hansen, Mari Kleemola, Irena Vipavc Brvar, Ana Inkret, Alexander König, Daan Broeder, Maria Eskevich, Kea Tijdens, Darja Fišer, Kristina Pahor de Maiti, Monica Monachini, Emiliano Degl'Innocenti, Maurizio Sanesi, Jana Striova, Nicolas Larrousse, Clara Petitfils, … Holly Wright. (2021). SSHOC D1.4 Second Annual Progress & Activity Report (V1.0). Zenodo. https://doi.org/10.5281/zenodo.4633681

Covid-19 causing travel restrictions introduced across Europe, all meetings in WP1 were held in virtual space. The deliverable D1.4 Second Annual Progress & Activity Report was submitted with 2 months delay, due to an extended period provided to reviewers to perform peer-review. This did not cause any negative impact. Information on risk monitoring in WP1 for Year 3 is presented in the table below:

Table 2. *Risk monitoring in WP1 - Year 3*

Risks monitoring WP1				
No of risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
1	Difficulties in cooperating with other ERICs and Pan-European projects	**Yes**	**No**	Intensified communication in the period mitigated the risk, regular virtual meetings of all bodies were held, increased the number of meetings of 1st Tier Strategic Board.
U1	Underestimated organisational efforts needed to coordinate a big scale project with considerable amount of Beneficiaries and Linked Third Parties, causing delays in the project delivery	**Yes**	**Yes**	Any delays and needs for change were mitigated by opening an Amendment and postponing the work officially. Separate Use of resources review was done by the coordinator to make sure that all partners have enough effort and funds available to complete the work. Another Amendment has been opened just before the period ended.
U7	No delivery or reformatting/adjusting of face-to-face activities due to COVID-19	**Yes**	**Yes**	Consortium meetings in 2021 were not able to be organised face-to-face, and they were moved in a virtual environment, as well as some other meetings planned for this period.

2.2. WP2 - Communication, Dissemination and Impact

2.2.1. WP2 Progress

2.2.1.1. Task 2.1 SSHOC Cluster communication & Dissemination strategy

This task was completed in M6 of the project.

2.2.1.2. Task 2.2 Maximising Impact: SSH Communication and outreach as part of EOSC

Task 2.2 was led by TRUST-IT with main partners participating CESSDA/AUSSDA, CLARIN ERIC, both TRUST-IT LTPs, CNRS, CNR and LIBER. The continued to focus on the production and dissemination of content following the strategy set out in Task 2.1, defined in *D2.1 SSHOC Overall Communication and Outreach Plan* and continued in *D2.2 Preliminary Report on User Communities' Engagement*. This included

creating content for the SSHOC web presence, for social media, publications in external channels and other outlets. SSHOC used various communication channels leveraging the project partner networks with the SSHOC website as the central channel. Regular updates were published on the website focusing on SSHOC activities and results, as well as updates from the EOSC ecosystem, to which SSHOC actively contributes. Stakeholder Engagement on social media helps to build a strong SSH community, where proper engagement ensures effective impact. Social Media channels set-up in SSHOC are Twitter[11], LinkedIn[12], Flickr[13], Youtube[14].

Engaging stakeholder and end-user communities, the partners worked steadily to organise SSHOC and SSHOC-related events, participated in other relevant events and promoted them, joining forces with other projects, such as the ESFRI cluster projects, FREYA, EOSC-hub and other EOSC related projects and initiatives. WP2 initiated a series of interviews showcasing SSHOC success stories, by users of SSHOC services. WP2 coordinated the definition of SSHOC's exploitation plan, building on the **Key Exploitable Results (KERs)** identification already initiated in year 1 and the SSHOC task force dealing with onboarding services to the EOSC Portal. In the third year WP2 and WP6 collaborated on pulling out factsheets on all 33 identified KERs fostering their uptake.

In alignment with the FAIR principles, all project **reports, publications and presentations were shared** via the website and WP2 dedicates specific effort to making deliverables, milestones, presentations, posters and SSHOC whote papers available via **ZENODO**, ensuring long-term access and facilitating the sharing of the project's results. WP 2 and WP6 are collaborating to develop a pilot gamification of the CESSDA Data Management Expert Guide that can be used in the SSH and beyond, among partners and the wider EOSC ecosystem called the **SSHOC League of Data (LoD)**. The gamification service should be applicable for other tools which will be made clear once the gamification platform is built. SSHOC LoD (League of Data) platform shall support and motivate researchers to publish their research data, by providing guidance for the publishing process. Researchers will be able to test their knowledge, run a checklist on their Data Management Plan and data publishing, and get in touch with peers.

[11] SSHOC Twitter: https://twitter.com/SSHOpenCloud [18.01.2022]
[12] SSHOC LinkedIn: https://www.linkedin.com/company/18997546/ [18.01.2022]
[13] SSHOC Flicker: https://www.flickr.com/photos/170844433@N02/ [18.01.2022]
[14] SSHOC Youtube channel: https://www.youtube.com/channel/UCw-mY8v84yeHW2z4KG3ZLtA [18.01.2022]

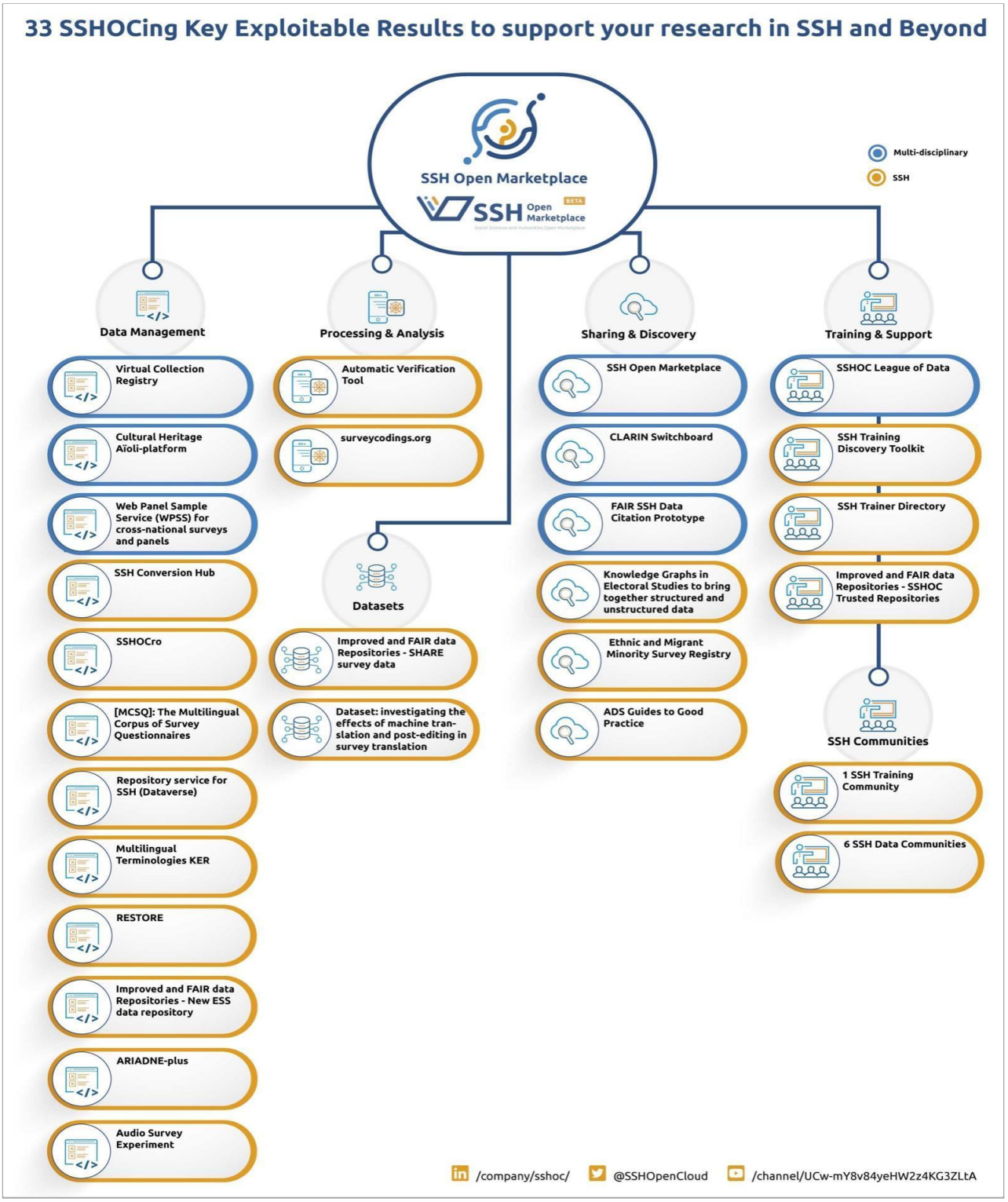

Figure 3. *Infographic of SSHOC KERs, categorised according to property of tool and coloured according to applicability for domains beyond SSH.*

In 2021, the team delivered the ***D2.2 Preliminary Report on User Communities' Engagement***[15], building on the strategy defined in *D2.1 SSHOC Overall Communication and Outreach Plan*[16] and *D6.1 SSHOC Community Engagement Strategy*[17]. Analysing the SSHOC consortium engagement with stakeholders through online presence, publications (scientific and other), events, creating communities, calls, interviews, surveys and collaborating with other EOSC cluster projects and relevant projects and initiatives. The deliverable concluded with an activity plan for the remaining months of the project. In addition, WP2 coordinated the definition and publication of the ***SSHOC Exploitation Plan***[18].

Publications: In 2021, a total of **54 news pieces** were published on the SSHOC website, **66 events** were promoted via the SSHOC website relevant for the project stakeholders. In addition to these news-items **53 deliverables and milestones were digested**[19] and published under project results. These updates were disseminated in a wider network via SSHOC and partner channels. In 2021, a total of **7 newsletters and direct messages**[20] were sent, on the latest SSHOC achievements and activities to **491 subscribers** (at M36). A total of **8 Publications** in external channels were made such as the CORDIS WIRE magazine, EOSC liaison platform and RDA community. In addition, **12 SSHOC scientific publications** and **7 white papers** are now highlighted on the website[21].

Online presence: By the end of 2021 On Twitter SSHOC has built a community of **1711 followers** and on LinkedIn, the community has grown to **645 followers**. On Youtube SSHOC received **11,000+ views**, worth highlighting is the promotional video "SSH Open Marketplace - explained the easy way" with almost 8,000 views since its publication.

Building on the strong brand identity that SSHOC has built, and the results achieved during the project lifetime, the consortium has the ambition to become the **SSH reference point in EOSC**. The **SSHOpenCluster branding** has been developed to show just that, the original consortium has expanded considerably, new partners bringing new assets. With a Memorandum of Understanding underway and already a strong SSHOC partner's involvement in the EOSC Future project, the new branding goes beyond the cluster as a project. The images below show the new logo and design for tools and services

[15] Marieke Willems, Tracey Biller, Filomena Minichiello, & Veronika Heider. (2021). SSHOC D2.2 Preliminary Report on User Communities' Engagement (V1.0). Zenodo. https://doi.org/10.5281/zenodo.4655994

[16] Annika Schwabe, Julian Ausserhofer, Leonardo Marino, Marieke Willems, Vasso Kalaitzi, Irena Vipavc Bvrar, Eleonor Smith, & Silvana Muscella. (2019). SSHOC D2.1 Overall Communication and Outreach Plan (approved 18 nov 2019) (v1.0). Zenodo. https://doi.org/10.5281/zenodo.3595936

[17] Veronika Keck, Dorothée Behr, & Brita Dorer. (2021). D4.9 Guidelines on the use of Translation Memories in survey translation (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5180976

[18] Marieke Willems, Stephanie Parker, Martina Drascic, Ivana Ilijasic Versic, Vanja Komljenovic, Franciska de Jong, Laure Barbot, Daan Broeder, Ariane Néroulidis, Diana Zavala Rojas, Nicolas Larrousse, Ricarda Braukmann, Mari Kleemola, Yuri Pettinicchi, Athina Kritsotaki, Holly Wright, Cees van der Eijk, Albin Ahmeti, Ami Saji, … Amaury de Vicq. (2022). SSHOC Exploitation Plan (1.0). Zenodo. https://doi.org/10.5281/zenodo.6034593

[19] SSHOC Website publication of Deliverables produced: https://www.sshopencloud.eu/publications/deliverables [Jan 2022]

[20] SSHOC newsletter: https://www.sshopencloud.eu/newsletter/sshoc-newsletter [Jan 2022]

[21] SSHOC Scientific publications on the website: https://sshopencloud.eu/scientific-publications [Jan 2022]

that co-exist with any original branding or upcoming new branding as per new funding for enhancements and sustainability. In the last months of the projects the new branding will be launched and implemented.

Figure 4. *SSHOpenCluster sustainable branding*

The SSHOC Communication Kit has dynamically evolved and was stakeholder tailored. The update of the website made an effort to improve access to all dissemination material produced by setting a dedicated menu in place on "Resources" providing access to dedicated pages for deliverables & milestones, videos, posters, scientific publications, white papers, communication kit and all material produced and made available for awareness raising events. The table below shows the material produced and made available via SSHOC channels in 2021:

Table 3. *Communication collaterals in the Communications Kit and SSHOC resources web pages at M36*

Communication Kit Item	No	Description	Link
Videos	1	SSH Open Marketplace - explained the easy way	https://youtu.be/4tyZ4vhrM9s
	11	Webinar videos	YouTube Playlist: https://www.youtube.com/playlist?list=PLpuwwe1MpnqKds5en7SyezeYESYDhy90M
	11	SSHOC Considerations for the Vocabulary Platforms	Youtube Playlist: https://www.youtube.com/watch?v=aEejUNlyjig&list=PLpuwwe1MpnqJ_P7bcam7qtnSN5nGNxBHh
	7	SSHOC Online Information Sessions: Open-Source Vocabulary Hosting and Management Platforms	Youtube Playlist: https://www.youtube.com/watch?v=ZKaXhi6MOnw&list=PLpuwwe1MpnqIeMC9cF341suBh5OlQJ99J

	3	SSH Open Marketplace	YouTube Playlist: https://www.youtube.com/watch?v=4tyZ4vhrM9s&list=PLpuwwe1MpnqJbNSUjuDEQrp0bn19IJbQw
	32	Realising EOSC session videos	YouTube Playlist: https://www.youtube.com/playlist?list=PLpuwwe1MpnqKKTezIRlHDaNx_zIo4yuRC
Infographics	3	-Consortium infographic -SSH Open Marketplace Infographic -SSHOC Services & tools timeline -SSHOC Stakeholder infographic, plus an interactive version with key messages.	https://sshopencloud.eu/sshoc-infographics https://sshopencloud.eu/who-benefits
Empowered by SSHOC stamp	1	Branding for SSHOC tools & services	https://sshopencloud.eu/empowered-sshoc-stamp
SSHOC icons	8	SSH Training icons	https://www.sshopencloud.eu/sshoc-icons
Newsletters	4	Social Sciences and Humanities Open Cloud Insights #6 - #14	https://www.sshopencloud.eu/newsletter/sshoc-newsletter

Posters created in SSHOC were tailored to the audience attending the specific conference. In 2021, in total 3 posters were designed and presented.

Table 4. *Posters created and presented in SSHOC in 2021*

Event	Poster title	Date	ZENODO DOI
Open Science Conference 2021	A Training Discovery Toolkit for the Social Sciences and Humanities - OpenScience Conference2021	Feb 2021	doi: 10.5281/zenodo.453419 Zenodo: 530 views, 169 downloads
ESRA 2021 conference	[MCSQ]: The Multilingual Corpus of Survey Questionnaires	Jul 2021	doi: 10.5281/zenodo.5887002
LIBER2021	Social Sciences & Humanities Open Marketplace: A user-centric service for collaboration and knowledge sharing across the SSH communities	Jun 2021	10.5281/zenodo.588736

WP2 and WP6 were coordinating the sourcing, branding and publication of a series of factsheets on SSHOC's full suite of Key Exploitation Results, as identified in the SSHOC Exploitation plan, to increase awareness and foster their uptake. Each factsheet is published on ZENODO; made available on the SSHOC service catalogue and SSH Open Marketplace. By the end of 2021, a total of **13 factsheets** have been made publicly available via ZENODO and the dedicate items in the SSHOC website services catalogue[22], the remaining 20 will be made available in the coming months and will be bundled in a dedicated factsheet booklet structured according to KER typology. The booklet will be used particularly for wide dissemination at the final SSHOC conference.

The SSHOC ZENODO account provides access to all deliverables submitted by the end of 2021[23] and all these were made available via the SSHOC website. Key results are now easily shared with the wider EOSC for reuse.

By the end of the year, the **235 records** had **24+K total views** and **19+K total downloads**, worth highlighting the visibility of deliverable *D7.1 SSH Open Marketplace System Specification*[24] with **1058 views and 4213 downloads**

Creating communities: In addition to the ESFRI communities and data communities from WP9 that SSHOC can tap into for wide dissemination of its results and activities. A further avenue for end-user engagement has been the establishment of dedicated (online) communities to serve researchers in specific disciplines or tasks or involve them in achieving particular objectives tied to project outputs. All communities have dedicated pages on the SSHOC website for visibility, and a number of them have mailing lists to facilitate communication and sharing of updates.

- the SSHOC training community (**172 members**)
- the SSH trainers directory (**15 members** - officially launched in December 2021)
- the SSH Open Marketplace tester community (**106 members**)
- the SSHOC trusted repositories **(14 repositories -** closed group sourced via a public call for reporistories)

This work package is also coordinating a series of **SSHOC success stories**, in collaboration with the full consortium, to foster end-user onboarding and wider uptake of its KERs. The series provides stories via interviews with SSHOC champions, or end-users. By the end of the year, a total of **3 stories** have been published and promoted, but the project aims for 10 stories at the end of the project to be bundled in a

[22] SSHOC services catalogue on the project website: https://sshopencloud.eu/service-catalogue [Feb 2022]

[23] SSHOC Zenodo Community: https://zenodo.org/communities/sshoc/ [18.01.2022]

[24] Laure Barbot, Yoan Moranville, Frank Fischer, Clara Petitfils, Matej Ďurčo, Klaus Illmayer, Tomasz Parkoła, Philipp Wieder, & Sotiris Karampatakis. (2019). SSHOC D7.1 System Specification - SSH Open Marketplace (1.0). Zenodo. https://doi.org/10.5281/zenodo.4558302

booklet for the final conference and wide dissemination. The SSHOC Champion story showcased below showcases a member of the SSHOC Trusted Repositories Community.

Figure 5. *Sample of a SSHOC Champion story from the SSHOC Trusted Repositories Community*

Events: In 2021 SSHOC partners (co)-organised **41 events** in which partners actively engaged **2200+ attendees** and recordings of the sessions received **2250+ views**. The consortium performed promotional and dissemination activities at **52 events** such as conferences, workshops and a hackathon to raise awareness on the project results and activities engaging **3400+** stakeholders (see Appendices to this report). SSHOC organised events and presence at external events has been promoted via the website, SSHOC and partner social media channels and newsletters. For these events WP2 liaised with partners on collaterals, social media promotion and post event reporting and publication of presentations. WP2 has been working liaising with the EOSC ecosystem for communication and community engagement purposes via the following events:

- FAIRsFAIR Week 2021[25]
- ESFRI Clusters at RDA House of Commons[26]
- ESFRI Science Clusters' Long Term Commitments to Open Science[27]
- EOSC Symposium 2021[28].

Synergie: The team has created a number of synergies, to leverage on for project activities, fostering cross-disciplinary research and alignment with the EOSC ecosystem.

Table 5. *EOSC related Synergies created and continued in 2021*

Project/ Initiative	Synergy	Output
RDA and RDA Europe 4.0	• *Community Building Examples Across EOSC-hub, FREYA, & SSHOC*, Joint session at "Realising the European Open Science Cloud. Towards a FAIR research data landscape for the SSH" conference. • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report	• *Community Building Examples Across EOSC-hub, FREYA, & SSHOC* ○ Slides: https://zenodo.org/communities/realisingtheeoscevent/search?page=1&size=20 ○ Recordings: https://youtu.be/BELr6kG-bnk • *ESFRI* at RDA House of Commons report: https://www.sshopencloud.eu/esfri-clusters-rda-house-commons

[25] FAIRsFAIR Week 2021: https://sshopencloud.eu/fairsfair-week-2021 [21.03.2022]

[26] ESFRI custers at RDA House of Commons Debate: https://sshopencloud.eu/events/esfri-clusters-rda-house-commons [21.03.2022]

[27] ESFRI clusters long term commitments to Open Science workshop https://sshopencloud.eu/events/esfri-science-clusters-long-term-commitments-open-science [21.03.2022]

[28] EOSC Symposium: https://sshopencloud.eu/events/eosc-symposium-2021 [21.03.2022]

ESCAPE	• Joint session at the "Realising EOSC" conference, titled "Thematic Discovery Marketplaces for the European Open Science Cloud • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report • Joint workshop and position paper ESFRI Science Clusters' Long Term Commitments to Open Science	• Joint session at the "Realising EOSC" event titled "Thematic Discovery Marketplaces for the European Open Science Cloud: ○ Presentation: https://zenodo.org/record/4277601#.YAWk2C2ZO1t ○ Recordings: https://youtu.be/jpWU9qVnY5o • *ESFRI* at RDA House of Commons report: https://www.sshopencloud.eu/esfri-clusters-rda-house-commons • Joint position paper 2021: https://zenodo.org/record/4892245#.YeqIVC8w2qA
PaNOSC	• Joint session at the "Realising EOSC" conference, titled "Thematic Discovery Marketplaces for the European Open Science Cloud • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report • Joint workshop and position paper ESFRI Science Clusters' Long Term Commitments to Open Science	• Joint session at the "Realising EOSC" event titled "Thematic Discovery Marketplaces for the European Open Science Cloud: ○ Presentation: https://zenodo.org/record/4277601#.YAWk2C2ZO1t ○ Recordings: https://youtu.be/jpWU9qVnY5o • *ESFRI* at RDA House of Commons report: https://www.sshopencloud.eu/esfri-clusters-rda-house-commons • Joint position paper 2021: https://zenodo.org/record/4892245#.YeqIVC8w2qA
ENVRI FAIR	• Joint session at the "Realising EOSC" conference, titled "Thematic Discovery Marketplaces for the European Open Science Cloud • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report • Joint workshop and position paper ESFRI Science Clusters' Long Term Commitments to Open Science	• Joint session at the "Realising EOSC" event titled "Thematic Discovery Marketplaces for the European Open Science Cloud: ○ Presentation: https://zenodo.org/record/4277601#.YAWk2C2ZO1t ○ Recordings: https://youtu.be/jpWU9qVnY5o • *ESFRI* at RDA House of Commons report: https://www.sshopencloud.eu/esfri-clusters-rda-house-commons • Joint position paper 2021: https://zenodo.org/record/4892245#.YeqIVC8w2qA
EOSClife	• Joint session at the "Realising EOSC" conference, titled "Thematic Discovery Marketplaces for the European Open Science Cloud • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report • Joint workshop and position paper ESFRI Science Clusters' Long Term Commitments to Open Science	• Joint session at the "Realising EOSC" event titled "Thematic Discovery Marketplaces for the European Open Science Cloud: ○ presentation: https://zenodo.org/record/4277601#.YAWk2C2ZO1t ○ Recordings: https://youtu.be/jpWU9qVnY5o • *ESFRI at RDA House of Commons* report: https://www.sshopencloud.eu/esfri-clusters-rda-house-commons • Joint position paper 2021: https://zenodo.org/record/4892245#.YeqIVC8w2qA
EOSC	• Regular meetings with the cluster	• EOSC Symposium:

Secretariat	representatives and the EOSC secretariat to foster cross disciplinary collaboration • EOSC Symposium 2021 - Engagement and cross-fertilisation between Research Infrastructures and the EOSC ecosystem session with the lightning community paradigm talk "The SSH Open Marketplace with SSHOCing tools & services.	https://sshopencloud.eu/events/eosc-symposium-2021
EOSC-hub	• Realising the European Open Science Cloud. Towards a FAIR research data landscape for the SSH. Joint 4-day conference with EOSC-hub, FREYA and SSHOC	• Realising the European Open Science Cloud: https://sshopencloud.eu/realising-european-open-science-cloud
FREYA	• Realising the European Open Science Cloud. Towards a FAIR research data landscape for the SSH. Joint 4-day conference with EOSC-hub, FREYA and SSHOC	• Realising the European Open Science Cloud: https://sshopencloud.eu/realising-european-open-science-cloud
OPERAS & TRIPLE	• *Exploring the SSH data landscape: thematic discovery portals in the EOSC,* joint session at "Realising the European Open Science Cloud. Towards a FAIR research data landscape for the SSH" conference. • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report • Joint fireside chat with Suzanne Dumnouchel video interview and promotional article.	• Exploring the SSH data landscape: thematic discovery portals in the EOSC: ○ Slides: https://zenodo.org/record/4290599#.YAWsEC2ZO1s ○ Recordings: https://youtu.be/hr94Yz8odPE • *ESFRI at RDA House of Commons* report: https://www.sshopencloud.eu/esfri-clusters-rda-house-commons • Fireside Chat with Suzanne Dumouchel https://sshopencloud.eu/news/fireside-chat-suzanne-dumouchel
FAIRs FAIR	• SSHOC representation in FAIRsFAIR synchronisation workshops • SSHOC FAIR champion • Joint report: FAIR + Time: Preservation for a Designated Community • *ESFRI at RDA House of Commons*, joint debate during the RDA Plenary 17 and post-event report	• https://www.fairsfair.eu/events/fairsfair-event/fairsfair-third-synchronisation-force-workshop • https://www.fairsfair.eu/advisory-board/erzsébet-tóth-czifra • https://sshopencloud.eu/news/eosc-nordic-fairsfair-and-sshoc-working-paper-open-public-comments
Europeana	• *Citizen Science: What it means for SSH and how can multidisciplinarity be achieved?* joint session at "Realising the European Open Science Cloud. Towards a FAIR research data landscape for the SSH" conference.	• Citizen Science: What it means for SSH and how can multidisciplinarity be achieved? ○ Slides: https://zenodo.org/communities/realisingtheeoscevent/search?page=1&size=20 ○ Recordings: https://youtu.be/iqHwZNOaLsU
EOSC Enhance	• SSHOC Task Force on EOSC alignment • 2 Joint sessions at "Realising the European Open Science Cloud. Towards a FAIR	Thematic Discovery Marketplaces for the European Open Science Cloud

	research data landscape for the SSH" conference. ○ How can I onboard my resource to EOSC? ○ Thematic Discovery Marketplaces for the European Open Science Cloud	○ Slides: https://zenodo.org/record/4277601#.YAWk2C2ZO1t ○ Recordings: https://youtu.be/jpWU9qVnY5o How can I onboard my resource to EOSC? ○ Recordings: https://youtu.be/32hgvCEhsrM
EOSC Nordic	• Joint report: FAIR + Time: Preservation for a Designated Community	○ https://sshopencloud.eu/news/eosc-nordic-fairsfair-and-sshoc-working-paper-open-public-comments
EOSC Future	SSHOC works on 2 science projects in the EOSC Future projects: ○ Climate neutral and smart cities (SSHOC and ENVRI-FAIR) ○ Access Management for distributed RI's	○ https://eoscfuture.eu/data/climate-neutral-and-smart-cities/ ○ https://eoscfuture.eu/data/access-management-for-distributed-research-infrastructures/
Data Driven Policy Cluster	Cluster of 5 projects joining effort in the Evidence Based Policy Making in Europe, a premier conference for government that focuses purely on data and tools for decision making.	SSHOC joins the discussion on Innovative Tools for Evidence Based Policy - from digital disruption to digital adoption: https://www.policycloud.eu/news-events/events/evidence-based-policymaking-europe-summit-2021

The communication and outreach strategy included the regular monitoring of impact. For this aim, Task 2.2 monitored regular progress and the status of compliance with KPIs set. **The SSHOC Dashboard**[29] allows easy access for all partners to monitor the SSHOC website and social media metrics and to shape our strategy accordingly.

[29] SSHOC Dashboard: https://datastudio.google.com/reporting/1JTtWjrE7ee81DbpkWZc6596J22VNQncR [18.01.2021]

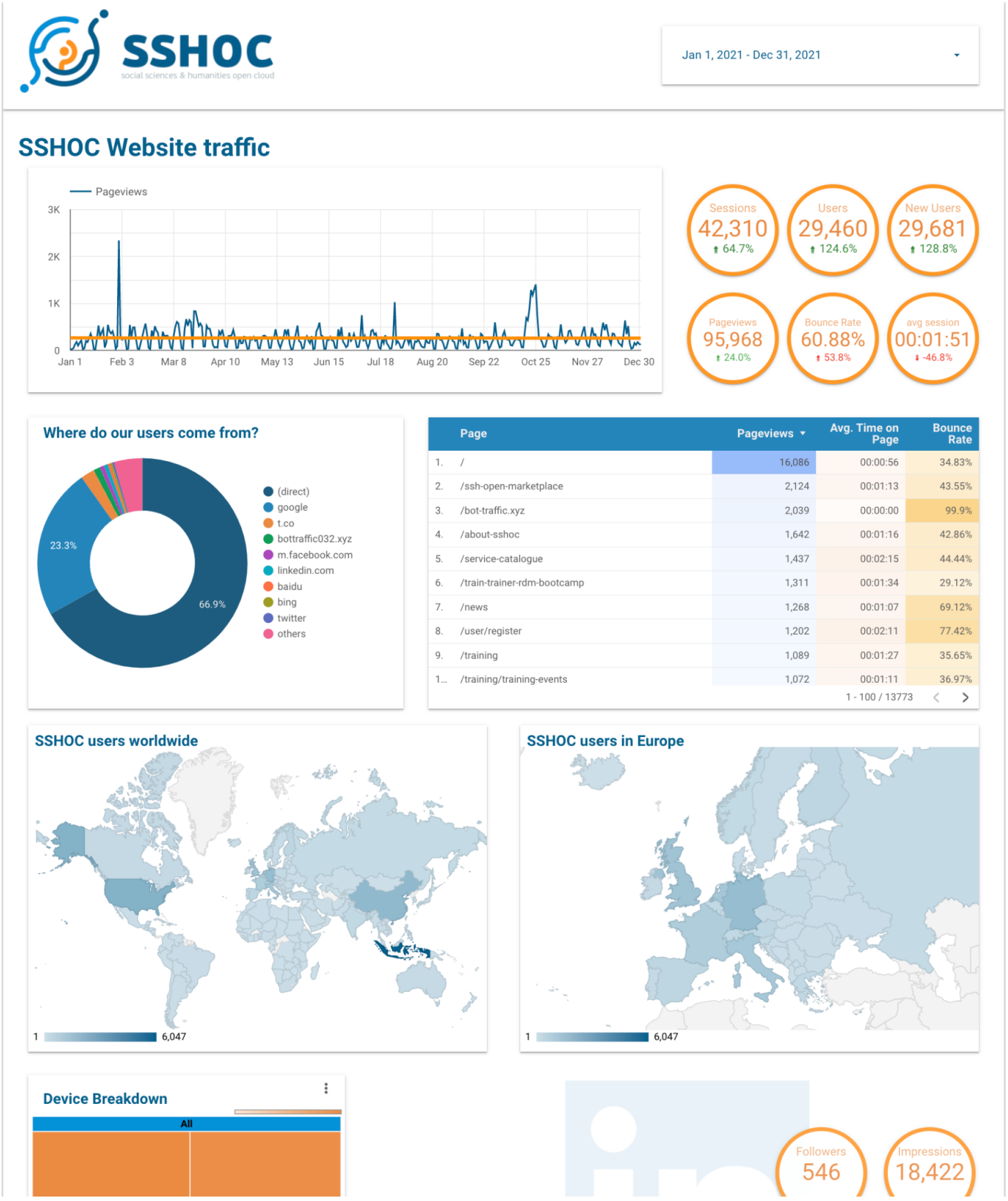

Figure 6. *A part of SSHOC Dashboard presenting M25-M36 traffic*

2.2.1.3. TASK 2.3 SSHOC WEB PRESENCE

In year 3 WP2 collaborated with WP6 to develop the **SSH Trainer's directory**. Supporting trainers in gaining visibility and promoting their offer of training activities and helping training activities and event organisers to find and approach qualified, and experienced speakers/trainers create a powerful network of professionals, facilitates the contribution of expert knowledge, and connects people worldwide. Being a member of the Trainers' Directory allows experienced trainers in the fields of social sciences and humanities to be visible to a broad audience of professionals interested in training within the SSH domain.

SSHOC Website **https://www.sshopencloud.eu/** and its updates are the main result, with a registration mechanism for the newsletter, Training and SSH Open Marketplace Tester communities on the SSHOC website, feeding into the GDPR compliant database of the project. The latest update of the Website focused on an improved navigation experience, greater functionality and easier access to more information. As one of the major upgrades, the SSHOC Data Communities (WP9), Q&A with users, Training and SSH Open Marketplace Tester Communities have been made visible. In year 3 of the project the website has received **54.595+ visits from 36.160+ new users, with 132.588+ pageviews**.

MS6 SSHOC web platform continuous marketplace integration with SSHOC service offers 2/3[30] was achieved. Providing direct access to SSHOC tools and services available and special attention went out to updating the current topics, training, SSH Open Marketplace access, the SSHOC services & tools catalogue, About and Resources. In alignment with T2.2 and WP6, the project works on fostering engagement with end-user communities. A dedicated submenu highlights SSHOC activities with the SSH Open Marketplace Tester community, SSH Training Community and the SSH research communities from WP9. By the end of the year, ***MS7 SSHOC web platform continuous marketplace integration with SSHOC service offers 3/3*** was achieved with an updated Service Catalogue, the launch of the SSH Trainer's Directory and the facilitated access to all SSH ESFRI Catalogues partnering in SSHOC.

2.2.2. Note on deviations from the plan and risk monitoring

Due to the COVID-19 global health crisis SSHOC WP2 worked on the following issues not foreseen in the workplan or adapted due to confinement rules in Europe:

1. Promotion of SSHOC organised and attended events turned virtual. The SSHOC organised events turned virtual were recorded by WP6 and promoted for reuse by WP2.
2. The SSHOC Final Conference is planned as a 2-day hybrid event, in Brussels.

There was a delay in both delivering Deliverables and achieving the milestones set. Due to COVID-19 pandemic, and travel restrictions, travelling to events and meetings was not possible in 2021 still, a strategic decision was also made for TRUST-IT to use the underspent F2F events funds for an additional SSHOC WP2 & WP6 coordinated output, aimed at end-user onboarding via training. The WPs proposed to

[30] Marieke Willems, & Stephanie Parker. (2022). MS6 SSHOC web platform continuous marketplace integration with SSHOC service offers 2/3. Zenodo. https://doi.org/10.5281/zenodo.5914373

develop the *SSHOC League of Data*, a training game, based on the CESSDA Data Management Expert Guide, targeted at researchers from the SSH and beyond. This game will address the EC reviewer comments on the further activities to reach end-user audiences, thus providing them with a ludic training game to support their data management and improve the quality of data and thus foster its reuse. Trust-IT, leading WP2, has the technical & gamification skills to develop the SSHOC LoD in-house, and will develop the tool in close collaboration with SSHOC WP6 training partners. This change entered the 3rd SSHOC Amendment. Also, part of the funds were used for reusable training materials among SSHOC project partners. WP2 works on the accepted proposals, providing branding, graphic design, video editing and editorial support.

Information on risk monitoring in WP2 for Year 3 is presented in the table below:

***Table 6**. Risk monitoring in WP2 - Year 3*

Risks monitoring WP2				
No of risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
2	Lack of visibility through media channels	**Yes**	**Yes**	Targeted messages were sent directly via the multiplier channels of ESFRI landmarks and projects, LIBER and SSHOC liaisons with other EOSC projects. In addition, in M36 SSHOC started looking at dedicating undertspent budget to disseminating press releases planned for M37-M40 via dedicated press agencies.
3	Lack of engagement at outreach events	**Yes**	**Yes**	Targeted messaging is used for each event to attract the envisioned stakeholders for engagement. Each event is promoted via the SSHOC channels and multiplied via partner networks. Interactive elements are included in events to collect input and feedback from stakeholders. Recordings & outputs of events are made available for reuse via SSHOC channels.
5	Inefficient use of resources: survey creation, translation and storing	**Yes**	**Yes**	Apart from the regular calls, additional task force calls were set up, messages via the internal communication platform and personal emails were sent to collect input, and ensure participation and alignment.

2.3. WP3 - Lifting Technologies and Services into the SSH Cloud

2.3.1. WP3 progress

2.3.1.1. Task 3.1 Multilingual Terminology

Task is led by CNR with partners CLARIN/ERIC, CLARIN/Athena, CLARIN/CUNI, CLARIN/WWI, CESSDA/UTA-FSD, CESSDA/UL-ADP, CESSDA/FORS. The partners participated in discussions about vocabulary formats and publication platforms for optimal interoperability and management, thus advancing the awareness of FAIR principles for vocabularies and ontologies. This Task launched and contributed to the **"Vocabulary Initiative"**, an initiative that has emerged from the need to align the vocabulary activities across the SSHOC work packages and to optimise the sharing of research data across various practises and domains. The results of this activity have led to the revision of the milestone report ***MS8 Choice of Vocabulary Publication platform for SSHOC*** which has been updated and published in Zenodo[31]. The Vocabulary Initiative has now evolved into the **SSH Vocabulary Commons.** Two main results from Task 3.1 the multilingual data-stewardship and metadata vocabularies were made available from the ILC CLARIN centre and on the new SSH Vocabulary Commons vocabulary publication platform (the Task 3.1 case studies (the NLP and MT approaches adopted) and the results are described in the ***D3.9 Report on Ontology and Vocabulary Collection and Publication***[32]. The task team worked towards finding synergies between different vocabulary initiatives also across different projects:

1) A common vocabulary approach was the topic of the SSHOC ICTeSSH workshop (June 2021) co-organised by this Task (with other project's Tasks);
2) The task tem was the promoter of a synergy meeting with TRIPLE on April 1, 2021, and
3) Task 3.1 has also participated in the Panel organised by TRIPLE about the integration of data and services in the EOSC system (November 2021). The task leader gave a presentation of SSHOC at a CLARIN event in February 2021[33].

2.3.1.2. Task 3.2 Selected SSH Ontologies and Vocabularies

Task 3.2 is led by CLARIN ERIC and partners are CentERdata, SHARE/Unive, TiU-EVS, and ESS/GESIS. The task aims to foster the use of selected global ontologies in the social sciences and humanities, regarding occupational titles, educational categories, sectors of industry, geographical regions, food items, and

[31] Monica Monachini, Taina Jääskeläinen, Dieter Van Uytvanck, Iulianna Van der Lek, Daan Broeder, & Yoann Moranville. (2021). MS8 Choice of Vocabulary Publication platform for SSHOC (1.0). Zenodo. https://doi.org/10.5281/zenodo.5181389

[32] Francesca Frontini, Federica Gamba, Monica Monachini, Daan Broeder, Kea Tijdens, & Irena Vipavc Brvar. (2021). D3.9 Report on Ontology and Vocabulary Collection and Publication. Zenodo. https://doi.org/10.5281/zenodo.5913485

[33] https://www.clarin.eu/event/2021/clarin-cafe-how-not-spill-coffee-your-tapes-best-practices-preserving-oral-archives [21.03.2022]

religions in order to classify elements into standard global classifications, for example the ISCO classification of occupations and its derived social status or the NACE/ISIC classification of industries. CentERdata, TiU-EVS, and ESS/GESIS focussed on updating the website **surveycodings.org**, redesigned it, ensured that the databases were in line with the FAIR recommendations, and made technical improvements to the front and backend. A workshop for European survey holders was organised. By the end of 2021, TiU-EVS finalised working on a database of religious denominations, including a check of the translations.

ESS/GESIS proceeded in adding more countries and their educational categories to the database and thus to the website. More than 40 countries' entries were fully ready by the end of the year.

SHARE/Unive continued its work on recovering the codification of occupations for the non-coded job description text strings, collected in the SHARE survey. Such strings include the occupation of respondents' parents (wave 2-5, 118552 strings), the retrospective occupations collected (wave 3, 74529 strings), and all occupation strings collected in the survey from wave 6 onwards, in the situations when the Jobcoder instrument did not work properly. SHARE/Unive has completed the retrospective occupation coding for France and for the French speaking respondents in Belgium. Parents' information on occupation has been completely coded for Germany and Italy as well as for Spanish respondents. SHARE/Unive has completed the codification of the retrospective information of occupation for the French speaking respondents in Switzerland and is working on coding the parents' jobs for the French Swiss sample. For Germany the percentage of coded retrospective strings is about 75%.

Some of the main results are the update of surveycodings.org, the workshop organised, finalised work on the database of religious denominations, and a progress on recovering the codification of occupations for the non-coded job description text strings, collected in the SHARE survey. The deliverable ***D3.4 Multilingual ontologies for Occupation, Industry, Regions and cities, Food items, and Religion, with use case***[34], was submitted to the EC and published in Zenodo.

The partners also organised a workshop in March 2021 for potential users of Surveycodings, among which ESS, SHARE, GGP, EUROFOUND, CESSDA. In July 2021 there was a contribution to the virtual ESRA2021 conference titled "The future of SurveyCodings" presenting the SurveyCodings work in WP3 by TiU-EVS.[35]

2.3.1.3. Task 3.3 Text & Data Mining

Task 3.3. is led by CLARIN ERIC with partners CLARIN/Athena, CLARIN/CUNI, DARIAH/UGOE, and SciencesPO. The partners focused on the development of four demonstration scenarios that highlight

[34] Maurice Martens, & Kea Tijdens. (2021). D3.4 Multilingual ontologies for Occupation, Industry, Regions and cities, Food items, and Religion, with use case (V1.1). Zenodo. https://doi.org/10.5281/zenodo.4724837

[35] Luijkx, R. et al "The future of SurveyCodings" abstract retrieved from https://www.europeansurveyresearch.org/conferences/glanceProgram2021?sess=5#169

the value of NLP technologies for the SSH field and investigated which aspects of the outcomes of T3.3. and in which form can be shared via SSH Open Marketplace[36].

(1) ***Application of TDM to large bodies of multilingual texts. Use case: Collective Bargaining Agreements (CBAs).*** CLARIN ERIC/WageIndicator worked with the dataset that was expanded during the previous reporting period. The pipeline of steps that are to be taken in order to annotate the CBAs according to the standards in the field has been stored in the form of an online script in a guided notebook in Colab. This guided notebook is connected to Zenodo, where the datasets are stored, and it can work on any machine.

(2) ***Integration of linguistic analysis for information extraction into SSH tasks. Use case: verbal aggression in the context of social media.*** CLARIN/ATHENA works on three research questions based on three particular case studies: i) who are the main targets of verbal attacks, ii) which are the main types of verbal attacks, iii) what type of insights can be derived by the qualitative analysis of the verbal attacks (e.g., stereotypes, prejudices). Two case studies work with the Greek language, and the third one is on English. For the semantic analysis of Social Media content, and in particular for detecting Verbal Aggression (VA) exhibited in interactions on the Twitter platform, CLARIN/ATHENA has devised and developed a VA analysis framework based on the existing ATHENA/ILSP suite of NLP tools complemented with two specifically developed semantic analysis pipelines for Greek and English.The work on English language task is carried out in collaboration with Sciences Po, as their expertise is crucial to label the training data, as well as to assess the quality of the VA automatic annotation.

(3) ***TDM handling of heterogeneous data. Use case I: Intertextuality phenomena in European drama history.*** DARIAH/UGOE and CLARIN/CUNI partners have investigated how different NLP methods and tools, such as for instance sentiment analysis, word embedding, etc., can be used to support such research tasks as (a) comparative literary analysis; and (b) an analysis of the literary language of individual dramas of the respective historical language level.

(4) ***TDM handling of heterogeneous data. Use case II: Topic modelling approaches on a multilingual corpus of scientific journals.*** DARIAH/UGOE and CLARIN/CUNI have investigated a set of potential research questions that one can attempt to answer with the TDM support given a corpus of multilingual scientific journals. Unfortunately, current quality of the OCR of the available material is not of the quality that would allow to achieve any meaningful advancement at this point.

Apart from the Use cases presented above, the Task team (co-)organised two events and collaborated with the appropriate reports. At the Helsinki Digital Humanities Hackathon (#DHH2021[37]) partners CLARIN, WageIndicator and the SSHOC project have led one of the themes at the event that was

[36] Among many virtual meetings, one internal f2f meeting was held by partners in Prague, Czech republic in July 2020 to discuss the topics of NLP tools regarding the Drama use case from T3.3.

[37]#DHH21:https://www2.helsinki.fi/en/helsinki-centre-for-digital-humanities/helsinki-digital-humanities-hackathon-2021-dhh21 [21.01.2022]

dedicated to the ***'Exploration of society through the lens of labour market related documentation - comparing the coverage, style and subjects discussed in collective labour agreements from more than 50 countries'.*** The participants were asked to work on the same datasets from the WageIndicator Collective Agreements Database[38].

The team also organised a webinar **"SSHOC'ing Drama in the Cloud"**[39] at the LIBER 2021 Online Conference, showcasing how SSH researchers can benefit from the resources and services offered by SSH research infrastructures to produce and exploit highly encoded historical textual data. The use case was based on ongoing work carried out within the SSHOC project on a corpus of theatrical play texts from the 17th and 18th century covering examples in three languages (English, French, and Spanish). The webinar also included a hands-on part which will allow the participants to test proposed methods, resources, and tools.

2.3.1.4. Task 3.4 Making Data Findable by being Citable

Task 3.4 is led by CNRS (Huma-Num) with partners CLARIN ERIC, DARIAH/UGOE, LIBER, CNR. The task 3.4 work plan was updated leading to the development of what was called the **"FAIR SSH Citation"**: with the main idea to take existing citations, normalise them, enrich them with other sources and annotations and to present them in a standardised way and be machine actionable. To put this concept into practice, the task is developing a **"FAIR SSH citation prototype" implementation**.

In parallel, the team developed a set of **Recommendations for FAIR Data Citation in the Social Sciences and Humanities**[40] to build citations in SSH. So as not to reinvent the wheel, these are based on existing principles created by Force11[41] and adapted to the specific characteristics of the SSH data. These recommendations were validated by a committee of experts from different backgrounds and structures (RDA participants, CODATA director, OpenAire Engineers etc.) during a round table[42] and in a parallel review process.

In order to investigate the support repositories offer researchers with citing data, in ***D3.5 Report on citation enabled SSH catalogues and SSH citation exploitation***[43] , the team analysed 85 repositories, against 7 quality criteria based on the recommendations mentioned above. The results of this survey

[38] Final report on the session: https://dhhackathon.wordpress.com/2021/05/28/cbaquest-final-report-incl-tools/ [21.01.2022]
[39] Webinar page: https://sshopencloud.eu/news/sshoc-webinar-notes-sshocing-drama-cloud-added-value-sshocclarin-services [21.01.2022]
[40] Nicolas Larrousse, & Edward J. Gray. (2021). Recommendations for FAIR Data Citation in the Social Sciences and Humanities. Zenodo. https://doi.org/10.5281/zenodo.5361718
[41] Data Citation Synthesis Group: Joint Declaration of Data Citation Principles. Martone M. (ed.) San Diego CA: FORCE11; 2014 [https://www.force11.org/group/joint-declaration-data-citation-principles-final].
[42] Round table held in May 2021: https://www.sshopencloud.eu/news/roundtable-experts-data-citation [21.01.2022]
[43] Nicolas Larrousse, Edward Gray, Daan Broeder, Cesare Concordia, Jan Brase, & Athina Papadopoulou. (2021). D3.5 Report on citation enabled SSH catalogues and SSH citation exploitation (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5603306

were encouraging - even if there is room for improvement, particularly in the use of Persistent Identifiers. Importantly, the presence of a landing page in almost all cases allowed for building up a test sample made up of a very diverse dataset from those repositories for which we want to build standardised and actionable citations. These results were used to improve the FAIR SSH citation prototype[44] mentioned above, as the team also used it to test the repositories. The prototype is composed of three components: a harvester which grabs information about a dataset and normalises it; an API to disseminate the metadata of the citation thereby making it actionable; and a citation viewer for human purposes. In the first instance the prototype was populated with data collected during the survey of repositories which is subsequently added to in an opportunistic way from various sources: metadata from the repository hosting the data, the PID registration Agency and several Knowledge Graphs. Also, the RE3Data registry was used to obtain information wrt the supported APIs at the repository hosting the dataset. This way the prototype is to provide a unified view of information on cited datasets coming from different sources, providing researchers with information how to cite a specific dataset but also additional information such as its provenance.

The task also created a number of documents, webinars and presentations:

- Presentation of the outcome of D3.5 and the impact of the prototype during the October 2021 Consortium Meeting,
- SSHOC Workshop Data Citation in practice[45] ,
- SSHOC Webinar FAIR SSH Data Citation[46],
- Presentation at LIBER conference - Session #3: Working with Software & Data[47],
- Poster at conference DHNord (France) “La mise en œuvre de mécanismes de citation de données: un socle solide pour bâtir des data papers”[48],
- Presentation at CLARIN Bazar “Much ado about citation”[49],
- Proposition (short paper) for DH2022 conference “Diary of our initiatory journey on the continent of data citation in SSH”.

2.3.1.5. Task 3.5 Data and Metadata Interoperability Hub

Task 3.5 is led by CESSDA/UTA-FSD with partners CESSDA/SND, CESSDA/UKDS, CLARIN ERIC, CLARIN/EKUT, DARIAH/OEAW, CNR and FORTH. It aims to address interoperability challenges within SSHOC by analysing the SSHOC work plan, following activities, and recommending solutions.

[44] http://v4e-lab.isti.cnr.it/citationservice/swagger-ui.html#/

[45] SSHOC Workshop Data Citation in practice page: https://sshopencloud.eu/events/sshoc-workshop-data-citation-practice [20.03.2022]

[46] SSHOC Webinar FAIR SSH Data Citation https://www.sshopencloud.eu/events/fair-ssh-data-citation-practical-guide [20.03.2022]

[47] Presentation at LIBER conference - Session #3: Working with Software & Data https://liber2021.sched.com/event/iu1R/session-3-working-with-software-data [20.03.2022]

[48] #DHNORD2021: https://meshs.fr/page/session_poster_dhnord2021..2021-05 [20.3.2022]

[49] Clarin Bazaar: https://www.clarin.eu/content/clarin-bazaar-2021 [20.03.2022]

By the end of 2021, **The Conversion Hub data model** was finalised by CESSDA/UTA-FSD, CLARIN ERIC, CLARIN/EKUT and DARIAH/OEAW and harmonised with SSHOCro by FORTH. The first version of the **Conversion Hub portal**, implemented and hosted by DARIAH/OEAW, was provided. Population of the Conversion Hub continued by all task partners. CLARIN ERIC, CESSDA/SND, DARIAH/OEAW, and CNR continued the work on conversion solutions. All partners contributed to ***D3.6 Report on SSHOC format interoperability solution service***[50], including new software. The report provides a detailed description of Conversion Hub, its functions and data model, the conversion solutions that are being developed, and the sustainability options after the project. Further work on Conversion Hub includes creating policy documents and content management guidance and further editing, cleaning, and adding content, as well as agreeing on an editorial team for the post-project time. The task team also presented SSHOC work in various events:

- FAIRsFAIR and RDA workshops on Metadata Catalogues integration for Interdisciplinary Research[51] on September 11 and October 9, 2020, and March 30, 2021 (CESSDA/UTA-FSD, DARIAH OEAW and CESSDA/UKDS participated),
- RDA 17th Plenary meeting, session on Syntactic and Semantic Conversion of Metadata on 20 April 2021, with presentation on SSHOC[52] (CESSDA/UTA-FSD and CLARIN ERIC participated),
- EDDI2021 conference, with presentation on Harvesting DDI for an integrated catalogue[53] together with B2FIND, on December 1st, 2021 (CESSDA/UTA-FSD participated).

[50] Mari Kleemola, Katja Moilanen, Daan Broeder, Matej Ďurčo, Klaus Illmayer, Maurizio Sanesi, Emiliano Degl'Innocenti, Hervé L'Hours, Benjamin Mathers, Johan Fihn Marberg, Eleni Tsoulouha, Athina Kritsotaki, & Cesare Concordia. (2021). D3.6 Report on SSHOC format interoperability solution services, including new software. https://doi.org/10.5281/zenodo.5561604

[51] FAIRsFAIR and RDA Metadata Catalogues Integration Workshop materials: https://drive.google.com/drive/folders/1Pb9MDGw9L8dKX_hByDZgYPT8kVN7w1ld [10.1.2022]

[52] RDA 17th Plenary session on Syntactic and Semantic Conversion of Metadata https://www.rd-alliance.org/plenaries/rda-17th-plenary-meeting-edinburgh-virtual/syntactic-and-semantic-conversion-metadata [10.1.2022]

[53] Martens, Claudia, Flügel, Anna-Lena, & Kleemola, Mari. (2021, December 1). Harvesting DDI for an integrated catalogue. 13th Annual European DDI User Conference (EDDI2021), virtual (Paris). Zenodo. https://doi.org/10.5281/zenodo.5746789

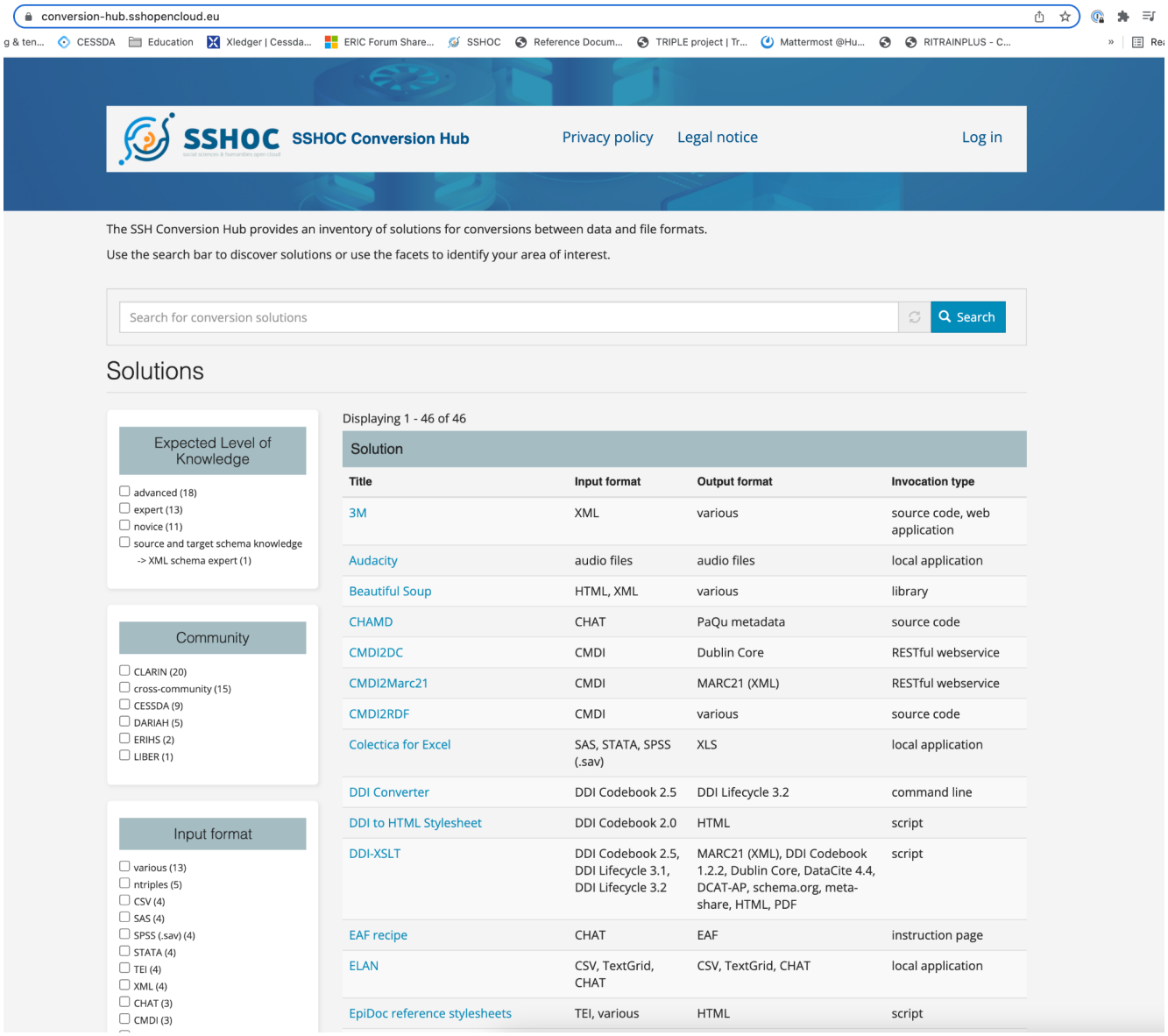

Figure 7. *SSHOC Conversion Hub home page*

In addition, the task team had a synergies meeting with **TRIPLE project** in April 2021, collaborated with **DICE project** and **B2FIND** in mapping DDI Codebook and B2FIND EUDAT core metadata, as well as initiated the SSH Vocabulary Commons as a follow-up of the CLARIN Vocabulary Initiative and T3.1 activities to bring together experts from SSH research infrastructures (CESSDA, CLARIN, DARIAH and E-RIHS).

2.3.1.6. Task 3.6 Making Data Re-usable and Actionable

Task is led by CLARIN ERIC with partners CLARIN/EKUT, DARIAH/OEAW, CNR, DAI, DARIAH/UGOE. The partners worked on the already existing use-cases and some new use-cases for Switchboard and VCR were discussed with the other SSH community infrastructures. More effort was given to developing the

VCR use-cases culminating in the VCR shopping basket scenario which positions the VCR as a neutral middle ground between the data spaces and repositories of the individual SSH infrastructures allowing users to create virtual collections from resources belonging to all of these. There was continued collaboration with WP7, making the Switchboard and VCR useful in the SSH Open MarketPlace and with Task 5.4, on integrating the Switchboard in the SSH Dataverse software, as well as with DARIAH-DE about exploring solutions for sharing SSH thematic services and their sustainability. ***Deliverable 3.8 Implementation report and available SSHOC Switchboard and VCR services***[54] was finalised, submitted to the EC and published in Zenodo in 2021. Some related documents were also published: ***Summary Use Cases for the Virtual Collection Registry in SSHOC***[55], "***Addendum to Collaborative Use Cases between SSH Open Marketplace and Virtual Collection Registry***" [56], **Language Resource Switchboard factsheet**[57], and **Virtual Collection Registry factsheet**[58].

Figure 8. *Language Resource Switchboard factsheet*

[54] Daan Broeder, Willem Elbers, Stefan Buddenbohm, Wolfgang Schmidle, Emanuel Dima, Matej Durco, Cesare Concordia, Maurizio Sanesi, & Emiliano Degl'Innocenti. (2021). D3.8 Implementation report and available SSHOC Switchboard and VCR services (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5608542

[55] Broeder, Daan, Buddenbohm, Stefan, & Elbers, Willem. (2021). Use Cases for the Virtual Collection Registry in SSHOC. Zenodo. https://doi.org/10.5281/zenodo.5535818

[56] Buddenbohm, Stefan, & Broeder, Daan. (2021). Addendum to Collaborative Use Cases between SSH Open Marketplace, Switchboard and Virtual Collection Registry. Zenodo. https://doi.org/10.5281/zenodo.5215987

[57] Elisa Gorgaini. (2021). Language Resource Switchboard - SSHOC Service Catalogue's Factsheets Series (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5495696

[58] Elisa Gorgaini. (2021). Virtual Collection Registry - SSHOC Service Catalogue's Factsheets Series (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5482899

2.3.2. Note on deviations from the plan and risk monitoring

The only deviations in the WP3 tasks were 1-month delays in submission of the deliverables D3.4 and D3.6 due to extra time given to address peer review comments and formalise the last version of deliverables. No negative consequences were perceived.

Information on risk monitoring in WP3 for Year 3 is presented in the table below:

Table 7. *Risk monitoring in WP3 - Year 3*

Risks monitoring WP3				
No of risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
6	Too few available software developers	**Yes**	**Yes**	Some partners had difficulties in allocating work to software developers, but attempts to re-plan and reschedule were implemented
U2	Problems in hiring staff by some partners	**Yes**	**Yes**	Goals for 3.4 reformulated

2.4. WP4 - Innovations in Data Production

2.4.1. WP4 progress

2.4.1.1. TASK 4.1. A SAMPLE MANAGEMENT SYSTEM FOR CROSS-NATIONAL WEB SURVEYS

This task is led by ESS ERIC/City and contributing partners were Sciences Po, and TiU-EVS. The work consisted primarily of the design, development, deployment and testing of the **Web Panel Sample System (WPSS)** by ESS ERIC and Sciences Po. Most of the time in this task was allocated to continuous software engineering work. After **deployment of the beta version** of the tool in August 2021, the team was mainly focused on conducting a test with eleven European countries, and processing feedback from the pilot: rewriting survey distribution features, improving debugging capacities and correcting bugs, releasing a software production ready version in September, 2021.

Other activities included organising **a training session** for survey coordinators roles (ESS ERIC headquarters) as well as sample managers (national coordinators); organising **two workshops** ("BYOS: Bring your own sample") in July 2021, training more than 20 users to manage a test national sample using the software. A companion website documenting the software and the project has been published[59]. Dissemination activities included: CSDI2021 (Comparative Survey Design and Implementation workshop[60]) and ESRA2021 (European Survey Research Association online conference[61]) presentations.

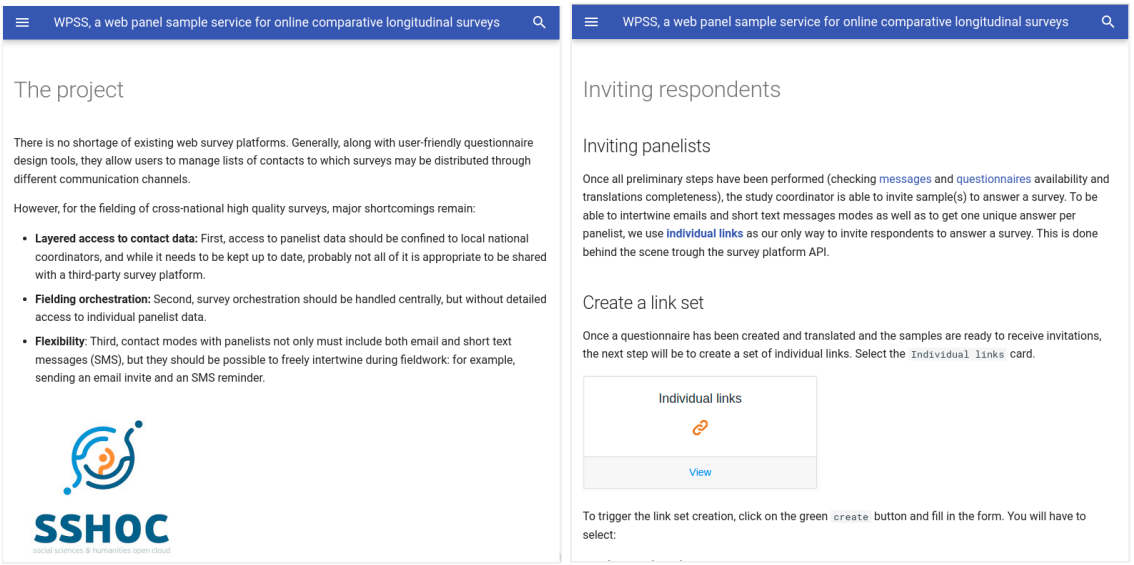

***Figure 9.** The WPSS companion website*[62]

[59] Website documenting the software: https://cdsp-scpo.github.io/wpss-doc [January 2022]
[60] CSDI2021: https://csdiworkshop.org/2021-csdi-virtual-workshop-schedule/ [January 2022]
[61] ESRA 2021: https://www.europeansurveyresearch.org/conferences/program2021?sess=48#224 [January 2022]
[62] The WPSS companion website, including extensive user documentation, available at https://cdsp-scpo.github.io/wpss-doc/ [March 2022]

The final deliverable ***D4.2 A ready to use sample management system*** was finalised in November 2021, and published on Zenodo[63], available under GNU GPL v3 licence. The output of task 4.1, a sample management system for cross-national web surveys, is used by ESS ERIC since September 2021 in the framework of ESS-SUSTAIN-2 project in WP6[64]. "Opinion study for <country>" is a high quality online comparative web study taking place at the same time in twelve participating countries. Three waves have already been published to 4580 panellists from 7 countries (twelve early 2022), using 15 different languages.

2.4.1.2. Task 4.2. Preparing tools for the use of Computer Assisted Translation

The Task is led by ESS/UPF and contributing partners in this reporting period were TiU-EVS, CentERdata, CLARIN/CUNI. In 2021, the team launched **two versions of the Multilingual Corpus of Survey Questionnaires** (MCSQ); the second version was released in March and the third in August. The MCSQ is an open-access and open-source tool. The data is licensed under a Creative Commons Attribution-NonCommercial- ShareAlike 4.0 International Licence. The use of the MCSQ tool is licensed under EUPL-1.2 (European Union Public License). It consists of a dedicated web interface that runs on top of the MCSQ SQL-database and has corpus management features[65]. The data has been deposited in CLARINO which is a repository for textual data FAIR compliant for permanent preservation and archiving. It can be downloaded[66].

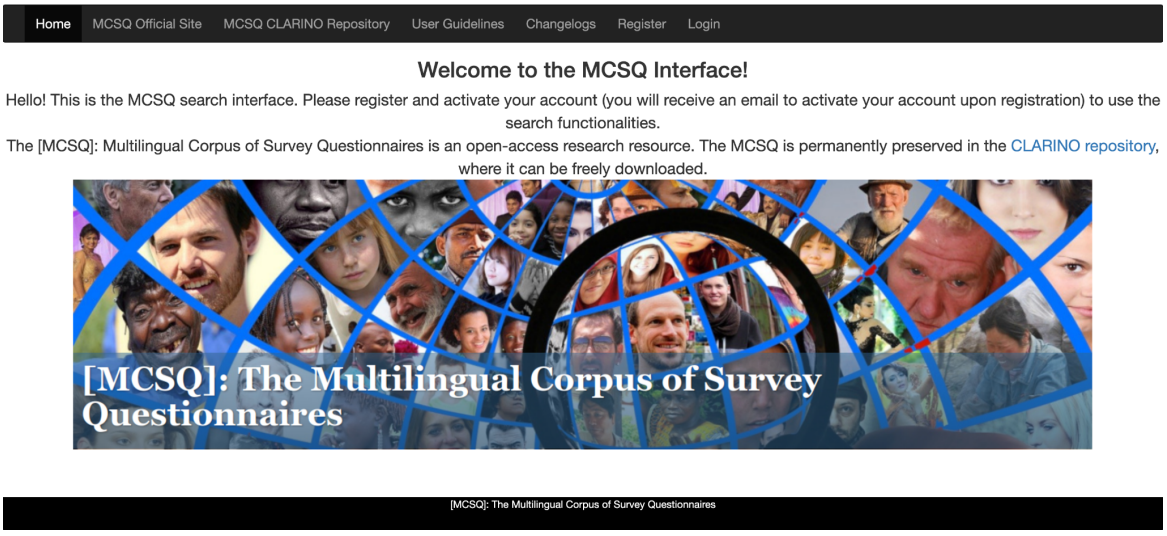

Figure 10. *[MCSQ] interface; Screen Capture*

[63] Baptiste Rouxel, Mathilde Steinsvåg Hansen, Elissa Sibley, Geneviève Michaud, Gianmaria Bottoni, Lorna Ryan, Malaury Lemaître- Salmon, Nicolas Sauger, Quentin Agren, Rory Fitzgerald, Tom Villette, & Elsa Peris. (2021). D4.2 Ready to use sample management system (1.0). Zenodo. https://doi.org/10.5281/zenodo.5907939

[64] Next Steps in Securing the Sustainability of the European Social Survey (ESS-SUSTAIN-2) is a project funded by the EC under GA No. 871063.

[65] MSCQ:https://www.upf.edu/web/mcsq/ [January 2022]

[66] Available for download here: https://repo.clarino.uib.no/xmlui/handle/11509/142 [January 2022]

MS 16 Survey questions extracted from TMT and delivered in machine readable format, to be used as input for T4.3 and T3.1 was completed in February 2021, and the questions integrated in the MCSQ. Collaboration between the ESS/UPF and TiU-EVS teams made it possible to add more questionnaires to the corpus than originally planned, as early waves of EVS questionnaires that existed only as scanned images were transcribed and digitised. The MCSQ has been presented in several important conferences[67] in the fields of survey methods and computational linguistics, and in two peer reviewed articles, one already published[68] and one still under review.

A second focus of this Task was improving the computer assisted translation software currently used by the survey infrastructures in the SSHOC (**Translation Management Tool**) by exploring the integration of machine translation and translation memories features. The team at Centerdata decided to create a stand-alone Translation Memory (TM) solution running in a MySQL database and integrating it into the TMT. Existing tools would not suffice for several reasons. International surveys using the TMT have several rounds/waves of translations supported in the TMT system. Wave/round consistency is a priority and existing tools do not focus on it. Technical concerns were TMT system stability, service availability and language availability. Integration of the TM to TMT was to be done by user interface elements allowing users to call the TM solution for translations' suggestions. At the start of October 2021, the first version of the TM solution was delivered internally for review and several design adjustments were implemented. Then, the work focused on connecting the TMT to the TM. Implementation was finished in December 2021. Research was done into several alternative matching algorithms that could potentially be used in the TM. Finally, work started on preparing the TM to share data via its API.

CLARIN/CUNI has continued the development of domain specific NMT models using the tensor2tensor (T2T) neural sequence learning framework. Since October 2021, variations of domain-specific models are in the process of fine-tuning using the MCSQ parallel data. The previously evaluated general-domain T2T models for Czech, German, French, Polish and Russian were released using the Lindat repository. Additionally, CUNI released a Docker image containing the Lindat Translation T2T backend that is compatible with the release models. The team participated in CL 2021 in Limerick: *The Multilingual Corpus of Survey Questionnaires MCSQ, in* July 2021, where they presented the research output as part of the dissemination strategy as well as the European Survey Research Association (ESRA) conference: *The compilation of the [MCSQ]: Multilingual Corpus of Survey Questionnaires*, in July 2021, with the same purpose.

[67] Conferences are listed on the MCSQ website at https://www.upf.edu/web/mcsq/conferences-and-presentations [Retrieved January 27, 2022].

[68] Sorato, D., & Zavala-rojas, D. (2021). The Multilingual Corpus of Survey Questionnaires Query Interface. In S. S. Stefania Degaetano-Ortlieb, Anna Kazantseva, Nils Reiter (Ed.), Proceedings of the 5th Joint SIGHUM Workshop on Computational Linguistics for Cultural Heritage, Social Sciences, Humanities and Literature (pp. 43–48). Association for Computational Linguistics. https://aclanthology.org/2021.latechclfl-1

D4.7 Code for data exchange between TMT and open-source CAT software[69], finalised and published in March 2021 and developed under the GPLv3 licence (GNU General Public Licence version 3), was focused on the possibility of connecting the Translation Management Tool (TMT) to external open-source Computer Aided Translation (CAT) tools. Completion of said work culminated in a report on the possibilities for MateCat and MyMemory and the creation of a stand-alone demo tool with a connection to MyMemory. ***D4.8 Report on possibilities for incorporating open source CAT tool functionality into the TMT***[70], finalised and published in July 2021, further built upon the results of D4.7.

D4.5 Packaged tested version of MT system[71] describing the release of the NMT backend and the aforementioned NMT models has been submitted in November 2021 and a report was published. During the model development CLARIN/CUNI discovered a length-based overfitting tendency in the contemporary Transformer NMT architecture and published these findings on EMNLP 2021. Further research studying current issues with correct estimation of NMT model generalisation is currently in progress.

2.4.1.3. Task 4.3. Applying Computer Assisted Translation tools in Social Surveys

The task is led by ESS ERIC/UPF, and partners contributing in this period were ESS/GESIS, SHARE/MPISOC, TiU-EVS, and CentERdata. Partners focused on the design and implementation of experiments **using machine translation in the translation of survey questionnaires** and comparing this design with the use of human translation only. The team also focused on producing guidelines for the use of translation memories in survey translation. These guidelines will close the gap between common practises in translation and survey research. Finally, the **Automatic Verification Software** allows to flag texts for translation mistakes, aiding the job of project managers of survey translation projects. The WP4 team (ESS/UPF and ESS/GESIS) finalised the methodological design for the experiments. Forty items chosen from EVS and ESS questionnaires were translated from English to German or Russian. The experiments consisted of comparing the use of human translation with a method that combines machine translation and post editing. Partners dedicated their time to data curation and management, and error coding of the different versions of German and Russian translations. The ***D4.10 Report on the MT pilot study*** was submitted to the EC in December 2021.

Several **research papers** were started, resulting in presentations at **CSDI 2021** and **ESRA 2021**. Furthermore, ESS/UPF and ESS/GESIS keep on coordinating the submission of the final dataset (linguistic dara, human data, technical report, etc.) to a repository towards the end of the SSHOC project. Curation, dissemination, data analysis and article preparation are conducted at ESS/GESIS and ESS/UPF in collaboration with TiU-EVS. The data will be submitted to the SowiDataNet|datorium[72] for permanent

[69] Sebastiaan Pennings. (2021). D4.7 Code for data exchange between TMT and open-source CAT software. https://doi.org/10.5281/zenodo.4922730

[70] Sebastiaan Pennings, & Maurice Martens. (2021). D4.8 Report on possibilities for incorporating open source CAT tool functionality into the TMT (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5608412

[71] Dušan Variš. (2021). D4.5 Packaged tested version of MT system. Zenodo. https://doi.org/10.5281/zenodo.5907943

[72] SowiDataNet|datorium. https://data.gesis.org/sharing/#!Home [March 2022]

preservation and archiving and licensed under a Creative Commons Attribution- NonCommercial-ShareAlike 4.0 International Licence.

ESS/GESIS worked on the ***D4.9 Guidelines on the use of Translation Memories in survey translation***[73]. Here, it was shown how translators and/or survey researchers can use the Multilingual Corpus of Survey Questionnaires (MCSQ), developed in Task 4.2, in a translation tool (in our case MateCat) and which benefits the re-use of the corpus as a translation memory has for the process of survey translation. The written deliverable was accompanied by a hands-on video presentation.

Between July and October) 2021, the ***D4.11 Report on the experience with the automatic verification programme in SHARE wave 9***[74] was prepared. The team introduced a new feature in the TMT, the Centerdata software that is used to manage the procedure. Translators get a machine-made translation (CUNI-LINDAT) immediately upon request and are able to provide a human-edited version to the system. Another new feature is a set of safety checks. They allow the team managing translation procedures to easily spot mistakes in the syntax within a translation. Safety checks save time in the translation process by reducing the versions of the question tool that need to be generated. The tool is open-source[75]. It has been developed under GPLv3 licence (GNU General Public Licence version 3). By the end of 2021 the team set up the first steps in order to transform the beta version of the automatic verification tool (AVT) into a web service. The team participated in European Survey Research Association (ESRA) conference 2021 - *Investigating the effects of machine translation and post-editing in the TRAPD: an experimental approach,* in July 2021, where presented the research output as part of the dissemination strategy.

2.4.1.4. Task 4.4. Voice recorded interviews and audio analysis

This task is led by KNAW and contributing partners are CLARIN/RUN and TiU-EVS. As part of the task, an **Audio Survey Module was prepared** which integrated the collection of Computer Assisted Recorded Interviews (CARI) in the Longitudinal Internet studies for the Social Sciences (LISS) panel survey. Information was collected among 771 panellists in April 2021. The focus in July and August 2021 was on cleaning and preparing the raw data in such a way that it could be further analysed by the partners of Task 4.4. This work included: listening to all audio files and deleting personal information (e.g., names and addresses) that could lead to direct identification and preparing an excel file in which responses to the survey questions and the cleaned audio transcripts were aggregated. From September till the end of 2021, a qualitative and quantitative assessment of the quality of the audio recordings was performed.

[73] Veronika Keck, Dorothée Behr, & Brita Dorer. (2021). D4.9 Guidelines on the use of Translation Memories in survey translation (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5180976

[74] Yuri Pettinicchi, & Yichen Liu. (2021). D4.11 Report on the experience with the automatic verification programme in SHARE wave 9 (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5614676

[75] Tool is available here: https://github.com/yichennliu/bwes_translation [January 2022]

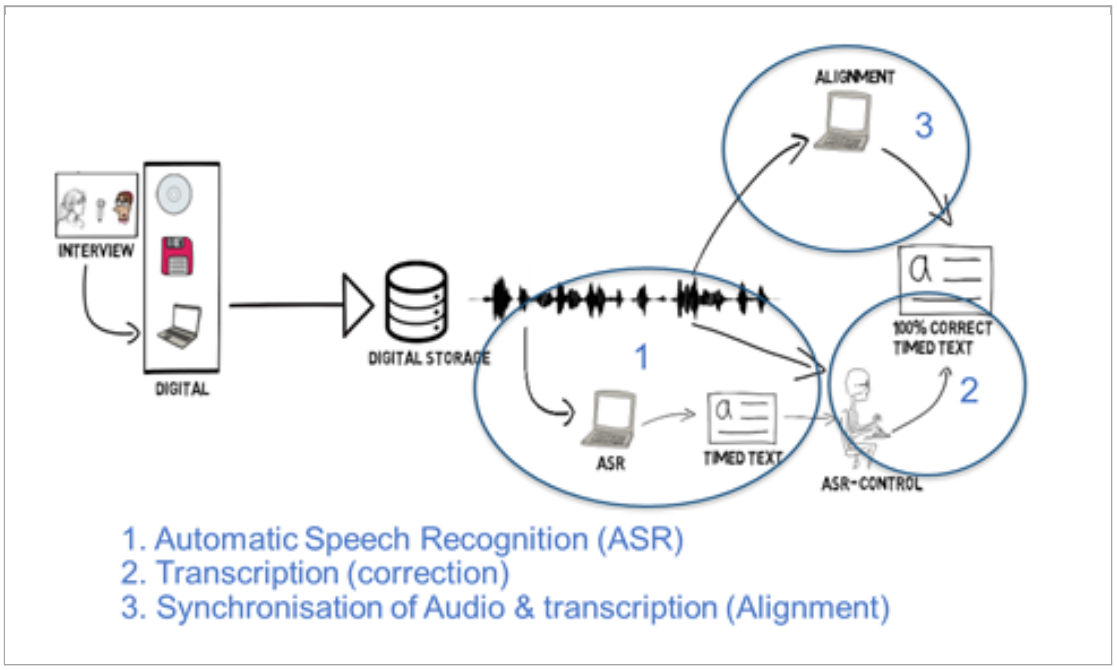

Figure 11. *Graphical representation of the use of CLARIN's ASR tools to prepare speech-to-text transcripts.*

D4.13 Audio Transcript Data[76] was submitted in December 2021 and published on Zenodo. A summary of the findings from the qualitative and quantitative assessment of the data is added to the report that was published in addition to Deliverable 4.13. The speech-to-text transcripts devoid of identifiable information, as well as the responses to the survey questions are to be made available in excel format to the LISS Data Archive in 2022. The data was planned to be published in the LISS panel data archive as an "Assembled Study" available to be found under the title "Voice recorded interviews SSHOC project". The data will be available to registered researchers who have signed a statement in which they agree to all rules and conditions of the use of the LISS panel data[77].

2.4.1.5. Task 4.5. Social policy APIs for social surveys

Task 4.5 is led by KNAW. The Social Policy Module, capturing all questions needed to calculate family and housing benefits, was fielded using the Dutch WageIndicator Survey from June till September 2021. In the months of September and October the data was cleaned and prepared in excel format to make it accessible for further analyses by the partners of T4.5. From October onward the focus lay on analysing the quality of the data. ***D4.15 Report on integrating API into GGP***[78] was submitted to the EC in December 2021. It provides a summary of the implementation of the Social Policy Module in the Dutch

[76] Judith C. Koops, Henk van den Heuvel, & Ruud Luijkx. (2021). D4.13 Audio Transcript Data (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5833876 - report is available on Zenodo, while the audio transcripts are restricted, and shared only with the EC.

[77] LISS panel Data Statement https://statements.centerdata.nl/liss-panel-data-statement [Jan 2022]

[78] Judith C. Koops, & Kea G. Tijdens. (2021). D4.15 Report on integrating API into GGP (1.0). Zenodo. https://doi.org/10.5281/zenodo.5907931

WageIndicator Survey, an assessment of the quality of the estimated family and housing benefits as well as a reflection on the scalability of the approach and recommendations for future policy research. The collected survey information will be archived at the data repository of the Institute of Labour Economics (IZA) called the International Data Service Centre (IDSC) and be made available to researchers for scientific purposes in March or April 2022.

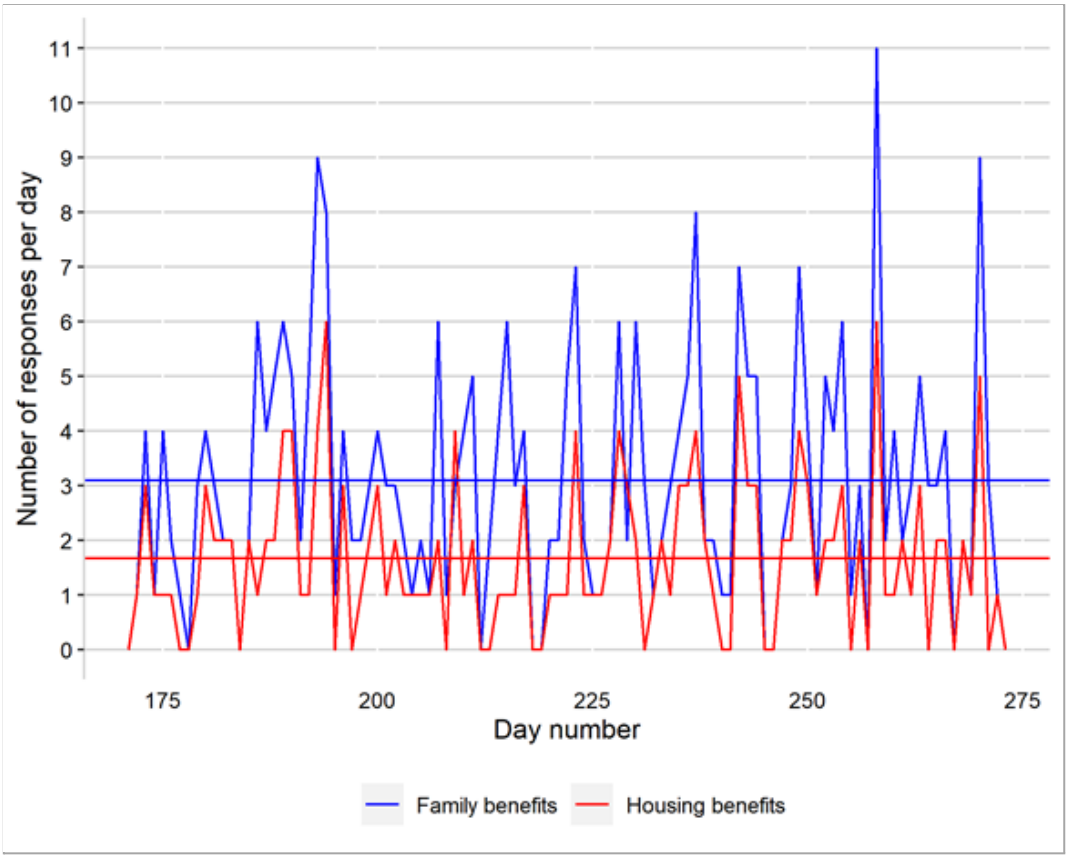

Figure 12. *Daily number of responses to Social Policy Module over the period from Sunday 20 June 2021 (day 171) until Thursday 30 September (day 273).*

2.4.1.6. Task 4.6. Semantic annotation of Heritage Science Data

This Task is led by CNRS, partners in this Task are CNR and FORTH. Partners focused on the integration of new functionalities defined in *Deliverable 4.16 'Specification of the new features of the Aioli platform'* for the implementation of the new version of Aioli. During 2021 the mapping continued on the Aioli computation processes (TACO, Mayonnaise, Ketchoupi) by using CIDOC-CRM high level classes and specific classes such as CRMdig. About interoperability issues, the possibility of importing a project processed outside the platform is possible. This modality implies the creation of an archive following a precise structure based on the MicMac file structure. Projects processed outside the platform by MicMac can therefore be easily integrated into the platform. As MicMac is not necessarily the most accessible and therefore the most used photogrammetry software, the possibility of importing projects processed by other software has been studied.

A script for converting Metashape data to an archive respecting the MicMac data structure that can be imported into Aioli was therefore implemented. This script simply runs within Metashape and directly creates the archive to be imported into the platform. The use of a common and standardised vocabulary makes it possible to foresee facilitated research methods within one or more projects. The new version of Opentheso (Opentheso2) has been deployed within a Docker container. This new version integrates advanced functionalities and in particular the provision of a complete REST WebService. This has enabled the development of an autocomplete term search module that integrates with Aioli as an API. To make projects findable and accessible, the sharing and dissemination of an annotated project within a community is a crucial issue for the Aioli project. Collaboration modalities already allow several actors to work on the same project through the management of rights on a project. Spritz, a specific viewer, is therefore being developed to allow the sharing and dissemination of Aioli projects on a wider scale. This viewer aims to embed Aioli scenes within a web page.

As a result, the ***Deliverable 4.17 New version of the Aioli platform***[79] was submitted to the EC in December 2021. A new beta testing campaign was being prepared with the aim to have it opened in early 2022, as soon as the latest features have been integrated.

2.4.1.7. Task 4.7. Modelling the SSHOC data life cycle

This Task is led by FORTH, partners in this task are CNR and CNRS. The final output of the task is the definition of **SSHOCro**, a common meta-level schema modelling the data life cycle in data-driven research in the SSH that can be applied as a standard when devising and implementing a metadata capture scheme for tracking the data lifecycle in individual projects, or as a target schema whereby to integrate cross-domain tools and services into a single knowledge base (e.g., resource discovery, browsing, and data mining). The latter function is achieved through the transformation of existing data from different projects/institutions/disciplines to SSHOCro.

Work on D4.20 SSHOCro (final version) began in January 2021. The work has focused on (i) disseminating SSHOCro and (ii) incorporating feedback in the final release of the ontology and harmonising it with a larger set of data. Further **testing and harmonisation** of SSHOCro involved **extending the use cases** to the SSHOC MP data model, the data model describing conversion solutions found in the SSHOC Conversion Hub, the Aïoli workflow. Ongoing work involves harmonisation of the SSHOCro with analytical techniques documented in workflows from the Heritage Science and Archaeology, with emphasis on data from ancient DNA analysis, Spectrometry (Raman and LIBS) and Natural Language Processing.

[79] Adeline Manuel, Livio De Luca, Isabelle Cao, & Theo Zanetti. (2021). D4.17 New version of the Aïoli platform (1.0). Zenodo. https://doi.org/10.5281/zenodo.5913502

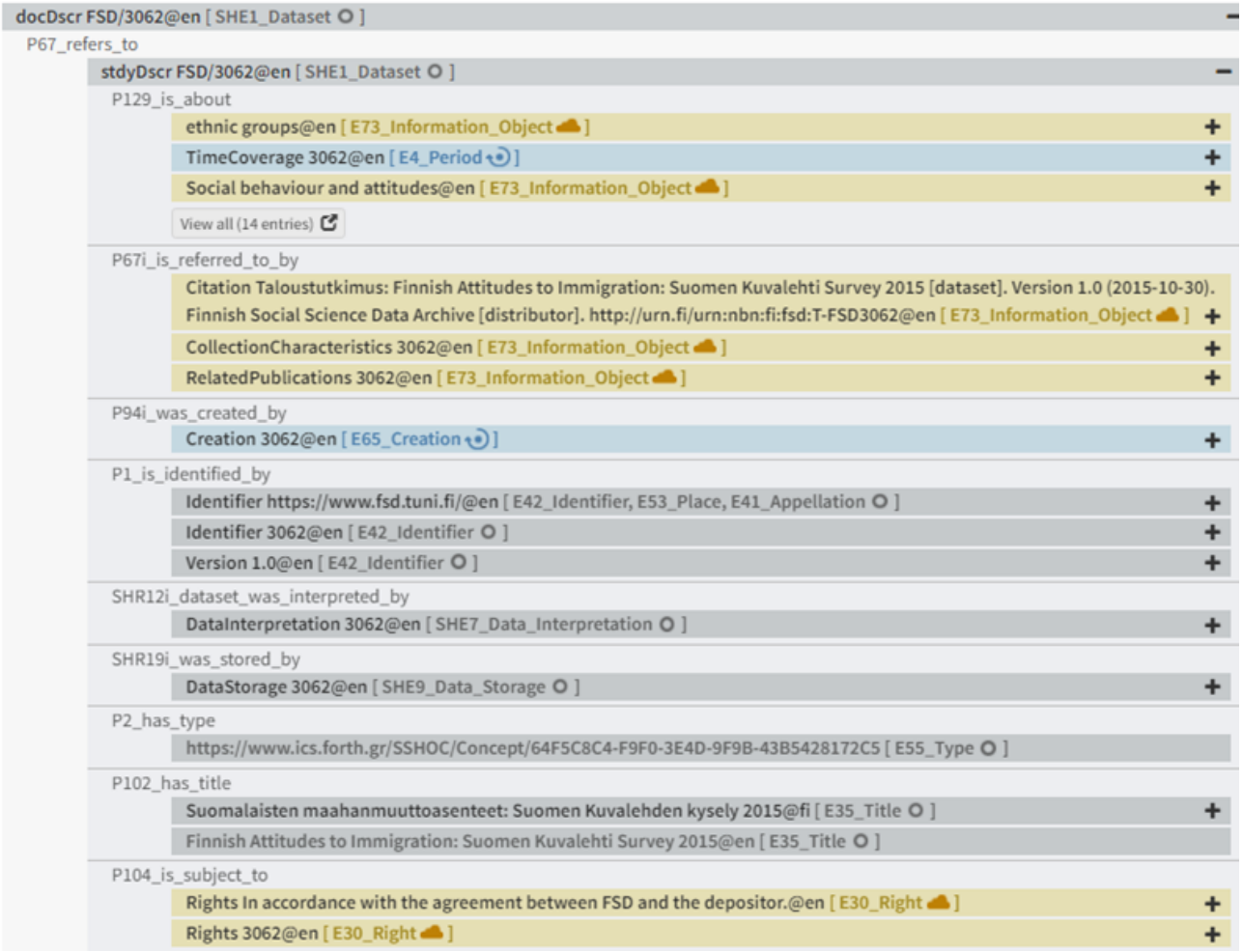

Figure 13. *Visualisation of the data transformation from DDI to SSHOC-ro using 3m*

2.4.2. Note on deviations from the plan and risk monitoring

In Task 4.1, in order to further test the WPSS, **two additional tests**, not planned in the GA, were carried out. The tests involved 12 European countries (Austria, Belgium, Czechia, Finland, France, Hungary, Iceland, Italy, Portugal, Slovenia, Sweden and the UK), all participating in the CRONOS 2 web panel, funded by the European Commission as part of the Horizon 2020 project, ESS-SUSTAIN-2 (grant agreement number 871063). The first test was launched at the end of April 2021 and the second one in mid-August 2021. The tests **contributed to the improvement of the tool both** in terms of functionalities (a module letting WPSS to issue text message survey invitations was added) and in terms of reliability of the tool.

The parallel corpora produced in Task 4.2 **included more data than originally planned**. The original plan included data of the ESS, EVS and SHARE survey projects in English and their translations in three languages. The latest version 3 of the corpus includes English and translations in **eight languages**. This was a positive change. The additional data was made possible thanks to the collaboration of ESS/UPF, EVS/Tilburg university and the WageIndicator (WWI).

In Task 4.5 the intention was to demonstrate the potential of the API by integrating a module in the Generations and Gender Survey (GGS) in the first half of 2021. However, due to the COVID-19 pandemic, data collection of GGS was postponed, which made it unsuitable to collect data for this task. Instead, the Social Policy module was collected via the WageIndicator Survey. Because the WageIndicator Survey is an online survey, data collection was not interrupted by the COVID-19 pandemic. In total, in WP4, Three deliverables were delayed in order to give more time for additional peer-review.

Information on risk monitoring in WP4 for Year 3 is presented in the table below:

Table 8. *Risk monitoring in WP4 - Year 3*

Risks monitoring WP4				
Risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
6	Too few available software developers (Medium)	**Yes**	**Yes**	Adapting development plans and time schedule (T4.1)
U2	Problems in hiring staff by some partners	**Yes**	**Yes**	Timeline adapted for T4.2 and T4.3
7	Technical difficulties of complex software development	**Yes**	**Yes**	
11	Understaffing of research infrastructures	**Yes**	**Yes**	Mitigation measures were applied by re-allocating the work in Task 4.3, the team managed to produce the final outputs (scientific articles) as deliverables are not enough to promote the visibility of the outcomes. Given the peer-review process of such articles, they may not be published during the SSHOC but at some point of 2022.

2.5. WP5 - Innovations in Data Access

2.5.1. WP5 progress

2.5.1.1. Task 5.1 Legal, Ethical and Technological Issues of Access to Biomedical Data

This task is led by SHARE ERIC (MPISOC), and the partner contributing was CentERdata. Dried Blood Spot Samples (DBSS) have been collected in SHARE Wave 6 in 2015 but required special ethics considerations and validations before making data based on DBSS available. The preparation of the release of DBSS data was completed with ***D5.1 Guidelines for ethics considerations in making biomedical survey data FAIR (Access to biomedical data)***[80] .

Analyses of the DBS in specialised laboratories were performed based on MS22 and were finalised in August 2021. Data cleaning and validation for delayed analyses are ongoing (8000 samples analysed in 2018 vs. 16.000 samples in 2020/21). The collection of the accelerometer data started in October 2019 in ten SHARE countries and was suspended at the end of March 2020 due to the Covid-19 outbreak. At the time of the interruption, 855 complete accelerometer datasets had been collected. In June 2021 aggregated accelerometer data – including meta data and documentation – was released as part of the release 1.0.0 of SHARE wave 8 (DOI: 10.6103/SHARE.w8.100). A more detailed dataset – so-called epoch data – was generated to be included in future releases of SHARE. ***D5.3 Data access protocol for accelerometer data, linked to survey data, conforming FAIR principles (Access to biomedical data)***[81] was submitted to the EC and a report published in Zenodo. Generated module containing aggregated data from the accelerometer study was released[82].

The work was also done on the user portal, CentERdata prepared the portal for the biomedical survey data, developed functionality to attach DOI's to datasets in this system, and provided maintenance on the data dissemination platform and server.

2.5.1.2. Task 5.2 Hosting and Sharing Data Repositories

Team members of this task are from KNAW/DANS (task leader) and CESSDA/AUSSDA, then PSNC and UGOE, UIT (DARIAH Third Parties), a CLARIN centre; and CNR/ISTI (as part of E-RIHS). Main part of the task was development of additional functionalities for the **open source Dataverse software** and when applicable, transfers of the developments to Harvard for incorporation within the master branch of Dataverse. ***Milestone 26 Testing, evaluation and documentation of additional functionality of data***

[80] Axel Börsch-Supan, Carolina Brändle, Johanna Bristle, Fabio Franzese, Daniel Schmidutz, & Luzia Weiss. (2021). D5.1 Guidelines for ethics considerations in making biomedical survey data FAIR (Access to biomedical data) (v1.0). Zenodo. https://doi.org/10.5281/zenodo.4785198

[81] Fabio Franzese. (2021). D5.3 Data access protocol for accelerometer data, linked to survey data, conforming FAIR principles (Access to biomedical data). https://doi.org/10.5281/zenodo.5608517

[82] Börsch-Supan, A. (2021). Survey of Health, Ageing and Retirement in Europe (SHARE) Wave 8. Release version: 1.0.0. SHARE-ERIC. Data set. DOI: 10.6103/SHARE.w8.100

repository service was achieved[83]. Within the task every partner focussed on different aspects of the software. Results of all work are **published on GitHub**.

DANS developed a **plugin mechanism** for controlled vocabularies support for the CESSDA Metadata Schema. Furthermore, they are on the Deployment of Dataverse on the CESSDA Cloud Infrastructure. To test this installation, the tests and test data developed by AUSSDA were used. DANS also developed **an 'Archive in a box' solution**, for automatic installation. This was tested by the UGOE developer, who also focussed on improving the DevOp aspects of Dataverse. PSNC worked on the development of previewers and integration of Apache Superset, a data visualisation tool. Furthermore, they tested Dataverse deployment on PSNC's OpenShift infrastructure to test the automated Dataverse deployment routines developed by DANS. The team member of ISTI worked on the integrating of Dataverse with the CLARIN Language Resource Switchboard and on a plug-in to enable users to save Taverna workflows in a dataverse using the Taverna Workbench GUI. The UIT partner team members worked on the implementation of a CLARIN-compliant Metadata Schema in Dataverse.

Furthermore, three workshops[84] were organised by DANS and AUSSDA about the translation of the GUI, making use of weblate, and a workflow developed by DANS.

2.5.1.3. Task 5.3 Legal Issues of Innovative Data Access

This task is led by NSD, and the partners contributing in 2021 were DARIAH and CNR. In the second period the task team worked on finalising all the Task 5.3 main activities with a goal to **set a legal base related to data sharing**. Work on ***D5.7 Report on the impact of the GDPR and its implications for EOSC (Legal issues of innovative data access)***[85] was finalised in July 2021. It described results of national GDPR implementation comparison in several selected countries and provides insight to different interpretations of the law in some countries, as well as different national supplementary provisions.

Work related to a formal common framework to demonstrate compliance and facilitate harmonisation of data-sharing rules and practises was also completed, resulting in publication of ***D5.8 Draft SSH GDPR Code of Conduct (Legal issues of innovative data access)***[86]. Document explains the basic terminology, lists conditions that must be fulfilled to be able to create and get a SSH GDPR Code of Conduct draft admissible, and provides some suggestions on what are the aspects which the SSH GDPR Code of

[83] Marion Wittenberg, Vyacheslav Tykhonov, Eko Indarto, Wilko Steinhoff, Stefan Kasberger, Tomasz Parkoła, Peter Kiraly, Cesare Concordia, & Philipp Conzett. (2022). MS26 Testing, evaluation and documentation of additional functionality of data repository service. https://doi.org/10.5281/zenodo.6282667

[84] https://sshopencloud.eu/news/sshoc-workshop-notes-dataverse-translation-follow-event [Jan 2022]

[85] Maurizio Sanesi, Lea Sztuk Haahr, Mathilde Steinsvåg Hansen, Ina Nepstad, Belinda Gloppen Helle, Marianne Høgetveit Myhren, Marita Ådnanes Helleland, Tore Andre Kjetland, Ingvild Eide Graff, & Vigdis Kvalheim. (2021). D5.7 Report on the impact of the GDPR and its implications for EOSC (1.0). Zenodo. https://doi.org/10.5281/zenodo.4723645

[86] Ina Nepstad, Inga Brautaset, Mathilde Steinsvåg Hansen, Tore A. K. Fjeldsbø, Siri Tenden, Marita Ådnanes Helleland, Christopher Ongre Autzen, Ingvild Eide Graff, Marianne Høgetveit Myhren, & Vigdis Namtvedt Kvalheim. (2021). 5.8 Draft SSH GDPR Code of Conduct (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5181223

Conduct draft may regulate. In order to facilitate creation of the SSH Code of Conduct, Task 5.3 partners hosted a virtual stakeholder's workshop[87] which engaged a number of professionals and experts related to the area. The Workshop provided a space for focused discussion which pointed out the necessity of mutual alignment and complexity of the Code of Conduct developing process. The crossing field and implications of ethics and privacy turned out to be especially relevant when processing personal data in research. Also, the need for mapping possible appropriate safeguards when processing personal data and addressing how to better facilitate reuse and sharing of personal data in the research environment was highlighted. SSH dimension was complemented by the BBMRI ERIC's presentation which focused on a Code of Conduct for health research.

Figure 14. *SSH Conde of Conduct workshop announcement on SSHOC website*

The main conclusions as well as description of course of work and methodology is provided within the ***D5.19 Report on stakeholder workshop about a SSH Code of Conduct***[88].

[87] Information on the workshop, available at: https://www.sshopencloud.eu/news/workshop-notes-code-conduct-social-sciences-and-humanities [Jan 2022]

[88] Mathilde Steinsvåg Hansen, Ina Nepstad, Marianne Høgetveit Myhren, Ingvild Eide Graff, Inga Brautaset, Irena Vipavc Brvar, Ana Inkret, Maurizio Sanesi, Emiliano Degl'Innocenti, Veronika Keck, & Iris Buunk. (2021). D5.19 Report on Stakeholder workshop about SSH Code of Conduct (1.0). Zenodo. https://doi.org/10.5281/zenodo.5113554

2.5.1.4. Task 5.4 Remote Access to Sensitive Data

This task is led by CESSDA/GESIS, and the partners contributing were CESSDA/UKDS, CESSDA/FORS, CLARIN/RUN, and CLARIN ERIC. The team members continued the efforts and progress towards **enhancing and extending the infrastructure for secure remote access to research data**. The work on a Conceptual Framework and Template Contract for international data use agreements on remote access to confidential data between institutions located in different countries was finalised (***D5.9 Framework for Data Use Agreements (Remote access to sensitive data***[89]), and provides an adaptable legal framework to the institutions planning to facilitate access to their confidential/sensitive microdata via **Safe Room Remote Desktop Access**. Progress was also made towards establishing the **Secure Data Facility Professionals Network** by setting the core partnership and promoting the network within the community. To achieve the Task goals and facilitate the work of the secure data facility professionals, canonical training materials (published in ***D5.20 Training materials of workshop for secure data facility professionals***[90]) were produced and provided a framework of core content on which to build a safe researcher type training course that can be easily tailored to the specific needs of each user. A new set of canonical training slides aimed at helping secure data access facilities to develop training courses in the safe use of secure access data was presented and discussed on a Workshop[91] organised by the team members.

Finally, an essential legal document has also been completed, the **GESIS Licence Compliance Policy**[92]. FORS contributed a Case Study by using the Task outputs, such as the Framework for Data Use Agreements and the (***MS28) Assessment of existing platforms***[93] report was published on Zenodo in August, as resources for their internal project to implement a Secure Data Service. This Case Study has been completed and is being reviewed. It will be included as an Annex in a future deliverable. CLARIN started investigating if the ERAN Pilot might be relevant to inform their decision regarding the set-up of a new Sensitive Data Centre which could be an excellent development demonstrating how the subtask outputs can be used, and scaled, in a decentralised manner.

2.5.1.5. Task 5.5 ESS as a Service: A Pilot making Cross-national Survey Data FAIR

Task 5.5 is led and realised by ESS/NSD. IMost of the development work of the task was carried out in late 2020 and 2021. Data and metadata repositories have been built. The new ESS data and metadata service consists of a network of data and metadata repositories connected by a series of APIs for

[89] Matthew Woollard, Beate Lichtwardt, Elizabeth Lea Bishop, & Dana Müller. (2021). D5.9 Framework and contract for international data use agreements on remote access to confidential data (v1.0). Zenodo. https://doi.org/10.5281/zenodo.4534286

[90] Training materials available at: https://zenodo.org/record/5541587#.YgPl4e7MIUF [Jan 2022]

[91] https://www.sshopencloud.eu/news/sshoc-workshop-notes-providing-canonical-training-materials-secure-data-facility-professionals [Jan 2022]

[92] https://www.gesis.org/en/sdc [Jan 2022]

[93] Elizabeth Bishop. (2021). MS28 Assessment of Existing Platforms (1.0). Zenodo. https://doi.org/10.5281/zenodo.5914390

management and dissemination of the ESS data and metadata. The system has Azure blob storage for publication and is based on the Colectica platform for metadata management. The system interconnects existing and new infrastructures. The NSD-developed APIs are effective tools for storing and dissemination of ESS data and metadata. Furthermore, the APIs allow data curators to process, document and publish data and metadata in a secure and stable environment. The APIs have been designed to enable replacement of single elements without breaking the system. Increased use of controlled vocabularies and easier log in (authentication) has given simpler retrieval of data. Access for users to the data from the new data repository is provided[94]. ESS ERIC has registered as a service provider in the EOSC portal, and the new data resource will be onboarded in the near future. The first of two deliverable reports, D5.13 Recommendations for a FAIR compliant integrated data and metadata repository (ESS as a service), has been peer reviewed.

All five milestones of the task have thus been achieved in 2021:

- ***MS 31 Setting up and populating a new ESS repository***
- ***MS 32 Developing APIs***
- ***MS 33 Integrate data publishing with Data Cite/DOI and bespoke advanced landing pages with rich functionalities***
- ***MS35 Authentication and API management solutions aligning with developments in the EOSC,***
- ***MS34 ESS interoperable services to external consumers.***

2.5.1.6. Task 5.6 Issues in Providing Open Data in Heritage Science and Archaeology

The first part of the Task 5.6 is led and realised by the UK's Archaeology Data Service (UoY-ADS) and addresses the heritage science and archaeology domain. UoY-ADS began work on *D5.15* ***Report on opening access to research data in the Archaeology domain,*** which is an examination of the issues and challenges faced in providing FAIR access to archaeological and archaeological science data, and review of the solutions adopted across Europe. UoY-ADS undertook a full audit of FAIR compliance for the archaeological data at UoY-ADS as a baseline for further work[95]. Taking the lessons learned from the audit, UoY-ADS began a collaboration with the FAIRsFAIR project to explore testing the data with the F-UJI tool. This would allow UoY-ADS to understand the differences found between the qualitative audit undertaken by UoY-ADS staff and a machine actionable, quantitative audit with the F-UJI tool. If any differences are identified this will become important information about the efficacy of both approaches. The results were very useful and will be combined with research to put the work into a wider European context, to be reported in the Deliverable, due in 2022.

The second part of this Task is led by the NG, with CNR participating. Work began with the setup of an open GitHub repository[96] to present results of the mapping work[97]. The two **complex heritage datasets**

[94] Access available at: https://ess-search.nsd.no/en/all/query/ [Jan 2022]

[95] https://archaeologydataservice.ac.uk/about/adsFAIR.xhtml [Jan 2022]

[96] https://github.com/jpadfield/sshoc-ng [Jan 2022]

[97] https://jpadfield.github.io/sshoc-ng/ based on https://jpadfield.github.io/simple-site/ [Jan 2022]

have been examined and mapped to the CIDOC CRM using python functions based on rdflib[98] details, and code can also be found via the GitHub site. A WP focused workshop on the CIDOC Semantics and tools used in this task helped confirm the approaches used in the work. Work on a direct SPARQL access point for the final datasets, has reached its final phase, based on Blazegraph[99], hosting the data as well and a series of documented worked examples demonstrating how the data can be queried and re-used[100]. An initial example of a more open, "citable" presentation of this type of data following the 2nd data-structure[101] has been drafted to provide an example of how the data can be opened up based on the IIIF standard[102] and a Simple IIIF Discovery System, that has been developed with support from this task. This task has also supported the development of a web based Dynamic modeller[103], which has been used extensively within task discussions and will also be deployed to present the final results. This system has been specifically designed with collaboration and re-use in mind to ensure that the work of mapping a data set can be as FAIR as the final data set itself. The tool has also been exploited within other projects, such as the IPERION-HS project (EU H2020).

In summary, several specific tools have been developed:

- Dynamic Modeller - SubGraphs (v1.1.1)[104],
- Simple Site - with Dynamic Build Option (v1.7)[105],
- Simple IIIF Discovery (v2.0)[106].

2.5.1.7. Task 5.7 Open Linked Data. Archaeological Case Study

Task 5.7 is led by DAI (Berlin) and conducted with the partners CNR-ITABC (Rome) and CNR-IBAM (Lecce). The Deliverable ***D5.17 Implementation plan for the archeological case study***, had laid out a change in direction of the task, in particular a stronger reliance on the tools already in development in the partner groups. In cooperation with Task 5.6, the **application of the FAIR principles** in the case study were discussed. A **data repository was set up**, albeit still private due to copyright reasons. The repository includes the complete survey data and a comprehensive bibliography for the case study. The data conversion from closed-source system Cinema 4D to Blender was completed, which was a necessary step for using the Extended Matrix system for the 3D reconstruction. The implemented work was presented at an online workshop ***"SSHOC Archaeological Case Study Workshop: The Roman theatre in***

[98] https://rdflib.readthedocs.io [Jan 2022]
[99] https://blazegraph.com [Jan 2022]
[100] https://rdf.ng-london.org.uk/sshoc [Jan 2022]
[101] https://research.ng-london.org.uk/ss-smk/ [Jan 2022]
[102] https://iiif.io [Jan 2022]
[103] https://research.ng-london.org.uk/modelling/ [Jan 2022]
[104] Joseph Padfield. (2021). *Dynamic Modeller - SubGraphs* (v1.1.1). Zenodo. https://doi.org/10.5281/zenodo.5137618 https://research.ng-london.org.uk/modelling/
[105] Joseph Padfield. (2021). *Simple Site - with Dynamic Build Option* (v1.7). Zenodo. https://doi.org/10.5281/zenodo.5137663 https://jpadfield.github.io/simple-site/
[106] Joseph Padfield. (2021). *Simple IIIF Discovery* (v2.0). Zenodo. https://doi.org/10.5281/zenodo.5576545 https://research.ng-london.org.uk/ss-iiif/

Catania from survey to interactive 4D visualisation" in May 2021[107], with an example workflow based on a smaller version of the real case study rather than made-up data and including the connection of the data and systems of the three partner groups.

Following the workshop, the work was embedded in a Linked Open Data (LOD) scenario addressing the related comments from the General Project Review Consolidated Report. The LOD scenario includes people, places, periods and events that can be associated with the Extended Matrix (i.e., the extended version of the Harris Matrix based on the survey data and the 3D reconstruction of the theatre). Use cases for examining, comparing, and searching 3D models were developed. MS36 includes a technical recap of the workshop results, the concept of the LOD scenario including 3D use cases and a CIDOC CRM mapping of the LOD scenario including norm data sources. The Extended Matrix was independently mapped to CIDOC CRM, with the unification of the two mappings detailed in a report on ***Milestone 36 Case study Roman theatre in Catania: Transfer of the 3D data to the open source Extended Matrix system and concept of a LOD scenario***. Work on the online version EMviq of the Extended Matrix has progressed. EMviq includes Virtual Reality features. The partners in Rome and Lecce have new official representatives.

2.5.2. Note on deviations from the plan and risk monitoring

There were no deviations in WP5.

Information on risk monitoring in WP5 for Year 3 is presented in the table below:

Table 9. *Risk monitoring in WP5 - Year 3*

Risks monitoring WP5				
Risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
6	Too few available software developers	Yes	No	Adapting development plans and time schedule, users involved in testing (T5.4)
7	Technical difficulties of complex software development	Yes	No	Adapting development and timeplans (T5.5)
10	Low acceptance or understanding of the new data access tools, guidelines and services by users and public	Yes	No	Several webinars and workshops have been organised with WP6 presenting developments in T5.2, T5.3, T5.4, T5.6 and T5.7
11	Understaffing of research infrastructures	Yes	Yes	Re-allocation of work was made (change of WP5 lead and T5.1 lead)

[107] Information available at: https://www.sshopencloud.eu/events/sshoc-archaeological-case-study-workshop-roman-theatre-catania-survey-interactive-4d [Jan 2022]

2.6. WP6 - Fostering Communities, Empowering Users, & Building Expertise

2.6.1. WP6 progress

2.6.1.1. Task 6.1 Mapping the landscape and developing strategies to foster communities & build expertise

Task 6.1 is led by LIBER, and partners participating in it were TRUST-IT (and its LTPs), DARIAH/OEAW, CESSDA/UL-ADP, CLARIN/UL-FF. The task formally ended in M12. However, WP6 continued to monitor changes and developments in the landscape, as well as regularly check the progress on the KPIs identified in the strategies through the monitoring of activities of the other WP6 tasks.

2.6.1.2. Task 6.2 Fostering Communities: Engaging New & Existing Users

The lead of Task 6.2 is CESSDA/ADP, while the partners participating were LIBER, TRUST-IT, CESSDA/GESIS, CLARIN/UL-FF. The main body of work was the organisation of **engagement and awareness raising events** where the partners collaborated closely with the developers of SSHOC tools and services to showcase the achievements and progress of the project, promote the uptake, and collect feedback from the community that could be applied to future development. The organisation of the events included **promotion, technical support, and documenting**. A special effort was also made to foster dialog and collaboration across disciplines, scientific communities, and stakeholder groups. Many events were cross-disciplinary and cross-stakeholder, while other addressed specific disciplines and communities such as heritage science, linguistics, or citizen scientists. In the final months of 2021, the task and project partners also began the organisation of the SSHOC Final conference in collaboration with WP2. Another focus area were the **factsheets,** designed to raise awareness of the added value of the SSHOC project and its tools and services with their end-users and in the SSH ecosystem. Partners collaborated on a general template that structured the content of the factsheets, then coordinated the preparation of content with the partners responsible for the SSHOC key exploitable results.

Many **awareness raising workshops**, **webinars**, and **stakeholder events** took place in 2021 and succeeded in introducing SSHOC developments to relevant audiences, offering the SSH community an opportunity to engage in the development, and addressing all SSHOC stakeholder groups. **Over 2000 participants** took part. The events informed and attracted future users, provided feedback and insight into community needs for the developers of tools and services, but they also fostered dialog and cooperation in the wider EOSC landscape, increasing the visibility of the project beyond SSH communities.

D6.3 Final report on the outcome of the awareness raising workshops[108] was prepared and published in December 2021. It covers workshops on vocabulary platforms, linking social survey and linguistic

[108] Ana Inkret, Rosie Allison, & Irena Vipavc Brvar. (2021). D6.3 Final report on the outcome of the awareness raising workshops. Zenodo. https://doi.org/10.5281/zenodo.5913518

infrastructures, developments for archaeological data, translation of Dataverse and training materials for secure data facility professionals. ***D6.5 Report on Stakeholder Series events***[109] was prepared and published in October 2021 and covers, among other, the Realising EOSC conference, SSH Code of Conduct Workshop, The ESFRI Clusters at RDA House of Commons debate, and the Onboarding Citizen Science workshop. The task also organised several webinars on the topics of Dataverse, SSH Open marketplace, vocabulary platforms, trustworthy repositories, oral archives, and the Multilingual Corpus of Survey Questionnaires that will be covered in an upcoming deliverable. Team members both participated in and co-organised events with the purpose of reaching and empowering users[110] (See Annexes to this Report at the end).

2.6.1.3. Task 6.3 Empowering Users: Training Materials and Online Learning Paths

The task is led by DARIAH/OEAW, partnering DARIAH ERIC, CLARIN ERIC, CLARIN/UL-FF CESSDA/NSD, CESSDA/UKDS, UCL, and CNR. In line with the description of work, the team focused on the following three aspects: a) inventorising the existing resources to foster their findability; b) means to create training material in a way maximising reuse; c) ensuring the long-term availability of the information gathered. This phase was marked by tight collaboration with Task 6.4 *(Building Expertise: the SSHOC Training Network)*, which was able to adopt the application for collecting training material primarily suitable for trainers. In line with this development the application is called ***Training Discovery Toolkit (TDT)***[111].

The manual inventorisation pursued two perspectives: one giving a broad overview of the landscape, concentrating on potential sources for training materials relevant for the SSH community underpinned by a sample set of training materials featured in these sources; the other stemming from the cooperation with Task 6.4 accordingly more focused on training materials specifically usable by trainers in their educational measures. The team adopted a broad understanding of the concept "training materials'' as resources usable for knowledge sharing, ranging from traditional e-learning modules, through presentations and videos, down to resources, which on its own are not considered as training materials, but could be beneficially integrated into these, especially interactive resources like data notebooks or games. Another dimension considered was the intended audiences, especially aiming to distinguish between resources that can be used directly and independently by learners, as opposed to "training materials" **(re-)usable by trainers** in their teaching procedures. While learning resources were not generally excluded, the focus was on "training materials", in line with the goals of T6.4. Another line

[109] Irena Vipavc Brvar, & Ana Inkret. (2021). D6.5 Report on Stakeholder Series events. Zenodo. https://doi.org/10.5281/zenodo.5638651

[110] e.g. CESSDA/UKDS participated in the IMISCOE Annual Conference on "Crossing borders, connecting cultures", in July 2020, involved on behalf of WP6 & WP9 as part of a Roundtable and Interactive Presentation on New Tools and Platforms for Knowledge Exchange, Research Discovery and Open Data Solutions for Migration Studies. UKDS presented findings of the *Migration Data Sharing* event, i.e. ethical complexities and guidelines for researchers.

[111] Accessible at: training-toolkit.sshopencloud.eu/ [February 2022]

of activity in the second project phase was the development of a **novel technical solution for creating, editing and publishing training materials in an open, collaborative and reusable way**.

Finally, the question of sustainability and reusability of the training materials catalogued and created within SSHOC was a focus of the task in this period. To ensure that the resources stay available and the catalogue is kept up to date, continuous curation is required, both by reviewing the validity of the existing information and collecting new. To this end, T6.3 team worked together with WP7 developing the SSH Open Marketplace on **formulating a common curation and maintenance strategy** for the two services, given their overlapping scopes.

Training Discovery Toolkit (TDT)[112] has been further developed to serve as means for collective curation of the information about existing training material, as well as **a discovery platform for the community**. A novel technical solution for creating, editing and publishing training materials in an open, collaborative and reusable way was developed. Both have been described in further details and in addition to an overview over the information collected in this catalogue in ***D6.8 Report on training materials***[113], available on Zenodo.

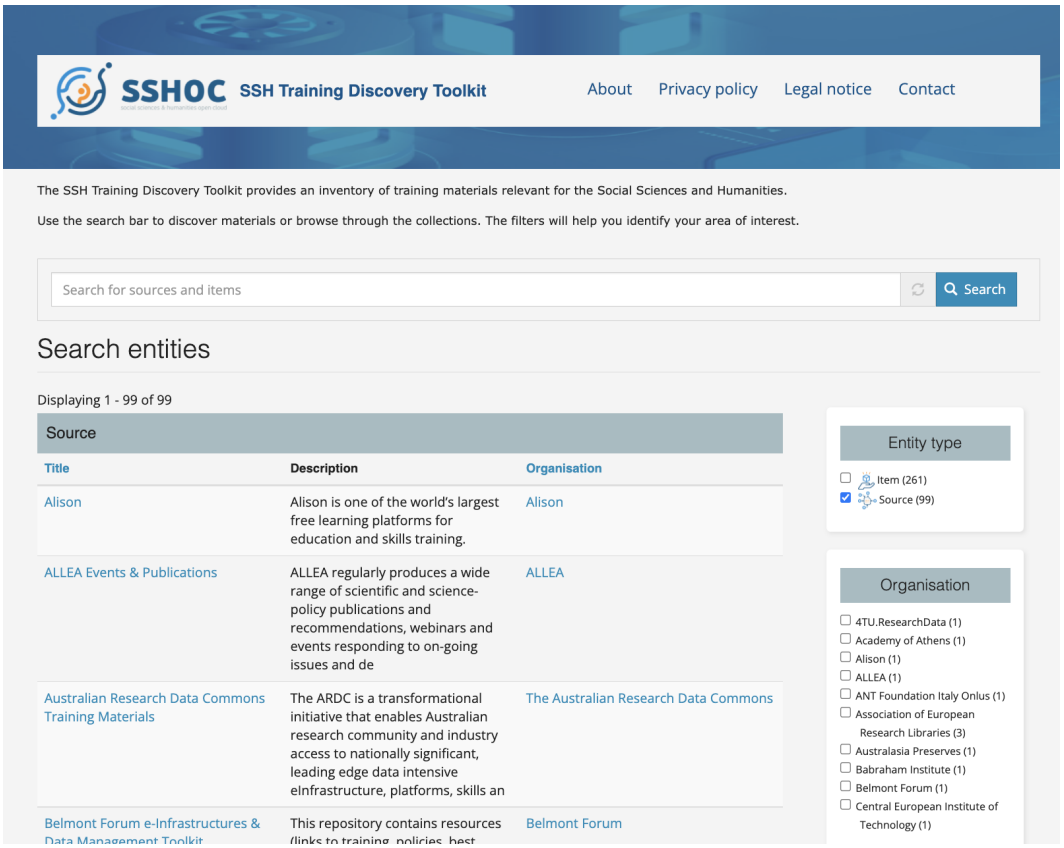

Figure 15. *SSH Training Discovery Toolkit homepage*

[112] Accessible at: training-toolkit.sshopencloud.eu/ [February 2022]

[113] Matej Ďurčo, Klaus Illmayer, & Laure Barbot. (2021). D6.8 Report on training materials (1.0). Zenodo. https://doi.org/10.5281/zenodo.5913545

2.6.1.4. Task 6.4 Building Expertise: the SSHOC Training Network

Task 6.4 is led by KNAW/DANS and partners participating were LIBER, CESSDA/GESIS, CESSDA/UKDS, UCL and CLARIN/UL-FF. The three main areas of activities performed in 2021 were:

Fostering, expanding and empowering the SSH Training Community[114]: This work was continued, although synergies, collaboration and exchange beyond the SSH have been established. Furthermore, the reports illustrate overall results and emphasises on the sustainability of the SSH Training Community after the end of the project. As of December 2021, the SSH Training Community includes **172 members** covering all SSH disciplines. The main goal is the facilitation of networking and exchange of knowledge between existing and new trainers in the SSH, while also encouraging and fostering collaboration with wider communities (e.g., Community of Practice for training coordinators[115]). The focus is put on the tools and services for training, aiming at creating and supporting Open Science and the FAIR principles. The SSH Training Community is supported by monthly calls on different topics and formats and the **SSH *Trainers Directory***, a registry of qualified and experienced trainers in the SSH that was launched in December 2021.

Curating and updating the SSHOC Training Discovery Toolkit: By the end of 2021, the SSHOC Training Discovery Toolkit was updated to contain more than **200 training and learning resources** from more than **80 different sources** and in a wide range of topics. Several rounds of curation of the materials and metadata schema were arranged, including input provided during the SSH Training Community calls and Train-the-Trainer Bootcamps. Working on revising the metadata has started, to allow alignment with the marketplace and match with the recommendations for minimal metadata for learning resources established by the RDA Education and Training on handling of research data IG[116].

Train-the-Trainer Bootcamps: Bootcamps were organised, targeting different stakeholder groups represented in the SSH training community: research libraries and archives, universities, and research performing institutions, while covering a wide range of topics and tools.

The following detailed reports were published on Zenodo:

- Deliverable ***D6.12 Report on the Train-the-Trainer Bootcamps***[117] describes the results and evaluation of the Bootcamps.

[114] SSH Training Community, https://sshopencloud.eu/ssh-training-community [Feb 2022]
[115] Community of Practice for training coordinators, https://www.openaire.eu/cop-training [Feb 2022]
[116] Website of the ETHRD-IG Focus group https://www.rd-alliance.org/group/education-and-training-handling-research-data-ig/wiki/ethrd-ig-focus-group-materials [Feb 2022]
[117] Darja Fišer, Erzsébet Tóth-Czifra, Judith Wehmeyer, Veronika Keck, Ellen Leenarts, Ricarda Braukmann, Tatsiana Yankelevich, & Cristina Magder. (2021). D6.12 Report on the SSHOC train-the-trainer bootcamps. https://doi.org/10.5281/zenodo.5734301

- Deliverable ***D6.13 Report on the SSH Training Community (final)***[118] is a follow-up on the deliverable *D6.10 Report on the SSHOC Training Community*[119] and it describes the overall results and emphasises on the sustainability of the SSH Training Community after the end of the project.

2.6.1.5. Task 6.5 Coordinating targeted training in the Social Sciences and Humanities

Task 6.5 is led by CLARIN/UL-FF, while partners participating were LIBER, CESSDA/ADP, CLARIN ERIC, DARIAH ERIC, CNRS(Huma-Num), and UCL. The aim of the task is to coordinate targeted training activities in the form of workshop-webinar pairs which have to cover six predefined topics. The training activities of this task most visibly contribute to the SSHOC objective of maximising reuse through Open Science and FAIR principles by ensuring a human-centric approach and support to the community in the process of adoption of these principles, showcasing cross-disciplinary cooperation as well as producing content that is in line with the Open Science and FAIR principles. The workload was distributed across three stages:

The specific topics, target audience, speakers, venues and scheduling were determined in close collaboration with other members of this task as well as aligned with the other relevant work packages in accordance with their topic expertise. According to the event reports, considering just audience size (on average **60 individuals per event** representing various stakeholder groups and nationalities) and overall positive feedback by the participants, it can be concluded that these three general objectives have been successfully met. In addition, the team also tried to accommodate another two goals, namely supplying the community with continuous training support throughout the project and using and showcasing SSHOC resources and results as much as possible. The team organised **six additional events** to support the dissemination of SSHOC results and to address specific needs expressed by SSH research communities.

The second stage included **pre-event activities and delivering the event**. At this stage, most work was performed by Trust-IT (collaboration with WP2), LIBER and CLARIN/UL-FF. LIBER members were providing technical and financial support for the events, while Trust-IT ensured regular promotion up to the event.

The third stage represented **post-event activities** which included dissemination of the results and the reporting phase. Each event was accompanied by a blogpost published on the SSHOC website, and a report. With some exceptions, the blog posts were prepared by task members and reviewed by CLARIN/UL-FF and LIBER, while the reports were prepared by CLARIN/UL-FF and reviewed by LIBER. Both blog posts and reports were sent to speakers for authorization. Given the online format of most of the events, most of them have recordings which are available on the SSHOC YouTube channel, while the slide deck for each event can be accessed on Zenodo.

[118] Judith Wehmeyer, Ellen Leenarts, & Tatsiana Yankelevich. (2021). D6.13 Report on the SSHOC Training Community (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5837119

[119] Ricarda Braukmann, & Ellen Leenarts. (2020). SSHOC D6.10 Report on the SSHOC Training Community (v1.0). Zenodo. https://doi.org/10.5281/zenodo.3875986

By the end of the project, this task will have delivered **20 events**: 12 required in the GA and 8 additional ones. All except two have already been delivered. Events delivered in 2021, with the accompanying blog posts[120] were the following:

1) Heritage Science:
   - Citizen Science & Cultural Heritage. Planning for success[121]; 24 May 2021
   - Digitising Museum Objects Using Basic Photogrammetry[122]; 28 June 2021
2) Text Mining for SSH:
   - Exploration of Society Through the Lens of Labour Market Related Documentation[123]; 6 August 2021
   - ParlaMint – exploring societal issues through comparable corpora of parliamentary debates[124]; 4 August 2021
   - SSHOC'ing drama in the cloud: the added value of SSHOC/CLARIN services[125]; 6 August 2021
3) Data Protection & GDPR:
   - Data Protection in research practice[126]; 13 October 2021
4) Data Citation:
   - Data Citation in Practice[127]; 1 September 2021
   - FAIR SSH Data citation: practical guide[128]; 3 December 2021

[120] Detailed reports with a breakdown of the audience, satisfaction reports and description of the content will be available in Deliverables D6.14 and D6.15 due in M38.

[121] SSHOC Workshop Notes: Citizen Science & Cultural Heritage. Planning for Success: https://sshopencloud.eu/news/sshoc-workshop-notes-citizen-science-cultural-heritage-planning-success [Feb 2022]

[122] SSHOC Workshop Notes: Digitising Museum Objects Using Basic Photogrammetry: https://sshopencloud.eu/news/sshoc-workshop-notes-digitizing-museum-objects-using-basic-photogrammetry [Feb 2022]

[123] SSHOC Workshop: Exploration of Society Through the Lens of Labour Market Related Documentation – Post Event Report: https://sshopencloud.eu/news/sshoc-workshop-exploration-society-through-lens-labour-market-related-documentation-%E2%80%93-cbaquest [Feb 2022]

[124] SSHOC Workshop Notes: ParlaMint – exploring societal issues through comparable corpora of parliamentary debates: https://sshopencloud.eu/news/sshoc-workshop-notes-par%C2%ADlamint-%E2%80%93-exploring-societal-issues-through-com%C2%ADpar%C2%ADable-cor%C2%ADpora-par [Feb 2022]

[125] SSHOC Webinar Notes: SSHOC'ing drama in the cloud: the added value of SSHOC/CLARIN services: https://sshopencloud.eu/news/sshoc-webinar-notes-sshocing-drama-cloud-added-value-sshocclarin-services [Feb 2022]

[126] (blogpost in preparation)

[127] SSHOC Workshop Notes: Data Citation in Practice: https://www.sshopencloud.eu/news/sshoc-workshop-notes-data-citation-practice [Feb 2022]

[128] (blogpost in preparation)

2.6.2. Note on deviations from the plan and risk monitoring

The main deviation for WP6 in 2021 remained the realisation of online events instead of face-to-face ones due to COVID-19 restrictions. All events had to be adapted for virtual-only or hybrid delivery. Although there were periods of time when sanitary measures were looser and in-person gatherings would be possible, the travelling restrictions were far from harmonised between the countries.

To ensure equal opportunities for attending the event to everyone, the team in most cases opted for online delivery and adapted the structure of the event accordingly. This included splitting the content into shorter presentations knowing that the attention span in online events is shorter, ensuring active moderation of the event and encouraging interaction (e.g., monitoring the chat box, solving technical issues, using pooling activities (Mentimer)), and providing adapted interactive activities to ensure knowledge and skills transfer (e.g. breakout rooms, live demonstrations).

Information on risk monitoring in WP6 for Year 3 is presented in the table below:

Table 10. *Risk monitoring in WP6 - Year 3*

Risks monitoring WP6				
Risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
3	Lack of engagement at outreach events	Yes	No	Events were tailored to specific stakeholder groups and communities. For the stakeholder events, organisation of workshops or sessions along larger conferences or community meetings proved to be a good practice as that ensured the presence of key target groups and warranted the visibility of the SSHOC project. The awareness raising events were promoted within target communities and always included opportunities for interaction with the organisers and other participants to maximise the engagement and value both for the participants and the SSHOC project. Response of the stakeholder communities was ensured also by inviting eminent representatives to the round table discussions etc. In the case of SSHOC Training Community, the "online meeting fatigue" due to the extended effects of the COVID19 pandemic was apparent, especially towards the end of this second period. The mitigation measures used was the realization of monthly calls with a bottom-up, community-driven perspective and wide selection of topics, the invitation of external experts, wide communication and collaboration with other relevant training initiatives (e.g., OpenAIRE-led CoP for training coordinators).

14	Delay in development of SSHOC services might affect training schedule	Yes	Yes	Although the schedule of training events was adapted to the releases of SSHOC results as much as possible including anticipating possible delays (e.g., pushing events that showcased WP3 work towards the end of the project), the delay in the development forced the team to adjust the schedule, so that the community benefited from continuous training support throughout the project. Delivering most of the events in the final stage of the project would not ensure that the requirements for training events are met. Efforts were made to support the dissemination of SSHOC services released towards the end of the project by organizing additional training events not required by the GA.
15	Geographical distribution of partners not sufficient to ensure European coverage for national training nodes	Yes	No	Bringing all activities online due to the pandemic, in combination with the efforts on widely communicating relevant work and creating synergies with relevant training initiatives and communities, has led to a wide geographical distribution of the training community, as the representation goes across 44 countries.
16	Specialized training to be delivered by partners outside WP6 due to their expertise	Yes	Yes	The risk materialized partially. Training events were usually covered by a team of SSHOC and outside experts because the main priority was the quality of the content. However, rather than having a negative impact, this proved to be positive since it increased the visibility of SSHOC outputs outside the SSHOC community of trainers.
U7	No delivery or reformatting/adjusting of face-to-face activities due to COVID-19	Yes	Yes	At the start of the epidemic, one awareness-raising workshop was cancelled along with the LREC 2020 conference it was part of, but extensive workshop proceedings were published. All following events were adapted to take place online instead of in person as planned. Special care was applied to make the events as interactive as possible, for example by using the breakout room functionalities in Zoom to foster the discussion or the Mentimeter surveys to record the opinions of the group or foster the team spirit. The online format allowed the participants to take part without the expense of travel which eased the access to events. Partners ensured that all events were free of charge to participants. The only downside was the level of informal interaction that could have taken place during face-to-face lunch breaks was limited in the online environment. By sharing best practices in the community for organizing online events, the team worked hard to maximize the functionalities offered by online platforms, and took special care to adapt the duration of events to ensure optimal participation and engagement (e.g. considering the choice of time slots, splitting a full-day workshop (doable onsite but not online) into two parts, etc.)

2.7. WP7 - Creating the SSH Open Marketplace

2.7.1. WP7 progress

2.7.1.1. Task 7.1 User requirements, Conceptual Model and System Architecture of the SSH Open Marketplace

Task 7.1 led by DARIAH/ UGOE and with members from partners CESSDA ERIC, DARIAH ERIC, CNRS (Huma-Num), DARIAH/PSNC, DARIAH/OEAW, SWC, CNR and FORTH ended in June 2020. During 2021 refinement of the system specifications was driven by the needs of the three open tasks, mainly coordinated by T7.2 in charge of the implementation, and always based on user consultations.

2.7.1.2. Task 7.2 Development of the Marketplace Application

Task 7.2 is led by DARIAH/OEAW and has members DARIAH ERIC, CNRS (Huma-Num), DARIAH/UGOE, DARIAH/PSNC, TRUST-IT, SWC. The task was focused on the actual **implementation of the SSH Open Marketplace** based on the specification formulated and the initial development work done in the first half of the project culminating in the minimal viable product and the alpha release in June 2020.

The basic architecture as laid out in the specification proved successful and was further developed in quick iterations cycles. It divides the system into two main components: backend implemented in Java using the Spring framework by the DARIAH/PSNC team, frontend implemented in Javascript using the React framework by the DARIAH/OEAW team. Additionally, two further auxiliary components have been developed: Ingestion module with custom ingestion pipelines for individual data sources and a Curation module to ensure the quality of the information in the Marketplace. Originally, the ingestion module was implemented by SWC as part of their PoolParty system, in the second half of the project an alternative ingestion pipeline, called DACE has been developed by DARIAH/PSNC as an open-source alternative. The curation functionality is divided into two parts. Manual curation of individual items is done through edit forms which are part of the frontend application available to all logged-in users developed by DARIAH/OEAW. This is accompanied by automatic analyses and checks, implemented through Python notebooks as the most versatile and well-established means for data analysis and manipulation. These have been conducted in cooperation with Task 7.4 involving mainly CNR and CNRS. All the components communicate with the backend, which represents the sole source of truth and holds/persists all the information, solely through a well-defined REST API, ensuring encapsulation of the business logic and data consistency over the whole system.

The final version of the data model (v1.4) as well as the main functionalities have been described in report on ***D7.2 Marketplace implementation***[129], published November 2021. In December 2021 the application was released into production.

[129] Matej Ďurčo, Laure Barbot, Klaus Illmayer, Sotiris Karampatakis, Frank Fischer, Yoann Moranville, Joshua Tetteh Ocansey, Stefan Probst, Michał Kozak, Stefan Buddenbohm, & Seung-Bin Yim. (2021). 7.2 Marketplace – Implementation (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5749465

2.7.1.3. Task 7.3 Marketplace Interoperability

Task 7.3 is led by CLARIN ERIC and has members from DARIAH/PSNC, CNRS (Huma-Num), DARIAH/ OEAW, DARIAH/UGOE, SWC, CLARIN/Athena, and CNR. The main focus has been the **ingestion of sources into the SSH Open Marketplace**. For each source this was a multi-step process, first creating a mapping of item metadata from the sources data model to the Marketplace data model. This has been done using a simple spreadsheet with all the sources divided up between members of the task, each source being "adopted" by one task member that took over the responsibility for fine-tuning the mapping. The source was then ingested into a test instance of the Marketplace using one of the two ingestion pipelines (PoolParty and DACE) by the task members from SWC and DARIAH/PSNC respectively. Once ingested the person responsible for the source checked the ingest result and suggested adaptations to the mapping where necessary. After that the mapping was adapted and the source was ingested into the staging instance of the Marketplace. The second important task was the **development of the DACE ingestion pipeline** by the task members from DARIAH/PSNC. After developing a first version of this pipeline within the first half of the reporting period, during the second half of the period, the pipeline was used for actual ingests and adapted to be able to cope with all the necessary requirements to ingest the various heterogeneous sources.

The main outcomes of this period were: The development and fine-tuning of a second ingestion pipeline, DACE, by the task members from DARIAH/PSNC, and the ingestion of several sources into the Marketplace, populating the final release of the Marketplace at the end of 2021. The following sources have been newly ingested during this period: TAPoR, The Programming Historian, The CLARIN Language Resource Switchboard, the Standardisation Survival Kit (SSK) including the corresponding Zotero library, Humanities Data, Digital Humanities papers via dblp, the SSHOC Service Catalogue, DARIAH Campus, the EOSC Portal Marketplace, and the DARIAH National Resources. All these sources had been fully integrated into the Marketplace for its final release. However, there are still several sources in the ingestion/mapping process that will be added to the Marketplace over the course of the coming months until the end of the SSHOC project. ***D7.3 Marketplace Interoperability***[130] was published in December 2021 and focuses on the process of populating the SSH Open Marketplace, thereby complementing the previous reports on on the technical implementation *(SSHOC D7.2 Marketplace Implementation)* and the curation *(SSHOC D7.4 Marketplace Data Population and Curation)* of the Marketplace.

2.7.1.4. Task 7.4 Governance: Population, Curation & Sustainability of the SSH Open Marketplace

Task 7.4 is led by CNRS (Huma-Num), and has members from DARIAH/PSNC, DARIAH/OEAW, TRUST-IT. The focus of the work in 2021 was the **conception and implementation of a curation apparatus for the SSH Open Marketplace.** A Curation Task Force was formed, including members from all WP7 tasks, to ensure perfect integration with the development of the Marketplace. Throughout the reporting period, members of the **Curation Task Force** worked on developing both the intellectual and technical

[130] Alexander König, & Dieter Van Uytvanck. (2020). D7.3 Marketplace - Interoperability. https://doi.org/10.5281/zenodo.5871651

workflows to ensure curation of Marketplace data. These included the development of a series of curation notebooks that automatically check for errors, as well as an editorials dashboard which signals these errors for moderators to check. When combined with the Editorial Guidelines, these automatic checks and editorial dashboard allow for an entire curation suite. Building upon this work, team members conceived and organised **a series of virtual curation sprints** and conducted a first curation sprint with the focus on testing of curation dashboard/curation workflows in October 2021 with 25 participants.

In preparation of the SSH Open Marketplace final release, internal resources were dedicated to further data-dedicated curation activity targeting de-duplication of items, actors curation and manual creation of DARIAH national resources (app. 50 records) as a showcase collection with detailed metadata population and curation. As well, team members undertook the task of performing the curation tasks that were signalled by the automatic checks in the editorial dashboard, both ensuring that Marketplace data is high quality, and refining the curation processes with experience.

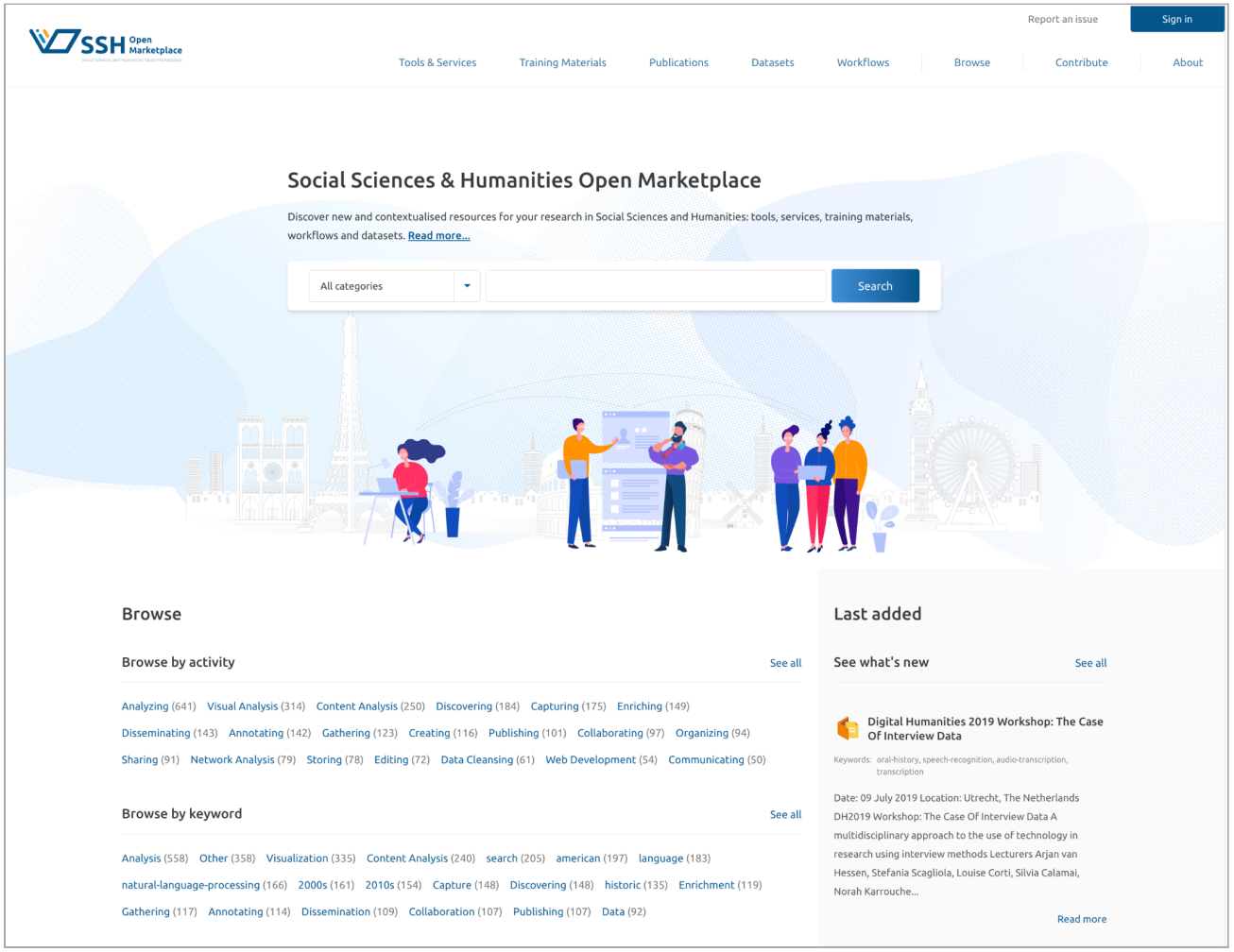

Figure 16. *Final release of the SSH Open Marketplace in December 2021*

During the reporting period, the major achievements were the Marketplace releases. SSH Open Marketplace beta release, or ***Milestone 43 Marketplace – beta release*** was achieved in December 2020, as planned, and a report[131] on this event followed. The final release of the SSH Open Marketplace, or ***Milestone 44 Marketplace – final release,*** was achieved in December 2021. Additionally, the team's work led to the publication of three deliverables: ***D7.6 Resources for Marketplace content description***[132] submitted in February 2021 offers an analysis based on 330 answers to the survey conducted within Task 7.4, aimed to understand common practises regarding SSH vocabularies among the research community; ***D7.4 Data Population and Curation***[133], finalised in December 2021, included the Editorial Guidelines which will drive the curation of the SSH Open Marketplace. In parallel, the task developed, wrote and published ***D7.5 Marketplace Governance***[134] in October 2021, to ensure that the Marketplace remains functional beyond the life of the project. T7.4 finalised curation tools and pipelines, particularly Editorial Guidelines that will guide the future Editorial Board. These include specifications for the enhancement of the automatized curation tools (Notebooks) as well as for the editorial dashboard. Additionally, these tools and workflows were **tested with live participants,** ensuring their suitability.

2.7.2. Note on deviations from the plan and risk monitoring

There were no deviations in WP7. Information on risk monitoring in WP7 for Year 3 is presented in the table below:

Table 11. *Risk monitoring in WP7 - Year 3*

Risks monitoring WP7				
Risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
6	Too few available software developers	Yes	Yes	Reorganisation of work and reallocation of PMs between partners.
7	Technical difficulties of complex software development	Yes	No	

[131] Laure Barbot, Frank Fischer, Klaus Illmayer, Matej Ďurčo, Alexander König, Dieter Van Uytvanck, & Nicolas Larrousse. (2020). MS.43 -Marketplace - beta release (1.0). Zenodo. https://doi.org/10.5281/zenodo.4785194

[132] Clara Petitfils, Suzanne Dumouchel, Nicolas Larrousse, Laure Barbot, Klaus Illmayer, Matej Ďurčo, Stefan Buddenbohm, & Tomasz Parkola. (2021). SSHOC D7.6 Resources for Marketplace content description (V1.0). Zenodo. https://doi.org/10.5281/zenodo.4558339

[133] Edward Gray, Nicolas Larrousse, Clara Petitfils, Laure Barbot, Frank Fischer, Matej Ďurčo, Klaus Illmayer, Cesare Condordia, Alexander Konig, Dieter Van Uytvanck, & Stefan Buddenbohm. (2021). D7.4 Marketplace – Data population & curation (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5783358

[134] Clara Petitfils, Suzanne Dumouchel, Nicolas Larrousse, Edward J. Gray, Laure Barbot, Arnaud Roi, Matej Ďurčo, Klaus Illmayer, Stefan Buddenbohm, & Tomasz Parkola. (2021). D7.5 Marketplace - Governance. https://doi.org/10.5281/zenodo.5608487

2.8. WP8 - Governance / Sustainability / Quality Assurance

2.8.1. WP8 progress

2.8.1.1. Task 8.1 Governance & Sustainability

This task is led by CLARIN ERIC, and carried out in collaboration with DARIAH ERIC, CESSDA ERIC, LIBER, CNR, and TRUST-IT. The work defined for Task 8.1 has progressed in line with the work plan and has resulted in a set of ingredients for the main report - deliverable D8.1 Governance and Sustainability Roadmap. A draft version has been generated. The finalisation of the deliverable has been made dependent on the finalisation of a few overviews that represent crucial ingredients for the agenda that members of the CLARIN consortium have agreed to work on in the post-project period. These overviews will be included as annexes to the report. The roadmap includes plans for future events, training activities, support action for specific user communities and a model for the joint governance of the SSH Open Marketplace. ***Milestone 46 Feedback on Draft Roadmap collected in a second round of consultations*** was achieved in October 2021. This has enabled continuation of work.

2.8.1.2. Task 8.2 Trust & Quality Assurance

Taskis led by CESSDA/UTA-FSD and partners are CESSDA/SND, CESSDA/UKDS, KNAW(DANS), CLARIN ERIC, CNR, and DARIAH/PSNC. T8.2 has begun the **CoreTrustSeal certification support** process for **14 SSHOC repositories** that were interested in support in the open call launched in June 2020. All task partners contributed to the support work, and it was organised as one-on-one meetings with repository representatives and task members assigned for each repository. Task members provided feedback and comments on the self-assessments drafted by the repositories. The support process is ongoing and will continue until the end of the project with selected repositories. The team explored the SSH trust landscape in Year 3 by **conducting surveys aimed at SSHOC organisations** offering data services and SSHOC infrastructure stakeholders. To further map the trust and certification landscape, T8.2 examined several SSH repositories through desk research on a number of repository characteristics. The team's collaboration with FAIRsFAIR and EOSC-Nordic projects continued, as a co-branded networking webinar planning started, with the aim to explore ideas and needs of such a network and identify the next steps.

Main results include **several supported repositories being prepared to submit their CoreTrustSeal application**. The support process has also allowed the participating repositories to improve their practices and contributed to enhancing their governance and sustainability, which are required from trusted digital repositories. ***Milestone 47 Follow up of certification status***[135] was achieved in October 2021. The report on the milestone provides an overview of the certification support activities up until then. The preliminary analysis of the results of the surveys and desk research on trust landscape have

[135] Henri Ala-Lahti, Mari Kleemola, Benjamin Mathers, Hervé L'Hours, Maurizio Sanesi, & Emiliano Degl'Innocenti. (2022). Milestone 47 Follow up of certification status. https://doi.org/10.5281/zenodo.6282437

been done. These will be reported in the final deliverable and two separate publications that are being drafted.

2.8.1.3. Task 8.3 Legal and Ethical Issues

The task is led by CESSDA/NSD. The team focused on investigation and preparation for the ***Report on ethical and legal issues and implication for EOSC*** and the ***SSH Code of Conduct***. Several iterations of the two reports were prepared, with extensive reviews and discussions on what the final product should be, and what they should contain. ***Milestone 48 Ethical and legal issues and implications for EOSC*** was achieved in September 2021, by preparing a draft report on the topic.

In the Report on ethical and legal issues and implication for EOSC the team worked on identifying the risk of participants losing control over their personal data, and a risk that scientific data might be used for commercial interests, and that sharing data which is potentially identifiable can increase the risk of harm for the participants. As part of identifying legal issues, the team is looking into the situation where the content of contracts between a researcher and a participant can have implications towards the EOSC, as it can affect which data that can be stored, how long it can be stored, and possibly shared with others, in the cloud. Sharing of research data on cloud-based services like the EOSC, can lead to some IPR issues. Results from the report indicate that further work on how to resolve ethical and legal issues related to open access and sharing of research data should be actioned. It will be important to determine who is responsible for resolving the issues arising. It will also be helpful to envision a mechanism able to verify that legal and ethical issues are considered and resolved, before storing data in the EOSC.

The work on the SSH Code of Conduct has been extensive and several iterations and review of the document draft were performed as the new questions arose. The report identifies the terms that must be fulfilled in order to make a Code of Conduct draft admissible. The following is addressed "it must be determined which organisation(s) have the mandate to draft the code; specific explanatory statements and supporting documents must be gathered, the territorial and processing scope of the code must be determined. Further, it was determined which supervisory authority is competent to assess and approve the code draft; which monitoring body is appropriate for the code and which mechanisms will enable that monitoring body to perform its task. Finally, consultation with stakeholders was performed; and the draft code must be in compliance with relevant national legislation and the content and language of the code must be determined". The draft report contains input from partners on how some of these terms can be fulfilled. The report will provide some suggestions for what the Code of Conduct might regulate and provides additional suggestions on how the further initiative can be taken.

2.8.1.4. Task 8.4 Overarching clusters

The team worked on preparing and shaping, and finally delivering the debate *The ESFRI Clusters at RDA House of Commons*[136] in April 2021 with the aim of connecting the Science Clusters, RDA community and EOSC representatives at the RDA's 17th Virtual Plenary Meeting. The work on *Deliverable 8.6 Report on inter-cluster cooperation activities* due in April 2022, started in 2021.

[136] Event page: https://sshopencloud.eu/events/esfri-clusters-rda-house-commons [Feb 2022]

The ESFRI Clusters at RDA house-of-commons styled debate took a look at the commonalities and collaboration in the ESFRI clusters, when contributing to the EOSC on three pillar topics. Thematic data services, connecting to end-user communities, governance was driven respectively by FAIRsFAIR and RDA Europe 4.0 ambassador for interdisciplinary research, RDA Secretary General and the director of CLARIN ERIC and member of the EOSC sustainability Working Group[137]. The wrap-up report[138] explains the topic of each of the three debates, the main points debated and defines the recommendations made.

Figure 17. *Announcement of the ESFRI Clusters at the RA House of Commons event at SSHOC website*

[137] see slide deck here: Ricarda Braukmann, & Marieke Willems. (2021, April 27). The ESFRI Clusters at RDA House of Commons. Zenodo. https://doi.org/10.5281/zenodo.4723646 [Feb 2022]

[138] Stephanie Parker, Ana Inkret, Irena Vipavc Brvar, Vasso Kalaitzi, Iris Buunk, & Jana Striova. (2021). The ESFRI Clusters at RDA House of Commons (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5024589 [Feb 2022]

2.8.2. Note on deviations from the plan and contingencies

Due to COVID-19 restrictions, some of the activities (T8.3 and T8.4 mostly) have been rescheduled in consideration of the COVID19 situation. Milestones were achieved with a slight delay which did not have any negative impact.

Information on risk monitoring in WP8 for Year 3 is presented in the table below:

Table 12. *Risk monitoring in WP8 - Year 3*

Risks monitoring WP8				
Risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
5	Inefficient use of resources: survey creation, translation and storing	Yes	No	To prevent inefficient use of resources in survey creation, translation and storing the team realized a mapping of available tools developed and used project-wide, planned the integration of the information management platform with other SSHOC tools.
11	Understaffing of research infrastructures	Yes	Yes	Rescheduled the work; changed the rules and procedures after the 1st project's year
12	Imbalance between research communities in the governance: disciplines poorly/over represented	Yes	No	Mitigation measures applied in WP8: participation of different domains (Humanities, Social Sciences and Heritage Science), ongoing consultations with other EOSC actors.
13	Overlapping of work with other clusters	Yes	No	Mitigation measures applied in WP8: Possible common actions involving other clusters have been investigated in various contexts; T8.4 established specific communication tools and procedures as part of the activities of the E-RIHS
U7	No delivery of reformatting of face to-face activities due to COVID-19	Yes	Yes	Some of the activities (T8.3 and T8.4 mostly) have been rescheduled in consideration of the COVID19 situation

2.9. WP9 - Data Communities

2.9.1. WP9 progress

2.9.1.1. Task 9.1 Identifying shared and unique challenges for SSH data communities; Evaluation and Usability Report

Task 9.1 is led by CESSDA/AUSSDA and functions as coordination and communication platform for the entire Work Package 9, and monitors progress and development in the tasks. This was also done in regular WP9 meetings that were taking place in a bi-weekly interval. In addition to the WP9 task leaders (UNOTT, CESSDA ERIC/AUSSDA, Sciences Po, CNR), all T9.1 partners (SWC, EEP PSE, SAFE, UAntwerp, FSCIRE, INFAI) were encouraged to share their work and experiences in the WP9 meetings. Two deliverables have been produced in 2021, namely ***D9.2 Midterm Evaluation Report***[139] submitted in August 2021 and ***D9.3 Usability Evaluation Report***[140]***.*** The two reports contain separate contributions from the various tasks within WP9. They demonstrate that much progress has been made for each of the data community projects, while each also still aims to extend its outcomes during the remaining months of the SSHOC program in 2022. Stocktaking in November 2021 of the usability of the tools produced and under development in the three data community projects of WP9 yielded extremely encouraging outcomes, as reported in D9.3.

2.9.1.2. Task 9.2 Ethnic and Migration Studies

Task 9.2 is led by Sciences Po, and it routinely collaborates with a COST Action network, ETHMIGSURVEYDATA[141]. It is working to make quantitative surveys on ethnic and migrant minorities' (EMMs') integration and/or inclusion FAIR. This data community's first SSHOC task was producing the **EMM Survey Registry**[142], a publicly available database and tool that allows users to discover and learn about existing EMM surveys via detailed and structured metadata. This Registry, which is now live and available as a final version, has been a by-product of a close collaboration with COST Action 16111 - ETHMIGSURVEYDATA, as well as carefully constructed workflows and processes for developing the tool itself and for compiling the metadata. To ensure that this Registry can continue to attract diverse users from across the globe, this data community has been: (1) working to ensure that the Registry can be displayed and showcased on the SSH Open Marketplace and EOSC Portal, (2) producing outreach and training materials in a variety of mediums and languages to target and engage different user groups, (3) exploring the feasibility of setting up an API to facilitate the Registry's interoperability with other social sciences platforms, and (4) curating and developing a special collection for COVID-19 surveys with EMM respondents.

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[139] Van der Eijk, Cees, Ami Saji, Carmen Di Meo, & Emiliano Degl'Innocenti. (2021). D9.2 Midterm evaluation report (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5579235

[140] Cees van der Eijk, Ami Saji, Laura Morales, Emiliano Degl'Innocenti, Carmen Di Meo, & Francesco Coradeschi. (2021). D9.3 Usability evaluation report (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5783356

[141] ETHMIGSURVEYDATA website: https://ethmigsurveydatahub.eu/ [20.07.2020]

[142] EMM Registry, available here: https://ethmigsurveydatahub.eu/emmregistry/ [February 2022]

The second SSHOC task for this data community **was assessing the feasibility of creating an EMM collection for the European Question Bank (EQB)**. To do this, the data community used thematic pilots to not only identify the technological solutions and resources (financial plus human) needed, but also the "right" workflows and processes to use, in order to create the EMM collection by way of the EQB harvesting the questionnaires/question items of EMM surveys from the EMM Question Data Bank (QDB). The outcome of this rigorous feasibility assessment was that such a collection for the EQB could reasonably be set up by strategically upscaling the work completed via the thematic pilots.

In 2021, some major results were finalised: To date, the EMM Survey Registry displays metadata from over 1,700 surveys from 34 different countries and is actively growing its metadata collection by having data producers of EMM surveys (namely those on the topic of COVID-19) contribute their own metadata via online form. Moreover, a number of outreach and training materials to facilitate exploitation of the Registry has been produced, with all of them publicly available on the data community's Zenodo page[143]. As for the ***D9.5 Feasibility report on setting up a collection on questionnaires relating to Ethnic and Migrant Minorities in the European Question Bank***[144], the EMMs EQB is on track to being launched before the end of the project.

2.9.1.3. Task 9.3 Data Community Project: Electoral Studies & EURHISFIRM

Task 9.3 is led by UNOTT and contains contributions from SWC, UNIVIE, AUSSDA, UNOTT and EEP PSE, SAFE, UAntwerp. It focuses on the design and development of a **pilot Knowledge Graph** in the field of **Electoral Studies,** which contributes to the specific objectives of SSHOC by maximising re-use through Open Science and FAIR principles, and by interconnecting existing and new infrastructures. Its work heavily uses various tools and services developed by other partners in SSHOC, in particular CESSDA, CESSDA/GESIS, CESSDA/AUSSDA and CLARIN/UL. The work done with respect to the development of a Knowledge Graph is also meant to provide a basis upon which EURHISFIRM, which is a Research Consortium as well as a partner in T9.3 can evaluate the relevance of Knowledge Graphs in its own field of research. The first **(alpha) version** of the pilot Knowledge Graph, which since its first publication **has been updated** in several ways based on feedback from testers, was the focus of the work in 2021.

This data community's pilot has produced three reports published in 2021, which are, respectively ***D9.9 Delivery of user-validated Knowledge Graph, and Election Studies Analytics dashboard***[145], ***D9.10 User community Feedback Report***[146] and ***D9.11 Concluding Report on T9.3***[147].

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[143] Community's Zenodo page: https://zenodo.org/communities/ethmigsurveydata/ [February 2022]

[144] Laura Morales, Ami Saji, & Meredith Winn. (2021). D9.5 Feasibility report on setting up a collection of questionnaires relating to Ethnic and Migrant Minorities in the European Question Bank (1.0). Zenodo. https://doi.org/10.5281/zenodo.5898536

[145] Sotirios Karampatakis, Albin Ahmeti, Martin Kaltenböck, Johann Gründl, Julia Partheymüller, & Cees van der Eijk. (2021). SSHOC D9.9 Delivery of user-validated Knowledge Graph, and Election Studies Analytics dashboard (V1.0). Zenodo. https://doi.org/10.5281/zenodo.4700170

[146] Cees van der Eijk, & Julia Partheymüller. (2021). D9.10 User community feedback and usage report (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5579217

[147] Van der Eijk, Cees. (2021). D9.11 Concluding Report on T9.3. https://doi.org/10.5281/zenodo.5898534

2.9.1.4. Task 9.4 Heritage Science and Humanities

Task 9.4 is led by CNR with contributions from CNRS (MAP), FSCIRE, and INFAI. The team has created and developed the **RESTORE data pilot** (smaRt accESs TO digital heRitage and mEmory), a digital environment (i.e.: a platform) where the complete workflow, and the tools selected are made available for testing. Data mapping assumes the configuration of a full data integration with relation to Cultural Heritage and Heritage Science dataset provided by the pilot project partners (GLAMs institutions: archives, museums, libraries, and heritage science labs), responding to different cataloguing standards, and related metadata schemas and encoding formats. All the detailed information about the work described above was reported in the report on ***MS49 Heritage Science and Humanities Pilot alpha release***[148], published on Zenodo. In 2021, connections were established by T9.4 with other SSHOC Tasks: T3.5 and T3.6 in order to work together for data interoperability and data reuse policies, and T4.7 in order to evaluate the alignment with the SSHOCro. A new collaboration was established with the EVT team[149] in order to develop a tool for integrated image-text visualisation. As with regard to other publications within SSHOC, contributions were added to SSHOC *Deliverable 9.2* and *Deliverable 9.3* of WP9.

2.9.2. Note on deviations from the plan and risk monitoring

A positive deviation for WP9 was the **addition of new partners** in T9.1 and T9.4. They represent **RESILIENCE** (beneficiaries FSCIRE, InfAI), a research infrastructure for religious studies that has been placed on the ESFRI Roadmap in 2021. The **COORDINATE** Consortium (beneficiaries NUID UCD, MMU) works to improve the health and wellbeing of children and young people through better evidence-based policy making across the EU. **OPERAS** (beneficiary OPERAS AISBL) is the Research Infrastructure supporting open scholarly communication in the social sciences and humanities (SSH) in the European Research Area and is engaged in bringing its services to the EOSC and setting up a global sustainable framework for them. The original planned work of the tasks has not been altered but some components were added, as the new partners will add their expertise and experiences. The production of deliverables in WP9 has been delayed, but these delays did not endanger the progress of other deliverables.

Information on risk monitoring in WP9 for Year 3 is presented in the table below:

[148] Emiliano Degl'Innocenti, Carmen Di Meo, Francesco Coradeschi, Maurizio Sanesi, Elisa Brunoni, Athina Kritsotaki, & Eleni Tsoulouha. (2021). MS49 Heritage Science and Humanities Pilot alpha release (v1.0). Zenodo. https://doi.org/10.5281/zenodo.5217113

[149] see: https://visualizationtechnology.wordpress.com/ [January 2022]

Table 13. *Risk monitoring in WP9 - Year 3*

Risks monitoring WP9				
Risk (DoA)	Description	Mitigation measures applied?	Risk materialised so far?	Comments
6	Too few available software developers	Yes	Yes	Where partners had difficulties finding software developers, work has been rescheduled and did not cause any delays. All WP9 tools have undergone user testing and will do so in the future in various formats: in webinars, focus groups and via feedback forms to name some.
7	Technical difficulties of complex software development	Yes	Yes	Delays in the creation of the European Question Bank could have negatively impacted D9.5 but close cooperation between partners saw a positive outcome. All WP9 tools have undergone user testing and will do so in the future. Results from user feedback were included in adaptation of tools in iteration cycles. Some technical difficulties were caused by working from home due to the COVID-19 pandemic and delayed access to the needed programmes.
10	Low acceptance or understanding of the new data access tools, guidelines and services by users and public	Yes	No	Researchers were included in all tools in development/developed by WP9 and tested the tools in various formats: in webinars, focus groups and via feedback forms to name some.
U6	Vulnerability to obstructing personal circumstances in small teams where work to be done cannot be transferred to another team member	Yes	Yes	Work obligations in WP9 were partially redistributed to other partners to relieve partners with a small number of team members.
U7	No delivery or reformatting/adjusting of face-to-face activities due to COVID-19	Yes	Yes	Face-to-face activities that were crucial for deliverable production like workshops with users/researchers were first postponed and then reformatted to not cause further delays to, for example D9.9.

3. Summary of progress and delivery

As explained in the previous chapters, SSHOC project managed to submit **40 Deliverables** and **16 Milestones** planned in Year 3. This was another year of successful work, and again - in spite of the COVID pandemic. Most of the delays were due to additional peer-reviews. Review processes have been prolonged, and the main focus put on quality. The following tables show a summary of the Milestones achieved and Deliverables submitted in Year 3.

Table 14. *Milestones planned and achieved in Year 3 of SSHOC Project*

Year 3 - 2021						
MILESTONES						
WP No.	**Task**	**No.**	**Title**	**Lead beneficiary**	**Due Date (month)**	**Actual achievement (month)**
WP 2	2.3	MS 6	SSHOC web platform continuous marketplace integration with SSHOC service offer 2/3	TRUST-IT	28	29
WP 2	2.3	MS 7	SSHOC web platform continuous marketplace integration with SSHOC service offer 3/3: M60, M61m M70	TRUST-IT	36	36
WP 4	4.2	MS 16	Survey questions extracted from TMT and delivered in machine readable format, to be used as input for T4.3 and T3.1	CentERdata	26	26
WP5	5.2	MS 26	Testing, evaluation and documentation of additional functionality of data repository service	KNAW	34	34
WP5	5.4	MS 28	Assessment of existing platforms	CESSDA ERIC-GESIS	32	32
WP 5	5.5	MS 32	Developing APIs	ESS ERIC	29	29
WP 5	5.5	MS 31	Setting up and populating a new ESS repository	ESS ERIC-NSD	31	31
WP 5	5.5	MS 33	Integrate data publishing with DataCite/DOI and bespoke advanced landing pages with rich functionalities	ESS ERIC	33	33
WP 5	5.5	MS 34	Expose ESS' interoperable services to external consumers	ESS ERIC	35	36
WP 5	5.5	MS 35	Authentication and API management solutions aligning with developments in the EOSC	ESS ERIC	35	35
WP 5	5.7	MS 36	Identification of a suitable archaeological case study and implementation of prototypes of the software module and the corresponding web service for that case study	DAI	22	34
WP 7	7.4	MS 44	Marketplace – final release	DARIAH ERIC/CRNS Humanum	36	36
WP 8	8.1	MS 46	Feedback on Draft Roadmap collected in a second round of consultations	CLARIN	34	34
WP 8	8.2	MS 47	Follow up of certification status	CESSDA ERIC-FSD	36	34
WP 8	8.3	MS 48	Ethical and legal issues and implication for EOSC	CESSDA ERIC-NSD	30	33
WP 9	9.4	MS 49	Heritage Science and Humanities Pilot alpha release	UNOTT, CNR	18	27

Table 15. *Deliverables planned and delivered in Year 3 of SSHOC Project*

Year 3 - 2021						
DELIVERABLES						
WP No.	**Relative number in WP**	**Del. No.**	**Title**	**Lead beneficiary**	**Expected submission date**	**Actual delivery date**
WP1	**D1.4**	D4	Second Annual Progress & Activity Report	CESSDA ERIC	31 Jan 2021	*22 Mar 2021*
WP2	**D2.2**	D8	Preliminary report on user communities engagement	TRUST-IT	31 Dec 2020	*31 Mar 2021*
WP3	**D3.4**	D13	Multilingual ontologies for Occupation, Industry, Regions and cities, Food items, and Religion, with use case	CLARIN	28 Feb 2021	*22 Apr 2021*
WP3	**D3.5**	D14	Report on citation enabled SSH catalogues and SSH citation exploitation	CNRS	31 Aug 2021	*16 Sep 2021*
WP3	**D3.6**	D15	Report on SSHOC format interoperability solution services, including new software	CESSDA ERIC	31 Aug 2021	*24 Sep 2021*
WP3	**D3.8**	D17	Implementation report and available SSHOC Switchboard and VCR services	CLARIN	31 Dec 2021	22 Oct 2021
WP3	**D3.9**	D18	Report on Ontology and Vocabulary collection and Publication	CNR	31 Dec 2021	20 Dec 2021
WP4	**D4.7**	D26	Code for data exchange between TMT and open source CAT software	CentERdata	30 Sep 2020	*18 Mar 2021*
WP4	**D4.8**	D27	Report on possibilities for incorporating open source CAT tool functionality into the TMT	CentERdata	30 Jun 2021	*19 Aug 2021*
WP4	**D4.9**	D28	Guidelines on the use of TM in survey translation	ESS ERIC	31 Jul 2021	19 Jul 2021
WP4	**D4.10**	D29	Report on the MT pilot study	ESS ERIC	31 Oct 2021	15 Dec 2021
WP4	**D4.2**	D21	Ready to use sample management system	ESS ERIC	31 Dec 2021	24 Nov 2021
WP4	**D4.5**	D24	Packaged tested version of MT system	CLARIN	31 Dec 2021	4 Nov 2021
WP4	**D4.11**	D30	Report on the experience with the automatic verification programme in SHARE wave 9	SHARE ERIC	31 Dec 2021	15 Oct 2021
WP4	**D4.13**	D32	Audio Transcript Data	KNAW	31 Dec 2021	3 Dec 2021
WP4	**D4.15**	D34	Report on integrating API into GGP	KNAW	31 Dec 2021	30 Nov 2021
WP4	**D4.17**	D36	New version of the Aïoli platform	CNRS	31 Dec 2021	21 Dec 2021
WP5	**D5.9**	D48	Framework for Data Use Agreements (Remote access to sensitive data)	CESSDA ERIC	30 Jun 2020	*12 Jan 2021*
WP5	**D5.1**	D40	Guidelines for ethics considerations in making biomedical survey data FAIR (Access to biomedical data)	CentERdata	30 Sep 2020	*18 Mar 2021*
WP5	**D5.7**	D46	Report on the impact of the GDPR and its implications for EOSC (Legal issues of innovative data access)	CESSDA ERIC	30 May 2021	*2 Jul 2021*
WP5	**D5.19**	D58	Report on stakeholder workshop about a SSH Code of Conduct (Coop. with 8.3)	CESSDA ERIC	30 May 2021	*7 Jul 2021*
WP5	**D5.8**	D47	Draft SSH GDPR Code of Conduct (Legal issues of innovative data access)	CESSDA ERIC	30 Jun 2021	*10 Aug 2021*
WP5	**D5.3**	D42	Data access protocol for accelerometer data, linked to survey data, conforming FAIR principles (Access to biomedical data)	SHARE ERIC	31 Aug 2021	*30 Sep 2021*
WP5	**D5.20**	D59	Training materials of workshop for secure data facility professionals	CESSDA ERIC	31 Oct 2021	29 Oct 2021

WP6	**D6.5**	D64	Report on Stakeholder Series events	CESSDA ERIC	31 Oct 2021	29 Oct 2021
WP6	**D6.12**	D71	Report on the Train-the-trainer Bootcamps	KNAW	31 Oct 2021	*4 Nov 2021*
WP6	**D6.3**	D62	Final report on the outcome of the awareness raising workshops	CESSDA ERIC	31 Dec 2021	9 Dec 2021
WP6	**D6.8**	D67	Report on training materials	DARIAH ERIC	31 Dec 2021	13 Dec 2021
WP6	**D6.13**	D72	Report on the SSHOC Training network (updated version)	KNAW	31 Dec 2021	8 Dec 2021
WP7	**D7.6**	D80	Resources for Marketplace content description	CNRS	31 Dec 2020	*15 Feb 2021*
WP7	**D7.5**	D79	Marketplace – Governance	CNRS	30 Sep 2021	*13 Oct 2021*
WP7	**D7.2**	D76	Marketplace – Implementation	DARIAH ERIC	31 Dec 2021	17 Nov 2021
WP7	**D7.3**	D77	Marketplace – Interoperability	CLARIN	31 Dec 2021	15 Dec 2021
WP7	**D7.4**	D78	Marketplace – Data population & curation	CNRS	31 Dec 2021	2 Dec 2021
WP9	**D9.9**	D95	Delivery of user-validated Knowledge Graph, and Election Studies Analytics dashboard	SWC	28 Feb 2021	*7 Apr 2021*
WP9	**D9.2**	D88	Midterm evaluation report	UNOTT	30 Jun 2021	*19 Aug 2021*
WP9	**D9.10**	D96	User community feedback and usage report	UNOTT	31 Aug 2021	*8 Oct 2021*
WP9	**D9.11**	D97	Concluding report on T9.3	UNOTT	30 Nov 2021	*17 Dec 2021*
WP9	**D9.3**	D89	Usability evaluation report	UNOTT	31 Dec 2021	29 Nov 2021
WP9	**D9.5**	D91	Feasibility report on EQB for EMM	Sciences Po	31 Dec 2021	15 Dec 2021

4. Use of resources and budget expenditure

With the third year ending, and only 4 months of the project implementation left, the project reached 90% of its duration (36/40 months). Out of the 42 tasks in the project, most of the tasks lasted throughout the 3 years. The work, as planned, intensified towards the end of the project, so most of the resources were planned for the final period. By the end of 2021, in total about 1623 person-months were used, which corresponds to 88% of the total person-months allocated to the project. Translated to budget expenditure, about 11,7 million € was spent (81%) out of the total budget of 14,5 million €. The discrepancy is certainly due to unused travel budget and unused budget for organising face-to-face events, as well as some missing numbers at the time of this reporting. The Use of resources summary tables present amounts reported by partners by the end 2021. It can be concluded there are no deviations per Work Package and there are enough resources available to finalise the implementation.

Table 16. *Use of resources: Person-months reported per work package in first 3 years of SSHOC project*

Work Packages	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	WP9	Total
Allocated PMs	73.50	95.60	365.90	429.30	311.90	150.65	227.25	87.80	96.89	1,838.79
Spent in Year 1-3	59.43	77.68	344.50	398.53	264.67	123.52	218.96	60.80	75.56	1,623.65
Remainder	14.07	17.92	21.40	30.77	47.23	27.13	8.29	27.00	21.33	215.14
% of PMs spent	***81%***	***81%***	***94%***	***93%***	***85%***	***82%***	***96%***	***69%***	***78%***	***88%***

Table 17. *Use of budget reported*

Type of cost	Personnel	Sub-contracting	Other costs	Indirect costs	Total
Allocated budget	10,939,910	50,000	598,965	2,866,719	14,455,594
Spent in Year 1-3	9,233,282	50,000	273,670	2,222,345	11,774,621
Remainder	1,706,629	-	325,295	644,374	2,680,973
% of category spent	***84%***	***100%***	***46%***	***78%***	***81%***

5. Conclusions

In the 3 years of implementation, SSHOC Consortium has achieved all of its planned milestones and objectives, with a visible and measurable impact. The work continued even during COVID,and different measures for mitigating the risks have been applied, activities have been adapted to the new environments and conditions. Until the end of 2021, the focus remained on quality, results, and **community building with an impact.**

The management team worked on maintaining this quality, at the same time taking care of what is beyond SSHOC, and what comes after it. Maintaining close connections with other cluster projects financed in the same call, and considering the strategically important issues is what became a focus in 2021.

Also, the sustainability of the Consoritum beyon the project duration became a focal point for the Strategic Board, and the preparation of **Memorandum of Understanding** between the SSHOC partners, which will ensure the post-project collaboration and sustainability of results. This means, SSHOC community will transform into the **SSH Open Cluster** and the community built around it will stay connected.

Thai was followed by the project teams working on branding, dissemination and community building who maintained the level of visibility, community engagement. The **SSHOpenCluster branding** has been developed, and continued to be promoted, expanding and building on the project´s visibility.

The project defined the SSHOC's exploitation plan and selected **33 Key Exploitable Results (KERs)**, with a special SSHOC task force dealing with onboarding services to the EOSC Portal. In the third year of the project, factsheets on all 33 identified KERs were prepared to showcase what was achieved and to make it easy for the stakeholders to access the KERs.

The last 4 months of the project span to April 2022, and the project partners are getting ready for the Final SSHOC Conference, completing the results promised in the DoA, and preparing for the next phase - the post-project collaboration, guided by the MoU.

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SSHOC Webinar FAIR SSH Data Citation https://www.sshopencloud.eu/events/fair-ssh-data-citation-practical-guide [20.03.2022]

SSHOC Webinar Notes: SSHOC'ing drama in the cloud: the added value of SSHOC/CLARIN services: https://sshopencloud.eu/news/sshoc-webinar-notes-sshocing-drama-cloud-added-value-sshoccla rin-services [Feb 2022]

SSHOC Webinar page: https://www.sshopencloud.eu/news/sshoc-workshop-notes-providing-canonical-training-material s-secure-data-facility-professionals [Jan 2022]

SSHOC Website publication of Deliverables produced: https://www.sshopencloud.eu/publications/deliverables [Jan 2022]

SSHOC Workshop Data Citation in practice page: https://sshopencloud.eu/events/sshoc-workshop-data-citation-practice [20.03.2022]

SSHOC Workshop Notes: Citizen Science & Cultural Heritage. Planning for Success: https://sshopencloud.eu/news/sshoc-workshop-notes-citizen-science-cultural-heritage-planning-s uccess [Feb 2022]

SSHOC Workshop Notes: Data Citation in Practice: https://www.sshopencloud.eu/news/sshoc-workshop-notes-data-citation-practice [Feb 2022]

SSHOC Workshop Notes: Digitising Museum Objects Using Basic Photogrammetry: https://sshopencloud.eu/news/sshoc-workshop-notes-digitizing-museum-objects-using-basic-pho togrammetry [Feb 2022]

SSHOC Workshop Notes: https://www.sshopencloud.eu/news/sshoc-workshop-notes-providing-canonical-training-material s-secure-data-facility-professionals [Jan 2022]

SSHOC Workshop Notes: ParlaMint – exploring societal issues through comparable corpora of parliamentary debates:

SSHOC Workshop: Exploration of Society Through the Lens of Labour Market Related Documentation – Post Event Report:

SSHOC Youtube channel: https://www.youtube.com/channel/UCw-mY8v84yeHW2z4KG3ZLtA [18.01.2022]

SSHOC Zenodo Community: https://zenodo.org/communities/sshoc/ [18.01.2022]

The ADS and the FAIR Data Principles: https://archaeologydataservice.ac.uk/about/adsFAIR.xhtml

The WPSS companion website, including extensive user documentation, available at https://cdsp-scpo.github.io/wpss-doc/ [March 2022]

Training Discovery Toolkit: training-toolkit.sshopencloud.eu/ [February 2022]

7. Appendix – *Tables of events*

Table 18. *SSHOC organised & co-organised events in Year 3 (2021)*

Year 3							
SSHOC organised & co-organised events							
Title	**event**	**Date**	**Target Stakeholder**	**Link event**	**Link recordings**	**Views of recordings**	**Stakeholders Engaged**
SSHOC Webinar: Putting Data Protection into Practice – GDPR and the DARIAH ELDAH Consent Form Wizard	Training	13/10/2021	Scientific Community, Industry, Civil Society	https://sshopencloud.eu/putting-data-protection-practice-gdpr-and-dariah-eldah-consent-form-wizard-0	https://www.youtube.com/watch?v=eAKhI0qde2w&t=2s	**98**	**60**
SSHOC Webinar: Sharing Datasets of Pathological Speech	Training	14/10/2021	Scientific Community, Industry, Civil Society	https://sshopencloud.eu/sshoc-webinar-sharing-datasets-pathological-speech	https://www.youtube.com/watch?v=qjTJ4ZxzfvI	**51**	**88**
SSHOC webinar: Introducing the newly launched Ethnic and Migrant Minorities (EMM) Survey Registry	training	26/10/2021	Scientific Community, Industry, Civil Society	https://www.sshopencloud.eu/sshoc-webinar-introducing-newly-launched-ethnic-and-migrant-minorities-emm-survey-registry	https://www.youtube.com/watch?v=UFRj6Lz0v_w; https://zenodo.org/record/4134061#.X7aPhRNKhZ0	**126**	**163**
SSHOC Certification support webinar	invitation only webinar	28/01/2021	Scientific Community	closed meeting	N/A	**N/A**	**19**
Train-the-Trainer RDM Bootcamp	training	08/02/2021		https://sshopencloud.eu/events/train-trainer-rdm-bootcamp	N/A	**N/A**	**0**
Monthly Call - SSH Training Community - February	training monthly call	11/02/2021		https://sshopencloud.eu/events/monthly-call-ssh-training-community-february	N/A	**N/A**	**10**
CLARIN-SSHOC café on oral archives	webinar	24/02/2021	Scientific Community & Civil Society	https://www.clarin.eu/event/2021/clarin-cafe-how-not-spill-coffee-your-tapes-best-practices-preserving-oral-archives	https://www.youtube.com/playlist?list=PLlKmS5dTMgw2XgWNuzQtGn_twUm-SHIL9	**70**	**50**
SSHOC Webinar: Best Practices for Preserving Oral Archives	Training	24/02/2021	Scientific Community, Industry & Civil Society	https://www.sshopencloud.eu/sshoc-webinar-best-practices-preserving-oral-archives	https://www.youtube.com/watch?v=ZMWLxAqwo1U&list=PLpuwwe1MpnqIC-3c-KFflAUdKvvKuvg82	**25**	**45**

Monthly Call - SSH Training Community - March	Training monthly call	09/03/2021	Scientific Community, Industry & Civil Society	https://sshopencloud.eu/events/monthly-call-ssh-training-community-march	N/A	**N/A**	**30**
Stakeholder Workshop about a SSH Code of Conduct	training	17/03/2021	Scientific Community	https://www.sshopencloud.eu/events/sshoc-workshop-ssh-code-conduct-0 and https://zenodo.org/record/4655623#.YH2AFOkzbUo	N/A	**N/A**	**35**
5th SSHOC Consortium Meeting	Online meeting	23-24/03/2021	Scientific Community & Industry	https://www.sshopencloud.eu/events/5th-sshoc-consortium-meeting	N/A	**N/A**	**108**
SSHOC Workshop: Citizen Science & Cultural Heritage. Planning for success	training	24/03/2021	Scientific Community, Policymakers, Civil Society	https://sshopencloud.eu/events/sshoc-workshop-citizen-science-cultural-heritage-planning-success	https://www.youtube.com/watch?v=Kv_ZvDQgydc&t=2s	**29**	**176**
SSHOC Workshop: Digitising museum objects using basic photogrammetry	training	25/03/2021	Scientific Community, Policymakers, Civil Society	https://sshopencloud.eu/events/sshoc-workshop-digitising-museum-objects-using-basic-photogrammetry	https://www.youtube.com/watch?v=Tf1MMGc4bGg	**69**	**140**
SSHOC & ESS Webinar on the Multilingual Corpus of Survey Questionnaires	webinar	06/04/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-webinar-multilingual-corpus-survey-questionnaires	N/A	**N/A**	**35**
Combined SSHOC Training Community Call & Community of Practice of training coordinators	training	13/04/2021		https://sshopencloud.eu/events/combined-sshoc-training-community-call-community-practice-training-coordinators	N/A	**N/A**	**26**
SSHOC Speech-to-text Workshop: Linking Social Survey and Linguistic Infrastructures through speech interviews	webinar	16/04/2021	Scientific Community, Industry & Civil Society	https://sshopencloud.eu/events/sshoc-speech-text-workshop-linking-social-survey-and-linguistic-infrastructures-through	https://www.youtube.com/watch?v=8OmXr0Fr7DY	**49**	**64**
The ESFRI at RDA House of Commons	RDA P16	19/04/2021	Scientific Community	https://www.sshopencloud.eu/events/esfri-clusters-rda-house-commons	N/A	**N/A**	**100**
SSHOC Open Science and Research Data Management Train-the-Trainer bootcamp at IASSIST2021	training at IASSIST2021	10-12/05/2021	Scientific Community & Industry	https://www.sshopencloud.eu/events/sshoc-open-science-and-research-data-management-train-trainer-bootcamp-iassist-pre-conference			**54**

Monthly Call - SSH Training Community - May	training monthly call	18/05/2021	Scientific Community	Via Training mailinglist	N/A	**N/A**	**11**
Presentation on integrating SSHOC services into EOSC through EOSC Enhance	Internal EOSC Enhance & SSHOC meeting	19/05/2021	Scientific Community	Internal	Internal	**N/A**	**21**
SSHOC Workshop: Exploration of Society Through the Lens of Labour Market Related Documentation	Helsinki Digital Humanities Hackathon #DHH21 - training	19/05/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-workshop-exploration-society-through-lens-labour-market-related-documentation	https://www.youtube.com/watch?v=CX-ZhLYmLa0&t=6s	**1300**	**65**
SSHOC workshop: ParlaMint – exploring societal issues through comparable corpora of parliamentary debates	Helsinki Digital Humanities Hackathon #DHH21 - training	19-28/05/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-workshop-par%C2%ADlamint-%E2%80%93-exploring-societal-issues-through-com%C2%ADpar%C2%ADable-cor%C2%ADpora-par%C2%ADlia			**65**
Round Table of Experts on Data Citation	webinar	20/05/2021	Scientific Community, Industry	https://sshopencloud.eu/events/round-table-experts-data-citation	N/A	**N/A**	**50**
Workshop: SSHOC archaeological case study Workshop - The Roman theatre in Catania from survey to interactive 4D visualisation	webinar	25/05/2021	Scientific Community, Industry	https://sshopencloud.eu/events/sshoc-archaeological-case-study-workshop-roman-theatre-catania-survey-interactive-4d	https://www.youtube.com/watch?v=Nz0Q3HORgf4	**22**	**33**
SSHOC Dataverse translation workshop	webinar	02/06/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-dataverse-translation-workshop	https://www.youtube.com/watch?v=WilxneyJORU&t=1s	**25**	**29**
ESFRI Science Clusters' Long Term Commitments to Open Science	Joint cluster & ESFRI webinar	11/06/2021	Scientific Community	https://sshopencloud.eu/events/esfri-science-clusters-long-term-commitments-open-science	N/A	**N/A**	**114**
SSHOC Workshop: Data Citation in Practice	training	15/06/2021	Scientific Community & Industry	https://sshopencloud.eu/events/sshoc-workshop-data-citation-practice	https://www.youtube.com/watch?v=16JD2ekW_Oo	**55**	**36**
SSHOC webinar: SSHOC'ing Drama in the Cloud – encoding theatrical text collections and the added value of SSHOC & CLARIN services.	LIBER 2021 - training	23/06/2021	Scientific Community	https://www.sshopencloud.eu/events/sshoc%E2%80%99ing-drama-cloud	https://www.youtube.com/watch?v=KlmI3C20KiE&t=1s	**31**	**47**

Onboarding Citizen Science and the role of research libraries: barriers and accelerators	LIBER 2021	23/06/2021	Scientific Community	https://sshopencloud.eu/news/onboarding-citizen-science-and-role-research-libraries-barriers-and-accelerators-post-event	https://www.youtube.com/watch?v=clNWqLgObbg	**66**	**50**
SSHOC Vocabulary Initiative - What users want (ICTeSSH 2021 SSHOC session)	ICTeSSH 2021	28/06/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-vocabulary-initiative-what-users-want%C2%A0ictessh-2021-sshoc-session	https://www.youtube.com/watch?v=NShl2fr4Uzs	**39**	**108**
Monthly Call - SSH Training Community - July	training monthly call	06/07/2021	Scientific Community	https://sshopencloud.eu/events/monthly-call-ssh-training-community-july	N/A	**N/A**	
SSHOC Dataverse Translation follow-up event	webinar	08/09/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-dataverse-translation-follow-event	N/A	**N/A**	**14**
SSHOC webinar: Showcase your survey for free on the EMM Survey Registry	training	20/09/2021	Scientific Community	https://www.sshopencloud.eu/events/sshoc-webinar-showcase-your-survey-free-emm-survey-registry	https://www.youtube.com/watch?v=zz2kucs5uoA	**22**	**11**
Workshop: Providing canonical training materials for secure data facility professionals	training	21/09/2021	Scientific Community	https://sshopencloud.eu/events/sshoc-workshop-providing-canonical-training-materials-secure-data-facility-professionals	https://www.youtube.com/watch?v=svx-n4LEh6M	**15**	**38**
Monthly Call - SSH Training Community - October	training monthly call	07/10/2021	Scientific Community	https://sshopencloud.eu/events/monthly-call-ssh-training-community-october	N/A	**N/A**	**11**
SSHOC 6th Consortium meeting	online meeting	5-6/10/2021	Scientific Community, Policymakers & Industry	https://www.sshopencloud.eu/events/6th-sshoc-consortium-meeting	N/A	**N/A**	**108**
SSHOC Workshop: Data Protection in research practice: The GDPR and the ELDAH Consent Form Wizard	training (hybrid)	13/10/2021	Scientific Community	https://www.sshopencloud.eu/events/sshoc-workshop-data-protection-research-practice-gdpr-and-eldah-consent-form-wizard	https://www.youtube.com/watch?v=lzP60vKnho0	**22**	**34**
Workshop SurveyCodings	webinar	03/11/2021	Scientific Community, international and national surveys	https://twitter.com/SurveyCodings	N/A	**N/A**	**11**

SSHOC Workshop: FAIR SSH Data citation: practical guide	training	03/12/2021	Scientific Community	https://www.sshopencloud.eu/events/fair-ssh-data-citation-practical-guide	https://www.youtube.com/watch?v=dRMAnuxvY88	**44**	**49**
Monthly Call - SSH Training Community - November	training monthly call	11/11/2021	Scientific Community	Via Training mailinglist	N/A	**N/A**	**75**
SSHOC Dataverse Translation follow-up event	webinar	07/12/2021	Scientific Community & Policymakers	https://sshopencloud.eu/events/sshoc-dataverse-translation-follow-event-0	https://www.youtube.com/watch?v=WiIxney3ORU	**25**	**13**

Table 19. *SSHOC attended events in Year 3 (2021)*

Year 3						
SSHOC at Third Party Events						
Event	**Title**	**Activity**	**Date**	**Link**	**Target Stakeholder**	**Stakeholders Engaged**
Seminar by La Plateforme universitaire des données de Paris Nanterre (PUDN) for migration data	EMM Survey Registry	Present the EMM Survey Registry and the French EMM surveys that will be included in the registry	14/01/2021	https://epnr.parisnanterre.fr/seminaire-de-la-pudn-donnees-sur-les-migrations-986349.kjsp ; https://halshs.archives-ouvertes.fr/halshs-03110814	Scientific Community	**50**
InGRID2 expert workshop, 'The Identification and Monitoring of Vulnerable Groups in the Labour Market: Session 1 - Data Recycling'	EMM Survey Registry	Present the challenges of harmonising EMM survey data using metadata from the EMM Surrvey Registry via the presentation "Challenges in the harmonisation of survey data on ethnic and migrant minorities in Europe: the Ethmigsurveydata approach"	28/01/2021	https://www.inclusivegrowth.eu/expert-workshops/call-36-expert-workshop-uva ; https://www.inclusivegrowth.eu/files/call-36/UvAExpertWorkshop_Day1_Session1_Morales.pdf	Scientific Community	**NoData**
49th CIDOC CRM & 42nd FRBR CRM sig meeting	SSHOCro	49th CIDOC CRM & 42nd FRBR CRM sig meeting	08-11/03/2021	http://www.cidoc-crm.org/Meeting/49th-cidoc-crm-42nd-frbr-crm-sig-meeting	Scientific Community	**55**
Digital technology and heritage - Challenges and issues	Project valorisation experience: Aïoli collaborative platform	The conference, organised by the French National Research Agency and JPI Cultural Heritage in collaboration with the French Ministry of Culture, was open to IT and heritage specialists in the field of digital heritage. On this occasion, the MAP laboratory made a presentation entitled: "Project valorisation experience: Aïoli collaborative platform" which is available online and translated into English.	11-12/03/2021	https://anr.fr/fr/actualites-de-lanr/details/news/conference-en-ligne-numerique-et-patrimoine-enjeux-et-questionnements-actuels-les-11-et-12-mar/	Policymakers & Scientific Community	**NoData**

WWI Lecture on occupation databases	THE SURVEY QUESTION MEASURING OCCUPATIONS - SOLUTIONS FOR MULTI COUNTRY WEB SURVEYS	WWI Lecture on occupation database	12/03/2021	https://wageindicator.org/documents/20210312-web-surveys_occupation-measurement_tijdens_rev.pdf	Scientific Community	**50**
GenPopWeb2 network workshop	The survey question measuring occupations solutions for multi-country web surveys, Presentation for GenPopWeb2 network, 12 March 2021, Kea Tijdens	Presentation of multilingual occupation database	12/03/2021	https://www.ncrm.ac.uk/documents/Web%20surveys_occupation%20measurement_Tijdens_rev.pdf	Scientific Community	**50**
European COVID-19 Data Platform Fifth stakeholder meeting	ESS presentation	ESS presentation to stakeholders	15/03/2021		Scientific Community	**20**
RDA event: Rich Metadata for annotation of citations contexts and data-citations contexts	SSHOC	presentation at RDA workshop	21/03/2021	https://www.rd-alliance.org/rich-metadata-annotation-citations-contexts-and-data-citations-contexts	Scientific Community	**150**
CSDI 2021	A Sample Management Service for Cross-National Internet Surveys	Recorded presentation at CSDI 2021 online workshop	22/03-08/04/2021	https://csdiworkshop.org/2021-csdi-virtual-workshop-schedule/	Scientific Community	**205**
	Survey Translation 4.0	Presentation: "SURVEY TRANSLATION 4.0" at CSDI workshop (Keck et al.)	22/03-08/04/2021	(Only with registration: https://csdiworkshop.org/2021-virtual-csdi-workshop/)	Scientific Community	**NoData**
Local Time Machines project meeting	RESTORE	Onboarding RESTORE on Local Time Machines project	01/04/2021	https://www.timemachine.eu/ltm-projects/restore-smart-access-to-digital-heritage-and-memory/	Scientific Community	**NoData**
Online (Monthly seminar hosted by the groupe science ouverte of Sciences Po)		Showcase how the EMM Survey Registry helps make EMM survey data FAIR	09/04/2021	https://drive.google.com/file/d/1gqGMM2rTjb5TY7FbpuBRgdjjM3SWVU0g/view	Scientific Community	**10**
16th CESSDA Service Providers' Forum - agenda item 16.09 EC projects and CESSDA	Realising the Social Sciences and Humanities part of the EOSC	Presentation of EC projects CESSDA participates in - update	15/04/2021	overview, internal use only, not public	Scientific Community	**20**
ESFRI FENIX Workshop	Realising the Social Sciences and Humanities part of the EOSC	Presentation at ESFRI FENIX Workshop	21/04/2021	https://drive.google.com/file/d/1Xoux10dpDBK9tptoHXblc-NZj9r2R	Scientific Community	**70**

				UkW/view?usp=sharing		
IASSIST Board meeting	Report on European developments	Report on European developments to IASSIST board (with Anne Sofie Fink)	18/05/2021	https://drive.google.com/file/d/1EgMRltsklnvlwZfmB19E_l2dACRHDa4U/view?usp=sharing	Scientific Community	**20**
Research Council Norway Workshop on EOSC	Presentation of CESSDA and SSHOC to Research Council Norway	presentation	26/05/2021	https://drive.google.com/file/d/12fo0guLisrh8WE0qncpakPGYGpf1S46F/view?usp=sharing	Policymakers & Scientific Community	**60**
SSH integration and infrastructure? Meeting with the EC Cluster 2 team	SSH integration and infrastructure?	EC hosted meeting	31/05/2021		Policymakers & Scientific Community	**10**
ICRI2021 conference	Presentation of collaboration between public sector and academia	panel session on collaboration between academic and public sector research	01/06/2021	https://drive.google.com/file/d/1tMlnXa53eqpFLA-cD34lrU7iOzfZZoIB/view?usp=sharing	Policymakers & Scientific Community	**100**
	Trans-disciplinary collaboration	presenting SSHOC	02/06/2021	https://drive.google.com/file/d/1F7jDbtxlWaLlzIlIQEPch_AcOWwENfbn/view?usp=sharing		
	#SSHOCingCOVID	Virtual expo booth booklet	01-03/06/2021	https://sshopencloud.eu/events/sshoc-communities-fighting-covid-19 and https://icri2021.can.chime.live/cms/data/modules/biosResources/res-1151-7168.pdf		
Webinar on the EMM Survey Registry in Spanish	El Registro de Encuestas a Minorías Étnicas e Inmigrantes como herramienta para fomentar el conocimiento de las minorías en España	presentation & discussion	01/06/2021	https://www.youtube.com/watch?v=wFX5SOJUSpk&t=4726s ; https://ethmigsurveydatahub.eu/webinar-materials-emm-survey-registry-in-spanish-june-1/ ; https://zenodo.org/record/5045630	Policymakers, Scientific Community & Civil Society	**50**
EVA FLORENCE 2021 CONFERENCE	RESTORE: Smart Access to the Digital Heritage and Memory	Presentation & conference proceedings	14/06/2021	http://digital.casalini.it/9788859621591	Scientific Community	**NoData**
Bosnia and Herzegovina CREDI conference	The Benefits of Open Science and Long-Term Data Preservation in Social Science Research Confirmation	Presentation	23/06/2021	overview, restricted use	Scientific Community	**15**

LIBER 2021	Requesting Crowd Expertise: The SSH Open Marketplace and LIBER,	Poster	24/06/2021	https://liberconference.eu/liber-2021-presentations-posters/	Scientific Community	**208**
French language webinar organized and hosted by FAIRETHMIGQUANT	Le EMM Survey Registry à long-terme	presentation	24/06/2021	https://zenodo.org/record/5045866	Policymakers, Scientific Community & Civil Society	**40**
9th CESSDA GA		Presentation of EC projects CESSDA participates in - update	29/06/2021	overview, internal use only, not public	Policymakers & Scientific Community	**36**
ESRA 2021 conference	The future of SurveyCodings	presentation	02/07/2021	https://www.europeansurveyresearch.org/conferences/glanceProgram2021?sess=5	Scientific Community	**800**
	Religious denominations database	presentation	02/07/2021	https://www.europeansurveyresearch.org/conferences/glanceProgram2021?sess=5		
	The compilation of the [MCSQ]: Multilingual Corpus of Survey Questionnaires	presentation	10/07/2021	https://sshopencloud.eu/events/compilation-mcsq-multilingual-corpus-survey-questionnaires		
	Investigating the effects of machine translation and post-editing in the TRAPD: an experimental approach	presentation	11/07/2021	https://www.europeansurveyresearch.org/conferences/program2021?sess=18		
	Translatoin CTRL: Managing translation processes in the European Social Survey	presentation	11/07/2021			
CL 2021 in Limerick	The Multilingual Corpus of Survey Questionnaires MCSQ	presentation	14-17/07/2021	https://www.upf.edu/documents/235887980/237683133/CL2021/6ede8fde-0cb6-fbdb-5b22-acd423ca85a9	Scientific Community	**NoData**
17th ESS ERIC National Coordinators meeting	Realising the Social Sciences and Humanities part of the EOSC	presentation	15/09/2021	https://docs.google.com/presentation/d/1Tgzr7PF8KdAs592cPhMuW5FhSW-C3Rt8/edit?usp=sharing&ouid=105405843836349215338&rtpof=true&sd=true	Scientific Community	**25**
CLARIN Annual Conference Bazaar	Much Ado about Data Citation	presentation	28/09/2021	https://www.clarin.eu/content/clarin-bazaar-2021	Scientific Community	**60**

Sharing Digitally. Seminar on Digital Tools and Infrastructures	Sharing digital tools in context: the SSH Open Marketplace	presentation	29/09/2021	https://www.lvivcenter.org/wp-content/uploads/2021/08/Sharing-Digitally-DHS-29.09.2021-programme-participants-3.pdf & https://zenodo.org/record/5535742#.YYVEHboo9hE	Scientific Community	**40**
17th CESSDA Service Providers' Forum	Realising the Social Sciences and Humanities part of the EOSC	17th CESSDA Service Providers' Forum (6th and 7th October)	07/10/2021	closed meeting	Scientific Community	**23**
CESSDA Roadshow on Migration	EMM Survey Registry	Present the CESSDA DC in relation to the EMM Survey Registry at the CESSDA Roadshow on Migration	08/10/2021	https://www.cessda.eu/News-Events/News/CESSDA/CESSDA-Roadshow-on-Migration	Scientific Community	**60**
ESFRI Strategic Workgroup Meeting (SCI cluster)	N/A	ESFRI Strategic Workgroup Meeting (SCI cluster)	13/10/2021	closed meetig	Scientific Community	**10**
DARIAH-HR conference	DARIAH ERIC: Empowering Arts and Humanities Research on a National and International Level	Presentation at DARIAH-HR conference, included details of SSH Open Marketplace	15/10/2021	https://dhh.dariah.hr/en/programme/ & https://doi.org/10.5281/zenodo.5596904	Scientific Community	**70**
DARIAH-CZ national conference	A superhighway for the villages? The DARIAH research infrastructure for the arts and humanities, then, now and in the future	Presentation at DARIAH-CZ national conference, included details of SSH Open Marketplace	22/10/2021	https://lindat.cz/events/workshop2021	Scientific Community	**45**
OntoCommons Global Workshop (Ontology Commons addressing challenges of the Industry 5.0 transition)	SSHOCro	poster presentation	02/11/2021	https://www.ontocommons.eu/sites/default/files/SSHOC%20Reference%20Ontology.pdf	Scientific Community	**278**
EASSH General Assembly	SSHOC MoU	presented SSHOC MoU	04-05/11/2021		Scientific Community	**52**
EMNLP 2021, Conference on Empirical Methods in Natural Language Processing, Punta Cana, Dominican Republic	Sequence Length is a Domain: Length-based Overfitting in Transformer Models	Presentation of poster at EMNLP 2021 "Sequence Length is a Domain: Length-based Overfitting in Transformer Models"	09/11/2021	https://aclanthology.org/2021.emnlp-main.650/	Scientific Community	**50**
EURHISFIRM final review		Mention of SSHOC in review presentation	10/11/2021		Policymakers & Scientific Community	**20**

5th Joint SIGHUM Workshop on Computational Linguistics for Cultural Heritage, Social Sciences, Humanities and Literature	The Multilingual Corpus of Survey Questionnaires Query Interface	poster presentation & Conference proceedings	11/11/2021	https://aclanthology.org/2021.latechclfl-1.5/	Scientific Community	**NoData**
DHnord 2021	SSH Data Citation	Poster presentation	17/11/2021	https://www.meshs.fr/page/dhnord2021-aac	Scientific Community	**45**
1st TRIPLE International Conference	Panel — GoTriple in the EOSC ecosystem	Panel	22-23/11/2021	https://project.gotriple.eu/triple-international-conference-2021/	Scientific Community	**70**
European Values Study General Assembly	Surveycodings	Presentation	26/11/2021		Scientific Community	**49**
NSD anniversary	presentation of CESSDA & SSHOC	NSD anniversary	01/12/2021		Policymakers & Scientific Community	**210**
OpenCor	The Multilingual Corpus of Survey Questionnaires (MCSQ) interface	Presentation	03/12/2021	https://sites.google.com/view/opencor-2021/	Scientific Community	**NoData**
Sarajevo, BiH, virtual	Economic response and recovery from COVID-19 crisis - the value of data	Economic response and recovery from COVID-19 crisis - the value of data	03/12/2021		Policymakers & Scientific Community	**110**
Evidence Based Policymaking in Europe Summit 2021	Switching from policymaking to society's needs	presentation & panel	9-10/12/2021	https://sshopencloud.eu/events/evidence-based-policymaking-europe-summit-2021	Policymakers, Scientific Community & Industry	**220**

List of Figures

List of Tables