EUROPEAN MIDDLEWARE INITIATIVE

DNA1.2.1 - SERVICE LEVEL AGREEMENT TEMPLATE

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Abstract:
This deliverable provides the general Service Level Agreement template used as the basis to negotiate SLAs with EGI, PRACE and other infrastructure providers. It contains a clear definition of what categories of services EMI provides (support, software products releases, consultancy, training, etc.) and how the EMI services can be evaluated to respond to the criteria of 'fit for purpose' and 'fit for use'. The template will be revised when major changes occur and at least every 12 months.

Delivery Slip

	Name	Partner / Activity	Date	Signature
From	Alberto Di Meglio	CERN/NA1	29/09/2010	
Reviewed by				
Approved by				

Document Log

Issue	Date	Comment	Author / Partner
0.1	14/07/2010	Table of Content	Alberto Di Meglio
0.2	31/08/2010	Added sections 3 and 4 and template and Conclusions	Alberto Di Meglio
0.3	03/09/2010	Revised references, added text in section 4 and added Conclusions	Alberto Di Meglio
0.4	27/09/2010	Use new format for SLA Template after revision with legal experts	Alberto Di Meglio
0.5	29/09/2010	Updated definitions in template appendix	Alberto Di Meglio
0.6	17/11/2010	Revised version after reviewers' comments	Alberto Di Meglio

Document Change Record

Issue	Item	Reason for Change

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1. INTRODUCTION

1.1. PURPOSE

This document describes the purpose and features of the EMI Service Level Agreement strategy and provides a generic template to be used when negotiating specific SLAs with EMI Customers. This document applies to all services provided by EMI to external Customers.

1.2. DOCUMENT ORGANISATION

This document is organized as follows:

Chapter 1 - Introduction: this section, explaining the purpose, scope and organization of the document.

Chapter 2 - Executive Summary: this section contains a high-level description of the document. It gives a summary of the most important points described in each main section.

Chapter 3 - SLA-Based Service Provision: this section describes the principles of SLA-based service provision following industry-standard guidelines from ITIL and CMMI. It introduces the main concepts and definitions and the typical usage patterns.

Chapter 3 - The Main Elements of the EMI SLA: this section describes in more detail each of the major elements of the EMI SLA template with examples of the information to be provided and the expected roles and actions involved.

Chapter 5 - Conclusions: a brief description of the outcome, consequences or further work to be done beyond the work described in the document.

Appendix A: the EMI SLA Template

Comment [p1]: I would remove two colon in the same sentence in this section. Maybe a '-' as done later on in the document.

Comment [ADM2R1]: Done

1.3. REFERENCES

R1	Setting Expectations in SaaS, SIIA, February 2007 http://www.l2soft.com/docs/saas_sla_wp_07.pdf
R2	The Service Level Agreement Zone (http://www.sla-zone.co.uk)
R3	The EMI Project Description of Work, EMI, April 2010 https://twiki.cern.ch/twiki/pub/EMI/EmiDocuments/EMI-Part_B_20100624-PUBLIC.pdf
R4	DSA1.1 - Software Maintenance and Support Plan, EMI, November 2010 http://cdsweb.cern.ch/record/1277556
R5	DNA2.1 – EMI Collaboration Programs, November 2010 https://twiki.cern.ch/twiki/bin/view/EMI/DeliverableDNA211

1.4. DOCUMENT AMENDMENT PROCEDURE

This document can be amended by the EMI Service Level Agreement Manager (currently the Project Director) further to any feedback from other teams or people. Minor changes, such as spelling corrections, content formatting or minor text re-organisation not affecting the content and meaning of the document can be applied by the EMI Service Level Agreement Manager without peer review. Other changes must be submitted to peer review and to the EMI CB and PEB for approval.

When the document is modified for any reason, its version number shall be incremented accordingly. The document version number shall follow the standard EMI conventions for document versioning. The document shall be maintained in the CERN CDS repository and be made accessible through the OpenAIRE portal.

It is already foreseen that this document and the annexed SLA Template will be revised once per year following feedback from the actual establishment of SLAs with key Customers. The SLA Template will follow the same amendment procedures as the main document. The SLAs based on this template can be revised following the specific SLA amendment procedure described in the SLA Template itself.

1.5. TERMINOLOGY

CMMI	Capability Maturity Model Integration, a process improvement approach that provides organizations with the essential elements of effective processes that ultimately improve their performance - http://www.sei.cmu.edu/cmmi
EGI	European Grid Infrastructure – http://www.egi.eu
EMI	European Middleware Initiative – http://www.eu-emi.eu
IGE	Initiative for Globus in Europe (http://www.ige-project.eu)
ITIL	Information Technology Infrastructure Library, the most widely adopted approach for IT Service Management in the world. It provides a practical, no-nonsense framework for identifying, planning, delivering and supporting IT services to the business - http://www.itil-officialsite.com/home/home.asp
ITSM	Information Technology Service Management, it employs ITIL documented best practices and in most cases extends beyond into additional areas such as enhanced processes and implementation to provide additional value-added functionality - http://www.itsm.info/ITSM.htm
PRACE	Partnership for Advanced Computing in Europe, a unique persistent pan-European Research Infrastructure for High Performance Computing (HPC) - http://www.prace-project.eu/
SaaS	Software as a Service, software that is deployed over the internet and/or is deployed to run behind a firewall on a local area network or personal computer by a service provider without the need for the user to deploy or maintain it
SIIA	Software and Information Industry Association - http://www.siia.net
SLA	Service Level Agreement, a part of a service contract where the level of service is formally defined
SLM	Service Level Management, the process responsible for negotiating Service Level Agreements and ensuring that these are met
SLR	Service Level Requirements, document recording the business requirements for an IT Service
SLT	Service Level Target, a commitment documented in a Service Level Agreement. Service Level Targets are based on Service Level Requirements, and are needed to ensure that the IT Service design is Fit for Purpose

2. EXECUTIVE SUMMARY

The EMI project brings together all key European middleware providers and carries out the collective task of supporting and maintaining the middleware for EGI, PRACE and their user communities from its very first day of existence. Starting from existing services already deployed in production infrastructures, EMI support and maintenance efforts will gradually shift to its new and improved services.

Infrastructures like EGI, PRACE and other European distributed computing and data infrastructures provide growing communities of researchers with sustainable and reliable services in their daily work. The middleware services play an important role in this context and must mark a clear transition from ad-hoc development, maintenance and support models to more standard, sustainable and professional models by adopting best-practice service provision methods as the ITIL processes or the CMMI guidelines.

Repositories of packages, reports, quality metrics and test and compliance programs must be created and maintained in support of the project software engineering activities and to other providers of applications and services based on the EMI middleware.

Particular focus is therefore put by EMI on supporting and maintaining its software services, both reactively by fixing software defects with SLA-based response times and quality attributes and proactively by monitoring and enhancing the services reliability, usability and scalability anticipating the usage trends in close collaboration with EGI, PRACE and the user communities.

This document describes the overall principles of the EMI Service Level Agreement strategy. It starts by describing the general principles and best practices in standard SLA-based service provision, then highlights the main service items covered by the EMI SLA and the associated quality attributes. Finally, it provides a generic template based on the described principles to be used when negotiating specific SLAs with external Customers

3. SLA-BASED SERVICE PROVISION

A service level agreement (generally abbreviated in SLA) is a negotiated agreement between two parties where one is the Customer and the other is the Service Provider. The SLA records a common understanding about the provided service, the defined priorities, the responsibilities of the parties, the guarantees, and the warranties associated with the service.

SLAs must contain clearly defined levels of service; these levels must be capable of measurement, and they must be directly relevant to the effective performance of the service supplier. The SLA may specify the levels of availability, serviceability, performance, operation, or other attributes of the service, such as billing. The "level of service" can also be specified as "target" and "minimum," which allows Customers to be informed about what to expect (the minimum), whilst providing a measurable (average) target value that shows the level of organization performance. In some contracts, penalties may be agreed upon in the case of non-compliance of the SLA. However this is not a mandatory element of an SLA. It is important to note that the "agreement" relates to the service the Customer receives, and not how the service provider delivers that service, which is defined by different agreements (service specifications). The linked concept of Service Level Management (or 'SLM') arises from the idea that, if an organisation has agreed levels of service, there should also be an agreed method of monitoring performance, of dealing with exceptions and changes, or in other words, with managing the service.

SLAs have been used since late 1980s by fixed line telecom operators as part of their contracts with their corporate Customers. This practice has spread such that now it is common for a Customer to engage a service provider by including a service-level agreement in a wide range of service contracts in practically all industries and markets. Internal departments (such as IT, HR, and Real Estate) in larger organization have also adopted the idea of using service-level agreements with their "internal" Customers that is users in other departments within the same organization (Operational Level Agreements, or OLAs). One benefit of this can be to enable the quality of service to be benchmarked with that agreed to across multiple locations or between different business units. This internal benchmarking can also be used to market test and provide a value comparison between an in-house department and an external service provider.

Service Level Agreements are a key method within ITIL and IT Service Management (ITSM) for setting out how two parties have agreed that a specific service (usually, but not necessarily, IT-related) will be delivered by one to the other, and the standards or levels to which it will be delivered.

Traditionally, SLAs have not been applied to software providers, since they usually provide products and not services in a strict sense. However, with the advent of distributed computing, grid computing, cloud computing and on-demand software provision, the need for more accountable methods of providing end-to-end software services including clear quality levels of maintenance and support has arisen. A report published in 2007 [R1] by the Software and Information Industry Association (SIIA) Software Division has highlighted this need and described the general principles of application of SLAs to software providers in the context of what is called Software as a Service (SaaS) provisioning model.

3.1. MAIN CONCEPTS AND ELEMENTS OF AN SLA

The ITIL best practices describe a **service** as "*a means of delivering value to Customers by facilitating Outcomes Customers want to achieve without the ownership of specific Costs and Risks*." In order to provide such a service and make sure it is not only "*fit for use*", but also "*fit for purpose*", ITIL requires a set of **service levels** to be associated to the service. A service level is a "*measured and reported achievement against one or more Service Level Targets*" negotiated and agreed between the provider and the Customer in the Service Level Agreement.

The typical SLA document is divided into **segments**, each one describing a different aspect of the service to be provided and the associated quality attributes and targets [R2]. The most typical segments are for example a definition of the service, performance targets and measurement methods, incident and problem management, Customer responsibilities, warranties and remedies, security, disaster recovery, and termination of agreement.

The process responsible for negotiating Service Level Agreements and ensuring that these are met is called the **Service Level Management** Process (or SLM). SLM is responsible for ensuring that all "*Service Management Processes, Operational Level Agreements, and Underpinning Contracts, are appropriate for the agreed Service Level Targets*". SLM monitors and reports on Service Levels, and holds regular Customer reviews and internal audits.

An **incident** is defined as "*an unplanned interruption to a Service or a reduction in the Quality of a Service*" based on the targets defined in the SLA. The process of receiving and handling incidents is called **Incident Management** and is performed by means of the **Service Desk** function, a single Point of Contact for users to report incidents and submit requests.

3.2. MAPPING THE ITIL BEST PRACTICES ONTO EMI

The EMI project is committed to adopt best practice processes in support to its software development and maintenance activities. EMI is not an SaaS in the strict sense of the term, since it does not run the software services for its Customers. However, it has a close relationship with the major infrastructure projects like EGI and PRACE and it is part of a larger ecosystem that ultimately must indeed deliver distributed computing and data management services on demand.

The establishment of clear SLAs with the infrastructure project and with the user communities developing scientific applications based on the EMI middleware is therefore a critical step in the direction of creating a professional, sustainable environment.

The EMI project is composed of the following Work Packages [R3]:

NA1 - Administrative and Technical Management has the responsibility to put in place and run the project management, execution structure and the required decision and communication mechanisms. It provides administrative and technical management of the consortium of beneficiaries, supervises and guides the overall execution of the project program of work, defines and enforces the overall quality assurance procedures, maintains the relationships with the European Commission and other decision-making bodies and represents the project vision and mission in European and international initiatives. NA1 also works in close collaboration with NA2 on the dissemination tasks, making sure that EMI maintains a high profile, is well represented in key events and is reaching out to new collaborations.

NA2 - Outreach and Collaborations is the Work Package focusing on the organization of dissemination and training events and is responsible for the overall management of collaboration programs with external entities, like EGI, PRACE, the standardization bodies, user communities and industrial companies and other FP7 and ESFRI projects. NA2 has the responsibility to create and promote the EMI brand either directly or in collaboration with other projects and to put in place mechanisms to ensure a continuous and efficient flow of information between EMI and the users (infrastructures and communities) and coordinate the project knowledge exploitation plans.

SA1 - Maintenance and Support owns the EMI production releases and the associated transition and support procedures. It provides coordination of the EMI user support activities (expert 3rd-level support), and is responsible for the reactive maintenance (software defects fixes) of the EMI services and Components. SA1 works closely with SA2 (Quality Assurance) to implement and execute the release configuration management process, the acceptance criteria validation process and the correct application of Service Level Agreements. SA1 contributes to the dissemination and training activities

defined by NA2 by providing technical expertise, especially in the use of the project results by third-parties, such as users, system and service administrators, application developers and operating systems maintainers.

SA2 - Quality Assurance defines and monitors the software engineering and quality assurance process for all EMI engineers and developers and for external interested third parties. SA2 works in close relationship with the other technical Work Packages to make sure that the QA processes and procedures are shared, understood and applied by all members of the project. It has explicit endorsement from the EMI management to identify actual or potential issues and make sure that adequate corrective actions are taken by the development teams. SA2 works in collaboration with EGI (via the EGI SA2 - Middleware Unit Work Package and the MCB) and other DCIs technical personnel to identify and monitor acceptance criteria used to establish and enforce Service Level Agreements. SA2 is also responsible to coordinate the availability of testbeds for software build and test operations using resources provided by the project beneficiaries or with collaborating resource providers (NGIs, third-party projects, etc).

JRA1 – Middleware Development, Evolution and Integration is responsible to implement the project development plans, by consolidating and standardizing the middleware Components, performing proactive maintenance to improve reliability, performance and usability of Components according to agreed requirements, and developing the new functionality required for the project to achieve its technical objectives. JRA1 is also responsible to define and implement the integration, interoperability and standardization specifications, receives overall technical guidance from the Project Technical Board and interacts with SA2 for the execution of the QA procedures.

Comment [p3]: No colon in previous items

Comment [ADM4R3]: Fixed

The definition, management and monitoring of the EMI SLA is mapped onto tasks from NA1, SA1 and SA2 in the following way:

NA1: this WP is the owner of the **Service Level Management** process. It is responsible to define with the Customers the **Service Level Requirements** (SLRs), negotiate the **Service Level Targets** (SLTs) and manage the **Service Level Agreements** (SLAs), periodically revising them together with the Customers to make sure they always meet the expectation and deliver value.

SA1: this WP is responsible for the EMI **Service Desk** function and the **Incident Management** and **Release Management Processes**, which are critical parts of the SLA, since release of software distributions and user support are essentially the services that are regulated by the EMI SLA. It is also responsible to define and collect the service metrics used to measure the performance of the service provision.

SA2: this WP is the owner of the **Continual Improvement Process** and is responsible to define the software development metrics used to monitor the performance of the software development process. The metrics are collected by the individual EMI product teams as part of the development (JRA1) and maintenance (SA1) activities, digested by SA2 in consolidated reports and passed to NA1 for defining and enforcing any required improvement action.

The Service Desk function in EMI is implemented using the GGUS system as part of a wider user support strategy involving the National Grid Infrastructures, the major Distributed Computing Infrastructures (EGI and PRACE) and the software providers (EMI, IGE and others). In this context, the EMI Service Desk can be used as expert third-level support for EGI and PRACE or as initial entry point for users that are not part of the large research infrastructure ecosystem, although this is expected to be a minor case. More information on the EMI User Support strategies is available in the deliverable DSA1.1 - Software Maintenance and Support Plan [R3].

4. THE EMI SLA

The EMI SLA is composed of a number of sections describing the service provided and the terms under which such service is provided. A general SLA template is available in Appendix A and will constitute the base for negotiation of specific SLAs with EMI Customers and users.

The following sections describe the purpose and scope of each segment in the SLA template together with some typical example of usage when required.

4.1. AGREEMENT OVERVIEW

A general description of the scope and context of the Agreement.

4.2. GOALS AND OBJECTIVES

A description of the agreed purpose of the Agreement as understood by the two parties.

4.3. STAKEHOLDERS

Definitions of the two parties entering into this Agreement.

4.4. TERM, TERMINATION AND AMENDMENTS

This section defines the terms of service provisions and the agreed procedures to terminate and amend the Agreement from either Party

4.5. SERVICE AGREEMENT

This section describes the conditions under which the SLA is established. It is divided in a number of subsections:

1) The list of services covered by the SLA and references to documents describing the details of the services.
2) The description of the responsibilities of EMI as service provider and of the Customer.
3) The general assumptions and conditions under which the SLA is applicable.

4.6. SERVICE MANAGEMENT

This section describes the agreed levels of service for each of the services covered by the SLA and the methods by which the levels are monitored and reported to the Customer.

4.7. SECURITY AND CONFIDENTIALITY

This section contains a standard confidentiality clause in case the Customer requires it. It may specify non-disclosure conditions and penalties in case of breach.

4.8. LIMITATION OF LIABILITY

A default limitation of liability clause.

4.9. MISCELLANEOUS

Any other contractual clause that does not fit in previous sections, like “Force Majeur”, “Assignment” and “Entire Agreement” clauses.

4.10. OFFICE LOCATIONS

Details of the EMI locations and web sites.

4.11. COMMUNICATION

Names and contact details of authorized people to be contacted in case of issues or questions about the SLA.

4.12. SIGNATURES

Official signatures of the EMI SLA Manager and the Customer authorized representative with powers to enter into this Agreement.

5. CONCLUSIONS

The principles set forward in this document and the template reported in Appendix A constitute the base for negotiation of Service Level Agreements with EMI Customers and partners. The main targets of the EMI Support Services are Distributed Computing Infrastructure (DCI) initiatives like the EGI and PRACE projects. Additional SLAs can be signed with specific communities as part of the EMI Collaboration Programs as described in DNA2.1 – Collaboration Programs [R4].

The first SLAs will be signed with the European Grid Infrastructure in September 2010 after detailed negotiations with the EGI Operations and Software Roll-Out managers. The SLAs will be periodically revised to take into account their dynamic operational nature and any changed conditions in the delivery of the EMI Services.

Additional, more commercial aspects will also be taken into account as necessary and as the EMI exploitation plans take form and are implemented during the project lifetime.

APPENDIX A: THE SERVICE LEVEL AGREEMENT TEMPLATE

European Middleware Initiative

Service Level Agreement

For the Provision of Software and Support Services

Effective Date: 17 November 2010

Version

Version	Date	Description	Author
1.0	29-09-2010	Service Level Agreement	

Approval

(By signing below, all Approvers agree to all terms and conditions outlined in this Agreement.)

Approvers	Role	Signed	Approval Date
EMI	SLA Manager		
Customer	Customer Role		

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1. AGREEMENT OVERVIEW

This Agreement represents a Service Level Agreement ("SLA" or "Agreement") between the European Middleware Initiative (EMI) project and <Customer> for the provisioning of Software Development and Support (SDS) services required to support and sustain the <Customer Product or service>.

This Agreement remains valid until superseded by a revised agreement mutually endorsed by the stakeholders.

This Agreement outlines the parameters of all SDS services covered as they are mutually understood by the primary stakeholders. This Agreement does not supersede current processes and procedures unless explicitly stated herein.

2. GOALS & OBJECTIVES

The purpose of this Agreement is to ensure that the proper elements and commitments are in place to provide consistent SDS service delivery to the Customer by the Service Provider.

The goal of this Agreement is to obtain mutual agreement for SDS service provision between the Service Provider and Customer.

The objectives of this Agreement are to:

- Provide clear reference to service ownership, accountability, roles and/or responsibilities.
- Present a clear, concise and measurable description of service provision to the Customer.
- Match perceptions of expected service provision with actual service support and delivery.

3. STAKEHOLDERS

The following Service Provider(s) and Customer(s) will be used as the basis of the Agreement and represent the primary stakeholders associated with this SLA:

Service Provider(s): EMI. ("Provider")

Customer(s): <Customer> ("Customer")

4. TERM, TERMINATION AND AMENDMENTS

This Agreement is valid from the Effective Date outlined herein for a maximum period of 36 months and in any case not beyond the end date of the EMI Project on 30 April 2013. This Agreement should be reviewed at a minimum once per year; however, in lieu of a review during any period specified, the current Agreement will remain in effect.

Should they wish to terminate the Agreement before its expiration date, the Customer will inform EMI in writing with 30 days notice. Similarly, EMI will inform the Customer in writing with 30 days notice should they wish to terminate the Agreement before its expiration date. EMI can terminate the contract if the Customer does not apply reasonable effort in fulfilling their responsibilities as specified in section 5.2 (Customer Responsibilities).

The Service Level Agreement Manager is responsible for facilitating regular reviews of this document. This Agreement and the related EMI Support Plan offering details are operational in nature and may be modified at any time by EMI. EMI will take appropriate measures to inform the Customer of modifications and will give the Customer the right and window of time to review any proposed change, discuss it with EMI, and terminate the relationship if all parties cannot abide by the revisions. The new revision of this Agreement supersedes any previous service level agreements, which are considered expired.

Service Level Agreement Manager: EMI SLA Manager

Review Period: Yearly (12 months)

Previous Review Date:

Next Review Date:

5. SERVICE AGREEMENT

The following detailed service parameters are the responsibility of the Service Provider in the ongoing support of this Agreement.

5.1. SERVICE SCOPE

The following Services are covered by this Agreement:

Comment [p5]: Check for consistency in using capitalized initial for 'service'. Same for 'customer', 'problem', 'component' and 'product'.

Comment [ADM6R5]: Done, all terms have been capitalized except for the following distinction:
Service: a service provided by EMI and to which this SLA can be applied
service: an EMI middleware service

- Requirements Prioritization
- Quarterly Requirements tracking Reports
- Software acceptance Tests Reports for Major Releases
- Web-based Support
- Monitored email support

Details of the Services can be found in the EMI User Support Plan at

http://www.eu-emi.eu/support/EMI_Support_Plan.pdf

5.2. CUSTOMER RESPONSIBILITIES

5.2.1 Staffing

All Customer personnel contacting EMI for Support must be fully trained on both the Major Release of the EMI Components and the current issue with which the Customer requires assistance.

5.2.2 Named Designated Contacts

The Customer agrees that contact with EMI will be through the specified Designated Contacts. The Customer is responsible for specifying and updating valid Designated Contacts with person-specific email addresses. Designated Contacts can be contacted by EMI management to discuss any escalation issues or other issues related to the fulfillment of the present SLA.

5.2.3 Network Access

To the extent possible, and as requested by EMI, the Customer understands that it may be necessary to provide EMI or its authorized Technical Experts access to the affected network environment for any Severity 1 issue, or when EMI determines that its Technical Experts need to access the Customer network in order to remotely diagnose an issue. The Customer understands that if access is not provided as requested by EMI, problem determination will be slower or impaired.

5.2.4 System Information

Upon request the Customer must provide EMI with information on the Customer system, including the list of installed EMI Components, their version, the Operating System and other installed software.

5.2.5 Backup and Removal of Data and Software

To reconstruct lost or altered files, data, or programs, the Customer must maintain a separate backup system or procedure that is not dependent on the EMI Products under Support.

Where applicable, before installing workarounds, fixes or updated software, the Customer agrees to:

(a) backup and secure all programs and data contained in the system (hardware or virtual machine) running the affected EMI Services;

(b) update or roll-back any third-party program used by the EMI Products, but having different version than the one specified in the current Product requirements.

5.2.6 On-site Access

Where applicable, the Customer agrees to provide EMI Technical Experts or Support Managers with sufficient and safe access to the Customer facilities in order to permit EMI to fulfill its obligations.

5.3. SERVICE PROVIDER RESPONSIBILITIES

A description of EMI Support offerings is given in the general EMI Support Plan. The latest version of the Support Plan can be downloaded from the EMI web site at:

http://www.eu-emi.eu/support/EMI_Support_Plan.pdf

Upon the Customer and EMI acceptance of this SLA, the Customer will be entitled to receive Support according to the features and benefits provided under those offerings, subject to the terms and conditions of this Agreement.

5.3.1 Technical Support

For Customers covered under a valid EMI Support offering, technical support will be provided pursuant to the terms of the EMI Support Plan. EMI agrees to provide support, where appropriate, to the Customer, which may include but is not limited to, the following actions:

(a) Provide the Customer with access to Product update releases, related Documentation and knowledge articles, upon general public release;

(b) Provide the Customer with access to Technical Experts, who will work with him to diagnose issues, and provide Problem Resolutions, including escalating the issue through EMI management as needed.

5.3.2 Support Lifecycle.

(a) EMI provides support on the current EMI Major Releases and the current Components Releases of all the software Products listed in the EMI Products Catalogue. EMI will also provide reasonable technical assistance on all its software Products during their lifetime, starting from the General Availability date of the Products first Major Release version. Problem Resolution may be limited to the current Major Release of Product.

(b) EMI ends software support for a Major Release version when the second subsequent Major Release has been released. EMI will provide End-of-Support notification for discontinued software to the Customer through an announcement posted on the EMI website at URL:

http://www.eu-emi.eu/services/lifecycle/support_periods.htm

(g) EMI reserves the right to modify its Support Lifecycle policy at any time; changes will be presented to the Customer at least 6 months in advance. Notifications regarding changes in policy will also be posted on the website.

5.3.3 Nonconformance

If EMI determines the problem is due to nonconformance to published specifications of a software version, or another substantial EMI related Problem, then under the EMI Support Plan, EMI shall provide any software workaround for the reported nonconformance that may be available at the time the Problem is reported. If there is no such available workaround, EMI will use reasonable efforts to remedy such nonconformance and restore the Service, which may include temporary fix to the software. Permanent fixes will be provided in subsequent official public releases according to the priority of the Problem.

5.3.4 Exclusions.

Support does not include the following items or actions:

(a) Step-by-step installation of the software;

(b) Onsite activities;

(c) Altered, damaged, or modified Products and software code;

(d) Product Problems caused by Customer negligence, misuse, or misapplication, use of the Product other than as specified in the EMI Product documentation, or in any other case beyond the control of EMI;

(e) Products not installed from one of the EMI official or approved distribution channels.

(f) Products that are past their End-of-Support date, as provided in Section 5.3.2 above.

Comment [p7]: Check for consistency in use of dash in 'End of Support'.

Comment [ADM8R7]: Added dashes in all occurrences of the terms

Support for the above listed items can be provided on a best effort basis by the EMI Technical Experts, but it is not part of the EMI Support Plan offerings, is not covered by this SLA and does not have to fulfill any agreed Service Level.

5.3.5 Reporting Non-EMI Errors to the Customer

Upon working the Service Request under normal processes, and with appropriate management review, if at that point EMI believes that a Problem reported by the Customer may not be due to an error in the EMI Products, EMI will notify the Customer. At that time, the Customer may: (a) ask EMI to proceed with problem determination outside the terms of this SLA; or (b) instruct EMI that they do not wish the Problem pursued further.

If the Customer requests that EMI proceed with problem determination, the terms and scope of the work to be performed will be negotiated on a case by case basis outside this SLA. EMI reserves the right to deny support or to charge any associated non-labour cost (travel expenses, subsistence, or material) to the Customer. If the Customer instructs EMI that they do not wish the Problem pursued further by EMI, EMI may, at its sole discretion, investigate independently the anomaly with no liability thereof.

5.4. SERVICE ASSUMPTIONS

EMI provides technical support to users of its publicly released Components. The support provided by EMI is typically at “expert level” and it is directed at handling incidents that lower level support desks within the Customer Organization could not solve without changing the Component source code or by applying known workarounds. The Technical Support and Escalation Procedures are described in the EMI Project Support Plan. The latest version of the Support Plan can be downloaded from the EMI web site at:

http://www.eu-emi.eu/support/EMI_Support_Plan.pdf

User support is provided via the GGUS portal (see section 5.4.1, Web-based Support), which is the single point of contact for users to access the EMI Service Desk. The EMI Service Desk within GGUS is organized in Support Units. Every Support Unit is responsible for one or more Components. The number and definition of the EMI Support Units in GGUS is not regulated by this SLA and can change at any time to fulfil the EMI Incident and Problem Management requirements.

Incidents are analysed by the EMI Technical Experts to identify the Problem or Problems that have caused them. If available, suitable workarounds are proposed to restore the Service to its agreed level as soon as possible. If the incident is

caused by Problems in the software and a change is required, a software defect report is filed by the EMI Technical Experts in one of the EMI defect tracking systems and a change request is produced and scheduled for a future release depending on the Problem priority. The priority levels and their relationship with the Problem impact and severity are defined in Appendix: Definitions, the agreed response policies are defined in section 6 (Service Management).

This Service Level Agreement applies to Services provided by EMI for any Component making part of the EMI Product Catalogue. Conversely, the Product Catalogue lists all software Components that at any given time are supported by EMI. Components can be deprecated and removed from the Product Catalogue and new Components can be added during the lifetime of EMI according to the procedures described in the EMI Support PIan and the terms described in this SLA in section 5.3.2 (Support Lifecycle).

5.4.1 Web-based Support

EMI web-based Support is available through GGUS at:

https://gus.fzk.de/pages/home.php

It provides the Customer with access to EMI support via the Customer GGUS-based escalation process or via approved third-party organizations acting as first and second level support. EMI always provides expert third-level technical support.

The public EMI web site at:

http://www.eu-emi.eu

provides the Customer with:

(a) Product documentation, release notes, troubleshooting guides and technical white papers about EMI software Products, as releases become publicly available. Technical previews can also be obtained if the Customer is additionally subscribing to the 'Works with EMI' technical program.

(b) Software Downloads, a public repository of all publicly available EMI Components releases, fixes, workarounds and utilities. Technical previews can also be obtained if the Customer is additionally subscribing to the 'Works with EMI' technical program.

(c) Product Forums, containing shared knowledge of EMI Products and solutions within an online community of Customers, user communities, technical partners and EMI developers, as well as news on EMI Products and technologies. Support Customers can view and post on the discussion threads in all Forums.

5.4.2 Contact Technical Experts

Direct access to EMI Technical Experts is provided on a best effort basis as a means to discuss technical details after a support request has been received and accepted by EMI. Contact should be either by web forms (GGUS or dedicated EMI software defect tracking systems), or by Email.

Comment [p9]: Consistency for Expert(s) vs Experts.

Comment [ADM10R9]: Used Technical Experts everywhere

(a) By Email: contact the EMI Technical Experts in charge of the support request with additional information about the issue. Contact can also be initiated by the Technical Experts in case additional information is needed. The additional information is logged to the GGUS application

(b) By Web Forms: once a support request is available in GGUS, the Customer can update it with additional information or questions for the Technical Experts in charge of the issue. The Technical Experts may additionally provide access to the internal software defect tracking systems as necessary. In the latter case, they will provide the required access information.

6. SERVICE MANAGEMENT

6.1. SERVICE AVAILABILITY

Coverage parameters specific to the Services covered in this Agreement are as follows:

Service name	Availability	Comments
Web support	Submission via GGUS available 24 hours, Monday to Sunday (depending on GGUS service availability guarantees)	Web support requests are automatically acknowledged upon reception. Requests received after office hours will be stored in the support system, however no action can be guaranteed until the next working day
Email support	Monitored 9:00 A.M. to 5:00 P.M. Monday – Friday	Emails received outside of office hours will be collected, however no action can be guaranteed until the next working day

On-site assistance		Negotiated on a case by case basis

6.2. SERVICE REQUESTS

In support of Services outlined in this Agreement, the Service Provider will respond to Service-related incidents and/or requests submitted by the Customer within the following time frames:

Severity Level	GGUS Ranking	Response time	Comments
Severity 1 (Critical)	Top Priority	0-2 hours	During office hours
Severity 2 (Major)	Very Urgent	Within 5 working days	
Severity 3 (Medium)	Urgent	Within 15 working days	
Severity 4 (Enhancements)	Less Urgent	N/A	No guaranteed response time is given for enhancements requests, however, all requests are considered and enter into the standard EMI software cycle for potential inclusion in the public releases

Comment [p11]: G.Pucciani: working in SA2.3 metrics definition, we defined Severity and Priority of a RfC according to DSA1.1 and the Change Management Guidelines. Here Severity is {defect|feature} and priority is {low|medium|high|immediate}.
It's very important to be coherent on this. GGUS though provides a priority field with {less urgent|urgent|very urgent|top priority}.

Comment [ADM12R11]: I completely agree on the need to be consistent. Defining Severity just as {defect|feature} is however not enough. Severity is a subjective evaluation of how a user is affected by a problem and it is one of the criteria used to assign the Priority of the intervention. It is necessary to classify the Severity with a sufficient number of discreet values beyond the pure classification as a Defect or a Feature Request. Neither DSA1.1 nor the Change Management Guidelines AFAICS define any value for the Severity, but they both state correctly that Severity is used for assigning the Priority. (which is defined in both in the same way, indeed). The mapping with GGUS values is indeed an issue, although I do not agree with the GGUS Severity values that are clearly Priority values. This mixes the concepts of Severity and Priority, creating confusion (e.g. a Severity 1 problem may affect only one user, should this be Top Priority for us?). Since this SLA will be distributed to users, who are expected to use GGUS, I've added the corresponding GGUS values

6.3. MONITORING AND REPORTING

Acknowledgment and response times will be continuously measured and reported every quarter using the tools provided by the GGUS Support System.

7. SECURITY AND CONFIDENTIALITY

Except as contemplated by the terms hereof or as required by applicable law or pursuant to an order of a court with competent jurisdiction, EMI Partner Institutes

shall ensure and procure that each of its employees, directors or representatives who provide a Service to the Customer shall keep confidential all non-public information provided to it by the Customer and/or to which it has access as a result of the Services provided hereunder and shall not disclose or otherwise make available such information to any third party.

8. LIMITATION OF LIABILITY

In no event will EMI, or any of its Partner Institutes and suppliers, be liable, under any contract, negligence, strict liability, or other legal or equitable theory, even if EMI or its Partner Institute and suppliers were advised of the possibility of such damages as is stated below. These damages include but are not limited to: (i) PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES; OR (ii) LOST DATA OR LOST PROFITS; OR (iii) COSTS OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES; OR (iv) CLAIMS BASED ON ANY ERROR, DEFECT OR NONCONFORMITY IN THE PRODUCTS OR SERVICE; OR (v) ALL OTHER CLAIMS NOT RELATED TO AN ERROR, DEFECT OR NONCONFORMITY IN THE PRODUCT.

9. MISCELLANEOUS

9.1. FORCE MAJEURE

Neither party shall be liable for any delay or failure in performance due to event outside the defaulting party's reasonable control, including without limitation, acts of God, labour disputes, and shortages of supplies, actions of governmental entities, riots, war, fire, epidemics, or other circumstances beyond its reasonable control. The obligations and rights of the excused party shall be extended on a day-to-day basis for the period equal to the period of the excusable delay.

Comment [p13]: Aren't natural disasters already included in the term 'act of God'?

Comment [ADM14R13]: Indeed yes, according to Wikipedia "**Act of God** is a legal term[1] for events outside of human control, such as sudden floods or other natural disasters, for which no one can be held responsible"

9.2. ASSIGNMENT

The Customer may not assign this Agreement without the prior written consent of EMI. EMI may transfer its rights to any wholly owned subsidiary of its Partners.

9.3. ENTIRE AGREEMENT

This Agreement, outlining the terms and conditions of Software Technical Support Services for EMI Products, constitutes the entire agreement between EMI and the Customer and supersedes all previous written or oral agreements between the parties with respect to the subject matter of this Agreement. The terms in this Agreement override any contrary terms contained in any release note or other documentation.

10. OFFICE LOCATIONS

Headquarters: EMI Project Office

European Centre for Nuclear Research

1211 Geneva, Switzerland

EMI Web Site: http://www.eu-emi.eu

EMI Support Site: http://www.eu-emi.eu/support

EMI User Center: http://www.eu-emi.eu/userprograms

Support Services: http://www.eu-emi.eu/services

11. COMMUNICATION

EMI Designated Contacts	Customer Designated Contacts

12. SIGNATURES

The following agree to the terms and conditions of this SLA:

_____ _____

Alberto Di Meglio
Director EMI Project

_____ _____

Date **Date**

APPENDIX: DEFINITIONS

Acknowledge	means informing the submitter that a support request has been received by the EMI Automated Support System (GGUS).
Acknowledgement time	means the amount of time elapsed between the initial submission by the Customer to EMI Support and the initial acknowledgement from the EMI
Age-change Release	means the issuance of Software that is designated by EMI with a change in the fourth part of (r) of its release number of the format x.y.z-r, signifying a change in the packaging, dependencies or documentation in an existing product level without any change in the source code.
Business Day	means normal working day in the time zone where the EMI Technical Experts in charge of a support request are located.
Component	means a software package or strictly related set of packages providing a specific functionality within an EMI Middleware Product (Service, Client or Library)
Customer	means the party identified as the organization entering into this Agreement with EMI.
Documentation	means user and technical manuals provided by EMI for use with its Software.
EMI	means European Middleware Initiative.
EMI Product(s)	means the set of software Products (Services, Clients or Libraries) maintained by EMI during their active support lifetime.
Enhancement	means all Software changes, including changes in the code, configuration, schemas, interfaces, etc which modify the software to provide additional or improved features.
Error	means an error in the product, which degrades the product as defined by the Severity definitions, as compared to EMI published functionality and performance specifications.
Level 1 Support	means the ability to provide general product information, software configuration information, collect relevant technical problem identification information, perform base problem determination, provide basic support on the standard products, protocols and features and propose workarounds to known Problems. This level of support is not provided directly by EMI, as described in the EMI Support Plan.
Level 2 Support	means the ability to provide Level 1 Support plus the ability to resolve the majority of misconfigurations, troubleshoot and simulate complex configuration, and software problems; support problem isolation and determination of product specification defects; provide simulation and interoperability and compatibility testing for new software releases prior to being deployed into the Customer production network; provide advanced Support on all products, protocols and features; have the ability to analyze traces, diagnose problems remotely, and provide End Users with complete steps to reproduce a problem. This level of support is not provided directly by EMI to End Users, but can be performed together with the Customers, as described in the EMI Support Plan.
Level 3 Support	means the ability to provide Level 2 Support plus the ability to provide software fixes and enhancements such as patches, fixing or generating workarounds that address software bugs; troubleshoot bugs that were not diagnosed during Level 2 Support; work with Customers to resolve critical situations, and building action plans with Customers to address complex issues.
Major Release	means the issuance of Software that is designated by EMI with a change in the first number (x) of its release number of the format x.y.z-r, signifying a new product level

	with major new functionality, fixes to known errors (bugs) and possibly non-backward-compatible interfaces or behaviour.
Minor Release	means the issuance of Software that is designated by EMI with a change in the second number (y) of its release number of the format x.y.z-r, signifying an enhancement of an existing product level with minor new functionality, possibly fixes to known errors (bugs) and with backward-compatible interfaces or behaviour.
Patch	means a set of one or more packages distributed to the Customer to issue changes in the EMI products. A patch can contain Minor, Revision or Age-Change releases of one or more products.
Previous Sequential Release	means Release of Software, which has been replaced by a subsequent version of the product.
Problem Resolution	means the use of reasonable efforts to resolve the reported problem. These methods may include (but are not limited to): configuration changes, patches that fix an issue, reinstalling the software, etc.
Product	means a set of installable packages providing together a defined set of interfaces and functional behaviours and owned by a specific team of EMI Technical Experts called Product Team. EMI Software offerings come in the form of Products. The EMI Support Service and this SLA apply to the current EMI Products or Products Catalogue as published in the EMI Web Site.
Release	means a Major or Minor Release of the same product.
Respond	means addressing the initial request and taking ownership of the issue.
Response Time	means the amount of time elapsed between the initial submission by the Customer to EMI Support through the agreed escalation mechanism and the EMI Technical Experts response.
Revision Release	means the issuance of Software that is designated by EMI with a change in the third number (z) of its release number of the format x.y.z-r, signifying a change in the Software to fix an error (bug) in an existing product level without any new functionality and with backward-compatible interfaces or behaviour.
Service Level Agreement (SLA)	means the Customer Service Level Agreement (SLA) that identifies the features and defines the processes involved with the delivery by EMI of various support functions to Customer, as presented by this document.
Service Request (SR)	means a single issue opened with EMI Support using the GGUS application. The SR number identifies the Service Request.
Service(s)	means: (a) the Software Provision and Support Services described in the EMI Technical Plans and the Support Plan and to which this SLA is applicable; (b) the distributed computing services provided by EMI as Software and making the object of the Software Provision and Support Services.
Severity 1	means: (a) an Error with a direct security impact on the product; (b) an Error isolated to Software or in a production environment that renders the product inoperative or causes the product to fail catastrophically; e.g., critical system impact, system down; (c) a reported defect in the product in a production environment, which cannot be reasonably circumvented, in which there is an emergency condition that significantly restricts the use of the product to perform necessary business functions; or (d) inability to use the product or a critical impact on operation requiring an immediate solution.
Severity 2	means: (a) an Error isolated to Software that substantially degrades the performance of the product or materially restricts business; e.g., major system impact, temporary system hanging; (b) a reported defect in the product, which restricts the use of one or more features of the product to perform necessary business functions but does not completely

	restrict use of the product; or (c) ability to use the product, but an important function is not available, and operations are severely impacted.
Severity 3	means: (a) an Error isolated to the Software that causes only a moderate impact on the use of the product; e.g., moderate system impact, performance/operational impact; (b) a reported defect in the product that restricts the use of one or more features of the product to perform necessary business functions, while the defect can be easily circumvented; or (c) an Error that can cause some functional restrictions but it does not have a critical or severe impact on operations.
Severity 4	means: (a) a reported anomaly in the product that does not substantially restrict the use of one or more features of the licensed product to perform necessary business functions; this is a minor problem and is not significant to operation; or (b) an anomaly that may be easily circumvented or may need to be submitted to EMI Research and Development as a request for enhancement.
Site	means the physical location where EMI services are installed.
Software	means the object code version of the intangible information constituting one or more computer or apparatus programs and the informational content of such programs, together with any Documentation supplied in conjunction with, and supplementing such programs, the foregoing being provided to Customer by way of electronic transmission or by being fixed in media furnished to Customer.
Support	means the Technical Support Services provided by EMI directly to Customer as set forth in the EMI Support Plan.
Support Plan	means the direct Support program offering and procedure described in the EMI Support Plan document.
Support Unit	means the team of people registered in GGUS as responsible to receive Support Requests for specific products or sets of Products.
Technical Expert	means an individual who has demonstrated technical competency in one or more of the products developed and maintained by EMI and is authorized by EMI to provide technical support the Customer.
Version Number	means a sequence of numbers and letters in the form x.y.z-r identifying a specific version of a given Product: x = Major Version number y = Minor Version number z = Revision number r = Age number
Workaround	means a known change in the followed installation or configuration procedures of a Product or its associated data to avoid an Error without substantially impairing use of the product.
Working Day	See Business Day