



EGI-InSPIRE

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Abstract

This document reports on the implementation of the EGI-InSPIRE quality assurance plan during the first year of the project. It reviews the main quality assurance mechanisms foreseen in the quality plan, analyses results and proposes some improvements for the next period.

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II. DELIVERY SLIP

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III. DOCUMENT LOG

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3	29/3/11	Second draft	C Gater / EGI.eu
4	1/4/11	Third draft	C Gater / EGI.eu
5	20/4/11	Fourth draft in response to review	C 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 reports on the implementation of the EGI-InSPIRE quality assurance plan (D1.1) [R1] during the first year of the project. It reviews the main quality assurance mechanisms set out in the quality plan, analyses results and proposes some improvements for the next period. This report is a self-assessment of the running of the project and the management tools in use. It is coupled to the annual reports produced by the individual activities, and also to the Periodic Report for the first period.

The report describes the main QA functions covered by the Project Office in NA1, including producing the Quality and Metrics Plans, driving the agreement of quality metrics within the activities, summarising metrics for quarterly and annual reports and raising quality matters with the AMB or other appropriate bodies. The websites and wiki sites related to Quality are also outlined, as well as the initial approach to ITIL within the project.

The project overall assessment mechanisms are reviewed, including Activity Management Board (AMB) meetings, quarterly reports and periodic reports, the project execution plan, Deliverables and Milestones reviews, metrics web and wiki pages, Project Management Board meetings, External Advisory Committee reports and EC annual project reviews.

The document management and review procedures are assessed and changes proposed for the second year. The DocDB has functioned effectively as the document storage repository for all official EGI documents during the first year. The timetable and detailed processes of the document review procedure are listed on the wiki site¹ and are also described in D1.1 [R1]. Some refinements to the review process are proposed, including a small change in role for the moderator. A number of document formats are currently supported by the project – for the second year more Open standard-based formats will be considered.

Project management tools for EGI-InSPIRE include the Project Progress Tracking Tool PPT. The PPT tool is hosted by CERN and is used by the EGI-InSPIRE project to track the work of its members across the different work packages and tasks. It manages the online completion of timesheets across the partners. Two types of data are recorded in PPT to enable the partners to report their activities: the effort plan as agreed in the Consortium Agreement tables and the execution plan that defines which resources (PPT members) are allocated to the partners tasks. PPT will continue to be used as the project progress tracking tool for EGI-InSPIRE in Year 2. The effectiveness of the current set-up of the database will be assessed during the generation of the annual effort reports and the cost estimates, and changes may be proposed as a result for the second year.

This document also shows an overview of the project metrics and targets. A number of project metrics are defined in D1.1 in the areas of operation of the production infrastructure, support of researchers, support for current heavy users of the infrastructure, interfaces that expand access to new user communities, mechanisms to integrate existing infrastructure providers into the production infrastructure and processes to integrate new DCI technologies in a seamless production infrastructure.

Targets have been set for these project metrics, and further metrics established for measuring activity within the project, within a Virtual Research Community (VRC) and also within National Grid

¹ https://wiki.egi.eu/wiki/Review_process



Infrastructures (NGIs). Some changes to metrics and targets are discussed in this document for consideration during the second year.



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1 INTRODUCTION

This document reports on the implementation of the EGI-InSPIRE quality assurance plan (D1.1) [R1] during the first year of the project. It reviews the main quality assurance mechanisms set out in the quality plan, analyses results and proposes some improvements for the next period. This report is a self-assessment of the running of the project, the management tools in use and shows an overview of the project metrics and targets. It is coupled to the annual reports produced by the individual activities, and also to the Periodic Report for the first period. Some changes to the project metrics are also discussed, as well as updates to the targets for the project level metrics. The activity level metrics themselves are reported and analysed in the quarterly reports, in the Periodic Report and in the activity annual reports.

2 QUALITY ASSURANCE ORGANISATION STATUS

2.1 QA Management in EGI-InSPIRE

In EGI-InSPIRE, the resources committed to Quality Assurance are provided by NA1 through quality management procedures and processes. Some Quality Assurance effort is also allocated within each activity in order to implement the QA policy and metrics defined in D1.1 Quality Plan and Project Metrics [R1].

The main tasks of the quality functions in NA1 include:

- Develop the Quality and Metrics Plan and update these annually;
- Ensure that agreed quality metrics are applied and measured within the activities;
- Summarise the metrics for the Quarterly and Annual Periodic Reports
- Take quality matters, which cannot be dealt with within the activity, to the AMB or other appropriate body.

2.1.1 QA wiki site and metrics web pages

The QA wiki site² sets out the project management procedures, document management procedures, instructions for recording project output and includes links to templates and documents in the EGI Document Server implemented using DocDB³.

The project metrics are summarised each quarter at <http://www.egi.eu/projects/egi-inspire/metrics/>, and further metrics can be obtained through the gstat tool⁴ and the accounting portal⁵.

- **NGI metrics**⁶
- **SA1 task metrics**⁷

The full project metrics described in D1.1 are also summarised in the quarterly reports. Further operational tools are available at the operational tools wiki page⁸.

2.1.2 ITIL

ITIL®⁹ is the most widely accepted approach to IT service management and the de facto standard for operating computer centres in the industrial sector. ITIL provides a cohesive set of best practices, drawn from the public and private sectors internationally.

² https://wiki.egi.eu/wiki/Quality_Assurance:Main_Page

³ <http://documents.egi.eu>

⁴ <http://gstat.egi.eu>

⁵ <http://accounting.egi.eu>

⁶ https://wiki.egi.eu/wiki/NGI_QR_Reports_and_Metrics

⁷ https://wiki.egi.eu/wiki/SA1_Task_Metrics_Table

⁸ <https://wiki.egi.eu/wiki/Tools>

⁹ <http://www.itil-officialsite.com/>



In the research environment, computer centres such as CERN and FZK are moving to ITIL. One of the recommendations from EGEE-III for EGI was to move in this direction. Several NRENs in the GÉANT network adopt ITIL terminology between their sites. There are a wide variety of different resource centres in EGI and hence different quality approaches are needed by each resource centre in the area of ITIL.

Assessment and Changes for Year 2:

Plans for implementing ITIL within EGI are currently in the early stages of discussions within SA2 and NA3. The Policy Team is discussing an MoU with gSLM. The gSLM project aims to improve Service Level Management (SLM) in the grid domain. This will make it easier for grid resource owners, operators, and representatives of user groups to agree upon, document and manage the many agreements between stakeholders required to make the grid run smoothly. Bringing ITIL into the grid community is their main goal and this area could be covered by the MoU with EGI-InSPIRE during the second year.

Similarly, EGI.eu is looking at implementing ITIL awareness and ITIL practitioner training for Activity Managers.

2.2 Project Management

The project management procedures and related materials used within EGI-InSPIRE are based on the successful processes developed during the management of large distributed collaborative projects such as the EGEE series of projects. Much of this material has also been used by related projects (e.g. BALTICGRID, SEE-GRID, D4Science, ETICS).

2.2.1 Project overall assessment mechanisms

The following mechanisms have been established by the project to assess the project progress:

- Activity Management Board (AMB) meetings¹⁰;
- Quarterly reports and periodic reports [R2,3,4];
- Project execution plan [R5];
- Deliverables and milestones reviews [R6];
- Metrics web¹¹ and wiki pages¹²;
- Project Management Board meetings;
- External Advisory Committee reports;
- EC annual project reviews.

Assessment:

¹⁰ <https://www.egi.eu/indico/categoryDisplay.py?categId=13>

¹¹ <http://www.egi.eu/projects/egi-inspire/metrics/>

¹² <https://wiki.egi.eu/wiki/Tools>



The AMB includes the Activity Managers and key Task Leaders for the project and meets on a weekly basis. The meetings have driven the Deliverable and Milestone production and their associated review process, and have also proved to be a useful forum to raise and resolve project issues. The quarterly reports have also been produced successfully, and the time taken to produce them has gradually decreased as the project has progressed, to around 5 weeks after the close of the quarter. Metrics are published on the website on a quarterly basis, and further tools are available at the operational tools wiki site. Project Management Board meetings are held quarterly on average and are fully minuted. The External Advisory Committee is in the process of being established, and will meet for the first time at the EGI User Forum 2011 in Vilnius. The first EC annual project review will be held on the 30 June and 31st July 2011.

Changes proposed for Year 2:

The overall project assessment mechanisms will remain substantially unchanged for the second year, apart from planned changes to the way that metrics are gathered. Upgrades to the metrics portal are being planned by JRA1 so that more of the metrics generated by multiple NGIs can be gathered online and delivered as a report on a quarterly basis. Generally, these metrics will be gathered automatically where possible, or via online forms completed by the NGIs at the end of each project quarter. Some refinements to the deliverable and milestone review process are also planned, which are outlined in more detail in Section 2.2.3.

2.2.2 Document management procedure

The document management procedure includes the following elements, described in [R1]:

- Document repository (DocDB);
- Naming conventions;
- Document metadata;
- Repository metadata.

Assessment:

The DocDB has functioned effectively as the document storage repository for all official EGI publications in the first year, including deliverables, milestones, review documents, presentations, reports and committee minutes. Statistics for the DocDB are listed online¹³. There are currently over 400 documents and more than 2400 files in the database, with 1150 registered authors. Guidelines for naming of official documents such as deliverables and milestones are set out in D1.1. The final step in the document review process is for the quality team to check that the conventions have been followed before producing a final pdf of the document for submission to the EC, as well as updating the document version to final, setting the modification and viewing permissions in the DocDB and publishing it to the website.

Changes proposed for Year 2:

During the second year, the DocDB will continue to be the main repository for EGI-InSPIRE's official documents. Some regrouping of documents at an activity level is anticipated, and there will be an

¹³ <https://documents.egi.eu/secure/Statistics>



audit of the documents currently held to ensure that the correct groups are currently allocated modification and reading writes.

EGI-InSPIRE will also consider strategies for uploading key documents to OpenAIRE to meet special clause 39 in the Grant Agreement, and the BELIEF Digital Library during the second year.

2.2.3 Document review procedure

The formal outputs from the project, in the form of milestones and deliverables pass through a defined review process. The review process is timed to ensure that the output is available to the EC at the end of the project month (PM) that the material is due.

The timetable and detailed processes of the document review procedure are listed on the wiki site¹⁴ and are also described in D1.1 [R1].

Assessment

The review process has worked effectively during the first year of the project, with the time to produce deliverables and milestones decreasing over the course of the year, so that the bulk of the documents are delivered on schedule by the end of the project month that they are due. Each document is initially reviewed internally to produce a first draft. According to D1.1, this draft should then be sent for review by up to 3 external reviewers in the case of a deliverable, and one reviewer in the case of a milestone, with a moderator role assigned to an AMB member from outside the activity that produced the document. The moderator should coordinate gathering the external reviews. Finding three reviewers external to the originating activity and gathering all their reviews in the short time available for the full review process has proven challenging. Instead, the review practice evolved during the first year to instead seek one review from the moderator of the document in place of one of the reviewers. In practice, a deliverable therefore receives 3 reviews (from 1 moderator and 2 reviewers) and a milestone receives 2 reviews (from 1 moderator and 1 reviewer).. The external reviewers can be either external to the originating activity and/or external to the project as a whole, if expertise is available. This iterative external review process is followed by review by the AMB, and then the PMB. Some refinements to the review process are proposed for Year 2 below, including further fine-grained status fields (i.e. ToC, Review, AMB Review, etc) but the procedure for review outlined in D1.1 will essentially stay in place. The procedure is summarised in the figure below:

¹⁴ https://wiki.egi.eu/wiki/Review_process

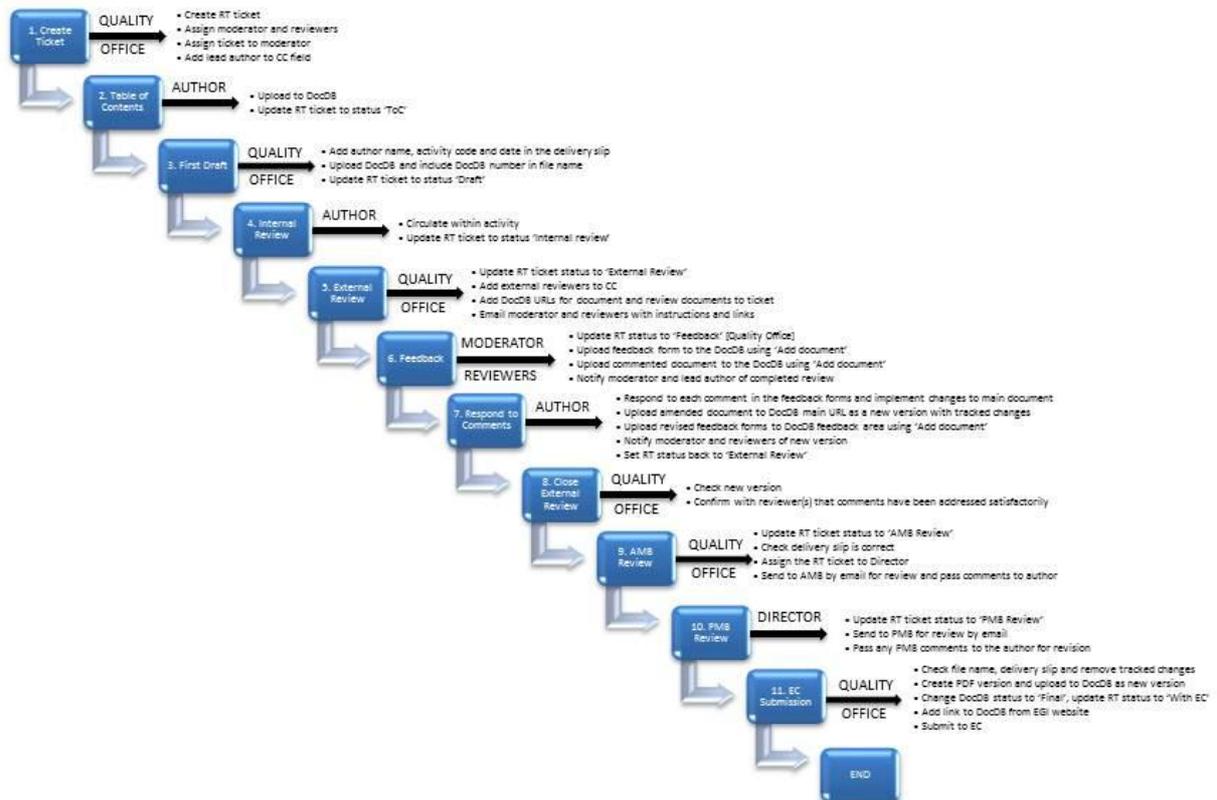


Figure 1: Deliverable and Milestone Review Process

Proposed changes for Year 2:

The document review templates sent to the external reviewers will be revised to include more comprehensive instructions on the types of comments requested at this stage of the review process, for example to avoid commenting on US or UK style English, guidelines for file names for the review documents and a section where the reviewer can briefly outline their experience in the area covered by the deliverable or milestone in order to help reflect on the input provided in the form.

Many of the deliverables and milestones will be updated during each year of the project e.g. the dissemination plan, quality plan, gender action plan etc. It will be important to keep track of which is the most recent version of these documents, so that links to previous related versions will be included in the DocDB, and the previous version will be downgraded in the DocDB to obsolete if necessary. The format of the updated documents will need to make it clear that this is the current version of the



document, to emphasise what elements have changed, and refer back to previous versions of the document as needed. Depending on the deliverable or milestone, the extent to which information will need to be repeated from year to year will vary. The review process for the updated document versions will be the same as for the originals, with the addition of a step to link backwards to the previous version of the document in DocDB, and to downgrade the previous version if necessary.

Currently, the moderator role for the review process is allocated to a member of the AMB. The moderator works with the quality office to guide the document through the external review process, with the project office contacting reviewers to ensure that they are available to review the document in the time available, and answering any queries about the process. The moderator reviews the document after the comments are received from the reviewers, and asks the project office to pass these back to the author. The author should also respond to the comments in the review forms. This process is repeated until the reviewers have confirmed that their comments have been responded to satisfactorily. The AMB moderator also has access to the amb-deliverable and amb-milestone RT ticket queues to help them track the process and report back to the AMB on progress at the weekly meeting.

In Year 2, the moderator role will also be opened to non-AMB members with suitable areas of expertise from the project's task leaders. Members of the AMB interested in the deliverable or milestone and wishing to provide a full review will be expected to read the document at the same time as the external reviewers and provide their input to the authors at this stage. This will ensure that the review input is collected at the same time and can be integrated in one pass by the document authors. Since the AMB will now be closely involved in the external review phase, the role of the AMB review stage will mostly be to ensure that the reviewers' comments are fair and justified and to mediate in cases where conflicting review comments are received.

3 MAIN PROJECT MANAGEMENT TOOLS

3.1 Document management tools

The document management tools and standards recommended for EGI are the following:

- Word processing: MS Word 97-2003
- Spreadsheet: MS Excel 97-2003
- Slides presentation: MS PowerPoint 97-2003
- Document Management tools: DocDB

The following formats are also used for exchanging documents:

- doc/docx, xls/xlsx, ppt/pptx
- PDF
- HTML
- OpenData format

All official documents must be available in PDF format.

Assessment:

Since version control and formatting can become difficult if different file formats are used, the expectation during Year 2 is to continue using these file formats for document creation and circulation.

Proposed changes for Year 2:

For the two main annual events supported by EGI-InSPIRE, presentation and poster files will also be available in an open standard format¹⁵. This has already been implemented in time for the EGI User Forum in Vilnius in April 2011. Files will be provided in an Open Document Format, compatible with programs such as LibreOffice where possible during Year 2. Similarly, the versions of Microsoft Office documents supported will be updated to newer versions in D1.5 Quality Plan and Metrics.

3.2 Project Progress Tracking

For the whole project the project is tracked using:

- Project Progress Tracking: PPT (CERN tool, customised for EGI-InSPIRE)¹⁶

The PPT tool is hosted by CERN and is used by the EGI-InSPIRE project, and other EC-funded projects such as EMI, to track the work of its members across the different work packages and tasks. It manages the online completion of timesheets across the partners.

The working plan of the project is registered per partner and per task. For each task a list of involved partners and the corresponding staff resource is maintained in the database (see Figure 2).

¹⁵ http://en.wikipedia.org/wiki/OpenDocument_Format

¹⁶ <https://pptevm.cern.ch/egi/ui/main.do>

EGI-InSPIRE Tasks

Legend
 TASK: unit of work to be completed (preferred granularity: 3 months)
 RESource: Partner involved in completing the task
 OUTput: end result of the task

Command (N,M or D)	TASK	Code	ID Description	Holders Email	WBS	Deliverable/ Milestone	Status	LOE ?	Planned Start	Planned Finish	Comments
(N,M or D)	RES		# Partner Code		Funded PM	Unfunded PM					Comments
(N,M or D)	OUT		# Output description		Actual Qty	Total Qty	Unit			Planned Finish	Comments
	TASK	TNA2.2N	116 Dissemination	catherine.gater@egi.eu	WP2-N		AC	N	01-May-2010	30-Apr-2014	
	RES		1 IPT		5	0					
	RES		2 IPP-BAS		8	0					
	RES		3 UCY		3	0					
	RES		4 CESNET		4	0					
	RES		5 KIT-G		10	0					
	RES		6 CSIC		11	0					
	RES		7 UPVLC		12	0					

Figure 2: Task view within PPT showing partners

The data collected in the Execution Plan is then transferred into PPT. A member form is created for every user. A combination of information is used to define the activities that the user can report his/her efforts to. Each member has a supervisor assigned in PPT, who is responsible for validating the member's declaration, his/her working period, etc.

Two types of data are recorded in PPT to enable the partners to report their activities:

- the effort plan as agreed in the Consortium Agreement tables, which is regularly updated as needed by the Partners during the course of the project;
- the execution plan that defines which resources (PPT members) are allocated to the partners tasks; again regularly updated according to the partner's staff turnover.

The day-to-day monitoring of these two data sets enables the Project Office to provide an accurate resources report to the EC. It provides the assurance that the project is on track towards the agreed plan and that resources declared are indeed linked to the respective project activity.

The member is identified and authenticated using his/her EGI Single Sign On (SSO) ID. This is a single username and password allocated by the EGI.eu IT support services. It ensures that every member has a unique ID and can be recognised by PPT. Further details about PPT and how it is used to track the progress of the project are included in MS102 Execution Plan [R6].

Assessment:

PPT has proved to be an effective tool for managing the project level reporting and will be used to generate the annual effort reporting and cost estimates at the end of the fourth quarter. Currently 1126 people are registered in the SSO. Of these, 792 (70%) are male, 174 (15%) are female and 160 (15%) are not specified. PPT data has also been used by the Project Office to track over and under-committing partners, and this data has been made available to Work Package leaders on the wiki site¹⁷, to facilitate the end of year reporting. PPT can also deliver indications of how many timesheets have been validated per month and whether timesheets have been completed.

Plans for Year 2:

¹⁷ https://wiki.egi.eu/wiki/Activity_Management_Board



PPT will continue to be used as the project progress tracking tool for EGI-InSPIRE in Year 2. The effectiveness of the current set up of the database will be assessed during the generation of the annual effort reports and the cost estimates, and changes may be proposed as a result for the second year. For example, in Year 2, the record of unfunded resource will not be further accessible in the timesheet. A member therefore will not be able to report unfunded effort at the level of the task, but the funded effort can be set to 0, for example for senior staff that cannot be charged to EGI-InSPIRE but are still active for example to attend project meetings.

3.3 Website and wiki

- PUBLIC¹⁸: Dedicated to the general public
- INTERNAL¹⁹: Wikis dedicated to supporting the technical Activities

Assessment:

At the start of the project, the main EGI website consisted of a basic shell in terms of design and content. Since then, content has been developed for a number of areas of the website, including the press area, the user support area and the governance areas. A new version of the website was launched in September 2010, and the improved design, layout and content were reflected in the web statistics. As a result, in PQ2, the website received more than 3600 unique visitors, an increase of 85% on the first quarter. The bulk of these visited during the EGITF2010 event, generating over 8000 visits, 35% of which were new visits and a total of nearly 35,000 page views. During PQ3, there have been around 7700 visits, corresponding to around 32,000 page views per month.

Since the beginning of January 2011, there has been an increase in the rate of publication of website news items. As a result of progress within EGI and the development of a network of dissemination contacts, at least two stories are published per week. The team has also worked closely with CESNET and the EGI-InSPIRE work package leaders to set up an EGI blog²⁰, which now includes regular contributions from across the project and the wider community.

The project wiki site²¹ has been regularly updated during the course of the project and new templates have been developed for standard pages. The site now contains project information and is used as a community area by NA3. The usage of the project wiki to support operations activity has greatly expanded from PQ1. The Operations wiki space²² currently amounts to 138 pages, which are periodically reviewed, and additional manuals and procedures are still under update and migration from external sources. A well-defined set of page categories was defined to easily find and categorize operations content. In addition, templates were developed to improve navigation and make the Operations wiki more user-friendly. Wiki is the media where all operations documents such as best-practice guides, manuals, procedures and FAQs, are stored²³. Prescriptive documents (manuals and procedures) are now numbered for an easier reference. Quality processes and metrics are included in the site, and metrics for SA1 are now gathered each quarter using the wiki. Contributions to

¹⁸ <http://www.egi.eu>

¹⁹ <http://wiki.egi.eu>

²⁰ <http://www.egi.eu/blog/>

²¹ https://wiki.egi.eu/wiki/Main_Page

²² <https://wiki.egi.eu/wiki/Category:Operations>

²³ <https://wiki.egi.eu/wiki/Documentation>



milestones such as MS108 Review of Global Tasks are also collected using the wiki site. The dissemination team has helped to shape the wiki by providing consultative expertise where required.

The EGI website and wiki are assessed in more detail in D2.8 Annual Report on External Relations [R7].

Plans for Year 2:

The EGI website and wiki will continue and expand according to the needs of the project and their users. In particular, it is anticipated that information aimed at user communities, for example outlining support services and use cases, will be expanded as more MoUs are signed and VRCs increasingly engage with EGI and EGI-InSPIRE. Information aimed at NGIs and the EGI Council will also be enhanced.

Plans for the website and wiki, as well as the other project dissemination channels such as social media sites, will be outlined in more detail in D2.9 Dissemination Plan in PM13 and MS217 Dissemination Handbook in PM14.

3.4 Meetings and Events

Meetings and related agendas are managed with Indico²⁴ These include EGI Community meetings, EGI Management meetings, such as the OTAG, SCG, USAG and UCB, operations meetings and EGI-InSPIRE meetings, such as the AMB, PMB and CB.

EGI also hosts two large annual events each year, the User Forum and the Technical Forum. Both the Technical Forum²⁵ in September 2010 in Amsterdam and the User Forum²⁶ in Vilnius in April 2011 used Indico to host the programme and content for the event.

Assessment:

Indico has been used throughout the first year for hosting meetings of the various EGI, EGI.eu and community groups. It offers functionalities such as registration, programme generation, agenda, timetabling, abstract review, email lists of contributors and a permanent repository for documents such as minutes, notes, abstracts and presentations.

Plans for Year 2:

Indico will continue to be used to provide meeting planning for EGI.eu and the wider community in the second year. For EGI's two larger annual conferences, alternatives may also be considered, but only if their functionality matches or exceeds that of Indico.

²⁴ <https://www.egi.eu/indico/>.

²⁵ <https://www.egi.eu/indico/conferenceDisplay.py?confId=48>

²⁶ <https://www.egi.eu/indico/conferenceDisplay.py?confId=207>

4 METRICS PROGRAMME

4.1 Project Overall Metrics

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

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 sustainable National Grid Infrastructures (the NGIs) that deliver an operational infrastructure (SA1) and support and develop the communities using it (NA3). There is not a direct legal mapping between each partner and their corresponding NGI, as established as a participant in EGI.eu. However, the legal entity that embodies each of the NGIs has delegated their technical responsibilities to an organisation (either a 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 and user support activities ('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/Infrastructure (NGI)

Performance of the individual activities against the planned project metrics targets are outlined in the activity reports and the Periodic Report.

Table 1: Target Project Metrics

Project Objectives	Objective Summary	Metrics	Target Y1	Target Y2	Target Y3	Target Y4
PO1	Expansion of a nationally based production infrastructure	Total number of production resource centres in EGI (M.SA1.Size.1)	300	330	360	400
		Number of job slots available in EGI-Integrated (M.SA1.Size.2a)	300,000	350,000	400,000	450,000
		Number of job slots available in EGI – Project (M.SA1.Size.2b)	200,000	250,000	300,000	350,000
		EGI monthly reliability [availability] of site middleware services (M.SA1.Operation.5)	90%	91% [93.3%]	92% [90.7%]	93% [92.3%]
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
		Average number of jobs done per day for all VOs (M.SA1.Usage.1)	500,000	525,000	550,000	575,000
PO3	Sustainable support for Heavy User Communities	Number of sites supporting MPI (M.SA1.Integration.2)	50	75	100	125
		Number of users from HUC VOs (M.NA3.12)	5,000	5,500	6,000	6,500
PO4	Addition of new User Communities	Amount of integrated desktop resources (M.SA1.Integration.3)	0	5	10	15
		Number of users from	500	1,000	1,500	2,000

		non-HUC VOs (From M.NA3.12) Public events organised (M.NA2.6)	1,500	2,000	2,500	3,000
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 production HPC clusters (M.SA1.Integration.1)	1	3	5	10
		Amount of virtualised installed capacity accessible to EGI users (HEPSPEC) (M.SA1.Integration.4)	0	1	2	5

Table 2: Achieved Year 1 Project Metrics (Q1-Q3)

Project Objectives	Objective Summary	Metrics	Q1	Q2	Q3	Target Y1
PO1	Expansion of a nationally based production infrastructure	Total number of production resource centres in EGI (M.SA1.Size.1)	341	337	340	300
		Number of job slots available in EGI-Integrated (M.SA1.Size.2a)	277,193	296,588	308,583	300,000
		Number of job slots available in EGI – Project (M.SA1.Size.2b)	184,844	197,777	207,203	200,000
		EGI monthly reliability [availability] of site middleware services (M.SA1.Operation.5)	94.3% (93.3%)	91.9% (90.7%)	93.3% (92.3%)	90%
PO2	Support of European	MoUs with VRCs (M.NA2.11)	0	0	0	5

	researchers and international collaborators through VRCs	Number of papers from EGI Users (M.NA2.5) Average number of jobs done per day for all VOs (M.SA1.Usage.1)	25 834,746	25 871,073	29 819,100	50 500,000
PO3	Sustainable support for Heavy User Communities	Number of sites supporting MPI (M.SA1.Integration.2) Number of users from HUC VOs (M.NA3.12)	NA -	73 -	90 -	50 5,000
PO4	Addition of new User Communities	Amount of integrated desktop resources (M.SA1.Integration.3) Number of users from non-HUC VOs (From M.NA3.12) Public events organised (M.NA2.6)	0 3542 -	NA 3749 -	1562 4109 -	0 500 1,500
PO5	Transparent integration of other infrastructures	MoUs with resource providers (M.NA2.10)	0	0	0	1
PO6	Integration of new technologies and resources	MoUs with Technology providers (M.NA2.9) Number of production HPC clusters (M.SA1.Integration.1) Amount of virtualised installed capacity accessible to EGI users (HEPSPEC) (M.SA1.Integration.4)	0 NA NA	0 55 45,200	4 54 16,109	4 1 0

Assessment:

Metrics have been measured through manual and automatic means as described in Section 2.1.1, through the wiki pages, gstat tool and the accounting portal. Many of the project and activity metrics require inputs from several different NGIs each quarter, which is complicated and time consuming process.

Changes proposed for Year 2:



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. However, it is clear that in some areas, such as PO2 and PO4, target metrics have already been substantially exceeded during Year 1. The targets for these metrics and others as appropriate will be reviewed and updated for Year 2. Similarly, as a result of the analysis and feedback from the first period, activity level metrics will be re-evaluated and updated in D1.5 Quality Plan and Project Metrics in PM13.



5 CONCLUSION AND FUTURE PLANS

Generally the quality plan and metrics outlined for EGI in D1.1 has progressed well, with the tools chosen to track the progress and management of the project working well. However, lack of communication within the NGIs, for example between the political, operational, user support, policy and dissemination functions, as reported in the annual reports from these activities, and through the issues raised in the quarterly reports, is a source of major problems within EGI-InsPIRE. This has improved during the year but still remains a matter of concern. Internally, management of the delivery of deliverables and milestones has improved during the first year, with a much higher proportion being delivered on time. Initially, a number of deliverables and milestones were delivered late due to slow initial recruitment in some NGIs and JRUs as the Grant Agreement was not yet signed. EGI.eu was also established some months later than originally planned, in February 2010 and the coordinating partner did not reach full strength in key areas, including the Project Office, Operations, User Community Support, Dissemination and Policy, until January 2011. However, all deliverables and milestones scheduled in the first project year have been delivered by the end of the project year.

Since reaching full recruitment at EGI.eu, and with the better understanding and refinements added to the Execution Plan that outlines who is working on which tasks within the NGIs, it is expected that the timeliness of delivery should be improved substantially in Year 2. However, as outlined above, if communication within and to NGIs continues to be problematic, this may affect the delivery of documents that draw on substantial input from a wide range of partners. EGI-InsPIRE works as a federated model – EGI.eu coordinates the communication and input from the partners and has some influence over the distributed whole due to its coordinating role, but a high proportion of management effort is dedicated to requesting and chasing partner contributions. This is especially true when small amounts of effort in some tasks are distributed over a large number of individuals, such as SA1, NA2 and NA3 particularly when contacts are not clearly defined, or not identified at all in some cases. The EGI-InsPIRE management team will need to work with the partners, the AMB and the PMB to define the best basis for Quality Assurance in the face of non-responsive partners during the second year of the project.

6 REFERENCES

R 1	D1.1 Quality Plan and Metrics https://documents.egi.eu/document/55
R 2	MS105 Quarterly Report 1:May-July 2010 https://documents.egi.eu/document/156
R 3	MS106 Quarterly Report 2:August-October 2010 https://documents.egi.eu/document/248
R 4	MS107 Quarterly Report 3:November 2010 -January 2011 https://documents.egi.eu/document/361
R 5	MS102 EGI-InSPIRE Execution Plan https://documents.egi.eu/document/358
R6	Deliverable and milestone review documents https://documents.egi.eu/document/54
R7	D2.8 Annual Report on External Relations https://documents.egi.eu/document/377