

White Paper 3: Procurement

Supporting Document to D3.3 Draft Policy Recommendations

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1. INTRODUCTION

The job of subtask 3.1.3 of EOScpilot is to review and gather the policy requirements which will provide guidelines for the procurement of European Open Science Cloud resources from the perspective of users; Research Producing Organisations, Research Infrastructures and e-Infrastructures. It considers how Resources can be made available to the users whether they are from another user or a commercial company or indeed an arrangement of a “commons” in which services are maintained and sustained by collective actions of EOsc participants.

“Resources” in the context of the EOsc encompass a wide range of goods and services that could be included within the EOsc service catalogue, including but not limited to cloud services - software or infrastructure, professional services and possibly other forms of intellectual property, eg data-sets.

In producing this Chapter, the findings from the Science Demonstrators in the EOsc Pilot project have been considered and input was gathered from attendees at the Policy Workshop held as part of the EOscpilot Plenary event in Pisa in February 2018¹.

¹ The report of the workshop’s Mentimeter survey results is in the WP3 Repository

2. DRIVERS AND CONSTRAINTS

The main drivers to performing procurement activity in the EOsc are the likely need to procure services, infrastructures or resources for a broader set of users than has been the case previously, as a result of the envisaged federated nature of the EOsc. Associated with this are the requirements to procure services or resources at great scale in order to meet the needs of some of the EOsc use cases (big data experiments in particular), and also economies of scale which could potentially be realised by procurement activity in the EOsc.

A particular driver is the desire of the research community to make use of cloud storage and compute facilities, many of which are provided by commercial suppliers.

The main constraint acting on the provision of services, infrastructures and resources in the EOsc is expected to be the terms of the EC Procurement Directive (2014/24/EC), discussed in detail below.

3. THE EOsc MODEL AND PROCUREMENT

The form, character and style for EOsc is developing to deliver on the EC's initial stated vision in April 2016 in its European Cloud Initiative Communication². Some key characteristics that are emerging are:

- “1.7 million European researchers and 70 million professionals in science and technology a virtual environment with free at point of use, open and seamless services for...” (ECI Communication)
- “benefit from a EOsc that federates existing research data infrastructures”³ (EOsc Implementation Roadmap)
- “the consultation clearly and conclusively ruled out a centralised model of implementation as a valid option for the implementation of EOsc” (EOsc Implementation Roadmap)

The EC's Implementation Roadmap for the European Open Science Cloud proposes a possible model for EOsc:

“a pan-European federation of data infrastructures built around a federating core and providing access to a wide range of publicly funded services supplied at national, regional and institutional levels, and to complementary commercial services”.

To deliver an effective EOsc, access to such services will require procurement activity to establish the right contractual arrangements for users. This section reports on the legislative constraints that will need to be satisfied when acquiring services in the EOsc and provides suggestions as to how procurement can increase the value of the resources being offered and reduce the administrative overhead of accessing them.

² COM(2016)178 final

³ Implementation Roadmap for the European Open Science Cloud SWD(2018) 83 final

4. EOsc STAKEHOLDERS AND IDENTIFICATION OF RELEVANT LEGISLATIVE REGIMES

The eco-system of entities that will comprise EOsc is diverse: service providers be they commercial companies or publicly funded bodies, and users covering a broad spectrum from individuals to employees who are representatives of large international commercial organisations.

Whilst the individual or commercial users are subject only to laws of their nation or corporate governance the publicly funded bodies are in general subject to the EC Directive on Procurement (2014/24/EC) "Directive". For this study the obligations of the Directive shall be considered in the model proposed in the EC's EOsc Roadmap and as exemplified by Science Demonstrators within EOsc Pilot.

Note that the Directive is codified within Member States National Legislation, but for this study the implications will be considered at the EC Directive level. Subsequent project phases can consider this at a more detailed level.

The participation of private sector bodies in a role other than provider of services may cause implications to the EOsc. For example, service providers may offer different commercial terms to publicly funded EOsc users compared to private sector users. Further private sector participation (as users) in an arrangement to share infrastructure may prevent participation by publicly funded bodies as explained in Section 7 below.

5. PROCUREMENT CONTRIBUTION TO EOSC

Compliance to procurement legislation in the sourcing of services to be used in EOSC is essential for publicly funded bodies; public procurement can often be complex and there are limited numbers of technology procurement professionals with public procurement experience. Procurement should be considered as a value-add activity within EOSC and not solely a policy consideration:

- Through the aggregation of demand, procurement may be able to secure competitive terms with commercial providers on behalf of all the EOSC participants, noting the possible segmentation of terms dependent upon the type of user - commercial or publicly funded
- Procurement may provide the opportunity for the Principles of Engagement/Principles of Participation in development for the EOSC to be incorporated into an appropriate contractual vehicle to provide a mechanism to enforce service standards.

6. ACCESS TO COMMERCIAL SERVICES THROUGH EOSC

The Directive sets out a number of arrangements that describe the conditions to be met for procuring resources that are of potential relevance to potential EOSC operational models.

Proprietary Rights

The Directive recognises that where proprietary rights exist then no market exists and as such a direct award of a contract is acceptable.

In the research sector it may be possible that a particular methodology or source of intellectual property may exist for which some access charge/cost share may need to be paid for access.

In such an instance a Contracting Authority may award a contract directly to access such proprietary intellectual property without the need for a procurement.

An example of such a circumstance may be Copernicus DIAS offerings

Aggregated Procurement and Framework Agreements

The Directive sets out provisions that will allow Contracting Authorities to work collectively to jointly procure services from the commercial market place. It is possible for one Contracting Authority to act on behalf of others to combine their demands and carry out a single procurement.

The outcome of such a procurement can result in the establishment of a framework agreement. Such an agreement allows for any Contracting Authority cited in the initial procurement to use the framework without the need for undertaking a fuller or more exhaustive procurement procedure.

By aggregating demand, smaller Contracting Authorities may be able to access suppliers which they could not independently, and for all it is likely there will be benefits in the form of economies of scale.

This has been proven in the establishment of a framework for Infrastructure as a Service (IaaS) – including Microsoft, Amazon and a variety of European providers who are offering enhanced discounted services for NRENs and their connected institutions across Europe.

7. CONTRIBUTION OF RESOURCES FROM PUBLICLY FUNDED STAKEHOLDERS

Entities subject to The Directive are referred to as Contracting Authorities and Article 12 sets out the circumstances under which one Contracting Authority (CA), may provide services to another CA, e.g. one University wishes to offer/sell capacity within their infrastructure to another University, or as is foreseen in EOsc the provision of resources from a Research Infrastructure to another Contracting Authority.

If a CA service provider wishes to deliver services to another CA in exchange for revenues, then such an arrangement may be implemented without undertaking a procurement in two circumstances, which are described below.

Where one CA provides services to another in exchange for receiving other services in exchange (“a barter”) then given that such services are likely to have some obligations associated and the mutual exchange has a consideration equivalence it is assumed that such arrangements will also be subject to the two circumstances below.

The two circumstances set out in The Directive in which it is possible to avoid undertaking a procurement are set out below as a general guide rather than an exhaustive specification:

1. Control Arrangements

Three tests need to be met for such an arrangement to be considered in force:

- Control – whether independently or jointly the entity receiving the services exercises an appropriate level of control over the activity of the supplying entity (e.g. in approving activities like budgets or strategic decisions)
- No private participation – there can be no private equity in the entities involved in the CA’s supply Resources
- 80:20 rule – where 80% of the activities (revenue/income) of the entity supplying the services comes from the entity that exercises control over it.

An example of such a Control arrangement is the establishment of a special purpose vehicle for the delivery of certain undertakings by a Contracting Authority. In the R&E community GEANT, owned and controlled by NRENS is a case example. Note the control can be joint, i.e. multiple NRENS.

2. Co-operation in the public interest

Three tests must be satisfied for such an arrangement to be considered to mitigate the need to undertake a procurement:

- The Contracting Authorities forming a co-operation must be doing so to undertake common objectives
- These common objectives must be in the public interest – i.e. generally something entrusted by statute to them to deliver and not generally an activity entrusted to the commercial market
- The objectives of the co-operation must be delivered primarily for the benefit of those Contracting Authorities participating in the co-operation, specifically no more than 20% of the activities may come from those outside of the co-operation.

An example of such a cooperation arrangement is Worldwide LHC Computing Grid

If a procurement procedure is required, to enable one CA to procure from another, (as a result of the two scenarios above not being satisfied), it is worth noting that the CA offering the service may be limited in its ability to respond to a formal call for tenders by the procuring CA. Many CA’s are unable to respond to any form of a tender procedure due to their governance.

8. DRAFT POLICY RECOMMENDATIONS

Whilst the actors involved in EOsc may come from both public and private organisations it is a fact that EC Directive 2014/24/EC will be relevant as it obligates those from publicly funded bodies who wish to procure or provide services within the EOsc.

The Directive contains provisions which can be used to aid in the realisation of the stated aims of EOsc, namely aggregated procurements, such as framework agreements established on behalf of the EOsc user community to provide access to a range of complementary commercial services. Furthermore, there are mechanisms that allow for governance structures to operate and services to be shared amongst those entities.

Two main considerations, at this Pilot phase of EOsc, are highlighted for further consideration:

1. Funding

The Directive becomes relevant when contracts come into existence in EOsc - i.e. charges are to be levied by service providers - and there are no proprietary reasons why only one service provider could be selected, (this removing obligations to follow the Directive). The funding models for EOsc will determine if a contract exists for which procurement activity would be required. It is foreseeable that in instances where the services are not EC- or state-funded, and require payments from users, then procurement activity will be required. This may limit participation from some actors if they cannot respond to a public procurement due to their internal governance restrictions.

2. Private organisations

The involvement of private organisations adds an extra dimension to the characteristics of EOsc. It may be that there will be different service offerings, notably from private organisations, to EOsc users. The most significant consideration from Article 12 of The Directive is that co-operations in the public interest can only exist between public bodies. A private organisation will typically not have a statutory obligation/public-interest task entrusted to it. Further analysis will be required of EOsc service providers, such as e-Infrastructure providers, to establish their character; if they wish to

- a. Recover fees for their services from users and
- b. do not have a proprietary service offering and
- c. are judged to be private organisations without a public interest obligation entrusted to them,

then they will be unable to provide services to the EOsc users without responding to a formal procurement exercise.

In summary, compliance with EC Directive 2014/24/EC on procurement is likely to be material to EOsc. In order to meet the objectives and aspirations at this date two recommendations are proposed and the implications and impacts of these for EOsc governance/Rules of Participation, Funders/Ministries, RPOs and RIs are set out in the table on the following pages.

Draft Policy Recommendation	EOSC Governance/RoP	Funders/Ministries	RPOs	RIs
<p>P1. The EOSC governance, RPOs and RIs should consider exploiting aggregated procurement in the EOSC. This should be undertaken in accordance with EC Directive 2014/14 (Procurement). The aggregated procurements could be carried out by organisations participating in EOSC or by EOSC itself if it has legal form and is a Contracting Authority</p>	<p>(a) Implication: If aggregated procurement is to be performed by the EOSC itself, a function will be needed to manage the contracts/systems resulting from the aggregated procurement</p> <p>(b) Implication: the entity leading the procurement will need to be able to describe/represent with a mandate the entities within the EOSC user community who wish to benefit from the aggregated procurement</p> <p>(c) Impact: potential to deliver choice of suppliers, meeting agreed terms and conditions suitable for the research community, to users</p> <p>(d) Impact: harnessing the market power of the European research community to deliver attractive prices for users</p>	<p>(e) Impact: framework contracts deliver cost savings for service consumers</p> <p>(f) Implication: funding conditions must allow for aggregated procurements let by a centralised purchasing body</p>	<p>(g) Implication: If aggregated procurement is to be performed by an RPO, a function will be needed to manage the contracts/systems resulting from the aggregated procurement</p> <p>(h) Implication: RPOs may need to establish a mandate for the entity carrying out the aggregated procurement to do so on their behalf</p> <p>(i) Impact: framework contracts deliver greater choice of suppliers of services, lower prices, without needing to undertake a lengthy procurement process independently</p>	<p>(j) Implication: If aggregated procurement is to be performed by an RI, a function will be needed to manage the contracts/systems resulting from the aggregated procurement</p> <p>(k) Implication: RIs may need to establish a mandate for the entity carrying out the aggregated procurement to do so on their behalf</p> <p>(l) Implication: funding conditions must allow for aggregated procurements let by a centralised purchasing body to be sufficient for the procurement obligations in any funding agreement</p> <p>(m) Impact: framework contracts deliver greater choice of suppliers of services, lower prices, without needing to undertake a lengthy procurement process independently</p>

Draft Policy Recommendation	EOSC Governance/RoP	Funders/Ministries	RPOs	RIs
<p>P2. EO SC governance, funders/ministries, RPOs and RIs should be aware that in the context of the EO SC, organisations' governance arrangements should be recognised as a possible mechanism to allow for sharing resources where it makes sense to do so (e.g. forming a special-purpose vehicle). It may not be possible for one public entity to buy services from another public entity without a procurement in accordance with Directive 2014/24 (Procurement) unless certain governance conditions can be met.</p> <p><i>NB This is not relevant where the resources/services being provided/procured are unique, i.e. intellectual property</i></p>	<p>(a) Implication: Where services are to be charged to EO SC users, having a governance arrangement which removes the need for a procurement would be beneficial</p>	<p>(b) Implication: Conditions of funding would have to allow for the recipients to participate in federations/special purpose vehicles if they expect to have to pay for services they wish to use</p>	<p>(c) Implication: Where RPO's wish to sell services to other Contracting Authorities they may need to respond to procurements issued by other Contracting Authorities</p> <p>(d) Impact: Where the correct governance arrangements are established RPO's can easily provide services to other Contracting Authorities in the EO SC</p>	<p>(e) Implication: Where RIs wish to sell services to other Contracting Authorities they may need to respond to procurements issued by other Contracting Authorities</p> <p>(f) Impact: Where the correct governance arrangements are established RIs can easily provide services to other Contracting Authorities in the EO SC</p>

9. NEXT STEPS

These recommendations will be discussed further with EOSC stakeholders to gather further input on their suitability. Further work is also required to examine the situation of entities which have limitations on their ability to respond to public procurements exercises, and also to determine whether some potential EOSC service suppliers will only be able to provide services in response to a public call for competition.

In the next phase of work, Subtask 3.1.3 will collect further information from EOSCpilot WP5 (Services), from the Business Model subtask of WP2 and from other relevant activities in EOSCpilot about the emerging EOSC operational model, and also from experts about the character of likely EOSC service providers such as e-Infrastructures. This is to understand more clearly the likely purchasing needs of the EOSC programme, considering the full range of services and resources likely to be provided within it. Further consultation with stakeholders and experts including HelixNebula will also be performed to gather more input on requirements and to understand potential solutions for service provision and consumption in the EOSC.