



EGI-InSPIRE

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Abstract

This document reports on the implementation of the EGI-InSPIRE quality assurance plan during the third 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.

I. COPYRIGHT NOTICE

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II. DELIVERY SLIP

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III. DOCUMENT LOG

Issue	Date	Comment	Author/Partner
1	18/02/2013	ToC	C Gater / EGI.eu
2	06/03/2013	First draft	C Gater / EGI.eu
3	12/03/2013	Second draft	C Gater / EGI.eu
4	22/3/2013	Third draft	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 updated EGI-InSPIRE quality assurance plan, D1.9 [R1] during the third 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 it uses. It is coupled to the annual reports produced by the individual activities, and also to the Periodic Report for the third period.

The metrics described in this document are used to measure work:

- As an Activity within the project
- Towards the project's overall objectives
- Towards EGI's strategic goals outlined in the EGI Strategy Plan

The project level metrics and targets presented in this document correspond to those highlighted in D1.9. Progress towards this original set of project level metrics is described, and areas where updates to the targets are recommended are outlined. The new targets for project level metrics will be described in D1.13 Quality Plan and Project Metrics [R8].

For Project Year 3, strategic level metrics are proposed that align with D2.30 The EGI Strategic Plan [R2]. The Strategic Plan covers the main activities in the areas of community and coordination, operations and virtual research environments. The strategic metrics are designed to highlight the European "value add" of EGI and are aligned with the EGI and EGI.eu's longer term mission and strategy in order to help the project steer itself, reflect objectively upon current performance with a view to deploying a range of easy-to-reach, growth and stretch targets. The strategy metrics targets will also be presented in D1.13 Quality Plan and Project Metrics. [R8]



TABLE OF CONTENTS

1	INTRODUCTION	7
2	QUALITY ASSURANCE ORGANISATION STATUS	8
2.1	QA Management in EGI-InSPIRE	8
2.1.1	QA wiki site and metrics web pages.....	8
2.1.2	ITIL.....	8
2.2	Project Management	9
2.2.1	Project overall assessment mechanisms.....	9
2.2.2	Document management procedure.....	10
2.2.3	Document review procedure.....	11
3	MAIN PROJECT MANAGEMENT TOOLS	14
3.1	Document management tools	14
3.2	Project Progress Tracking.....	14
3.3	Website and wiki	16
3.4	Meetings.....	16
4	METRICS PROGRAMME	18
4.1	Project Overall Metrics.....	Error! Bookmark not defined.
5	STRATEGIC METRICS	24
5.1	EGI Balanced Scorecard Table	25
6	CONCLUSION AND FUTURE PLANS	33
7	REFERENCES	34
	APPENDIX I EGI Scorecard Data Dictionary Template.....	35
	APPENDIX II EGI Scorecard Data Dictionaries	39



1 INTRODUCTION

This document reports on the implementation of the EGI-InSPIRE quality assurance plan, D1.9 [R1] during the third 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 being used 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 third period. Some changes to the project metrics are also discussed, as well as updates to the targets for the project level metrics.

The metrics described in this document are used to measure work:

- As an Activity within the project
- Towards the project's overall objectives
- Towards EGI's strategic goals outlined in the EGI Strategy Plan

The project level metrics and targets presented in this document correspond to those highlighted in D1.9. Progress towards this original set of project level metrics is described, and areas where updates to the targets are recommended are outlined. Strategic level metrics are included that align with D2.30 The EGI Strategic Plan [R2]. The Strategic Plan covers the main activities in the areas of community and coordination, operations and virtual research environments. These metrics are designed to highlight the European “value add” of EGI and are aligned with the EGI and EGI.eu's longer term mission and strategy in order to help the project steer itself, reflect objectively upon current performance and deploy a range of easy-to-reach, growth and stretch targets.

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 D1.9 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 project metrics are summarised each quarter at <http://www.egi.eu/about/egi-inspire/metrics/index.html> and further metrics can be obtained through the gstat tool¹ and the accounting portal². A project metrics portal was released by EGI-InSPIRE JRA1 in PY1, upgraded in PY2 and PY3 and is available at <http://metrics.egi.eu/>. All NGI and EGI.eu metrics and project task metrics are now reported in the metrics portal. Where possible metrics are automatically gathered from operational tools and activity managers and NGIs are requested to validate or modify them as needed. The remaining metrics are manually recorded in the portal.

The full project metrics and activity metrics described in D1.9 are also summarised in the quarterly reports. NGI operational metrics (SA1) are annually gathered and used for the NGI International Task annual assessment [R10]

Further operational tools are available at the operational tools wiki page <https://wiki.egi.eu/wiki/Tools>. Statistic of service levels accomplished by Resource Centres and NGIs are gathered monthly and are accessible on wiki (<https://wiki.egi.eu/wiki/Performance>).

2.1.2 ITIL

The ITIL® framework has been mentioned in a variety of EGI documents including D1.9 and referenced as a strategic area for improving service management across EGI. ITIL is the most widely accepted approach to IT service management and the de facto standard for operating computer centres in the industrial sector, providing a cohesive set of best practices, drawn from the public and private sectors internationally.

¹ <http://gstat.egi.eu>

² <http://accounting.egi.eu>

Over the last year, EGI has continued the work to increase the maturity of its service management processes in the areas of operations, policy and software delivery. With the kick-off of the FedSM project³ where EGI.eu is a client partner, dedicated consultancy was received. One of the main outcomes has been the creation of the EGI.eu service portfolio as a refactoring of the EGI-InSPIRE activities. This portfolio organises the services being provided from an organisational viewpoint and hence regardless of the project structure. The costs of the EGI Global Tasks have also been restructured to map across to the new service portfolio. The finalisation and publication of the portfolio is expected by the end of April with the completion of MS123 Global Task Review [R11]. The service portfolio will also be expanded to include the NGI technical services that are user facing so to build a wider service definition covering the EGI partnership.

Another relevant activity that is being carried out in collaboration with the FedSM project is the definition of the minimum requirements for service management in a federated infrastructure based on the ISO20000 standard⁴. A capability maturity model has been also defined together with an implementation plan to assess the current maturity level of EGI.eu and two pilot NGIs involved in the project. Once completed, EGI.eu will conduct a self-assessment following a specific set assessment framework over the next few months and actions will be taken to increase the maturity if needed.

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.

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) meetings⁵;
- Quarterly reports and periodic reports [R3,4,5];
- Project execution plan [R6];
- Deliverables and milestones reviews [R7];
- Metrics web⁶ and wiki pages⁷;
- Project Management Board meetings;
- External Advisory Committee reports;
- EC annual project reviews.

³ <http://www.fedsm.eu/>

⁴ http://en.wikipedia.org/wiki/ISO/IEC_20000

⁵ <https://www.egi.eu/indico/categoryDisplay.py?categId=13>

⁶ <http://www.egi.eu/projects/egi-inspire/metrics/>

⁷ <https://wiki.egi.eu/wiki/Tools>



Assessment:

The AMB includes the Activity Managers and key Task Leaders for the project and continues to meet on a weekly basis, with an annual face to face meeting. 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, and to discuss events. The quarterly reports have also been produced successfully, and the time taken to produce them has stabilised to around 5-6 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 for deeper level metrics. Project Management Board meetings were held quarterly. The second EC annual project review was held on 27th and 28th June 2012.

The metrics portal has been upgraded 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. The metrics portal is now available online at <http://metrics.egi.eu/>.

Changes proposed for Year Four:

The overall project assessment mechanisms have matured during PY3, and the roles of each body will remain similar for PY4, with the AMB driving the logistics of the project management, and the PMB dealing with project issues. The quality assurance activity will continue to gather NGI level metrics through the metrics portal and assess progress towards the strategic metrics discussed in Section 4.

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 since the start of the project, including deliverables, milestones, review documents, presentations, reports and committee minutes. Statistics for the DocDB are listed at <https://documents.egi.eu/public/Statistics>. There are currently over 1570 documents and more than 11,900 files in the database, with 1890 registered authors. Guidelines for naming of official documents such as deliverables and milestones are set out in D1.9. 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. The process for publishing a document with all the necessary metadata is outlined on the wiki⁸. The documents have been reviewed to ensure that they have the correct access rights by the correct groups.

Changes proposed for Year Four:

⁸ https://wiki.egi.eu/wiki/Metadata_management

The DocDB will continue as the official repository for the EGI-InSPIRE documents. The topics will be expanded to include metadata relating to other projects in which EGI.eu is participating.

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 site at https://wiki.egi.eu/wiki/Review_process_for_deliverables_and_milestones and are also described in D1.9 [R1].

The review process instigated in PY2 and used in PY3 is summarised below:

Time before submission	Person	Action	RT action
>2 months	Project Office	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
7 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
6 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
5 weeks	Shepherd	The draft is stable and is undergoing review within the activity and is nearly complete	Set state to Internal Review
4 weeks	Shepherd	The document is ready for external review.	Set state to External Review and assign to the PO
Immediately	Project Office	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
	Project Office	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

	Project Office	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

The roles are summarised 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 task leader 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. This is normally the activity manager or their deputy.

AMB Chair: This is the project director, or their deputy.

Assessment

The established review process has run successfully during PY3. The presence of the shepherd role has helped the AMB to track the progress of Deliverables and Milestones where the editor is not within the AMB, and the concurrent external and AMB reviews have also helped to coordinate the input of comments in a more focused way. Drafts of the documents have continued to ready earlier for review, and have been reaching the PMB stage of the process as early, which has meant that the submission time for documents has maintained the improvements seen in PY2. The possible exception to this trend in decreasing review times has been seen at the end of the project year, when several annual reports have been prepared in parallel when the EGI Community Forum was also being held.



Proposed changes for Year Four:

The current version of the review process will be continued in PY4 with the aim of maintaining a realistic time for the review process, and ensuring that the first drafts are available from editors as close to the start of the month that they are due as possible. It is particularly important that the final reports at the end of the project are delivered on time.

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
- Spread sheet: MS Excel 97-2003
- Slides presentation: MS PowerPoint 97-2003
- Document Management tools: DocDB

The following formats are used for exchanging documents:

- doc, xls, ppt
- PDF
- HTML

All official documents must be available in PDF format. Documents produced by OpenSource versions of office software, and/or in OpenSource formats may also be submitted for review, but final documents should be available as pdfs.

Further templates are available from the website⁹, a presentation template in MS PowerPoint and LaTeX, and poster templates in MS PowerPoint and Libre Office.

Assessment:

Since version control and formatting can become difficult if different file formats are used between versions, the expectation during PY4 is to continue using both of these file formats for document creation and circulation.

Proposed changes for Year Four:

Further OpenSource alternatives to MS and OpenOffice.org will be considered for sharing documents if they are requested by the community.

3.2 Project Progress Tracking

For the whole project the project effort is tracked using:

- Project Progress Tracking: PPT (CERN tool, customised for EGI-InSPIRE):
<https://pptevm.cern.ch/egi/ui/main.do>

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 timesheets submitted are used as the source of data for the quarterly payments to partners, which are calculated based on estimated costs related to the effort recorded during the quarter and the average staff costs. Final adjustments to payments are made through the Form C's provided by the project partners at the end of each project

⁹ <http://www.egi.eu/about/egi-inspire/templates/>

year, based on real staff costs, and other costs. The Form C's are audited by the partners' institutional accountants, and Certificates on the Financial Statements are provided when necessary. All Form Cs are reviewed by the EC's financial and legal services and any queries resolved through the end of project year NEF session. EGI Global Tasks costs are gathered through a separate spreadsheet, which is completed by partners based on the average or actual costs of providing the global tasks as a whole.

Monitoring of project effort within PPT (and by association the quarterly payments) is carried out by the Work Package leaders, to assess expended effort against planned effort. This analysis at both a work package and a project level is reported through the quarterly and periodic reports, along with any associated deviations from the work plan or project issues.

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 UPT		5	0					
	RES		2 IPP-BAS		8	0					
	RES		3 LUCY		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

CERN has provided the PPT tool since the beginning of the project, giving administrators rights to the Project Office team which has enabled them to monitor timesheets declared on the project and analyse data regularly.

CERN will continue to ensure the implementation and maintenance of the tool for the full duration of the EGI-InSPIRE project. Performance and functionality is reviewed once a year during a face to face meeting between the EGI.eu Project Office and the CERN team. The Service and support is on a “best-effort” and “as-is” basis.

Assessment:

A second version of PPT (PPT/EU2) was issued by CERN during PY2, and this was tested for EGI-InSPIRE in March 2012. PPT/EU2 represents a complete rewrite of the previous application, due to administrative and technical reasons at CERN. This will provide more flexibility for users and the project office, and will allow the developers to add new features to it as required. The user will be able to fill in time sheets as previously, and each user will have only one time sheet for all the European Projects they are working on to simplify the data entry process. The new version includes a reminder service that will send an email to every user with time sheets that are not submitted and to every supervisor that has any time sheets not validated. However, bugs are being fixed and the new version has not yet been implemented for EGI-InSPIRE but has been used by other EC projects during the last year. The primary benefit of the new version is improved ease of use through a new user interface therefore the delay has not any impact on the operation of the project. The system will be tested again in March 2013, with the current target for migration being 1 May 2013. The upgraded version of PPT



should therefore be available for the final year of the project and for preparation of the final reporting period.

Proposed changes for Year Four:

The second version of PPT will be used by all project members to track their progress in the project from the start of PY4 if the migration is carried out as planned. CERN will continue to provide regular maintenance of the tool and members database.

3.3 Website and Wiki

- PUBLIC: Dedicated to the general public: <http://www.egi.eu>
- INTERNAL: Wikis dedicated to supporting the technical Activities: <http://wiki.egi.eu>

Assessment:

The EGI public website has continued to be developed, with new areas on EGI Champions, services and federated clouds.

The project wiki site¹⁰ has been regularly updated during the course of the project and has been particularly useful in supporting and reporting the work of the Virtual Teams¹¹.

The EGI website and wiki are hosted and maintained by EGI-InSPIRE partner CESNET. This includes security monitoring and patching, day-to-day maintenance, and more substantial updates to the CMS as were required for the relaunch of the website in PY2. The level of service provided by CESNET for the website, wiki, Indico(see below), document server and other technical services has shown excellent availability and reliability. The very occasional failures have been promptly resolved. The technical support and consultancy has been effective and responsive. There has been one service outage for the EGI.eu DNS (hosted by NIKHEF) during PY3 which was quickly resolved.

Plans for Year Four:

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 D2.22 Marketing and Communications Plan in PM36 and MS238 Communications Handbook in PM37.

3.4 Meetings

Meetings and related agendas are managed with Indico: <https://www.egi.eu/indico/>. 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 Community Forum and the Technical Forum.

Assessment:

Indico has been used throughout the third year for hosting meetings of the various EGI, EGI.eu and community groups, including the two large annual meetings. An update to Indico took place in PY3,

¹⁰ https://wiki.egi.eu/wiki/Main_Page

¹¹ https://wiki.egi.eu/wiki/Virtual_Team_Projects



which allowed enhanced sharing of EGI events on online calendars and conference apps such as Conf4Me. Indico continues to offer 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. The performance of the Indico tool during the third year has been satisfactory, with no major outages experienced.

Plans for Year Four:

Indico will continue to be used to provide meeting planning for EGI.eu and the wider community in the fourth year.

4 EGI-INSPIRE PROJECT METRICS

In Years 1 and 2, EGI-InSPIRE defined 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 was previously monitored through the project's metrics. Additional metrics are defined to monitor the work of the different activities (work packages).

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

- As an Activity within the project
- Towards the project's overall objectives (PO1-6)
- Towards EGI's strategic goals outlined in the EGI Strategy Plan

The original target metrics for the project level metrics are outlined below. The PY3 Targets for each metric have three values. The first figure is a foundation level performance and the two bracketed figures are ideal and stretch targets respectively for that metric:

Table 1: Target Project Metrics

Project Objectives	Objective Summary	Metrics	Target PY1	Achieved PY1 (PQ4)	Target PY2	Achieved PY2 (PQ8)	Target PY3
PO1	Expansion of a nationally based production infrastructure	Number of resource centres in EGI-InSPIRE and integrated partners (M.SA1.Size.1)	300	344	330	347	350 (355) (355)
		Number of job slots available in EGI-InSPIRE and integrated partners (M.SA1.Size.2)	200,000	239,895	250,000	290,300	300,000 (325,000) (333,000)
		Reliability of resource centre functional services (M.SA1.Operation.5)	90%	94.6%	91%	94.8%	95% (96%) (97%)
		Reliability of NGI functional services (MSA1.Operations.4)	N/A		N.A		97% (98.5%) (99%)
		Reliability of critical operations tools (MSA1.Operations.6a)	N/A		N/A		97% (98.5%) (99%)
PO2	Support of European researchers and international collaborators through VRCs	Number of papers from EGI Users (M.NA2.5)	50	161	60	82	70 (80) (90)
		Number of jobs done a day (M.SA1.Usage.1)	0.5M	0.96M	0.53M	1,265M	1.2M (1.4M) (1.5M)
PO3	Sustainable support for Heavy User Communities	Number of sites with MPI (M.SA1.Integration.2)	50	96	100	108	120 (130) (140)
		Number of users from HUC VOs (M.SA1.VO.6)	5000	7,103	5500	10,856	12,000 (15,000) (17,000)
PO4	Addition of	Peak number of	0	0	0	0	1,000

	new User Communities	cores from desktop grids (M.SA1.Integration.3)					(5,000) (7,500)
		Number of users from non-HUC VOs (M.SA1.vo.5)	500	4075	1000	8,518	10,000 (12,000) (13,000)
		Public events organised (attendee days) (M.NA2.6)	1500	2800	2000	1400	2000 (3000) (3250)
PO5	Transparent integration of other infrastructures	MoUs with resource providers (M.NA2.10)	3	1	5	3	4 (5) (5)
PO6	Integration of new technologies and resources	Number of HPC resources (M.SA1.Integration.1)	1	49	3	39	50 (50) (50)
		Number of resource centres part of the EGI Federated Cloud (M.SA2.19)	0	1	1	7	10 (15) (20)

The project level metrics reported in the quarterly reports during PY3, while the EGI Strategic Metrics were being developed are listed below:

Table 2: Achieved Year Three Project Metrics (PQ9-PQ11)

Project Objectives	Objective Summary	Metrics	PQ9	PQ10	PQ11	Target PY3
PO1	Expansion of a nationally based production infrastructure	Number of resource centres in EGI-InSPIRE and integrated partners (M.SA1.Size.1)	347	351	315 ¹²	350 (355) (355)
		Number of job slots available in EGI-InSPIRE and integrated partners (M.SA1.Size.2)	428688	429000	410028	300,000 (325,000) (333,000)
		Reliability of resource centre functional services (M.SA1.Operation. 5)	94.53%	94.8%	94.80%	95% (96%) (97%)
		Reliability of NGI functional services (MSA1.Operations. 4)	98.65	95.92	99.0	97% (98.5%) (99%)
		Reliability of critical operations tools (MSA1.Operations. 6a)	NA	NA	98.6 ¹³	97% (98.5%) (99%)
PO2	Support of European researchers and	Number of papers from EGI Users (M.NA2.5)	27	0		70 (80) (90)
		Number of jobs	1.41	1.78	1.67 ¹⁴	1.2M

¹² This value does not include 30 Resource Centres that are temporarily suspended due to on-going maintenance work to update the locally deployed middleware. During PQ10 and 11 a major upgrade campaign was undertaken to retire unsupported gLite products. In addition to this, two Operations Centres terminated their operations in PQ11 because of sustainability problems: Ireland and Iniciativa de Grid de America Latina – Caribe (IGALC). All Resource Centres operated in Ireland were decommissioned while a fraction of the IGALC ones are now operated by the second Operations Centre active in the region (ROC Latin America). The remaining fraction of IGAL Resource Centres was decommissioned.

¹³ Monitoring of the EGI.eu core operations tools was rolled to production in October 2012. Reports for the previous quarters are not available.

	international collaborators through VRCs	done a day (M.SA1.Usage.1)				(1.4M) (1.5M)
PO3	Sustainable support for Heavy User Communities	Number of sites with MPI (M.SA1.Integration. 2)	106	87	80 ¹⁵	120 (130) (140)
		Number of users from HUC VOs (M.SA1.VO.7)	11,073	11,208	11,431	12,000 (15,000) (17,000)
PO4	Addition of new User Communities	Peak number of cores from desktop grids (M.SA1.Integration. 3)	NA	4284	5220	1,000 (5,000) (7,500)
		Number of users from non-HUC VOs (M.SA1.vo.6)	7,467	10,325	10,654	10,000 (12,000) (13,000)
		Public events organised (attendee days) (M.NA2.6) ¹⁶	418	5035	726	2000 (3000) (3250)
PO5	Transparent integration of other infrastructures	MoUs with resource providers (M.NA2.10)	3	2	2	4 (5) (5)
PO6	Integration of new technologies and resources	Number of HPC resources (M.SA1.Integration. 1)	40	37	42	50 (50) (50)
		Federated Cloud (M.SA2.16)	14	9	16	(20)

¹⁴ 1.67 Mjob/day only includes grid jobs. This value increases to 2.25 Mjob/day when also including job submitted locally to clusters.

¹⁵ The number of Resource Centres supporting parallel computation has been steadily increasing in PY2, but this trend changed in PY3 as the number remained constant during the latest reporting period. In PY3 a new framework for the tracking of Resource Centres supporting MPI was devised and approved, and it will be rolled to production at the beginning of PY4. The new framework will allow for a more accurate estimation of this metric.

¹⁶ This metrics is expressed in the number of participants in a one-day event. For example, 2000 translates to 200 people attending a ten-day event, or 500 people attending a 4-day event



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. During PY3, the Quality team investigated, with SA1 and JRA1, mechanisms for gathering as many of these metrics through an updated metrics portal as possible, rather than gathering them manually. This has now been implemented for the SA1 work package in PY3 and is used by the NGIs and EGI.eu to report metrics.

Plans for Year Four:

The project metrics will continue to be collected during the final year of the EGI-InSPIRE project and used to track the progress of the project's objectives. At the end of the project an assessment of the effectiveness of these metrics will be made to inform any future activities.

5 EGI STRATEGIC METRICS

The following strategic-level metrics are aligned with the EGI Strategic Plan¹⁷ [R2]. The key areas of the strategy and the project level objectives have been aligned to the metrics using an “EGI Balance Scorecard” which sets out a strategic management and measurement framework that can be used to track the execution of the strategy. The framework is based on a fourth-generation balanced scorecard¹⁸ adapted for non-profit organisations that provides an integrated framework for describing and translating strategy through the use of linked performance measures from a number of key perspectives. In the most common form, these perspectives are: Customer, Internal Processes, Employee Learning and Growth, and Financial. The balanced scorecard acts as a measurement system, strategic management system and communication tool.

In its most recent evolution, this is coupled with the Strategy Map, a multi-layered diagram grouping the strategic objectives by perspectives and linking them with arrows to identify a cause-effect relationship. Applying this technique to EGI, the Strategy Map includes also the values that need to be upheld by the people involved in the organisation, the strategic themes (i.e. grouping of objectives that run across the perspectives) as defined in the EGI2020 strategy and with the mission/vision at the top. The Strategy Map is a useful tool to design and communicate a strategy.

Given the not-for-profit nature of EGI, the balance scorecard needs to be adapted. The selected perspectives include are:

1. **Learning & Growth:** “how EGI must learn, grow and develop as an organisation”
2. **Processes:** “to satisfy our beneficiaries and funders, what must we focus on and excel at?”
3. **Direct beneficiaries:** “what do our direct beneficiaries want?”
4. **Funders:** “what do our funders want in return for funds?”
5. **Income:** “if we succeed, what will our income look like?”

Figure 1 below presents the EGI Strategy Map with the objectives that have been derived from the EGI Strategic Plan and are cross-referenced to the EGI-InSPIRE project objectives (see number in the circle).

It should be noted that the EGI Strategic Plan is aligned with the Europe 2020 (EU2020)¹⁹ vision. For EGI, the two important key flagship initiatives are the Digital Agenda for Europe (DAE) and the Innovation Union (IU). EGI plays an important role in achieving a number of the key actions defined in these initiatives. The contribution to the Europe 2020 will be captured at an aggregate level, while a more detailed measurement framework will be used to track progress in the other areas and to generate the aggregated metrics.

¹⁷ <https://documents.egi.eu/document/1098>

¹⁸ <http://www.balancedscorecard.org/BSCResources/AbouttheBalancedScorecard/tabid/55/Default.aspx>

¹⁹ http://ec.europa.eu/europe2020/index_en.htm

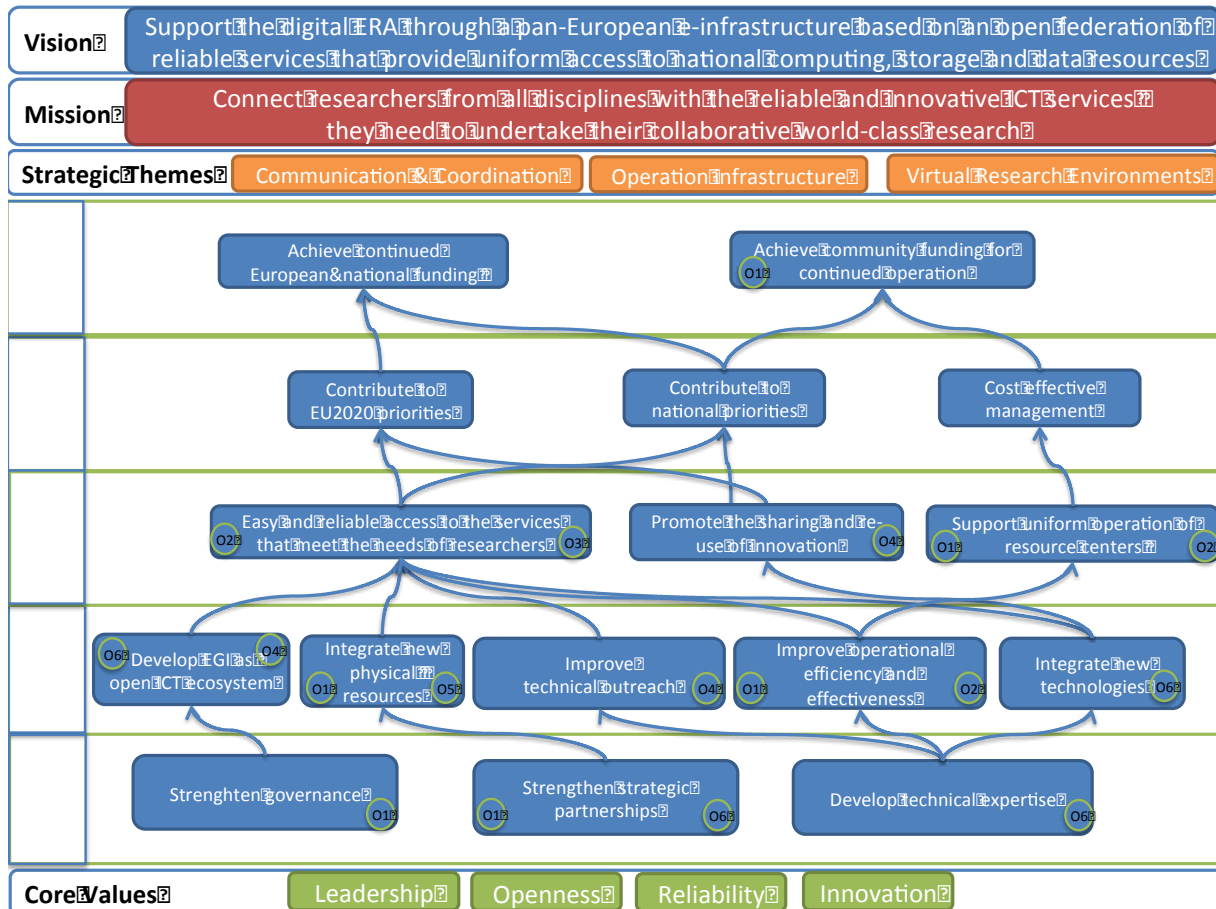


Figure 1 - EGI Strategy Map

The EGI Balanced Scorecards for PY4 and their associated targets are described in the following table. The first figure is a foundation level performance and the two bracketed figures are ideal and stretch targets respectively. Metrics with targets marked ‘N/A’ are provided as a means of tracking performance and do not have any targets associated with them. More details on each of the metrics presented in Table 3 can be found in Appendix II.

Plans for Year Four:

The EGI Strategic Metrics have a lifetime that goes beyond of the EGI-InSPIRE project. These metrics will be reviewed towards the end of PY4 based on the continued development and implementation of EGI’s strategy and informed by the experiences (and cost) of metrics collection over the next year.



Table 3 EGI Balanced Scorecard

Objectives	Objective Description	Performance measures	Strategic Themes	PY4 Targets	Value to-date
Perspective: Learning & Growth					
1. Develop technical expertise	Develop the human capital within the EGI ecosystem. This should have a positive impact on the technical effectiveness and capacity of the EGI ecosystem and the support that can be offered locally to all stakeholders.	1.1 Number of NGI supported training/tutorial attendee days undertaken at NGI events a year.	C&C	3000	3476
		1.2 Number of NGI supported training/tutorial attendee days undertaken through EGI Forums and dedicated events a year.		(4000) (5000) 200	220
2. Strengthen strategic partnerships	Develop strategic relationships with organisations/projects that can contribute or expand the EGI ecosystem (e.g., broaden technology offer, consulting on IT service management, engaging with developing regions, strategic partnerships)	2.1 Number of external partners that actively contribute to EGI through defined agreements	C&C	(300) (400) 30	36



3.Strengthen governance	Align the EGI governance to sustain the development of an open ecosystem by increasing the diversity of its stakeholders with associate participants who are not resource providers.	3.1 Number of associate participants in the EGI Council	C&C	5 (6) (7)	6
Perspective: Processes					
4. Develop EGI as an open ICT ecosystem	With an open governance model (including well-defined roles, processes and interfaces) the confidence of external actors to build on top of the EGI platforms should improve stimulating healthy competition and expanding the ecosystem.	4.1 Number of Science Gateway offerings in the ecosystem that have been identified and documented as being able to be provided autonomously.	C&C	45 (50) (55)	39 (QR11)
5. Integrate new physical resources	Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)	5.1 Total number of job slots (LCPUs) available in EGI	O.I.	300,000 (325,000) (333,000)	327,394
		5.2 Installed disk capacity (PB) in EGI		150 (160) (170)	155.2
		5.3 Installed tape capacity (PB) in EGI		150 (160) (170)	150.9



6. Integrate new technologies	Integrate new functional services into EGI's Operational Infrastructure in order to increase the diversity and therefore the attractiveness of EGI to more research communities.	6.1 Number of different operational service types in EGI as recorded in GOCDB. 6.2 Number of resource centres offering federated cloud services accessible to authorised users. (See M.SA2.16)	O.I. VREs	60 (63) (66)	75 9 (PQ10)
7. Improve technical outreach	Strengthen local technical outreach to existing and new research communities to increase awareness of EGI.	7.1 Number of recorded geographical contacts across the NGIs that can represent EGI locally to external requests	C&C	70 (75) (80)	67 (58 NILs; 9 Champions on 4/4/13)
8. Improve operational efficiency and effectiveness	Improve the reliability and the delivery of the operational infrastructure through improvements in the operational tools and associated processes.	8.1 Number of EGI Global Services meeting published OLAs 8.2 Number of resource centres meeting the Resource Centre OLA.	O.I.	7 (10) (12) 300 (310) (320)	
Perspective: Beneficiaries					



<p>9. Easy and reliable access to the services that meet the needs of researchers</p>	<p>Increase number of researchers and the diversity of research communities who rely on EGI for performing their data driven research</p>	<p>9.1 Number of researchers using EGI's resources (either directly or through affiliated services – i.e. portals or integrated research infrastructures)</p> <p>9.2 Number of scientific papers produced using NGI resources affiliated into EGI across different disciplines.</p>	<p>VREs</p>	<p>22,000 (25,000) (27,000)</p> <p>500 (700) (800)</p>	<p>21513 + 1720</p>
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10. Promote the sharing and re-use of innovation	Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	10.1 Number of relevant software items registered in the EGI AppDB	VREs, C&C	500 (550) (600)	453 (PQ11)
		10.2 Number of relevant training materials and resources in the EGI Training Marketplace		40 (50) (60)	34 (PQ11)
		10.3 Number of relevant appliances (i.e. virtual machines) available in the EGI Marketplace		5 (10) (20)	11
		10.4a Number of updates published per Community Platform		3 (4) (5)	
		10.4b Number of downloads per Community Platform		3 (4) (5)	
		10.5 Number of agreements established with external research communities to use EGI's operational tools to monitor their deployed services in their infrastructures		0 (1) (2)	
11. Support the uniform operation of resource centres	Resource centres providing uniform operation and consistent access to services is a fundamental aspect of a transnational infrastructure.	11.1 Number of resource centres that run services for international VOs.	O.I.	200 (250) (275)	



Perspective: Funders					
12. Contribute to EU2020 priorities	EGI shows a clear impact on enabling the Digital ERA and other key EU strategic objectives for 2020	12.1 Established measurement framework that will track the EGI contribution to EU2020 key flagship initiatives (IU and DAE)	C&C	N/A	
13. Contribute to national priorities	NGIs, by collaborating with EGI, shows a clear impact on contributing to their national priorities	13.1 Number of NGIs able to demonstrate strong engagement and integration with the 'owner' or funder of their national activities. 13.2 Number of NGIs that are recognised in their national e-Infrastructure strategies or plans.	C&C	10 (13) (15) 5 (8) (10)	Coming from EGI Compendium 2012
14. Cost effective management	Demonstrate the cost effective management of EGI and utilisation of its resources.	14.1 Cost (in Euro) of providing the operational tools and coordination needed to ensure the operation of EGI	O.I.	N/A	€2.77M
		14.2 Percentage utilisation through EGI provisioned services by EGI VOs of the job slots (LCPU)s capacity made available for their use		N/A	70.44%
Perspective: Income					
15. Achieve continued European & national funding	The EGI ecosystem is able to attract funding for continued operation, investment in physical resources and innovation in the virtual research environment that are deployed within it.	15.1 Total national funding received for the operation and replacement of the physical resource infrastructure. 15.2 Total national funding for the staff needed to operate and provide technical outreach. 15.3 Total national and European funding that is supporting technology innovation projects	C & C VREs	N/A N/A N/A	Coming from EGI Compendium 2012



16. Achieve community funding for continued operation	The cost of providing the EGI Global Services needed to ensure the integrated operation and coordination of the production infrastructure is matched by the funds available from the NGIs.	16.1 The percentage of funds coming from inside the community that is needed to deliver the coordinated operation of the EGI Global services	O.I.	N/A	
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6 CONCLUSION AND FUTURE PLANS

The project has largely followed the quality plan set out in D1.9 Quality Plan and Metrics successfully, and the project tools used to monitor and analyse progress have been effective. The updated document review process put in place at the start of the year has helped to reduce the time taken for Deliverables and Milestones to pass through the review process, stabilising at about 5-6 weeks. Two large scale meetings, the EGI Technical and EGI Community Forums have been supported using the project tools. The project effort has also been effectively tracked using PPT throughout the year. Updates to PPT are planned for PY4, and the impact of this update on the delivery of the project will be monitored.

This document summarises the progress towards the targets for the project level metrics planned for Year 3. Broadly the targets have been met or exceeded in most cases compared to the plans set out in D1.9, and these targets and the metrics themselves will be revised for Year 4 in response to the reviewers' comments. The document also discusses the future strategy for tracking the progress of the project towards its strategic objectives. These plans will be outlined in more detail in D1.13 Quality Plan and Metrics for PY4, released in April 2013.

7 REFERENCES

R1	D1.9 Quality Plan and Project Metrics https://documents.egi.eu/document/1071
R2	D2.30 EGI Strategic Plan https://documents.egi.eu/document/960
R3	MS119 Quarterly Report 9: May – July 2012 https://documents.egi.eu/document/1338
R4	MS121 Quarterly Report 10: August – October 2012 https://documents.egi.eu/document/1480
R5	MS122 Quarterly Report 11: November 2012 – January 2013 https://documents.egi.eu/document/1620
R6	MS102 EGI-InSPIRE Execution Plan https://documents.egi.eu/document/358
R7	Deliverable and milestone review documents https://documents.egi.eu/document/54
R7	D2.14 Annual Report on External Relations https://documents.egi.eu/document/1069
R8	D1.13 Quality Plan and Project Metrics https://documents.egi.eu/document/
R9	D4.3 EGI Operations Architecture https://documents.egi.eu/document/763
R10	MS124 NGI International Task Review https://documents.egi.eu/document/1568
R11	MS123 Global Task Review https://documents.egi.eu/document/1566

APPENDIX I: EGI Scorecard Data Dictionary Template

In order to provide a more precise definition of each measure, a descriptive table could be developed supporting the creation of a measure dictionary. Table 5 presents a Scorecard data dictionary template providing full information on the measure and how this should be monitored and interpreted. Following to that, guidelines on how to fill each item are provided following the book “Balanced Scorecard Step-by-Step for Government and Non-profit Agencies” by Paul R. Niven.²⁰

Table 5 EGI Scorecard Data Dictionary Template

Perspective: internal	e.g.	Metrics Number:	Measure Name:	Owner:
Strategic theme:			Objective: e.g. Develop technical expertise Description:	
Measure Description:				
Lag/Lead:		Frequency: e.g. yearly, quarterly	Unit type: e.g. numbers, percentages	Polarity: e.g. high values are positive
Formula: describes specific element of calculation				
Data Source:			Data Collector:	
Data Quality: High/Low/Medium			Collection Quality: High/Low/Medium	
Baseline:			Stretch Target:	Ideal Target:
Target rationale: How did you define Stretch and Ideal Target			Initiatives: Current and anticipated initiatives to reach defined target 1. 2.	

- **Perspective**

Displays the perspective under which the measure falls. For EGI the Perspectives are: Learning & Growth, Internal, Direct Beneficiaries, Funders and Income.

- **Measure Number**

All performance metrics should be provided a number. The number is important should you later choose an automated reporting system. In EGI, it is a notation based on two numbers “X.Y” where X is the number of the objective, while Y is the relative number of the related measure.

- **Measure Name**

²⁰ <http://www.amazon.com/Balanced-Scorecard-Step-Step-Government/dp/0470180021>



The measure name should be brief, but descriptive. For EGI it is the name of performance measure.

- **Owner**

The Balanced Scorecard also should create a climate of accountability for results. Central to the idea of accountability is the establishment of owners for each and every measure. Simply put, the owner is the individual responsible for results. Should the indicator's performance begin to decline, it is the owner and specific individual you look to for answers and a plan to bring results back in line with expectations. If the metrics are assigned to functions and titles people will tend to hide behind it, but an employee who sees his or her name associated with the performance of a key organizational measure will tend to promote more action and accountability than will a job function.

- **Strategic theme**

Displays the specific strategic theme within the EGI Strategy that the measure will positively influence. There are three strategic themes in the EGI Strategy: Operational Infrastructure, Virtual Research Environments and Communication & Coordination.

- **Objective and Objective Description**

The strategic objective to which the measure refers and its description

- **Measure Description**

Concise and accurate description that captures the essence of the measure so that anyone reading it will be able to quickly grasp why the measure is critical to EGI.

- **Lag/Lead**

Outline whether the measure is a core outcome indicator or a performance driver. Lag: if it measures the focus on results at the end of a time period. Normally characterising historical performance. It usually lacks predictive power (e.g. number of resource centres meeting OLA) Lead: if it measures the "drive" or lead to the performance of lag measures. It normally measures intermediate processes and activities. May prove difficult to identify and capture, often there are new measures with no history at the organization (e.g., number of active champions).

- **Frequency**

How often do you plan to report performance on this measure? Do you want to report performance on a daily, weekly, monthly, quarterly, semi-annual, or annual basis?

- **Unit Type**

This characteristic identifies how the measure will be expressed. Commonly used unit types include numbers, dollars, and percentages.

- **Polarity**

When assessing the performance of a measure, you need to know whether high values reflect good or bad performance. In most cases, this is very straightforward. Lower costs and increased employee satisfaction are good, while a high value for complaints reflects



performance that requires improvement.

- **Formula**

In the formula box, provide the specific elements of the calculation for the performance measure.

- **Data Source**

Every measure must be derived from somewhere—an existing management report, EGI AppDB, DocDB, Training Marketplace, Compendium etc. In this section you should rigorously attempt to supply as detailed information as possible. If the information is sourced from a current report, what is the report titled, and on which line number does the specific information reside? Also, when can you access the data? The more information you provide here, the easier it will be to begin actually producing Balanced Scorecard reports with real data. Conversely, if you provide vague data sources, or no information at all, you will find it exceedingly difficult to report on the measure later.

- **Data Quality**

Data quality is related to reliability of provided data.

- **Collection Quality**

Use this area of the template to comment on the condition of the data you expect to use when reporting Scorecard results. If the data is produced automatically from a source system, and can be easily accessed, it can be considered “high.” If, however, you rely on an analyst’s Word document that is in turn based on some other colleague’s Access database numbers that emanate from an old legacy system, then you may consider the quality “low.” This is related to collection quality. Data quality is related to reliability of provided data.

- **Data Collector**

You identified the owner of the measure as that individual who is accountable for results. Often, this is not the person you would expect to provide the actual performance data.

- **Baseline**

Users of the Balanced Scorecard will be very interested in the current level of performance for all metrics. For those owning the challenge of developing targets, the baseline is critical in their work.

- **Stretch Target**

We differentiate stretch and ideal target. Stretch target is the target that is the threshold for achieving expectations in performance for certain measure. Some organizations may find it difficult to establish monthly or quarterly targets and instead opt for an annual target; but track performance toward that end on a monthly or quarterly basis.

- **Ideal Target**

Ideal target is the “best case scenario” target.

- **Target Rationale**



This will apply only to those metrics for which you currently have a performance target. The rationale provides users with background on how you arrived at the particular target(s). Did it come from an executive planning retreat? Is it an incremental improvement based on historical results? Was it based on a mandate? For people to galvanise around the achievement of a target, they need to know how it was developed, and that while it may represent a stretch, it isn't merely wishful thinking on the part of an overzealous senior management team.

- **Initiatives**

At any given time, EGI.eu may be simultaneously engaged in dozens of initiatives or the mini projects. Often, only those closest to the project know anything about it, hence any possible synergies between initiatives are never realized. The Scorecard provides an opportunity to evaluate these initiatives in the context of their strategic significance. If a Virtual Team or mini project, that EGI.eu is participating in, cannot be linked to the successful accomplishment of your strategy, the question has to be asked why is EGI participating in it? Use this section of the template to map current or anticipated initiatives to specific performance metrics.

APPENDIX II: EGI Scorecard Data Dictionaries

This Appendix describes in detail an EGI Scorecard Data Dictionary for each measure defined in Table 1. Guidelines for filling in the EGI Scorecard data dictionary are available in Annex A.

Perspective: Learning & Growth

Perspective: Learning & Growth	Measure Number: 1.1	Measure Name: Number of NGI supported training/tutorial attendee days undertaken at NGI events a year	Owner: Gergely Sipos
Strategic theme: Communication & Coordination		Objective: Develop technical expertise Description: Develop the human capital within the EGI ecosystem. This should have a positive impact on the technical effectiveness and capacity of the EGI ecosystem and the support that can be offered locally to all stakeholders.	
Measure Description: Number of people attending the training events provided by NGIs so they gain technical expertise			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Person training day	Polarity: High values are positive
Formula: Summing up numbers from different NGIs			
Data Source: EGI Training marketplace		Data Collector: Claire Devereux	
Data Quality: Low		Collection Quality: High	
Baseline: 1000		Stretch Target: 1500	Ideal Target: 2000
Target rationale: Based on the number of events and average attendee per event in previous years.		Initiatives: 1. Further Development and sustainability of Training Marketplace 2. EGI.eu develops reusable training materials and shares these in the Training Marketplace	

Perspective: Learning & Growth	Measure Number: 1.2	Measure Name: Number of NGIs supported training/tutorial attendee days undertaken through EGI Forums and dedicated events a year	Owner: Gergely Sipos
Strategic theme: Communication & Coordination		Objective: Develop technical expertise Description: Develop the human capital within the EGI ecosystem. This should have a positive impact on the technical effectiveness and capacity of the EGI ecosystem and the support that can be offered locally to all stakeholders.	
Measure Description: Number of people attending the training events provided by EGI.eu so their gain technical expertise.			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: An event that lasted for 2 days that had 25 attendees would contribute 50 attendee training days.			
Data Source: EGI-InSPIRE deliverable/milestone		Data Collector: Claire Devereux	
Data Quality: Medium/Low		Collection Quality: Low	
Baseline: 100		Stretch Target: 200	Ideal Target: 300
Target rationale: Based on the number of events and average attendee per event in previous years.		Initiatives: 1. Support for training activities at EGI Forums	

Perspective: Learning & Growth	Measure Number: 2.1	Measure Name: Number of external partners that actively contribute to EGI through defined agreements	Owner: Sergio Andreozzi
Strategic theme: Communication & Coordination		Objective: Strengthen strategic partnerships Description: Develop strategic relationships with organisations/projects that can contribute or expand the EGI ecosystem (e.g., broaden technology offer, consulting on IT service management, engaging with developing regions, strategic partnerships)	
Measure Description: Provides number of external partners that collaborate with EGI.eu through MoUs and EU funded projects with EGI.eu involvement in order to strengthen EGI strategic partnerships			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Numbers	Polarity: High values are good
Formula: Summing up number of partners on collaboration page and non-lead EC projects. Each non-lead EC project is count as one.			
Data Source: Collaboration page http://www.egi.eu/community/collaborations/ and non-lead EC project page http://www.egi.eu/about/EGI.eu/EGI.eu_projects/index.html		Data Collector: Damir Marinovic	
Data Quality: Medium		Collection Quality: Medium	
Baseline: 30		Stretch Target: 38	Ideal Target: 42
Target rationale: Based on historical data		Initiatives: 1. MoU framework 2. Attending external events	

Perspective: Learning & Growth	Measure Number: 3.1	Measure Name: Number of associate participants in the EGI Council	Owner: Steven Newhouse
Strategic theme: Communication & Coordination		Objective: Strengthen governance Description: Align the EGI governance to sustain the development of an open ecosystem by increasing the diversity of its stakeholders with associate participants who are not resource providers.	
Measure Description: The associate participants are non-eligible NGIs who or other organisations that contribute to the objective of EGI. Increasing the number of associate participants contributes to the development of an open ecosystem of diverse stakeholders that have a voice in EGI governance.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Summing up the number of associate participants that are members of the EGI Council			
Data Source: Statement for acknowledging EGI.eu Statutes or Ministerial Letter		Data Collector: Rob van der Meer	
Data Quality: High		Collection Quality: Low	
Baseline: 5		Stretch Target: 6	Ideal Target: 7
Target rationale: Based on the historical data		Initiatives: 1. Signing MoUs with organisations can lead to further consolidation into associate participants	

Perspective: Processes

Perspective: Processes	Measure Number: 4.1	Measure Name: Number of Science Gateway offerings in the ecosystem that have been identified and documented as being able to be provided autonomously.	Owner: Gergely Sipos
Strategic theme: Communication & Coordination		Objective: Develop EGI as an open ICT ecosystem Description: With an open governance model (including well-defined roles, processes and interfaces) the confidence of external actors to build on top of the EGI platforms should improve stimulating healthy competition and expanding the ecosystem..	
Description: With well-defined roles, processes and interfaces, other actors should be able to deploy their own services independently (e.g. Science Gateways, community services in the EGI Federated Cloud). This measure aims to capture the number of service offerings that emerge autonomously to demonstrate openness of the ecosystem.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Calculate number of Science Gateway entries in the EGI AppDB			
Data Source: Applications Database		Data Collector: Nuno Ferreira	
Data Quality: High		Collection Quality: Medium	
Baseline: 30		Stretch Target: 40	Ideal Target: 45
Target rationale: Based on historical data		Initiatives: 1. VT Science Gateways Primer 2. Dedicated Sessions at EGI CFs and TFs 3. Collaborations with projects specialised in science gateways (e.g. SCIBUS)	

Perspective: Processes	Measure Number: 5.1	Measure Name: Total number of job slots (LCPU) available in EGI	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Integrate new physical resources Description: Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)	
Measure Description: Provides information about computation capacity of the infrastructure			
Lag/Lead: Lag	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum of Integrated NGIs logical CPUs (excluding USA, which is a peer infrastructure)			
Data Source: Operations Metrics Portal		Data Collector: Malgorzata Krakowian	
Data Quality: Medium		Collection Quality: Medium	
Baseline: 300,000		Stretch Target: 325,000	Ideal Target: 333,000
Target rationale: There is no agreement in place with NGIs about the cores they must provide. The number of cores increased almost constantly during past year, but it was driven by the pledges requested by communities funding those computing resources. The target was based on the known requirements of user communities, and the historical trend of this measure.		Initiatives: 1. Work with the NGIs to integrate new resource providers.	

Perspective: Processes	Measure Number: 5.2	Measure Name: Installed disk capacity (PB) in EGI	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Integrate new physical resources Description: Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)	
Measure Description: Provides information about storage capacity of the infrastructure.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum of resources provided by Integrated NGIs (excluding USA, which is not integrated)			
Data Source: Operations Metrics Portal		Data Collector: Malgorzata Krakowian	
Data Quality: Medium		Collection Quality: Medium	
Baseline: 150		Stretch Target: 160	Ideal Target: 170
Target rationale: Similar rationale described for measure 5.1		Initiatives: 1. Work with the NGIs to integrate new resource providers	



Perspective: Processes	Measure Number: 5.3	Measure Name: Installed tape capacity (PB) in EGI	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Integrate new physical resources Description: Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)	
Measure Description: Provides information about storage tape capacity of the infrastructure.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum of resources provided by Integrated NGIs (excluding USA, which is not integrated)			
Data Source: Operations Metrics Portal		Data Collector: Malgorzata Krakowian	
Data Quality: Medium		Collection Quality: Medium	
Baseline: 150		Stretch Target: 160	Ideal Target: 170
Target rationale: As per M5.1		Initiatives: 1. As per M5.1	

Perspective: Processes	Measure Number: 6.1	Measure Name: Number of different operational service types in EGI as recorded in GOCDB.	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure & Virtual Research Environments		Objective: Integrate new technologies Description: Integrate new functional services into EGI's Operational Infrastructure in order to increase the diversity and therefore the attractiveness of EGI to more research communities	
Measure Description: Provides information about diversity of possible operational services within EGI.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Service type from the PI excluding custom types.			
Data Source: GOCDB PI		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: High	
Baseline: 60		Stretch Target: 63	Ideal Target: 66
Target rationale: Based on historical trends. It's not possible to have an educated guess on the number of services in GOCDB based on other information.		Initiatives: 1. There are general advantages in the integration of a grid service in the EGI framework (a service type is the first step), monitoring is one of the most appreciated.	

Perspective: Processes	Measure Number: 6.2	Measure Name: Number of resource centres offering federated cloud services accessible to authorised users. (See M.SA2.19).	Owner: Michel Drescher
Strategic theme: Operational Infrastructure & Virtual Research Environments		Objective: Integrate new technologies Description: Integrate new functional services into EGI's Operational Infrastructure in order to increase the diversity and therefore the attractiveness of EGI to more research communities.	
Measure Description: Measure the uptake of providing IaaS cloud services within the resource providers federated in EGI.eu. This is a number comparable to other distributed computing service offerings.			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Manually summing up the numbers of RPs			
Data Source: Wiki and Google spread sheet		Data Collector: Michel Drescher	
Data Quality: High		Collection Quality: Low	
Baseline: 10		Stretch Target: 15	Ideal Target: 20
Target rationale: Based on historic and current values. They are augmented by RPs in integration pipeline.		Initiatives: 1. Task force activities are accountable as EGI-InSPIRE effort. Partners are more encouraged to participate. 2. Clarify and document RP integration process	

Perspective: Processes	Measure Number: 7.1	Measure Name: Number of recorded geographical contacts across the NGIs that can represent EGI locally to external requests	Owner: Gergely Sipos
Strategic theme: Communication & Coordination		Objective: Improve technical outreach Description: Strengthen local technical outreach to existing and new research communities to increase awareness of EGI.	
Measure Description: Number of current EGI champions and NGI International Liaisons in order to strengthen technical outreach.			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Summing up the following contact points: EGI champions, NGI International Liaisons			
Data Source: EGI.eu website sections for the EGI champions and NGI International Liaisons		Data Collector: Gergely Sipos	
Data Quality: High		Collection Quality: Low	
Baseline: 50		Stretch Target: 60	Ideal Target: 70
Target rationale: There are ~50 NGIs (ideally 50 NILs), plus a few champions.		Initiatives: 1. Expansion of EGI's Human Network through NILs, EGI Champions, Technology experts and national or local operations contacts	

Perspective: Processes	Measure Number: 8.1	Measure Name: Number of EGI Global Services meeting published OLAs	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Improve operational efficiency and effectiveness Description: Improve the reliability and the delivery of the operational infrastructure through improvements in the operational tools and associated processes.	
Measure Description: Provides information about service level delivered by Global Services.			
Lag/Lead: Lag	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: EGI OLA defines the target performances.			
Data Source: Operations Portal, GGUS		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: Low	
Baseline: 7		Stretch Target: 10	Ideal Target: 12
Target rationale: There is no historical monitoring of OLA targets for most of the EGI Global services. For this reason not all the tools/services will be able to hit the targets in the first iteration, but monitoring will provide the needed information to spot the gaps.		Initiatives: 1. All the operational tools must be highly available. Monitoring will help identify when this is not the case.	

Perspective: Processes	Measure Number: 8.2	Measure Name: Number of resource centres meeting the Resource Centre OLA.	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Improve operational efficiency and effectiveness Description: Improve the reliability and the delivery of the operational infrastructure through improvements in the operational tools and associated processes.	
Measure Description: Provides information about quality of the resource provisioning within infrastructure.			
Lag/Lead: Lag	Frequency: Monthly	Unit type: Numbers	Polarity: High values are positive
Formula: RC OLA defines the target performances			
Data Source: SAM, GGUS		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: High	
Baseline: 300		Stretch Target: 310	Ideal Target: 320
Target rationale: Based on historical data		Initiatives: 1. Sites not meeting the target are supported to improve their technical infrastructure.	

Perspective: Beneficiaries

Perspective: Beneficiaries	Measure Number: 9.1	Measure Name: Number of researchers using EGI's resources (either directly or through affiliated services – i.e. portals or integrated research infrastructures)	Owner: Tiziana Ferrari
Strategic theme: Virtual Research Environments		Objective: Easy and reliable access to the services that meet the needs of researchers Description: Increase number of researchers and the diversity of research communities who rely on EGI for performing their data driven research	
Measure Description: Total number of EGI single sign on accounts will increase number of researchers using EGI services			
Lag/Lead: Lag	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum of users certificates from the Operations Portal			
Data Source: The Operations Portal and EGI SSO accounts database		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: High	
Baseline: 22,000		Stretch Target: 25,000	Ideal Target: 27,000
Target rationale: Based of Historical Data		Initiatives: <ol style="list-style-type: none"> 1. Work with portal providers to accurately report the number of users they support. 2. Increase the diversity of resources that are available within through EGI. 	

Perspective: Beneficiaries	Measure Number: 9.2	Measure Name: Number of scientific papers produced using NGI resources affiliated into EGI across different disciplines.	Owner: Catherine Gater
Strategic theme: Virtual Research Environments		Objective: Easy and reliable access to the services that meet the needs of researchers Description: Increase number of researchers and the diversity of research communities who rely on EGI for performing their data driven research	
Description: Goal is to enable digital research; scientific impact can be demonstrated through the tracking of the number of the scientific publications that benefited from using EGI services.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum up the scientific papers			
Data Source: Currently Survey to NGIs and in future OpenAIRE		Data Collector: Sara Coelho	
Data/Collection Quality: Medium		Collection Quality: Low	
Baseline: 500		Stretch Target: 700	Ideal Target: 800
Target rationale: Based on historical data		Initiatives: 1. VT EGI Scientific Publications Repository 2. Collaboration with OpenAIRE	

Perspective: Beneficiaries	Measure Number: 10.1	Measure Name: Number of relevant software items registered in the EGI AppDB	Owner: Gergely Sipos
Strategic theme: Virtual Research Environments & Communication and Coordination		Objective: Promote the sharing and re-use of innovation Description: Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
Measure Description: By increasing the number of software profiles in AppDB users will reuse the existing solutions and benefit from it.			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Count the number up to date software profiles in the AppDB			
Data Source: EGI Applications Database		Data Collector: Marios Chatziangelou	
Data Quality: High		Collection Quality: High	
Baseline: 450		Stretch Target: 500	Ideal Target: 550
Target rationale: Based on the annual increase from previous years.		Initiatives: 1. Promotion of AppDB to new communities 2. Improving the AppDB service.	

Perspective: Beneficiaries	Measure Number: 10.2	Measure Name: Number of relevant training materials and resources in the EGI Training Marketplace	Owner: Gergely Sipos
Strategic theme: Virtual Research Environments & Communication and Coordination		Objective: Promote the sharing and re-use of innovation Description: Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
Measure Description: By increasing the number of training materials and resources we expand our expertise in topics they are interested in.			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum of up to date following items: events, online training, training resources and courses.			
Data Source: Training Marketplace		Data Collector: Claire Devereux	
Data Quality: High		Collection Quality: High	
Baseline: 40		Stretch Target: 50	Ideal Target: 60
Target rationale: Annual increase in previous years.		Initiatives: 1. Promoting the Training Marketplace service to new communities 2. Improving the Training Marketplace service	

Perspective: Beneficiaries	Measure Number: 10.3	Measure Name: Number of relevant appliances (i.e. virtual machines) available in the EGI Marketplace	Owner: Michel Drescher
Strategic theme: Virtual Research Environments & Communication and Coordination		Objective: Promote the sharing and re-use of innovation Description: Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
Measure Description: There will be a less of community effort if more people share relevant scientific appliances. The more appliances are shared the more popular the EGI Cloud infrastructure is expected to become.			
Lag/Lead: Lag	Frequency: Quarterly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum what is in VM Marketplace			
Data Source: EGI VM Marketplace		Data Collector: Michel Drescher	
Data Quality: High		Collection Quality: Medium	
Baseline: 5		Stretch Target: 10	Ideal Target: 20
Target rationale: The baseline is calculated from the demonstrations at CF2012 and TF2012. Stretch and Ideal targets are derived from user communities evaluating using the Federated Cloud.		Initiatives: 1. Dedicated Help Desk support unit exists 2. Each user community is accompanied with dedicated task member	

Perspective: Beneficiaries	Measure Number: 10.4a	Measure Name: Number of updates published per Community Platform	Owner: Michel Drescher
Strategic theme: Virtual Research Environments & Communication and Coordination		Objective: Promote the sharing and re-use of innovation Description: Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
Measure Description: Measures the activity of Platform Integrators in terms of published software updates (platform updates) available for download in the EGI community. This measure should correlate with the number of GGUS tickets closed as solved for bug reports and implemented features.			
Lag/Lead: Lead	Frequency: Quarterly	Unit type: N-tuple of positive numbers	Polarity: High values are, by trend, positive
Formula: Count the numbers of updates published for all community platforms available			
Data Source: EGI Software Repository		Data Collector: Kostas Koumantaros	
Data Quality: Medium/High		Collection Quality: High	
Baseline: 3 platforms		Stretch Target: 4	Ideal Target: 5
Target rationale: This is a new measure proposed as a replacement for the old measure. EGI's influence on this measure is limited to the number of Community Platforms, not the updated activity. Baseline, stretch and ideal targets are provided based on potential community platforms emerging out of the current UMD.		Initiatives: <ol style="list-style-type: none"> 1. Changing collaboration model with technology providers 2. Changing layout of the repository 3. Evolving the measure into counting the number of community platforms available in the EGI Repository 4. Partitioned Platform repositories (i.e. one per community platform) avoid non-trivial package dependencies for re-used software 5. Composite measure counting number of community platforms and their update activity 	

Perspective: Beneficiaries	Measure Number: 10.4b	Measure Name: Number of downloads per Community Platform	Owner: Michel Drescher
Strategic theme: Virtual Research Environments & Communication and Coordination		Objective: Promote the sharing and re-use of innovation Description: Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
Measure Description: Provide an overview of the relative popularity of the provided Community Platform. This is a relative value to indicate comparable download activity. This measure correlates with deployment figures from the Operations community.			
Lag/Lead: Lag	Frequency: Quarterly	Unit type: N-tuple of positive numbers	Polarity: High values are positive
Formula: Sum the number of individual package downloads divided by the number of packages available in the repository			
Data Source: EGI Software Repository		Data Collector: Kostas Koumantaros	
Data Quality: Medium/High		Collection Quality: High	
Baseline: 3 platforms		Stretch Target: 4	Ideal Target: 5
Target rationale: This is a new measure proposed as a replacement for the old measure. EGI's influence on this measure is limited to the number of Community Platforms, not the updated activity. Baseline, stretch and ideal targets are identical to those for measure10.4a (in fact, for the number of community platforms, they will always be the same)		Initiatives: <ol style="list-style-type: none"> 1. Changing collaboration model with technology providers 2. Changing layout of the repository 3. Evolving the measure into counting the number of community platforms available in the EGI Repository 4. Partitioned Platform repositories (i.e. one per community platform) avoid non-trivial package dependencies for re-used software 	

Perspective: Beneficiaries	Measure Number: 10.5	Measure Name: Number of agreements established with external research communities to use EGI's operational tools to monitor their deployed services in their infrastructures	Owner: Tiziana Ferrari
Strategic theme: Virtual Research Environments & Communication and Coordination		Objective: Promote the sharing and re-use of innovation Description: Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
Measure Description: Provides information if EGI operations tools are useful for other infrastructures.			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Number of signed MoUs			
Data Source: Manual		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: Low	
Baseline: 0		Stretch Target: 1	Ideal Target: 2
Target rationale: Based on the maturity of other e-Infrastructures and Research Infrastructures attempting to federate their resources.		Initiatives: <ol style="list-style-type: none"> 1. Work with other infrastructure such as Helix-Nebula and EU-DAT to demonstrate the potential role of EGI' operational tools 2. Work with research infrastructures needing to operate distributed compute and data services. 	

Perspective: Beneficiaries	Measure Number: 11.1	Measure Name: Number of resource centres that run services for international VOs.	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Support the uniform operation of resource centres Description: Resource centres providing uniform operation and consistent access to services is a fundamental aspect of a transnational infrastructure.	
Measure Description: Provides overview how EGI Infrastructure is engaged in supporting international VOs.			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Manual			
Data Source: Operations Portal/Accounting Portal		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: Medium	
Baseline: 200		Stretch Target: 250	Ideal Target: 275
Target rationale: Based on historical data		Initiatives: 1. Demonstrating Excellent European Science on EGI's shared resources Policy	

Perspective: Funders

<i>Perspective:</i> Funders	<i>Measure Number:</i> 12.1	<i>Measure Name:</i> Established measurement framework that will track the EGI contribution to EU2020 key flagship initiatives (IU and DAE)	<i>Owner:</i> Sergio Andreozzi
<i>Strategic theme:</i> Community and Coordination		<i>Objective:</i> Contribute to EU2020 priorities <i>Description:</i> EGI shows a clear impact on enabling the Digital ERA and other key EU strategic objectives for 2020	
<i>Measure Description:</i> This measure refers to the establishment of a measurement framework to capture EGI contribution to two key flagship initiatives Digital Agenda for Europe and Innovation Union of the Europe 2020 strategy. Once established this framework is expected to generate a measure of the progress of the planned contribution. Such a measure will be added in the next iteration of the EGI Scorecard.			
<i>Lag/Lead:</i> Lag	<i>Frequency:</i> Yearly	<i>Unit type:</i> Yes/No	<i>Polarity:</i> n/a
<i>Formula:</i> Measurement framework is approved by the SPT and the Director.			
<i>Data Source:</i> EGI Europe 2020 Wiki Table		<i>Data Collector:</i> Damir Marinovic	
<i>Data Quality:</i> High		<i>Collection Quality:</i> Low	
<i>Baseline:</i> No		<i>Stretch Target:</i> Yes	<i>Ideal Target:</i> Yes
<i>Target rationale:</i> n/a		<i>Initiatives:</i> 1. Complete and validate the framework with the first data gathering	

Perspective: Funders	Measure Number: 13.1	Measure Name: Number of NGIs able to demonstrate strong engagement and integration with the 'owner' or funder of their national activities.	Owner: Steven Newhouse
Strategic theme: Community and Coordination		Objective: Alignment and integration with national priorities Description: NGIs, by collaborating with EGI, shows a clear impact on contributing to their national e-Infrastructure priorities	
Measure Description: By increasing the number of NGIs able to demonstrate strong engagement and integration with the 'owner' or funder of their national activities (e.g. by having a national ministry or governmental representative as a stakeholder in their governance structure or by being part of an integrated national e-Infrastructure service provider) the NGI is more likely to be aligned with national priorities and have a greater chance of being sustained.			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum up the number of NGIs able to demonstrate strong engagement and integration with the 'owner' or funder of their national activities in EGI Compendium survey			
Data Source: EGI Compendium		Data Collector: Damir Marinovic	
Data Quality: Medium		Collection Quality: Medium	
Baseline: 10		Stretch Target: 13	Ideal Target: 15
Target rationale: EGI.eu has a limited influence on achieving the targets.		Initiatives: <ol style="list-style-type: none"> 1. Provide recommendations through the EGI Compendium analysis about importance of having strong links with national stakeholders 2. Showcase EGI/NGI value to national funding agency/ministry 3. Evaluate/implement EGI.eu transition plan to ERIC 	

Perspective: Funders	Measure Number: 13.2	Measure Name: Number of NGIs that are recognised in their national e-Infrastructure strategies or plans	Owner: Steven Newhouse
Strategic theme: Community and Coordination		Objective: Contribute to national priorities Description: NGIs, by collaborating with EGI, shows a clear impact on contributing to their national priorities	
Measure Description: By increasing number of NGIs recognised in their national e-Infrastructure strategies or plans, EGI is more recognised and aligned to the national priorities.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	Polarity: High values are positive
Formula: Sum up NGIs that are recognised in their national e-Infrastructure strategies or plans through EGI Compendium survey			
Data Source: EGI Compendium		Data Collector: Damir Marinovic	
Data Quality: Medium/Medium		Collection Quality: Medium	
Baseline: 5		Stretch Target: 8	Ideal Target: 10
Target rationale: EGI.eu has a limited influence on achieving the targets.		Initiatives: <ol style="list-style-type: none"> 1. Provide recommendations through the EGI Compendium analysis about importance of being recognised in national e-Infrastructure strategies or plans 2. Showcase EGI/NGI value to national funding agency/ministry 3. Evaluate/implement EGI.eu transition plan to ERIC 	

Perspective: Funders	Measure Number: 14.1	Measure Name: Cost (in Euro) of providing the operational tools and coordination needed to ensure the operation of EGI	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Cost effective management Description: Demonstrate the cost effective management of EGI and utilisation of its resources.	
Measure Description: Provides insight in EGI operation cost efficiency and effectiveness			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Euro	Polarity: High values are positive
Formula: Effort reported for the SA1 EGI Global Tasks with responsibility for the operational tools			
Data Source: Manual		Data Collector: Malgorzata Krakowian	
Data Quality: Medium		Collection Quality: Low	
Baseline: N/A		Stretch Target: N/A	Ideal Target: N/A
Target rationale: No target is available as this is a metric used to track the cost of delivering the required services.		Initiatives: <ol style="list-style-type: none"> 1. Accurate cost assessment of the services continues. 2. Ongoing definition and review of the services that are critical for the operation of EGI 3. Assessment as to how these services can be delivered more effectively. 	

Perspective: Funders	Measure Number: 14.2	Measure Name: Percentage utilisation through EGI provisioned services by EGI VOs of the job slots (LCPUs) capacity made available for their use	Owner: Tiziana Ferrari
Strategic theme: Operational Infrastructure		Objective: Cost effective management Description: Demonstrate the cost effective management of EGI and utilisation of its resources.	
Measure Description: Provides information if EGI operations tools are useful for other infrastructures.			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Percentage	Polarity: High values are positive
Formula: $(\text{Total elapsed time used by int. VOs in the time window}) / ((\text{Total LCPU available in EGI}) * (\text{Time window}))$			
Data Source: Accounting portal		Data Collector: Malgorzata Krakowian	
Data Quality: Medium		Collection Quality: Medium	
Baseline: /		Stretch Target: /	Ideal Target: /
Target rationale: Demonstrate the use of the resources within EGI coming from the NGIs.		Initiatives: 1. Improvements in the accounting system to accurately track jobs that fail or are killed. 2. Accurate recording and integration of locally submitted jobs.	

Perspective: Income

Perspective: Income	Measure Number: 15.1	Measure Name: Total national funding received for the operation and replacement of the physical resource infrastructure	Owner: Steven Newhouse
Strategic theme: Community and Coordination & Virtual Research Environments		Objective: Achieve continued European & national funding Description: The EGI ecosystem is able to attract funding for continued operation, investment in physical resources and innovation in the virtual research environments that are deployed within it.	
Measure Description: The most acknowledged source of funding for the operation and replacement of the physical resource infrastructure is through national funding as it impacts the national infrastructure assets.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Number	Polarity: High values are positive
Formula: Sum up national funding for NGIs for the operation and replacement of the physical resource infrastructure			
Data Source: EGI Compendium		Data Collector: Damir Marinovic	
Data Quality: Medium		Collection Quality: Medium	
Baseline: To be evaluated with the next EGI Compendium		Stretch Target: /	Ideal Target: /
Target rationale: EGI.eu has a limited influence on achieving the targets. Demonstrate the in-kind contribution being made by NGIs/EIROs towards EGI		Initiatives: 1. Showcase EGI/NGI value to national funding agency/ministry 2. Participate in national funding calls for projects	

Perspective: Income	Measure Number: 15.2	Measure Name: Total national funding for the staff needed to operate and provide technical outreach.	Owner: Steven Newhouse
Strategic theme: Community and Coordination & Virtual Research Environments		Objective: Achieve continued European & national funding Description: The EGI ecosystem is able to attract funding for continued operation, investment in physical resources and innovation in the virtual research environment that are deployed within it.	
Measure Description: The most acknowledged source of funding for the staff needed to operate and provide technical outreach is through national funding as it impacts the national human capital. This will enable continuity of high quality staff within NGIs and securing their long-term perspective as well as further efforts in technical outreach.			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Number	Polarity: High values are positive
Formula: Sum up national funding for the staff needed to operate and provide technical outreach			
Data Source: EGI Compendium		Data Collector: Damir Marinovic	
Data Quality: Medium		Collection Quality: Medium	
Baseline: To be evaluated with the next EGI Compendium		Stretch Target: /	Ideal Target: /
Target rationale: EGI.eu has a limited influence on achieving the targets.		Initiatives: <ol style="list-style-type: none"> 1. Showcase EGI/NGI value to national funding agency/ministry 2. Participate in national funding calls for projects 3. Establish a national Champions scheme 	

Perspective: Income	Measure Number: 15.3	Measure Name: Total national and European funding that is supporting technology innovation projects	Owner: Steven Newhouse
Strategic theme: Community and Coordination & Virtual Research Environments		Objective: Achieve continued European & national funding Description: The EGI ecosystem is able to attract funding for continued operation, investment in physical resources and innovation in the virtual research environment that are deployed within it.	
Measure Description: Securing European and national funding is essential for supporting technology innovation projects.			
Lag/Lead: Lead	Frequency: Yearly	Unit type: Number	Polarity: High values are negative
Formula: Sum up the European and national funding for technology innovation projects			
Data Source: EGI Compendium		Data Collector: Damir Marinovic	
Data Quality: Medium		Collection Quality: Medium	
Baseline: To be evaluated with the next EGI Compendium		Stretch Target: /	Ideal Target: /
Target rationale: To be defined based on the on-going analysis of the mapping the services to funding streams.		Initiatives: 1. Participate in the EC funding calls for projects 2. EGI.eu to promote the added value of EGI	

Perspective: Income	Measure Number: 16.1	Measure Name: The percentage of funds coming from inside the community that is needed to deliver the coordinated operation of the EGI Global services	Owner: Steven Newhouse
Strategic theme: Operational Infrastructure		Objective: Achieve community funding for continued operation Description: The cost of providing the EGI Global Services needed to ensure the integrated operation and coordination of the production infrastructure is matched by the funds available from the NGIs.	
Measure Description: Increased percentage of funds coming from the community demonstrates EGI capability of not being dependent of funding sources outside the community (e.g. the EC funding).			
Lag/Lead: Lag	Frequency: Yearly	Unit type: Percentage	Polarity: High values are positive
Formula: Calculate the percentage of funds coming from inside the community			
Data Source: EGI Compendium		Data Collector: Damir Marinovic	
Data Quality: Medium/Medium		Collection Quality: Medium	
Baseline: To be evaluated with the next EGI Compendium		Stretch Target: /	Ideal Target: /
Target rationale: Demonstrate the willingness and ability of the EGI Community to support the required services.		Initiatives: 1. Complete analysis on EGI Global Service evolution and related mapping to the funding streams	