

ANNEX T7

FRAMEWORK FOR EXECUTION OF THE CONTRACT

**Indicative document for information purposes –
subject to modification after the competitive dialogue**

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1 GENERAL DESCRIPTION OF THE REQUIREMENTS FOR THE NEW EUR-LEX

EUR-Lex is used for the dissemination of official legal documents produced by the institutions and bodies of the European Union and of the European Communities, as well as of European Union related information and acts adopted by national and international institutions and bodies.

The aim of EUR-Lex is to become the central access point to European Union law, the reference system for European Union law.

This means that the various sites: EUR-Lex, PRELEX (chronological view of the legal procedure), N-Lex (access to national law) will be gathered under one single portal.

The main functional requirements for new EUR-Lex are the following:

1. Multilingualism – the system is available in all the official languages of the EU. All linguistic renditions are treated as equal, but there is a need to handle situations when not all renditions are available (either temporarily or not.), in which case available versions will be offered;
2. Completeness – the aim of EUR-Lex is to include all EU law related documents published since 1951, in all available language versions;
3. Unicity – following the request from the European Parliament and the Council, expressed notably during the Management Committee of 17.10.2008, EUR-Lex should integrate various sites to become a unique portal enabling users to access the European Law from one access point;
4. Authenticity – in the future, the electronic version of the Official Journal could be accepted as having legal value by the EU Institutions and the Member States; a certified version of the acts will be proposed alongside the working version;
5. Robust, user friendly and WAI-compliant web user interface, providing:
 - a. fast response time and high reliability;
 - b. optional user accounts;
 - c. various access/view according to i.e. chronological order, subject-matter classification, legislative procedure, life-cycle of documents, related documents, etc.;
 - d. different types of search (Basic, Advanced, Expert with data export);
 - e. organisation of different language versions of the same document;
6. Advanced multilingual search engine allowing to search in both documents and the structured meta-data according to any combination of search criteria, as well as in a simple way similar to the leading web search engines (faceted search);
7. RSS and e-mail notification of recently published documents has to be in place;
8. Back-office infrastructure for administration, maintenance, statistics, monitoring, diagnostic and basic data extraction tasks;
9. A web content management system, with the possibility of template based and automatic creation of content (editorial parts, thematic indexes, news, etc.);
10. Web Service interface available to external re-users.

11. Re-use of all documents and meta-data, as well as the key concepts from the existing EUR-Lex.

Technically, new EUR-Lex is also required to:

1. give access in a homogeneous and secure way to a large number of EU Law documents and their structured metadata;
2. handle documents in all official EU languages and different formats (Word, PDF, HTML, XML, TIFF);
3. manage the early arrival of new documents to allow searching and viewing as soon as possible after the publication, before a full set of meta-data is available;
4. manage updates of the meta-data coming from the production system (ProCat);
5. manage complex XML formats on import and export (via XML schemas, via distribution style sheets, etc.);
6. respect the hardware and security constraints of the site where the system will be accommodated;
7. be permanently available on the web providing stable performance over time;
8. be accessible to a large number of simultaneous users;
9. function automatically fail-soft;
10. use current industry standards for data management;
11. be extendable in view of the possibility to include new languages and new collections of documents in the future.

EUR-Lex key figures

- The EUR-Lex repository contains currently about 3 650 000 documents in 23 languages;
- Amount of data sent by the web servers – up to 125 GB a day;
- Number of page hits – up to 3 000 000 a day;
- Number of search queries performed by the users – up to 100 000 a day.

2 SUBJECT OF THE CALL FOR TENDERS

2.1 Purpose

The purpose of this call for tender is to develop a new EUR-Lex portal for access to EU law.

The implementation of the EUR-Lex is planned in three phases. The tenderer has to present a separate offer for the development of each phase on a fixed price base.

Based on the functional specifications included in technical annexes T1 and T2, and further detailed during the competitive dialogue, the contractor will develop a mock-up, a prototype and a final delivery.

The 3 phases have to be planned from the start aiming at final delivery 12 months after the signature of the contract.

The Publication Office may request changes. The contractor shall describe these changes by change requests and indicate the impact of the change request. Eventual supplementary cost will be covered by additional orders.

2.2 Overall objectives

The overall objectives are included in the technical annexes T1 and T2, and further specified during the competitive dialogue.

2.3 Global requirements

The Office requires a reliable, extensible and user-friendly system built by using well-established software in order to avoid the risk of lengthy developments and captivity. Development should be based on proven procedures.

The Office insists that the software and hardware architecture of the new system must fit into the Office's technical environment as described in technical annex T5, and chapter 8 of technical annex T2.

2.4 Requested services

The subject of this call for tender is the selection of one contractor for the development of the new EUR-Lex.

This contract covers different types of services:

Services directly related to the realisation of the new EUR-Lex project (as described in Chapter 4)

Analysis, development and implementation of the new EUR-Lex application on a fixed-price basis, including related services (training, technical support...). The implementation will take place in three separate phases.

Additional services, as described in Chapter 5

Further development of new EUR-Lex;

Maintenance of new EUR-Lex;

Purchase of supplementary software, including maintenance and support;

Training;

Technical support.

3 FUNCTIONAL REQUIREMENTS

See technical annexes T1 and T2, further specified during the competitive dialogue.

4 FRAMEWORK FOR EXECUTION OF THE EUR-LEX PROJECT

4.1 Introduction

Chapter 4 defines the framework for the execution of the new EUR-Lex project. The general working methods and procedures, which have to be respected for all service deliveries under this contract, are defined in chapter 6.

4.2 Project organisation

The sponsor of a project on behalf of the Publications Office is called the project owner. The project owner is at least an administrator, in most cases a head of unit. In case of the EUR-Lex project, the project owner will either be the head of the "EUR-Lex Unit" or an administrator of this unit.

To ensure the daily follow-up of the project, the Publications Office designates a project leader. The Publications Office's project leader is the main contact person for the contractor. The Publications Office's project leader follows the project until the end of the guarantee period.

For the supervision of the daily production process, the Publications Office nominates a so-called application supervisor. In general, the application supervisor will also supervise the maintenance activities. Major releases or other major changes of the system will be considered as projects and will be followed again by a dedicated project leader.

Any other relevant roles and responsibilities of civil servants of the Publications Office that will be identified in the context of the new EUR-Lex project have to be documented by the project's quality assurance plan.

The contractor will also designate the person who will be responsible for the execution of the project on his side. This person is expected to be the main contact person for the Publications Office. In the following, this person will also be called project leader.

However, the Publications Office requires that three different teams work on the three different layers of the project (see architecture diagram: internet portal, index & search, content layer.)

An outline of the envisaged project team on the tenderer's side must be included in the tender offer for execution of the project. The definitive composition of the contractor's project team must be documented by the quality assurance plan. The role of each team member must be clearly defined; all changes have to be tracked. The contractor will provide the curricula vitae of all project team members. The use of a CV form as defined in Annex XX is mandatory.

The contractor will guarantee:

- to maintain his project leader for the whole duration of the project, including the guarantee period, except in case of reasons beyond of his control or of change in common agreement;
- to select the appropriate people in terms of skills and experience according to the needs of the project;
- to notify the Publications Office immediately of any changes in the composition of his project team;
- to provide equivalent replacements in the case of leave of team members; replacement must be accepted by the Publications Office.

The Publications Office reserves the right to ask for a replacement of a specific team member. The request must be justified. The contractor must document the eventual impact of the requested replacement by a change request.

4.3 Project phases and deliverables

The appropriate sequence and subdivision of the project realisation phases, i.e. phases between “initialisation” and “testing and start up”, will be defined by the contractor. Chapters 4.3.1 and 4.3.6 should be considered as an indication except for the definition of deliverables. The contractor has to produce all deliverables as indicated in chapter 4.3.7.2.

4.3.1 Initialisation

The project starts with a kick-off meeting. At this occasion, the contractor is expected to deliver and to present an initial version of the detailed project plan and an initial version of the quality assurance plan. In addition, the contractor is expected to present his approach for execution of the project including an explanation of how he intends to cope with the constraints (see Chapter 4.6) and the general and the specific requirements (see Chapters 4.4 and 4.5).

After the kick-off meeting, a technical meeting must be organized in order to agree on different aspects of the technical environment to be setup at the Publications Office’s premises. The versions of the different software to be used during the realization of the project will be fixed (see technical Annex T5). At the same occasion, the contractor will also present his proposal for the hardware architecture, in particular for the production environment. This proposal is needed in order to guarantee that the appropriate hardware is available in time.

The initialisation phase will be completed by the validation of the detailed project plan and of the initial version of the quality assurance plan.

The validated project plan defines the baseline for the execution of the project. The contractor’s project leader must regularly report on progress (at least once per month). Any derivation of the initial planning has to be communicated by the causing party. Derivations must be submitted to the change request procedure. The project plan has to be updated accordingly.

The quality assurance plan has to be completed and to be kept up-to-date during the whole project.

If appropriate, the initial set-up of the Publications Office's test environments (SAT environment, training environment, etc) could already be carried out during the initialisation phase. The contractor is supposed to deliver the necessary documentation and to provide support and assistance.

4.3.2 Functional analysis and design

The expected output of this phase is a validated functional analysis and design document.

Functional analysis and design will be based on the software requirement specification provided by the Publications Office (see technical annexes T1 and T2, and further specified during the competitive dialogue). The objective of the phase is to complete and to detail the existing specifications.

The functional analysis and design document should contain at least the following information:

- Identification and description of all business processes in relation with the new EUR-Lex site;
- Definition and description of the future system and its interactions with the help of use case diagrams, class diagrams, relevant behaviour and implementation diagrams;¹
- Functional analysis and design of the different modules (e.g. user interface, social network, search and index, data/metadata repository, etc.);
- Functional analysis and design of the different interfaces;
- Functional analysis of the different types of documents and metadata;
- Analysis of the needs in terms of reporting and statistics;
- Definition of the naming conventions;
- User interface design (detailed screen layout in HTML format – a mock-up), covering all use cases and navigation.

¹ According to the UML specification.

4.3.3 Technical analysis and design

The expected output of this phase is a validated technical analysis and design document.

The technical analysis and design document should at least contain the following information:

- Detailed description of the software architecture and modules, including definition of the common interface architecture;
- Completion of the hardware architecture proposal (sizing, disk space...);
- Definition of the repository/database structure, including objects, attributes, constraints, validation and archiving rules;
- Definition of the workflows;
- Technical analysis and design of each interface;
- Definition of the reporting architecture;
- Definition of roles and permissions;

Design must be illustrated by a mock-up.

4.3.4 Development

This phase includes all development activities.

Together with each software delivery, the protocol of the contractor's FAT (factory acceptance testing) has to be provided. The FAT protocol serves as proof that the software has been exhaustively tested before delivery.

In order to prepare SAT testing, each major software delivery must include a draft test plan for SAT testing. The draft test plan has to list all relevant test cases. It must also include the necessary instructions in order to assure a correct initialization of the test environment. If appropriate, the contractor will also provide test data: values for parameter tables, etc.

The development of the prototype will be considered as proof of concept for the solution defined and realized by the contractor. As already indicated in chapter 2.1, The Office reserves the right to denounce the contract in case of failure of prototype release.

4.3.4.1 Development of the different phases

The application software, including all necessary scripts for installation and configuration, should be delivered together with the corresponding documentation as well as a draft test plan for the SAT (site acceptance testing).

In addition, the protocol of the contractor's FAT (factory acceptance testing) has to be provided, as proof that the software has been exhaustively tested before delivery.

4.3.4.2 Modules

For each module, a detailed functional and technical analysis has to be performed (see chapter 4.3.2 and 4.3.3). On the technical side, it is expected, that the contractor proposes a technical framework in order to standardize module development and to encourage reusability of common modules (see chapter 4.3.3).

After validation of the analysis, development of the different modules should start.

The expected outcome of this phase is:

- Programs and scripts for each module;
- Release notes, installation instructions, systems operations manual, technical reference manual², user manual and draft test plan for SAT for all modules;
- FAT protocol.

Whenever feasible, the development of each module must comprehend a prototype phase and a final delivery allowing a progressive installation in production.

4.3.5 Testing and start-up

It is expected that in each first session of a particular training type a general presentation of the new EUR-Lex system is given.

4.3.5.1 Training for the technicians

Before starting the SAT, the Publications Office's IT team has to be trained in order to be able to perform the installation of the system in the test

² If suitable, the technical reference manual for the interfaces could be integrated in the technical reference manual of the EUR-Lex system.

environment and to run the technical part of the SAT. The contractor has to propose a training plan, which has to take into account that this training phase must be finished before installation of the application in the test environment.

An adequate sub-set of the documentation related to the new system must be available at the beginning of this phase.

The expected outcome of this phase is:

- Training plan;
- Training support;
- Training session(s) for the technicians according to the training plan;
- Evaluation reports.

4.3.5.2 Training for the testers

Before starting the SAT, testers have to be trained according to the different user profiles. The contractor has to propose a training plan, which has to take into account, that this training phase must be finished at latest when the installation of the software in the test environment has been finished.

An adequate sub-set of the documentation must be available at the beginning of this phase.

The expected outcome of this phase is:

- Training plan;
- Training support;
- Training session(s) for SAT testers according to the training plan;
- Evaluation reports.

4.3.5.3 SAT testing

The contractor is expected to deliver a document, which describes what has to be done in order to prepare the test environment on the Publications Office's premises. Testing will be partially based on real data.

For all tests linked to workflows, it should be possible to re-establish a consistent status in order to continue testing or to repeat testing of a certain sequence of operations without being obliged to replay the complete workflows, for example in order to test a correction of a bug related to a specific workflow step.

During SAT testing, the contractor is expected to provide assistance for the Publications Office staff.

Assistance means that competent staff is available on the contractor's side to answer rapidly any eventual questions of the SAT testers.

The contractor has to organize himself in a way that he is able to correct blocking problems or to indicate workarounds within a short delay.

4.3.5.4 Assessment

The contractor and the Publications Office will assess and report the results in terms of delays, functional and technical convergence, organisational impacts, etc.

The contractor will document the result of the assessment.

4.3.5.5 Training

Before entering into production, those users, who have not participated in the SAT testing, have to be trained. If necessary also an update session for the SAT testers should also be foreseen.

The expected outcome of this phase is:

- Training plan;
- Updated or completed training support (if appropriate);
- Training session(s) according to the training plan.
- Evaluation reports

4.3.5.6 Transition to production

The contractor will define the scenarios for putting the system in production.

The contractor is expected to formulate his recommendation. He will deliver a document, which includes a proposal about how to organize the transition to production: set-up of the production environment, switching from the old and to the new system, etc. The document should be delivered at least one month before transition to production.

After the switch over, the contractor will assist and support the end-users and the technicians in their daily operations for four weeks.

At the same time, he will also actively participate in the tuning of the system.

A reviewed set of documentation which takes into account all changes and additions identified during SAT and parallel running must be provided at the beginning of this phase.

4.3.6 Guarantee period

The contractor has to correct without charge all bugs detected during the guarantee period. If a correction has an impact on the documentation, the relevant documents have to be updated.

4.3.7 Deliverables

4.3.7.1 Documentation

4.3.7.1.1 *General remarks*

Documentation must be written either in English or in French.

If no other agreement has been taken, each document must be supplied in the following quantities and formats:

- One electronic copy in Microsoft Word 2002 format or compatible;
- One electronic copy in PDF format (V 1.5).

Online help files have to be supplied in HTML format.

4.3.7.1.2 *Document types*

The following table summarizes the general characteristics of the different types of documentation requested by the Publications Office.

This represents the minimum contents of the specified documents. The contractor is free to add any information deemed useful.

| Document type | Minimum expected contents |
|------------------------|--|
| Quality assurance plan | Organisation and responsibilities, procedures (including change management and quality control), methods and standards, deliverables, risk management, reporting, standard forms. |
| Project plan | Detailed project plan, including as a minimum all delivery dates and all tasks which request intervention of Publications Office staff such as interviews, validations, installations and tests. The initial validated project plan will constitute the base line of the project. Progress has to be updated on a regular base, at least once per month. |
| Hardware architecture | Hardware configuration (cpu, storage, network...) necessary to implement the |

| | |
|--|-----------------|
| | EUR-Lex system. |
|--|-----------------|

| Document type | Expected contents |
|--------------------------------|---|
| Functional analysis and design | Business processes, use cases, class diagrams, relevant behaviour diagrams, workflows, modules, interfaces. |
| Technical analysis and design | Hardware – and software architecture, sizing, repository/database design, workflow design, technical analysis and design of the different system components: end-user functions, modules, interfaces, batch processes, security. |
| Release notes | See Annex XX. |
| Installation instructions | See Annex XX. |
| System operation manual | See Annex XX. |
| Technical reference manual | Technical description of all systems components: programs, modules, scripts, repository/database. Could be based on the technical analysis and design document. Automatic generation by the use of appropriate tools (development tools, configuration management tools...) is allowed. |
| User manual | System overview, production workflow, workflow independent functions, operations and procedures, problem handling. |
| Online help | Context sensitive user manual in HTML format. |
| Test plan | A test plan has to list all relevant test cases. A scenario of how to execute the different tests (sequence, iterations, etc.) has to be included. The necessary operations to perform in order to assure a correct initialization of the test environment have to be documented. |

4.3.7.2 List of deliverables

The following table defines the deliverables per project phase.

| Project phase | Deliverables |
|---|---|
| Initialisation phase | |
| <ul style="list-style-type: none"> • Initialisation | <p><u>For the kick-off meeting:</u></p> <ul style="list-style-type: none"> ○ Quality assurance plan ○ Detailed project plan (initial version) ○ Agenda and minutes of kick-off meeting <p><u>For the technical meeting:</u></p> <ul style="list-style-type: none"> ○ Hardware architecture document (initial version) ○ Minutes of the technical meeting <p><u>As result of the initialisation phase:</u></p> <ul style="list-style-type: none"> ○ Quality assurance plan (version 1) ○ Hardware architecture document (version 1) ○ Detailed project plan (baseline) |
| <ul style="list-style-type: none"> • Set-up of the Publications Office's test environments | <ul style="list-style-type: none"> ○ If applicable: technical documentation for software provided through this contract ○ Test environments installed ○ Draft installation instructions |
| Analysis and design | |
| <ul style="list-style-type: none"> • Functional analysis and design | <ul style="list-style-type: none"> ○ Functional analysis and design document ○ Web user interface design (detailed screen layout in HTML format), covering all use cases and showing screen sequences (for both the Front Office and the Back Office) |
| <ul style="list-style-type: none"> • Technical analysis and design | <ul style="list-style-type: none"> ○ Technical analysis and design document |

| Project phase | Deliverables |
|--|--|
| Development | |
| <ul style="list-style-type: none"> ○ Development of the different ... | <ul style="list-style-type: none"> ○ Application software, including all necessary scripts for installation and configuration ○ Release notes ○ Installation instructions ○ System operation manual ○ Technical reference manual ○ User manual ○ Online help ○ Draft test plan for SAT testing ○ FAT protocol |
| <ul style="list-style-type: none"> ○ Modules | <ul style="list-style-type: none"> ○ Programs and scripts for each interface ○ Release notes ○ Installation instructions ○ System operation manual ○ Technical reference manual ○ User manual ○ Draft test plan for SAT testing ○ FAT protocol |

| Project phase | Deliverables |
|---|--|
| <ul style="list-style-type: none"> ○ Reporting | <ul style="list-style-type: none"> ○ Release notes ○ Installation instructions ○ System operation manual ○ Technical reference manual ○ User manual ○ Online help ○ Draft test plan for SAT testing ○ FAT protocol |
| <ul style="list-style-type: none"> ○ Purging and archiving | <ul style="list-style-type: none"> ○ Programs and scripts for purging, archiving, search and retrieval ○ Release notes ○ Installation instructions ○ System operations manual ○ Technical reference manual ○ Draft test plan for SAT testing ○ FAT protocol |

| Project phase | Deliverables |
|--|---|
| Testing and training | |
| <ul style="list-style-type: none"> ○ Common training support | <ul style="list-style-type: none"> ○ General presentation of the EUR-Lex system |
| <ul style="list-style-type: none"> ○ Training for the technicians | <ul style="list-style-type: none"> ○ Training plan <u>According to the training plan:</u> ○ Training support ○ Training session(s) for the technicians ○ Evaluation reports |
| <ul style="list-style-type: none"> ○ Training for the testers | <ul style="list-style-type: none"> ○ Training plan <u>According to the training plan:</u> ○ Training support ○ Training session(s) for the SAT testers ○ Evaluation reports |
| <ul style="list-style-type: none"> ○ SAT testing | <ul style="list-style-type: none"> ○ Assistance |
| <ul style="list-style-type: none"> ○ Corrections | <ul style="list-style-type: none"> ○ Patch ○ Releases notes ○ Installations instructions <u>Dependent on the corrections:</u> ○ Updated version(s) of relevant documentation |
| <ul style="list-style-type: none"> ○ End-user training | <ul style="list-style-type: none"> ○ Training plan <u>According to the training plan:</u> ○ Updated or completed training support ○ Training session(s) ○ Evaluation reports |
| Start-up | |
| <ul style="list-style-type: none"> ○ Transition to production | <ul style="list-style-type: none"> ○ Documentation up-to-date ○ Scenario for the transition to production (document) ○ Tuning of the system during four weeks ○ Assistance of end-users and technicians during four weeks |

| Project phase | Deliverables |
|--|---|
| Assessment and guarantee | |
| <ul style="list-style-type: none"> ○ Assessment | <ul style="list-style-type: none"> ○ Assessment document |
| <ul style="list-style-type: none"> ● Guarantee period | <p>For each delivery during the guarantee period³:</p> <ul style="list-style-type: none"> ○ Bug fixes ○ Releases notes ○ Installations instructions <p>Dependent on the corrections:</p> <ul style="list-style-type: none"> ○ Updated version(s) of relevant documentation |
| Horizontal tasks | |
| <ul style="list-style-type: none"> ● Project management | <p><u>At least once per month:</u></p> <ul style="list-style-type: none"> ○ Report on progress (based on the detailed project plan) ○ Report on design quality and software quality based on the parameters defined in Chapters 4.5.3 and 4.5.4. <p><u>If necessary:</u></p> <ul style="list-style-type: none"> ○ Update of the quality assurance plan |

The contractor has to ensure that the documentation stays up-to-date and reflects all modifications to the system during the full lifecycle of the project, including the guarantee period.

³ The same rules apply for each intermediate software delivery

4.4 General requirements

4.4.1 Ergonomics

The system must offer a clear, intuitive and comprehensive user interface (see technical annex T6 – Web Usability Assessment.)

Online help must be available. Translation of the online help into different languages must be possible.

4.4.2 Quality control

It is expected that the tenderer has defined and implemented the necessary procedures in order to ensure and to maintain a high level of quality concerning the deliverables of the new EUR-Lex project.

It is expected that adequate technical resources are dedicated to quality control. Quality control has to be independent. At least part of the quality assurance activities has to be performed by qualified people, who are not members of the project team.

The Publications Office reserves the right to request proof concerning the quality assurance procedures of the contractor and the qualifications of the involved people.

4.4.3 Test plan

To support SAT, the tenderer will propose a detailed test plan. The test plan must include all relevant test cases, which have been identified either by the tenderer or by the Publications Office.

Every installation in the production environment will be preceded by a test and acceptance phase composed of unit tests and integration tests. Integration tests include the test of relevant interfaces. The Publications Office will carry out the technical and functional tests. Technical tests also include validation of the different procedures necessary for the daily operation of the system: backup, restore, etc.

4.4.4 Documentation

Documentation has to be complete, well structured, readable and comprehensive. Redundancy should be avoided. Diagrams should be used in order to illustrate complex issues.

Each document has to include a table of contents. Changes in consecutive versions of a document should be clearly flagged to simplify the validation process.

4.5 Specific requirements

4.5.1 Introduction

The following chapters define the specific requirements, which have to be met by the new EUR-Lex project.

Prior to the start of the corresponding project phase, the exact procedures to be implemented to measure and to collect the values for the different parameters will be fixed by common agreement, including the definition of the domains of responsibility of each party.

Example: non availability of the system due to a hardware failure is not under the responsibility of the contractor.

4.5.2 Performance, throughput and availability

Chapter 6 of the technical annex T2 defines the different parameters and the corresponding values, which have to be met by the future EUR-Lex system in production.

Implementation of the necessary measurement procedures should be simple and automated in order to give almost immediate results and to represent as much as possible reality. In principle, the calculation of the different values should be based on the evaluation of measurements recorded in log files.

Until the end of the guarantee period, the following rules apply.

If on average the tolerated maximum value for a parameter is not respected during one week, the contractor has to fix the problem at his own expense.

If the contractor is not able to fix the problem within one week, the Office reserves the right to apply liquidated damages. The amount of liquidated damages is 750 € per working day until the problem has been solved.

4.5.3 Design quality

It is expected that analysis and design is based on general accepted methodology. The Publications Office recommends the use of an object-oriented analysis and design method based on UML⁽⁴⁾ notation.

Before starting analysis and design, the contractor and the Office will define by common agreement which type of diagrams and/or models will be used.

⁽⁴⁾ UML: Unified modeling language®.

| | |
|------------------|---|
| Parameter | Analysis and design errors 1 |
| Description | Errors detected during validation of the functional and technical analysis and design documents. |
| Measure | Number of errors detected. |
| Target | ≤ 1 error for 2 pages. |
| Limit | 2 errors for 2 pages. |
| Parameter | Analysis and design errors 2 |
| Description | Defects detected during SAT, during parallel running or in production caused by analysis and design errors. |
| Measure | Number of defects (bugs) of the EUR-Lex system caused by analysis and design errors. |
| Target | $< 10\%$ of the detected defects. |
| Limit | 20 % |
| Parameter | Change requests |
| Description | Change requests caused by analysis and design errors. |
| Measure | Number of relevant change requests. |
| Target | $< 10\%$ of the total number of change requests. |
| Limit | 20% |
| Parameter | Reusability |
| Description | Number of modules (sub-programs, scripts, etc.), which are used by more than one function point. |
| Measure | Number of multiple used modules / total number of modules |
| Target | $\geq 0,5$ |
| Limit | $\geq 0,25$ |

4.5.4 Software quality

It is expected that the tenderer can rely on a proven approach for software development in order to ensure and to maintain a high level of quality concerning the services related to the subject of this call for tender.

Adequate tools (programmer's workbench, source code and configuration management systems, debugging tools, etc.) should assist the software development process.

The structure of different types of software components (programs, sub-routines, scripts, etc.) should be standardized. Programming guidelines should exist.

The Publications Office reserves the right to request proof concerning the software development environment of the contractor.

Error handling must be standardized. System errors must be systematically trapped and logged. System errors should not provoke abnormal terminations.

Transaction handling must be consistent. In case of failure in complex transactions complete rollback has to be assured.

In addition to other justified reasons, the Office reserves the right to reject a software delivery, if the limit defined for one of the parameters listed below has been exceeded.

| | |
|------------------|--|
| Parameter | Defects (bugs) |
| Description | Errors detected during SAT, during parallel running or in production. |
| Measure | Number of errors detected |
| Target | For each component (program, module, script): < 1% of total lines of code. |
| Limit | 2 % |
| Parameter | Regression |
| Description | Corrected errors, which reappear after a new software delivery. |
| Measure | Number of reappeared errors |
| Target | 0 |
| Limit | 10 % of total number of errors detected before this software delivery. |
| Parameter | Abnormal termination |
| Description | Part of the system crashes without error logging. |
| Measure | Number of crashes without trapping. |
| Target | 0 |
| Limit | 5 % of total number of crashes. |

4.6 Constraints

4.6.1 Deadlines

The contractor is free to propose an organisation of the project provided that final delivery of the new EUR-Lex system deadline is T0+12 months.

The deliverables must be supplied throughout the project phases in such a way that all the major choices have been informally validated by the Publications Office before the final proposal has been submitted for formal acceptance

4.6.2 Technical environment of the Publications Office

The proposed solution for implementation of the future EUR-Lex must fit into the technical environment of the Publications Office as described in technical annex T5.

If justified, the contractor is free to propose additional software (see chapter 5.4).

4.6.3 Development environment

The installation of an adequate development environment on the contractor's premises is requested. Especially source code and configuration management as well as regular backup have to be assured. The configuration of the development environment is under responsibility of the contractor. The contractor must be aware that software deliveries must conform to the technical environment of the Publications Office (see technical annex T5).

4.6.4 Test and production environment

At the Publication Office, at least two separate environments will be implemented (see technical Annex T5):

- a test environment, where the Publications Office representatives will install the new EUR-Lex system for testing purposes;
- a production environment dimensioned and configured according to the recommendations defined by the contractor, where the Publications Office representatives will install the EUR-Lex system for production purposes.

Both environments will be dimensioned and configured according to the definitions laid down in the hardware and software architecture parts of the validated technical analysis and design document.

Based on his experience, the tenderer may propose in his offer additional environments, for example a training environment.

4.6.5 Security rules

The Publications Office, as all the European institutions, is extremely conscious of the need for computer service security in general and, in particular, of the primary computer resources and of their direct or indirect uses.

The contractor has to implement the necessary security rules in order to:

- Prevent users from doing things which they are not allowed to do (access control);
- Protect data from unintentional destruction;
- Protect the system from intrusion.

The new EUR-Lex system must conform to the Information Security Policy of the European Commission, review 023, 20/12/2000.

Communication with trusted third parties should follow the provisions of the Directive 1999/93/EC of The European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures (published in the Official Journal L 13, the 19 January 2000).

In order to assure an appropriate security level, communication with external partners should be based on open standard protocols, such as the XML based communication protocol defined by the OASIS group in the scope of the SOAP/Web service standardisation.

The new EUR-Lex should respect the following rules as much as possible.

User Management rules:

- Access to the system administration and editorial part of EUR-Lex requires a personal and unique user identifier;
- A standard repository such as LDAP or Active Directory should be used to store user-related information. Password management and policy should be enforced by the repository. The schema used for user provisioning must allow the use of existing directories.
- Revocation of user access must be simple and effective.

Access Control rules:

- Access to the new EUR-Lex administration and editorial part should be granted on an as-needed basis.
- Accesses should be restricted to the required needs.
- The access management should rely on use an RBAC (Role Base Access Control) policy.
- Accesses should be attributed to roles. Individual user right will be obtained by granting appropriate roles.
- Role management should use the same standard based repository as user management allowing integration with access management platform.

The system should offer facilities to:

- Define, modify and delete a role;
- Grant a role to a user;
- List grants of an individual user;
- List all roles having access to a certain resource.

Accesses will be logged with associated user identification as audit trails.

4.6.6 Languages

Currently the EUR-Lex supports 23 official languages of the European Union. Future enlargements of the European Union are envisaged.

The future system must assure a correct handling of documents in all of these different languages.

The proposed solution must support Unicode (Unicode V2.0 ⁽⁵⁾⁽⁶⁾ or higher). Technical implementation must be based on a Unicode character encoding scheme. Actually, the preferred character encoding scheme is UTF 8.

Language support also means that all different languages have to be displayed correctly on screen and on paper (reports etc.).

Support of supplementary languages must be possible without substantial modifications of the system.

⁽⁵⁾ Publication reference: *The Unicode standard*, version 2.0, Addison-Wesley Developers Press, first printing, July 1996, ISBN 0-201-48345-9.

⁽⁶⁾ ISO/IEC standard: 10646-1:1993.

5 ADDITIONAL SERVICES – OPTIONAL

5.1 *General remarks*

The dates of order are not yet defined. The quantities defined in the estimation form are estimations and are purely indicative.

5.2 *Further development of EUR-Lex*

The contract also covers development of future releases of the system. Development includes both:

- changes of existing functionality and
- development of supplementary functionality.

The requested developments will be in general realised on a fixed price basis. Exceptionally, developments could be performed on a time and means basis.

The general disposals for the provision this kind of services are defined in Chapter 6.2.

The service must be delivered by persons who meet the requirements defined by the profiles ‘Technical consultant (TEC-CONS)’, ‘Business analyst (BUS-ANAL)’, ‘Project manager (PRO-MAN)’, ‘Analyst programmer (ANA-PROG)’, ‘Programmer (PROG)’ and Junior programmer (JUN-PROG).

For each project, the contractor is expected to compose an adequate project team in terms of skills, experience and number of staff.

5.3 *Maintenance of EUR-Lex*

The tenderer must propose a specific maintenance contract for the EUR-Lex system.

The maintenance contract must cover:

- Implementation of an appropriate infrastructure, to be able to register all requests transmitted by the Publications Office and to forward them to the maintenance team within a maximum delay of 4 hours (2nd level helpdesk). The contractor can rely on an existing helpdesk structure.
- Correction of defects and minor enhancements of the software components, which had been developed by the contractor. In case of blocking errors, a correction or a work-around has to be provided at the latest within 8 working hours after transmission of the initial request.
- Proposals for adjustments and corrections of the configuration of the underlying software components of the new EUR-Lex;
- Adaptations of the system in order to support necessary upgrades and patches of underlying software components;

- Functional and technical assistance for end-users and for the Publications Office's IT team.

The Publications Office has no obligation to accept or to order the specific maintenance contract.

5.4 Purchase of supplementary software, including maintenance and support

In addition to the software available at the Publications Office (see technical Annex T5), the contractor may propose supplementary software, which in his opinion increases the efficiency of the EUR-Lex system or its development in a significant manner.

In no case can supplementary software be proposed in order to replace available software.

Every proposal has to be justified. The justification has to describe the technical reasoning of the proposal and must be completed by a cost/benefit analysis. Alternatives and options, including a description of their respective impact, have to be listed.

As an option, the call for tender also covers the purchase of the corresponding software licences.

If necessary a standard maintenance contract must be proposed. The maintenance contract must offer the possibility to install future minor releases of the software as well as patches without extra cost. Access to the software editors standard support network (helpdesk etc.) including access to up-to-date documentation has also to be included.

The Publications Office has no obligation to purchase any supplementary software proposed by the tenderer. In case that purchase of supplementary software is already covered by an existing contract, the Publications Office is obliged to use the existing contract.

The Publications Office is open to discuss usage of open source software in the context of non mission critical aspects of the system. The proposed open source software must be supported by an identified company.

5.5 Training

In addition to training sessions that are provided in the scope of the new EUR-Lex project; the Publications Office may also request *ad hoc* training sessions, for example to train new staff or to train the existing staff on a new functionality.

These training sessions have to be performed by trainers who meet the requirements defined by the ‘Information systems trainer (INF-SYS-TRAI)’ profile. A detailed description of this profile is included in Annex XX.

The requested services will be realised either on a fixed price or a time and means basis (see Chapter 6.2).

5.6 Technical support

The contractor will be required to provide support and assistance to the Publications Office’s IT team, i.e. take responsibility for the technical problems and technical questions concerning the installation, operation and tuning of the system.

This also includes assistance and support to the technicians in case of technical problems until they are resolved (fault isolation, etc.).

Technical support will be delivered by persons who meet the requirements defined by the ‘Technical consultant (TEC-CONS)’ or the ‘Technical support (TEC-SUP)’ profile. In particular, it is expected that these persons are experts with regard to the technical environment of the EUR-Lex system. A detailed description of these profiles is included in Annex XX.

The requested services will be realised either on a fixed price or a time and means basis (see Chapter 6.2).

6 WORKING METHODS AND GENERAL CONSTRAINTS

6.1 Introduction

This chapter defines the common procedures to be followed and the general constraints and disposals to be respected by the contractor in order to deliver the different types of services requested by the Office for Official Publications of the European Communities (hereinafter referred to as Publications Office).

Delivery of services is based on Orders/Order forms or Specific agreements/Specific contracts established by the Publications Office on the base of the XXXXX framework contract. Orders and Specific agreements may be either on a fixed price or on a time and means basis. In general, the Publications Office prefers to work on a fixed price basis. Time and means requests will be restricted to cases where a fixed price agreement is not adequate, due to a lack of specifications or to the urgency or the nature of the work.

In the following text, the term ‘working days’ means the official working days of the Publications Office.

6.2 Working methods

Delivery of services has to be in conformity with the Orders placed, which may be either fixed price or time and means.

The provisions of the framework contract have to be respected. Special attention is drawn to the rules concerning the guarantee period, invoicing conditions and liquidated damages.

For work on the Publications Office’s premises, contractors must comply with the following rules:

- normal working times: **between 7 AM and 7 PM**
- normal working days: **Monday to Saturday**
- normal working hours (excluding lunch break): **8 hours**
- minimum compulsory lunch break: **30 minutes**

The working hours must be in accordance with the requirements of the service.

In case of time and means work, a detailed monthly attendance sheet has to be provided for each individual person.

For work outside normal working times, on Sundays and on public holidays, tenderers must specify separately the price per day and type of overtime (see ‘Price schedules and Estimation forms’).

6.2.1 Fixed price projects

Projects based on fixed price agreements will be initiated on request of the Publications Office. The request will normally come together with a functional and/or a technical specification describing in sufficient detail the work to be done or the service to be provided.

The contractor will answer to the request by introducing a fixed price proposal which must be submitted within 15 working days after initiation of the request by the Publications Office. The results of a fixed price project are defined by deliverables. In consequence, every fixed price proposal has to include the definition of all deliverables which will be provided as final or intermediate results. A fixed price must be indicated for each deliverable. This price has to be calculated on the basis of the day rates of the appropriate profiles included in price schedule of the framework contract. Every fixed price proposal has to contain a global project plan. The project plan has to point out the major phases of the project. Underlying assumptions and restrictions have to be clearly indicated. For each phase an estimation of its duration has to be defined.

On acceptance of the contractor's proposal, the Publications Office will either conclude a specific contract or establish an order form.

The start of the project will be formalised by a kick-off meeting, which must take place within 10 working days either after signature of the specific contract by both partners (contractor and Publications Office) or after acceptance of the order by the contractor. The contractor will also submit at this occasion a detailed version of his project plan for validation by the Publications Office. The project plan has to indicate clearly all actions demanding intervention or active participation of the Publications Office, such as interviews, installations or acceptance periods. The Publications Office has to validate the proposed planning within 5 working days. In the case of disagreement, a second meeting has to be scheduled to negotiate the necessary changes and to validate together the modified planning.

Deliveries may include one or more deliverables. A delivery has to be accompanied by a consignment note and an acceptance protocol form. Intermediate deliveries in common agreement are possible, but they do not have any contractual impact. For software deliverables and related documentation, the acceptance period will take up to 30 working days. The acceptance period consists of three consecutive phases: an installation phase of up to 5 working days, a test phase of up to 20 working days, and a wrap-up phase of up to 5 working days in order to establish the acceptance protocol. The Publications Office may request the support of the contractor in case of problems during the installation phase, without supplementary charges. If no acceptance protocol is submitted at the end of the acceptance period, the deliverables are implicitly accepted without reserve and the guarantee period starts 30 working days after the date of signature of the consignment note for the delivery.

In the case of acceptance with reserve, the contractor has to correct the detected problems.

In the case of non-acceptance, the contractor has to make a new delivery. A new 30 working days' acceptance period starts on the date of signature of the consignment note for the new delivery.

In both cases, the contractor has to communicate his position within 5 working days after reception of the acceptance protocol. The contractor accepts the result of acceptance by countersignature of the acceptance protocol. At the same time, he communicates his planning for the delivery of the necessary corrections respective the new delivery. The planning has to be reasonable. The contractor has to prove, that he has taken the necessary arrangements in order to redeliver without delay.

In the case of acceptance with or without reserve, the guarantee period starts with the date of countersignature of the acceptance protocol by the contractor.

Deliveries, which are only composed of documentation (analysis documents, technical studies, etc.), have to be accepted within 15 working days after signature of consignment note. In the case of non-acceptance of this type of deliverable, the contractor has to carry out the necessary corrections and to deliver again. In this case the acceptance period starts to run again. In case of acceptance with reserves, the contractor has to deliver a corrected documentation.

Exceptionally, the above defined delays may be adapted in common agreement for a subset of deliverables due to the specific requirements of a particular project or a particular service.

In case of non-acceptance the Publications Office reserves the right to apply liquidated damages corresponding to 0,5 % of the total price of the non-accepted deliverables per working day between the date of non-acceptance and the date of the new delivery.

Normally, fixed price projects will be executed on the contractor's premises. The contractor nominates a project leader who is the principal contact person for the Publications Office.

To assure the follow-up of a fixed price project, the Publications Office also designates a project leader on its side. The project leader is the principal contact person of the contractor's project leader.

6.2.2 Fixed price services

Services based on fixed price agreements will be initiated on request of the Publications Office. The request will normally come together with a sufficiently detailed description of the expected service.

The contractor will answer to the request by introducing a fixed price proposal, which must be submitted within 15 working days after initiation of the request by the Publications Office. The proposal must also include a suggestion for an adequate set of reports, which should allow monitoring of the service execution and the definition of a relevant set of key performance indicators, which should allow an objective analysis of the overall performance and quality of the service. Reports have to be delivered at latest 10 working days after the end of the corresponding reporting period. The Publications Office has to approve or to reject reports within 10 working days. In case of rejection the contractor has to deliver a corrected set of reports and the approval procedure starts again. If the Publications Office doesn't approve the reports in time they are implicitly considered as accepted.

In case of insufficient performance and/or quality of the delivered service, the Publications Office reserves the right to apply liquidated damages of 1% of the monthly service price per day of insufficient performance up to 10% of the monthly service price. In consequence, the contractor has to propose an adequate schema for the calculation of these liquidated damages, which is based on the proposed set of key performance indicators.

The contractor nominates a project leader (also called service manager) who is responsible for the delivery of the service. The project leader is the principal contact person for the Publications Office.

To assure the follow-up of a fixed price service contract, the Publications Office also designates a service manager on its side who will be the principal contact person of the contractor's service manager. The Publications Office's service manager is responsible for the approbation of the reports.

6.2.3 Time and means activities

In the case of time and means requests, the contractor submits within 10 working days after initiation of the request by the Publications Office a proposal concerning the required resources, including a commitment concerning the availability of each person.

For a candidate who is proposed for the first time to the Publications Office, a duly completed CV form (see Annex XX) that includes a proposition concerning the profile has to be provided by the contractor. This proposition has to be validated by the Publications Office.

In general, the Publications Office reserves the right to schedule an interview with a proposed candidate in the case of a first intervention. The Publications Office has the right to reject a proposal.

In the case of agreement, the Publications Office may directly establish an order form or a specific contract based on the price schedule of the framework contract.

If the contractor wants to replace a person during an engagement, he has to address a formal demand. The Publications Office has the right to reject the demand. On acceptance, the contractor has to provide an equivalent replacement. The initial member of personnel remains in place until his/her replacement is fully operational.

If a person is unavailable due to reasons beyond the contractor's control, the contractor has to ensure that an equivalent replacement will be available within 10 working days.

In both cases, all eventual costs relating to the changeover (for example training expenses) are to the charge of the contractor.

If the contractor is unable to assure replacement of a person within the predefined delays, the Publication office reserves the right to apply liquidated damages.

The contractor has the right to ask for an adjustment of the profile attribution for a person. This request has to be accompanied by an updated CV form (see Annex XX) including a proposition concerning the new profile and a justification. The demand has to be validated by the Publications Office. In order to validate such a demand, the

Publications Office may schedule an interview with the person. The Publications Office has the right to reject a proposal.

6.3 *General constraints*

6.3.1 Language constraints

Documents must be provided in English and/or French. All written or oral communication must be done either in English and/or French.