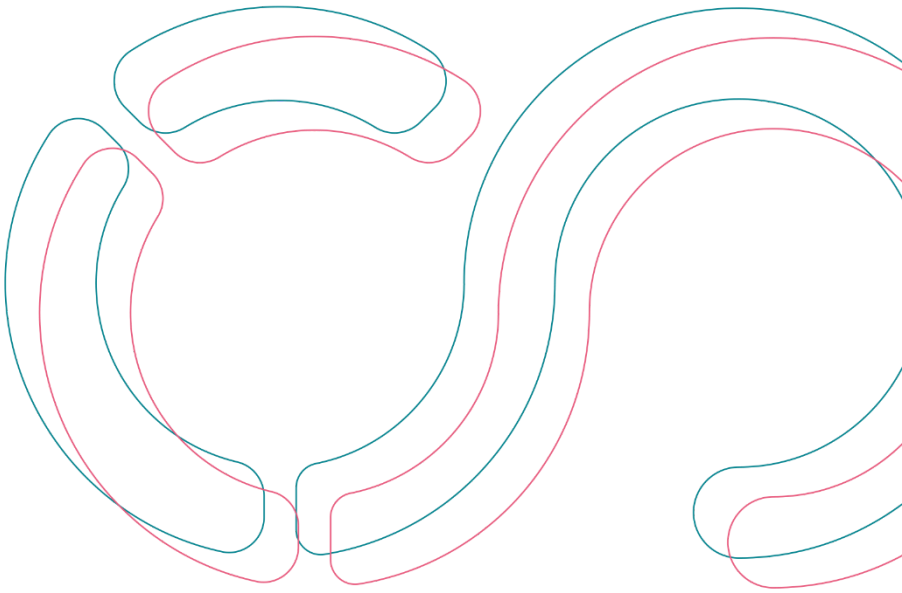
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Cascading grant project: Preparatory grant

Project acronym: EOSC-CSN

Deliverable: Project Charter



Funded by
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Name and acronym of the cascading project	EOSC Citizen Science Node (EOSC-CSN)
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Lead beneficiary	Ibercivis Foundation
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Disclaimer

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1 Project summary

The EOSC Citizen Science Node (EOSC-CSN) is a thematic EOSC Node designed to support anyone wishing to engage in citizen science in Europe, from a university to a neighbourhood association. It is coordinated by the Ibercivis Foundation together with CIEMAT and with Citizen Science Italia and Citizen Science Nederland (Leiden University), the operators of the national citizen science platforms in Spain, Italy and the Netherlands.

Users without an affiliation can authenticate themselves and access the Federation, but no organisation verifies their identity, nor does it specify what they are permitted to do, nor is there an enforceable acceptable use policy. Without this, a provider has no basis for allocating workspaces, quotas or publication rights on the same terms as institutional users.

The Node addresses this gap in two ways. Firstly, it operates a Community AAI, connected to the EOSC AAI Federation Hub (FC-1) and registered in the EOSC AAI Federation Registry. In this way, accredited citizen science organisations will be able to verify identities so that citizen profiles can gain access to services on the same terms as institutional users.

Secondly, it provides other services necessary to carry out a citizen science project: from project launch, data acquisition, validation and analysis, to the publication of results and attribution of contributions (CAP-01 to CAP-05, section 3). These services may be used as a package or individually. The node has been designed so that, in the future, new services can be added to the node's catalogue.

The outcomes for the Federation include new user communities, as well as new FAIR citizen science datasets and reusable validation profiles, documented as candidates for the EOSC Interoperability Guidelines; a method for accommodating non-affiliated users; and the capacity to interpret datasets from other Nodes through citizen science.

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2 Value proposition

A citizen without institutional affiliation can authenticate themselves within the Federation, but no organisation verifies their identity or specifies what they are permitted to do with it; consequently, they do not have access to research services under institutional terms.

Furthermore, once inside the Federation, there are no specific services for creating new citizen science projects. Consequently, the avenues for other Federation Nodes to reach citizen science communities are very limited and, in practice, almost non-existent. These gaps were documented by RIECS-Concept through 823 user stories and 36 workshops across Europe in 2025-2026[1] .

The Node offers benefits such as: A) Services to create a citizen science project from start to finish, including the collection of geolocated data and analysis by citizen scientists. B) New users through participation in the Federation of both professional scientists and scientists without institutional affiliation. C) New datasets generated through citizen science that are traceable, verifiable and reusable. D) Data traceability, ensuring that each piece of data remains linked to its creator, thereby enabling the attribution and recognition of participants. These benefits are available to: A) Researchers and scientific institutions who want to run a citizen science project; B) Independent citizen researchers and community-led citizen science projects; C) Citizens who want to participate in scientific projects, with enhanced features such as data identifiers and control over their data; D) Public authorities and policy-makers, through increased public participation in science; and E) Citizen science organisations and companies operating services that may join and provide resources to the Node under defined admission criteria.

European citizen science comprises thousands of projects, each with its own application, database and vocabulary. The Node provides implementations of five capabilities (CAP-01 to CAP-05, section 3): registration and discovery, project launch, data acquisition, validation and analysis. The aim is that, in the immediate future, other organisations will either a) use some of the services proposed here, and/or b) Any organisation already providing these capabilities to its community may register as a resource provider, with its own catalogue entry alongside the founding partners', subject to compliance with the published interfaces. The software contributed by the founders upon registration is included because it is already operational (TRL 7-8, section 3); this does not imply that this is static, nor that the Node is defined by it.

Furthermore, an organisation may also be accredited to verify the identities of its community without contributing software. The citizen identity layer falls to this Node as the gateway to the Federation, as no other Node offers it. The verification of each profile is carried out by citizen science coordinators who are already familiar with the profiles they verify, and they document this so that any Node can reuse it.

[1]See the RIECS-Concept deliverables D2.2 Technical Requirements Report and D2.3 Preliminary Catalogue of Services, Resources and Functionalities at https://concept.riecs.eu/deliverables/

3 Repositories and services provided

Resource ID	Resource description	Resource access policies	Contribution to the Federation and value for users	TRL
CAP-01 Registration and discovery				
CSNR ES-01	ciencia-ciudadana.es (Ibercivis). Citizen science projects in Spain are registered, listed and searchable in Spanish, and the list is made available to the EOSC catalogue.(*)	Open	Projects are made discoverable within their national community and across the Federation without having to maintain their own website	8
CSNR ES-02	piattaforma.citizenscience.it (Citizen Science Italia). The same in Italy (*)	Open	Similarly, for the Italian community	8
CSNR ES-03	citizenscience.nl (Leiden University). The same in the Netherlands (*)..	Open	Similarly, for the Dutch community	8
CAP-02 Project launch				
CSNR ES-04	Project launch assistant (Ibercivis + Citizen Science Nederland). A project brings together consent, licensing, data management plans, ethical screening, data protection self-assessment and an initial validation profile into a single workflow. The service can be accessed from any platform, including third-party platforms.	European scope	A route for projects without an institutional sponsor to establish consent, licences, ethical screening and data protection self-assessment; the Node does not sign the project's DPIA	7
CAP-03 Data acquisition				
CSNR ES-05	geonity.ibercivis.es (Ibercivis + Citizen Science Italy). A tool for creating and participating in citizen science projects involving geolocated observations. Available as an app (Android and iOS) and on mobile devices	European scope	Field observation data with source captured at origin, and project creation without the need for software development	8
CSNR ES-06	openred.ibercivis.es (Ibercivis). Project creation, sensor registration, mapping and continuous data collection via citizen-operated sensors.	European scope	Sensor data that no current Node ingests	8
CSNR ES-07	A service for creating citizen science projects to manage human contributions to datasets (lostatnight.org and citscisort.ibercivis.es are implementations of this service, Ibercivis)	European scope	Capability for Nodes that hold data but lack a community to interpret it	7
CAP-04 Validation				
CSNR ES-08	validator.ibercivis.es (Ibercivis). A project describes the checks that a dataset must pass; the engine executes them and records which ones passed, against which profile and version, in a repeatable manner. At the end of the validation, it performs an action (e.g. publish the dataset to Zenodo)	European scope	A library of executable, versioned and citable validation profiles, documented as candidates for the EOSC Interoperability Guidelines pending review and published in the meantime as versioned and citable profiles, reusable by any Node	7
CAP-05 Analysis				
CSNR ES-09	data.ibercivis.es (Ibercivis). A Jupyter-based data analysis tool with easy access to data from the node.	European scope	An analysis environment accessible without an institutional account	7
Any of the previous capabilities				
CSNR ES-10 +	Resources accepted during the construction phase. Software operated by citizen science organisations in Europe, registered alongside the above resources in accordance with the criteria in section 5. Target: at least one accepted in M18.	As declared by each operator	Expands the CSN resource pool beyond the founding partners	≥ 7 required

(*) The three national platforms are interoperable with the European Citizen Science platform (citizenscience.eu) providing european-wide discoverability of projects.

4 Use cases

The Node is committed to four use cases during the construction phase. They share a common pattern: the creation of a citizen science project. In CSUC-1, the entire process is carried out within the Node, relying only on Federation core services (EU Node, Zenodo). In the CSUC-2 use case, the project has already collected the data independently, so it requires the Node from the validation stage onwards. CSUC-3 is a multi-Node use case. CSUC-4 describes the specific contribution to federation capabilities. All four rely on the Community AAI operated by CIEMAT (FC-1) and on the Node's catalogue entry maintained by Ibercivis (FC-2, D-Cat-1).

Use case ID	Usage Case Description	Contribution to the Federation and value for users	Participating organisations	Other Nodes involved
CSUC-1	A group of local residents, a school, a museum or a university department obtains verified identities for those driving the initiative. Once logged in, it creates the informed consent form, licence and data management plan, and carries out an ethical review. They create the citizen science application through which they collect - thanks to citizen contributions, field observations or sensor data - or classify material in their possession; Once analysed, the node provides a tool to set up the rules the dataset must meet in order to be validated. When the dataset meets the rules, it automatically publishes the data to a repository (e.g. Zenodo), with version control and DOI. Each piece of data collected / analyzed is associated with the citizen scientist who created it, so that they can access, edit and/or delete it (depending on the project policies) and be notified when their data has been downloaded or used in a publication.	(1) Citizen science full support within the Federation. (2) A community without institutional backing carries out a project under the same conditions as an institutional one. (3) New FAIR observational datasets included in the Federation. (4) datasets are validated and data items are linked to the citizen who has contributed to it allowing recognition.	**Ibercivis**: project launch (CSNRES-04), data acquisition (CSNRES-05/06/07), validation and publication (CSNRES-08), analysis (CSNRES-09), Node catalogue entry; Spanish pilot and listing (CSNRES-01). **Citizen Science Italia**: co-operator of Geonity (CSNRES-05); Italian pilot and listing (CSNRES-02); identity verification of its community. Citizen **Science Nederland**: co-operator of the launch assistant (CSNRES-04); Dutch pilot and listing (CSNRES-03); identity verification of its community. **CIEMAT**: Community AAI and Infrastructure Proxy, infrastructure, security.	**EU EOSC Node** (AAI Federation Hub, catalogue registration); **CERN Node** (Zenodo).
CSUC-2	A project already has its own process for generating data through citizen science. However, it needs a process to analyse, validate and publish this data so that it is accessible to the research community. It therefore sends the data to the node, which then analyses it. Once analysed, the node provides a tool to set up the rules the dataset must meet in order to be validated, and imports these into the validator. When the dataset meets the rules, it automatically publishes the data to a repository (e.g. Zenodo), with version control. Each	(1) It demonstrates that the Node can work in conjunction with the tools a citizen science project already possesses. (2) A project gains visibility in the catalogue,(3) a repeatable validation record and attribution for its contributors	As in CSUC-1 from validation onwards: **Ibercivis** (CSNRES-08/09, catalogue entry), **CIEMAT** (AAI). **Citizen Science Nederland** (recruitment of Dutch projects, CSNRES-03). **Citizen Science Italia** (recruitment of Italian projects, CSNRES-02). The projects' own platform operators, as data providers.	**EU EOSC Node** (AAI Federation Hub, catalogue registration); **CERN Node** (Zenodo).

Use case ID	Usage Case Description	Contribution to the Federation and value for users	Participating organisations	Other Nodes involved
	piece of data collected / analyzed is associated with the citizen scientist who created it, so that they can access, edit and/or delete it (depending on the project policies) and be notified when their data has been downloaded or used in a publication.	without having to change its tools.		
CSUC-3	An external national or thematic node has a dataset that requires human interpretation or needs to collect data with the help of citizen scientists. To do this, it draws up the informed consent form, licence and data management plan, subject to ethical review. It creates the citizen science application through which citizen scientists carry out the necessary tasks. Once the data has been generated, the external node may decide to continue using the tools provided by EOSC-CSN to analyse and validate the data, or to move it to its own repository to continue processing.	(1) The external node receives observations at a level of detail that its own networks cannot achieve, (2) a reusable validation profile, interpretation of the material it holds, and (3) a layer of trust enabling contributors to use the Federation's services. Community data is used where it matters.	As in CSUC-1 for the full service chain. In addition: **CIEMAT**: inter-node exchange interface (D-Tech-5) and storage fallback; **Ibercivis**: domain validation profile agreed with the partner Node (D-Tech-9); **the three national platforms** (CSNRES-01/02/03) — recruitment of citizen scientists; citizen science organisations in the partner Node's country, accredited as authenticators.authenticators.	(1) **EOSC Data-Terra Node;** (2)**European Digital Twin of the Ocean Node** (second line: storage and computing); (3) **ENVRI Node.**
CSUC-4	An individual or a community project without institutional affiliation requests services from their country's National Node. The National Node forwards the verification process here: an accredited citizen science organisation verifies the identity, the Node issues the credential and the AARC-G069 entitlements, and the National Node's Infrastructure Proxy accepts these via the Hub (token inspection) and allocates workspace, storage, computing resources or publication rights under the same conditions as for an institutional user. The project is listed on the national citizen science platform in its own language, is submitted via the Node, and is featured in both catalogues.	(1) A method for admitting users whose identity will not be verified by any institution: membership, verification by accredited coordinators, entitlements and application of the usage policy.	**Citizen Science Nederland**: author of the accreditation scheme (D-Gov-2), accredited authenticator in the pilot, liaison with SURF (Leiden University is a SURF member). **CIEMAT**: technical method: credential issuance, AARC-G069 entitlements, token-inspection interface with the Hub (D-Tech-2). I**bercivis:** catalogue entry (dual listing), documentation of the method for reuse by other Nodes. **Citizen Science Italia**: Italian extension once the EOSC Italy Node registers.	(1) **SURF EOSC Netherlands Node**. (2) **EU EOSC Node** (AAI Federation Registry, Hub); (3) **EOSC Italy Node and** (4) **EOSC-ES Node**

This table shows the services associated with the citizen science process

	How the data is received	Service	What the checks cover
A	Classification, annotation and	CSNRES-07	The aggregated output: tag distribution, agreement amongst contributors, classifications by object, unresolved items. Objective: PPSR-Core + metrics by task level.

	How the data is received	Service	What the checks cover
	human transcription of existing material		
B	Field observation	CSNRES-05	Coordinates, timestamps, taxonomies, completeness, duplicates. Objective: Darwin Core / DwC-DP, publishable on GBIF.
C	Sensor networks	CSNRES-06	Calibration records, drift, gaps in the series, out-of-range readings. Objective: OGC SensorThings + calibration metadata.

4.1 Within scope

Node activities and services: Operation of the services listed in section 3; identity verification and account lifecycle management; accreditation of service providers, including organisations outside the consortium; development of the four aforementioned use cases and admission of further software to the EOSC-CSN Resource Pool; agreements with partner Nodes for multi-node cases; training and documentation as per section 8; participation in Federation working groups.

Stakeholders served by the Node: Section 2 beneficiaries.

Integration. Compliance with requirements and federation developments with the EOSC AAI Federation (FC-1); resource catalogue in accordance with the EOSC Interoperability Guidelines; ARGO monitoring; Zenodo for repository storage; the exchange interface between Nodes (D-Tech-5, section 7).

4.2 Outside the scope

This node aims to make use of services already available, such as the provision of general-purpose storage or computing; nor does it seek to replace existing thematic or national or EU-wide citizen science platforms, nor to replace the tools used by each community for data collection, classification or analysis within a project. Nor does it imply legal representation of individual citizen scientists.

During the development phase, data and services are limited, and no involvement beyond the supported services is intended.

This Charter acknowledges the current limited capacity and will promote the incorporation of external projects and stakeholders beyond the countries ES/IT/NL.

This node also relies on key aspects of registration in the EOSC AAI Federation Registry, registration with the Hub, and the EU EOSC Node's catalogue registration APIs; domain profiles, source material and, where agreed with partner nodes.

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5 Compliance with technical requirements

This section sets out the plan for EOSC-CSN to meet the necessary requirements to become an EOSC Federation node, following a strategy of reuse wherever possible. The services that EOSC-CSN federates, described in section 3, are already operational (TRL 7-8). The federation capabilities are new deployments and will be operated by CIEMAT on behalf of the consortium. CIEMAT already has experience with EOSC in production (EOSC-SYNERGY, IberGrid, WLCG operations). Reference solutions published openly by the EU Node and EGI will be used, and a phased timetable with reviews and contingency plans, as shown below, will be followed.

The ability to act as a gateway for the citizen science community is provided by the three national platforms in production and the citizen identity layer, which no other Node offers. The technical specifications for AAI and the catalogue are met as detailed below. The resources exposed to the Federation operate at TRL 7 or higher; those that do not yet meet this standard are excluded from the catalogue - and this project charter - until the date specified in their roadmap. The required multi-node use case is committed to an identified counterpart (CSUC-3, section 4). The individuals appointed to the roles required by the Federation are listed in section 10, and the legal entity that will sign the Federation's MoU will be decided by agreement within the consortium.

Thus, core capabilities are deployed during the construction phase, drawing where possible on the reference solutions already published openly — a procedure set out in the EOSC Federation Handbook v2.0 (DOI 10.5281/zenodo.18454649, §4.2.1). The Node commits to all five Federation capabilities, including those that become mandatory in 2026 (FC-3, FC-4 and FC-5), with the deadlines set out below.

FC	Federation Capability (FC)	Implementation	Deadline
FC-1	AAI (Mandatory)	Dedicated Infrastructure Proxy and Community AAI operated by CIEMAT, compliant with the AARC Blueprint Architecture and the EOSC AAI Architecture 2025 (OIDC/OAuth2), registered in the EOSC AAI Federation Registry and connected to the EU Node Hub. Built on the EU Node reference stack: SATOSA (proxy) and Perun (membership, identity verification by accredited organisations, AARC-G069 entitlements). End-user authentication delegated to MyAccessID (GÉANT), eduGAIN and eIDAS; partner platforms still using SAML or local accounts are bridged by the Community AAI. Tested in the EOSC Core Innovation Sandbox before production.	Registration M6; production M12
FC-2	Resource Catalogues and Registry services (mandatory)	Node catalogue profile maintained by Ibercivis for the resources in section 3 and the published datasets, in accordance with "Registration of EOSC Service Catalogues in the EOSC EU Node" v5.1 and "Registration of EOSC Research Product Catalogues in the EOSC EU Node" v3.0; registered and technically validated through the Contributors Dashboard and harvested into the EU Node Resource Hub. Each dataset entry includes its validation record and, from M18 (D-Tech-8), the attribution of its contributors.	First batch M9; complete M15
FC-3	Helpdesk (mandatory from 2026)	Single point of contact on Zammad, the EU Node reference solution, operated by CIEMAT (Head of Operations) either as a Node deployment or as-a-Service from the EU Node; integrated in the federated ticket exchange between Node helpdesks in accordance with the Federation's procedure and interoperability guide.	M9

FC	Federation Capability (FC)	Implementation	Deadline
		Second-line support by each resource operator (Ibercivis, Citizen Science Italia, Citizen Science Nederland).	
FC-4	Service Monitoring (mandatory from 2026)	One ARGO probe per resource in section 3, operated by CIEMAT, publishing availability and quality metrics under the agreed metric profile to the Federation's central Monitoring Repository (ARGO, operated by the EU Node). A compatible probe is a condition for inclusion in and continued listing in the catalogue.	M12
FC-5	Service Management System (mandatory from 2026)	FitSM subset - service portfolio, incidents, changes and request fulfilment, information security - reusing CIEMAT's existing SMS (EOSC-SYNERGY, IberGrid); Node entry in the Federation's configuration database (GOCDB); Sirtfi and Snctfi compliance for the AAI; CSIRT contact at CIEMAT; incident response in accordance with the SLA.	M12

Once in production, there will be four ways to participate in the Node, and only the last one involves governance

Via	What is required	What you get
Using the services	AAI. Identity verified when a workspace or publishing rights are assigned. Identity verification is not required when participating in citizen science projects.	Any service in section 3.
Accreditation as an authenticator	Training, registration, audit cycle with revocation. Defined in D-Gov-2.	An entity accredited as an authenticator may verify the identities of users within its own community. It does not need to be a member of the node.
Admission to the CSN Resource Pool	Compliance with the published capabilities interface. A provider agreement. Both are defined in D-Gov-2	Its resource is listed in the Node's catalogue entry alongside existing ones; it is not a member
CSN Membership	Adherence to the SLA, shared responsibility and sustained commitment	A seat on the Steering Committee and a vote on admissions

The criteria for admission to the Pool will be published: the capacity offered by the resource and how it connects with adjacent resources; a verifiable, self-assessed TRL of 7 or higher; an operational organisation and a designated person for the construction phase; a defined access policy; and that the software is made available beyond the operator's own projects. The agreement with the provider sets out the conditions, which also constitute the terms for continued participation — an acceptable use policy, specified monitoring points, second-line support, a declared role in relation to the GDPR and maintenance of the TRL — as admission is not permanent: any service that ceases to meet these conditions will be removed from the catalogue. Accreditation as an authenticator is open to European organisations that do not join the consortium - this is how the Node reaches countries that lack their own platform - with sample-based audits and a revocation process that entails the retroactive withdrawal of authorisations granted. The five capabilities, from CAP-01 to CAP-05, are declared, not fixed: if the resource providing one of them is withdrawn, another takes its place; if a resource contributes something new that goes beyond what its operator would use, the Steering Committee adds the capability and records it in the updated Project Charter (D-PM-2, M12 and M24).

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6 External dependencies and key risks

Impact × probability rated (H/M/L). Timeframes are counted from the kick-off (M1). 'BF=Before submission' refers to the Node registration submission to the Federation, which precedes M1.

External dependencies and risks	Actions and mitigation measures	D
Multi-Node counterpart not confirmed (external, H/M). CSUC-3 depends on Data-Terra agreeing scope and dates. No contact has been made yet (Appendix A), and its planned citizen science gateway overlaps with this Node unless the boundary is written down.	Contact via CNRS before submission; boundary fixed in the agreement between Nodes (D-Gov-3); Digital Twin of the Ocean and ENVRI as second line; if nobody confirms, CSUC-3 is demonstrated on a local copy of the data and D-UC-1 does not claim counterpart validation.	BF
National Node counterpart not confirmed (external, M/M). CSUC-4 depends on one first-wave Node, SURF, accepting the Node's credentials; the method itself works with any Node.	Contact via Citizen Science Nederland (Leiden is a SURF member); if SURF has not been confirmed by M9, the identity leg moves to EGI or GÉANT; Italian and Spanish legs are extensions and do not affect the commitment.	BF / M9
Single operator for federation capabilities (operational, H/M). CIEMAT operates the AAI, helpdesk, monitoring, SMS and CSIRT with 1.3 FTE (1.0 operations, 0.3 security; section 10).	24-month commitment in the SLA (D-Gov-1); deployments documented so another partner can operate them (D-Tech-2, D-Rel-1).	M3 / M12
Dependence on the EU Node and on rules still being written (external, M/M). Registration in the AAI Federation Registry, the Hub and the catalogue set the pace of the Community AAI and CSNRES-08. Deposit depends on Zenodo (CERN Node).	Contact with the onboarding team at kick-off (MS1); testing in the EOSC Core Innovation Sandbox; buffer between M6 and M12; FC-3/4/5 implemented on the EU Node reference solutions.	M3 / M12
Own services not integrated in time (technical, H/L). CSNRES-04/08/09 run at TRL 7 but are not yet connected to the Community AAI, the catalogue profile and monitoring; a resource may fail the EOSC Interoperability Framework validation; M12 and M18 are the busiest points of the plan.	Registration at M9 with CSNRES-01/02/03/05/06/07; 04/08/09 added at M12; gate reviews at M3 and M9 to replan early; ARGO mapping from M1; rebaseline path M15-M18.	M3 / M12
Most resources come from one partner (strategic, M/M). Ibercivis operates seven of nine resources, which could be read as an institutional hub rather than a European Node.	Admission criteria published with the governance manual (D-Gov-2); CSUC-4 led by Citizen Science Nederland; CSNRES-04 and CSNRES-05 co-operated by Citizen Science Nederland and Citizen Science Italia respectively; at least one external resource admitted by M18; Services are opensource, other partners can adopt resources.	M6 / M18
Verified identities: liability and consistency (governance, H/L). The Node answers to providers for acceptable use by users it did not verify itself, keeps verification records, and accreditation is open to organisations outside the consortium.	Node DPIA (D-Tech-1); liability shared in the SLA; written procedure and training as conditions of accreditation; audit by sampling with revocation; suspension workflow tested before accreditations open (D-Gov-2).	M6 / M12
Consent and reuse of sensitive data (ethics, H/M). Material exchanged between Nodes may be reused beyond what participants consented to; projects may involve minors.	Consent established at launch (CSNRES-04) and travels with the dataset; reuse terms in the licence and each exchange agreement(D-Gov-3) ethical screening including minors (D-Tech-6); screening blocks deposit without obfuscation.	M12
Low adoption (strategic, H/M). Researchers and public authorities may not use the data even with a validation record; the membership pilot may not reach 50 verified identities at M12 and 500 at M21.	Validation profiles drawn up with the communities that use the data; partners as users from M1; recruitment through the three national platforms; reuse and membership tracked as KPIs (D-Com-2).	Quarterly
Effort and governance not yet secured (financial and governance, H/M). The Node runs on in-kind effort; registration is not funded; the five Federation roles and the DPO are designated (section 10) but not yet formally committed.	Roles and signatory appointed at kick-off and fixed in the SLA with 24-month commitments (D-Gov-1); capabilities declared, not fixed, so a resource can be replaced; sustainability plan (D-Rel-2).	M1 / M21

7 Contributions [Deliverables (including documentation)]

The steps in the roadmap (validation approval status for publication, AAI sandbox, first catalogue batch, field observation route, membership pilot, sensor pilot, ARGO integration, user evaluation, KPI report) are milestones under Section 9, not separate deliverables.

Prior to publication, each deliverable will be reviewed by individuals who did not participate in its drafting. Comments and their resolution will be recorded, and the coordinator will validate the deliverable against that record before publishing it.

#	ID	Deliverable	Responsible	Deadline
1	D-PM-1	Project work plan: breakdown of work, allocation of resources by partner, dependencies, reporting frequency	Ibercivis	M2
2	D-PM-2	Updated Project Charter: which resources were admitted to the CSN Resource Pool and who operates them; what capabilities the Steering Committee added beyond CAP-01 to CAP-05 and the published interface for each; the proportion of resources not operated by a founding partner; the current status of use cases and counterpart nodes	Ibercivis	M12 and M24
3	D-Gov-1	Multi-party SLA: service levels, roles, liability, exit clauses, joint liability agreement, accession clause. A brief interim form is signed at M3; the fully signed SLA replaces it at M6.	Ibercivis (legal representative)	M3 short form; full SLA at M6
4	D-Gov-2	Governance manual: FitSM processes, membership admission, accreditation scheme for trained coordinators, audit and revocation cycle, published admission criteria for the CSN Resource Pool, agreement template for external providers, procedure for removal from the catalogue, licences for contributed data, withdrawal, records policy	Citizen Science Nederland	M6
5	D-Gov-3	Final agreement with the Counterpart nodes: domain profile, source material, permitted purposes, storage and computing quotas, distribution of reports, identity verification limits.	Ibercivis + Citizen Science Nederland	M9
6	D-Tech-1	Node DPIA and identity verification procedure (approved), extended to the attribution chain and location traces of field data collection.	CIEMAT + Citizen Science Nederland (DPO)	M6
7	D-Tech-2	Infrastructure Proxy and Community AAI in production, registered with the EOSC AAI Federation Registry and connected to the Hub, with membership, identity verification and active suspension, plus administrator and user documentation.	CIEMAT	M12
8	D-Tech-3	Validation (CAP-04, CSNRES-08) at TRL 8 as a federated service: publication approval workflow, integration into the AAI Federation, set-level checks, catalogue registration with the validation metadata profile, API documentation	Ibercivis	M12
9	D-Tech-4	Analysis environment (CAP-05, CSNRES-09) at TRL 8 as a federated service	Ibercivis	M12
10	D-Tech-5	Inter-node exchange interface: specification and reference implementation; payload as an RO-Crate with PROV; transfer via registration in the Research Product Catalogue and PID resolution; authorisation via G069 entitlements.	CIEMAT	M9
11	D-Tech-6	Set-up (CAP-02, CSNRES-04): project consent, data management plan, licence (CC BY 4.0 / CC0), ethical screening (including minors) and safeguarding, data protection self-assessment template (without Node	Ibercivis + Citizen Science Nederland	M12

#	ID	Deliverable	Responsible	Deadline
		signature), first validation profile, call interface for other platforms and training templates.		
12	D-Tech-7	AAI Community Security: internal assessment and penetration testing as criteria for going live (M11); external review (M14)	CIEMAT	M11 / M14
13	D-Tech-8	Publication and attribution (CAP-03/CAP-04, CSNRES-05/06/07/08): each item in the collection bears the identifier of the creator who uploaded it to the repository; contributors can view their own items; unlink-on-request; Zenodo downloads and OpenAIRE citations at collection level, with a coverage statement	Ibercivis	M18
14	D-Tech-9	Public profile library: versioned and citable profiles for three domains, one per data route in section 4: classification (PPSR-Core), field observation (Darwin Core) and sensor data (OGC SensorThings), including the profile written with the partner Node and a wrapper for an existing external validator	Ibercivis + Counterpart Node	M18
15	D-Cat-1	Catalogue exposure: cross-references to 'Registration of EOSC Service Catalogues in the EOSC EU Node' v5.1 and 'Registration of EOSC Research Product Catalogues in the EOSC EU Node' v3.0; first batch of production resources at TRL ≥ 7, including national platforms (M9); full exposure of research services and products with validation records (M15).	Ibercivis	M9, M15
16	D-UC-1	Multi-Node demonstration (CSUC-3): domain material and profile supplied by the partner Node; observations and classifications produced by the community, checked against the profile, returned with provenance and validation record, and used by the partner's researchers	Ibercivis + Counterpart Node	M18
17	D-UC-2	Use-case reports for CSUC-1, CSUC-2 and CSUC-4: capabilities exercised, combined resources, projects incorporated and lessons for the Federation	Citizen Science Italia in collaboration with leading organisations involved in the use cases	M12 and M18
18	D-Com-1	Integration programme: documentation and tutorials (EN/ES/IT/NL), project listing feed to national platforms, citizen science curriculum at the EOSC Academy and the EOSC Knowledge Hub, using the project's Training Matrix; metadata for learning resources as required by the Academy.	Ibercivis + Citizen Science Italia + Citizen Science Nederland	M9, updated M15 / M18
19	D-Com-2	Community engagement report: third-party projects and resources incorporated, coordinator accreditations, events held and attendance, training courses completed, and the targets in Section 8 measured against the baseline	Communications Officer + the three national platforms	M12 and M24
20	D-Rel-1	Software release: code, documentation and licences for components developed during the construction phase	Ibercivis + CIEMAT	M18
21	D-Rel-2	Sustainability plan: funding streams, cost base, alignment with the RIECS-Concept roadmap and options for transfer to a future research infrastructure	Ibercivis	M21

8 Community engagement

Community involvement has two objectives: to bring the European citizen science community into the Federation and to offer citizen science to the other Nodes as a research method they can utilise. The three national platforms operated by the consortium in Spain, Italy and the Netherlands bring together more than 200,000 citizen scientists across over 500 projects and are federated with the European platform citizenscience.eu, meaning that a project registered on any of them is visible across Europe. Ibercivis also leads RIECS-Concept. The three operators are members of the European Citizen Science Association (ECSA).

Projects created on the Node will be published on national platforms with participation links, and anyone requiring a workspace or publishing rights will be able to obtain a verified identity. Any European citizen science organisation, whether within or outside the consortium, will be able to become accredited to verify the identity of its community, subject to training and an audit cycle (D-Gov-2); in this way, the Node will reach countries without a national platform. The Node will be able to incorporate third-party resources into the CSN Resource Pool according to published criteria (TRL ≥ 7, capabilities interface, supplier agreement, ARGO probe, second-line support), with at least one resource accepted in M18 and an annual admission limit in line with support capacity. Training will be provided for each of these channels, and they will be promoted at conferences and events.

The Node will be presented at the national citizen science conferences (subject to the construction-phase calendar) in the three countries: the Convegno Nazionale di Citizen Science Italia (biennial, next edition 2027), the Nationale Citizen Science Expo 'Kennis Maken' in the Netherlands and the First Citizen Science Congress in Spain (June 2027), as well as at the ECSA 2028 conference (Lisbon, May 2028). Bioblitzes and hackathons will continue to serve as platforms for demonstrating the tools. Two training sessions will be held each year, with materials in EN/ES/IT/NL, for project creators, organisations wishing to become accredited and operators wishing to join the Resource Pool; the citizen science curriculum will be published on the EOSC Academy (D-Com-1) in coordination with the Federation's Training & Competencies Working Group. As regards the other Nodes, the CSUC-3 case study, for which Data-Terra is the intended counterpart (Appendix A), will demonstrate how the community can interpret data from another Node.

The plan includes three lessons from the first hour. The bottlenecks are the AAI and the catalogue, not the services; that is why CIEMAT is reusing the EU Node's reference stack and testing in the Sandbox. "Production" requires alignment of technical, policy and governance aspects; this is why the M12 go-live is conditional upon the SMS, the security review and the appointed roles. Multi-node scenarios are the Federation's key value proposition but depend on third parties; this is why CSUC-3 has a local fallback. Furthermore, the Node will contribute its community to the EOSC User Forum, the launch of which coincides with the move to production. Objectives (measured in D-Com-2): verified identities, 50 in M12 and 500 in M21; accredited organisations outside the consortium, 3 in M12 and 6 in M24; projects onboarded: 10 in M12 and 20 in M18; third-party resources accepted: ≥1 in M18; individuals or organisations trained: 50 per year.

9 Timetable and milestones

The kick-off date depends on the opening of the next wave of Node registrations, which has not yet been announced; all deadlines in this Charter are therefore relative to M1.

ID	Milestone	Target
MS1	Kick-off. MoU signatory decided; the five Federation roles and the DPO (section 10) confirmed in the interim SLA; EU Node onboarding contact established; Project work plan delivered (D-PM-1, M2); interim multi-party SLA signed (D-Gov-1 short form, M3).	M1-M3
MS2	Milestone 1 review: technical readiness against the Tripartite Governance Requirements for EOSC Nodes and the Node requirements of the EOSC AAI Architecture 2025; CIEMAT's AAI baseline confirmed or plan exceeded; validation service (CSNRES-08) design approved to proceed towards federated production (production release itself at MS6).	M3
MS3	Infrastructure Proxy and Community AAI registered in the EOSC AAI Federation Registry and demonstrated with the Hub in the EOSC Core Innovation Sandbox (FC-1, registration stage); full multi-party SLA signed (D-Gov-1); Node DPIA approved (D-Tech-1); policy suite published (AUP, privacy notice, assurance policy, Sirtfi/Snctfi, AARC-G069 entitlement scheme); governance manual with accreditation scheme and Resource Pool admission criteria published (D-Gov-2); suspension workflow tested and first accreditations outside the consortium opened.	M6
MS4	Helpdesk operational (FC-3); first batch of catalogue entries registered and validated, including the three national platforms and CSNRES-05/06/07 (FC-2, D-Cat-1); onboarding documentation published and first training session for project creators held (D-Com-1); inter-node exchange interface published (D-Tech-5); agreement with the counterpart Node signed (D-Gov-3) or, failing confirmation, the local fallback for CSUC-3 formally activated (section 6, Appendix A). Decision on the CSUC-4 identity leg: SURF confirmed, or switch to EGI/GÉANT. Documentation published.	M9
MS5	Milestone 2 review: pre-production readiness of AAI, validation service, monitoring mapping and SMS; replan if required.	M9
MS6	Core services in production. Federated Community AAI live (D-Tech-2), after internal security assessment and penetration testing (D-Tech-7, M11); validation and analysis environment at TRL 8 (D-Tech-3, D-Tech-4) and CSNRES-08/09 added to the catalogue; project launch assistant published (D-Tech-6) and CSNRES-04 added to the catalogue; ARGO probes for all catalogue resources reporting to the Federation monitoring repository (FC-4); SMS operational and Node entry in GOCDB (FC-5); membership pilot with 50 verified identities holding workspaces; operational field observation channel with first datasets in the catalogue carrying DOIs and validation records; first cohort of 10 projects incorporated; first federated CSUC-2 project; first CSUC-4 credential accepted by the counterpart selected at MS4; first updated Charter (D-PM-2) and first community engagement report (D-Com-2). Documentation published.	M12
MS7	External security review completed (D-Tech-7).	M14
MS8	Full catalogue exposure completed: research services and products with validation records (D-Cat-1, FC-2); pilot projects running in the three countries with 'unlink-on-request' tested in pilot mode; citizen science curriculum published at the EOSC Academy (D-Com-1 update). Documentation published.	M15
MS9	Multi-node demonstration completed (D-UC-1). CSUC-2 completed with 2 projects reports delivered (D-UC-2). Sensor pipeline completed as a limited pilot. Publication and attribution in production: contributor view and unlink-on-request (D-Tech-8, CAP-03/04). Public profile library (D-Tech-9) and software release (D-Rel-1) published; D-Com-1 final update. At least one third-party resource admitted to the CSN Resource Pool (CSNRES-10+). CSUC-4 complete on the Dutch side; Italian and Spanish legs as extensions only if their counterparts confirm.	M18
MS10	Closing review of registration: KPIs reported in the final community engagement report (D-Com-2), including the proportion of resources not operated by founding partners and the capabilities added by the Steering Committee; declaration of readiness for full operation; second updated Charter (D-PM-2); alignment with the assessed RIECS-Concept roadmap; closing presentation at a community conference.	M24

10 Contacts

The EOSC-CSN team consists of six named individuals, contributing their services in kind throughout the 24-month construction phase and without associated funding: the five roles required by general criterion No. 5 (Handbook §3.3.3) —coordination, operations, legal affairs, cybersecurity and communication— plus a data protection officer, who is distinct from the legal representative. The six names will be listed in the multi-party SLA (D-Gov-1) and in the registration package.

Role	Name	Email
Coordinator	Francisco Sanz García (Ibercivis)	frasanz@ibercivis.es
Head of Operations	Rafael Mayo (CIEMAT)	rafael.mayo@ciemat.es
Head of Cybersecurity	Antonio Rubio (CIEMAT)	antonio.rubio@ciemat.es
Legal Officer	TBD	TBD
Communications Officer	Andrea Sforzi (Citizen Science Italia)	direzione@museonaturalemaremma.it
Data Protection Officer	Margaret Gold (Citizen Science Nederland)	margaret@citizenscience.nl

The Node is coordinated by the Ibercivis Foundation. A Steering Committee, comprising one representative per partner, approves admissions to the CSN Resource Pool, new capabilities and updates to the Charter (D-PM-2). CIEMAT operates the federation capabilities (AAI, helpdesk, monitoring, SMS and CSIRT); the three national platforms lead the integration of their communities. The escalation procedure is defined in the SLA.

The coordinator oversees implementation and represents the Node within the Federation. Operations manages the services, their availability and the helpdesk. Cybersecurity manages incidents and liaises with the CSIRT, and is a separate role from Operations. Legal is responsible for the SLA, sponsorship terms and licences. The DPO is responsible for the DPIA and the records management policy. Communications is responsible for the engagement plan, training and the indicators report (D-Com-2).

A minimum of 3.5 FTEs is required: 1.0 for operations and infrastructure; 0.7 for development; 0.6 for community and training; 0.5 for coordination and communications; 0.4 for legal and data protection; 0.3 for security.

11 Appendix A. Counterparty Node Confirmations

No confirmation has been received and no contact has been established with any of the Nodes named in section 4, nor has a date been agreed. The table lists each counterpart, its role in the plan, what its confirmation must cover, the intended contact route and the milestone it is tied to. The EU EOSC Node (AAI Federation Hub and Registry, catalogue registration) and the CERN Node (Zenodo) are also involved in every use case, but as Federation core services rather than counterparts, and are not subject to this criterion.

Counterpart Node	What the confirmation should cover	Status
EOSC Data-Terra Node (CNRS): lead counterpart for CSUC-3 (D-Gov-3, M9; D-UC-1, M18). First-wave candidate Node whose data sources were among the first incorporated into the EU EOSC Node catalogue. Its Charter (§2, p. 6) states the intention to "implement a citizen science gateway" for research data annotation/classification with science knowledge-based validation. Project charter: https://eosc.eu/wp-content/uploads/2025/10/20250401_Project_Charter.EOSCData-Terra_CNRS.31-03-2025.v_1.1-2.pdf	Material for classification and the domain validation profile; a written boundary between its planned gateway (thematic entry point and catalogue) and this Node's services (verified identity, validation profile, item-level attribution); CSUC-3's role in its multi-node image demonstrator; storage and computing as agreed; a designated contact; a timetable compatible with M9 and M18.	[TBD: no contact established. Via CNRS / Gaia Data; French citizen science organisations as accredited authenticators.] [Contact planned before registration submission]
European Digital Twin of the Ocean Node (CNR / Blue-Cloud 2026): second line for CSUC-3, for storage and computing, not as a supplier of material. Its Charter mentions citizen science once, as a beneficiary audience rather than a contributor (§2, p. 4); its plankton use case relies on modelling and machine learning, not human classification. Project charter: https://eosc.eu/wp-content/uploads/2025/10/20250404_Project_Charter-Blue-Cloud-Marine–ThematicNode_V2.pdf	Storage and computing via D4Science virtual laboratories; the marine pathway shared with the EOSC-ES ESUC-2 use case; a designated contact. A commitment to supply material for human classification would first require presenting the use case to them, as their Charter does not cover it.	[TBD: no contact established. Via CNR-ISTI and via NEREIDAS / CSIC.] [Contact planned before registration submission]
ENVRI Node (LifeWatch ERIC / ENVRI-Hub NEXT): CSUC-3, terrestrial biodiversity pathway. Project charter: https://eosc.eu/wp-content/uploads/2026/06/20260227_Project-Charter_ENVRI-EOSC-Node.pdf	Whether its Charter, once published, contains material requiring human interpretation; alignment of validation profiles with the terrestrial and in situ environmental track; a designated contact.	[TBD: no contact established.] [Contact planned before registration submission]
SURF: EOSC Netherlands Node, counterpart for CSUC-4 and the pillar of the construction-phase commitment (decision at M9; first credential accepted at M12, MS6; completion at M18, MS9). Its Charter (§3) leaves use-case selection open, depending on the capabilities of other Nodes during the build-up phase. Project charter: https://eosc.eu/wp-content/uploads/2025/10/20250331_Project_Charter.EOSC-SURF-pilot-node-31-04-2025.v0.9.pdf	Acceptance by the national Node's proxy of this Node's AAI Federation credential and AARC-G069 entitlements; allocation of workspace, storage and computing to verified users without institutional affiliation under the same conditions as institutional users; dual listing of resulting outputs in the catalogue; a designated contact; a calendar compatible with M12 and M18.	[TBD: no contact established. Via Citizen Science Nederland / Leiden University (a SURF member). If not confirmed by M9, the identity leg switches to EGI or GÉANT.] [Contact planned before

Counterpart Node	What the confirmation should cover	Status
		registration submission]
EOSC Italy Node (ICSC Foundation): Italian extension of CSUC-4; outside the construction-phase commitment. Project charter: https://eosc.eu/wp-content/uploads/2025/11/Project_Charter.EOSC-Italian-Node_Final-Second-version.pdf	As for SURF, for the Italian leg; working relationship with Citizen Science Italia as an accredited organisation. Implemented only if confirmed; its absence does not affect the CSUC-4 commitment.	[TBD: no contact established.] [Contact planned before registration submission]
EOSC-ES: Spanish extension of CSUC-4, candidate Node, not yet registered; outside the construction-phase commitment.	Agreement in principle to participate once registered; the joint marine use case (ESUC-2) with CSUC-3. Implemented only if EOSC-ES registers and confirms.	[TBD: no contact established.] [Contact planned before registration submission]

Until confirmations are in place, the local fallback described in sections 6 and 9 applies: the CSUC-3 approach is demonstrated on a local copy of the data, using CIEMAT's limited work allocation and the Node's analysis environment, and the multi-Node demonstration (D-UC-1) is not claimed to have been validated by a counterpart until the corresponding row above is closed. If SURF has not confirmed by M9, the CSUC-4 identity leg is switched to EGI or GÉANT (section 9). There is no Spanish national Node in either wave; the Dutch leg therefore constitutes the CSUC-4 commitment, and the Spanish leg cannot be an extension until EOSC-ES registers. The risk of non-confirmation and its management are set out in section 6.