



		EOSC-Nordic	EOSC-Pillar	NI4OS-Europe	ExPaNDs	EOSC Synergy	
FAIR ecosystem (Pillar 3)	Rec. 7: support semantic technologies	The FAIR Maturity evaluator is actively using various harvesters to extract machine-actionable metadata (semantics). The task that addresses this theme is T4.2.2 "Support the adoption of FAIR data standards" ( <a href="https://wiki.eosc.no/wiki/EOSC/Nordic/ist_of_tasks">https://wiki.eosc.no/wiki/EOSC/Nordic/ist_of_tasks</a> ), but does not start until Sep2020 (report D4.5 deliverable due Aug2022). Supporting the adoption of semantic attributes within the various communities by MAM, hackathon events + communication. Hope to synchronize our efforts on this better with the other initiatives, in particular other 50-projects.	WP4.5 will gather types of ontologies in use which can be used as a step stone towards machine actionable metadata for FDO.	NI4OS-Europe will use existing semantic schemas	D3.2 Release V1.0 ExPaNDs ontology available as an EOSC online service (Feb 2021)	Alignment of policies to the European Interoperability Framework (EIF). Not a specific task or project focus.	
	Rec. 8: Facilitate automated processing	Indirectly supported via the FAIR Maturity evaluator that is fully automated itself and promotes machine-actionability, which ultimately enables automated processing. Ongoing activity throughout the project.	WP7 will implement workflows using VRE	WP4 will facilitate automation processes through the development of the tools. D4.3 Delivery of legal, technical and procedural tools (type Demo) (November 2020), potentially D4.7 D4.7 "Second set legal, technical and procedural tool(s) (type Demo) (November 2021). A categorization of contemporary tools supporting FAIR and ODM, applicable at the strategic, operational or technical level is provided in the deliverable D4.3 "Mapping of legal, technical and procedural tools" ( <a href="https://doi.org/10.5281/zenodo.350088">https://doi.org/10.5281/zenodo.350088</a> )	D4.5 Deployment of Analysis Services for EOSC (Jun 2022)	M3.6 - Software QA-as-a-Service allows to plug-in generic software for CC0. Automated pipelines for adding Software and Services to the EOSC - this should respect FAIR and ROP. (To be possible for generic software & services by the end of 2021)	
	Rec. 9: Certify FAIR services	Support for self-assessments and certification of data repositories according to CTS is a central activity (T4.2.3) in the project and process and results will be detailed in D4.1 (May-Jun2020) according to "trainee" repositories that are not yet certified (using results from the FAIR evaluation) and other. Aiming to support 3-5 repositories in the way during the period.	Services delivered as part of the project will stick to the FAIR recommendations. However, the certification of FAIR services is not mature enough to be in scope.	Training for Open and FAIR RDM (WP4) and for onboarding (WP5) includes presentation and walk through the specifics of the CoreTrustSeal certification. Repositories to be onboarded in the NI4OS-Europe countries will have the opportunity to learn about the process and prepare for obtaining a certification if they decide to do so. Also, tools/services to be produced in WP4 already take into consideration FAIR/FAIR reports and deliverables about FAIR-aligned repositories and services. Potentially D3.2 First report on pre-production environment, D3.5 Final report on pre-production environment	D2.6 Self-evaluation Photon and Neutron RIs for FAIR data certification (Feb 2022)	Whitepaper: State of the art regarding digital badge issuing technologies: <a href="https://digital-eosc.eu/handle/10261/206348">https://digital-eosc.eu/handle/10261/206348</a>	M3.4 - Badge issuing for Software & Service Quality Assurance - linked to but not focused on FAIR/Reass Assessment.
	Rec. 22: Use information held in DMPs	NA	NA	NI4OS-Europe DMP has been produced in deliverable D1.14 "Data Management Plan"	D2.8 Active DMPs for Photon and Neutron RIs (Aug 2022)	Driving some process guidance for developing DMPs for services joining the EOSC. D4.1 - Best Practices Elicitation including Data Management Plans -> Deliverable focusing on work with thematic services to empty data management plans as part of the project.	
	Rec. 23: Develop components to meet research needs	NA	See Rec. 1		D3.3 Demonstrate ICAT and SciCat released with APIs compatible to ExPaNDs (Feb 2022)	See Rec. 9.	
Rec. 24: Incentivise research infrastructures to support FAIR data	T4.3 "Incentives for the uptake of FAIR practices" will map and identify effective incentives for various stakeholders. Activity starts 2021 and continues in D4.4 (Apr2022).	A federated data space incentivise the uptake of additional data spaces and will connect data islands.		Federated EOSC services	See Rec. 9 - Badging provides recognition.		
Skills for FAIR (Pillar 4)	Rec. 10: Professionalise data science & stewardship roles	NEIC (project coordinator) has initiated a regional series of data stewardship courses (held by GO-FAIR trainers) to build homogeneous data stewardship competences throughout the region (by end of 2020 expect more than 100 trained stewards). Beyond dissemination of the importance of training and self-development through the project (T4.1), there are no explicit actions to contribute to training among data scientists or research support staff. Train-the-trainer event planned for 2020-21, to develop a training series with hands-on exercises using tools and use-cases.		Through training activities and dissemination events of the project with a total of 600 persons targeted. All the relevant information can be found on our training plan published on the deliverable D2.3 "Training plan" ( <a href="https://zenodo.org/records/3736165#q17256uLKW">https://zenodo.org/records/3736165#q17256uLKW</a> ). In addition, WP2 that consults NI4OS-Europe partners and builds a blueprint for creating national open science initiatives, includes provisions for implementing education and training frameworks in the countries. However, how/when which extent they will be implemented at the national level depends on the diversity of national settings and on the profiles set in national roadmaps.	D2.1 Annual report on training activities (Aug 2020, 2021, 2022)	Development of a train-the-trainer guide for the associated platforms being developed on the project.	
	Rec. 11: Implement curriculum frameworks and training	NA	D3.3 Training Plan (Dec 2019)	The project supports Training of Partners and creation of training material to be translated to the partners' languages for FAIRness. The material will be based on existing training material/guidelines transformed to meet stakeholders' needs according to the project's stakeholder survey findings.	D5.4 Report on lessons learned and future prospects for adopting best practices on data FAIR principles, data management and data stewardship at the ExPaNDs RIs (Aug 2022)	WP6 is finalizing a report about MOOC solutions available as a preliminary step for the development of a tool that helps data producers, stewards, services and infrastructures run their own training events about Open Science in general	
Incentives and metrics for FAIR data and services (Pillar 5)	Rec. 12: Develop metrics for FAIR digital output	Evaluation of repository FAIRness is achieved by averaging 10-15 datasets from the respective repository. More than 100 repositories are evaluated. Project has contributed to the extensive testing and multiple improvements of the FAIR Maturity evaluator tool, including harvester and many of the indicators. Details to be provided in D4.1 (Aug2020) and D4.3 (Feb2022).	Together with the call5s an initiative to define metrics (indicators) which include indicators on implementation of FAIR for continuous monitoring has been started.	D4.3 has identified studies, frameworks and tools that propose and/or make use of FAIR metrics. FAIR Maturity Model is also guiding practice in that area and service providers will be informed about all possible solutions for assessing FAIRness and will be provided with support within WP4, 4 and 5 should they be willing to implement them.	D2.1 Draft data policy framework for Photon and Neutron RIs (Aug 2020) -> evaluation using FAIR Data Maturity Model - write up as possible use case?		
	Rec. 13: Develop metrics to certify FAIR services	WP3 is developing a Service Maturity framework, but the FAIR aspect of that is less clear.	NA	D4.3 has identified studies, frameworks and tools that propose and/or make use of FAIR metrics, including for repositories. Moreover, for the needs of new tools to be developed in WP4, FAIR/FAIR report is taken into consideration so that they are designed from scratch as FAIR-enabled tools/services.	D2.6 Self-evaluation Photon and Neutron RIs for FAIR data certification (Feb 2022)		
	Rec. 25: Implement and monitor metrics	FAIR Maturity evaluator is the implementation of metrics and the project is monitoring the evolution of those metrics among 100+ repositories in the region and will monitor those over 2 years using a fixed version of the evaluator.	Pillar together with 50 projects work on metrics to be rolled out in National Initiatives - this includes metrics related to FAIR	Metric derived from onboarded services and repositories will be monitored at the pre-production platform before fed to EOSC.			
Rec. 26: Support data citation and next generation metrics	NA	NA					
Investment in FAIR (Pillar 6)	Rec. 14: Provide strategic and coordinated funding	NA	The project has funds to support applicable use cases of new services with integration into EOSC. The applicants will be selected through an open call. At the time the selection criteria for the applicants are not yet defined but will contain requirements regarding FAIRness of the proposed service candidate.	Strategic and coordinated funding will be covered in business plan as well as sustainability plan. Regarding Business Plan, there is a particular task focusing on such aspects, namely T2.4 "Business Models" which is expected to deliver D2.5 "Business model for recommendations" by October 2021. In addition, task 7.4 "Innovation management and sustainability" with final results presented in the deliverable D2.7 "Sustainability Report" which is expected to be delivered by August 2022.	D1.7 Sustainability policy report ( <a href="https://doi.org/10.5281/zenodo.3715279">https://doi.org/10.5281/zenodo.3715279</a> )	n/a	
	Rec. 15: provide sustainable funding	NA	WP4.5 investigates models for funding in the different participating countries and will deliver lessons learnt.	T7.4 Innovation management and sustainability. This leads to two deliverables: D7.2 "Marketing, dissemination and sustainability plan" ( <a href="https://zenodo.org/records/3736165#q17256uLKW">https://zenodo.org/records/3736165#q17256uLKW</a> ; November 2019) as well as D7.7 "Sustainability Report" (M36)	D1.7 Sustainability policy report ( <a href="https://doi.org/10.5281/zenodo.3715279">https://doi.org/10.5281/zenodo.3715279</a> )	n/a	
	Rec. 27: Open EOSC to all providers but ensure services are FAIR	What is expected to "ensure that services are FAIR-compliant" is not very clear to us yet. What we have discussed is to include machine-actionable metadata to declare what type of service and supported APIs a given service provides (but have not yet clearly established what vocabulary/standard to use if available at all). Open APIs are used as a rule (when possible) to enable interoperability.	Assessment of FAIRness of services is the next step - currently main objective is inclusion to EOSC catalogue.	Gradual migration of regional services and repositories towards EOSC with focus on FAIRness. Deliverable D3.2 "First report on pre-production environment" (June 2020), Deliverable D3.5 "Final report on pre-production environment" (April 2020)	D4.5 Deployment of Analysis Services for EOSC (Jun 2022)	D2.3 Intermediate report on integration efforts. This report will provide information on the implementation status of Integration Plan. (Q4, 2020)	