



Software Heritage

Strategic Software Insights report for the ESFRI and European Science Clusters

Version 1.0 – 2026-09-22

<https://www.softwareheritage.org>

List of the authors

Short title	Strategic Software Insights: ESFRI and the European Science Clusters
Full title	Strategic Software Insights report for the ESFRI and European Science Clusters
Author	Roberto Di Cosmo (for the Software Heritage team)
Date	2026-09-22
Contact	Roberto Di Cosmo < roberto@dicosmo.org >

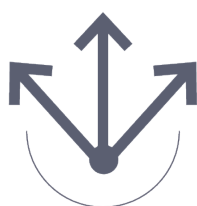
Contents

1	What this report says, in five numbers	3
1.1	Three things a research infrastructure can do this quarter	3
2	The forty largest projects	4
3	What was counted, and how we know	5
4	Where the software lives, and whose forge it is on	6
5	Your science cluster	8
6	Your country, and your institution	9
6.1	Which institutions	11
7	Who works with whom	13
8	What would be lost, and is not	14
8.1	Can this software be cited	14
8.2	Can this software be reused	15
9	What a research infrastructure can do next	16
9.1	Where to send someone who asks how	16
10	About Software Heritage	17
11	Appendix	18
11.1	Method, in full	18
11.2	Programming languages	18
11.3	The ten largest projects of each science cluster	19
11.4	The institutional domains of the perimeter	21
11.5	Technical information	22

1 What this report says, in five numbers

Software Heritage has collected, preserved and indexed the source code produced by the institutions of the ESFRI landscape and the five EOSC Science Clusters. This edition counts only projects a model judged individually, with a contributor at one of the institutional domains listed in the appendix, which define the perimeter.

1. **43,670 research projects** carry at least 25 contributions signed from an institutional address of the perimeter.
2. **2,356 of them can no longer be found where they were published**, and exist today only because they were archived. That is 5.4% of everything counted here.
3. **1,053 projects, 2.4%, declare how they wish to be cited**. The rest cannot be credited automatically in any bibliography, a solved problem left unsolved.
4. **6,505 projects received a contribution in the last twelve months**. The rest are not necessarily abandoned, but they are not moving.
5. **Most of this code lives on one commercial platform**, and the exceptions are institutional forges run by the infrastructures themselves.



11,147,459

Contributions



43,670

Software Projects

Active last 12 months: 6,505

Still crawled: 41,314



24,457

Contributors



1977-08-08
2026-06-04

Time Span

1.1 Three things a research infrastructure can do this quarter

Declare how your software should be cited. A `CITATION.cff` or a `codemeta.json` file at the root of a repository is a few lines, and it turns an unattributable artefact into a citable one.

Have your institutional forge archived. The section on your country names the most-used forge in each country. If yours is not yet crawled by Software Heritage, it takes one request, and everything on it is then preserved whether or not the forge survives.

Use Save Code Now for what is at risk. Any repository can be archived on demand, in seconds, by anyone. The projects in point 2 are the argument.

2 The forty largest projects

These are the forty projects of the perimeter with the most contributions from the institutions counted here, out of the 11,147,459 contributions the perimeter holds in total. Each row is a project, not a repository: its forks and mirrors in the archive are counted once, under the name of the project itself.

rank	project	contributions	science cluster
1	CMS experiment software (CMSSW)	283,644	ESCAPE
2	ATLAS experiment offline software (CERN)	195,464	ESCAPE
3	LHCb experiment software	74,363	ESCAPE
4	Koha library system build, Gothenburg University Library (ub.gu.se)	70,609	SSHOC
5	ALICE physics analysis software	67,542	ESCAPE
6	LHCb conditions database	60,704	ESCAPE
7	ROOT data analysis framework (CERN), used beyond particle physics	55,268	Cross-cutting research computing
8	Belle II analysis software framework (DESY, KEK)	50,750	ESCAPE
9	Indico event management system developed at CERN	50,225	Cross-cutting research computing
10	ALICE experiment O2 software	47,863	ESCAPE
11	LHCb simulation data quality data	47,824	ESCAPE
12	BORIS behavioural observation research tool, website repository (unito.it)	44,890	EOSC-Life
13	EOS disk storage system (CERN)	38,934	Cross-cutting research computing
14	Geant4 particle transport toolkit, also used in medical and space physics	37,196	ESCAPE
15	ESRF BLISS beamline control system	36,335	PaNOSC
16	Diamond Light Source GDA data acquisition	36,189	PaNOSC
17	CMS software distribution recipes	33,340	ESCAPE
18	LHCb high-level trigger application	32,489	ESCAPE
19	SWI-Prolog logic programming system (VU and UvA Amsterdam)	31,204	Cross-cutting research computing
20	Rucio scientific data management (CERN, used by ESCAPE)	30,865	Cross-cutting research computing
21	Text Encoding Initiative guidelines, digital humanities standard	30,445	SSHOC
22	CERN Tape Archive	30,291	Cross-cutting research computing
23	LCG COOL conditions database for LHC experiments	29,310	ESCAPE
24	SQUIRREL robotics project (Fraunhofer IPA)	28,504	Outside the five clusters
25	GPI-Space memory-driven HPC runtime (Fraunhofer ITWM)	26,167	Cross-cutting research computing
26	OMERO / Open Microscopy Environment (Dundee)	25,878	EOSC-Life
27	dCache storage system (DESY)	22,202	Cross-cutting research computing
28	LHCb online conditions database	21,394	ESCAPE
29	European XFEL Karabo control and data acquisition	19,920	PaNOSC
30	ALICE software distribution recipes	19,343	ESCAPE
31	sktime machine learning for time series (UCL)	19,191	Cross-cutting research computing
32	cbmc	19,002	Cross-cutting research computing
33	ILCDIRAC	18,778	ESCAPE
34	PorePy simulation of fractured and deformable porous media (University of Bergen)	18,644	Outside the five clusters
35	OMERO.web client (fork of ome/omero-web, Dundee)	18,623	EOSC-Life
36	libyang	17,829	Not placed
37	SeLaLib semi-Lagrangian plasma physics library (CNRS, Strasbourg, Max Planck IPP)	17,800	Outside the five clusters
38	ui	17,190	EOSC-Life
39	Scipp: multi-dimensional data arrays for neutron and photon scattering data reduction (ESS, PSI)	17,075	PaNOSC
40	Vocabulary data and tools for the Finto ontology service, National Library of Finland	16,984	SSHOC

3 What was counted, and how we know

The perimeter. Every project with at least 25 contributions signed from one of the institutional email domains of the ESFRI landscape and the five EOSC Science Clusters. The full list is in the appendix, and the machine-readable version is published beside this report, so the perimeter can be checked rather than believed.

The classification. Not every repository on an institutional forge is research software: the corpus also holds mailing-list mirrors, distribution trees, dotfiles, coursework and machine-written logs. Every project above the threshold was therefore judged individually by two independent language models reading its metadata, its top contributor domains and its README as archived. A third model settled disagreements, and the mapping from a label to a decision was made by code, not by a model. A human ruling, where one exists, overrides all of them.

How we know it worked. The classification was tested against a property no model saw: whether a repository declares itself citable with a `CITATION.cff` or a `codemeta.json` file. Among the projects kept, 2.24% declare themselves citable; among those dropped, 0.15%. A ratio of **15.3**. The same test named its own mistakes: 102 dropped projects carried the declaration, and re-reading them returned 40 to the corpus, `JuliaLang/julia` among them.

What that does not tell you. The classification has not been read by a human end to end. The falsification test above bounds how wrong it can be; it does not make it right. Where a judgement was close, the project was kept.

4 Where the software lives, and whose forge it is on

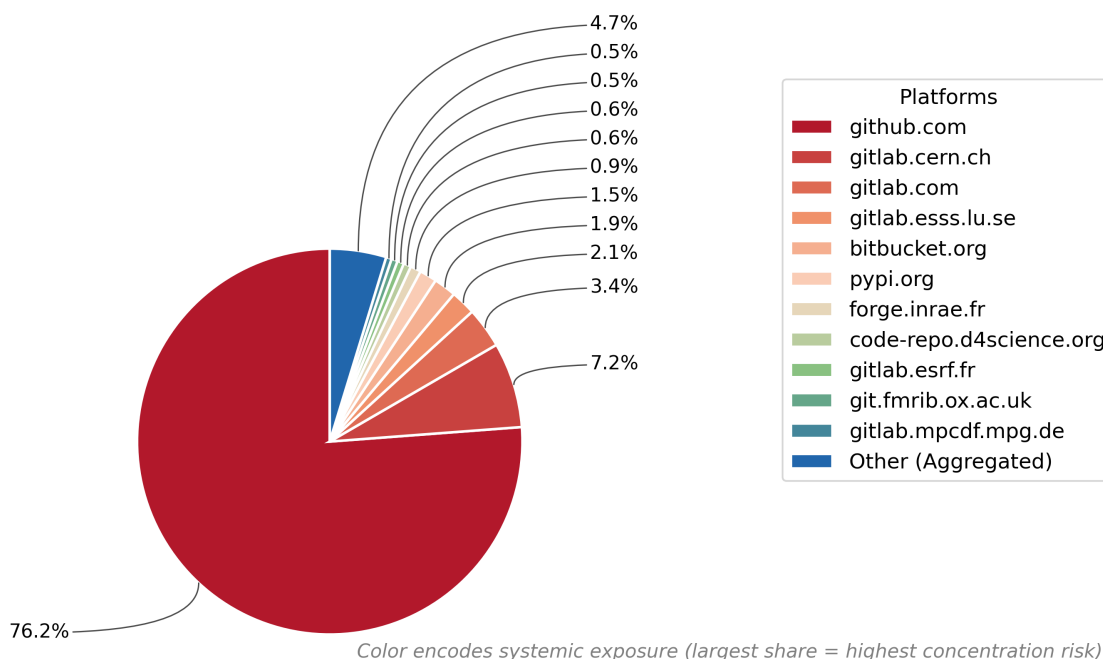


Figure 1: **Hosting platforms.** Share of the 43,670 research projects in this report, by the platform that hosts them.

The headline is not the interesting part. One commercial platform holds roughly three quarters of everything counted here, which is true of almost any corpus of public source code and tells a research infrastructure nothing it can act on.

The tail is the interesting part. Behind the general-purpose platforms sit forges run by the infrastructures themselves, and those are the ones where an institution controls its own preservation. A forge that Software Heritage does not crawl is a single point of failure for everything on it, and a forge that it does crawl is preserved regardless of what happens to the institution that runs it.

Distribution of Project Platforms (Log Scale)

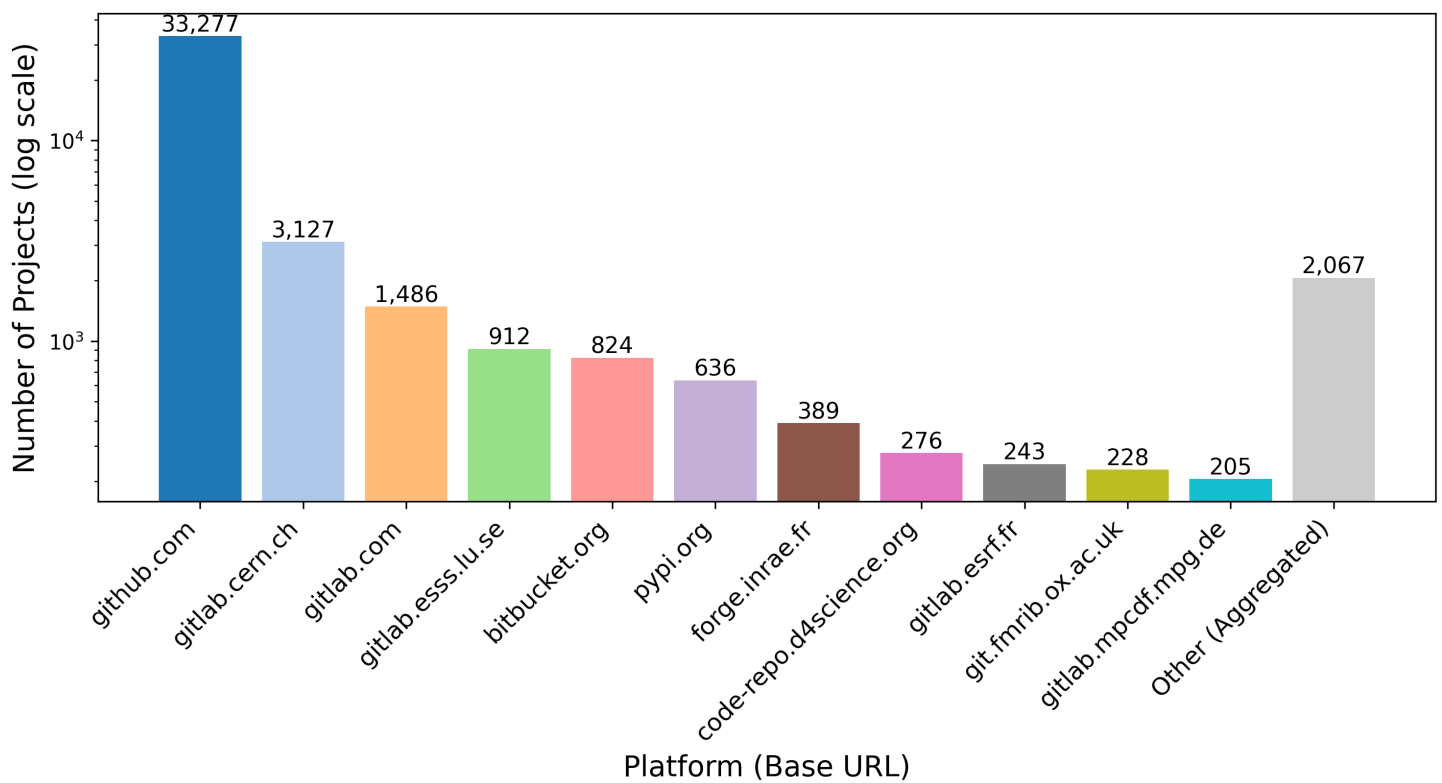
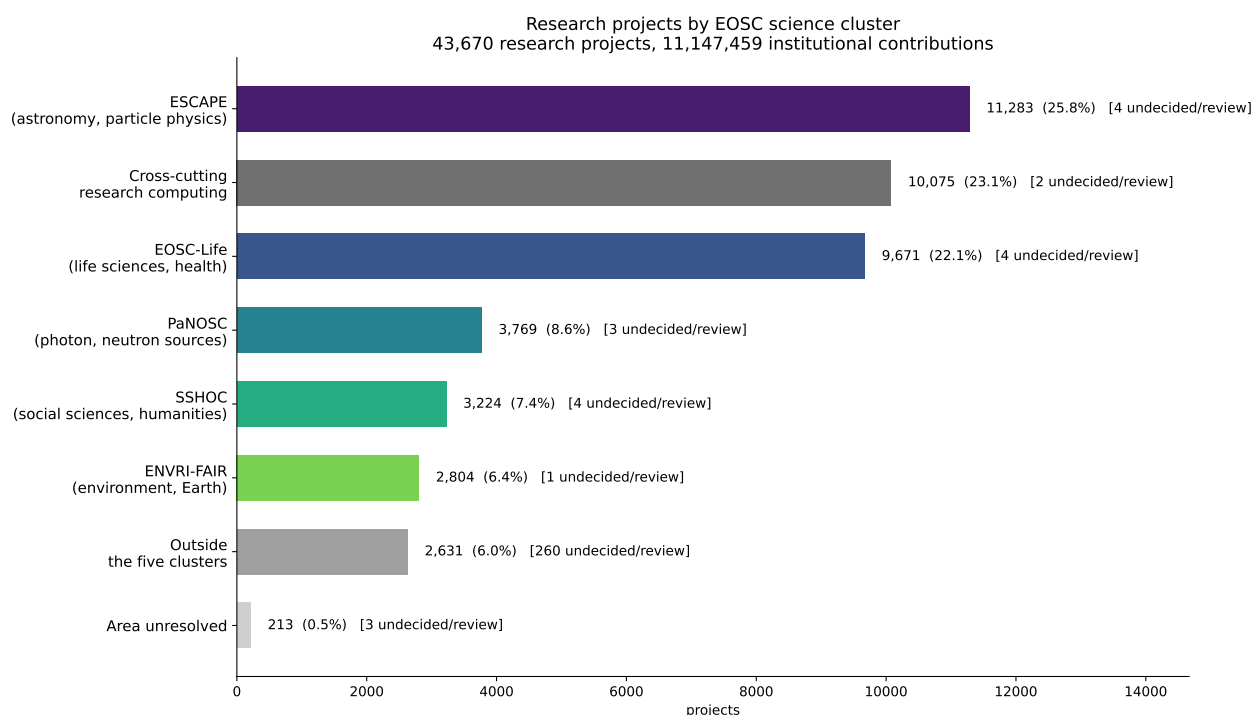


Figure 2: **The long tail, logarithmic.** Every platform carrying at least ten of the 43,670 projects. The institutional forges are the argument of this section.

5 Your science cluster

area	projects	contributions	data projects	code projects	still archived	disappeared	pct projects	pct contributions	pct disappeared	undecided or review
ESCAPE	11283	3754699	310	10973	10821	462	25.84	33.68	4.09	4
Cross-cutting research computing	10075	2269509	177	9898	9521	554	23.07	20.36	5.5	2
EOSC-Life	9671	1919901	489	9182	9082	589	22.15	17.22	6.09	4
PaNOSC	3769	920246	56	3713	3555	214	8.63	8.26	5.68	3
SSHOC	3224	721534	659	2565	3034	190	7.38	6.47	5.89	4
ENVRI-FAIR	2804	590195	148	2656	2656	148	6.42	5.29	5.28	1
Outside the five clusters	2631	521005	157	2474	2436	195	6.02	4.67	7.41	260
Not placed	213	450370	7	206	209	4	0.49	4.04	1.88	3

Each project was assigned to one of the five EOSC Science Clusters, or to cross-cutting research computing where it serves all of them, or to none. The assignment is by project, never weighted by the number of contributions: weighted that way, a handful of very large repositories at one institution dominate every cluster and the picture becomes a picture of those repositories.



ESFRI Science Clusters, corrected perimeter: the 43,670 projects with at least 25 institutional contributions whose contributors resolve to one of the 196 institutional domains of the ESFRI perimeter, rebuilt 2026-09-21. Areas assigned from repository metadata, contributor email domains and the archived README, by two models on the ILAaS federated gateway with closed categories at temperature 0; disagreements settled by a third model; the top 40 checked by hand. Research data is kept and marked, never dropped. The three grey rows are not EOSC science clusters: cross-cutting research computing is a category in its own right, and of the 2,631 projects recorded as outside the five clusters, 260 are undecided or under review rather than judged to belong nowhere.

Figure 3: Research projects by science cluster. Measured on the classified projects of this report; the population is stated in the table above.

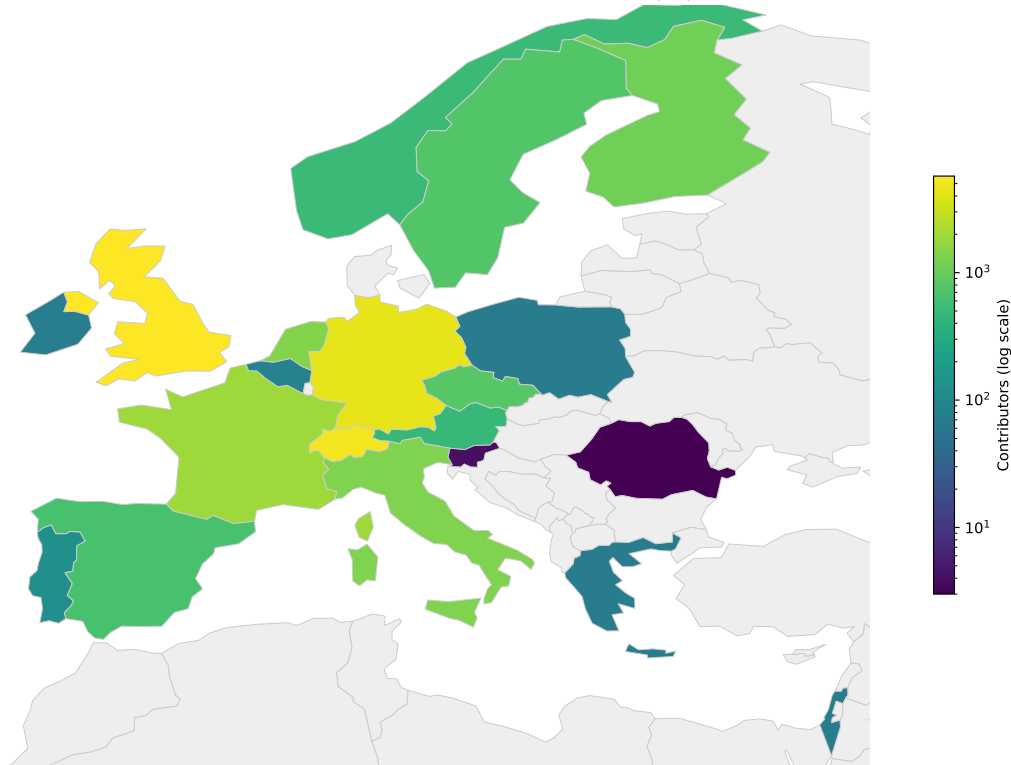
6 Your country, and your institution

country	contributors	projects touched	github share pct	disappeared	disappeared pct	top institutional host	top institutional host projects
Austria	480	1061	89.73	50	4.71	gitlab.phaidra.org	15
Belgium	83	187	93.05	16	8.56		
Czechia	774	1625	79.69	69	4.25	gitlab.ics.muni.cz	149
Finland	1119	1861	87.32	135	7.25	gitlab.cern.ch	7
France	1919	3766	59.48	261	6.93	forge.inrae.fr	389
Germany	4288	7831	79.76	391	4.99	gitlab.mpcdf.mpg.de	205
Greece	70	131	96.95	3	2.29	gitlab.ow2.org	1
Ireland	72	108	86.11	5	4.63		
Israel	69	131	78.63	1	0.76	gitlab.cern.ch	8
Italy	1326	3116	77.09	126	4.04	code-repo.d4science.org	276
Netherlands	1415	3118	86.88	262	8.4	git.astron.nl	4
Norway	509	968	85.12	41	4.24	git.app.uib.no	78
Poland	69	127	83.46	3	2.36	git.man.poznan.pl	3
Portugal	128	165	93.33	9	5.45	gitlab.inria.fr	1
Romania	3	15	40.0	0	0.0		
Slovenia	4	14	100.0	3	21.43		
Spain	632	1184	85.56	61	5.15	gitlab.geo3bcn.csic.es	11
Sweden	745	2117	46.86	86	4.06	gitlab.esss.lu.se	912
Switzerland	5025	10205	66.23	349	3.42	gitlab.cern.ch	3116
United Kingdom	5727	10385	89.23	633	6.1	git.fmrib.ox.ac.uk	228

Countries are listed alphabetically. This is not a ranking and it should not be read as one: the size of a country's entry reflects the size of the infrastructures that happen to sit there, not the quality or the openness of its research software.

A project is counted in every country whose contributors touched it, so a project shared between three countries appears in three rows and the project column does not sum to 43,670. The contributor column does sum to 24,457: each person is attributed to one country.

Institutional contributors by country, Europe and Israel
24,457 contributors across 20 countries, 43,670 research projects



ESFRI Science Clusters, corrected perimeter: the 24,457 contributors behind the 43,670 projects with at least 25 institutional contributions, rebuilt 2026-09-21. A contributor is attributed to the country of their institutional email domain, one of the 196 domains of the ESFRI perimeter, so each contributor counts once and the 20 shaded countries carry the whole population. Countries in grey have no contributor in this perimeter. Colour is on a logarithmic scale, the archive's convention for these distributions, because a single country holds close to a quarter of the total and a linear ramp collapses the tail onto the floor.

Figure 4: Contributors across the ESFRI landscape. Shaded by the contributor count, over 24,457 identified people. Countries without a shaded value have institutions inside the perimeter but no contributor in this corpus.

country	contributors	projects	country	contributors	projects
Austria	480	1,061	Netherlands	1415	3,118
Belgium	83	187	Norway	509	968
Czechia	774	1,625	Poland	69	127
Finland	1119	1,861	Portugal	128	165
France	1919	3,766	Romania	3	15
Germany	4288	7,831	Slovenia	4	14
Greece	70	131	Spain	632	1,184
Ireland	72	108	Sweden	745	2,117
Israel	69	131	Switzerland	5025	10,205
Italy	1326	3,116	United Kingdom	5727	10,385

The shading above carries one number per country. This is that number beside the projects it came from, for a reader who wants the counts alone.

6.1 Which institutions

This is the only table in the report at the granularity of a single institution, and it is the one where a reader is most likely to find themselves.

domain	count	domain	count	domain	count
cern.ch	5025	surf.nl	104	stir.ac.uk	19
mpg.de	1796	inaf.it	101	ua.ac.be	17
ox.ac.uk	1558	cesnet.cz	97	igbmc.fr	16
ucl.ac.uk	1274	uv.es	92	naturalsciences.be	16
ed.ac.uk	1256	fmi.fi	91	skatelescope.org	16
fraunhofer.de	954	inserm.fr	85	brgm.fr	15
helsinki.fi	648	unifi.it	78	sikt.no	15
desy.de	523	lumc.nl	77	npolar.no	14
manchester.ac.uk	482	knaw.nl	72	dainst.de	13
muni.cz	476	man.poznan.pl	69	hubrecht.eu	10
fau.de	464	weizmann.ac.il	69	mmu.ac.uk	10
uva.nl	409	tib.eu	66	nilu.no	10
inrae.fr	406	oulu.fi	64	uniurb.it	10
infn.it	395	forth.gr	59	egi.eu	8
york.ac.uk	335	open.ac.uk	59	hcmr.gr	8
inra.fr	324	essex.ac.uk	52	imim.es	8
lu.se	307	geis.org	51	jive.eu	8
univie.ac.at	303	naturalis.nl	51	clarin.eu	7
rug.nl	287	knmi.nl	49	umweltbundesamt.at	7
unistra.fr	280	ucd.ie	49	cessda.eu	5
esrf.fr	272	uvsq.fr	49	eiscat.se	5
cnrs.fr	257	nki.nl	48	img.cas.cz	5
uib.no	252	eso.org	41	marionegri.it	5
cnr.it	251	ill.fr	41	unitus.it	5
diamond.ac.uk	250	ingv.it	41	upol.cz	5
nottingham.ac.uk	215	umcg.nl	41	bbmri-eric.eu	4
vu.nl	210	aip.de	35	dariah.eu	4
csc.fi	190	xfel.eu	35	nib.si	4
unimib.it	190	radboudumc.nl	33	unis.no	4
ucm.es	181	unive.it	33	crea.gov.it	3
upf.edu	180	crs4.it	31	fleming.gr	3
met.no	179	pml.ac.uk	31	nipne.ro	3
gsi.de	175	noc.ac.uk	30	nsd.no	3
cuni.cz	171	city.ac.uk	27	ogs.trieste.it	3
ess.eu	170	norceresearch.no	27	plocan.eu	3

domain	count	domain	count	domain	count
ifremer.fr	169	vib.be	25	ceric-eric.eu	2
csic.es	146	vliz.be	25	embl.org	2
gu.se	144	medunigraz.at	24	ukri.org	2
oeaw.ac.at	142	uniroma2.it	24	eli-laser.eu	1
unito.it	134	marine.ie	23	euro-argo.eu	1
unl.pt	128	abo.fi	21	h-its.org	1
esss.se	119	ifae.es	21	inta.es	1
charite.de	112	cmcc.it	20	lygature.org	1
dundee.ac.uk	110	infai.org	20	nationalgallery.org.uk	1
tuni.fi	105	fzu.cz	19		

7 Who works with whom

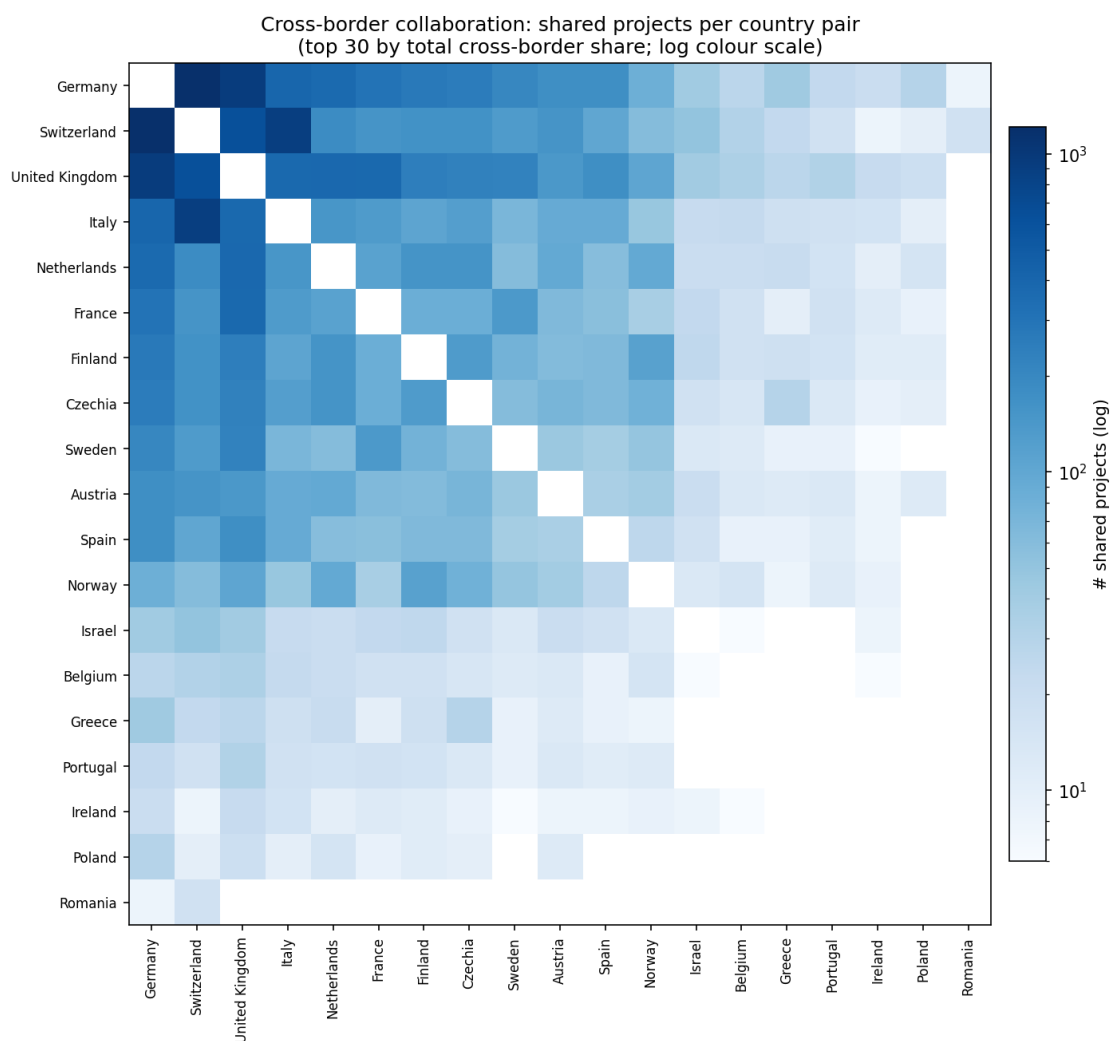


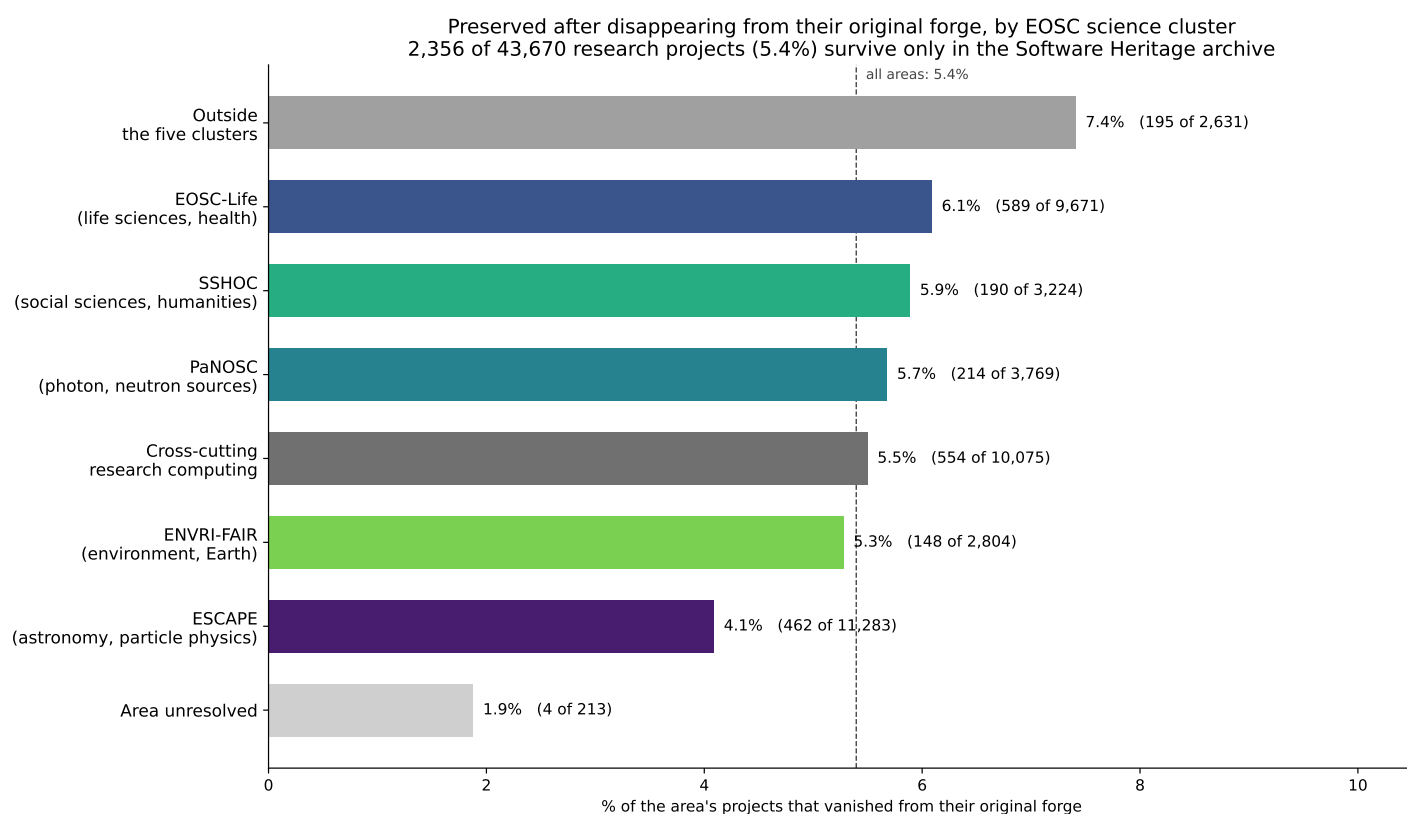
Figure 5: **Shared projects between countries.** Measured on the projects of this report whose contributors resolve to a country. A pair appears when the two countries share at least five projects.

Cross-border work is the exception rather than the rule, and that is the finding. Most research software is written inside one institution, by a small number of people, and the projects that genuinely cross borders are few enough to name.

8 What would be lost, and is not

This is the section the rest of the report exists to support.

2,356 projects counted here can no longer be reached where they were published, against 6,505 that received a contribution in the last twelve months. They were not backed up by their authors, and they are not on the platform that hosted them. They exist because they were archived, and they can still be read, cited and built today.



ESFRI Science Clusters, corrected perimeter: the 43,670 projects with at least 25 institutional contributions whose contributors resolve to one of the 196 institutional domains of the ESFRI perimeter, rebuilt 2026-09-21. Areas assigned from repository metadata, contributor email domains and the archived README, by two models on the ILaaS federated gateway with closed categories at temperature 0; disagreements settled by a third model; the top 40 checked by hand. Research data is kept and marked, never dropped. The three grey rows are not EOSC science clusters: cross-cutting research computing is a category in its own right, and of the 2,631 projects recorded as outside the five clusters, 260 are undecided or under review rather than judged to belong nowhere.

Figure 6: Projects no longer reachable at their original location, by science cluster. Every one of them is preserved in the Software Heritage archive. Population as in the section on what was counted.

8.1 Can this software be cited

1,053 projects of 43,670 declare a citation. The list of those that do is deliberately not printed here. The interesting population is the other one: the projects an infrastructure would want cited and that carry nothing a bibliography can read. That set is too large to name, which is the point, and it is addressed by adding one file rather than by consulting a table.

8.2 Can this software be reused

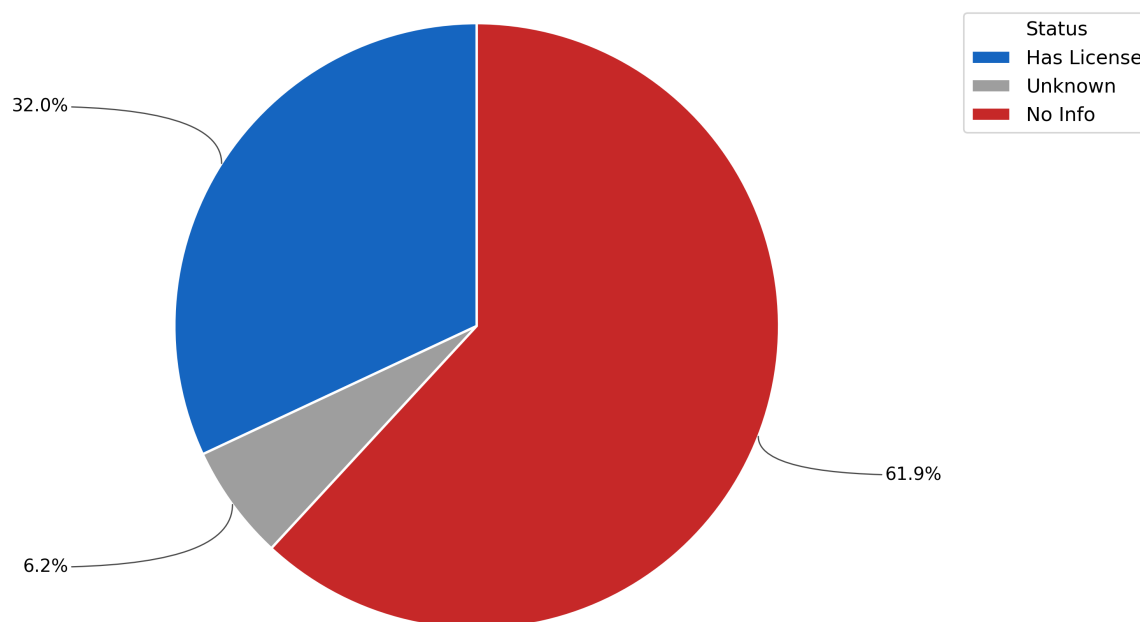


Figure 7: **Licence status**, over the 43,670 projects of this report. Software without a licence cannot legally be reused, whatever its authors intended.

9 What a research infrastructure can do next

Declare how your software should be cited. `CITATION.cff` and `codemeta.json` are read by Software Heritage, by Zenodo, by HAL and by the reference managers your researchers already use. Today 2.4% of the projects in this report carry one.

Have your forge crawled. The section on where the software lives shows where your institution's code actually sits. If it is on a forge you run, ask for it to be archived: the request is a form, the effect is permanent, and it covers everything on the forge rather than one repository at a time.

Archive what is at risk now. Save Code Now takes a repository URL and archives it in seconds. It needs no account and no agreement, and it is the fastest answer to a project whose maintainer is leaving.

Tell us what is missing. This report is built from a list of institutional domains and a list of forges. Both are incomplete, and both improve when the institutions they describe correct them.

9.1 Where to send someone who asks how



How to archive and reference your code. The practical guide: get a repository into the archive, obtain an identifier that will still resolve in twenty years, and cite it in a paper. softwareheritage.org/howto-archive-and-reference-your-code



The Source Code of Science. A doctoral course on archiving, referencing and reproducing research software, CC-BY-4.0, yours to reuse, translate and teach from. github.com/rdicosmo/source-code-of-science

10 About Software Heritage

This report is produced from the Software Heritage archive, and is one of the analyses published through the Public Code Observatory. Software Heritage collects, preserves and shares the source code of all publicly available software, with its full development history, and gives every version an identifier that can be cited and resolved. It is a non-profit initiative started by Inria in partnership with UNESCO, and its archive is open to everyone. Research software can be deposited through HAL and the CCSD, where French research is already deposited, and is archived and referenced in the same act.

- 2016** Public unveiling on 30 June, with the first sponsors.
- 2017** UNESCO and Inria sign an agreement on the access to and the preservation of software source code, on 3 April.
- 2018** The archive opens to the world on 7 June, and the HAL deposit opens in September, so French research software is archived and referenced in the same act as it is deposited. The first French National Plan for Open Science names Software Heritage among the international open science infrastructures France supports.
- 2019** The Paris Call on Software Source Code is published on 26 February, after an expert meeting convened at UNESCO. The archive's graph is released as an open dataset.
- 2020** The EOSC SIRS report, *Scholarly Infrastructures for Research Software*, sets out how research software should be archived, referenced, described and credited.
- 2021** The second French National Plan for Open Science, on 6 July, recommends Software Heritage for the archiving and referencing of source code. Software Heritage enters the French National Roadmap for Research Infrastructures, as a project.
- 2024** The archive is used beyond software preservation: AI, cybersecurity and software engineering research draw on it.
- 2025** The first institutional analyses, of which this report is one.
- 2026** The Public Code Observatory is unveiled at UN Open Source Week, and this report is one of its analyses. The French Strategy for Open Science is published, with multiannual support for Software Heritage. In the summer, Software Heritage becomes a **research infrastructure** in the French National Roadmap, up from the project status it held since 2021.



The archive.

softwareheritage.org



A decade of achievement, the 2025 activity report.

annex.softwareheritage.org



The Public Code Observatory, where this report and its companions are published.

softwareheritage.org/state-of-public-code

stateofpubliccode.org



11 Appendix

11.1 Method, in full

The corpus is built from the Software Heritage graph as of 2026-06-04. Contributions are attributed to an institution through the email domain used to sign them, which means this report measures where a contributor's institutional address is, not where the work was done or who paid for it. A contributor with no institutional address is invisible to it.

Projects are deduplicated before counting, so a fork and its parent are one project, and a contribution is counted once however many repositories it is reachable from.

11.2 Programming languages

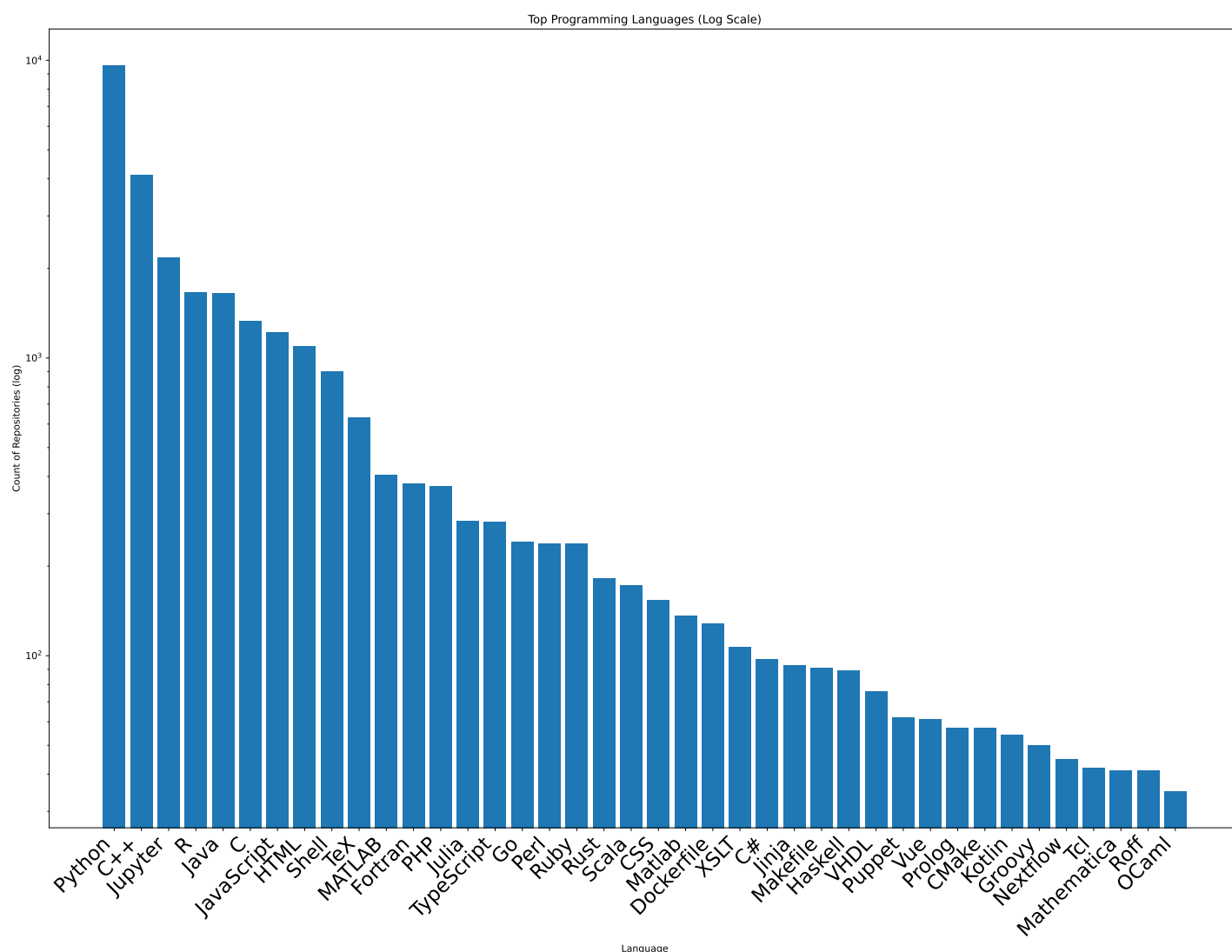


Figure 8: **Primary language**, over the 43,670 projects of this report.

11.3 The ten largest projects of each science cluster

Ranked by contributions from the institutions of the perimeter. Each row is a project, not a repository: its forks and mirrors in the archive are counted once. Where a project appears under a cluster it is because the model placed it there, not because the project declared itself.

science cluster	rank	project	contributions
ESCAPE	1	CMS experiment software (CMSSW)	283,644
	2	ATLAS experiment offline software (CERN)	195,196
	3	LHCb experiment software	74,363
	4	ALICE physics analysis software	67,542
	5	LHCb conditions database	60,704
	6	Belle II analysis software framework (DESY, KEK)	50,750
	7	ALICE experiment O2 software	47,863
	8	LHCb simulation data quality data	47,824
	9	Geant4 particle transport toolkit, also used in medical and space physics	37,157
	10	CMS software distribution recipes	33,340
EOSC-Life	1	BORIS behavioural observation research tool, website repository (unito.it)	44,890
	2	OMERO / Open Microscopy Environment (Dundee)	25,878
	3	OMERO.web client (fork of ome/omero-web, Dundee)	18,623
	4	patRoon	14,599
	5	molgenis	13,984
	6	NifTK	12,863
	7	Old-Chaste-svn-mirror	10,926
	8	laji	10,785
	9	RDMP	10,059
	10	opensilex	9,975
PaNOSC	1	Diamond Light Source GDA data acquisition	36,189
	2	ESRF BLISS beamline control system	36,127
	3	European XFEL Karabo control and data acquisition	19,920
	4	Scipp: multi-dimensional data arrays for neutron and photon scattering data reduction (ESS, PSI)	17,075
	5	silx	15,035
	6	gda-diamond	10,765
	7	dodal	10,131
	8	pyFAI	9,190
	9	mxcube3	9,111
	10	octopus	8,306
SSHOC	1	Koha library system build, Gothenburg University Library (ub.gu.se)	70,609
	2	Text Encoding Initiative guidelines, digital humanities standard	30,445
	3	Vocabulary data and tools for the Finto ontology service, National Library of Finland	16,984
	4	vufind	14,330
	5	idai-field	11,257
	6	praat.github.io	10,327
	7	lang-smn	9,746
	8	antero	8,561

science cluster	rank	project	contributions
ENVRI-FAIR	9	timbuctoo	7,571
	10	carneades-3	7,488
	1	hale	12,607
	2	Coupled_ICON	11,824
	3	pyaerocom	8,519
	4	room_1.06	7,752
	5	libcdi	7,272
	6	himan	6,218
	7	cdo	6,198
	8	diana	6,097
Cross-cutting research computing	9	globe	4,873
	10	laji-etl	4,869
	1	ROOT data analysis framework (CERN), used beyond particle physics	55,169
	2	Indico event management system developed at CERN	50,225
	3	EOS disk storage system (CERN)	38,155
	4	SWI-Prolog logic programming system (VU and UvA Amsterdam)	31,204
	5	CERN Tape Archive	30,291
	6	Rucio scientific data management (CERN, used by ESCAPE)	30,236
	7	GPI-Space memory-driven HPC runtime (Fraunhofer ITWM)	26,167
	8	dCache storage system (DESY)	22,202
Outside the five clusters	9	sktime machine learning for time series (UCL)	19,191
	10	cbmc	19,002
	1	SQUIRREL robotics project (Fraunhofer IPA)	28,504
	2	PorePy simulation of fractured and deformable porous media (University of Bergen)	18,644
	3	SeLaLib semi-Lagrangian plasma physics library (CNRS, Strasbourg, Max Planck IPP)	17,800
	4	mdsplus	8,145
	5	BOUT-dev	7,908
	6	cob_perception_common-release	7,185
	7	oodikone	6,713
	8	moodle	6,681
Not placed	9	dabc	6,655
	10	schunk_modular_robotics-release	6,522
	1	libyang	15,388
	2	sPyNNaker	13,531
	3	xrootd	12,111
	4	holoviews	11,960
	5	DGtal	11,934
	6	bel_projects	11,549
	7	DIRAC	11,314
	8	INGe	10,708
	9	SpiNNFrontEndCommon	10,442
	10	cgal	10,291

11.4 The institutional domains of the perimeter

domain	domain	domain	domain
abo.fi	essex.ac.uk	knmi.nl	stolav.no
aip.de	esss.se	libereurope.eu	surf.nl
astro.oma.be	eu-openscreen.eu	lifewatch.eu	tib.eu
athena-innovation.gr	euro-argo.eu	lu.se	tilburguniversity.nl
bbmri-eric.eu	europeansocialsurvey.org	lumc.nl	tuni.fi
biopolis.pt	fair-center.de	lygature.org	u-pec.fr
biosense.rs	fau.de	man.poznan.pl	ua.ac.be
brgm.fr	fleming.gr	manchester.ac.uk	ucd.ie
ccmar.pt	fmi.fi	marine.ie	ucl.ac.uk
centerdata.nl	forscenter.ch	marionegri.it	ucm.es
ceric-eric.eu	forth.gr	medunigraz.at	uib.no
cerm.unifi.it	fraunhofer.de	met.no	ukri.org
cern.ch	fscire.it	mmu.ac.uk	umcg.nl
cesnet.cz	fundacioclinic.org	mpg.de	umweltbundesamt.at
cessda.eu	fz-juelich.de	muni.cz	uni-erlangen.de
cetaf.org	fzu.cz	nationalgallery.org.uk	uni-freiburg.de
charite.de	geoecomar.ro	naturalis.nl	uni-goettingen.de
city.ac.uk	geis.org	naturalsciences.be	uni-heidelberg.de
clarin.eu	gsi.de	nib.si	uni-lj.si
cmcc.it	gu.se	nilu.no	uni-tuebingen.de
cnr.it	h-its.org	nipne.ro	unifi.it
cnrs.fr	hcmr.gr	nki.nl	unimib.it
crea.gov.it	helmholtz-muenchen.de	noc.ac.uk	uniroma2.it
crs4.it	helmholtz-munich.de	norceresearch.no	unis.no
csc.fi	helsinki.fi	nottingham.ac.uk	unistra.fr
csic.es	hsanmartino.it	npolar.no	unito.it
cta-observatory.org	hubrecht.eu	nsd.no	unitus.it
cuni.cz	icos-ri.eu	nwo.nl	uniurb.it
dainst.de	ifae.es	oeaw.ac.at	univ-grenoble-alpes.fr
dariah.eu	ifremer.fr	ogs.trieste.it	univ-lille.fr
desy.de	igbmc.fr	open.ac.uk	univ-paris12.fr
diamond.ac.uk	ill.fr	operas-eu.org	univ-tlse3.fr
dundee.ac.uk	img.cas.cz	oulu.fi	unive.it
eatris.eu	imim.es	ox.ac.uk	univie.ac.at
ecrin.org	inaf.it	parisschoolofeconomics.eu	unl.pt
ed.ac.uk	incdsb.ro	plocan.eu	upf.edu
egi.eu	infai.org	pml.ac.uk	upol.cz
ego-gw.it	infn.it	radboudumc.nl	ups-tlse3.fr
eiscat.se	infrafrontier.eu	rigsarkivet.dk	uv.es
eli-alps.hu	ingv.it	rug.nl	uva.nl
eli-laser.eu	inra.fr	safe-frankfurt.de	uvsq.fr
embl.org	inrae.fr	sciences-po.fr	vhebron.es
embrc.eu	inserm.fr	scto.ch	vib.be
emso.eu	instruct-eric.org	share-eric.eu	vliz.be
entecra.it	inta.es	sikt.no	vu.nl
erinha.eu	jive.eu	sios-svalbard.org	weizmann.ac.il
eso.org	kis.uni-freiburg.de	skatelescope.org	xfel.eu
esrf.fr	kks-netzwerk.de	sorbonne-universite.fr	york.ac.uk
ess.eu	knaw.nl	stir.ac.uk	zrc-sazu.si

11.5 Technical information

- **Toolchain Version:** 1.1.0
- **Report Version:** 1.0
- **Git Commit:** 57985f7a
- **Graph Date:** 2026-06-04
- **Contribution threshold:** 25
- **Report Generation Date:** 2026-09-22