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Geosphere Infrastructures for Questions into Integrated Research



D1.3 Data Management Plan and project management software



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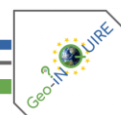


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Table of changes

Version	Date	Changes and/or comments
1.0	31.01.2023	First version submitted to the REA/EC
2.0	15.02.2024	Updated version after RP1 project review and assessment of the ethics advisor in February 2024. Section 2.1: mentions to specific service providers within the Helmholtz Association were removed, since they may vary during the project. However, the services remain under the scope of the Helmholtz IT Federated Services. Section 3, Table 1: update about personal data collected, for completeness. Section 3: paragraph about data deletion strategy added. Section 3.2: update about collected data (support letter for undergraduate applicants) Section 3.3: update nomenclature of dissemination activities, as defined in other project deliverables after version 1.0 of this document. Section 4: correction about integration of TA results (from M36 to M42). Section 4.1: update about survey of M6 and upcoming update deliverables (M18, M30 and M42).



1 Introduction

The Geo-INQUIRE Consortium places its best efforts to ensure that all the data collected, processed and produced by the project follows well established standards with respect to security and ethics, respecting all relevant regulations at the European level¹. All data handled within the Consortium is collected, processed and maintained lawfully, fairly and transparently with respect to its subjects, as well as kept safe from unwanted intervention. All data collected serves only for the purposes of implementing the work programme set out in Annex 1 of the Grant Agreement, and of complying with the obligations set out in the Grant and Consortium Agreements.

The data handled by the Geo-INQUIRE Consortium, relevant to the execution of its work programme, is divided into project data and service data.

- **Project data** refers to all data and information collected, processed, produced, managed and archived for the purposes of implementing the project goals and its related activities. It will be mainly contact information (of project participants, TA and training applicants), data resulting from internal surveys, project results (deliverables, papers, etc.), dissemination materials (video recordings, advertisement, website content, etc.). These data are owned by the project Consortium itself and its affiliated persons.
- **Service data** are all scientific data, products and software at the service levels, produced by the installations where the project support its maintenance, dissemination and curation for open access, but do not interfere on its processes within the existing/developing infrastructures. Service data are ruled by already existing data management policies and plans (at the services level), or will be ruled by updated data management plans harmonised within the scope of the project. These data are owned by the installations and persons participating in them.

As reference for this document (and within the Geo-INQUIRE project), certain definitions are necessary. *Research Infrastructures (RIs)*, also referred to as *Infrastructures*, consist of the high-level organisational institutions part of Geo-INQUIRE, which can be European Research Infrastructure Consortia (ERICs), Centre of Excellence (CoE), or other legal forms, that aggregate different installations in their scopes. *Installations*² are the individual components of the infrastructures, also referred to as virtual and transnational access providers. In turn, each installation provides, through the project, thematic services, data and products from relevant fields of the geoscience domain.

The present document “D1.3 Data Management Plan and project management software” presents the overall definitions about which data are foreseen to be handled within the project. Section 2 describes which software and services are used ensuring the proper implementation of the action. Section 3 describes which data are collected, processed and produced by Geo-INQUIRE, referred above as project data. Section 4 refers to the data at the installation levels, referred above as service

¹ Namely Regulation 2016/679 (EU) General Data Protection Regulation.

² As described in annex 1 – Table 3.7 of the Grant Agreement.



data, to which virtual and transnational access is supported within the project's framework. Although not foreseen at the present time, this deliverable may receive updates in the course of the project in the case that changes to the management of the project and service data will be required.

2 Project management software and related data

Project management software is considered all software and virtual services necessary to properly implement the project's work programme³. This includes virtual repositories for storage, maintenance and share of project documentation, communication channels such as email groups, chat channels and videoconference tools, survey and event management software, authentication services and project management tool. The Consortium prioritises the use of open source software and services in all areas possible; however, proprietary software is still used for specific processes.

Although management software is intended to serve the project until its conclusion, changes of individual tools can occur during the project's implementation. This may happen e.g. in the event that the provision of a service is discontinued due to higher-level decisions. In this case, the Project Management Office (PMO) will promptly inform the project members and an alternative service will be proposed and implemented.

Most of the project management software is offered by the Helmholtz Federated IT Services⁴ cloud (hereinafter referred to as HIFIS cloud services) via the Coordinator. In particular, HIFIS provides and brokers a portfolio⁵ of digital services for the Helmholtz member organisations and their collaboration partners, with in house storage distributed through the Helmholtz centres. The actual services used within the project are described in the following sections, additional services from the HIFIS may be used in the course of the project although not described here initially. HIFIS provides detailed documentation⁶ about its services and support via email about technical issues and advanced configurations to the PMO. Furthermore, the PMO creates additional ad hoc documentation for the specific use cases within Geo-INQUIRE.

2.1 Authentication system – Helmholtz AAI

The usage of the various services within the project Consortium is made possible by the Helmholtz-wide, internationally accessible authentication and authorisation infrastructure (Helmholtz AAI⁷). This AAI infrastructure enables login to all services using institutional credentials (Identity Provider in this case is the own institutions) when the institution is part of eduGAIN⁸ (~80% of the

³ Software, data and products related to the installations supported by Geo-INQUIRE do not fall into this category. Their relation to the Data Management Plan is described in Section 4 of this document.

⁴ <https://hifis.net/>

⁵ <https://helmholtz.cloud/services>,

⁶ <https://hifis.net/doc/>

⁷ <https://hifis.net/aai/>

⁸ <https://edugain.org/>



organisations involved in Geo-INQUIRE in 2022). It allows also to use social IdPs (e.g. ORCID, Github, Google, etc) which is used by partners affiliated to institutions not yet part of eduGAIN. This is a dynamic process and it is expected that the number of partner institutions joining eduGAIN will grow during the project. Figure 1 presents the Helmholtz AAI landing page, visible for the users to log in.

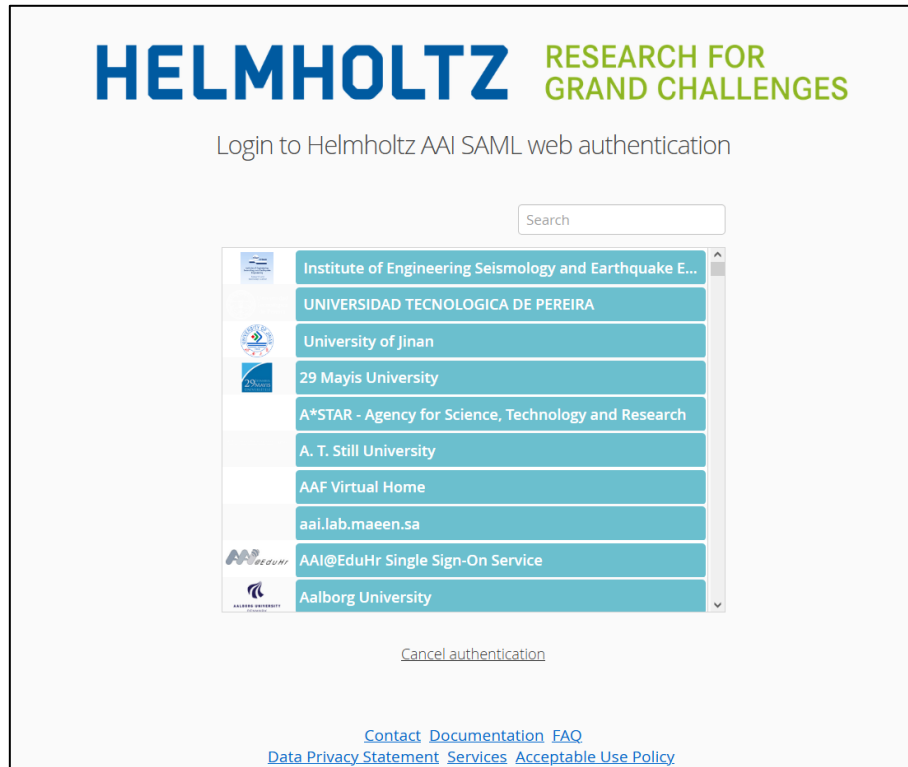


Figure 1 Login page where users can search for their own IdP (invitation and link sent by PMO/PMB to project members)

Access policies and rights within the HIFIS services are provided and administrated through the so-called Virtual Organisation (VO), which in this case is called Geo-INQUIRE. VO managers are members of the PMO, and this group has admin rights throughout the various project services and data. The PMO provides full rights to the Project Management Board (PMB) by creating a dedicated group within the VO called Geo-I_pmb, composed of the work package leaders. In addition to the PMO, all work package members are included into dedicated Geo-I_WP2-9 groups within the VO. All members of the project, invited and joining the Geo-INQUIRE VO are becoming part of it without rights/affiliation until not associated to a group. The VO has the following configuration schematically:

Geo-INQUIRE VO (admin group, Geo-I_pmo)

Geo-I_pmb

|__ **Geo-I_WP2, Geo-I_WP3, Geo-I_WP4, Geo-I_WP5, Geo-I_WP6, Geo-I_WP7, Geo-I_WP8, Geo-I_WP9**

|__ **Geo-INQUIRE all members**



Additional groups may be added and configured during the project as needed. Currently, the groups are maintained by the PMO and their ownership decided within the PMB. Each PMB member provides and maintains the list of collaborators within their own work package. Lists are maintained within the PMB and not shared with other project members. Master lists are the e-mail groups configured by the PMO@GFZ according to lists provided by PMB.

Users are invited to the various groups by the admin, first Geo-I_pmb and then in turn each WP group 2-9 followed by additional groups if needed during the project. For project related activities that requires registration of users, e.g. application for TA grants and training activities. Access through the Helmholtz AAI⁹ will be prioritised, in order to avoid registration of users and storage of additional identity information.

Cloud services and intranet

The project intranet area is based on NextCloud¹⁰, provided within HIFIS, allowing consistent file storage and maintenance, and synchronised editing of documents. Folders within the Geo-INQUIRE VO have been configured according to the management structure defined in the previous paragraph. PMB members have full rights for Geo-I_pmb and Geo-I_WP2-9 folders, whereas co-workers included into the Geo-I_WP2-9 folders have limited rights. A Geo-I_scratchspace folder is provided to all members of the Geo-INQUIRE VO with full rights to facilitate rapid exchange of information among partners across the WPs. In each folder, information about the usage and rights is provided (readme file displayed in the browser view also).

Online editing of files within the various folders is possible using the Collabora¹¹ suite integrated in Nextcloud. According to the access rules described above, all members of the various groups/folders can jointly create and edit documents, presentations, tables, etc.

Communication platform

A Mattermost^{12,13} instance from the HIFIS cloud services, is used as chat service for the Geo-INQUIRE team. All members joining the team can use open and pre-configured communication channels available for each work package (Geo-I_WP2-9), as well as the Town Square channel. PMB and PMO have private dedicated communication channels. Each member can customise and create additional channels at lower levels within the WPs.

⁹ Detailed technical documentation about the Helmholtz AAI is provided at <https://hifis.net/doc/helmholtz-aa1/howto-users/>.

¹⁰ <https://nextcloud.com/gdpr/>

¹¹ <https://www.collaboraoffice.com/>

¹² <https://helmholtz.cloud/services?search=mattermost&serviceDetails=svc-1be91786-b7e7-4fa3-81d9-1b95dd03cd52>

¹³ <https://docs.mattermost.com/about/certifications-and-compliance.html>



Survey tools

An online survey tool named LimeSurvey^{14,15}, instance from the HIFIS cloud services, is also used within the project to conduct surveys needed for the work programme. This service also inherits the configuration of the VO in terms of rights. Surveys are entered/created by the admins (PMO) and in some cases by the PMB. All other members and users are only expected to provide passively answers.

Event management

The Indico¹⁶ platform, from the HIFIS cloud services, is also available to manage events (e.g. Annual Meeting, General Assembly, Trainings, etc.). PMO administrates a dedicated Geo-INQUIRE category¹⁷ to which on demand for specific events (sub-categories) admin rights are provided to other project members. Terms of usage will be specified accordingly for the type of event organised through the platform.

Email groups and calendars

Emails groups, configured since the proposal preparation phase and hosted at GFZ, are used to organise email channels. These groups are the master tables (lists) used to configure the groups within the VOs and accordingly within all services in use. Groups are maintained and periodically reviewed by the PMB members. A public project calendar is also maintained by the PMO in NextCloud, with information about public events within and related to the project.

2.2 Grant and Consortium management

For the overall day-to-day management of the Grant and Consortium agreements, related to the monitoring of deadlines, activities and finances, the Project Management Office (PMO) uses the EMDESK software. The development of the software, as well as its data centres, are hosted in Germany and comply both with the GDPR and German national regulations¹⁸. Access to the project monitoring information will be restricted to the Project Management Board (PMB).

Information requested by the European Commission (EC) and the European Research Executive Agency (REA) will be provided by the PMO according to the timelines set out in the Grant Agreement or upon request of the Project Officer. The PMO and the GFZ reserve the right to collect any information from Beneficiaries, Affiliated Entities and Associated Partners, and provide it to the EC or REA upon their request.

¹⁴ <https://helmholtz.cloud/services?search=Limesurvey&serviceDetails=svc-8b90d666-2d49-4506-8924-fc4700da6a1d>

¹⁵ <https://www.limesurvey.org/>

¹⁶ <https://helmholtz.cloud/services?search=indico&serviceDetails=svc-ec78dddd-f44b-4062-a1a1-ba9c0ddaa70b>

¹⁷ <https://events.hifis.net/category/87/>

¹⁸ <https://www.emdesk.com/de/privacy-policy>



2.3 Videoconferences and organisation of meetings

Videoconference tools are an important component for the project implementation, both as an adaptation measure after the COVID pandemic and as an effort to reduce the project's carbon footprint by reducing travel. Partner organisations are allowed to use the tools available in-house and no specific licenses will be purchased for the project implementation. In any case, project partners are encouraged to look after compliance of their software and avoid using solutions that are not GDPR compliant. The Consortium will not collect information on which software is being used by its partner organisations.

For virtual meetings, hybrid and virtual events organised by GFZ in its premises, the Zoom¹⁹ platform will be used as in-house solution. Video material, such as recoding of project seminar presentations or training activities, will be only executed with the consent of the involved parties and their dissemination will be clearly communicated and mutually agreed.

3 Project data for the implementation of the action

Data collection for the project implementation consists of all data necessary to fulfil project goals, tasks and related activities, and is referred to as *project data*. These data will be kept on record by the Coordinator and/or relevant Consortium partners for at least 5 years after the project's conclusion (also for data under confidentiality obligations). The information flow within the project is regulated by access authorisation of project participants to individual groups, managed through the Virtual Organisation (VO). Each group member (of a Consortium body and work packages) has access to specific areas of the file sharing system, according to their roles in the project.

All personal data and/or data that could somehow relate to or identify individuals will be handled within the Consortium bodies, only for the purposes of fulfilling project tasks and activities. All data and information generated by the project for the execution of its tasks, personal or not, will be ruled at the Work Package level and, therefore, accessed by the Project Management Board (PMB). The PMB, as the highest executive body of the Geo-INQUIRE Consortium, will have access to the entire scope of data produced by the project, which includes e.g. email addresses contained in the individual mailing groups, raw data of performed surveys, application data for transnational access, among others.

Table 1 summarises the data collected and processed by Geo-INQUIRE, relevant to the project implementation. They are divided into personal, management and service data, and classified as restricted and/or public. Part of these data may be classified as confidential; more information is presented in the following sections.

¹⁹ <https://explore.zoom.us/en/gdpr/>



Table 1: Data collected and processed by Geo-INQUIRE

Description	Type of data	Usage
First and last name, email address and affiliation of project members	Personal data	Restricted: within the project for management and internal communication
First and last names, email, gender, nationality, phone number, position, scientific field; Name, legal status, department, address, city, post code and country of home organisation; Curriculum Vitae: of TA applicants (principal investigators and team members) and participants of dissemination activities organised by the project	Personal data	Restricted: within the project for the processing of TA applications and access grants, organisation and execution of dissemination and communication activities. Public: aggregated statistical information may be released in project deliverables. For accepted TA projects, names of applicants and their home organisation may be made public on the project website Note: for dissemination and communication activities, not always the entire set of information will be requested from users. However, this might vary depending on the activity being organised.
Project information about activities proposed for TA applications	Management data	Restricted: within the project for the assessment of TA applications Public: for accepted projects, project information such as title and abstract may be made public on the project website
Financial data of partners, especially related to project funds (including financial statements)	Management data	Restricted: within the project for the purposes of the Grant and Consortium management
General grant management data, including names, gender, contact, contractual information, among others, of project personnel	Management data	Restricted: within the project for the purposes of the Grant and Consortium management, limited to the information requested on the EU Portal
Metrics for the usage of installations, including number of users, location, among others	Service data	Public: aggregated data may be public through project deliverables
Description of installations supported by the project, including URLs	Service data	Public: textual descriptions and URLs may be publicly available on the project website, dissemination materials and deliverables
Raw data of internal project surveys related to the installations, their contents, capabilities and legal status	Service data	Public: aggregated information may be released in project deliverables



Table 2 presents a summary of the data produced by the project as results of its activities. It is divided into results and dissemination data and classified as partially restricted and/or public. Part of this data may be classified as confidential. More information about these data is presented in the following sections.

Table 2: Data produced by Geo-INQUIRE as result of its activities

Description	Type of data	Usage
Project deliverables and their related data and information	Results data	Partially restricted: project public reports may contain collected data. Internal project information will be released to public when necessary and with consent of their authors
Training materials, including textual information, software and data	Results data	Public: available to the training participants and TA grantees. Resulting training materials may be released in open platforms
Dissemination materials, including posters, flyers, brochures, website links, among others	Dissemination	Public: available to the wider public as project advertisement, advertisement of TA calls and training activities. Interaction with social media and open platforms of project partners is foreseen
Dissemination and/or training material including video recordings of presentations, presentation slides, among others	Dissemination	Public: upon agreement between the Consortium, its partners and external contributors Partially restricted: products within this category will need explicit consent of their owners and/or involved parties
Project results directly related to the implementation of the action and supported by project funds, including publications of journal papers, book chapters, DMPs, among others	Results data	Public: the project will encourage that all related publications should be available in open source platforms. Partially restricted: may apply according to the sensitivity of the presented results or specific community standards
Project results related to the TA grants, including resulting datasets, papers, among others	Results data	Public: specific publication and dissemination rules will apply to TA project results and their related data, including their feed back into project supported VA services Partially restricted: embargoes may apply to data and publications following internal rules of partner organisations



Data deletion strategy for personal data collected and stored by the consortium: collected personal data will be kept by the consortium as long as necessary to fulfil the purposes of its collection, such as preparation, execution, closure, assessment and reporting of communication activities, dissemination activities and TA application procedures. These data (e.g. registration data for training events and workshops, TA applications) will be archived using the project software and held at least until the end of the action, and then deleted when the project activities cease. Any data and information necessary for further reporting to the REA/EC, that might still be subject of auditioning or other assessment processes (e.g. TA projects accepted for funding), will be kept for at least five years after the end of the action (as mentioned above and set out in the Grant Agreement).

3.1 Data from project members and Consortium partners

Data collected by the project, necessary to ensure the proper functioning of the authentication and authorisation infrastructure (AAI), are email addresses of persons taking part in project activities. This information is cross-checked with first and last names and affiliation of individuals related to each email address, at the PMB level, and is not openly released neither within the project nor externally. Only persons directly involved in the implementation of project activities, related to Consortium partners, or selected external members (such as external advisors), are granted access to the intranet shared space and its related services.

General mailing groups, for the distribution of newsletters and other information about the project to the wide public, are handled by the PMO, with access for the PMB members. Email addresses are added to the general group as default for all project members, and upon request for external persons. Email addresses will be removed from any list and at any time upon request of their owners.

Data about the installations supported within Geo-INQUIRE will be collected regularly according to the definitions set out in the project deliverables, through surveys or other means defined by the work package leaders or the PMO. This may include data related to number of service users, geographical coverage, data volume, among others. All data provided by the installations to the project must be anonymised. For the execution of project activities, data about the individual installations may be transferred among project members (work packages, task leaders, etc.), as raw data or aggregated information, for the fulfilment of project activities.

Data collected by the PMO and PMB to fulfil project monitoring activities, including information requested by the EC and the REA for the project continuous reporting, may be made available to the members of the Project General Assembly (PGA), partially or completely, if deemed necessary by the Consortium management bodies, or if explicitly requested by the PGA itself.

Data that may be transferred within the project from EU to non-EU countries (namely Switzerland, Norway and United Kingdom) will be handled within GDPR rules, just as for external review and advisory activities and eventually applications for transnational access from outside the EU. Project members accessing data from these countries will have access granted through the Helmholtz AAI as well and, therefore, agree with its terms of use.



3.2 Transnational access data

For the execution of transnational access within Geo-INQUIRE, both internal and external data must be collected to fulfil the advertisement of TA calls and the evaluation of access proposals.

Internal data are mainly related to the installations providing access and associated contact persons, requested from the Consortium partners. It includes installation descriptions and capabilities, organisation legal names and addresses, responsible persons, contact information, among others. This information will be open on the project website as reference for the applicants.

External data relates to information provided by the applicants during the application process. The Consortium will only accept individuals applying through legal entities, and considers that any identity check necessary is performed at the host institution level. Identities will be verified through the Helmholtz AAI system, hence no personal data such as copies of identity cards or passports will be handled by the project. In addition, undergraduate applicants will have to provide a support letter from their supervisor.

Sensible data about proposed project ideas will be restricted and handled only internally by the respective board and panel members responsible for the evaluation of proposals. Application data will be available to the Technical Evaluation Boards (TEBs) of the respective work packages for the feasibility checks, and to the Transnational Activity Review Panel (TARP) for the decisions on access grants.

About the selected projects, the Consortium will collect and provide to the European Commission, through the Grant Management system, information about the researcher and their activity. This includes the first and last name, gender and nationality of the principal investigator, name, country and legal status of their home institution, internal application identifier and its activity domain. Moreover, for selected projects, information such as names of principal investigators and/or teams, title and abstract of their projects may be published in the project website. Applicants will provide their consent for such by accepting the calls' terms and conditions during the application process.

3.3 Dissemination and communication activities

For the proper execution of dissemination and communication activities, personal data of potential participants may be collected for communication and selection purposes. Different sets of data may be collected for the various planned activities, as described below.

- *Open Activities*, such as workshops, training events, community building activities, etc., either on-site, hybrid or virtual modes. Data such as first and last names, gender, email address, affiliation and career stage might be collected. They will be used to identify the users, provide information about the activity itself (advertisement, connection links, content, etc.), to generate anonym statistics about participants (gender, location of home organisations and career stage), and gather user feedback.



- *Summer Schools*: a minimum set of data will be collected as for *Open Activities*. In addition, participants shall provide a support letter from their home organisations to ensure the transfer of funds to support users (travel and subsistence costs) and/or a motivation letter and a CV for selection purposes. Applicants may be subject to a selection procedure similar to the TA.
- *Personalised trainings*: applicants will undergo a similar procedure as for TA applications and be subject to an evaluation procedure within the TEB and the TARP. Similar user data will be collected.
- *Communication activities*: such as project seminars or question and answer sessions, these activities are intended to reach both a wider public and research communities involved in specific topics. Information will be provided through the project general mailing list and may be disseminated by individual users without the control of the Consortium. Data collected by the organisers may include first and last names and email addresses of participants taking part in the activities and will not be publicly released.

Furthermore, information such as presentations, video and advertisement materials, resulting from the activities, may be publicly released under open licenses and with the consent of their owners.

3.4 Project website

The project website²⁰ is hosted by the German Research Centre for Geosciences (GFZ²¹), the project coordinating institution, and follows well-established institutional best practices with respect to its Terms of Use and compliance to the General Data Protection Regulation (GDPR²²). It provides general information about the project, its work plan, partner organisations and their installations, ongoing project activities, advertisement of transnational access calls and their respective rules, training activities, and general newsfeed.

Information openly released on the website is owned by the Geo-INQUIRE Consortium and will be disseminated as internally agreed e.g., within the project communication strategy. It is defined that content from the website, such as advertisement of transnational access and training activities, will be also disseminated by project partners through their own communication channels.

The Consortium is not responsible for the completeness and veracity of information provided on external websites that may be linked within the Geo-INQUIRE website, such as institutional websites of the partners institutions.

²⁰ <https://www.geo-inquire.eu/>

²¹ <https://www.geo-inquire.eu/legal-notice/>

²² <https://www.geo-inquire.eu/data-protection/>



4 Service data of individual installations

Service data are all scientific data, products and software at the installations level, produced by the project partners and associated persons, where the Geo-INQUIRE supports their maintenance, dissemination and curation for open access, but does not interfere with the processes within the infrastructures. Service data are ruled by already existing data management policies and plans, or will be ruled by updated data management plans harmonised within the scope of the project. These data are owned by the service providers (installations) or by the original creators participating to the installation, e.g. selected principal investigators or teams taking part to transnational access.

Results of selected transnational access (TA) projects, such as papers, datasets (raw and processed), reports, etc., must contain an open license and be made available to the public after the project conclusion. These will be fed back into other virtual access (VA) installations supported by Geo-INQUIRE. Specificities about project outputs and licensing will be provided to and accepted by the TA participants within the call's terms and conditions. The public release of results may undergo embargo periods, depending on internal rules of TA participants organisations. Embargo periods may be decided on a case-by-case basis, but all the data should be archived and made available via the infrastructures latest by the project month 42.

4.1 Harmonisation strategy

Most of the installations involved in Geo-INQUIRE belong to a larger infrastructure (e.g. EPOS, EMSO, ECCSEL, CHEESE, ARISE, European Geological Surveys, etc.)²³, where sustainable data management policies are discussed and implemented through well-structured governance processes. For the installations being formally included in one of the infrastructures during Geo-INQUIRE's implementation, the actual process of that infrastructure will apply. For extension/new services or simply for services not having yet a formal affiliation to an infrastructure, WP6²⁴ and WP7²⁵ will support the development of dedicated DMPs following the general FAIR and Open Science principles and in line with the infrastructure rules, and with guidelines for technical implementation and interoperability, such as for metadata.

Geo-INQUIRE will be liaising between the European Commission and the infrastructures to foster the adoption of new guidelines (if any and relevant) during the course of the project, in order to achieve a consistent and harmonised implementation for the installations involved. Service data will be available through the responsible infrastructures beyond the project's lifetime and according to their own sustainability plans.

²³ European Plate Observing System (EPOS-ERIC), European Multidisciplinary Seafloor and Water Column Observatory (EMSO-ERIC), European Carbon Dioxide Capture and Storage Laboratory (ECCSEL-ERIC), Centre of Excellence for Exascale in Solid Earth (CHEESE-CoE), Atmospheric dynamics Research InfraStructure in Europe (ARISE).

²⁴ WP6: Access and harmonisation of integrated research infrastructures services for next generation data, services and products.

²⁵ WP7: FAIR data management, legal compliance and impact assessment.



Strategic matters will be discussed within the Services Implementation Board (SIB), a governance body within Geo-INQUIRE. The board is composed of representatives of the main infrastructures involved in the project and will consult other consortium bodies and work packages on high-level issues related to the integration of installations into the existing RIs and interoperability of services among RIs. Synergies between project partners and other European initiatives such as the Strategic Forum on Research Infrastructures (ESFRI), the Environmental Research Infrastructures (ENVRI) community and the European Open Science Cloud (EOSC) are also part of the harmonisation strategy.

The present action, being limited to four years, will support the harmonisation of data management strategies where needed and consistently throughout the infrastructures involved. The clear target is to enable a wider usage and integration of the data produced by the installations in the European and global contexts. The status of infrastructures involved in Geo-INQUIRE was assessed in a project-wide survey with all the participating installations and reported at M6. Status updates are foreseen at M18, M30 and M42. Information about the individual DMPs and their statuses are also analysed.

Although many of the installations inherit rules, strategies, and best practices with respect to FAIR data management from the overarching research infrastructures, the latter themselves rely on internal bodies regarding the governance of the relevant open data licensing and management policies. As such, a further harmonisation at this level is necessary and will be conducted (by WP7) through the engagement of the participating infrastructures. These harmonisation efforts at the RI levels will cover all aspects of the FAIR (software and data) principles, e.g., from licensing issues to persistent identification. Additional attention will be paid to the establishment of a harmonised DMP template for research infrastructures, thereby considering that such DMPs demand more explicit attention to underlying sustainability aspects as opposed to the mere standard templates in use at deeper levels (e.g., the long tail of science).

4.2 Licensing

The Geo-INQUIRE Consortium is committed to actively foster the implementation of open science guidelines²⁶, though promotion of FAIR and open data whenever and wherever possible (“as open as possible, as closed as necessary”). In accordance with national policies investigated and harmonised through WP6 and WP7, the project actively promotes open and licensed access to data and scientific publications. The recommended license is the standard Creative Commons²⁷ CC-BY 4.0 and later. Exceptions are expected for special datasets. In such cases, WP6 and WP7 will negotiate the best data management strategy in accordance with national rules, infrastructure needs, and the project’s work programme.

²⁶ <https://en.unesco.org/science-sustainable-future/open-science/recommendation>

²⁷ <https://creativecommons.org/>



5 Ethical aspects

Personal data produced and managed by the project management software, to be collected within the project, will only be stored, analysed and used anonymously according to the GDPR. The individuals will be informed comprehensively about the intended use of the information collected from them and have to agree to the data collection for the project purposes with their active approval in the form of written consent or via web forms embedded in the software. The identity of any individual interviewed or engaged in the project (e.g. by email correspondence) will be protected by this anonymisation of the data. The anonymisation process guarantees that no particular individual can be identified anymore. The Beneficiaries in charge of delivering interviews and questionnaires, will guarantee that this process, including the information for the individuals about data protection issues, fully complies with national and EU laws. Any data collection activity will have to gain the approval of the Ethics advisor/board of the responsible Beneficiary (where applicable).

6 Final considerations

Any data and/or information that may come to be collected, processed or disseminated by the Geo-INQUIRE Consortium and that is not covered within this version of the Data Management Plan, will follow the same standards and procedures proposed here. In the case of unexpected issues related to the data, information or content handled by the Consortium, the ethics advisor and ethics committees of the research infrastructures will be consulted, an action plan will be proposed and the Consortium partners will be informed.

Necessary changes to the Data Management Plan will be reported to the Project General Assembly (PGA) within the PMO annual reports. Upon request of the PGA or of individual project partners, this plan can be revised at any time during the project duration. Information about the newly developed Data Management Plans and/or harmonisation actions for individual installations, created within the scope of the project, will be reported within relevant deliverables of WP6 and WP7.

