

DARIAH Services Policy

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Table of acronyms

API	Application Programming Interface
BoD	Board of Directors
CTO	Chief Technology Officer
DARIAH	Digital Research Infrastructure for the Arts and Humanities
DCO	DARIAH Coordination Office
EOSC	European Open Science Cloud
ERIC	European Research Infrastructure Consortium
FitSM	FitSM is the name for a family of standards for lightweight IT service management (ITSM) - https://www.fitsm.eu/
GA	General Assembly
HAL	Hyper Articles en Ligne
IT	Information Technology
JRC	Joint Research Committee
KPI	Key Performance Indicator
NC	National Coordinator
NCC	National Coordinator Committee
OLA	Operation Level Agreement
SB	Scientific Board
SLA	Service Level Agreement
UNR	Unified National Reporting
WG	Working Group

Services as DARIAH resources

The distributed and polymorphic nature of DARIAH as a consortium, and its social and technical components as an infrastructure makes it pertinent to define its perimeter. This is especially true with respect to the various resources that are created and used in its environment. The term **“DARIAH resource”** does not indicate direct ownership or control by the DARIAH consortium over that resource but rather it being **created and/or used within the broad DARIAH ecosystem**, i.e. some actor (person or institution) related to DARIAH being involved in the creation or provision of that resource. A large majority of DARIAH resources are produced or offered by individual institutions in the member countries and reported by their respective national consortia. Besides that, there are resources produced under DARIAH activities by DARIAH Working Groups, funded by DARIAH Theme or by DARIAH and affiliated entities within EU projects.

For DARIAH, as an operational ERIC¹ contributing to the European Open Science Cloud, a comprehensive inventory of the “ecosystem of resources” produced and used in the community is crucial to further build a “coherent RI ecosystem”² for the benefit of researchers. This leads to: a) position DARIAH as a broker or knowledge hub spreading best practices within and between communities; b) improve the integration and/or interoperability of the resources, by identifying and closing incompatibility gaps.

6 main DARIAH resource types are currently identified.

Resource Type	Definition ³
Publication	Research results published in academic journals or non-peer-reviewed publication repositories such as Zenodo.
Dataset	A dataset is an organised collection of data. It is generally associated with a unique body of work, typically covers one topic at a time and is treated as a single unit by a computer.
Training Material	Tutorials, lessons or didactic resources with specific learning outcomes, e.g. explaining how to use a tool.
Software	Source code or software package developed and/or used in a research

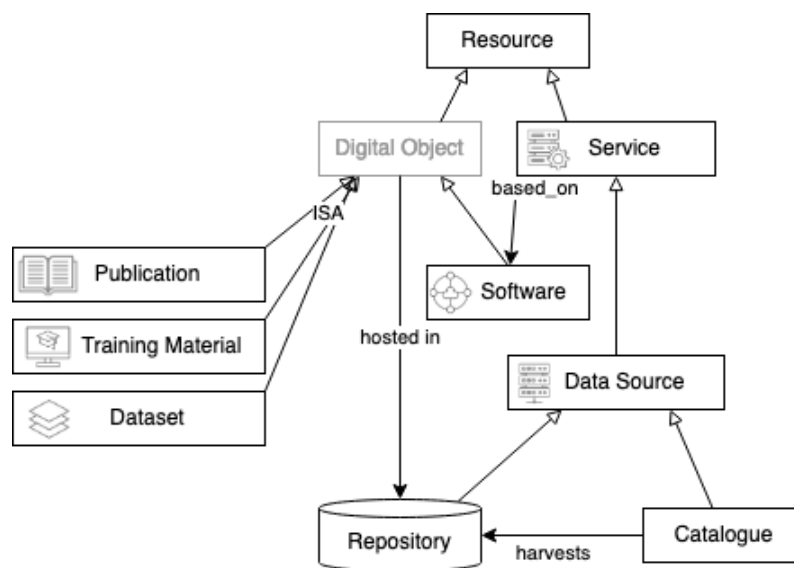
¹ See ESFRI Roadmap 2021:

<https://roadmap2021.esfri.eu/projects-and-landmarks/browse-the-catalogue/dariah-eric/> (accessed September 2022).

² See Making Science happen: https://www.esfri.eu/sites/default/files/White_paper_ESFRI-final.pdf (accessed September 2023).

³ EOSC serving as reference frame, we aim to align the categorisation of resources with that devised in EOSC Exchange, and in the SSH Open Marketplace (catalogue from the SSH Open Cluster. Definitions are coming from the SSH Open Marketplace items types (<https://marketplace.sshopencloud.eu/about/data-population#types-of-content>), from the EOSC Exchange glossary (<https://wiki.eoscfuture.eu/display/EOSCSMS/SPM+Guideline-02%3A+EOSC-Exchange+Definition+of+resource+types#SPMGuideline02:EOSCExchangeDefinitionofresourcetypes-5.Researchproductresourcetype>) and from the OpenAIRE types (<https://monitor.openaire.eu/methodology/terminology#entities>)

	context <i>Note:</i> In distinction to services, which are available as web applications or APIs and can be used directly, software needs to be downloaded and installed or executed on the side of the user, to be used.
Service	Web application or API which can be accessed online/via Internet.
Data source	A Data Source is a specific Service that exposes (meta)data about different types of Digital Objects. Examples of data sources are repositories, scientific databases, catalogues, etc.



DARIAH resources conceptual view

Taking into account the heterogeneity of the national configurations, we propose **multiple pathways** to collect information about DARIAH resources. These pathways can be defined as flows of information about different types of resources between existing components of the broader ecosystem. The defined pathways are governed by two premises:

- make maximal use of existing infrastructure components (repositories, catalogues, registries, etc.), primarily in the EOSC context
- capture the breadth of the field, not disqualifying resources (esp. software and services) which may be not mature enough for the primary pathway.

The individual pathways are further detailed in the upcoming Guidelines for handling DARIAH resources (referred to as “Guidelines” henceforth). Complementary, there are a number of further relevant policy documents that govern the management of DARIAH resources. **The present document focuses on DARIAH Services and describes the coordination and management of the DARIAH distributed infrastructure in terms of service offer and provision across the network.**

Roles

In this DARIAH service policy we distinguish the following roles:

- **Process Owner** - in FITSM: an actor with overall accountability for the operation of a specific process. DARIAH Process Owner has the decision power regarding onboarding and offboarding a service, taking into consideration the coherence of the overall DARIAH service offer.
- **Service Provider** - an organisation hosting a service, responsible for ensuring its availability. For DARIAH services, this could be a partner institution, a cooperating partner or a third party (for instance, a commercial provider). DARIAH ERIC does not act as a service provider itself.
- **Service Owner** - in FITSM: The person responsible for a specific (Information Technology (IT)) service offered by the service provider. This role is typically taken on by individuals with management experience. In the context of DARIAH, this can also be a group of people (decision body) or an institution (represented by one or more persons).
- **Technical Contact** - a person or group of persons (this could also be via a functional account or a helpdesk system) responsible for the technical provisioning of a service.
- **Portfolio Manager** - the DARIAH Chief Technology Officer (CTO) as part of DCO and supported by its other members is the main responsible for the overall portfolio management, oversight of the processes and reporting to the DARIAH Board of Directors (BoD).
- **Users** - the audience of the DARIAH services. Depending on the service, it can be a global audience, meaning that the services are open to anyone, or a more restricted audience. In some cases, users need to be authenticated to access services listed in the DARIAH Service Catalogue.

What is a DARIAH service?

DARIAH is a distributed infrastructure with loose connection between the distributed nodes of its network and a central shared coordination⁴.

Based on DARIAH history⁵ and a wide consultation of DARIAH bodies (General Assembly (GA), SB, National Coordinators Committee (NCC), JRC) between 2019 and 2023, the following 3 categories of DARIAH services have been ultimately chosen to categorise the services within the infrastructure.

⁴ See OECD 2014 report International Distributed Research Infrastructure: Issues and Options, p.10 for the terms definition: <https://www.oecd.org/science/international-distributed-research-infrastructures.pdf> (accessed September 2022).

⁵ See Barbot, Laure, Roi, Arnaud, Scharnhorst, Andrea, Durco, Matej, Fischer, Frank, Kalman, Tibor, Moranville, Yoann, Parkola, Tomasz, Garnett, Vicky, Edmond, Jennifer, & Toth-Czifra, Erzsebet. (2021). Towards a concise DARIAH service strategy: 2020 Reflections - White Paper. Zenodo. <https://doi.org/10.5281/zenodo.4621287> (accessed February 2023).

- **Core Service** is a mature service owned by DARIAH-ERIC contributing to the ability of the infrastructure to carry out its mission⁶. These are primarily services enabling communication with various audiences, and registries or catalogues of various kinds of resources. Examples: the SSH Open Marketplace, DARIAH-Campus.
- **Community Service** is a service owned by one or more DARIAH partner institutions. These services usually support local capacity building and scientific instrumentation. Examples: IMA - Image annotation tool, DARIAH-DE Geo-Browser or Backbone Thesaurus (BBT).
- **Internal Service** is used internally to support administrative activities of the network. Its provision is mostly ensured by private suppliers and rarely within the network, but it should nonetheless be noted that they are monitored to ensure the best investment and have exit strategies from the private suppliers where possible.

As any other service, **services created within an EU project or by DARIAH WGs or funded under the DARIAH Theme Call can become candidates for a DARIAH service**, if continuous provisioning of the service is ensured by a Service Provider and are adopted by either a DARIAH Partner or by the SMT as Service Owners. In cases where the Service Owner and/or the Service Provider are outside of the DARIAH network, dedicated (Service Level) Agreements or any other way to justify the affiliation to the DARIAH network can be established on-demand. Examples: the Consent Form Wizard⁷ created by the DARIAH ELDAH Working Group; services developed within projects that remain “orphan” when the project comes to an end.

DARIAH services requirements

Requirements to be considered a DARIAH service are based on EOSC onboarding service criteria⁸ and Humanities at Scale project work related to DARIAH in-kind contributions⁹.

<i>Core</i>	<i>Community</i>
Branding	
DARIAH-EU branding It is mandatory to display DARIAH affiliation using the DARIAH logo (and also the DARIAH style guide where possible)¹⁰. Ideally, available under a *.dariah.eu domain, except when specific collaborations, or other	DARIAH-EU and/or DARIAH national branding It is mandatory for national services to use DARIAH branding (EU and/or national) as it contributes to the coherence of the distributed infrastructure.

⁶ See DARIAH mission and vision: <https://www.dariah.eu/about/mission-vision/> (accessed September 2022).

⁷ Consent Form Wizard: <https://consent.dariah.eu/> (accessed October 2023)

⁸ See EOSC inclusion criteria: <https://wiki.eoscfuture.eu/display/PUBLIC/EOSC+Exchange+inclusion+criteria> (accessed October 2023)

⁹ Lisa de Leeuw, Femmy Admiraal, Matej Ďurčo, Nicolas Larousse, Michael Mertens, et al.. D5.1 Report on Integrated Service!Needs: DARIAH (in kind) contributions - Concept and Procedures. [Other] DARIAH. 2017. [\(hal-01628733v2\)](#) (accessed June 2022)

¹⁰ See DARIAH Style Guide: <https://www.dariah.eu/about/documents-list/> (accessed June 2022)

external factors advocate for a dedicated/different domain (e.g. hypotheses.org, openaire.eu, sshopencloud.eu).	
Maturity	
Must be of a reasonable maturity, Technology Readiness 7 or above in order to be listed in the catalogue ¹¹	Also nascent services still in development, lower than TRL 7 are acceptable

DARIAH service management

Following standard IT service management frameworks¹², two main lists are used to manage and expose the DARIAH service offer.

DARIAH Service Portfolio

A portfolio is an **internal inventory** of all services - including those in preparation, live and discontinued as well as internal services - offered by an organisation or service provider, along with administrative information about these services, especially contacts of responsible persons.

As DARIAH is a distributed network, the Service Portfolio encompasses all services provided by organisations affiliated with DARIAH, as well as services used by DARIAH and provided by third parties.

The current DARIAH Service Portfolio is maintained here: [DARIAH_services](#).

The portfolio keeps track of the services' **status**:

- **Onboarded** - Service is active and in use and is listed in the DARIAH Service Catalogue.
- **Needs review** - Service needs attention, e.g. because it is down (not available although it should be), or some aspect of it changed and stakeholders need to be informed, or decision is due.
- **To be offboarded** - There has been a decision or request for a service not to be considered a DARIAH Service anymore. This status marks the transitional period until the service has in fact been discontinued as a DARIAH Service.
- **Offboarded** - Service is no longer considered a DARIAH Service, either because it is not operational, or is no longer relevant in DARIAH context (though it may still be available).

¹¹ More on Technology Readiness Levels:

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/faq;keywords=/2890%20for%20teh%20definitions.%20Minimum%20accepted%20value%20is%20%3E%20>. (accessed June 2022)

¹² See Barbot, Laure, Roi, Arnaud, Scharnhorst, Andrea, Durco, Matej, Fischer, Frank, Kalman, Tibor, Moranville, Yoann, Parkola, Tomasz, Garnett, Vicky, Edmond, Jennifer, & Toth-Czifra, Erzsebet. (2021). Towards a concise DARIAH service strategy: 2020 Reflections - White Paper. Zenodo. <https://doi.org/10.5281/zenodo.4621287> (accessed February 2023).

DARIAH Service Catalogue

A catalogue is a public **user facing list of live services** offered along with relevant information about these services. Not all the services from the portfolio go into the catalogue (see Procedures section below).

The current DARIAH Service Catalogue is accessible via the DARIAH website: <https://www.dariah.eu/tools-services/tools-and-services/> and built using data from the SSH Open Marketplace¹³.

Coherence of the DARIAH Service Offer

Because of the distributed and largely bottom-up nature of the services' that DARIAH offers, ensuring the **coherence of the portfolio** can prove challenging. DARIAH Services have different scopes and can play different roles in the distributed infrastructure. The Process Owner is primarily responsible for assessing the suitability of a given service with respect to the overall service offer. This assessment takes into account the following aspects: how instrumental a service is in the context of the DARIAH mission and strategy; which functionalities should be provided to the arts and humanities communities across Europe; and whether the given functionality may already be provided by other services in the portfolio.

To support this assessment, the DARIAH Service Portfolio includes the value proposition for each service and relevant metadata describing the services, such as EOSC service category¹⁴ or TaDIRAH activities¹⁵.

This comprehensive information feeds into regular analyses of the services offer regarding coverage of the research activities and research data lifecycle on the backdrop of user requirements¹⁶.

¹³ DARIAH Service Catalogue displays tools and services tagged with the "DARIAH national resource" keyword in the SSH Open Marketplace. Data is retrieved via the following Application Programming Interface (API) call:

<https://marketplace.sshopencloud.eu/search?order=score&categories=tool-or-service&f.keyword=DARIAH+National+Resource> (accessed February 2023).

¹⁴ <https://api.eosc-portal.eu/vocabulary/byType/SUPERCATEGORY> and <https://api.eosc-portal.eu/vocabulary/byType/SUBCATEGORY> (accessed Oct. 2023)

¹⁵ <https://tadirah.info/> (accessed June 2022)

¹⁶ See Barbot, Laure, Roi, Arnaud, Scharnhorst, Andrea, Durco, Matej, Fischer, Frank, Kalman, Tibor, Moranville, Yoann, Parkola, Tomasz, Garnett, Vicky, Edmond, Jennifer, & Toth-Czifra, Erzsebet. (2021). Towards a concise DARIAH service strategy: 2020 Reflections - White Paper. Zenodo. <https://doi.org/10.5281/zenodo.4621287> (accessed Feb 2022)

Procedures

Onboarding

Onboarding is the process of adding the service to the DARIAH Service Portfolio. This involves gathering corresponding information about the service, most importantly, contacts of responsible organisations and persons, as well as categorisation (status and type).

1. Process Owner, after consultation with the Service Owner, proposes a service for onboarding

<i>Core</i>	<i>Community</i>
Central governing bodies: Based on a wide consultation with other DARIAH bodies, BoD and SMT regularly define the DARIAH Strategic Plan ¹⁷ and related strategic actions (STRAPL) ¹⁸ . These documents include prioritisation of the needs for <i>core services</i> , as well as investigation plans for services in preparation.	National nodes: National Coordinators, based on consultation with national consortia, declare community services as contributions in the Unified National Reporting (UNR). Other services that have potential for the DARIAH community can be added to the portfolio by DARIAH bodies. (JRC can, for example, act as Process Owner for services created by DARIAH Working Groups).

2. The Portfolio Manager solicits all the relevant information about the service from the Process and Service Owners and Provider about the services and enters it into the portfolio.
3. Publication of service to DARIAH Catalogue. To avoid duplication of work in providing information (metadata) about services, the DARIAH Service Catalogue is built reusing data from the EOSC Catalogue and the SSH Open Marketplace. This means that publication to the DARIAH catalogue is mediated by the EOSC Catalogue or the SSH Open Marketplace (depending on the TRL level of the service).

<i>Core</i>	<i>Community</i>
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¹⁷ DARIAH Strategic Plan 2019-2026:

https://www.dariah.eu/wp-content/uploads/2019/08/Strategic-Plan_2019-2026.pdf (accessed June 2022)

¹⁸ DARIAH Strategic Action Plan 2019-2022:

<https://www.dariah.eu/wp-content/uploads/2020/05/DARIAH-Strategic-Action-Plan-II-2019-2022.pdf> &

DARIAH Strategic Action Plan 2022-2025:

<https://www.dariah.eu/wp-content/uploads/2022/07/DARIAH-Strategic-Action-Plan-III-2022-2025-final.pdf> (accessed Sept 2022)

Mature services (TRL 7 or above) - Portfolio Manager supports Service Providers in onboarding to EOSC Catalogue (cf. Guidelines).	
	Service Owner and/or Provider registers service to SSH Open Marketplace (cf. Guidelines).

Service operation

Once onboarded, DARIAH services are expected to be run and maintained by the Service Provider in a reliable manner. To this end, various organisational and technical measures are introduced to enable overview of the status, availability, and reliability of the services. These will differ depending on the service type.

Four main mechanisms are currently contributing to the DARIAH service operations.

Core	Community
Service or Operational Level Agreement (OLA) - contract between Process Owner and Service Provider detailing the terms of offering a service	
OLA between service provider(s) and DARIAH-EU MUST be in place.	No OLA expected, though there could be an OLA on a local level between the partner institution and an actual third-party provider An exception is made for services provided by partners outside of the DARIAH network. For these services, SLA between the provider and DARIAH-EU MUST be established.
Ideally, SLA/OLA SHOULD be implemented as part of the onboarding. Existence of an SLA/OLA is recorded in the DARIAH Service Portfolio.	
Regular review - check the validity of information about the service in the portfolio by Service Owner	
Annual review of the portfolio by the BoD and SMT, involves re-assessment of the status of services, including potential onboarding of new services, as well as the status of EOSC service integration¹⁹ A basis for the review is a status report prepared by the Portfolio Manager for	Annually by NCs in the course of compiling contributions and Key Performance Indicators (KPIs) for the Unified National Report (UNR).

¹⁹ See <https://eosc-portal.eu/eosc-providers-hub> and <https://marketplace.sshopencloud.eu/workflow/pig9Nt> for more details about EOSC integration.

submission to SMT (in consultation with other bodies), to be discussed e.g. during Annual Strategy Days.	
Monitoring - Automated continuous checks of the availability of the service	
Required. For services, onboarded to EOSC Catalogue this is done automatically by the EOSC Monitoring core service. For other services a dedicated <i>DARIAH Monitoring</i> service can be used.	Optional but strongly recommended. <i>DARIAH Monitoring</i> is offered for all DARIAH services cf. Guidelines
Analytics - Automated collection of usage of the service	
Required. Use of <i>DARIAH Analytics</i> service preferred.	Use of an analytics services is optional, but usage statistics are required for the UNR <i>DARIAH Analytics</i> service can be used. Cf. Guidelines

Offboarding

Offboarding means removing a service from the offer of DARIAH services. This could be either due to a discontinuation of the service²⁰, or due to a decision by one of the stakeholders that this service should not be considered as DARIAH service anymore (because it is superseded by another service, it is not used/useful anymore, etc.). In any case, the Portfolio Manager must be informed as soon as possible. Portfolio Manager themselves can also suggest the offboarding of a service in consultation with the relevant stakeholders.

An offboarded service is removed from the catalogue, but is kept in the portfolio with status "Offboarded" for completeness of historical record.

Offboarding procedure:

1. Upon discontinuation decision, grace period and final date for end of service is agreed upon between Service Owner, Service Provider and the Portfolio Manager.
2. The Portfolio Manager changes the status of service to "to be offboarded" in the portfolio.
3. The Service Provider assesses the archiving & redirecting needs to ensure proper discontinuation of the service and discusses best solutions with the process, Service

²⁰ It is to be noted that, based on Horizon Europe rules, consortium of a EU funded project should make sure the results of the project are available up to four years after the end of the project, so services supported by EU funded projects must follow the Horizon Europe regulation. See art. 16 Horizon Europe General Model Grant Agreement.

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf (accessed November 2023)

Owner and the Portfolio Manager. Special precautions are needed in the case of transfer to a new service.

4. The Service Provider turns off the service.
5. The Portfolio Manager changes the service status in the DARIAH portfolio to “offboarded”
6. In order to remove the service from the DARIAH Service Catalogue, the service entry in the EOSC Catalogue and/or the SSH Open Marketplace is updated accordingly.

Aspects to consider when discontinuing a service:

- **Save the data**

Any relevant data or content contained in the service SHOULD be exported in a readable, ideally structured and machine-readable form. Depending on the nature of the content, it can be published to a repository (e.g. DARIAH community in Zenodo²¹), or archived internally by DARIAH. The location of the archived data MUST be recorded in the portfolio.

- **Save the code**

If the service is based on some custom software solution, the latest version of this software SHOULD be made available via a git-repository (by default under the DARIAH-ERIC organisation at github²²), Zenodo or on Software Heritage²³. This should include at least information about the installation and deployment procedure.

Submitting websites to Internet Archive to preserve the full presentation layer is also recommended. The location of the archived code MUST be recorded in the portfolio.

- **Save the links**

Ensure that the domain and if possible links to the website are either redirected properly to a new service, or at least to an information (tombstone) page informing about the discontinuation of the service.

This is especially the case for all services under the **dariah.eu** domain.

²¹ DARIAH Zenodo Community: <https://zenodo.org/communities/dariah> (accessed November 2023)

²² DARIAH GitHub organisation: <https://github.com/DARIAH-ERIC> (accessed November 2023)

²³ Software Heritage: <https://www.softwareheritage.org/> (accessed November 2023)