





# EGI-InSPIRE

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# **EU DELIVERABLE: D1.11**

#### <u>Abstract</u>

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.







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#### II. DELIVERY SLIP

	Name	Partner/Activity	Date
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Approved by	AMB & PMB		14/05/2013

#### III. DOCUMENT LOG

Issue	Date	Comment	Author/Partner
1	18/02/2013	ТоС	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: <u>https://wiki.egi.eu/wiki/Procedures</u>

#### VI. TERMINOLOGY







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







#### 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

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       A.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         35       AppenDIX I EGI Scorecard Data Dictionary Template       35	1	INTR	RODUCTION	7
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         3.4 Meetings       16         3.5 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         34       APPENDIX I EGI Scorecard Data Dictionary Template       36	2	QUAI	LITY ASSURANCE ORGANISATION STATUS	8
2.1.1       QA wiki site and metrics web pages		2.1 QA	A Management in EGI-InSPIRE	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         3.4       Meetings       16         3.4       Meetings       16         3.4       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 I EGI Scorecard Data Dictionaries       29		2.1.1	QA wiki site and metrics web pages	
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         3.4       Meetings       16         3.4       Meetings       16         3.4       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 I EGI Scorecard Data Dictionary Template       35		2.1.2	ITIL	
2.2.1       Project overall assessment mechanisms       9         2.2.2       Document management procedure       10         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         4.1       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         35       Appennix I EGI Scorecard Data Dictionaries       29		2.2 Pr	oject Management	9
2.2.2       Document management procedure		2.2.1	Project overall assessment mechanisms	9
2.2.3       Document review procedure		2.2.2	Document management procedure	
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         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         30       Distionaries       39		2.2.3	Document review procedure	11
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       16         4.1       Project Overall Metrics       18         4.1       Project Overall 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         4       APPENDIX I EGI Scorecard Data Dictionaries       20	3	MAIN	N PROJECT MANAGEMENT TOOLS	14
3.2       Project Progress Tracking       14         3.3       Website and wiki       16         3.4       Meetings       16         4       METRICS PROGRAMME       16         4.1       Project Overall Metrics       18         4.1       Project Overall Metrics       18         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         36       APPENDIX I EGI Scorecard Data Dictionaries       30		3.1 Do	ocument management tools	
3.3       Website and wiki       16         3.4       Meetings       16         4       METRICS PROGRAMME       16         4.1       Project Overall Metrics       18         4.1       Project Overall 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         30       Appendix Hech Scorecard Data Dictionaries       30		3.2 Pr	oject Progress Tracking	
3.4 Meetings       16         4 METRICS PROGRAMME       18         4.1 Project Overall Metrics       18         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         30       31		3.3 We	ebsite and wiki	
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         30       Scorecard Data Dictionaries       30		3.4 Me	eetings	16
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         30       31	4	MET	RICS PROGRAMME	
5       STRATEGIC METRICS		4.1 Pr	oject Overall Metrics Error! Bookmark	not defined.
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 I EGI Scorecard Data Dictionaries       30	5	STRA	ATEGIC METRICS	
6 CONCLUSION AND FUTURE PLANS       33         7 REFERENCES       34         APPENDIX I EGI Scorecard Data Dictionary Template       35         APPENDIX I EGI Scorecard Data Dictionaries       30		5.1 EG	I Balanced Scorecard Table	25
7 REFERENCES	6	CONC	CLUSION AND FUTURE PLANS	
APPENDIX I EGI Scorecard Data Dictionary Template	7	REFE	ERENCES	
ADDENDLY IL ECI Scorecard Data Dictionaries 20		APPEND	DIX I EGI Scorecard Data Dictionary Template	
AFFENDIX II Edi Scolecalu Data Dictionalies		APPEND	DIX II EGI Scorecard Data Dictionaries	







# **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/egiinspire/metrics/index.html and further metrics can be obtained through the gstat tool<sup>1</sup> and the accounting portal<sup>2</sup>. A project metrics portal was released by EGI-InSPIRE JRA1 in PY1, upgraded in PY2 and PY3 and is available at <u>http://metrics.egi.eu/</u>. 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 <u>https://wiki.egi.eu/wiki/Tools</u>. Statistic of service levels accomplished by Resource Centres and NGIs are gathered monthly and are accessible on wiki (<u>https://wiki.egi.eu/wiki/Performance</u>).

### 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.

<sup>&</sup>lt;sup>1</sup> http://gstat.egi.eu

<sup>&</sup>lt;sup>2</sup> 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 project<sup>3</sup> 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 standard<sup>4</sup>. 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) meetings<sup>5</sup>; •
- Quarterly reports and periodic reports [R3,4,5]; •
- Project execution plan [R6]; •
- Deliverables and milestones reviews [R7];
- Metrics web<sup>6</sup> and wiki pages<sup>7</sup>; •
- Project Management Board meetings; •
- External Advisory Committee reports; •
- EC annual project reviews. •

http://www.fedsm.eu/

http://en.wikipedia.org/wiki/ISO/IEC 20000

 <sup>&</sup>lt;sup>5</sup> <u>https://www.egi.eu/indico/categoryDisplay.py?categId=13</u>
 <sup>6</sup> <u>http://www.egi.eu/projects/egi-inspire/metrics/</u>

<sup>&</sup>lt;sup>7</sup> 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 27<sup>th</sup> and 28<sup>th</sup> 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 <u>http://metrics.egi.eu/</u>.

#### 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 <u>https://documents.egi.eu/public/Statistics</u>. 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 wiki<sup>8</sup>. The documents have been reviewed to ensure that they have the correct access rights by the correct groups.

Changes proposed for Year Four:

<sup>&</sup>lt;sup>8</sup> <u>https://wiki.egi.eu/wiki/Metadata\_management</u>







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 <u>https://wiki.egi.eu/wiki/Review\_process\_for\_deliverables\_and\_milestones</u> and are also described in D1.9 [R1].

Time before submission	Person	Action	RT action	
>2 months	>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.			
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.		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 Notify the Editor that review is complete Office		Set state to Being Revised	
	Editor	Notify the PO an updated document is available	Set state to External Review and return to	

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







			***	
	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 website<sup>9</sup>, 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): <u>https://pptevm.cern.ch/egi/ui/main.do</u>

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

<sup>&</sup>lt;sup>9</sup> <u>http://www.egi.eu/about/egi-inspire/templates/</u>







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.

3	EGI-InSPIRE Tasks												
4				Legend									
5				TASK: unit of work to be c	ompleted (preferred granularity: 3 months)								
6	RESource: Partner involved in completing the task					-							
1				OUTput: end result of the tas	ĸ		J						
8													
10	Command						Deliverable/						
11	(N,M or D)	TASK	Code	ID Description	Holders EMail	WBS	Milestone	Status	LOE ?	Planned Start	Planned Finish	Comments	
12	(N,M or D)	RES		# Partner Code		Funded PM	Unfunded PM					Comments	
13	(N,M or D)	OUT		# Output description		Actual Qty	Total Qty	Unit			Planned Finish	Comments	
14		TASK	TNA2.2N	116 Dissemination	catherine.gater@egi.eu	WP2-N		AC	N	01-May-2010	30-Apr-2014		
15		RES		1 UPT		5	0						
16		RES		2 IPP-BAS		8	0						
17		RES		3 UCY		3	0						
18		RES		4 CESNET		4	0						
19		RES		5 KIT-G		10	0						
20		RES		6 CSIC		11	0						
21		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: <u>http://www.egi.eu</u>
- INTERNAL: Wikis dedicated to supporting the technical Activities: <u>http://wiki.egi.eu</u>

#### Assessment:

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

The project wiki site<sup>10</sup> has been regularly updated during the course of the project and has been particularly useful in supporting and reporting the work of the Virtual Teams<sup>11</sup>.

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: <u>https://www.egi.eu/indico/</u>. 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,

<sup>&</sup>lt;sup>10</sup> <u>https://wiki.egi.eu/wiki/Main Page</u>

<sup>&</sup>lt;sup>11</sup> 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 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 Objecti ves	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)	200,00 0	239,895	250,00 0	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	Number of papers from EGI Users (M.NA2.5)	50	161	60	82	70 (80) (90)
	international collaborators through VRCs	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:







Project	Objective	Metrics	PQ9	PQ10	PQ11	Target PY3			
Objectives	Summary								
PO1	Expansion of a nationally based productio	Number of resource centres in EGI-InSPIRE and integrated partners (M.SA1.Size.1)	347	351	315 <sup>12</sup>	350 (355) (355)			
	n infrastruc ture	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 <sup>13</sup>	97% (98.5%) (99%)			
PO2	Support of European researche rs and internatio	Number of papers from EGI Users (M.NA2.5)	27	0		70 (80) (90)			
		Number of jobs done a day	1.41	1.78	1.67 <sup>14</sup>	1.2M (1.4M)			

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

<sup>&</sup>lt;sup>12</sup> 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.

<sup>&</sup>lt;sup>13</sup> Monitoring of the EGI.eu core operations tools was rolled to production in October 2012. Reports for the previous quarters are not available.

<sup>&</sup>lt;sup>14</sup> 1.67 Mjob/day only includes grid jobs. This value increases to 2.25 Mjob/day when also including job submitted locally to clusters.







	nal collaborat ors through VRCs	(M.SA1.Usage.1)				(1.5M)
PO3	Sustainab le support for Heavy User	Number of sites with MPI (M.SA1.Integration. 2)	106	87	80 <sup>15</sup>	120 (130) (140)
	Communi ties	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 Communi ties	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) <sup>16</sup>	418	5035	726	2000 (3000) (3250)
PO5	Transpare nt integratio n of other infrastruc tures	MoUs with resource providers (M.NA2.10)	3	2	2	4 (5) (5)
PO6	Integratio n of new technolog ies and resources	Number of HPC resources (M.SA1.Integration. 1)	40	37	42	50 (50) (50)

<sup>&</sup>lt;sup>15</sup> 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.

<sup>&</sup>lt;sup>16</sup> 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



Federated Cloud (M.SA2.16)	14	9	16	(20)
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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 Plan<sup>17</sup> [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 scorecard<sup>18</sup> 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)<sup>19</sup> 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.

<sup>&</sup>lt;sup>17</sup> https://documents.egi.eu/document/1098

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

<sup>&</sup>lt;sup>19</sup> http://ec.europa.eu/europe2020/index\_en.htm



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	g & 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.	<ul><li>1.1 Number of NGI supported training/tutorial attendee days undertaken at NGI events a year.</li><li>1.2 Number of NGI supported training/tutorial attendee days undertaken through EGI Forums and dedicated events a year.</li></ul>	C&C	3000 (4000) (5000) 200 (300) (400)	3476 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	30 (38) (42)	36

26 / 68

PUBLIC







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)	<ul><li>5.1 Total number of job slots (LCPUs) available in EGI</li><li>5.2 Installed disk capacity (PB) in EGI</li></ul>	O.I.	300,000 (325,000) (333,000) 150 (160)	327,394 155.2
		5.3 Installed tape capacity (PB) in EGI		(100) (170) 150 (160) (170)	150.9

PUBLIC







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	6.1 Number of different operational service types in EGI as recorded in GOCDB.	O.I. VREs	60 (63) (66)	75
	communities.	6.2 Number of resource centres offering federated cloud services accessible to authorised users. (See M.SA2.16)		10 (15) (20)	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 Champi ons 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.	<ul><li>8.1 Number of EGI Global Services meeting published OLAs</li><li>8.2 Number of resource centres meeting the Resource Centre OLA.</li></ul>	O.I.	7 (10) (12) 300 (310) (320)	
Perspective: Beneficia	ries				

PUBLIC







9. Easy and reliable access to the services that meet the needs of researchers	Increase number of researchers and the diversity of research communities who rely on EGI for performing their data driven research	9.1 Number of researchers using EGI's resources (either directly or through affiliated services – i.e. portals or integrated research infrastructures)	VREs	22,000 (25,000) (27,000)	21513 + 1720
of researchers		9.2 Number of scientific papers produced using NGI resources affiliated into EGI across different disciplines.		500 (700) (800)	







10. Promote the	Improve the reuse of innovation developed	10.1 Number of relevant software items registered	VREs,	500	453
sharing and re-use of	within the EGI ecosystem elsewhere in the	in the EGI AppDB	C&C	(550)	(PQ11)
innovation	ecosystem across all stakeholders (e.g.			(600)	
	resource centres, research communities)				
		10.2 Number of relevant training materials and		40	34
		resources in the EGI Training Marketplace		(50)	(PQ11)
				(60)	
		10.3 Number of relevant appliances (i.e. virtual		5	11
		machines) available in the EGI Marketplace		(10)	
				(20)	
		10.4 Number of Community Platforms in the		3	$5^{20}$
		UMD		(4)	
				(5)	
		10.5 Number of agreements established with			
		external research communities to use EGI's		0	
		operational tools to monitor their deployed		(1)	
		services in their infrastructures		(2)	
11. Support the	Resource centres providing uniform	11.1 Number of resource centres that run services	O.I.	200	
uniform operation of	operation and consistent access to services	for international VOs.		(250)	
resource centres	is a fundamental aspect of a transnational			(275)	
	infrastructure.				

<sup>&</sup>lt;sup>20</sup> The plans included Community Platforms coming from EMI, IGE, PSNC (QCG platform) and UVACSE (Genesis II). However, since backwards incompatibilities were introduced in the various EMI major updates, these need to be considered as individual platforms. Even though IGE releases major versions in a similar schedule as EMI, the IGE updates are all backwards compatible and thus are considered one platform. UVACSE has never made any software available. Thus, the current list of Community platforms are: EMI-1, EMI-2, EMI-3, IGE, QCG







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	2.1 Established measurement framework that vill track the EGI contribution to EU2020 key lagship 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	<ul><li>13.1 Number of NGIs able to demonstrate strong engagement and integration with the 'owner' or funder of their national activities.</li><li>13.2 Number of NGIs that are recognised in their national e-Infrastructure strategies or plans.</li></ul>	C&C	10 (13) (15) 5 (8) (10)	Coming from EGI Compen dium 2012
14. Cost effective management	Demonstrate the cost effective management of EGI and utilisation of its resources.	<ul> <li>14.1 Cost (in Euro) of providing the operational tools and coordination needed to ensure the operation of EGI</li> <li>14.2 Percentage utilisation through EGI provisioned services by EGI VOs of the job slots (LCPUs) capacity made available for their use</li> </ul>	O.I.	N/A N/A	€2.77M 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.	<ul> <li>15.1 Total national funding received for the operation and replacement of the physical resource infrastructure.</li> <li>15.2 Total national funding for the staff needed to operate and provide technical outreach.</li> <li>15.3 Total national and European funding that is supporting technology innovation projects.</li> </ul>	C & C VREs	N/A N/A N/A	Coming from EGI Compen dium 2012







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







# 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 <u>https://documents.egi.eu/document/1620</u>
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.<sup>21</sup>

#### Table 5 EGI Scorecard Data Dictionary Template

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

#### • 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

<sup>&</sup>lt;sup>21</sup> 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.

<i>Perspective:</i> Learning & Growth	Measure Number: 1.1	<i>Measure Name:</i> Number of NGI supported training/tutorial attendee days undertaken at NGI events a year	<i>Owner:</i> Gergely Sipos		
<i>Strategic theme:</i> Commu	nication & Coordination	<i>Objective:</i> Develop technical expertise <i>Description:</i> 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.			
<i>Measure Description:</i> Nutechnical expertise	umber of people attending	the training events provide	ed by NGIs so they gain		
Lag/Lead: Lead	Frequency: Quarterly	<i>Unit type:</i> Person training day	<i>Polarity:</i> High values are positive		
Formula: Summing up n	umbers from different NG	Is			
Data Source: EGI Trainin	ng marketplace	Data Collector: Claire Devereux			
Data Quality: Low		Collection Quality: High			
<b>Baseline:</b> 1000		Stretch Target: 1500	Ideal Target: 2000		
<i>Target rationale:</i> Based on the number of events and average attendee per event in previous years.		<ul> <li><i>Initiatives:</i></li> <li>1. Further Development and sustainability of Training Marketplace</li> <li>2. EGI.eu develops reusable training materials and shares these in the Training Marketplace</li> </ul>			

#### Perspective: Learning & Growth







<i>Perspective:</i> Learning & Growth	Measure Number: 1.2	<i>Measure Name:</i> Number of NGIs supported training/tutorial attendee days undertaken through EGI Forums and dedicated events a year	<i>Owner:</i> Gergely Sipos		
<i>Strategic theme:</i> Commu	nication & Coordination	<i>Objective:</i> Develop technical expertise <i>Description:</i> 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.			
<i>Measure Description:</i> Number of people attending the training events provided by EGI.eu so their gain technical expertise.					
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	<i>Polarity:</i> High values are positive		
<i>Formula:</i> An event that I days.	lasted for 2 days that had 2	25 attendees would contrib	ute 50 attendee training		
Data Source: EGI-InSPI	RE deliverable/milestone	Data Collector: Claire Devereux			
Data Quality: Medium/Lo	ow	Collection Quality: Low			
Baseline: 100		Stretch Target: 200	Ideal Target: 300		
<i>Target rationale:</i> Based and average attendee per a	on the number of events event in previous years.	<i>Initiatives:</i> 1. Support for training a	ctivities at EGI Forums		







<i>Perspective:</i> Learning & Growth	Measure Number: 2.1		<i>Measure Name:</i> Number of external partners that actively contribute to EGI th defined agreements	y rough	·: ozzi
Strategic theme: Communication & Coordination			<i>Objective:</i> Strengthen strategic partnerships <i>Description:</i> 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)		
<i>Measure Description:</i> 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		<i>Unit type:</i> Numbers	Polarity: values are go	High od
<i>Formula:</i> Summing up numbe lead EC project is count as one	r of partners on collabor	ation p	bage and non-lead EC	projects. Each	non-
Data Source: Collaboration pa http://www.egi.eu/community/ EC project page http://www.egi.eu/about/EGI.e	ge collaborations/ and non- u/EGI.eu_projects/index	lead .html	Data Collector: Dar	nir Marinovic	
Data Quality: Medium			Collection Quality:	Medium	
Baseline: 30			Stretch Target: 38	Ideal Target:	: 42
<i>Target rationale:</i> Based on his	torical data		<ul><li><i>Initiatives:</i></li><li>1. MoU frameworf</li><li>2. Attending external</li></ul>	s nal events	







<b>Perspective:</b> Learning	Measure Number: 3.1	Measure Name:	Owner:
& Growth		Number of associate	Steven Newhouse
		participants in the EGI	
		Council	
Strategic theme: Commu	nication & Coordination	<b>Objective:</b> Strengthen go	vernance
		<b>Description:</b> 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.	
<i>Measure Description:</i> The associate participants that contribute to the objective of EGI. Increasing the development of an open ecosystem of diverse st		are non-eligible NGIs who the number of associate pa akeholders that have a voic	o or other organisations articipants contributes to be in EGI governance.
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Summing up th	ne number of associate part	ticipants that are members of the EGI Council	
<i>Data Source:</i> Stateme EGI.eu Statutes or Minist	ent for acknowledging erial Letter	Data Collector: Rob van	der Meer
Data Quality: High		Collection Quality: Low	
Baseline: 5		Stretch Target: 6	Ideal Target: 7
Target rationale: Based of	on the historical data	Initiatives:	
		1. Signing MoUs with organisations can lead to	
		further consolidat	ion into associate
		participants	







#### **Perspective: Processes**

<i>Perspective:</i> Processes	Measure Number: 4.1	<i>Measure Name:</i> Number of Science Gateway offerings in the ecosystem that have been identified and documented as being able to be provided autonomously.	Owner: Gergely Sipos
<i>Strategic theme:</i> Communication & Coordination		<i>Objective:</i> Develop EGI as an open ICT ecosystem <i>Description:</i> 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	
<b>Description:</b> With well-defined roles, processes an their own services independently (e.g. Science Ga Cloud). This measure aims to capture the number demonstrate openness of the ecosystem.		d interfaces, other actors s teways, community service of service offerings that e	hould be able to deploy es in the EGI Federated merge autonomously to
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Calculate numb	per of Science Gateway en	tries in the EGI AppDB	
Data Source: Application	ns Database	Data Collector: Nuno Ferreira	
Data Quality: High		Collection Quality: Medi	um
Baseline: 30		Stretch Target: 40	Ideal Target: 45
<i>Target rationale:</i> Based on historical data		<ul> <li><i>Initiatives:</i></li> <li>1. VT Science Gateways Primer</li> <li>2. Dedicated Sessions at EGI CFs and TFs</li> <li>3. Collaborations with projects specialised in science gateways (e.g. SCIBUS)</li> </ul>	







Parsnactiva Processes	Maasura Number: 5 1	Maasura Nama	Owner:
Terspective. 110ccsscs	Weusure Muniber, 5.1	Total number of job	Tiziana Forrari
		slots (I CPUs) available	
		in FGI	
Strategic theme: Operation	onal Infrastructure	<b>Objective:</b> Integrate new	physical resources
Shall ge meme. Operational initiastructure		<i>Description:</i> Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)	
Measure Description: Pro	ovides information about c	omputation capacity of the	infrastructure
Lag/Lead: Lag	Frequency: Quarterly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Sum of Integra	ted NGIs logical CPUs (ex	ccluding 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	<i>Ideal Target:</i> 333,000
<i>Target rationale:</i> There with NGIs about the core number of cores increduring past year, but it w requested by commu computing resources. The known requirements of u historical trend of this me	is no agreement in place is they must provide. The eased almost constantly vas driven by the pledges unities funding those target was based on the ser communities, and the easure.	e <i>Initiatives:</i> e 1. Work with the NGIs to integrate new resource providers. e e e	







Perspective: Processes	Measure Number: 5.2	Measure Name:	Owner:	
		Installed disk capacity (PB) in EGI	Tiziana Ferrari	
Strategic theme: Operation	onal Infrastructure	Objective: Integrate new	physical resources	
		<i>Description:</i> Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)		
Measure Description: Pre	ovides information about s	torage capacity of the infra	structure.	
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive	
Formula: Sum of resource	es 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	
<i>Target rationale:</i> Similar rationale described for measure 5.1		<i>Initiatives:</i> 1. Work with the resource provider	NGIs to integrate new	







Perspective: Processes	Measure Number: 5.3	Measure Name:	Owner:
		Installed tape capacity (PB) in EGI	Tiziana Ferrari
Strategic theme: Operation	onal Infrastructure	Objective: Integrate new	physical resources
		<i>Description:</i> Expand the installed physical capacity of EGI (as defined by the EGI-InSPIRE partners)	
Measure Description: Pro	ovides information about s	torage tape capacity of the	infrastructure.
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Sum of resource	es 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	







<i>Perspective:</i> Processes	Measure Number: 6.1	<i>Measure Name:</i> Number of different operational service types in EGI as recorded in GOCDB.	<i>Owner:</i> Tiziana Ferrari
Strategic theme: Operation	onal Infrastructure &	Objective: Integrate new	technologies
Virtual Research Environments		<b>Description:</b> 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	
<i>Measure Description:</i> Provides information abou EGI.		diversity of possible ope	rational services within
<i>Lag/Lead:</i> Lag	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Service type fro	om the PI excluding custor	n types.	
Data Source: GOCDB PI	[	Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: High	
Baseline: 60		Stretch Target: 63	Ideal Target: 66
<i>Target rationale:</i> Based on historical trends. It's not possible to have an educated guess on the number of services in GOCDB based on other information.		<i>Initiatives:</i> 1. There are general adv integration of a grid s framework (a service monitoring is one of t	vantages in the service in the EGI type is the first step), the most appreciated.







Perspective: Processes	Measure Number: 6.2	Measure Name:	Owner:
		Number of resource	Michel Drescher
		centres offering	
		federated cloud services	
		accessible to authorised	
		users. (See M.SA2.19).	
Strategic theme: Operation	onal Infrastructure &	Objective: Integrate new	technologies
Virtual Research Environments		<i>Description:</i> 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.	
<i>Measure Description:</i> Measure the uptake of pr providers federated in EGI.eu. This is a number of offerings.		oviding IaaS cloud servic comparable to other distrib	es within the resource uted computing service
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Manually sum	ning up the numbers of RI	Ps	
Data Source: Wiki and G	loogle spread sheet	Data Collector: Michel Drescher	
Data Quality: High		Collection Quality: Low	
Baseline: 10		Stretch Target: 15	Ideal Target: 20
<i>Target rationale:</i> 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	t RP integration process







Perspective: Processes	Measure Number: 7.1	<i>Measure Name:</i> Number of recorded geographical contacts across the NGIs that can represent EGI locally to external requests	<i>Owner:</i> Gergely Sipos
Strategic theme: Communication & Coordination		<i>Objective:</i> Improve technical outreach <i>Description:</i> Strengthen local technical outreach to existing and new research communities to increase awareness of EGI.	
<i>Measure Description:</i> Number of current EGI char strengthen technical outreach.		mpions and NGI Internation	onal Liaisons in order to
Lag/Lead: Lead	Frequency: Quarterly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Summing up th	ne following contact points	EGI champions, NGI International Liaisons	
<i>Data Source:</i> 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
<i>Target rationale:</i> There are ~50 NGIs (ideally 50 NILs), plus a few champions.		<i>Initiatives:</i> 1. Expansion of H through NILs Technology expe operations contact	EGI's Human Network , EGI Champions, erts and national or local cts







Perspective: Processes	Measure Number: 8.1	Measure Name:	Owner:
		Number of EGI Global	Tiziana Ferrari
		Services meeting	
		published OLAS	
Strategic theme: Operational Infrastructure		<b>Objective:</b> Improve operational efficiency and effectiveness	
		<b>Description:</b> Improve the reliability and the delivery of the operational infrastructure through improvements in the operational tools and associated processes.	
Measure Description: Provides information about s		ervice level delivered by Global Services.	
<i>Lag/Lead:</i> Lag	Frequency: Quarterly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: EGI OLA defin	nes the target performances	s.	
Data Source: Operations	Portal, GGUS	Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: Low	
Baseline: 7		Stretch Target: 10	Ideal Target: 12
<i>Target rationale:</i> 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.		<ul> <li><i>Initiatives:</i></li> <li>1. All the operational to available. Monitoring when this is not the c</li> </ul>	ools must be highly g will help identify ase.







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







### **Perspective: Beneficiaries**

<i>Perspective:</i> Beneficiaries	Measure Number: 9.1	<i>Measure Name:</i> Number of researchers using EGI's resources (either directly or through affiliated services – i.e. portals or integrated research infrastructures)	<i>Owner:</i> Tiziana Ferrari
Strategic theme: Virtual Research Environments		<i>Objective:</i> Easy and reliable access to the services that meet the needs of researchers <i>Description:</i> Increase number of researchers and	
		the diversity of research on EGI for performing the	communities who rely eir data driven research
Measure Description: Tresearchers using EGI ser	Fotal number of EGI sinvices	ngle sign on accounts w	ill increase number of
<i>Lag/Lead:</i> Lag	Frequency: Quarterly	<i>Unit type:</i> Numbers	<i>Polarity:</i> High values are positive
Formula: Sum of users co	ertificates from the Operat	ions Portal	
<i>Data Source:</i> The Operat accounts database	ions Portal and EGI SSO	<i>Data Collector:</i> Malgorzata Krakowian	
Data Quality: High		Collection Quality: High	
Baseline: 22,000		Stretch Target: 25,000	Ideal Target: 27,000
<i>Target rationale:</i> Based of Historical Data		<ul><li><i>Initiatives:</i></li><li>1. Work with portal preport the number of</li><li>2. Increase the diversit available within thro</li></ul>	providers to accurately users they support. ty of resources that are ugh EGI.







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







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







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







<i>Perspective:</i> Beneficiaries	Measure Number: 10.3	<i>Measure Name:</i> Number of relevant appliances (i.e. virtual machines) available in the EGI Marketplace	<i>Owner:</i> Michel Drescher
<i>Strategic theme:</i> Virtual Research Environments & Communication and Coordination		<i>Objective:</i> Promote the innovation <i>Description:</i> Improve the developed within the EQ in the ecosystem across resource centres, research	sharing and re-use of ne reuse of innovation GI ecosystem elsewhere s all stakeholders (e.g. n communities
<i>Measure Description:</i> There will be a less of community effort if more people share relevant scient appliances. The more appliances are shared the more popular the EGI Cloud infrastructure is expect to become.			
Lag/Lead: Lag	Frequency: Quarterly	Unit type: Numbers	<i>Polarity:</i> High values are positive
Formula: Sum what is in	VM Marketplace		
Data Source: EGI VM M	larketplace	Data Collector: Michel Drescher	
Data Quality: High		Collection Quality: Medium	
Baseline: 5		Stretch Target: 10	Ideal Target: 20
<i>Target rationale:</i> 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.		<ul><li><i>Initiatives:</i></li><li>1. Dedicated Help Desk</li><li>2. Each user communi dedicated task memb</li></ul>	support unit exists ty is accompanied with er







Perspective: Beneficiaries	Measure Number:	Measure Name:	Owner:
	10.4	Number of	Michel Drescher
		Community Platforms in the	
		UMD	
<i>Strategic theme:</i> Virtual Research Environments & Communication and Coordination		<i>Objective:</i> Promote t use of innovation	he sharing and re-
		<i>Description:</i> Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities	
<i>Measure Description:</i> Indicate how many Communi installation on the physical infrastructure (as opposed Infrastructure Platform).		ty Platforms are availa I to being deployed on	ble to EGI for direct top of the Cloud
<i>Lag/Lead:</i> Lead	Frequency: Quarterly	<i>Unit type:</i> positive number	<i>Polarity:</i> High values are by tendency positive
<i>Formula:</i> Identify and Cou Technology Providers will	nt the number of Commu provide support and upda	nity Platforms for whi ted software packages	ch identified
<i>Data Source:</i> Agreements v Providers	with Technology	Data Collector: Michel Drescher	
Data Quality: High		Collection Quality: High	
Baseline: 3 Community Pla	tforms	Stretch Target: 4	Ideal Target: 5
<i>Target rationale:</i> The originally devised measures M10.4a and M10.4b were considered not strategic measures but activity metrics that are used to inform and feed into the actual strategic metric at hand here, and that is the number of Community Platforms that are available for direct installation: As opposed to the old measures, EGI does have control over the number of Community Platforms it wishes to make available in the UMD. Base, stretch and ideal target were estimated based on agreements made with Technology Providers.		1. Changing collabor technology providers	ration model with







Perspective:	Measure Number:	Measure Name:	Owner:
Beneficiaries	10.5	Number of agreements established with	Tiziana Ferrari
		external research	
		communities to use	
		to monitor their	
		deployed services in	
		their infrastructures	
Stratagia themas Virtual	Pasaarah Environmanta	Objective: Promoto the	sharing and rause of
& Communication and Co	ordination	innovation	sharing and re-use of
		<b>Description:</b> Improve the reuse of innovation developed within the EGI ecosystem elsewhere in the ecosystem across all stakeholders (e.g. resource centres, research communities)	
<i>Measure Description:</i> infrastructures.	Provides information if	EGI operations tools	are useful for other
Lag/Lead: Lead	Frequency: Yearly	<i>Unit type:</i> Numbers	<i>Polarity:</i> High values are positive
Formula: Number of sign	ned MoUs		·
Data Source: Manual		Data Collector: Malgorzata Krakowian	
Data Quality: High		Collection Quality: Low	
Baseline: 0		Stretch Target: 1	Ideal Target: 2
<i>Target rationale:</i> Based on the maturity of other e-Infrastructures and Research Infrastructures attempting to federate their resources.		<ul> <li><i>Initiatives:</i></li> <li>1. Work with other infr Helix-Nebula and EU the potential role of I</li> <li>2. Work with research is to operate distributed services.</li> </ul>	astructure such as U-DAT to demonstrate EGI' operational tools infrastructures needing I compute and data







<i>Perspective:</i> Beneficiaries	Measure Number: 11.1	<i>Measure Name:</i> Number of resource centres that run services for international VOs.	<i>Owner:</i> Tiziana Ferrari
Strategic theme: Operational Infrastructure		<i>Objective:</i> Support the uniform operation of resource centres <i>Description:</i> Resource centres providing uniform operation and consistent access to services is a fundamental aspect of a transnational infrastructure.	
<i>Measure Description:</i> Provides overview how international VOs.		EGI Infrastructure is e	engaged in supporting
Lag/Lead: Lead	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> 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
<i>Target rationale:</i> Based on historical data		<ul><li><i>Initiatives:</i></li><li>1. Demonstrating Exce on EGI's shared reso</li></ul>	llent European Science urces Policy







### **Perspective: Funders**

-	Measure Number:	Measure Name:	Owner:
	12.1	Established	Sergio Andreozzi
		measurement	
		framework that will	
		track the EGI	
		contribution to EU2020	
		key flagship initiatives	
		(IU and DAE)	
Strategic theme: Commu	nity and Coordination	<b>Objective:</b> Contribute to I	EU2020 priorities
		<i>Description:</i> EGI show enabling the Digital EF strategic objectives for 20	A and other key EU 20
<i>Measure Description:</i> This measure refers to th capture EGI contribution to two key flagship init. Union of the Europe 2020 strategy. Once establishe of the progress of the planned contribution. Such a EGI Scorecard.		e establishment of a meas atives Digital Agenda for d this framework is expecte measure will be added in	surement framework to Europe and Innovation ed to generate a measure the next iteration of the
Lag/Lead: Lag	Frequency: Yearly	Unit type: Yes/No	<b>Polarity:</b> n/a
			5
Formula: Measurement f	ramework is approved by	the SPT and the Director.	
<i>Formula:</i> Measurement f <i>Data Source:</i> EGI Europe	ramework is approved by e 2020 Wiki Table	the SPT and the Director. <i>Data Collector:</i> Damir M	arinovic
Formula: Measurement f Data Source: EGI Europe Data Quality: High	ramework is approved by e 2020 Wiki Table	the SPT and the Director. <i>Data Collector:</i> Damir M <i>Collection Quality:</i> Low	arinovic
Formula: Measurement f Data Source: EGI Europe Data Quality: High Baseline: No	ramework is approved by e 2020 Wiki Table	the SPT and the Director. <i>Data Collector:</i> Damir M <i>Collection Quality:</i> Low <i>Stretch Target:</i> Yes	arinovic Ideal Target: Yes
<i>Formula:</i> Measurement f <i>Data Source:</i> EGI Europe <i>Data Quality:</i> High <i>Baseline:</i> No <i>Target rationale:</i> n/a	ramework is approved by e 2020 Wiki Table	the SPT and the Director. Data Collector: Damir M Collection Quality: Low Stretch Target: Yes Initiatives:	arinovic Ideal Target: Yes







Perspective: Funders	Measure Number:	Measure Name:	Owner:
- · · · · · · · · · · · · · · · · · · ·	13.1	Number of NGIs able to	Steven Newhouse
		demonstrate strong	
		engagement and	
		integration with the	
		'owner' or funder of	
		their national activities.	
<i>Strategic theme:</i> Commu	nity and Coordination	<i>Objective:</i> Alignment national priorities	and integration with
		Description: NGIs, by a	collaborating with EGI,
		shows a clear impact of	on contributing to their
		national e-Infrastructure	priorities
<i>Measure Description:</i> By increasing the number of integration with the 'owner' or funder of their nation governmental representative as a stakeholder in the integrated national e-Infrastructure service provide national priorities and have a greater chance of being the statement of the statemen		f NGIs able to demonstrate onal activities (e.g. by havin heir governance structure ler) the NGI is more like g sustained.	e strong engagement and ng a national ministry or or by being part of an cely to be aligned with
Lag/Lead: Lead	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive
<i>Formula:</i> Sum up the nut the 'owner' or funder of t	umber of NGIs able to den heir national activities in l	monstrate strong engageme EGI Compendium survey	ent and integration with
Data Source: EGI Compe	endium	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	Initiatives:	
on achieving the targets.		1. Provide recommendations through the EGI	
		Compendium analysi	s about importance of
		having strong links with national	
		stakeholders	
		2 Showcase EGI/NGL	value to national
		funding agency/minis	stry
		3. Evaluate/implement	EGI.eu transition plan to
		ERIC	







Perspective: Funders	Measure Number: 13.2	<i>Measure Name:</i> Number of NGIs that are recognised in their national e-Infrastructure strategies or plans	<i>Owner:</i> Steven Newhouse	
<i>Strategic theme:</i> Community and Coordination		<i>Objective:</i> Contribute to national priorities <i>Description:</i> NGIs, by collaborating with EGI, shows a clear impact on contributing to their national priorities		
<i>Measure Description:</i> By increasing number of a strategies or plans, EGI is more recognised and alig		NGIs recognised in their need to the national prioritie	national e-Infrastructure s.	
Lag/Lead: Lag	Frequency: Yearly	Unit type: Numbers	<i>Polarity:</i> High values are positive	
<i>Formula:</i> Sum up NGIs that are recognised in through EGI Compendium survey		their national e-Infrastruc	ture strategies or plans	
Data Source: EGI Comp	endium	Data Collector: Damir Marinovic		
Data Quality: Medium/N	Iedium	Collection Quality: Medium		
Baseline: 5		Stretch Target: 8	Ideal Target: 10	
<i>Target rationale:</i> EGI.eu on achieving the targets.	1 has a limited influence	<ul> <li>Stretch Target: 8 Ideal Target: 10</li> <li>Initiatives:         <ol> <li>Provide recommendations through the EGI Compendium analysis about importance of being recognised in national e-Infrastructure strategies or plans</li> <li>Showcase EGI/NGI value to national funding agency/ministry</li> <li>Evaluate/implement EGI.eu transition plan to ERIC</li> </ol> </li> </ul>		







<i>Perspective:</i> Funders	Measure Number: 14.1	<i>Measure Name:</i> Cost (in Euro) of providing the operational tools and coordination needed to ensure the operation of EGI	<i>Owner:</i> Tiziana Ferrari
Strategic theme: Operation	onal Infrastructure	Objective: Cost effective	management
		<i>Description:</i> Demonstrate the cost effective management of EGI and utilisation of its resources.	
Measure Description: Provides insight in EGI oper		ation cost efficiency and ef	fectiveness
Lag/Lead: Lead	Frequency: Yearly	<i>Unit type:</i> Euro	<i>Polarity:</i> High values are positive
Formula: Effort reported	for the SA1 EGI Global T	asks with responsibility fo	r the operational tools
Data Source: Manual		Data Collector: Malgorzata Krakowian	
Data Quality: Medium		Collection Quality: Low	
Baseline: N/A		Stretch Target: N/A	<i>Ideal Target:</i> N/A
<i>Target rationale:</i> No target is available as this is a metric used to track the cost of delivering the required services.		<ol> <li>Initiatives:</li> <li>Accurate cost assessment continues.</li> <li>Ongoing definition as services that are critice EGI</li> <li>Assessment as to how delivered more effect</li> </ol>	nent of the services nd review of the cal for the operation of v these services can be ively.







Perspective: Funders	Measure Number: 14.2	Measure Name:	Owner:
		Percentage utilisation	Tiziana Ferrari
		through EGI	
		provisioned services by	
		EGI VUS OF the job	
		siots (LCPUS) capacity	
		use	
Strategic theme: Operation	onal Infrastructure	<b>Objective:</b> Cost effective	management
		<b>Description:</b> Demonstra	the cost effective
		management of EGI	and utilisation of its
		resources.	
<i>Measure Description:</i> Provides information if infrastructures.		EGI operations tools	are useful for other
Lag/Lead: Lead	Frequency: Yearly	Unit type: Percentage	<i>Polarity:</i> High values are positive
<i>Formula:</i> (Total elapsed * (Time window))	time used by int. VOs in t	he time window) / ((Total )	LCPU available in EGI)
Data Source: Accounting	g portal	Data Collector: Malgorza	ata Krakowian
Data Quality: Medium		Collection Quality: Medium	
Baseline: /		Stretch Target: /	Ideal Target: /
Target rationale:		Initiatives:	
Demonstrate the use of t	he resources within EGI	1. Improvements in the accounting system to	
coming from the NGIs.		accurately track jobs that fail or are killed.	
		2. Accurate recording a submitted jobs.	nd integration of locally







### **Perspective: Income**

Perspective: Income	Measure Number:	Measure Name:	Owner:
	15.1	Total national funding	Steven Newhouse
		operation and	
		replacement of the	
		physical resource	
		infrastructure	
<i>Strategic theme:</i> Commu Virtual Research Environ	nity and Coordination & ments	<i>Objective:</i> Achieve conational funding	ontinued European &
		Description: The EGI eco	osystem is able to attract
		funding for continued o	peration, investment in
		physical resources and in research environments the	nnovation in the virtual
		it.	lat are deployed within
<i>Measure Description:</i> The physical resource infrassets.	e most acknowledged sour astructure is through natio	rce of funding for the opera nal funding as it impacts th	ation and replacement of ne national infrastructure
I ag/I ead · I ag	Frequency. Yearly	<i>Unit type</i> • Number	Polarity High values
Ing/Leun. Lag	Trequency: Tearry		are positive
<i>Formula:</i> Sum up nation resource infrastructure	nal funding for NGIs fo	r the operation and repla	cement of the physical
Data Source: EGI Compo	endium	Data Collector: Damir Marinovic	
Data Quality: Medium		Collection Quality: Medium	
<i>Baseline:</i> To be evaluated Compendium	tted with the next EGI	Stretch Target: /	Ideal Target: /
Target rationale: EGI.eu	has a limited influence	Initiatives:	
on achieving the targets.		1. Showcase EGI/NGI value to national	
Demonstrate the in-kind contribution being made		funding agency/ministry	
by NGIs/EIROs towards EGI		2. Participate in national funding calls for	
		projects	







Persnective · Income	Measure Number: 15 2	Measure Name	Owner.	
	111045410 114440011 1012	Total national funding	Steven Newhouse	
		for the staff needed to		
		operate and provide		
		technical outreach.		
<i>Strategic theme:</i> Community and Coordination &		Objective: Achieve continued European &		
Virtual Research Environments		national funding		
		Description: The EGI ecosystem is able to		
		attract funding for continued operation,		
		in the virtual research environment that are		
		deployed within it.		
<i>Measure Description:</i> The most acknowledged source of funding for the staff needed to operate an provide technical outreach is through national funding as it impacts the national human capital. Th will enable continuity of high quality staff within NGIs and securing their long-term perspective well as further efforts in technical outreach.				
<i>Lag/Lead:</i> Lag	Frequency: Yearly	Unit type: Number	<i>Polarity:</i> High values are positive	
Lag/Lead: Lag Formula: Sum up nationa	<i>Frequency</i> : Yearly al funding for the staff nee	<i>Unit type:</i> Number ded to operate and provide	<i>Polarity:</i> High values are positive technical outreach	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe	<i>Frequency</i> : Yearly al funding for the staff nee- endium	<i>Unit type:</i> Number ded to operate and provide <i>Data Collector:</i> Damir M	<i>Polarity:</i> High values are positive technical outreach larinovic	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium	<i>Frequency</i> : Yearly al funding for the staff nee endium	Unit type: Number ded to operate and provide Data Collector: Damir M Collection Quality: Medi	Polarity: High values are positive technical outreach Iarinovic	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua	<i>Frequency</i> : Yearly al funding for the staff nee endium	Unit type: Number ded to operate and provide Data Collector: Damir M Collection Quality: Medi Stretch Target: /	Polarity:       High values are positive         technical outreach       Iarinovic         fum       Ideal Target: /	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium	<i>Frequency</i> : Yearly al funding for the staff nee- endium ated with the next EGI	Unit type: Number ded to operate and provide Data Collector: Damir M Collection Quality: Medi Stretch Target: /	Polarity:       High values are positive         technical outreach       Iarinovic         Jum       Ideal Target: /	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium Target rationale: EGI.eu	<i>Frequency</i> : Yearly al funding for the staff nee endium ated with the next EGI a has a limited influence	Unit type: Number ded to operate and provide Data Collector: Damir M Collection Quality: Medi Stretch Target: / Initiatives:	Polarity: High values are positive technical outreach larinovic tum Ideal Target: /	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium Target rationale: EGI.eu on achieving the targets.	<i>Frequency</i> : Yearly al funding for the staff nee endium ted with the next EGI has a limited influence	Unit type: Number ded to operate and provide Data Collector: Damir M Collection Quality: Medi Stretch Target: / Initiatives: 1. Showcase EGI/NGI w	Polarity:       High values are positive         technical outreach       Iarinovic         Jum       Ideal Target: /         value to national       Iarinoal	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium Target rationale: EGI.eu on achieving the targets.	<i>Frequency</i> : Yearly al funding for the staff nee- endium ated with the next EGI a has a limited influence	Unit type: Number ded to operate and provide Data Collector: Damir M Collection Quality: Medi Stretch Target: / Initiatives: 1. Showcase EGI/NGI w funding agency/minis	Polarity:       High values are positive         technical outreach       Iarinovic         tum       Ideal Target: /         value to national stry       Ideal Stry	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium Target rationale: EGI.eu on achieving the targets.	<i>Frequency</i> : Yearly al funding for the staff nee endium ted with the next EGI t has a limited influence	<ul> <li>Unit type: Number</li> <li>ded to operate and provide</li> <li>Data Collector: Damir M</li> <li>Collection Quality: Medi</li> <li>Stretch Target: /</li> <li>Initiatives:</li> <li>1. Showcase EGI/NGI v</li> <li>funding agency/minis</li> <li>2. Participate in nationa</li> </ul>	Polarity:       High values are positive         technical outreach       Itechnical outreach         Iarinovic       Itechnical outreach         Ideal Target:       /         value to national       Itechnical outreach         stry       I funding calls for	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium Target rationale: EGI.eu on achieving the targets.	<i>Frequency</i> : Yearly al funding for the staff nee- endium ited with the next EGI i has a limited influence	<ul> <li>Unit type: Number</li> <li>ded to operate and provide</li> <li>Data Collector: Damir M</li> <li>Collection Quality: Medi</li> <li>Stretch Target: /</li> <li>Initiatives:</li> <li>1. Showcase EGI/NGI v</li> <li>funding agency/minis</li> <li>2. Participate in nationa projects</li> </ul>	Polarity:       High values are positive         technical outreach         Iarinovic         Jum         Ideal Target:         value to national         stry         1 funding calls for	
Lag/Lead: Lag Formula: Sum up nationa Data Source: EGI Compe Data Quality: Medium Baseline: To be evalua Compendium Target rationale: EGI.eu on achieving the targets.	<i>Frequency</i> : Yearly al funding for the staff nee- endium ited with the next EGI i has a limited influence	<ul> <li>Unit type: Number</li> <li>ded to operate and provide</li> <li>Data Collector: Damir M</li> <li>Collection Quality: Media</li> <li>Stretch Target: /</li> <li>Initiatives: <ol> <li>Showcase EGI/NGI v</li> <li>funding agency/minis</li> <li>Participate in national</li> <li>projects</li> <li>Establish a national O</li> </ol> </li> </ul>	Polarity: High values are positive         technical outreach         Iarinovic         Jum         Ideal Target: /         value to national         stry         1 funding calls for         Champions scheme	







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







Perspective: Income	Measure Number: 16.1	<i>Measure Name:</i> The percentage of funds coming from inside the community that is needed to deliver the coordinated operation of the EGI Global services	<i>Owner:</i> Steven Newhouse	
Strategic theme: Operational Infrastructure		<i>Objective:</i> Achieve community funding for continued operation <i>Description:</i> 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.		
<i>Measure Description:</i> Increased percentage of funds coming from the community demonstrates capability of not being dependent of funding sources outside the community (e.g. the EC funding).				
Lag/Lead: Lag	Frequency: Yearly	Unit type: Percentage	<i>Polarity:</i> 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		
<b>Baseline:</b> To be evaluated with the next EGI Compendium		Stretch Target: /	Ideal Target: /	
<i>Target rationale:</i> Demonstrate the willingness and ability of the EGI Community to support the required services.		<ul> <li><i>Initiatives:</i></li> <li>1. Complete analysis on EGI Global Service evolution and related mapping to the funding streams</li> </ul>		