



EGI-InSPIRE

QUALITY PLAN AND PROJECT METRICS

EU DELIVERABLE: D1.1

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|----------------------|---|
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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

| | Name | Partner/Activity | Date |
|--------------------|--|------------------|----------|
| From | Catherine Gater and Steven Newhouse | EGI.eu | 9/10/10 |
| Reviewed by | Moderator: Steven Newhouse Reviewers: AMB | EGI.eu | 29/9/10 |
| Approved by | AMB & PMB | | 11/10/10 |

III. DOCUMENT LOG

| Issue | Date | Comment | Author/Partner |
|-------|---------|--------------|-------------------------|
| 1 | 13/6/10 | First draft | Steven Newhouse/EGI.eu |
| 2 | 30/6/10 | Second draft | Catherine Gater /EGI.eu |
| 3 | 29/9/10 | Third draft | Steven Newhouse/EGI.eu |
| 4 | 9/10/10 | Final | 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 Purpose

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.

1.2 Application area

This document is a formal milestone for the European Commission that describes to the project members how the EGI document repository will be used to support the review of the EGI-InSPIRE project's milestone and deliverables.

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 to provide a managed central location for all material.

The following templates are available:

| Template Name | Document URL |
|-----------------------|---|
| Milestone/Deliverable | https://documents.egi.eu/document/26 |
| Presentation | https://documents.egi.eu/document/44 |
| Document Comment | https://documents.egi.eu/document/54 |

Once logged into the document repository [R1] using your account (accounts are linked to the EGI single sign on system [R2] which can be used to generate an account and password) 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">• Deliverable: Use the deliverable name: e.g. D1.1, D5.5, etc.• Milestone: Use the milestone name: e.g. MS102, MS504, etc.• Activity: Use the activity code: e.g. SA1, NA3, etc.• Committee/Board: Use an acronym based on the committee or board name: e.g. TCB, OMB, UCB, USAG, SPG, etc.• Other: If the source of the material cannot be identified then ignore this section. |
| 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.

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

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>.

3.1 Deliverables

| Time before submission | State in AMB RT Queue | Material |
|------------------------|-----------------------|--|
| 6 weeks | ToC | Document skeleton created and first version of the document with the table of contents entered into the document |
| 4 weeks | Draft | A full draft is available in the repository that has been reviewed within the activity. |
| 2 weeks | Review | A review led by a moderator and three reviewers using the document comments form has been completed and responded to by the document authors. This may take multiple cycles. |
| 2 weeks | AMB Review | Document starts being reviewed by the AMB. |
| 1 week | PMB Review | Document starts being reviewed by the PMB. |
| Deadline | With EC | A clean version of the document is in the document repository. |

The review is led by a member of the AMB from an activity that is **not** producing the document. Three 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).

3.2 Milestones

| Time before submission | State in AMB RT Queue | Material |
|------------------------|-----------------------|---|
| 6 weeks | ToC | Document skeleton created and first version of the document with the table of contents entered into the document. |
| 4 weeks | Draft | A full draft is available in the repository that has been reviewed within the activity. |
| 2 weeks | Review | A review led by a moderator and one reviewer using the document comments form has been completed and responded to by the document authors. This may take multiple cycles. |
| 2 weeks | AMB Review | Document starts being reviewed by the AMB. |
| 1 week | PMB Review | Document starts being reviewed by the PMB through a |



| | | |
|----------|---------|--|
| | | monthly digest. |
| Deadline | With EC | A clean version of the document is in the document repository. |

The review is led by a member of the AMB from an activity that is **not** producing the document. One reviewer is drawn from the function of EGI (i.e. Operations, User Community, Technology or Policy) that is identified as a consumer of the work that is not involved in its production.

3.3 Submission to EC

Once the review process has been completed and approved by the PMB, the project office will produce a PDF of the document and upload this to the document repository and submit the material to the 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: www.egi.eu is the main website for the project. It is used mainly for all 'official' 'static' content. Individual services supported by EGI.eu will have their own hostname in the egi.eu domain. The wiki [R4] 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

unless the output is using 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 Infrastructures (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)

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 | |
| MNA1.2 | Time to review deliverables & milestones (from entering External Review to exiting PMB Review) | I | TNA1.4 | |

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 | |
| M.NA2.3 | Number of press cuttings relating to EGI, EGI.eu or EGI-InSPIRE | P | TNA2.2 | |
| M.NA2.4 | Number of interviews given to media organisations | P | TNA2.2 | |
| 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 |
| M.NA2.10 | Number of MoUs or agreements signed with external (non-EGI) resource 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 | P | TNA2.3 & | VRCs engaged in using EGI's services |

| | | | | |
|----------|---|--|--------|--|
| | collaborating virtual user communities | | TNA3.1 | |
| M.NA2.12 | Number of operational procedures recorded by EGI.eu | | TNA2.3 | Excludes updates. Indicates the need of this activity. |

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 | Number of GGUS tickets CREATED & SOLVED per user Support Unit (NGIs & EGI.eu) | P | TNA3.3 | EGI Helpdesk Statistics |
| M.NA3.3 | Number of GGUS tickets CREATED by users and SOLVED by EGI.eu | P | TNA3.3 | EGI Helpdesk Statistics |
| M.NA3.4 | Average and Median Solution time to resolve tickets | P | TNA3.3 | EGI Helpdesk Statistics |
| M.NA3.5 | Uptime of User Support websites: <ul style="list-style-type: none"> • Training • Application Database • VO Support Services | P | TNA3.4 | Nagios |
| M.NA3.6 | Visitors to User Support websites: <ul style="list-style-type: none"> • Training • Application Database • VO Support Services | P | TNA3.4 | Google Analytics |
| M.NA3.7 | Number of VO Support Services | P | TNA3.4 | |
| M.NA3.8 | Number of Applications in the AppDB | P | TNA3.4/3 | Recorded by NGI |
| M.NA3.9 | Number of Trainers in the Trainers database | P | TNA3.4/3 | Recorded by NGI |
| M.NA3.10 | Number of Training Days delivered through NGI Training events | P | TNA3.4/3 | Recorded by NGI |
| M.NA3.11 | Number of: <ul style="list-style-type: none"> • New/decommissioned VOs | P | TNA3.1 | An international VO is one that has a scope beyond a single country. |

| | | | | |
|----------|---|--|--------|--|
| | <ul style="list-style-type: none"> • Low/Medium/High Activity VOs • international VOs | | | (See registration portal.) VO Activity defined in Accounting Portal*. |
| M.NA3.12 | Number of users (grouped by community and VO) | | TNA3.1 | Statistics from the VO registration portal. |

*http://www3.egee.cesga.es/gridsite/accounting/CESGA/vomet_view.html.

7.4 SA1 – Operations

| Metric ID | Metric | Public / Internal | Task | Comments/Explanation |
|---------------|--|-------------------|--------|---|
| M.SA1.Usage.1 | Number of jobs done, per VO and discipline (mean daily/monthly number) | P | | Tool: accounting portal |
| M.SA1.Usage.2 | Normalised consumed computing capacity | p | | Measured in HEP SPEC 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 the EGI | P | TSA1.1 | Tool: gstat (TSA1.1 QR) |
| M.SA1.Size.2 | Total number of job slots available in EGI per NGI | P | TSA1.1 | 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 in EGI per NGI | P | TSA1.1 | Tool: gstat NGI can amend results reported by tools, and report correct values in its own QR |
| M.SA1.Size.4 | Installed disk capacity (PB) per NGI | 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) per NGI | 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.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 failing the Site Security Challenges | I | TSA1.2 | Manual metric (from TSA1.2 QR) |
| M.SA1.OperationalSecurity.3 | Incident Handling Assessment scores | I | TSA1.2 | Manual metric (in TSA1.2 QR) |
| M.SA1.OperationalSecurity.4 | 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 per NGI | 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 | Passing MPI Nagios tests Tool: query to the information system Manual metric (NGI QR) |
| M.SA1.Integration.3 | Amount of integrated desktop resources | I | TSA1.3 | Placeholder: Need to define desktop resources and how to integrate them. Manual metric (NGI QR) |
| M.SA1.Integration.4 | Amount of virtualised installed capacity accessible to EGI users | I | TSA1.3 | Placeholder: Need to define virtualised resources and how to integrate them. Manual metric (NGI QR) |
| M.SA1.ServiceValidation.1 | Total number of software components put through staged rollout per NGI | I | TSA1.3 | Manual metric (TSA1.3 QR) |
| M.SA1.ServiceValidation.2 | Number of staged rollout releases undertaken & rejected | 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 | Number of operational tickets CREATED /SOLVED per Support | P | TSA1.7 | GGUS reporting tool |

| Metric ID | Metric | Public / Internal | Task | Comments/Explanation |
|-------------------|---|-------------------|--------|---|
| | Unit per month | | | |
| M.SA1.Support.2 | Average & Median Solution ticket solution time (business days) per Support Unit per month | P | TSA1.7 | GGUS reporting tool |
| M.SA1.Support.3 | Number of monthly tickets opened per NGI | I | TSA1.7 | Tool: GGUS reporting tool |
| M.SA1.Support.4 | Assigned ticket Average & Median RESPONSE TIME and SOLUTION TIME per Support Unit per month | I | TSA1.7 | Tool: GGUS reporting tool |
| M.SA1.Support.5 | Number of tickets SOLVED by TPM (1st line support) | I | TSA1.7 | Tool: GGUS reporting tool |
| M.SA1.Support.6 | Ticket assignment time to Support Units by TPM (1st line support) | I | TSA1.7 | Tool: operations dashboard |
| M.SA1.Support.7 | COD Workload per month | P | TSA1.7 | Tool: operations dashboard TSA1.7 report |
| M.SA1.Support.8 | ROD Workload per month per region/NGI | P | TSA1.7 | Tool: operations dashboard TSA1.7 report |
| M.SA1.Support.9 | ROD Quality Metrics per month per region/NGI | P | TSA1.7 | Tool: operations dashboard TSA1.7 report |
| M.SA1.Operation.1 | NGI monthly availability and reliability | P | TSA1.8 | Tool: availability report generator |
| M.SA1.Operation.2 | Number of sites suspended | I | TSA1.7 | Manual metric. TSA1.7 report |
| 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 availability and reliability of core middleware services | P | TSA1.8 | Development needed |
| M.SA1.Operation.6 | EGI monthly availability | P | TSA1.8 | Development needed |



| Metric ID | Metric | Public / Internal | Task | Comments/Explanation |
|-----------|---|-------------------|------|----------------------|
| | and reliability of central operations tools | | | |

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 | |
| M.SA2.2 | Number of UMD Roadmap Capabilities defined through validation criteria | P | TSA2.2 | Ensures stability and defined quality for new UMD Releases |
| 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 to production that could be caught? |
| M.SA2.4 | Number of new releases validated against defined criteria | P | TSA2.3 | Measures the workload on the validation team |
| M.SA2.5 | Mean time taken to validate a release | P | TSA2.3 | Indicates how responsive the team is to validating releases |
| M.SA2.6 | Number of releases failing validation | P | TSA2.3 | Indicates the quality assurance process of the software providers |
| M.SA2.7 | 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.SA2.8 | Number of unique visitors to the Software Repository | P | TSA2.4 | Records the visibility of the repository to the community through Google Analytics |
| M.SA2.9 | Number of releases downloaded from the Software Repository | P | TSA2.4 | Records how actively the software repository is being used by the community |
| M.SA2.10 | Number of tickets assigned to DMSU | P | TSA2.5 | Demonstrates use of DMSU |
| M.SA2.11 | 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 VOs deploying their own dashboard instance/view | P | TSA3.2.1 | |
| M.SA3.2 | Number of users of deployed dashboard instances | P | TSA3.2.1 | |
| M.SA3.3 | Number of unique users of GANGA | P | TSA3.2.2 | |
| M.SA3.4 | Number of unique users of DIANE | P | TSA3.2.2 | |
| M.SA3.5 | Number of sites using GANGA | P | TSA3.2.2 | |
| M.SA3.6 | Number of sites using DIANE | P | TSA3.2.2 | |
| M.SA3.7 | Number of users of GReIC | P | TSA3.2.3 | |
| M.SA3.8 | Number of users of Hydra | P | TSA3.2.3 | |
| M.SA3.9 | Number of users of SOMA2 | P | TSA3.2.4 | |
| M.SA3.10 | Number of users using Taverna to access EGI resources | P | TSA3.2.4 | |
| M.SA3.11 | Number of users using RAS | P | TSA3.2.4 | |
| M.SA3.12 | Number of users using MD | P | TSA3.2.4 | |
| M.SA3.13 | Number of users using Gridway | P | TSA3.2.4 | |
| M.SA3.14 | Number of MPI support tickets | P | TSA3.2.5 | |
| M.SA3.15 | Mean time to resolve MPI support tickets | P | TSA3.2.5 | |
| M.SA3.16 | Number of HEP VO support tickets | P | TSA3.3 | |
| M.SA3.17 | Mean time to resolution of HEP VO support tickets | P | TSA3.3 | |

| Metric ID | Metric | Public / Internal | Task | Comments/Explanation |
|------------------|--|--------------------------|-------------|--|
| M.SA3.18 | 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.SA3.19 | Number of databases integrated and/or accessible from EGI resources. | P | TSA3.4 | |
| M.SA3.20 | Number of unique users of VisIVO | P | TSA3.5 | |
| M.SA3.21 | 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 | |
| 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 | |
| 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 | 75 | 100 | 125 |
| | | 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 (From M.NA3.12) | 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 | 10 | 15 |
| 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 |
| | | Number of virtualised resources (M.SA1.Integration.4) | 0 | 1 | 2 | 5 |



8.2 National Grid Initiatives

Fundamental to EGI are strong active NGIs. The NGIs within EGI have different levels of maturity which are reflected in these metrics. Targets are not generally defined (except where indicated in the project metrics) as 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) |
| 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.NA3.8) |
| Monitor that the NGI has trainers for its local user community | Number of Trainers in the Trainers database (M.NA3.9) |
| Monitor that the NGI provides training for its local users | Number of Training Days delivered through NGI Training events (M.NA3.10) |
| 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) |
| Developing a strong user base | Number of users within the NGI (M.NA3.12) |



8.3 VRC 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.NA3.8) |
| 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 NGI (M.NA3.12) |



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

| | |
|-----|---|
| R 1 | EGI Document Repository https://documents.egi.eu . |
| R 2 | EGI Single Sign On system https://www.egi.eu/sso/ |
| R 3 | EGI Indico Meeting Planner https://www.egi.eu/indico/ |
| R 4 | EGI Wiki https://wiki.egi.eu/wiki/Main_Page |