



# EGI-InSPIRE

## QUALITY PLAN AND PROJECT METRICS

### EU DELIVERABLE: D1.5

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This document describes the document handling and production procedures used within the EGI-InSPIRE project. In addition it describes the review procedure that is used for the project's milestones and deliverables. It also describes the project metrics that will be used to monitor the performance of the project from various perspectives: the project overall in terms of its defined objectives, the activity taking place within a National Grid Initiative, and the work of a Virtual Research Community.

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## II. DELIVERY SLIP

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## III. DOCUMENT LOG

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5	20/5/11	Fourth draft	Catherine Gater/EGI.eu
6	20/6/11	Fifth draft	Catherine Gater/EGI.eu

## IV. APPLICATION AREA

This document is a formal deliverable for the European Commission, applicable to all members of the EGI-InSPIRE project, beneficiaries and Joint Research Unit members, as well as its collaborating projects.

## V. DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to the authors. The procedures documented in the EGI-InSPIRE “Document Management Procedure” will be followed:

<https://wiki.egi.eu/wiki/Procedures>

## VI. TERMINOLOGY

A complete project glossary is provided at the following page: <http://www.egi.eu/about/glossary/>.



## VII. PROJECT SUMMARY

To support science and innovation, a lasting operational model for e-Science is needed – both for coordinating the infrastructure and for delivering integrated services that cross national borders.

The EGI-InSPIRE project will support the transition from a project-based system to a sustainable pan-European e-Infrastructure, by supporting ‘grids’ of high-performance computing (HPC) and high-throughput computing (HTC) resources. EGI-InSPIRE will also be ideally placed to integrate new Distributed Computing Infrastructures (DCIs) such as clouds, supercomputing networks and desktop grids, to benefit user communities within the European Research Area.

EGI-InSPIRE will collect user requirements and provide support for the current and potential new user communities, for example within the ESFRI projects. Additional support will also be given to the current heavy users of the infrastructure, such as high energy physics, computational chemistry and life sciences, as they move their critical services and tools from a centralised support model to one driven by their own individual communities.

The objectives of the project are:

1. The continued operation and expansion of today’s production infrastructure by transitioning to a governance model and operational infrastructure that can be increasingly sustained outside of specific project funding.
2. The continued support of researchers within Europe and their international collaborators that are using the current production infrastructure.
3. The support for current heavy users of the infrastructure in earth science, astronomy and astrophysics, fusion, computational chemistry and materials science technology, life sciences and high energy physics as they move to sustainable support models for their own communities.
4. Interfaces that expand access to new user communities including new potential heavy users of the infrastructure from the ESFRI projects.
5. Mechanisms to integrate existing infrastructure providers in Europe and around the world into the production infrastructure, so as to provide transparent access to all authorised users.
6. Establish processes and procedures to allow the integration of new DCI technologies (e.g. clouds, volunteer desktop grids) and heterogeneous resources (e.g. HTC and HPC) into a seamless production infrastructure as they mature and demonstrate value to the EGI community.

The EGI community is a federation of independent national and community resource providers, whose resources support specific research communities and international collaborators both within Europe and worldwide. EGI.eu, coordinator of EGI-InSPIRE, brings together partner institutions established within the community to provide a set of essential human and technical services that enable secure integrated access to distributed resources on behalf of the community.



The production infrastructure supports Virtual Research Communities (VRCs) – structured international user communities – that are grouped into specific research domains. VRCs are formally represented within EGI at both a technical and strategic level.



## VIII. EXECUTIVE SUMMARY

This document describes the quality plan and metrics for the individual activities and tasks within the EGI-InSPIRE project. The formal outputs from the project – the milestones and deliverables – are reviewed internally within each activity and then externally to the activity. This provides a broad input into the work and allows reviewers from the target audience to assess the document before it is formally published. The final stages of the review are undertaken by the Activity Management Board (AMB) which allows for technical alignment between the project’s different activities, and the Project Management Board (PMB) has the final approval on the project’s output.

Metrics have been developed within each activity within the project. Some of these activity metrics are recognised as representing the overall progress of the project to various stakeholders, the work of the individual National Grid Initiatives (NGIs) within the infrastructure, and the Virtual Research Communities (VRCs) using the e-Infrastructure supported through EGI-InSPIRE. These are recorded to provide an overview of the project towards its targets.



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## 1 INTRODUCTION

### ***1.1 Overview***

This document describes the document handling and production procedures used within the EGI-InSPIRE project. In addition it describes the review procedure that is used for the project's milestones and deliverables.

The document also reviews the metrics defined for the project at an activity and project level. Some of the activity metrics are recognised as representing the overall progress of the project to various stakeholders, the work of the individual National Grid Initiatives (NGIs) within the infrastructure, and the Virtual Research Communities (VRCs) using the e-Infrastructure supported through EGI-InSPIRE. These are recorded to provide an overview of the project towards its targets.

## 2 DOCUMENT MANAGEMENT PROCEDURE

### 2.1 Document Repository

All documents, presentations and other material that forms an official output of the project (not just milestones and deliverables) will be placed in the document repository [R1] to provide a managed central location for all material.

The following templates are available:

Template Name	Document URL
Milestone/Deliverable	<a href="https://documents.egi.eu/document/26">https://documents.egi.eu/document/26</a>
Presentation	<a href="https://documents.egi.eu/document/44">https://documents.egi.eu/document/44</a>
Document Comment	<a href="https://documents.egi.eu/document/54">https://documents.egi.eu/document/54</a>

EGI accounts are linked to the EGI single sign on (SSO) system [R2] which can be used to generate an account and password. Once logged into the document repository using your account follow the 'Create or change documents or other information' link to reserve a document number, or upload a draft of the document.

### 2.2 Naming Conventions

Filenames must use the following format in order to link any item back to other versions placed in the document repository. The filename format is:

EGI-<DOCUMENT IDENTIFIER>-<REPOSITORY ID>-V<VERSION>

DOCUMENT IDENTIFIER	The document identifier is dependent on the document type. If the document is: <ul style="list-style-type: none"><li>• Deliverable: Use the deliverable name: e.g. D1.1, D5.5, etc.</li><li>• Milestone: Use the milestone name: e.g. MS102, MS504, etc.</li><li>• Activity: Use the activity code: e.g. SA1, NA3, etc.</li><li>• Committee/Board: Use an acronym based on the committee or board name: e.g. TCB, OMB, UCB, USAG, SPG, etc.</li><li>• Other: If the source of the material cannot be identified then ignore this section.</li></ul>
REPOSITORY ID	This is the identification number generated by the document repository.
VERSION	This is the version number generated by the document repository for the particular repository identifier.



### 2.3 Document Metadata

The first page of the document (along with the header and footer) contains metadata (marked in yellow) that needs to be reviewed and completed:

- Title: This must be the title of the milestone or deliverable as described in the Description of Work.
- Deliverable/Milestone code: e.g. D1.1 or MS101. Delete if not required.
- Document identifier: With a correctly formulated filename (see 'Naming Convention') this field can be updated in MS Word by highlighting, right clicking and selecting 'Update Field'.
- Date: This field records the last date the document was saved and can be updated in MS Word by highlighting, right clicking and selecting 'Update Field'.
- Activity: Enter the work package name (WP1, WP2, etc.) that is producing this document.
- Lead Partner: Enter the recognised shortname within the EGI-InSPIRE project of the lead partner.
- Document Status: This will move through the following states for milestones and deliverables:
  - TOC (Table of Contents)
  - Draft
  - Review
  - AMB/PMB Review
  - FINAL
- Dissemination Level: This indicates the final dissemination level of the document:
  - INTERNAL: The document is internal to the project consortium and will not be passed onto the European Commission or the reviewers.
  - CONFIDENTIAL: The document is available to the project and the European Commission and its staff and reviewers, but must not be disclosed any further.
  - PUBLIC: The document is publicly available.
- Document Link: The URL in the EGI document repository that provides access to the document.
- Abstract: An abstract describing the document's contents and main conclusions. On submission of the final version this should be entered into the relevant field in the repository metadata.

The document title must be repeated into the header and before submitting a new version to the document repository the date and filename fields in the header must be updated.

Access to internal or confidential documents is controlled at SSO group level, with SSO IDs being assigned to particular groups depending on their permissions to view or modify documents. Public documents are available to all, without restriction or the requirement to log in. Restricted documents can only be viewed and/or modified by logging in using an account with the correct permissions.



## 2.4 Repository Metadata

When creating the entry in the document repository there are a number of compulsory metadata fields that need to be completed. These should be copied from the document metadata where duplicated:

- Title
- Abstract
- Keywords
- Notes and changes
- Media type:
  - Document: A written document: i.e., deliverable, milestone, policy document, etc.
  - Presentation: A presentation given for the EGI-InSPIRE project.
  - Other: Multi-media content, poster, etc.
- Submitter: Select the person submitting the document.
- Authors: Select the people involved in writing significant portions of the document.
- View: Select the groups able to view the document. Documents that are drafts may be restricted to the groups within the project that are working on the document. Documents that are complete must be marked public unless they are marked for distribution just inside the project.
- Modify: The 'office' group must be marked as able to modify the document.
- Topics: Select the topics relevant for the material. These will generally include 'EGI-InSPIRE', the work package or committee/board that the material is coming from, the material type (deliverable, milestone, etc.)

## 3 REVIEW PROCESS

### 3.1 Overview

The formal outputs from the project (milestones and deliverables) will pass through a formal review process. The review process is timed to ensure the output is available to the EC at the *end of the project month (PM)* that the material is due. Deliverable and milestone review forms are available from <https://documents.egi.eu/document/54>.

The review process is identical for milestones and deliverables except for:

- Milestones are expected to have two reviews – from a reviewer and the moderator.
- Deliverables are expected to have three reviews – from two reviewers and the moderator.

The reviewers are drawn (one from each of EGI's functional areas not involved in its production) from EGI's functional areas (i.e. Operations, User Community, Technology and Policy).

Other outputs from the project, such as documents that are not deliverables or milestones may use modified versions of the official document templates and are reviewed internally.

### 3.2 Roles

Roles in the review process are identified below:

- **Reviewer:** Responsible for providing a review of the document on the EGI review form so that responses from the document authors to the reviewer can be tracked. A change tracked version of the document can be provided with corrections for spelling, formatting and other minor issues. The reviewer is generally from the activity and organisation that is not responsible for producing the document.
- **Moderator:** Responsible for providing a review and deciding in cases of conflicting reviews, which elements of a review must be implemented by the author. The decision to follow or reject a reviewer's comment must be tracked in the review document. The moderator is normally an EGI-InSPIRE taskleader not from the activity producing the document.
- **Editor:** The person from the activity and the partner who is responsible for the document. They may rely on others within the activity to provide the information. The editor cannot be a moderator or reviewer.
- **Project Office (PO):** The project office provides administrative support for the process.
- **Shepherd:** The shepherd is a member of the AMB who is responsible for overseeing the production of the document. They will work with the Editor to ensure that the work is done in a timely manner, and report to the AMB on its progress. Normally the activity manager or their deputy.
- **AMB Chair:** This is the project director, or their deputy.

[NOTE: an individual could hold one or more of these roles if they are not in conflict with each other.]

### 3.3 Workflow

The workflow for the review process is described below.

Time before submission	Person	Action	RT Action
> 2 months	PO	Create DoCDB URLs and enter into RT. Obtain moderator and reviewers from the AMB Chair and add these into the ticket fields and cc on the ticket. Set the DoCDB metadata (see Section 2.4) and the view and modify groups to the inspire-taskleaders and the activity group responsible for the work.	Remains blank and is assigned to Shepherd
6 weeks	Shepherd	Add the editor onto the cc of the ticket. Ensure the editor has provided the table of contents (optionally including notes as to the contents of each section) and the document is stored in DoCDB.	Set state to ToC
4 weeks	Shepherd	Shepherd is aware a draft is available in the repository and is under active development with revisions from the contributors.	Set state to Draft
3 weeks	Shepherd	The draft is stable and is undergoing review within the activity and is nearly complete.	Set state to Internal Review
2 weeks	Shepherd	The document is ready for external review.	Set state to External Review and assign to the PO
Immediately (***)	PO	PO notifies reviewer(s), moderator and AMB that the document is available for review. Confirm expected review completion date with reviewers.	Enter completion date as Due Date in RT
	PO	Notify the Editor that review is complete.	Set state to Being Revised
	Editor	Notify the PO an updated document is available.	Set state to External Review and return to ***
	PO	The external review is complete. Notify the AMB that the document has completed external review.	Set state to AMB Review and assign to the AMB Chair.
1 week	AMB Chair	The PMB is emailed that the document is available for the PMB to review for 1 week.	Set state to PMB Review.
Deadline	AMB Chair	A clean PDF version of the document is generated by the PO and placed in the document repository with updated meta-data.	Set state to With EC.



## 4 DOCUMENT PRODUCTION

### 4.1 Content

All documents will be written in English and use document formats described in the following section. In addition to the fields and sections already described in the document template, deliverables must include an Executive Summary and, if required, one or more Annexes. References to external document and a Glossary to terms not listed on the website must be recorded.

The correct capitalisation of the project name is EGI-InSPIRE.

English date format must be used (DD/MM/YYYY) when required.

### 4.2 Formats and Tools

The following tools and formats will be recognised within the project:

- Word Processing: 'Word 97-2003 Format' allowing its use on MS Office on Windows/Mac and OpenOffice on Linux
- Spreadsheet: 'Excel 97-2003 Format' allowing the use of MS Office on Windows/Mac.
- Presentation: 'Powerpoint 97-2003 Format' allowing the use of MS Office on Windows/Mac.

Final version of all formal documents (milestones and deliverables) must be available in PDF format.



## 5 PROJECT OUTPUTS

All output produced by staff active within EGI-InSPIRE (funded and unfunded effort) must be recorded so that it can be reported by the project. The following procedures must be used:

- **Meetings run by EGI-InSPIRE:** The meetings must be recorded in the EGI Indico server [R3] and all presentations and material provided for the meeting, including any minutes, must be attached to the appropriate agenda page.
- **Presentations at other Meetings:** Presentations and/or papers presented at other meetings attended by EGI-InSPIRE staff must be recorded in the document repository [R1]. A link to the meeting and a summary of the outcome should be recorded in the 'notes' section of the document.
- **Mailing Lists:** As the majority of the communication within the project will be electronic having a coherent record of that work is essential. All mailing lists must use the EGI.eu based mailing lists which allow groups defined within the single sign on to be linked to mailing lists, access to wiki space, document access, etc.
- **Websites:** The main website [R4] is used for all 'official' 'static' content. Individual services supported by EGI.eu will have their own hostname in the egi.eu domain. The wiki [R5] has group based access control provided through the EGI SSO system. This can be used for all dynamic content being maintained or developed within each project activity. Other third party websites or wikis should not be used to host EGI-InSPIRE related material in order that the egi.eu domain becomes the definitive source of project information.

More generally all output from the project (paper or presentation) must include the phrase:

**EGI-InSPIRE is a project co-funded by the European Commission as a combination of a collaborative projects (CP) and coordination and support actions (CSA) within the 7th Framework Programme under contract INFISO-RI-261323**

This phrase should be included unless the output already uses one of the recognised project templates, where appropriate acknowledgements are already included.

## 6 PROJECT METRICS OVERVIEW

EGI-InSPIRE defines the following project objectives (PO) as its goals:

- PO1: The continued operation and expansion of today's production infrastructure by transitioning to a governance model and operational infrastructure that can be increasingly sustained outside of specific project funding.
- PO2: The continued support of researchers within Europe and their international collaborators that are using the current production infrastructure.
- PO3: The support for current heavy users of the infrastructure in Earth Science, Astronomy & Astrophysics, Fusion, Computational Chemistry and Materials Science Technology, Life Sciences and High Energy Physics as they move to sustainable support models for their own communities.
- PO4: Interfaces that expand access to new user communities including new potential heavy users of the infrastructure from the ESFRI projects.
- PO5: Mechanisms to integrate existing infrastructure providers in Europe and around the world into the production infrastructure so as to provide transparent access to all authorised users.
- PO6: Establish processes and procedures to allow the integration of new DCI technologies (e.g. clouds, volunteer desktop grids, etc.) and heterogeneous resources (e.g. HTC and HPC) into a seamless production infrastructure as they mature and demonstrate value to the EGI community.

Progress towards these objectives is monitored through the project's metrics. Additional metrics are defined to monitor the work of the different activities (work packages) and the national operational infrastructures within the project. The bulk of EGI-InSPIRE's focus is on the establishment of a sustainable National Grid Initiatives (the NGIs) that deliver an operational infrastructure (SA1) and supports and develops the communities using it (NA3). Although there is not a direct legal mapping between each partner and their corresponding NGI as established as a participant in EGI.eu, the legal entity that embodies the NGIs will have delegated their technical responsibilities to an organisation (either single legal entity or collaborative Joint Research Unit) that is a partner in EGI-InSPIRE. The partner in the project may also undertake 'EGI Global Tasks' on behalf of the whole community or 'General' tasks on behalf of heavy user communities in addition to their national operations ('NGI International Tasks'). The assessment of specific EGI Global Tasks and NGI International Tasks will be explored in annual milestones during the course of the project.

Therefore the metrics described in this document are used to measure work:

- As an Activity within the project
- Towards the project's objectives (PO1-6)
- Within a Virtual Research Community (VRC)
- As a National Grid Initiative (NGI)



The targets for the metrics relating to these project level objectives are outlined in Section 8. Metrics are tracked using a number of tools including the EGI Operational Tools Metrics portal<sup>1</sup> and the Accounting Portal<sup>2</sup>, the GGUS portal<sup>3</sup>, gstat<sup>4</sup> and the Operations Portal<sup>5</sup>.

As outlined in D1.3 Annual Report on Quality Status [R6], the metrics in Year1 were measured through manual and automatic means. Many of the project and activity metrics require inputs from several different NGIs each quarter, and gathering these is a complicated and time consuming process.

For Year 2, the Quality team will investigate, with SA1 and JRA1, mechanisms for gathering as many of these metrics through an updated metrics portal as possible, rather than gathering them manually. These metrics will then be published in the quarterly reports, with an analysis of performance.

Annual performance to metrics targets is analysed in the periodic report and annual activity reports. In some areas, such as PO2 and PO4, target metrics were substantially exceeded during Year 1. The targets for these metrics and others as appropriate have been reviewed and updated for Year 2 in this document. Similarly, activity level metrics have been updated to reflect the analysis detailed in the annual activity reports.

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<sup>1</sup> <http://metrics.egi.eu>

<sup>2</sup> [http://accounting.egi.eu/gridsite/accounting/CESGA/egee\\_view.php](http://accounting.egi.eu/gridsite/accounting/CESGA/egee_view.php)

<sup>3</sup> <http://helpdesk.egi.eu/>

<sup>4</sup> <http://gstat.egi.eu/>

<sup>5</sup> <https://operations-portal.egi.eu/>



## 7 ACTIVITY METRICS

### 7.1 NA1 – Project Management

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.NA1.1	Number of NGIs actively contributing resources into the production infrastructure	P	TNA1.2	From NGIs
MNA1.2	Time to review deliverables & milestones (from entering External Review to exiting PMB Review)	I	TNA1.4	Measured in days

### 7.2 NA2 – External Relations

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.NA2.1	Number of press releases issued	P	TNA2.2	Either centrally or nationally
M.NA2.2	Number of media contacts sent press releases	P	TNA2.2	Through AlphaGalileo or other means
M.NA2.3	Number of press cuttings relating to EGI, EGI.eu or EGI-InSPIRE	P	TNA2.2	Tracked through Google alerts and other means
M.NA2.4	Number of interviews given to media organisations	P	TNA2.2	Contributed from each NGI and partner
M.NA2.5	Number of papers published by users of EGI	P	TNA2.2	Contributed from each NGI and each VRC
M.NA2.6	Public events organised by EGI.eu & NGI teams	P	TNA2.2	Measured in events and event person days
M.NA2.7	Events with EGI presence (stand, presentation, or literature)	P	TNA2.2	Measured in events and people reached
M.NA2.8	Number of unique visitors per month on the main websites	P	TNA2.2	Measured by Google Analytics
M.NA2.9	Number of MoUs or agreements signed with technology providers	P	TNA2.3 & TSA2.1	Demonstrates the EGI's implementation of a diverse technical base

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.NA2.10	Number of MoUs or agreements signed with external (non-EGI) Resource Infrastructure Providers	P	TNA2.3 & TSA1.1	Establishes international network of resource providers as a source of shared resources for each other's user communities
M.NA2.11	Number of MoUs or agreements established with collaborating Virtual Research Communities (VRCs)	P	TNA2.3 & TNA3.1	Demonstrates the EGI capability to engage a diversified number of user communities engaged in using EGI's service
M.NA2.12	Number of MoUs or agreements signed with other partners	P	TNA2.3	Demonstrates the EGI need to engage with partners other than Technology Providers, external Resource Infrastructure Providers or VRC
M.NA2.13	Number of policies or procedures recorded by EGI.eu that apply to User Communities	P	TNA2.3 & TNA3.1	Demonstrates the progress of EGI in building a regulatory framework for user communities
M.NA2.14	Number of policies or procedures recorded by EGI.eu that apply to Infrastructure Providers	P	TNA2.3 & TSA1.1	Demonstrates the progress of EGI in building a regulatory framework for infrastructure providers
M.NA2.15	Number of policies or procedures recorded by EGI.eu that apply to Technology Providers	P	TNA2.3	Demonstrates the progress of EGI in building a regulatory framework for technology providers

### 7.3 NA3 – User Community Coordination

Metric ID (Scope)	Metric	Public / Internal	Task	Comments/ Explanation
M.NA3.1	Number of GGUS tickets CREATED (grouped by submitting community – where available)	P	TNA3.2/3	EGI Helpdesk Statistics
M.NA3.2	Average and Median Solution time to resolve tickets	P	TNA3.3	EGI Helpdesk Statistics

Metric ID (Scope)	Metric	Public / Internal	Task	Comments/ Explanation
M.NA3.3	Uptime of User Support websites: <ul style="list-style-type: none"> <li>• Training</li> <li>• Application Database</li> <li>• VO Support Services</li> </ul>	P	TNA3.4	Nagios
M.NA3.4	Visitors to User Support websites: <ul style="list-style-type: none"> <li>• Training</li> <li>• Application Database</li> <li>• VO Support Services</li> </ul>	P	TNA3.4	Google Analytics
M.NA3.5	Number of VO Support Services	P	TNA3.4	Total number
M.NA3.6	Number of Applications in the AppDB	P	TNA3.4/3	Recorded by NGI
M.NA3.7	Number of Training Days delivered through NGI Training events	P	TNA3.4/3	Recorded by NGI
M.NA3.8	Number of: <ul style="list-style-type: none"> <li>• New/decommissioned VOs</li> <li>• Low/Medium/High Activity VOs</li> <li>• international VOs</li> </ul>	P	TNA3.1	An international VO is one that has a scope beyond a single country. (See registration portal.) VO Activity defined in Accounting Portal <sup>6</sup> .
M.NA3.9	Number of users (grouped by community and VO)		TNA3.1	Statistics from the VO registration portal.

#### 7.4 SA1 – Operations

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA1.Usage.1	Average number of jobs “done” per day for all VOs	P		Excluding OPS and DTEAM. Tool: accounting portal

<sup>6</sup> [http://accounting.egi.eu/gridsite/accounting/CESGA/egee\\_view.php](http://accounting.egi.eu/gridsite/accounting/CESGA/egee_view.php).

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA1.Usage.2	Normalised consumed computing capacity	p		Normalized elapsed time to a reference value of HEP-SPEC 06 (hours), excluding DTEAM and OPS. Tool: accounting portal
M.SA1.Usage.3	Normalised Computing power consumed outside of a user's home country	P		Requires tool development.
M.SA1.Size.1	Total number of production resource centres that are part of EGI	P	TSA1.1	Tool: gstat (TSA1.1 QR)
M.SA1.Size.2a	Total number of job slots available in EGI – Integrated and peer	P	TSA1.1	Tool: gstat Job slots equal logical cpus. "Integrated" includes logical cpus from peer grids and Resource Infrastructure Providers that are integrated with EGI but not partners of EGI-InSPIRE. NGI can amend results reported by tools, and report correct values in its own QR
M.SA1.Size.2b	Total number of job slots available in EGI – Project	P	TSA1.1	Project only includes logical cpus from Resource Infrastructure Providers that are partners of EGI-InSPIRE. Tool: gstat. NGI can amend results reported by tools, and report correct values in its own QR.
M.SA1.Size.3	Installed Capacity in HEP-SPEC 06 in EGI	P	TSA1.1	Tool: gstat NGI can amend results reported by tools, and report correct values in its own QR

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA1.Size.4	Installed disk capacity (PB) in EGI	P	TSA1.1	Tool: gstat NGI can amend results reported by tools, and report correct values in its own QR
M.SA1.Size.5	Installed tape capacity (PB) in EGI	P	TSA1.1	Tool: gstat The overall installed capacity of EGI is derived from the sum of the capacity reported by NGIs. NGI can amend results reported by tools, and report correct values in its own QR
M.SA1.OperationalSecurity.1	Number of Site Security Challenge (SSC) made	I	TSA1.2	Manual metric (from TSA1.2 QR)
M.SA1.OperationalSecurity.2	Number of Sites passing one Security Challenge	I	TSA1.2	Manual metric (from TSA1.2 QR)
M.SA1.OperationalSecurity.3	Number of suspended sites for security issues	I	TSA1.2	Manual metric (in TSA1.2 QR)
M.SA1.Integration.1	Number of production HPC clusters	P	TSA1.3	An HPC cluster has a dedicated high-speed low-latency communications network. Manual metric (NGI QR)
M.SA1.Integration.2	Number of production sites supporting MPI	P	TSA1.3	Only sites passing MPI Nagios tests count. Tool: query to the information system Manual metric (NGI QR)
M.SA1.Integration.3	Amount of integrated desktop resources	I	TSA1.3	Manual metric (NGI QR)
M.SA1.Integration.4	Amount of virtualised installed capacity accessible to EGI users (HEP-SPEC 06)	I	TSA1.3	Manual metric (NGI QR)
M.SA1.ServiceValidation.1	Total number of components tested/rejected in staged rollout	I	TSA1.3	Manual metric (TSA1.3 QR)

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA1.ServiceValidation.2	Number of staged rollout tests undertaken	I	TSA1.3	Manual metric (TSA1.3 QR). A single patch can be tested by multiple EA sites at a time. This metric counts the number of actual tests performed by the EA sites.
M.SA1.ServiceValidation.3	Number of EA teams	I	TSA1.3	Manual metric (TSA1.3 QR)
M.SA1.Accounting	Number of sites adopting AMQ messaging for Usage Record publication		TSA1.5	Manual metric (TSA1.5 QR)
M.SA1.Support.1	Overall average number of GGUS tickets in EGI per month CREATED	P	TSA1.7	GGUS reporting tool
M.SA1.Support.2	Average/Median monthly ticket solution time (hours)	P	TSA1.7	GGUS reporting tool
M.SA1.Support.3	Assigned ticket monthly Average RESPONSE TIME (hours)	I	TSA1.7	Tool: GGUS reporting tool
M.SA1.Support.4	Number of tickets SOLVED by TPM (1st line support)	I	TSA1.7	Tool: GGUS reporting tool
M.SA1.Support.5	Average-Median ticket assignment time by TPM (1st line support) per month (hours)	I	TSA1.7	Tool: operations dashboard
M.SA1.Support.6	COD Workload per month	P	TSA1.7	Number of COD issues handled per month.
M.SA1.Support.7	EGI ROD Workload per month	P	TSA1.7	The overall ROD workload per month adding up the workload of all NGIs.
M.SA1.Support.8	EGI ROD Quality Metrics per month	P	TSA1.7	Arithmetic mean of all ROD quality metrics.
M.SA1.Operation.1	NGI monthly availability and reliability	P	TSA1.8	Tool: availability report generator

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA1.Operation.2	Number of sites suspended	I	TSA1.7	Manual metric. TSA1.7 report. Only includes sites suspended for operational issues.
M.SA1.Operation.3	NGI monthly availability and reliability of core operations tools	P	TSA1.8	Development needed
M.SA1.Operation.4	NGI Monthly availability and reliability of core middleware services	P	TSA1.8	Development needed
M.SA1.Operation.5	EGI monthly reliability [availability] of site middleware services	P	TSA1.8	This metric is the arithmetic average of the monthly weighted availability/reliability scored by all EGI certified sites. For each site the weight is the amount of contributed HEPSPec 06 installed capacity (published on the information discovery system).
M.SA1.Operation.6	EGI monthly availability and reliability of central operations tools	P	TSA1.8	Development needed

## 7.5 SA2 – Software Provisioning

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA2.1	Number of software components recorded in the UMD Roadmap	P	TSA2.1	From UMD Roadmap.
M.SA2.2	UMD Roadmap Capabilities coverage with Quality Criteria	P	TSA2.2	Expresses the coverage of UMD Quality Criteria with Quality Criteria. Value is given in percent.
M.SA2.3	Number of software incidents found in production that result in changes to quality criteria	P	TSA2.2	Indicates how good the quality criteria are – what is slipping through into staged rollout and production that could be caught? Only incidents that are investigated with post mortems are counted, not ordinary bugs.
M.SA2-4	Number of quality related issues that result in changes to quality criteria.	I	TSA2.2	Measures the activity and communication flow between TSA2.2 and its input sources as defined in the Wiki.
M.SA2.5	Number of new Product releases validated against defined criteria	P	TSA2.3	Measures the workload on the validation team
M.SA2.6	Mean time taken to validate a Product release	P	TSA2.3	Indicates how responsive the team is to validating releases
M.SA2.7	Number of Product releases failing validation	P	TSA2.3	Indicates the quality assurance process of the software providers
M.SA2.8	Number of new releases contributed into the Software Repository from all types of software providers	P	TSA2.4	Records how actively is the repository used by software providers in the community
M.SA2.9	Number of unique visitors to the Software Repository	P	TSA2.4	Records the visibility of the repository front-end to the community through Google Analytics
M.SA2.10	Number of unique visits to the Repository backend	P	TSA2.4	Records how actively the software repository is being used by the community in terms of visits.



<b>Metric ID</b>	<b>Metric</b>	<b>Public / Internal</b>	<b>Task</b>	<b>Comments/ Explanation</b>
M.SA2.11	Number of tickets assigned to DMSU	P	TSA2.5	Demonstrates use of DMSU
M.SA2.12	Mean time to resolve DMSU tickets	P	TSA2.5	Demonstrates effectiveness of DMSU for resolving tickets

## 7.6 SA3 – Support for Heavy User Communities

Metric ID	Metric	Public / Internal	Task	Comments/ Explanation
M.SA3.1	Number of users of deployed dashboard instances	P	TSA3.2.1	Measure the number of unique IP addresses per month.
M.SA3.2	Number of unique users of GANGA	P	TSA3.2.2	Total numbers
M.SA3.3	Number of unique users of DIANE	P	TSA3.2.2	Total numbers
M.SA3.4	Number of sites using GANGA	P	TSA3.2.2	Total numbers
M.SA3.5	Number of sites using DIANE	P	TSA3.2.2	Total numbers
M.SA3.6	Number of users of GReIC	P	TSA3.2.3	Total numbers
M.SA3.7	Number of users of Hydra	P	TSA3.2.3	Total numbers
M.SA3.8	Number of users of SOMA2	P	TSA3.2.4	Total numbers
M.SA3.9	Number of users using Taverna to access EGI resources	P	TSA3.2.4	Total numbers
M.SA3.10	Number of users using RAS	P	TSA3.2.4	Total numbers
M.SA3.11	Number of users using MD	P	TSA3.2.4	Total numbers
M.SA3.12	Number of users using Gridway	P	TSA3.2.4	Total numbers
M.SA3.13	Number of MPI support tickets	P	TSA3.2.5	Total numbers
M.SA3.14	Mean time to resolve MPI support tickets	P	TSA3.2.5	Measured in days
M.SA3.15	Number of HEP VO support tickets	P	TSA3.3	We can sum the number of tickets where the concerned VO = ATLAS, ALICE, CMS or LHCb during the quarter.
M.SA3.16	Mean time to resolution of HEP VO alarm tickets	P	TSA3.3	Time in days

<b>Metric ID</b>	<b>Metric</b>	<b>Public / Internal</b>	<b>Task</b>	<b>Comments/ Explanation</b>
M.SA3.17	Number of Life Science Users of provided services	P	TSA3.4	Usage of the VO management, File Catalog, Data encryption, VO monitoring and support services.
M.SA3.18	Number of databases integrated and/or accessible from EGI resources.	P	TSA3.4	Total number
M.SA3.19	Number of unique users of VisIVO	P	TSA3.5	Total number
M.SA3.20	Number of data sets accessible from EGI resources	P	TSA3.6	Enabled through collaboration with GENSEI-DR and others.

## 7.7 JRA1 – Operational Tools

Metric ID	Metric	Public / Internal	Task	Comments / Explanation
M.JRA1.1	Number of software release	P	TJRA1.2 & TJRA1.5	Records the activity of each product team within JRA1
M.JRA1.2	Number of software issues reported with deployed operational tools	P	TJRA1.2	Demonstrates the quality of the produced software
M.JRA1.3	Mean time to release for critical issues reported in production	P	TJRA1.2	Responsiveness of the team to serious issues.
M.JRA1.4	Number of approved (by OTAG) enhancement requests	P	TJRA1.2	Total numbers
M.JRA1.5	Mean time from approval to release for approved enhancement requests	P	TJRA1.2	Responsiveness to new feature requests.
M.JRA1.6	Number of operational tool instances deployed regionally	P	TJRA1.3	Total numbers
M.JRA1.7	Number of different resources that can be accounted for in EGI	P	TJRA1.4	Such as data, MPI, VMs, applications, etc.

## 8 STAKEHOLDER METRICS

### 8.1 Project

The following activity metrics are aligned against the project's objectives.

Project Objectives	Objective Summary	Metrics	Target Y1	Target Y2	Target Y3	Target Y4
PO1	Expansion of a nationally based production infrastructure	Number of production resources in EGI (M.SA1.Size.1)	300	330	360	400
		Number of job slots available in EGI (M.SA1.Size.2)	300000	350000	400000	450000
		Reliability of core middleware services (M.SA1.Operation.5)	90%	91%	92%	93%
PO2	Support of European researchers and international collaborators through VRCs	MoUs with VRCs (M.NA2.11)	5	10	15	20
		Number of papers from EGI Users (M.NA2.5)	50	60	70	80
		Number of jobs done a day (M.SA1.Usage.1)	500000	525000	550000	575000
PO3	Sustainable support for Heavy User Communities	Number of sites with MPI (M.SA1.Integration.2)	50	100	125	150
		Number of users from HUC VOs (M.SA1.Size.7)	5000	5500	6000	6500
PO4	Addition of new User Communities	Number of desktop resource (M.SA1.Integration.3)	0	5	10	15
		Number of users from non-HUC VOs (M.NA3.9)	500	1000	1500	2000
		Public events organised (M.NA2.6)	1500	2000	2500	3000
PO5	Transparent integration of other infrastructures	MoUs with resource providers (M.NA2.10)	3	5	6	7
PO6	Integration of new technologies and resources	MoUs with Technology providers (M.NA2.9)	2	4	4	4
		Number of HPC resources (M.SA1.Integration.1)	1	3	5	10



Project Objectives	Objective Summary	Metrics	Target Y1	Target Y2	Target Y3	Target Y4
		Number of virtualised resources (M.SA1.Integration.4)	0	1	2	5

## 8.2 National Grid Initiatives

Fundamental to the EGI are strong, active NGIs. The NGIs have different levels of maturity, which are reflected in these metrics. Targets are not generally defined (except where indicated in the project metrics) and the goal here is to monitor an NGI's activity.

Objective	Metrics
Increase the number of resource providers affiliated to the NGI	Number of production resources in the NGI (M.SA1.Size.1)
Increase the capacity of the NGI to support users	Number of job slots available in the NGI (M.SA1.Size.2)
Increase the capacity of the NGI to support users	Number of NGIs actively contributing resources into the production infrastructure (M.NA1.1)
Show that the users of the NGI are active researchers	Number of papers from the NGI Users (M.NA2.5)
Monitor the diversity of resources in the NGI	Number of HPC resources (M.SA1.Integration.1)
Monitor the diversity of resources in the NGI	Number of sites with MPI (M.SA1.Integration.2)
Monitor the diversity of resources in the NGI	Number of desktop resource (M.SA1.Integration.3)
Monitor the activity of the NGI in working with its users to contribute ported applications and services to the community	Number of Applications in the AppDB (M.NA3.6)
Monitor that the NGI provides training for its local users	Number of Training Days delivered through NGI Training events (M.NA3.7)
Demonstrates that the NGI is contributing to the production testing of the software	Total number of software components put through staged rollout per NGI (M.SA1.ServiceValidation.1)
Sites in a production infrastructure must report their usage	Number of sites adopting AMQ messaging for Usage Record publication (M.SA1.Accounting)
Sites in a production infrastructure should conform to agreed policies	Number of sites suspended (M.SA1.Operation.2)
Sites in a production infrastructure should have high availability and reliability	Monthly availability and reliability of core NGI middleware services (M.SA1.Operation.4)



### 8.3 Virtual Research Community Metrics

The VRC related metrics, demonstrate the strength and sustainability of the VRC activities within the EGI this providing a VRC perspective on the use of the infrastructure. The resources within the VRC are determined by:

Objective	Metrics
Increase the number of resource providers affiliated to the VRC	Number of production resources in the VRC (M.SA1.Size.1)
Increase the capacity of the VRC to support its users	Number of job slots available in the VRC (M.SA1.Size.2)
Show that the users of the VRC are active researchers	Number of papers from the users in the VRC (M.NA2.5)
Monitor the activity of the applications related to the VRC	Number of Applications in the AppDB (M.NA3.6)
Sites in a production infrastructure should have high availability and reliability	Monthly availability and reliability of core middleware services (M.SA1.Operation.4)
Developing a strong user base	Number of users within the VOs (M.NA3.9)
Increase the capacity of the NGI to support users	Number of NGIs actively contributing resources into the production infrastructure (M.NA1.1)





## 9 CONCLUSIONS

The quality plan within EGI-InSPIRE provides a multi-phase review mechanism to ensure that the formal output of the project is of a high quality. This takes place through technical review within the activity responsible for the initial work, review external to the producing activity to groups within the project that are consumers of the work, review across all activities of the project through the Activity Management Board, and then finally alignment with the managerial aspects of the project through the Project Management Board. While specifically focussed on the project's milestones and deliverables, this process of open review is used across all aspects of the project.

Alongside the formal outputs, metrics provide a continuous approach to monitoring the performance of an organisation or task. This document defines a set of metrics that will be used to monitor the performance of each activity and its tasks within the EGI-InSPIRE project at a technical level. Although, many of these metrics will be published, there are a subset of these metrics have been identified as representative for particular stakeholders. These are:

- The progress of the project towards its main objectives
- The progress of an National Grid Initiative towards sustainability
- The activity within a Virtual Research Community

This document will be updated at the mid-point of the project.

## 10 REFERENCES

<b>R 1</b>	EGI Document Repository <a href="https://documents.egi.eu">https://documents.egi.eu</a> .
<b>R 2</b>	EGI Single Sign On system <a href="https://www.egi.eu/sso/">https://www.egi.eu/sso/</a>
<b>R 3</b>	EGI Indico Meeting Planner <a href="https://www.egi.eu/indico/">https://www.egi.eu/indico/</a>
<b>R 4</b>	EGI Website <a href="http://www.egi.eu">http://www.egi.eu</a>
<b>R 5</b>	EGI Wiki <a href="https://wiki.egi.eu/wiki/Main_Page">https://wiki.egi.eu/wiki/Main_Page</a>
<b>R 6</b>	D1.3 Annual Report on Quality Status <a href="https://documents.egi.eu/document/360">https://documents.egi.eu/document/360</a>