INVITATION TO TENDER AO/006/19

Provision of IT Software Development and Maintenance Services

ANNEX II — TECHNICAL SPECIFICATIONS

Table of Contents

1. Introduction

The aim of the present European Union Intellectual Property Office (hereafter 'the EUIPO' or 'the Office') Call for Tender (hereafter 'CfT') is to obtain technical assistance in relation to Information Technology (hereafter 'IT') Software Development and Maintenance Services.

It is envisaged that the Framework Contract (hereafter 'FWC') resulting from this CfT will be run by the EUIPO Digital Transformation Department (hereafter 'DTD'), which is responsible for supplying all necessary IT services to the EUIPO in order to support the Office and enable it to achieve its goals.

The objective of the resulting FWC is twofold and consists of the following:

- Provide the services that are necessary to enable the successful implementation of all the IT-related projects in the current and future Strategic Plans of the Office. The current Strategic Plan, also known as SP2020, is expected to finish by 2020. At the time of writing the present CfT, the new Strategic Plan, also known as SP2025, is under preparation and it will have a five-year duration.
- Provide the right tools in order to maintain the Office's day-to-day operations, including corrective and adaptive maintenance activities over the IT systems falling under the scope of this CfT described later on in the present document.

Throughout the present document, the winning tenderer of this CfT that will be contracted to run the resulting FWC, will be referred to as the '**Contractor**', whereas other contractors that the Office has for other services in the context of separate framework contracts will be mentioned as 'suppliers', or 'service providers'.

2. Description of the Services

2.1. Overview of the EUIPO's IT environment

The EUIPO is a dynamic and knowledgeable organisation that needs to be supported by an effective and secure digital environment with streamlined digital operations, strong IT security and, highly available systems, all of which must be delivered in a cost-effective manner.

The Office has built a modern software and hardware IT infrastructure that can not only support its business needs, but also improve its overall performance in every aspect. The maintenance of this infrastructure combined with its continuous enhancement and further extension so as to include new capabilities, new systems and new technologies, have been, and will continue to be, key factors behind the EUIPO's productivity, reliability and continuous growth.

The Office's IT application landscape supporting its operational activities, which are mainly related, but not limited to, the examination of trade marks and designs, consists of a **considerable number of core business and e-business applications**. *See Annex B to the list of currently deployed systems*.

These IT applications (or IT systems)[1] are in their majority complex and, in most cases, highly integrated with each other. Several of them incorporate electronic workflows which implement and streamline the Office's business operations offering its internal and external users a wide range of electronic services and paperless exchange of information.

The applications are built using a combination of different technologies. The large majority of those applications are custom 'in-house' software (also known.as bespoke or tailor-made) developed on behalf of the EUIPO according to its specific needs. Nevertheless, there are several applications that have been developed or based upon 'commercial off-the-shelf' (hereafter 'COTS') and open source products, such as Moodle, Alfresco, Drupal, Liferay and other.

The IT applications concerned under the present CfT cover:

- Systems that facilitate the execution of the Office's core & support business operations as regards the entire life cycle and processing of the registration of trade marks and designs, such as examination, opposition, cancellation, appeal, payment, communication with users and any other specific service or proceeding in this context.
- Systems that facilitate the execution of the Observatory's[2] core business & support operations that bring public and private stakeholders together in the fight against piracy and counterfeiting, helping this way to secure the results of creativity and innovation after trade mark registration.
- Systems developed by the EUIPO on behalf of other external stakeholders in the context of the Cooperation programmes and activities that the Office runs. Such external stakeholders are, or can be, the national or regional Intellectual Property Offices of EU and non-EU countries, other EU Agencies, the EU Commission and more.

Hence, the activities concerning the software development and maintenance services to be described later in this document may be undertaken either for the purposes of the EUIPO itself, or within the EUIPO's mission, as a joint endeavour with other national, regional or international bodies.

The subject of this CfT does not cover the Office's IT systems based on 'SAP technologies'. As such, they are to be understood as those administrative systems mainly in the field of finance, accounting, customer relationship and human resources which are based on the SAP suite. Services on those system are covered by a dedicated FWC which is already in force.

[1] The terms 'IT application' and 'IT system' are treated as synonyms in the present CfT and thus they are used in an alternate manner throughout the document.

[2] The European Observatory hosted by EUIPO provides accurate, impartial and verifiable information to help safeguard Europe's knowledge and competitive edge in the global marketplace (for more information please check this link: https://euipo.europa.eu/ohimportal/en/european-observatory).

The IT systems in the EUIPO are divided into families. Further details on those families and the technical aspects of the Office's IT landscape are described later in the present document and in particular in chapter 6 and Annex B.

2.2. Service Catalogue

This section describes the services that are expected to be delivered by the Contractor which, in a nutshell, concern development, maintenance, studies and support of IT systems in the areas mentioned in the previous section.

The relevant work related to the scope of the resulting FWC will be mainly performed off-site (i.e. on the Contractor's premises). However, the EUIPO can request of the Contractor that some tasks are executed entirely or partly on-site, that is on the EUIPO's premises, or at third-party locations in the event of joint endeavours of the Office with other national or international bodies. Further details regarding the places of work per type of service are described in the sections to follow and also in chapter *4. Framework Contract Implementation.*

As mentioned, implementation of services will be provided by means of Specific Contracts[3]. The services will be performed on the basis of Fixed Price, Quoted Times & Means and Times & Means orders. The applicable model(s) per type of service is described in the later sections of the current chapter. For more information on the ordering requirements, the different contract modalities and the way each service will be sized in terms of effort and cost, the Tenderer may refer to section *4.3.Ordering process*.

The following types of services are covered in the context of this CfT:

- **Service Type 1 - Software Development**: implementation of new IT systems or extension of existing ones mostly linked, but not limited, to the EUIPO's current and future Strategic Plans; this type of service will be organised and managed as 'projects'.
- **Service Type 2 - Adaptive Maintenance**: changes to or adaptations of the EUIPO's existing IT systems; this type of service will be managed as 'Request for Change' or 'Work Order'.
- **Service Type 3 - Corrective Maintenance**: resolution of incidents and problems related to the EUIPO's IT systems.
- **Service Type 4 - Deployed Resources in Third-parties Locations**: deployment of specialised profiles at the premises of the EUIPO's external stakeholders.
- **Service Type 5.x - Other services**: take-over and hand-over tasks, feasibility studies, prototypes and other support related services not covered by the previous bullet points.

All service types will be subject to Service Level Agreements (hereafter 'SLA'). An SLA is already defined at the level of the FWC whereas further SLAs will be specified at the level of each Specific Contract.

The Contractor must have the capacity to carry out several assignments in parallel and must carry out the work as agreed according to the given specifications and quality expectations, respecting the delivery deadlines and the overall costs.

Below you may find a table which summarises the various service types and their main characteristics. Further details are provided in the sections that follow.

[3] Please note that reference to Specific Contracts in the different parts of the document may be understood, where relevant, as references to Purchase Orders.

Service Type	Short Description	Activities	Typical Location	Contract default type
1 - Software Development	Implementation of new IT systems or major enhancements of existing ones	• Creation of one or more completely new IT applications • Major extension/ enhancement of one or more of the Office's existing applications • A combination of the above • Includes adaptations to satellite systems as a consequence of the previous bullets • It might also involve migration of data and decommission of legacy applications	Mainly Off-site	Fixed Price or Quoted Time & Means
2 - Adaptive Maintenance	Changes to the EUIPO's existing IT systems	• Implementation of Requests for Change (RfC): Minor extension/ enhancement of one or more of the Office's existing applications • Implementation of Work orders (WO): general tasks concerning small or low-risk adaptive work which do not require the triggering of the *Plan IT Investment Process*	Mainly Off-site	Fixed Price or Quoted Time & Means
3 - Corrective Maintenance	Resolution of incidents and problems related to the EUIPO's IT systems.	• Priority corrective maintenance. • Non-priority corrective maintenance. • Question resolution & support	On-site, off-site, or a combination of both	Fixed Price or Quoted Time & Means
4 - Deployed Resources In Third-parties Locations	Deployment of specialised profiles at the premises of the EUIPO's external stakeholders	• Deployed Resources • Ad hoc missions	Third-party locations	Fixed Price or Quoted Time & Means
5 – Other services	Remaining support services	• Take-over / hand-over services • Prototyping • Ad-hoc studies (feasibility, technical analysis, etc.) • Ad-hoc support	Any of the options (i.e. on-site, off-site, third-party locations)	Fixed Price, Quoted Time & Means or Time & Means

2.2.1. **Service Type 1 - Software development**

This type of service concerns the implementation of new IT systems or major enhancement of existing ones with new features and capabilities. Services of this type will be organised and managed as **'projects'** following the Office's project management methodology.

Place of work
This service will be mainly executed off-site (i.e. on the Contractor's premises), unless the EUIPO decides otherwise.

Ordering
As far as the ordering process is concerned, every request for this type of service will typically trigger the launching of a dedicated RfO and hence a resulting Specific Contract. In cases where the project is split in work packages, a RfO per work package can be launched. The services of this type will generally be requested with Fixed Price or Quoted Time & Means orders, unless the EUIPO decides otherwise.

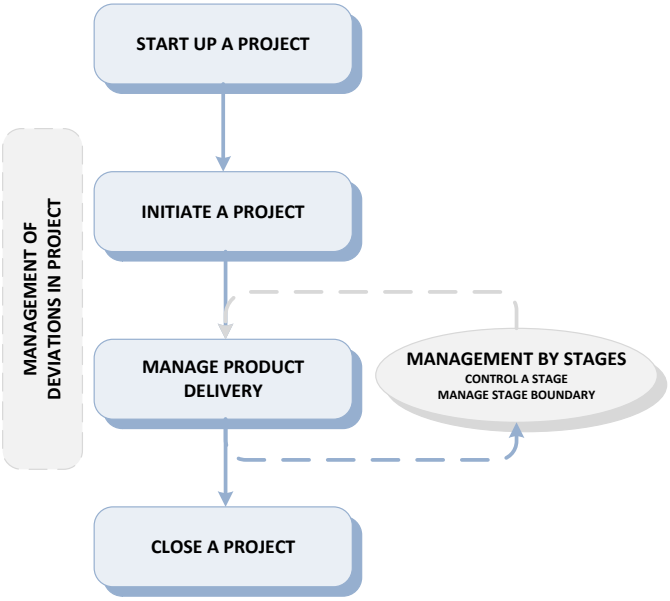
Scope
A software development project can be classified as operational or strategic depending on whether its resulting benefits are linked to the strategic objectives of the Office as described in the EUIPO's Strategic Plan in force at a given point in time. Contracting methods and deliverables will not be affected by project classification.

The scope of a software development project in the context of this CfT can be composed of:

- The creation of one or more completely new IT applications; it might also involve migration of data and decommission of legacy application;
- Major extension/enhancement of one or more of the Office's existing applications, e.g. addition of new functionalities, addition of new modules/components etc.;
- A combination of the above.

As described in the section concerning the overview of the EUIPO's IT environment, most of the IT systems of the Office integrate with each other. Therefore, in most cases, the creation of a new IT system or the enhancement of an existing one will also implicate adaptations to other existing systems, also referred to as '**satellite systems**' or just '**satellites**'. It should be pointed out that **any such adaptations will also be part of the software development project scope and hence they will be requested and managed via the presently described service type and not via adaptive maintenance,** which is described later in the document.

Applicable process & deliverables
The software development services will be managed using the project management methodology in place at the EUIPO. That process is based on a tailored version of PRINCE2, with the following main phases in the lifecycle of a project:



As shown above, this process at the EUIPO consists of four phases:

1. **Starting up a project**: prior to a project being initiated, it is conceptualised and there must be a project mandate. A project brief is then drafted and approved by the Office management.

2. **Initiating a project**: once the project brief is approved[4], the project can be initiated. This implies the development of the detailed project plan and triggers the booking of the resources planned.

3. **Managing product delivery**: in this phase the project manager executes the project, ensuring that production of deliverables is controlled, managed and monitored.

4. **Closing a project:** the closure of the project entails the acceptance of the project deliverables. Once accepted, the project manager produces the end project report and hands over the products to the business.

The implementation of software developments, which takes place within the *Managing product delivery* phase, follows the Software Development Life Cycle Process (SDLC), which is described in section *5.1. 'Software Development Life-Cycle' process (SDLC).*

In principle, the involvement of the Contractor in each of the SDLC phases is the following:

- **Requirements** phase: The Contractor is not involved; all the necessary steps are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs.
- **Design** phase: The Contractor is not involved; all the necessary steps are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs.
- **Implementation** phase: The Contactor is required to produce the project output on the basis of a defined set of requirements (functional, non-functional, security, architectural and quality-related) that have been produced in the previous phases. Once a Specific Contract between the Office and the Contractor has been signed for the IT system(s) to be built and/or adapted and/or extended, the Contractor is expected to:
    - analyse and understand the aforementioned requirements requesting clarifications from the Office wherever necessary,

[4] In the event of exceptional circumstances, the ED/programme board might authorise the initiation of project activities before the approval of the project brief.

- design a high-quality solution that is aligned with the EUIPO's architecture standards and high-level architecture requirements by completing the pertinent Design Document(s),
- develop the software in an iterative and incremental manner,
- test the software according to the Office's testing framework so that it can guarantee that it fulfils the acceptance criteria,
- package the software and deliver it to the EUIPO according to the Office's standards.

During the first steps of this phase, it is possible that further low-level modifications to satellite systems are required (mostly of a technical nature), although they could not be identified in the previous phases. Such modifications will need to be identified by the Contractor and be included in the pertinent Specific Contract. Such modifications will not be treated as changes in the scope of the requested service.

- **Acceptance** phase: The organisation and execution of the acceptance related tasks are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs. The Contractor must assist the Office, or its service providers, to install the software in the Office's acceptance testing environment. It must also provide the necessary support during the execution of the acceptance tests resolving any questions and bugs that may arise along the way, always complying with the agreed, at the level of each Specific Contract, SLAs.
- **Deployment** phase: The deployment related tasks of the relevant software are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs. The Contractor must assist the Office, or its service providers, in rolling out the software in production. By default, unless otherwise specified at the level of each Specific Contract, the Contractor must provide one-month post go-live support with dedicated teams that will quickly resolve any identified problems in production. The Contractor may be asked to provide training material and/or undertake specific training sessions.

From the non-exhaustive list of deliverables mentioned in section *5.1.1. SDLC deliverables (along with their applicable phase and the responsible party)*, here are the ones which are, or may be, applicable for this type of service.

Deliverables	Applicable
Software Requirement Specifications (SRS)	Mandatory
High Level Specifications (HLS)	Optional
Migration Plan	Optional
High Level Architecture (HLA)	Optional
Security Assessment Report	Optional
Master Test Agreement (MTA)	Mandatory
Site Acceptance Test Plan (SAT Plan)	Mandatory
Functional Test Approach	Optional
Security Test Approach	Optional
Performance Test Approach	Optional
Quality Audit Report	Optional
Detailed Project Plan	Mandatory
Implementation Progress Report	Mandatory
Design Document	Mandatory
Iteration Plan	Mandatory
Development Test Strategy	Optional
Source Code	Mandatory
Database scripts	Mandatory
Deployment scripts	Mandatory
Non-functional test automation scripts	Mandatory

Functional test automation scripts	Optional
Migration scripts	Optional
Factory Acceptance Test Specifications	Optional
Factory Acceptance Test Report (FAT Report)	Mandatory
Release Notes	Mandatory
Launch Plan	Mandatory
Rollout Plan	Mandatory
User Guide	Optional
Administration Guide	Optional
User Training Material	Optional
Admin Training Material	Optional
Site Acceptance Test Report (SAT Report)	Mandatory
User Acceptance Test Plan (UAT Plan)	Optional
User Acceptance Test Report (UAT Report)	Optional
Test Progress Reports	Optional
Communications Plan	Optional
Implementation Closure Report	Mandatory

By 'optional' it is meant that, depending on the specific needs of a pertinent request, the related deliverable may not be asked for in the context of that request. The definitive list of all the deliverables required each time, will always be specified beyond any doubt within each corresponding Specific Contract.

During project execution, regular meetings between the Contractor and the EUIPO are held at the Office's Alicante premises as well as via video conferencing, to follow and monitor the project's progress. The exact frequency and content of the regular meetings will be specified in each pertinent Specific Contract. The minimum frequency of the face-to-face meetings at the Office's premises in Alicante will be once per month at no extra cost for the EUIPO.

2.2.2. **Service Type 2 - Adaptive maintenance**

This type of service concerns the adaptive maintenance of the existing IT applications. Services of this type will be organised and managed either as '**Requests for Change**' (hereafter 'RfC') or '**Work Orders**' (hereafter 'WO'). They are also referred to as 'IT investments'.

Place of work
This service will be mainly executed off-site, unless the EUIPO decides otherwise.

Ordering
As far as the ordering process is concerned, one or more requests for this type of service can be bundled in the launch of the same RfO, thus, resulting in one Specific Contract under which all those requests will be treated. Nevertheless, depending on the size of the requested service, the EUIPO may launch a dedicated RfO per request.

The services of this type will be requested on the basis of Fixed Price or Quoted Time & Means orders, unless the EUIPO decides otherwise.

Scope
An RfC may concern any type of modification(s) to existing IT system(s) as these are defined in section *2.1. Overview of the EUIPO's IT environment*. Systems maintained by third parties are not included in the scope of this service type.

A 'modification' covers all requests for enhancing or adapting existing functionalities as well as creation of new features. It may also include version upgrades of COTS or other licenced libraries and products which may be used either as standalone or as parts of the in-house (i.e. custom) software of the Office. Adaptive maintenance also provides improvements in the documentation as well as other technical

adaptations and improvements concerning non-functional software attributes (e.g. performance, maintainability, security, etc.).

A WO may concern general tasks which are not always related to adaptive maintenance activities; still, they are described under this service type because they are usually treated as adaptive work. Examples where a WO can be requested are: impact analysis of a potential modification to a system, update of documentation according to new deliveries, preparation of configuration scripts to be used in production environment, small low-risk adaptive developments and other.

Adaptive maintenance requests are usually small in size. As such, they are dealt with in a faster and lighter way than the projects, from their inception to their roll-out.

Applicable processes & deliverables
The management process that is followed in the case of adaptive maintenance service requests as far as RfCs are concerned, is described in section *5.3 Plan IT Investments Process*.

For WOs the process is a very simple one which concerns the filing of a request in a ticketing system (i.e. Remedy) of the Office that reaches the Contractor's queue and thereafter the ticket goes through different statuses until it is implemented and closed.

In the case where the requested service involves adaptive developments to software, the implementation always follows the Software Development Life Cycle Process (SDLC) which is described in section *5.1. 'Software Development Life-Cycle' process (SDLC).*

In principle, the involvement of the Contractor in each of the SDLC phases is the following:

- **Requirements** phase: The Contractor in principle is not involved; all the necessary steps are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs. The produced specifications documentation is lighter than the respective of the software development services (i.e. Type 1) and it usually takes the form of a filled-in Request for Change template.
- **Design** phase: The Contractor in principle is not involved; all the necessary steps are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs. Usually, the aforementioned Request for Change document is updated with the design specific details of the solution and no dedicated Design Document is produced.
- **Implementation** phase: The Contractor is required to produce the project output on the basis of a defined set of requirements (functional, non-functional, security, architectural and quality-related) that have been produced in the previous phases. The Contractor is expected to:
    - analyse and understand the aforementioned requirements, assess the impact and provide effort and time estimates,
    - design a high-quality solution that is aligned with the EUIPO's architecture standards and high-level architecture requirements,
    - develop the software in an iterative and incremental manner,
    - test the software so that it can guarantee that it fulfils the acceptance criteria,
    - package the software and deliver it to EUIPO according to the Office's standards.

  During the first steps of this phase, it is possible that further low-level modifications to satellite systems pop up (mostly of technical nature) which were not possible to be identified in the previous phases. Such modifications will need to be identified by the Contractor and be included in its impact assessment. Such modifications will not be treated as changes in the scope of the requested service.

- **Acceptance** phase: The organisation and execution of the acceptance related tasks are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs. The Contractor must assist the Office, or its service providers, to install

the software in the Office's acceptance testing environment. It must also provide the necessary support during the execution of the acceptance tests resolving any questions and bugs that may arise along the way, always complying with the agreed, at the level of each Specific Contract, SLAs.

- **Deployment** phase: The deployment related tasks of the relevant software are undertaken by the EUIPO with the support of the relevant services provided in the context of other dedicated FWCs. The Contractor must assist the Office, or its service providers, in rolling out the software in production. By default, unless otherwise specified at the level of each Specific Contract, no post go-live support is required and any identified problems in production are treated by the pertinent corrective maintenance service (i.e. Type 3).

From the non-exhaustive list of deliverables mentioned in section *5.1.1. SDLC deliverables*, here are the ones which are, or may be, applicable for this type of service.

Deliverables	Applicable
Software Requirement Specifications (SRS)	Mandatory *(in the form of a filled-in RfC template)*
High Level Specifications (HLS)	Optional
Migration Plan	Optional
High Level Architecture (HLA)	Mandatory *(in the form of a filled-in RfC template)*
Security Assessment Report	Optional
Master Test Agreement (MTA)	Optional
Site Acceptance Test Plan (SAT Plan)	Optional
Functional Test Approach	Optional
Security Test Approach	Optional
Performance Test Approach	Optional
Quality Audit Report	Optional
Detailed Project Plan	Optional
Implementation Progress Report	Optional
Design Document	Optional
Iteration Plan	Optional
Development Test Strategy	Optional
Source Code	Mandatory
Database scripts	Mandatory
Deployment scripts	Mandatory
Non-functional test automation scripts	Optional
Functional test automation scripts	Optional
Migration scripts	Optional
Factory Acceptance Test Specifications	Optional
Factory Acceptance Test Report (FAT Report)	Mandatory
Release Notes	Mandatory
Launch Plan	Mandatory
Rollout Plan	Mandatory
User Guide	Optional
Administration Guide	Optional
User Training Material	Optional
Admin Training Material	Optional
Site Acceptance Test Report (SAT Report)	Optional
User Acceptance Test Plan (UAT Plan)	Optional
User Acceptance Test Report (UAT Report)	Optional
Test Progress Reports	Optional
Communications Plan	Optional
Implementation Closure Report	Optional

The definitive list of all the deliverables required each time in the context of a service request, will always be specified beyond any doubt within each corresponding Specific Contract.

2.2.3. **Service Type 3 - Corrective maintenance**

This type of service concerns the corrective maintenance activities of the EUIPO's IT systems so that the internal and external users of those systems can perform their daily assigned tasks and activities in a robust, consistent, secure and reliable manner with absolutely minimum systems' outage times.

Place of work
This service may be executed on-site (i.e. on the EUIPO's premises), off-site (i.e. on the Contractor's premises), or using a combination of both.

Ordering
As far as the ordering process is concerned, the Office's practice so far has been to launch a single RfO, with a duration from 6 to 12 months, thus, resulting in one Specific Contract each time under which all the corrective maintenance related tasks are performed. The services of this type will be requested on the basis of Fixed Price or Quoted Time & Means orders, unless the EUIPO decides otherwise.

Scope
The scope of this type of service includes the corrective maintenance of the EUIPO's existing IT system(s), as these are defined in section *2.1. Overview of the EUIPO's IT environment,* as well as any new systems to be created and be rolled out in the Office's production environment throughout the duration of the resulting FWC. Systems maintained by third parties are not included in the scope of this service type.

The details of the requested corrective maintenance services along with the applicable SLAs are specified at the level of the Specific Contracts. At a high-level, pertinent activities consist of, but are not limited to, the following areas:

- **Priority corrective maintenance**: It covers incidents and problems of a *critical* and *high* priority that seriously affect the services provided by the IT systems. The primary task of the Contractor in the event of a serious incident is to restore service either by resolving the problem, or by providing a workaround within the shortest time frame possible, to minimise disruption to the Office's operations.
- **Non-priority corrective maintenance**: It covers analysis and development of patches for incidents and problems of *medium* and *low* priority. Any development of patches for non-priority incidents must be performed only after an agreement has been reached between the Contractor and the EUIPO.
- **Question resolution & support**: Provision of support and answers to questions related to incidents, problems or other relevant areas. Questions could come from the EUIPO or from other service Contractors for example Service Desk, DevOps etc.

Analysis of the root cause must be carried out systematically for all incidents and problems referred to the Contractor. By default, **unless otherwise defined at the level of the corresponding Specific Contract(s)**, the following SLA will apply:

- A **Critical-priority** incident or problem has the highest priority of all incidents. It must be resolved within a very short time frame, **within 24 hours,** either via a permanent fix or a temporary workaround. The Contractor must inform proactively, at least twice a day, or to a timetable agreed with the EUIPO, on the progress and/or delays to the fixing of a critical incident.
- A **High-priority** incident or problem has less impact than a critical one but the Contractor must deliver a fix, **within 10 working days**, and always according to a schedule agreed with the EUIPO.

- A **Medium/Low-priority** incident or problem has the less important impact and the pertinent fixes with their corresponding releases should be planned and agreed with the EUIPO.

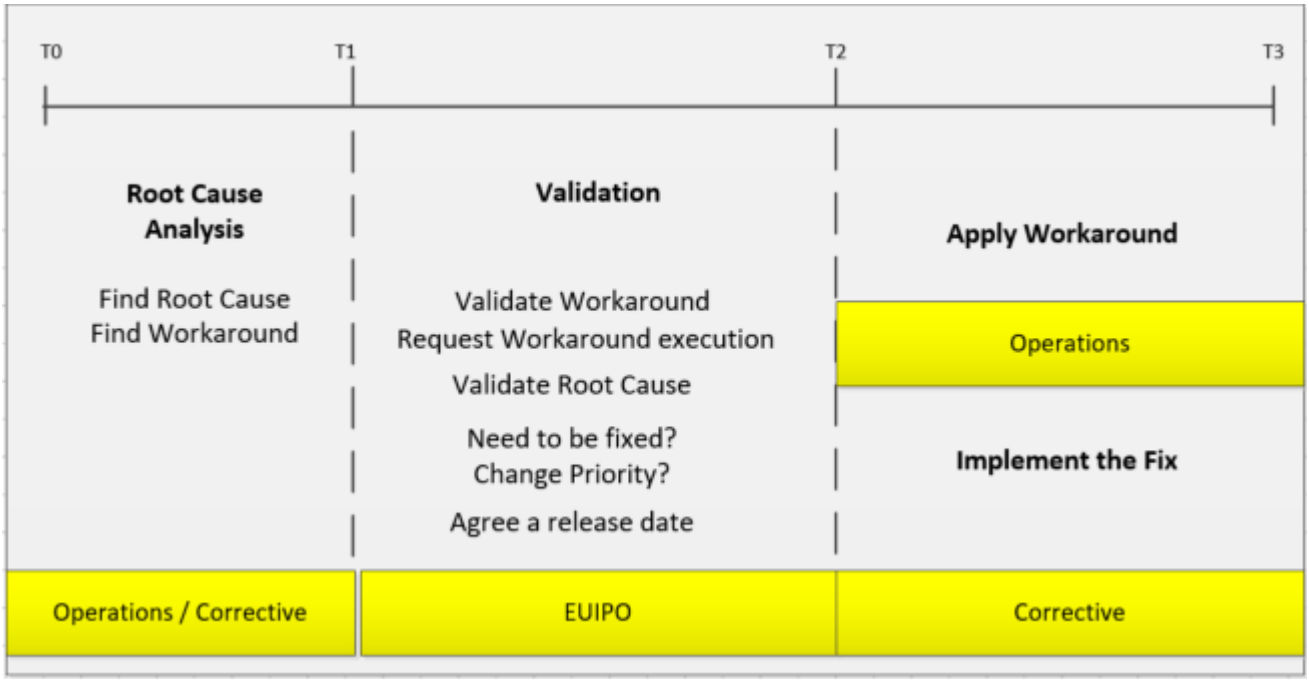
Applicable processes & deliverables

The corrective maintenance services follow the Incident and Problem Management process of the Office which is based on Information Technology Information Library (ITIL[5]) best practices. For more information refer to section *5.4. 'Manage incidents and problems' process.*

The resolution of the issues can be split into four phases:

1. Root Cause Analysis
2. Validation
3. Apply Workaround
4. Implement the Fix

Another FWC regarding IT Operations services is effective with an Operations service provider. The distribution of the tasks between that service provider and the Contractor in the context of the present CfT is depicted below.



Root Cause Analysis

The single point of contact for the root cause analysis is the Incident Manager provided by the Operations service provider. The Contractor will have to coordinate with the person or team that performs that role. The objective of this phase is to provide both the root cause and a workaround. As the aim is to restore normal service of an EUIPO application, an efficient coordination between the Contractor and the Operations service provider is essential.

Validation

The validation will be done by the EUIPO, depending on the priority of the involved incident or problem.

Apply Workaround

[5] For more info see https://www.axelos.com/best-practice-solutions/itil

When a workaround is available, the Office will request its execution and also check the validity of the root cause analysis, mainly to reassure that the real root cause has been identified and consequently decide whether the issue has to be fixed or if the workaround offers a viable solution. The existence of the workaround can also decrease the priority of the issue.

The application of the workaround is executed by the EUIPO with the support of Contractor.

Implement the Fix

When a fix is necessary, a date will be agreed with the Contractor. Corrective maintenance fixes can be added to adaptive or software development releases when it is in the interest of the Office as described in section *5.1.2. Product development*.

The implementation of the fix has to be performed by the Contractor. The agreed date is always the date when the fix will be available for the end-user, once the fix is released in production. Except for critical-priority cases, any implementation related tasks follows the Software Development Life Cycle Process (SDLC) which is described in section *5.1. 'Software Development Life-Cycle' process (SDLC)*.

The requirements and design phases of the SDLC are not applicable for the corrective maintenance services. From the non-exhaustive list of deliverables mentioned in section *5.1.1. SDLC deliverables*, here are the ones which are, or may be, applicable for this type of service.

Deliverables	Applicable
Software Requirement Specifications (SRS)	n/a
High Level Specifications (HLS)	n/a
Migration Plan	n/a
High Level Architecture (HLA)	n/a
Security Assessment Report	n/a
Master Test Agreement (MTA)	n/a
Site Acceptance Test Plan (SAT Plan)	Optional
Functional Test Approach	Optional
Security Test Approach	Optional
Performance Test Approach	Optional
Quality Audit Report	Optional
Detailed Project Plan	n/a
Implementation Progress Report	Optional
Design Document	Optional
Iteration Plan	Optional
Development Test Strategy	n/a
Source Code	Mandatory
Database scripts	Mandatory
Deployment scripts	Mandatory
Non-functional test automation scripts	Optional
Functional test automation scripts	Optional
Migration scripts	Optional
Factory Acceptance Test Specifications	Optional
Factory Acceptance Test Report (FAT Report)	Mandatory
Release Notes	Mandatory
Launch Plan	Optional
Rollout Plan	Optional
User Guide	n/a
Administration Guide	n/a
User Training Material	n/a
Admin Training Material	n/a
Site Acceptance Test Report (SAT Report)	Optional
User Acceptance Test Plan (UAT Plan)	Optional
User Acceptance Test Report (UAT Report)	Optional

Test Progress Reports	Optional
Communications Plan	n/a
Implementation Closure Report	n/a

The definitive list of all the deliverables required each time in the context of a service request, will always be specified beyond any doubt within each corresponding Specific Contract.

2.2.4. Service Type 4 - Deployed Resources in Third-parties Locations

This type of service concerns the deployment of the Contractor's resources with the required profile at the premises of the EUIPO's external stakeholders.

Place of work
Requests for this service will be principally executed at third-party locations.

Ordering
As far as the ordering process is concerned, every request for this type of service will typically trigger the launching of a dedicated RfO and hence a resulting Specific Contract. The services of this type will be on the basis of Fixed Price or Quoted Time & Means, unless the EUIPO decides otherwise.

Scope
There are two scenarios related to this type of service:

- **'Deployed' resources: '**Deployed' resources are Contractor's resources to be deployed/placed to a third-party location (e.g. EU IP Offices, non-EU IP Offices, EU-Funded Project Offices located outside Europe) from where they will contribute to the launch and development of new projects and/or support implementations of tools.

  Indicatively, the duties to be undertaken by the 'deployed' resources can be any of the following:

  - Effort estimation and schedule of deliveries
  - Prototypes and/or proof of concept
  - Activity reports
  - Software development tasks
  - Documentation drafting
  - Bug fixing
  - Deployment of system releases and go-live support

  For the resources to be deployed in EU, the involved persons must speak fluently (level C2) the language of the office or organisation where the deployment will take place. Those resources will need to come to the EUIPO approximately six times per year for follow up meetings, with an average duration of 5 days per visit. If more than six visits are requested in a natural year, costs of the seventh and subsequent visits will be reimbursed according to the rules described in 4.4.5.2.

  For resources to be deployed outside EU, follow up meetings at the EUIPO are not foreseen and the language requirements will be detailed in the Specific Contracts.

  In order to reinforce current and future projects and activities carried outside Europe, the Office expects to have deployed resources in some of the EU-Funded Project Offices (e.g. Buenos Aires, Mexico City, Bangkok).

- **Ad hoc Missions:** Contractor's resources might have to travel for short periods of time to third-party location(s) within or outside EU in order to participate in meetings or workshops, perform installations or provide other relevant support tasks. Travel costs will be reimbursed according to the rules described in 4.4.5.2.

Applicable processes & deliverables

These will be defined at the level of the Specific Contracts.

2.2.5. **Service Type 5.x - Other Services**

The following types of service cater for special needs that might arise throughout the duration of the FWC. The nature of those services is more general and ad-hoc, for that reason the place of work for each service can be any of the available options (i.e. on-site, off-site, third-party location) and as such it will be defined in the request related to each Specific Contract. Similarly, these services can be performed on the basis of Fixed Price or Quoted Time & Means or even Time & Means orders.

2.2.5.1. Service Type 5.1 – Take-over / hand-over services

This type of service concerns the hand-over and take-over services regarding transfer of knowledge and control from the Contractor to the EUIPO (or its service providers), and vice versa. Requests for such services involve the takeover of the complete set of applications in scope of this CfT or just specific application(s).

Due to the crucial importance of these services for the implementation of both the FWC and of the Office's activities, it is essential that the Contractor takes a strong commitment to implement them.
As a consequence, the Office reserves the right to apply special penalty fees in case the Contractor refuses or fails to properly perform them.

Transition IN

Upon signature of the FWC the EUIPO will request the Contractor to prepare and deliver within ten (10) working days, **at no extra cost** for the Office, a detailed **plan for the transition IN phase**. This plan must provide a detailed description of the proposed strategy for the succesful transition of the software development and maintenance service to the Contractor, covering, as a minimum, the following aspects:

- Strategy for the knowledge transfer, both explicit and tacit (i.e. what knowledge will be necessay, by what means it will be retrieved, etc.)
- Governance (team structure, roles & responsibilities, communication plan, reporting, etc.)
- Detailed work breakdown structure and durations for each activity
- Risk management and mitigation plans
- Communication and reporting
- Estimated cost for the execution of the plan

Once delivered, the plan will be subject to the EUIPO's validation and acceptance.

Within five (5) working days after reception of the proposed plan, or later if mutually agreed, a kick-off meeting shall take place at the Office with the objective to discuss about the proposed methodology for the transition IN phase and any other relevant topic for the implementation of the FWC. The kick-off meeting is not covered by a Specific Contract, but is organised at the Contractor's own cost.

For the preparation of the 'Transition IN Plan', the following shall be considered:

- The duration of the transition IN phase must have a duration of **maximum 4 months** from the signature of the FWC and it could be split in stages.
- The outgoing contractor will be responsible for providing support to the incoming Contractor with the take-over activities. As the knowledge transfer activities may suffer disruptions or may not be completed, the Contractor must describe in its 'Transition IN plan' which measures will be taken to mitigate that risk.
- The EUIPO has produced and maintained an extended set of technical and non-technical documents concerning its IT systems and its relevant procedures that the Contractor will have access to. Nevertheless, not all the documents may be fully up to date when the transition will

take place. How the Contractor will mitigate that risk must be included in the 'Transition IN Plan'.

Upon acceptance of the 'Transition IN Plan', a corresponding Specific Contract will be prepared and signed between the Office and the Contractor for this specific type of service (i.e. Type 5.1). During the execution of the Specific Contract, the Contractor must execute all the steps described in the approved 'Transition IN Plan' so that, at the end of the transition period, the Contractor is ready to receive requests for other types of services in the context of the FWC and it is capable of performing them with the expected efficiency, quality and agreed SLA.

The exact requirements of the Specific Contract will be defined in the pertinent RfO. Nevertheless, some of those requirements can be already specified at the level of the present CfT:

- At the latest within **3 months** from the signature of the FWC, the Contractor must finalise the set-up of a local (i.e. off-site) environment that will serve for the execution of the corrective maintenance services (i.e. Type 3) to be requested throughout the FWC's duration. By 'set-up' it is meant that all the required components, hardware (i.e. physical servers, network infrastructure, etc.) and software (i.e. IT systems in the scope of the present CfT, middleware, tools, etc.), are in place and the environment is operational.
- At the latest by the end of the transition period, the Contractor must finalise the set-up of another local (i.e. off-site) environment, **distinct** from the one described previously, that will serve for the execution of the software development (Type 1) and adaptive maintenance services (Type 2) to be requested throughout the FWC's duration. By 'set-up' it is meant that all the required components, hardware (i.e. physical servers, network infrastructure, etc.) and software (i.e. IT systems in the scope of the present CfT, middleware, tools, etc.), are in place and the envrionment is operational.

All IT and other software installations on the Contractor's premises must be validated by the EUIPO as being valid for operational use. The EUIPO must be able to test the applications working at the Contractor's site, in order to ensure the correct functioning of their environments.

Under no circumstances will the EUIPO purchase (and/or loan) any software or hardware for the Contractor to use at its premises. Any costs related to the set-up and maintenance of the environments should be included in the daily rates of the financial proposal of the Tenderer.

During the transition period the Contractor will be requested to perform corrective and adaptive maintenance releases following the Office's work processes as described in chapter *5. EUIPO Work Processes*. These will concern simple fixes and small enchancements on a small sample of the IT systems for which the take-over is already completed. The purpose of these hands-on exercises will be to test all the aspects of the delivery process and the interaction between the EUIPO and the Contractor. The successful performance of these exercises will be a pre-requisite to consider the successful completion of the transition IN period. The development and delivery of those releases will be done at no additional cost for the Office and they will not be subject to any kind of SLA.

Access to the Office's source code and documentation regarding the IT systems and relevant processes will be also made available to the Contractors ranked respectively second and third. It is in the high interest of those Contractors to invest in taking over as much knowledge as possible on the Office's IT landscape so that they are prepared to step in, should the cascade mechanism be activated.

Within the first year after signature of the FWC, the Office reserves the right to invite the abovementioned Contractors, to test their progress on the knowledge acquisition on the above source code and documentation.

Transition OUT

Before the end of the FWC, the Contractor will be asked to transfer the knowledge of the Office's complete IT landscape to a third party or to the Office itself.

This service will be requested via a specific RfO and it will consist of the transfer to the requested party of the full technical know-how, up-to-date documentation, knowledge of any relevant procedures, current status, backlog, and eventually the ownership & responsibility of the overall service.

The length of time given to carry out the transfer will be determined by the EUIPO in the relevant RfO.

This service may only be invoiced after the successful finalisation of the transition period which is subject to the EUIPO's validation and acceptance.

Take over of particular system(s)

The EUIPO may request the Contractor to take over the knowledge of IT system(s). This service will be requested via a specific RfO or as a Work Order.

After the finalisation of the knowledge transfer, the Contractor may be asked to carry out the maintenance of the concerned IT system(s).

The preliminary work will be based on establishing a solid view of the architecture of the system, including all hardware and software details. The Contractor must be able to find and apply the technical solutions to install and access the IT systems concerned at its own premises, if requested to work off-site. The EUIPO will test the applications installed at the Contractor's site in order to ensure the correct functioning of the off-site environments.

Under no circumstances will the EUIPO purchase (and/or loan) software or hardware for the Contractor to use at its premises.

Additionally, the Contractor may be asked to collaborate with the third-party service provider and/or to supervise part of the transition OUT work of the latter. Note that third-party service providers' work location(s) may vary.

The length of time given to carry out the transfer will be determined by the EUIPO in the relevant RfO.

The successful completion of the take-over activities will be subject to the EUIPO's validation and acceptance.

Hand over of particular system(s)

At some point during the FWC, the Contractor may be asked to hand over the knowledge of one or more IT system(s), to a third-party or to the EUIPO.

This service will be requested via a specific RfO and it consists of the transfer to the requested party of the full technical know-how, up-to-date documentation, knowledge of any relevant procedures, current status and backlog for the related software. Optionally, it may also involve the transfer to the requested party of the responsibility to maintain the pertinent IT system.

The length of time given to carry out the transfer will be determined by the EUIPO in the relevant RfO.

The successful completion of the take-over activities will be subject to the EUIPO's validation and acceptance.

2.2.5.2. Service Type 5.2 - Prototyping

The Contractor may be requested to develop one or several prototypes for a new product to allow potential users to test it. After preliminary requirements have been defined by the Office, a simple working model of the system is constructed to show the users visually what their requirements may look like when they are implemented into a finished system. This service will be requested via a specific RfO or a Work Order.

2.2.5.3. Service Type 5.3 - Ad hoc studies and support

The Contractor may be requested to prepare IT-related feasibility studies, analysis studies or any other type of studies. It may also concern requests for the providing of ad-hoc support that will be defined at the level of the pertinent Specific Contracts. This service will be requested via a specific RfO or a Work Order.

2.3. Indicative Volumes

An approximate distribution of the requested work per type of service is provided below on the basis of recent years of execution of similar services. In addition, some historical information is given concerning those executed services.

Please note that the estimated yearly needs for services may evolve. The actual volumes of the contracts depend on the quantities that the EUIPO will order. However, the Office cannot commit a priori to exact quantities to be ordered.

Indicative expected distribution of the work (i.e. effort) per type of service:

Service Type	Weight (%)
Type 1	50% - 70%
Type 2	10% - 20%
Type 3	10% - 20%
Type 4	5% - 15%
Type 5	1% - 10%

Especially to what concerns the deployed resources, we expect that the peak could reach up to 25 FTEs.

Below some historical information.

Number of projects launched

Since 2016, when the currently-in-force Strategic Plan 2020 commenced, more than 60 projects have been launched with more than 70% of them involving software development activities.

The estimated effort that has been contracted over this period till today is more than 60.000 person-days.

Number of RfCs requested for implementation:

Year	# RfCs	Average RfC effort (person-days)
2016	66	45
2017	31	85
2018	17	98

Number of WOs requested for implementation (excluding those intended for external stakeholders):

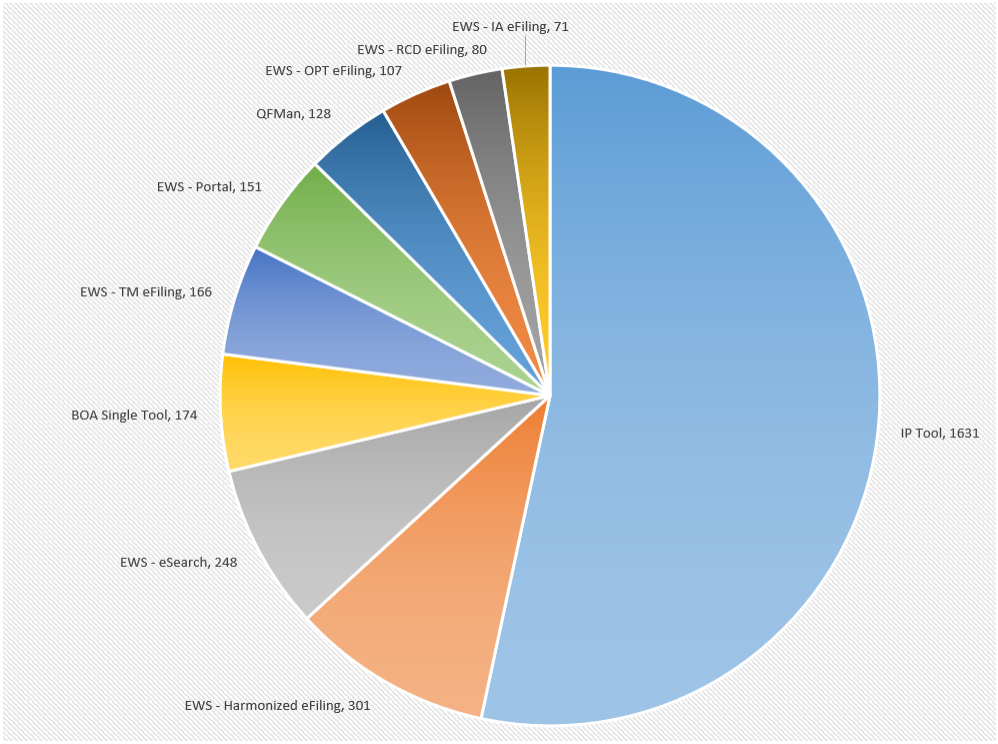
Year	# WOs	Average WO effort (person-days)
2016	154	3
2017	147	6
2018	66	17

Number of incidents reached third line (i.e. involving the development service provider)

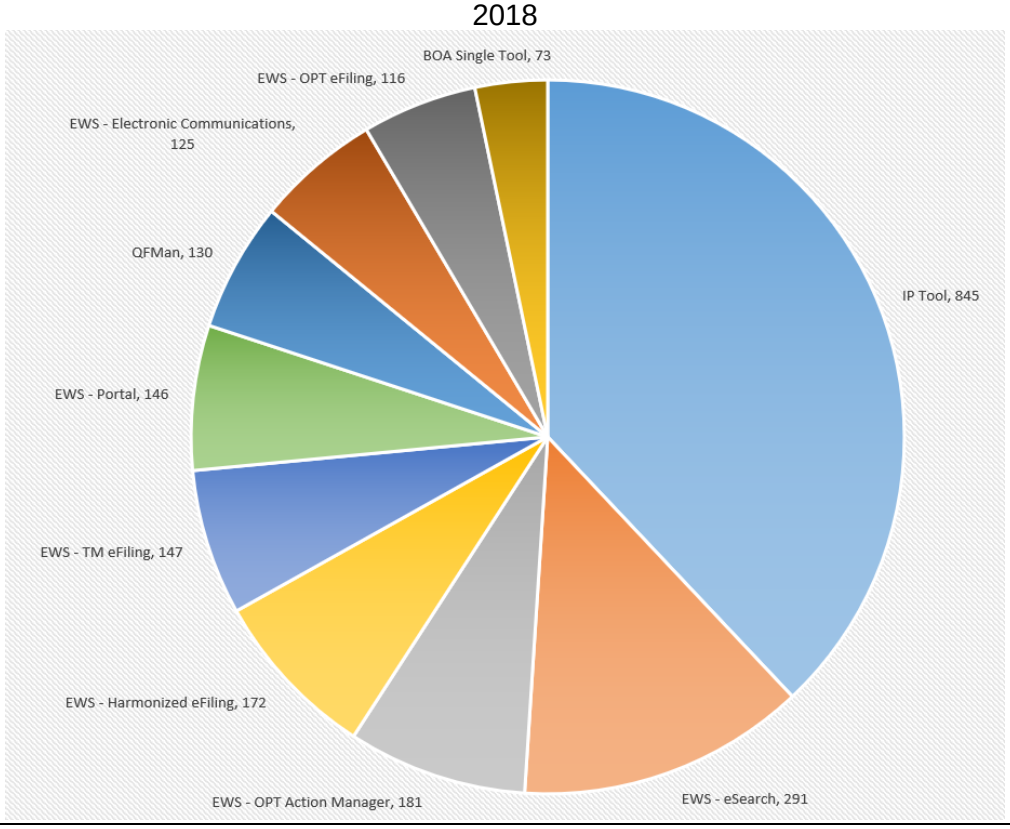
Year	# Critical	# High	# Medium or Low	Total
2017	20	282	4558	4860
2018	22	156	3134	3312

Top 10 applications with most incidents

2017



2018

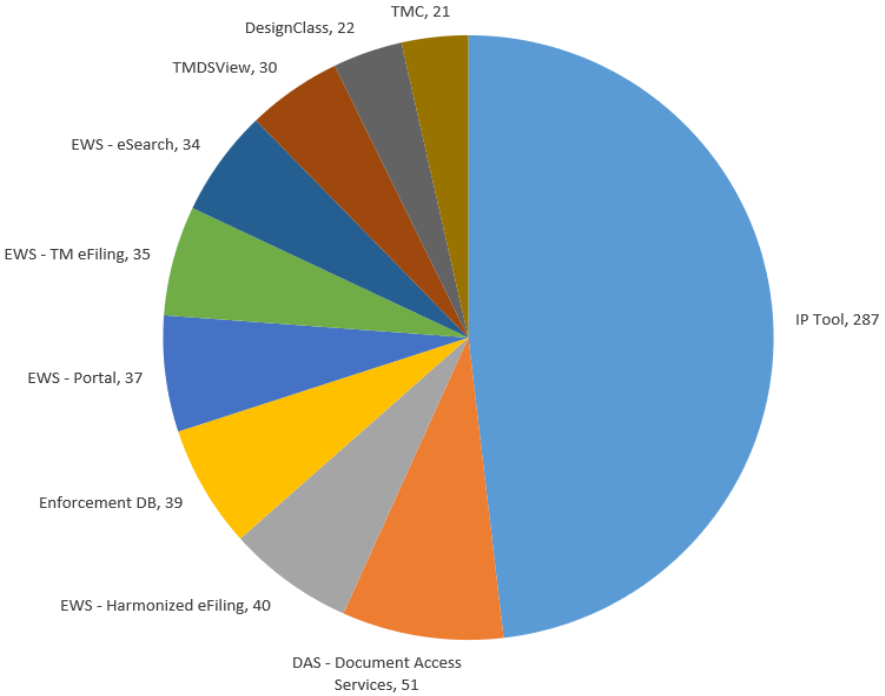


Number of problems that reached third line (i.e. involving the development service provider)

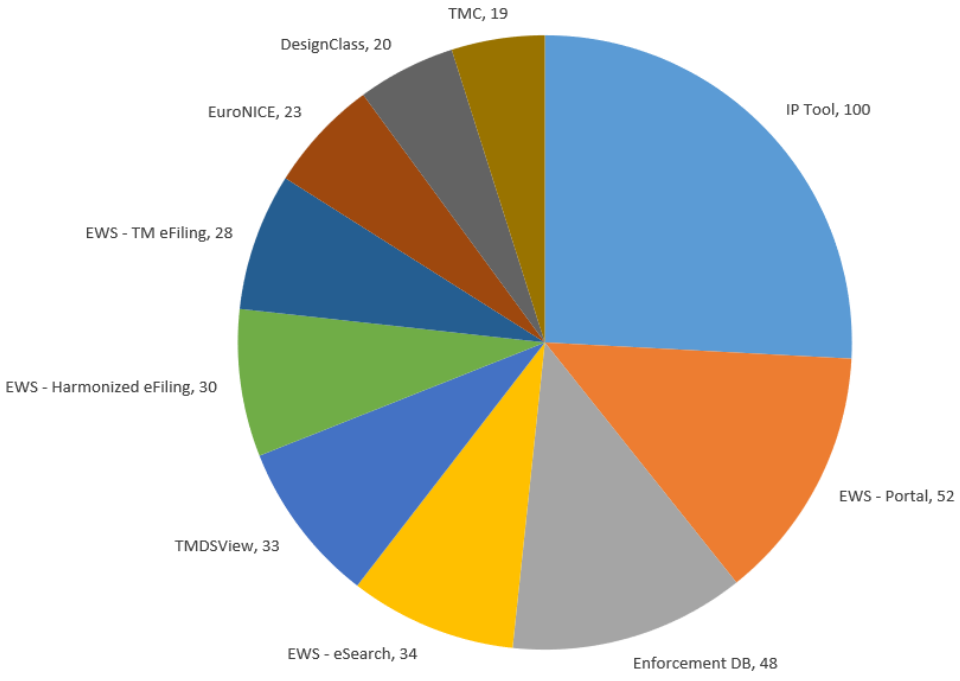
Year	# Critical	# High	# Medium or Low	Total
2017	11	122	593	726
2018	3	102	491	596

Top 10 applications with most problems

2017



2018



3. Profiles

This section lists the profiles for the requested services in the context of the present CfT. The following information regarding requirements is given for each profile.

Nature of the tasks	These are examples of the tasks that will be expected of a person proposed with the required profile. This list is not exhaustive and is to be regarded as indicative.
Education	A description of the minimum educational qualifications required for the profile.
Knowledge and skills	A list of the minimum knowledge and skills that a person with this profile is expected to possess.
Experience	The required experience for the profile. Professional experience must be recent and proven.

The required profiles are:

1. Team Leader (TL)
2. Senior Software Developer (SSD)
3. Software Developer (SD)

3.1. Team Leader (TL)

Nature of the tasks	• Lead software development teams ensuring that team members are motivated and constantly develop their skills and experience. • Estimate effort, costs, timescales and resource requirements for the successful completion of each service request in line with the agreed requirements. • Give proposals for project strategies, planning, definition of tasks and deliverables, review of project deliverables, quality control, risk analysis and management, status reports, problem reporting and management systems, follow-up and organisation. • Guide the team in charge of project activities and review their deliverables. • Monitor costs, timescales and resources used and take action where these deviate from agreed tolerances. Ensure that delivered systems are implemented within these criteria. • Manage the change control procedure gaining agreement for revisions to the project from project sponsors. • Manage capacity, risk and progress. Guide the team in charge of development activities and review their deliverables, follow-up development implementation. • Lead studies on specific technical matters regarding information systems and IT processes. • Carry out audits and quality assessments. • Participate in meetings with stakeholders: users, project board members, project managers, etc. • Produce regular or ad hoc reports on efficiency, KPIs and any other aspect of the service provided. Produce regular activity reports and updated planning for future activities.
Education	• University degree (minimum 4 years' post-secondary education or duly recognised as equivalent as per the Bologna Process) in an **ICT-related field**[6].
Knowledge and skills	• Very good knowledge of project management methodologies (e.g. PRINCE2, PMP, PM Square) and extensive experience in applying them in medium-large projects. • Excellent technical knowledge in the area covered by the tender. • Excellent ability in guaranteeing the timely delivery of the service requested from the team(s). • Excellent coordination and managerial skills (technical and administrative) for the activities of the team(s). Coaching on software development. • Able to participate in multilingual meetings, a good communicator. • Capable of integrating into an international/multicultural environment, rapid self-starting capability and experience in team work are mandatory. • Very good capacity for monitoring and guaranteeing the quality of the service, as well as adherence to standards, procedures, deadlines and other recommendations of the organisation (ISO standards, guidelines and references of the EUIPO, etc.). • Very good ability in ensuring the continuity of the team(s) and organising adequate replacements in the event of absences that might affect the service provided. • Expertise in IT strategy, service level agreements, quality

[6] Economics, Management or Mathematics as such are not ICT-related degrees.

	practices and certifications in the area of information system management and project management. • Very good sense of responsibility towards preparing and taking part in periodic status meetings with the representatives of the institution and proposing corrective actions when necessary. • Experience in carrying out high-level management studies. • High level of English (proficient user - level C1 according to the Europass Language Passport)
Experience	• Minimum of 10 years in software development. • Minimum of 5 years' experience of leading teams. • Experience in a similar position (team leader, project manager, project leader, etc.). • Proven experience in team management in an environment similar in size and activity to the service and team to be managed.

3.2. Senior Software Developer (SSD)

Nature of the tasks	• Development and maintenance of software applications. • Development and integration of technological components. • Design, implementation and maintenance of multitier applications. • Implementation of user requirements. • Prototyping. • Estimate effort, costs, timescales and resource requirements for the successful completion of each service request in line with the agreed requirements. • Writing of technical documentation liaising with the EUIPO's IT architects. • Consultancy studies on specific technical matters regarding information systems and IT processes. • Preparation and validation of quality plans for building and maintaining information systems. • Analysis of business processes, user requirements, functional requirements and technical requirements of a software project. • Design of sound technical solutions for new information systems or for adaptations for existing information systems. • Data analysis and modelling. • Cost/benefit analysis in the area of information systems. • Participate in meetings with stakeholders: users, project managers, etc. • Define practices and guidelines for development environment management. • Produce regular or ad hoc activity reports and updated planning for future activities. • Setup and maintenance of development environments.
Education	• University degree (minimum 4 years' post-secondary education or duly recognised as equivalent as per the Bologna process) in an **ICT-related field**[7].
Knowledge and skills	• In depth knowledge of application development environments. • Good knowledge of the design and development of web and multi-tier applications.

[7] Same applies as with the previous footnote

	• Good knowledge of modelling tools (e.g. UML). • Knowledge of software development methodologies. • Good knowledge of business process analysis. • Good knowledge of automating deployment, scaling, testing and management of containerised applications (e.g. kubernetes) • In-depth knowledge of Service Oriented Architecture and micro-services. • Good knowledge of behaviour-driven development (BDD). • Able to participate in multilingual meetings, a good communicator. • Capable of integrating into an international/multicultural environment, rapid self-starting capability and experience in team work are mandatory. • Capable of applying formal quality standards in the IT environment. Quality of IT projects. • Good level of English (independent user — level B2 according to the Europass Language Passport).
Experience	• Minimum of 7 years' experience in Software Development. • Minimum of 4 years' experience in the technologies and techniques related to the specific project or activity.

3.3. Software Developer (SD)

Nature of the tasks	• Development and maintenance of software applications. • Development and integration of technological components. • Design, implementation and maintenance of multitier applications. • Implementation of user requirements. • Prototyping. • Writing of technical documentation. • Perform unit, integration and factory acceptance testing and assist software quality control carry out site acceptance testing, including user-acceptance testing. • Optimise all elements of a software solution: databases, applications, interfaces, etc. • Produce database scripts for data manipulation. • Produce installation scripts and documentation. • Produce test automation scripts. • Produce the relevant technical or user documentation for a system. • Train users and administrators of information systems. • Participate in meetings with users. • Manage a development environment. • Register and keep updated incident or improvement tickets for information systems.
Education	• Successful training in IT of minimum of 2 years' post-secondary education in a computer-related field.
Knowledge and skills	• In depth knowledge of application development environments. • Good knowledge of the design and development of web and multi-tier applications. • Knowledge of software development methodologies. • Knowledge of relational database systems. • Able to participate in multilingual meetings, a good communicator.

	• Capable of integrating into an international/multicultural environment, rapid self-starting capability and experience in team work are mandatory. • Capable of applying formal quality standards in the IT environment. • Good level of English (independent user — level B2 according to the Europass Language Passport).
Experience	• Minimum of 4 years' experience in IT. • Minimum of 2 years' experience in the technologies and techniques related to the specific project or activity.

4. Framework Contract Implementation

4.1. Service delivery model

The Contractor will be required to set up a service delivery model to ensure the following:

- A clear definition of interfaces, roles and responsibilities (see section *4.2 Interfaces, roles and responsibilities*), as well as follow-up relating to the service delivery management of the Specific Contracts within the Framework Contract implementation;
- An effective communication process between the EUIPO and the Contractor;
- The preparation of an offer, between the receipt of a request and submission of the Contractor's response to the EUIPO, which is in line with the Framework Contract conditions and deadlines;
- The application of a mechanism to ensure the efficient, effective and timely execution of the services requested;
- The maintenance and continuous improvement of the competence of the Contractor's resources;
- The installation of a mechanism to ensure that experts involved acquire the relevant knowledge for efficient execution;
- A mechanism to control the activities and services to be performed and provided to the EUIPO;
- The measurement and monitoring of Key Performance Indicators;
- The execution and presentation of a risk analysis, including a contingency plan, related to the compliance of the delivered services;
- Compliance with the quality, budget, deadline and performance requirements included in the Specific Contracts.

4.2. Interfaces, roles and responsibilities

On the Contractor's side

- The Contractor must appoint a person or persons as **Framework Contract Manager(s)**, or FWC Manager(s), to be in charge of the FWC and responsible for all contractual relations with the EUIPO. The Framework Contract Manager(s) must be reachable by the EUIPO during working hours. In the event of absence, a backup person must be designated.

- The appointed **FWC Manager(s) must be** authorised to sign contracts and any amendments thereto.

- The Contractor must appoint a person or persons as **Service Manager(s)**, to assume the responsibility for daily operational contract execution as well as the technical leadership for the implementation of the contract. Service Manager should be physically located at the EUIPO's premises at least three days per week.

- The Contractor must designate a point of contact, and at least one backup person in the event of absence, to receive and handle all RfOs made by the EUIPO.

- The Contractor must provide a single point of contact for communications with the EUIPO, together with his/her full contact details.

- The Contractor must communicate the list of all persons in charge of customer relationship management with the services of the EUIPO.

On the EUIPO's side

- The EUIPO's Procurement & Vendor Management Service is responsible for the contractual and administrative **follow-up of the Framework Contract**. It will act as the contact point for all general legal aspects linked with the Framework Contract and the Specific Contracts.

- The EUIPO's authorising officer by delegation or authorised representative signs **the Framework Contract** and all amendments thereto.

- The EUIPO's authorising officer by delegation or authorised representative signs **Specific Contracts** and all amendments thereto.

- The EUIPO's authorising officer by delegation or authorised representative assumes the **highest responsibility for day-to-day operational execution of the contract**.

- EUIPO will appoint staff to be in charge of the **technical follow-up** of the contract and the monitoring of task execution. They are the primary **contact persons** for all procedural and reporting aspects linked to the Framework and Specific Contracts, following the provisions set out in the relevant tender documents.

4.3. Ordering process

The ordering process concerns the establishment of a Specific Contract and it covers the period from the sending of the RfO until the signature of the Specific Contract. Services can be provided in one of the following contract modalities:

- Time & Means (TM) orders
- Fixed Price (FP) orders
- Quoted Time & Means (QTM) orders

The ordering process is initiated by the Office via a 'Request for Offer' (or 'RfO') sent to the Contractor describing the requested services. The Contractor must confirm immediately receipt of the request, and express within **three working days** from the receipt its intention to make an offer.

Within a period to be defined in the RfO ranging from 5 to 20 working days after dispatch of the request according to the complexity of the request, the Contractor should make an offer to the Office for the execution of the request. The process completes with the signature of a Specific Contract or a purchase order form or with the withdrawal of the RfO. As part of the ordering process, it is possible that the Contractor's offer is rejected if not in compliance with what is requested or due to non-acceptable time and/or allocation of resources; in such cases the cascade mechanism will be activated, as explained later in this chapter. The Office may use purchase order forms for simplified requests.

The Contractor must have the capacity to carry out in parallel several individual orders, and must carry out the work as agreed according to the specified SLA, respecting the delivery deadlines and quality standards.

4.3.1. **Contract modalities**

4.3.1.1. Time & Means (TM) orders

TM orders are executed on the EUIPO's premises (i.e. on-site) or at third-party locations. In a TM order the EUIPO specifies the expected workload (e.g. number of person-days) and its specific needs for requested profiles.

The following conditions apply to TM orders.

- The Contractor must present offers that meet the requirements as specified in the RfO and associated documents. The Contractor's proposed staff must match the requested profile description and the specific needs indicated in the RfO.

- The Contractor must be able to propose per requested profile at least two (2) qualified candidates to choose from. For the specific case of 'Deployed' resources, at least three candidates per requested position should be proposed in a maximum of three weeks from the request dispatch. The Contractor must be ready to submit two more CVs within one week (after the three weeks) until the requested post is filled. For the deployed resources in Europe they must speak fluently the National Office language (level C2)

- CVs must be presented using the Europass Curriculum Vitae (CV) format. All information indicated in the CV must be verified and validated by the Contractor.

.

- Proposed candidates must be available for interviews with the EUIPO, if it so requests, in order to validate the technical competence of the candidates. Interviews will preferably take place on the EUIPO's premises, although other options would include videoconferences or telephone interviews.

- Successful candidates must be available for the start date of the Specific Contracts.

- In line with the provisions set in Article 7.7 of the FWC General Conditions, at the EUIPO's request, the Contractor must present new candidates to replace any persons unable to carry out the specified tasks to the required standards. The successful replacement candidate will be given sufficient training during a handover period of at least 10 working days, so that he or she will be operational immediately when the original person is withdrawn. Any such replacement and training, if required, will be carried out at no additional cost to the EUIPO.

- The Contractor must give notice to the EUIPO of at least 1 calendar month in the event of a change to the personnel in the team. Approval for such a change will only be granted in the case of justified and imperative reasons by means of a written authorisation from the EUIPO. If the above requirement is not met, the EUIPO will reserve the right to put on hold any invoices related to efforts rendered during the last 20 days of service provision. The selected replacement will be given sufficient training during a handover period of at least 10 working days, so that he or she will be operational immediately when the original person is withdrawn. Any such replacement and training, if required, will be carried out at no additional cost to the EUIPO.

- If the EUIPO so requests, the Contractor may be required to present candidates to temporarily replace team members during holidays or other periods of planned absence. The successful replacement candidate will be given sufficient training during an adequate handover period of at least 10 working days, so that he or she will be operational immediately when the original person goes on leave. Any such replacement and training, if required, will be carried out at no additional cost to the EUIPO.

- The Contractor must ensure the continuity of service required for the good performance of the Specific Contracts and it is strongly encouraged to minimise or avoid replacements of its team members. Under no circumstances may the Contractor invoke a change in team members to justify any failure to comply with contractual obligations, in particular compliance with deadlines and quality of service.

- Invoicing is based on the number of days delivered. The minimum unit is half a person-day and it will be charged as 50 % of one person-day.

4.3.1.2. Fixed Price (FP) orders

In a FP order, the EUIPO specifies the deliverables corresponding to the work to be delivered within defined time frames and at a fixed price.

The following conditions apply to FP orders.

- The Contractor must present proposals that meet the requirements as specified in the RfO and associated annexes (specifications, work packages, deliverables, activities, deadlines, etc.)
- The offer must be in line with the requirements.
- Work is usually carried out on the Contractor's premises (i.e. off-site) but it may be undertaken on-site or at a third-party location if requested so by the EUIPO. The Contractor must provide all the necessary infrastructure on its premises for the successful completion of the work.
- The deliverables must be delivered in line with the specifications and the timeframe established in the Specific Contract and its annexes.
- The Contractor's offer must be inclusive of all costs.
- The offer must include a project and work organisation plan and give details of the proposed activities, the team structure, the complete list of profiles, responsibilities and workload (person-days), the place of work of the team members, etc.
- The EUIPO may request the Contractor to provide CVs of the proposed team if the Office considers this appropriate prior to acceptance of the offer. For the specific case of 'Deployed' resources, at least three candidates per requested position should be proposed in a maximum of three weeks from the request dispatch. The Contractor must be ready to submit two more CVs within one week (after the three weeks) until the requested post is filled. For the deployed resources in Europe they must speak fluently the National Office language (level C2)
- Meetings with the Contractor's team may be required by the EUIPO without additional costs and at short notice (i.e. 3 working days for off-site projects, 1 working day for on-site projects):
    - for clarifications or Specific Contract implementation purposes;
    - at the place of performance or by means of videoconference.
- Invoicing is strictly based on acceptance of deliverables by the EUIPO, as well as on the price established in the Specific Contract, regardless of actual workload. Payments will be limited to the part corresponding to accepted deliverables.

4.3.1.3. Quoted Time & Means (QTM) orders

In a QTM order, the EUIPO specifies the activities to be undertaken and the time to be devoted to each of them.

The following conditions apply to QTM orders.

- The Contractor must present offers that meet the requirements as specified in the RfOs and associated documents (e.g. technical annex with description of activities).
- The Contractor's offer must include a technical proposal based on the EUIPO's requirements.
- If the EUIPO so requests, the offer must also include a project plan.
- The Contractor's offer must contain detailed information on profiles, roles, activities, responsibilities and workload (activity-days or person-days).

- The Contractor's staff must match the requested profile description.

- The EUIPO shall ask the Contractor to provide CVs of the proposed team members to monitor and verify that the Contractor's team for a given activity includes the right profile. For the specific case of 'Deployed' resources, at least three candidates per requested position should be proposed in a maximum of three weeks from the request dispatch. The Contractor must be ready to submit two more CVs within one week (after the three weeks) until the requested post is filled. For the deployed resources in Europe they must speak fluently the National Office language (level C2).

- The work is usually carried out off-site but may also be executed on-site or on third-party locations at the request of the EUIPO. The Contractor must provide all the necessary infrastructure on its premises for the successful completion of the work.

- Invoicing is strictly based on acceptance of deliverables by the EUIPO, as well as on the price established in the Specific Contract, regardless of actual workload. Payments will be limited to the part corresponding to accepted deliverables.

4.3.2. **Estimating the size of a service**

In the context of the FWC, the methodology to be used for the estimation of the size (i.e. effort in person-days) of a requested service depends on the service type, as defined in the Service Catalogue.

4.3.2.1. Service Type 1

For this type of service and for RfOs based on the fixed price modality, by default, the assessment of the proposed offer as far as its size is concerned, will be performed using **function points**[8] **metrics**. Function point metrics are considered to be one of the most widely used standards in the software industry which allow accurate measurements concerning the size of the software that is to be developed, enhanced or adapted.

From the different methodologies in the market, the Office and its service providers use **IFPUG 4.x** (International Function Point Users Group).

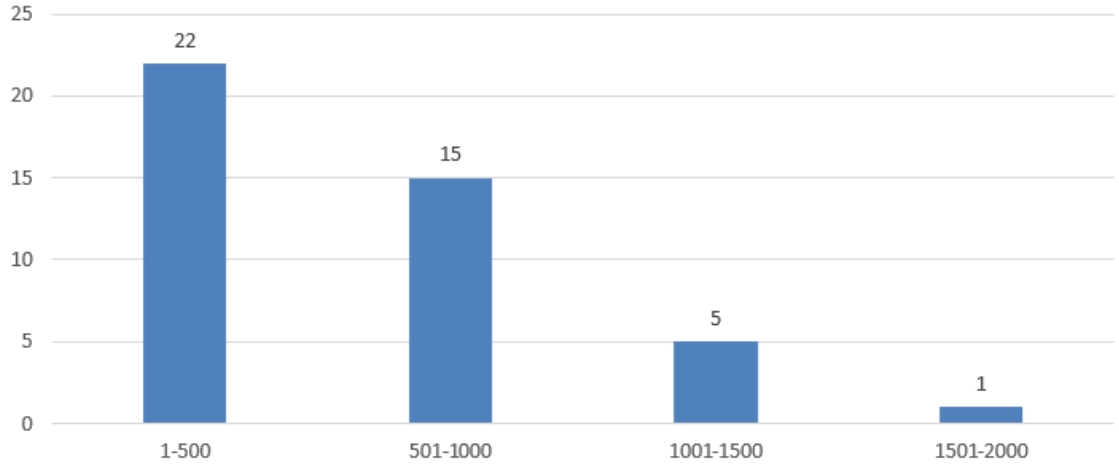
One mandatory count of the function points for a specific request will be performed by the quality service provider on behalf of the EUIPO and another one, optionally, by the Contractor if it wishes to. Any deviations between the two figures will be analysed and, if necessary, a new count will be performed until both parties reach a mutually agreed number of function points.

Function points measure business functionality; therefore, the resulting units will have to be converted to effort in person-days. This will be achieved with the application of a **fixed productivity ratio** (hereafter '**FPR**') in the form of person-days required for the implementation of one function point.

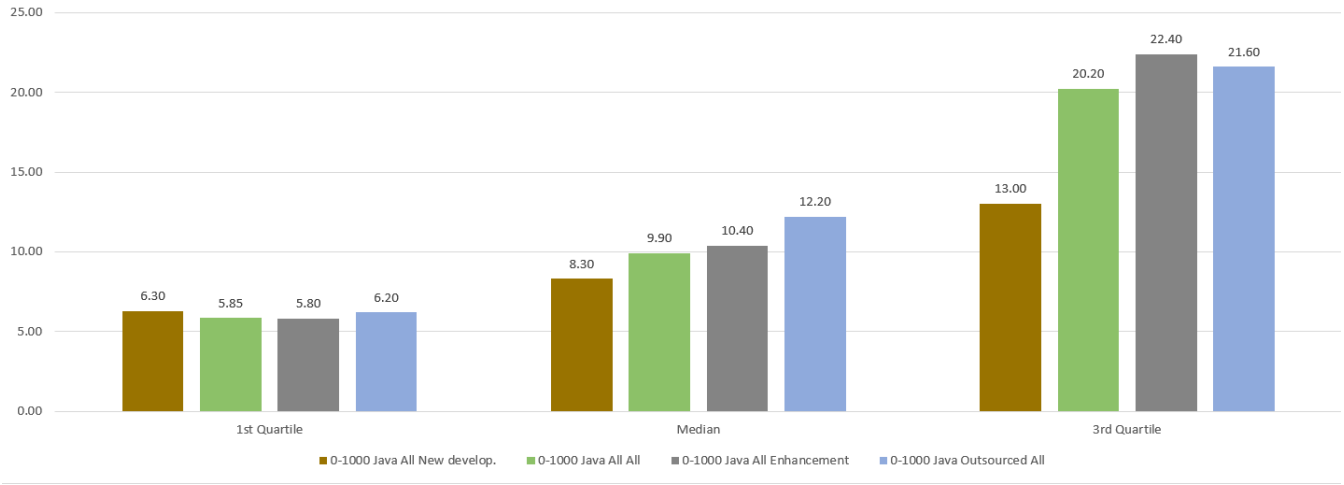
The databases of the International Software Benchmarking Standards Group (ISBSG) have been used as a benchmark. ISBSG is a global, independent and trusted source of data and analysis for the IT industry. Software project data is submitted to the ISBSG from many different IT companies and metrics organisation concerning developments of new functionalities as well as enhancements of existing ones.

The EUIPO's repository of function point measurements regarding past RfOs for software development services, has the following distribution, as concerns the number of function points contained in each request:

[8] A function point is a 'unit of measurement' to express the amount of business functionality in an information system. Function points are used to compute the functional size of software.



That means that the biggest part (i.e. 86%) of the Office's requests have functional sizes of up to 1 000 function points. By querying the ISBSG database for projects using Java as their main programming language (i.e. like it is the case for the most of the Office's IT systems), for functional size ranging between 0 and 1 000 function points the productivity ratios (including the typical phases of the software development life-cycle, from requirements gathering to deployment) are the following:



The brown bars reflect the productivity ratios for new developments, the green bar the productivity ratios for both new developments and enhancements, the grey bar the ones for implementation of enhancements, whereas the light blue shows the ratios for developments (new or enhancements) that were outsourced.

By '1st quartile', it is meant that 25 % of the data returned by the query is less than the depicted value (i.e. best of class), by '3rd quartile' that 75 % of the data returned by the query is less than the depicted value whereas the 'median' depicts the middle value when all the values in the data are arranged in ascending order.

Based on these statistics, the FPR which is selected to be used for all requests of Type 1 services in the context of the FWC is the average between the median and the '3rd quartile' values of the outsourced developments (new or enhancements), therefore:

$$FPR = \frac{12.2 + 21.6}{2} hours/function\ point = 16.9\ hours/function$$

$$\rightarrow \mathbf{2.11\ \ person\ days/function\ point}$$

$$(i.e.\ assuming\ that\ 1\ person\ day = 8\ hours)$$

As aforementioned, the values for the productivity ratio in the ISBSG database cover the full software development lifecycle, from requirements to deployment. However, in the context of this FWC the

requirements and part of the design and testing phases are not in the scope of the requested services. That could reasonably lead to an increase in productivity ratio of approximately up to 25 %.

Nevertheless, considering the complexity of the EUIPO's IT environment and the demanding testing framework, the value has deliberately not been reduced.

The specified FPR includes all the activities and all the deliverables involved in the Office's SDLC process that are applicable to Type 1 services (both mandatory and optional) and are under the responsibility of the Contractor to perform and deliver respectively. It is also inclusive of horizontal project activities (e.g. project set-up, project management, reporting, etc.) as well as any support expected during acceptance and deployment phases, post go-live etc. For more details refer to chapter *5. EUIPO Work Processes* and section *2.2.1 Service Type 1 - Software development*.

Effort for additional tasks: the following are not included in the FPR:

- Deliverables requested in the context of a RfO which do not appear, neither as mandatory nor as optional, in the list of deliverables of section *2.2.1*
- Deliverables and activities concerning automation of functional test cases,
- Deliverables and activities concerning the migration of data and workflows from legacy systems to new systems,
- Activities related to the creation or modification of letter templates (i.e. used by COR system).
- Any requests for changes that may emerge during the execution of the project.

The work related to the above additional tasks will be estimated using the methodologies applicable to the assessment of the other types of service, which are explained in the following section.

Hence, the size of the proposal for each RfO of Type 1 services will be estimated as follows:

$$Total\ effort = (Number\ of\ function\ points * FPR) + effort\ for\ additional\ tasks$$

The FPR is independent of:

- The location (on-site, off-site or combination of those two) at which the service is performed and delivered.
- The related technology if different from Java (e.g. Javascript, HTML, XML, .Net, Activiti workflows, etc.); however, especially for COTS, the Office may decide not to apply the estimation method based on function points and use the methodologies explained in the following section.

The FPR will not be applied in cases where the contract modality sought in the pertinent RfO is Time & Means or Quoted Times & Means. Function points will not be used also in cases of full-agile software development projects where the requirements are not known at the time the RfO for implementation is launched.

The expectation of the Office is that the Contractor will gradually get more efficient in delivering services as time goes on; that is due to the initial learning curve and the increased knowledge acquired, over time, of the systems as well as of the EUIPO's environment and procedures. In this direction the FPR will be calculated as follows:

- For the first 2 years of the FWC, the FPR will remain the same, i.e. 2.11 person-days/function point.
- The first day for each of the following years the FPR will decrease (i.e. improved productivity) by 5 %, therefore in the third year it will become 2.00 person-days/function point, in the fourth 1.90 person-days/function point and in the fifth 1.81 person-days/function.

Examples

Scenario 1: For an RfO sent during the first year of the contract concerning a functional size of 800 function points with no extra demands beside what is included in the FPR, the size of the received proposal should not be more than 800 * 2.11= 1 688 person-days.

Scenario 2: For an RfO sent during the fourth year of the contract concerning a functional size of 650 function points plus some requirements for migration of data from an old system to a new one estimated to 120 person-days, the size of the received proposal should not be more than 650 * 1.90+ 120 = 1 355 person-days.

4.3.2.2. Service types 2 to 5.x

For the rest of the service types, the size and distribution of profiles included in the proposed offer submitted by the Contractor in reply to a specific RfO will be compared against the Office's prior estimations based on the following:

- On the basis of the nature of the request,
- By analogy guided from past experience and historical information,
- Internal expertise (i.e. expert judgement),
- Using top-down and bottom-up estimation methods
- With the assistance of third-party independent experts, whenever necessary
- A combination of the above.

This assessment will be used as a benchmark in order to accept or reject the proposed offer presented by the Contractor in reply to the RfO.

Especially for the services of Type 2, the EUIPO, can also apply the assessment using function points, if it deems it appropriate (e.g. for big changes). Although the mandatory deliverables for this type of service are, in principle, less than in Type 1, the same FPR will be applied, i.e. 2.11 days/function point for the first two years and then decreasing by 5 % for each year to follow.

In case the contract modality sought in the RfO is Time & Means, sizing will be performed by the Office and the resulting number of days per profile will be requested in the RfO.

4.3.3. **Cascading mechanism**

The cascading mechanism is applied to multiple Framework Contracts whereby the first, second, and third contractors are ranked in descending order.

RfOs

The ordering process for each new request is that the Office will contact the contractor ranked first and, if it is unavailable, the second, and then, on the same terms, the third.

The following rules apply to requests for provision of services:

- The RfO is sent according to the process described above to the Contractor ranked in first place in the FWC.
- It is an obligation of the Contractor to fulfil the following requirements:
    i. respect the set deadlines for confirming receipt and providing an offer
    ii. base its offer on the requirements set in the RfO in terms of technical solutions, delivery dates, deliverables and any other constraint set in the request
    iii. propose an allocation of resources in application of the terms and conditions established in the FWC (i.e. see section *4.3.2 Estimating the size of a service)*

- If the Office considers the offer acceptable, the Contractor is awarded the services in question.
- If one or more of the above requirements are not fulfilled, the offer is rejected and the RfO is sent to the Contractor ranked in second place in the FWC.
- When using the cascade, the RfO specifications are not subject to modifications (including any annex which must remain the same).
- If this second contractor is unable to satisfy the RfO requirements at the same conditions described above, the RfO will be sent to the contractor ranked in third place in the FWC.

If the RfO relates to a series of RfOs within the same Project, the Office reserves the right, for reasons of efficiency, to send first the remaining RfOs of the Project to the said Contractor, regardless of its position in the cascading mechanism in the FWC. In case of rejection of the offer or refusal by the Contractor, the cascading mechanism will be activated.

End of ordering process

This process ends either with the award of the services in question to one of the contractors listed in cascade in the FWC, or with the failure to award such services to any of these contractors.

In the event of failure the Office can either re-submit the initial RfO or redefine its content and start the ordering process again, by repeating the above mechanism (contacting the contractor ranked first and, if not available, the second, and then, on the same terms, the third).

Before the services are awarded, the Office can at any time abandon the request, if the related services do not correspond any longer to the current needs.

After signature of a specific contract

The cascade mechanism applies as follows:

- If a specific contract is terminated because the Contractor failed to perform the services according to the terms and conditions established therein, the cascade mechanism may be activated by addressing the same RfO to the next contractor listed in the FWC.
- If a part of the activities has been duly implemented, the RfO may concern only the remaining activities.

The above applies without prejudice to the performance measurements in the SLA and the related contractual provisions (i.e. where applicable, liquidated damages, penalties and termination).

Furthermore, if a contractor fails to fulfil the conditions set above relating to the ordering process for three times during a period of 12 months, or if it fails to meet the performance ratios indicated in the SLA, it could be re-ranked in last position in the cascade system, without prejudice to the application of the penalties as set in the FWC provisions, including termination of the contract.

4.4. Delivery process

The delivery process covers the time from the signature of a specific contract to the acceptance of the deliverables. The Contractor must have the capacity to deliver several individual orders in parallel while complying with all the requirements set in the specification and in the SLA.

4.4.1. **Deliverables**

The Contractor will provide all deliverables in the form and format specified by the EUIPO and will guarantee their integration into the target environment. The deliverables must be submitted on time and must conform to the specifications as described by each Specific Contract.

Apart from the deliverables at the level of each service type from the catalogue, there are also deliverables at the level of the overall service, such as the **Transition IN Plan** and the reports which are specified in section *4.4.10. Reporting*.

4.4.2. **Languages**

The required services must be provided, unless otherwise specified, in English of at least level B2, according to the Common European Framework of Reference for Languages for those profiles and services requiring direct interaction with the EUIPO.

However, additional requirements regarding other languages may be defined in the RfOs wherever the nature of the tasks so requires; for instance, as anticipated in the case of services where the requested work needs to be performed in third-party locations as explained in the next section.

4.4.3. **Place of work**

The choice of the place of work (i.e. on-site, off-site, third-party location, or a combination of the above), or place of delivery, lies with the EUIPO and it will be specified at the moment of issuing a RfO. An indication of the location per type of service has been already provided in chapter 2 and the sections contained within that chapter. The location of work will be specified every time in the pertinent RfO, and hence on the terms of the resulting Specific Contract.

Indicatively, the expected overall distribution of the work per location will be: 30 % on-site, 60 % off-site and 10 % at third-party location(s).

4.4.3.1. On-site

The work will be performed on the EUIPO's premises in Alicante, Spain.

In this case, the EUIPO will charge the Contractor a fixed cost of EUR 9 (nine euros) per day, per provider and per resource, to provide the necessary EUIPO infrastructure. This may include EUIPO space, furniture, PC, printer, landline telephone, specific software and security requirements (compatible with the EUIPO internal tools). Tenderers are invited to consider these costs when offering the daily rates in their financial bids.

Stationery and mobile equipment will not be covered. The personnel providing the service will use only the standard software packages that are in use at the EUIPO. No other software may be installed or used without prior written authorisation from the EUIPO.

The EUIPO provides its statutory staff with complimentary facilities, such as the use of the gym, snacks and drinks, parking, transportation by the EUIPO bus, etc. In some cases, the use of these complimentary facilities could also be extended to external personnel, such as the Contractor's staff, subject to the payment of specific fees. Tenderers must be aware that in the event of their being awarded an EUIPO contract, the award and execution of a contract does not entail any right to free use of those facilities. Therefore, any tenderer that might be selected as a Contractor is kindly invited to inform its staff that fees might be payable for such facilities. The EUIPO waives all responsibility for any damages incurred by Contractors for their staff in relation to use of those facilities.

Furthermore, tenderers that may be selected as Contractor(s) are hereby informed that they may be held jointly and severally liable for the payment of the fees concerned as well as for any damage sustained by the said facilities as a result of use by their staff.

4.4.3.2. Off-site

Due to operational needs, services operating off-site must be fully running and responsive during the Office's working hours and observe the Office's applicable calendar (see section 4.4.6). Tenderers are invited to consider this requirement when preparing their offer.

The Contractor must provide the necessary infrastructure on its premises for the work to be carried out successfully.

All security measures to protect information and developments related to the EUIPO's projects will be the Contractor's responsibility. Any security breach in the Contractor's infrastructure that could have an impact on the EUIPO's services or data must be reported immediately, or the next working day following the event.

The Contractor **must provide all the necessary infrastructure on its premises** for the work to be carried out successfully. This infrastructure must be as similar as possible to that of the EUIPO, running the same versions of software and similar hardware equipment, so that risks linked to the transfer of applications from the Contractor's premises to the EUIPO Data Centre are minimised.

The Contractor will also maintain updated and sanitised copies of EUIPO data so that the tests are carried out with information as similar as possible to that in production. The Contractor must include the status of off-site infrastructure in the weekly operational reports. This report must also include the date of the last refresh of data in the Contractor's premises, so that the EUIPO can request an update of this data if it becomes obsolete.

All costs derived from the setup and maintenance of the Contractor's environments must be included in the daily rate.

4.4.3.3. Third-Party location

In this case, the services will be performed on the premises of an external stakeholder of the EUIPO. For more details you may refer to section *2.2.4 Service Type 4 - Deployed Resources in Third-parties Locations*.

4.4.4. Security provisions

As part of the EUIPO's security strategy, the Office has taken measures to protect its staff, sensitive information, patrimony, installations and systems, through ensuring that all the employees of its contractors, that regularly access the Office´s premises, answer to a set of security criteria. These criteria include a clean criminal record, and provision of authentic information regarding the educational and professional background of the employee. The contractor has the responsibility to ensure that its staff, assigned to perform services at the EUIPO premises, meets these criteria, by uploading the following documents for security verification in the portal linked hereafter (https://integra.asemwebservices.es):

The procedure related to the security verification is appended to the framework contract. Any financial burden for the security verification procedure will be at the expense of the contractor and not of the Office.

Should the Contractor, during the performance of the tasks which are the subject of the framework contract, need remote access to any communication and information system of the Office or data sets processed therein, it would have to comply with the procedure for the Access Management for Offsite Services. During the authorisation process the Contractor will have to describe relevant organisational, physical, logical and network security measures in order to provide reasonable assurance that the risks are adequately and systematically covered at a level equivalent to the corresponding Office security standards. The authorisation process may impose additional security requirements as a prerequisite for approval, in order to protect the Office's communication and information system and networks from the risks of unauthorised access or other security breaches. The outcome of the authorisation, i.e. validation of the security of the equipment and configuration of the secure access, must be valid for a specified duration linked to the contract and must be obtained before the connection is activated.

In addition to these security provisions, the Office draws the tenderers' attention to the contractual provisions on confidentiality (Article 11 of the General Terms and Conditions of the draft framework

contract) where all external users will be requested to acknowledge the confidentiality agreement their company must abide to and on processing of personal data (Article 1.9 of the Special Conditions and Article 12 of the General Terms and Conditions of the draft framework contract).

The processing of personal data by the tenderer, including subcontractor, must meet the requirements of Regulation (EU) No 2018/1725 and be processed solely for the purposes set out by the controller of the Office. If the Contractor relies on services to be performed in locations outside of the EU, it will be requested to demonstrate that these locations comply with the requirements of the Regulation (EU) 2018/1725 of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the European Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC that entered into force on 11 December 2018.

4.4.5. **Financial elements**

The following information should be taken into account when calculating the daily rates for the financial proposal.

4.4.5.1. Daily rates

The tenderer is requested to calculate one daily rate for each profile in each location (on-site, off-site, third-party).

The daily rates must include all the general expenses incurred, as well as those directly linked to the performance of the services, such as management and coordination costs, setup and maintenance of environments, social security contributions, office expenses, travel, subsistence, accommodation, etc. As a consequence, the prices proposed for each future Specific Contract must be exclusively based on the profile by location daily rates or the blended rates per location (as presented in the table 1 of the financial proposal). No additional costs will be accepted in this regard except the one covered by section 4.4.5.2.

For the third-party daily rates, tenderers are requested to provide Belgium based daily rates. To these rates, the Contractor will **apply correction coefficients** when sending the Offer in reply to a Request for Offer submitted by the EUIPO during the **Framework Contract implementation** depending on the location where the workforce will be located, as explained hereafter.

Correction coefficient operates as a percentage adjustment to compensate the difference (positive or negative) in the cost of living in each duty station as compared with Belgium.

Daily Rate in Belgium x Correction Coefficient = Daily rate in duty station

For European Union countries:

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_colc_nat&lang=en

For non-European Union countries:

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_colc_ext&lang=en

For third-party location contracts, the Contractor will apply correction coefficients depending on the location where the service will be performed.

For more details please refer to the Financial Proposal Instructions.

4.4.5.2. Missions requested by EUIPO

The EUIPO may request delivery of services outside of the regular locations of delivery of the specific contract. When travel to a location other than the regular location of delivery is requested (i.e. a Software Developer working on-site is requested to go on a 5-day mission to help a European Intellectual Property Office to implement a project), travel expenses will be reimbursed based on the following conditions:

- Only journeys exceeding 200 km (single trip) will be reimbursed.
- Travel by air will be reimbursed based on economy class tickets.
- Travel by train, boat or coach will be reimbursed on the basis on a second class ticket.
- Payments related to travel expenses will be subject to the submission of all original receipts and invoices related to the expenses incurred.
- Accomodation will be reimbursed based on the ceilings applied in the EUIPO. These ceilings will be provided once the FWC is signed by both parties.

Travel time to provide services outside normal locations of delivery will be charged as half a day for travel in (geographical) Europe and 1 day for the rest of the world. The day of travel is considered a working day even when falling on a week-end or an official holiday.

Travel can start from one of the possible locations (on-site, off-site, third party site) and end in another location (on-site, off-site, third-party).

4.4.5.3. Special case for third-party location resources (‘Deployed’ resources)

Deployed resources (see 2.2.4) working at third-party locations should come to the EUIPO six times per year for follow up meetings, with an average duration of five days per visit. Travel and accommodation costs for these visits will not be reimbursed, **and should be included in the daily rate offered for third-party locations**. If more than six visits are requested in a natural year, costs of the seventh and subsequent visits will be reimbursed according to the rules described in 4.4.5.2.

4.4.6. Service hours

Every year the EUIPO calendar is approved by the EUIPO’s Executive Director. This calendar defines all Saturdays and Sundays as non-working days, plus a number of bank holidays (17 in previous years, although this is subject to change). The remaining days of the year are all considered normal working days.

On-site and off-site services must be performed during the working hours of the EUIPO, that is to say, between 7.30 CET and 19.30 CET. From 9.30 to 12.30 and from 15.00 to 16.00 are core hours, during which all on-site contractors must be present at their workplace. Absences during core hours must be occasional only and must be authorised by the EUIPO.

Third party-location services will have to be performed during the working hours of the third-party location unless otherwise specified.

When requested by service needs, such as but not limited to installations of new systems, critical corrective maintenance, business continuity operations, roll out of major and critical system releases in production, etc., key profiles may be requested to be on call after 19.30 CET or during weekends and EUIPO holidays (e.g. Christmas holidays). On-call status will not give rise to any compensation and must be included in the daily rate. Should an intervention be needed outside working hours, either remotely or on-site, then it may be invoiced as extra work according to the agreed rate of the required profile.

4.4.7. **Acceptance of work**

For Specific Contracts, the EUIPO's official acceptance of the work carried out will take place at milestones during and/or at the end of each Specific Contract execution, applying the procedure that will be specified in each Specific Contract. Full payment by means of invoices will only be issued for fully executed milestones of Specific Contracts and tasks that have been completed and duly accepted by the EUIPO.

4.4.8. **Training**

The Contractor must manage the knowledge within its teams and make sure that it is maintained at an appropriate level in order to guarantee proper performance of the services concerned.

While the Contractor must be able to provide high-quality services using its own resources, it is possible that certain specialised skills/profiles may not be available when required for a particular project, time, release, etc.

The Contractor must ensure that it is in a position to provide these skills at all times during the execution of the Contract and, if necessary, to look for them in the market and absorb them into its team as required in order to fulfil its commitments.

The choice of how to identify and procure such specific skills/profiles (subcontracting, training, recruitment, etc.) is left to the Contractor to decide, taking into account the precise situation when those skills/profiles are required. Note that any profile must fully meet the expertise requested by the assigned function, as stated in the relevant purchase order/Specific Contract.

As a general rule, since the Contractor's staff is supposed to be fully operational and trained from the signature of the Specific Contract, the EUIPO will not be involved in the training of the Contractor's staff. However, if the EUIPO considers, on the basis of the services provided, that one or more members of the Contractor's staff have insufficient professional knowledge, it may require the Contractor to train them to be able to deliver the service. Any such training will be carried out at the Contractor's expense.

This option is without prejudice to the EUIPO's rights to request a replacement of the member of staff concerned and/or, as an extreme consequence, to terminate or suspend the contract.

4.4.9. **Meetings**

The operational meetings for every type of service will be specified in the corresponding Specific Contract. At the level of the overall service, there will be the following types of meetings:

- Kick-off meeting
- Follow-up meetings
- Tactical meetings
- Strategic meetings

For any of those meetings, additional attendees may be invited when necessary. The EUIPO may change the frequency of the meetings after consulting with the Contractor. Meetings will take place in Alicante **at no additional cost of any type** for the Office.

4.4.9.1. Kick-off meeting

Following the signature of the FWC, a kick-off meeting will be held with the participation of:

- Contractor's FWC manager(s)
- Contractor's senior manager(s) (e.g. CEO)
- EUIPO's manager in charge of the FWC

- EUIPO DTD Director
- EUIPO Finance Director
- Other EUIPO representatives

4.4.9.2. Follow-up meetings

Follow up meetings will be organised on a monthly basis with the participation of at least the Contractor's service manager and the EUIPO manager in charge of the FWC. In this meeting the Contractor will report on the:

- ongoing activities
- planned activities
- resource planning
- issues and risks
- staff issues
- financial issues
- status of SLAs/KPIs of the Specific Contracts
- other business

4.4.9.3. Tactical meetings

Tactical meetings will be organised every quarter with the participation of:

- Contractor's FWC manager(s)
- Contractor's service manager(s)
- EUIPO manager in charge of the FWC
- Other EUIPO representatives

In this meeting the Contractor will present the *Quarterly FWC Status Report*, described in section *4.4.10. Reporting.*

4.4.9.4. Strategic meetings

Strategic meetings will be organised on a yearly basis with the participation of the:

- Contractor's FWC manager(s)
- Contractor's service manager(s)
- Contractor's senior manager(s) (e.g. CEO)
- EUIPO manager in charge of the FWC
- EUIPO DTD Director
- EUIPO Finance Director
- Other EUIPO representatives

In this meeting the Contractor will present the *Annual FWC Status Report*, described in section *4.4.10. Reporting* and strategic matters will be discussed related to the FWC in the years to come.

4.4.10. **Reporting**

The operational reports for every type of service will be specified in the corresponding Specific Contract. At the level of the overall service, there will be three types of reports that the Contractor should prepare and send to EUIPO:

- Follow-up Reports
- Quarterly FWC Status Reports (tactical)
- Annual FWC Status Reports (strategic)

The preparation and delivery of these reports will not impose **any additional cost of any type** for the Office.

4.4.10.1. Follow-up Reports

The Contractor must provide on a monthly basis, before the fifth working day of the following month, follow-up reports to the EUIPO manager in charge of the FWC. The report should be written in English and it should contain complete and accurate information, in a format indicated by the EUIPO covering, inter alia, the following points:

- overall status
- plan and progress for all services
- deviations
- work in the pipeline
- RfOs status
- resource planning
- risks log
- issues log
- actions log
- status of SLAs/KPIs of the Specific Contracts

4.4.10.2. Quarterly FWC Status Reports (tactical)

Without prejudice to any other supplementary reporting requested in the Specific Contracts, the Contractor must provide a quarterly tactical report in English.

The report must address contract and financial management at FWC level for a given quarter and has to be delivered before the fifth working day of the month following the relevant quarter.

The content of the 'tactical' report will be agreed with the EUIPO and among other points it will include the following:

- the history of requests (last quarter and cumulative aggregates for the FWC);
- the history of Specific Contracts and order forms (last quarter and cumulative aggregates for the Framework Contract);
- the list of in-progress Specific Contracts and order forms;
- resource planning
- performance management;
- the outcome of risk and issue management.

4.4.10.3. Annual FWC Progress Reports (strategic)

The Contractor will provide an annual strategic report, in English, that will reflect the execution of the FWC and any related strategic matters around it. The report, the content of which must be agreed with the EUIPO, must contain complete and accurate information and be delivered within the first 5 working weeks of the following year, in a format indicated by the EUIPO.

The annual report will cover, inter alia, the following areas:

- follow-up the quality of the services;
- define the strategic evolution of the contracted services;
- review the annual objectives;
- deal with capacity and demand management;
- settle disagreements.

4.4.10.4. Risks & Issues Reporting

To what concerns risks and issues, the contractor will report any identified risk and issue of technical, financial or contractual nature, to the Office within the context of the aforementioned reports.

Examples are:

- Lack of staff resources for the execution of the contract.
- Lack of correct infrastructure for the execution of the contract.
- Lack of security.
- Lack of knowledge or experience in specific domains.
- Contractual problems with partners or subcontractors.
- Change in the ownership or business activities of the company.
- Request not conform to the contract.
- Request procedure not followed.
- Non-availability of the person at the start of the specific contact.
- Planned absence during the execution of the contract.
- Necessary replacement.
- Expected delivery delays.
- Necessary infrastructure not available.
- Sub-tasks not conform to the specific contract.

For each identified risk and/or issue occurred, the contractor will inform the Office about the measures it will put in place to mitigate/solve the risk/issue respectively. The Office will monitor the progress made by the Contractor.

4.4.11. **Quality assurance & control**

The Office puts special focus and attention in every aspect related to the quality of the services it provides its internal and external stakeholders with, should those be users, customers, other national or international bodies etc. This is a very important aspect of the Office's expectations that must be absolutely clear to all of the suppliers providing any type of service to the EUIPO.

When it comes to software development and maintenance services, that is the core element of the present CfT, quality plays a crucial role, especially for an organisation like the EUIPO with such a wide range of electronic services and such an extended IT landscape.

Therefore tenderers must duly note the relevance of quality assurance and quality control activities, as this has a strong impact in the performance of the FWC.

The testing framework that the Office applies by default is described in section *5.2 Testing framework*. Quality related requirements along with clear SLAs and KPIs, will always be specified in advance at the level of each RfO and therefore will constitute part of the corresponding Specific Contracts.

5. EUIPO Work Processes

ISO 9001 certification has been granted for all the EUIPO's processes, including IT processes. Below Tenderers can find information on the IT processes that are most relevant to this CfT.

5.1. 'Software Development Life-Cycle' process (SDLC)

The SDLC process describes an overall structured approach to information management and is composed of a number of clearly defined phases. It guides the software development process covering software development projects, as well as the corrective and adaptive maintenance of the Office's IT applications, both in-house and COTS. Therefore, the SDLC is applicable to services of Type 1, Type 2 and Type 3 as defined in section *2.2. Service Catalogue*.

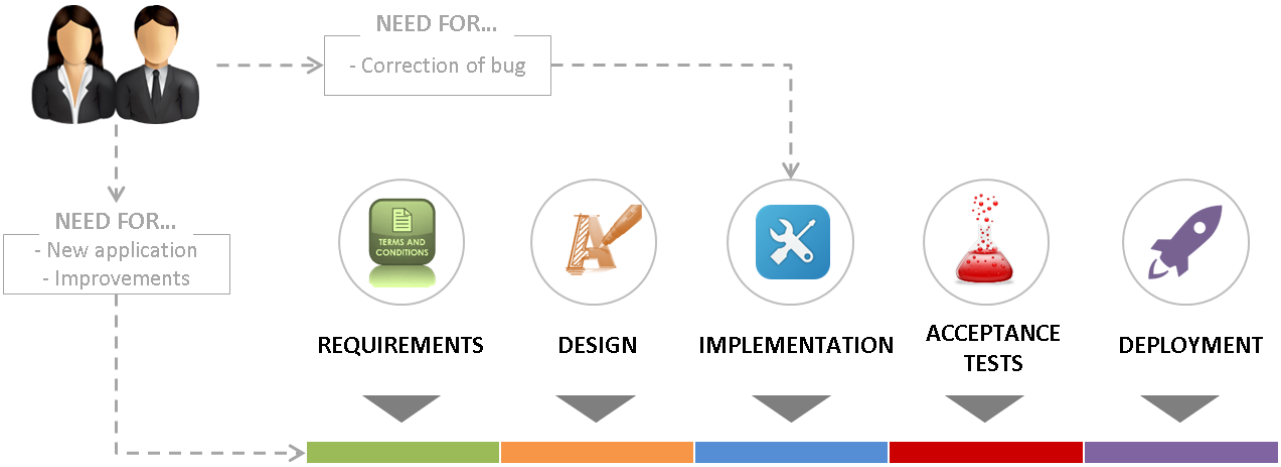
The process is subject to the continuous improvement cycle which is in place within the Office's Quality Management system.

At the time of drafting the present CfT, a new version of the SDLC is under preparation aiming to better reflect the Office's IT software-related needs and the way the DTD working methods.

The new version of the SDLC process currently under preparation is a simplification of the present one and it places special focus on the iterative nature that the process must have. Moreover, it makes the process more flexible so that it can be applied both for waterfall and agile software development methodologies or a combination of them.

This section mainly focuses on the SDLC currently under preparation, as it is expected to be applicable before FWC enters into force. Nevertheless, for reasons of completeness, in annex C of this document Tenderers may find both versions[9] and review the modifications applied.

The graph below gives a high-level overview of the SDLC process at the EUIPO.



The Software Development Lifecycle is...
... an iterative process
... based on a cross team collaboration
... flexible to adjust the type of development (new/adaptive vs. corrective)

As shown above, the SDLC process consists mainly of five phases: requirements, design, implementation, testing and deployment. There can be various iterations of that sequence, and in

[9] The 'to-be' process document is still in draft version.

some of the iterations one or more phases may not be necessary. Each iteration results in a deployable software product/output which can potentially be rolled-out in production.

In short:

- The **requirements** phase involves the activities related to the gathering and analysis of the business needs of the software to be developed, enhanced or amended. The outcome of this phase will be a set of Software Requirements Specification ('SRS'). This set may cover the complete scope of the work to be done or just a part of it in the format of a Work Package.

- The **design** phase involves the activities related to the architecture and design aspects of the software to be developed, enhanced or amended based on the output of the previous phase. During this phase, the high-level architecture of the solution is defined and documented along with all the pertinent non-functional requirements (e.g. performance, reliability, robustness, usability, portability, security, maintainability, etc.) of the software so that it fits into the Office's IT landscape. In addition, the testing strategy and acceptance requirements are specified and documented in detail.

- The **implementation** phase involves the activities related to the tasks of detailed design, development and factory acceptance testing (hereafter 'FAT') of the software to be developed, enhanced or amended based on the output of the previous two phases. This may cover the entire software or just the increment delivered in the context of an iteration which should typically have a duration of 3 to 4 weeks. During this phase, the design document of the solution will need to be completed with the specific low-level details. Any deliverable of this phase should comply with the EUIPO's technical architecture and standards applicable at the time when the pertinent service is requested. The current standards are described in chapter 6.

- The **acceptance** phase involves the activities related to the acceptance testing aspects of the software to be developed, enhanced or amended based on the output of the previous phases. During this phase, the delivered software will be tested by DTD (i.e. Site Acceptance Testing or 'SAT') and optionally by the end users (i.e. User Acceptance Testing or 'UAT'). This may cover the entire software or just the increment delivered in the context of an iteration.

- The **deployment** phase involves the activities related to the roll-out in production (i.e. go-live) of the software to be developed, enhanced or amended based on the output of the previous phase. Tasks related to training, communication, post go-live support etc. are pertinent to this phase.

The SDLC is integrated with quality management principles, providing a process-driven focus and proactive problem prevention. It is service-level oriented and focuses on continuous measurement and improvement. Implementation of these identified improvements can result in future revision of the SDLC process and/or the list of its associated deliverables.

As such, the Contractor must comply with the quality management standards and principles established throughout the Office at any given point in time. Any modifications to the process will not have any implication to the execution of the resulting FWC.

5.1.1. SDLC deliverables

In the table below the Tenderer may find a **non-exhaustive** list of the various deliverables that may be produced during each phase of the SDLC process.

Phase	Deliverables	Short description	Responsible[10]
Requirements	Software Requirement Specifications (SRS)	Describes the functional and non-functional requirements of a software application; in most cases this deliverable comprises several documents that include, but are not limited to: use cases, system configuration, domain model (also known as information model), migration requirements, templates, adaptation to satellite systems, business test scenarios, UI mock-ups and more	EUIPO
Requirements	High Level Specifications (HLS)	Describes the high-level requirements of what needs to be implemented from the business perspective of the users; it can be a separate document or part of the SRS	EUIPO
Requirements	Migration Plan	Describes the data or workflow migration needs related to the software application; this can be an independent document or part of the SRS	EUIPO
Design	High Level Architecture (HLA)	Provides the high-level architecture of the solution to be implemented; the relevant deliverable is usually the Design Document which is partly filled at this phase and it is completed during the implementation phase	EUIPO
Design	Security Assessment Report	Provides a security assessment of the software system and describes the security related requirements that the software application should implement and/or comply with	EUIPO
Design	Master Test Agreement (MTA)	Describes the quality related requirements of the software application such as the test strategy to be followed, levels of testing, test goals, risk analysis, test automation needs, acceptance criteria, etc.	EUIPO
Implementation	Site Acceptance Test Plan (SAT Plan)	Gives an overview of the test strategy that will be followed during the site acceptance tests of the software application	EUIPO
Implementation	Functional Test Approach	Specifies the approach to be followed for the acceptance tests of the software application as far as the functional requirements are concerned; this can be a specific document or be part of the SAT Plan.	EUIPO
Implementation	Security Test Approach	Specifies the approach to be followed for the acceptance tests of the software application as far as the security related requirements are concerned; this can be a specific document or be part of the SAT Plan.	EUIPO
Implementation	Performance Test Approach	Specifies the approach to be followed for the acceptance tests of the software application as far as the performance related requirements are concerned; this can be a specific document or be part of the SAT Plan.	EUIPO

[10] By 'EUIPO' it is meant that the relevant deliverable is produced either by the EUIPO's employees or by its service providers in the context of other framework contracts.

Implementation	Quality Audit Report	Sums up the findings of any audit performed on the Contractor's work during the implementation of the software application(s)	EUIPO
Implementation	Detailed Project Plan	Describes, inter alia, the Project Approach, Risk & Issue Management, Change Management, Communication Management, Team(s) setup, Roles & Responsibilities, etc. and it is accompanied by a detailed planning of all the implementation related tasks (e.g. mpp)	Contractor
Implementation	Implementation Progress Report	Gives the overview of the implementation progress for the specified reported period	Contractor
Implementation	Design Document	Document detailing the complete design of the solution and the list of integrations with external systems and service definitions; this is the same documentation as the HLA described above; it can be one document for the system as a whole or one per system component.	Contractor
Implementation	Iteration Plan	Document detailing the iterative delivery approach including for each of the deliveries: scope, delivery date, approach and impacts.	Contractor
Implementation	Development Test Strategy	Provides details about the testing strategy and activities to planned during the implementation phase, according to the test requirements specified in the MTA. Details related to functional, non-functional, integration and performance testing will be part of this document.	Contractor
Implementation	Source Code	The source code including unit test scripts associated with the software application	Contractor
Implementation	Database scripts	The scripts for the automatic creation of the relevant schemas based on the Office's technical standards	Contractor
Implementation	Deployment scripts	The scripts for the automatic building, packaging and deployment of the relevant software components based on the Office's technical standards	Contractor
Implementation	Functional test automation scripts	The scripts for the automation of the execution of the functional and UI test cases and test scenarios, based on the Office's technical standards (e.g. gherkin scripts)	Contractor
Implementation	Non-functional test automation scripts	The scripts for the automation of the execution of the non-functional test cases and test scenarios (e.g. performance, system integration, unit, security etc.), based on the Office's technical standards (e.g. Jmeter, Junit, etc.)	Contractor
Implementation	Migration scripts	The scripts that implement the migration of data and workflow depending on the specification needs; this can even be source code	Contractor
Implementation	Factory Acceptance Test Specifications	Includes the test specifications that the implementation teams will execute during FAT, e.g. functional, non-functional, performance etc. It can be one document or a set of documents per test type	Contractor
Implementation	Factory Acceptance Test Report (FAT Report)	Describes all the tests performed by the factory (i.e. Contractor) regarding the release including the list of any known issues; it includes the test cases, the outcome of the test for each of them; the types of test includes functional, non-functional, security and performance tests	Contractor

Implementation	Release Notes	Includes all the necessary information that characterises the corresponding release	Contractor
Implementation	Launch Plan	Covers all the necessary steps to install the corresponding release	Contractor
Implementation	Rollout Plan	Describes the actions needed for the rollout of the application in production including the preconditions, the installation order and any special details needed to be taken into account for production, the post-conditions such sanity testing, monitoring etc`.	Contractor
Implementation	User Guide	This is the manual of the software application targeted for the end user	EUIPO or Contractor
Implementation	Administration Guide	This is the manual of the software application targeted at the application administrator	Contractor
Implementation	User Training Material	Any material that is necessary to conduct training sessions with end users	EUIPO
Implementation	Admin Training Material	Any material that is necessary to conduct training sessions with administrator users	EUIPO or Contractor
Acceptance	Site Acceptance Test Report (SAT Report)	Describes the outcome of the site acceptance tests	EUIPO
Acceptance	User Acceptance Test Plan (UAT Plan)	Gives an overview of the test strategy that will be followed during the user acceptance tests of the software application	EUIPO
Acceptance	User Acceptance Test Report (UAT Report)	Describes the outcome of the user acceptance tests	EUIPO
Acceptance	Test Progress Reports	Gives the progress of the acceptance testing for the specified reported period	EUIPO
Deployment	Communications Plan	Describes the communications related actions regarding the roll-out of the software application, such as announcement in EUIPO's social media, insite, website, webinars etc	EUIPO
Deployment	Implementation Closure Report	Gives a summary of all the implementation related activities and highlights of the software application.	Contractor

Many of these deliverables may be customised for every Specific Contract depending on the needs of the pertinent service request. Others might be based on specific templates that need to be used across the various required services.

5.1.2. **Product development**

The EUIPO's IT landscape is composed of a wide range of applications, many of which developed recently. An example is *IP Tool* which is the main back-office application of the Office that implements most of the intellectual property proceedings. The intention is to keep investing in those applications by enhancing them with further capabilities and more features so as to cover all the proceedings of the Office.

It is common that a system, or group of systems, are impacted by different development activities that are happening in parallel.

For instance, it is possible that at a given point in time the following activities take place:

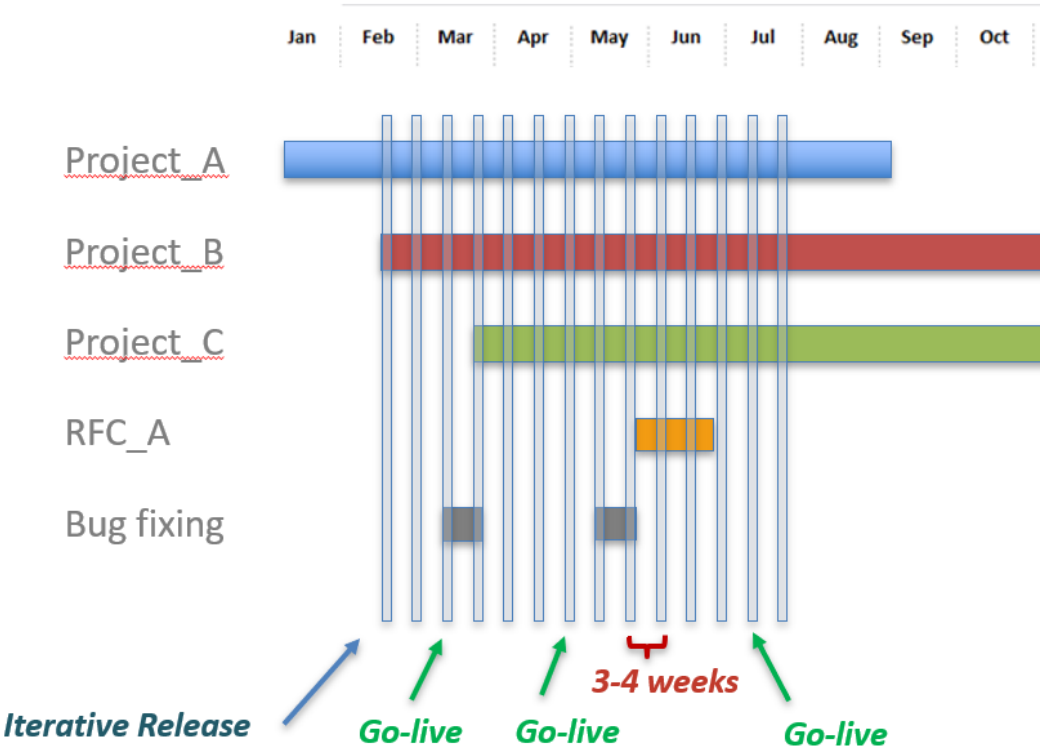
- A software development project, PROJECT_A, includes in its scope the addition of a new set of functionalities to system SYS_XX that will allow the users of a department of the Office to perform a specific task electronically instead of doing it manually which is the current situation.
- A software development project, PROJECT_B, includes in its scope the addition of a new feature in the same system SYS_XX that will allow all users to create custom reports and save them for future use.
- A software development project, PROJECT_C, concerns the development of a new Back Office support application which will need to integrate with SYS_XX and for that certain adaptations to the latter will be required.
- An adaptive maintenance activity, RFC_A, is under development that includes specific amendments to SYS_XX.
- A corrective maintenance activity is underway for SYS_XX in order to correct some important bugs.

It becomes quickly evident from this hypothetical, but realistic scenario that implementing and releasing all the mentioned enhancements, adaptations and corrections on SYS_XX could be a complicated exercise. On top of this, each of those activities is performed under a dedicated Specific Contract. Trying to follow an approach where each of the aforementioned development activities is seen in an isolated and independent way, is most probably doomed to fail resulting in direct impact to the execution of the relevant contracts.

The best chance to have a positive outcome out of this complicated situation is if system SYS_XX is managed as a 'Product' and all the pertinent modifications are performed applying a product development approach.

This means that each iteration of SYS_XX should implement part of the scope from the different projects as well as the adaptive and corrective maintenance activities. Depending on the implemented scope as well as other technical considerations, the EUIPO will decide for every iterative release whether SYS_XX should be rolled out in production or it should merely be deployed in EUIPO's test environment until a bigger part of the relevant scope is implemented. This means that the quality of the output of each iteration will be checked for acceptance based on the relevant quality requirements agreed at the level of each Specific Contract.

This is depicted graphically in the figure below.



The horizontal bars show the development time-plan for each activity whereas the vertical bars show the consecutive iterative incremental releases. The first two releases (from the left) will include of parts of the scope of Project_A and Project_B whereas the third one will also include bug fixes. In this example, the third iterative release will be rolled out to production.

Among the things to be considered for each iteration will be the implementation of flags that will activate/deactivate certain functionalities/features once it is decided to go-live with a release. This is because certain functionalities may be incomplete and therefore should not be activated for users until it has been fully implemented.

The SDLC process currently under preparation, and described above, can be perfectly used for this purpose. Using a product development approach, several of the deliverables mentioned in the previous section can be combined and promoted from a project level to product level. For instance, instead of producing a MTA or an Iteration Plan for each of the projects, a common version covering all the quality needs and intermediate deliveries respectively for the SYS_XXX can be prepared and then maintained. The same can apply for many other deliverables, thereby achieving important synergies.

The Contractor is required, throughout the FWC implementation, to be able to work using the described product development approach as this will be the intended working model for services of Type1, Type 2 and Type 3, as these are described in the Service Catalogue of the present CfT.

5.2. Testing framework

This section describes the Office's testing activities throughout the SDLC process, which are by default applicable (either entirely or partly) for any of the services in the catalogue that involve the implementation of software.

It is important to note that quality assurance and quality control services are also provided by a different service provider (i.e. QC provider) in the context of another FWC. Therefore, it must be clear to the Contractor (in this section also referred to as 'DEV Provider') which are its responsibilities.

The testing framework is based on different test levels that will take place during the different phases of the SDLC. Each test level may include multiple types of testing (e.g. functional, performance, security) based on different test goals.

The quality related requirements along with the acceptance criteria are usually defined in the MTA (see *5.1.1 SDLC deliverables*) which is prepared by the QC provider on behalf of the EUIPO during the analysis and design phases of the SDLC; however, said requirements can also reside in other documents, for instance the SRS or HLA. In any case, no matter which deliverable is used, the quality requirements are always part of the pertinent RfO that is sent to the Contractor in the context of a request for a service.

The information which describes the ways the quality requirements will be met is usually detailed in the following deliverables: 'Development Test Plan' (prepared by the Contractor), 'SAT Test Plan' (EUIPO via QC provider) and 'UAT Test Plan' (EUIPO via Business Analysis provider). Regression test strategy for each test level must be specified in these documents as well.

5.2.1. General acceptance criteria

The table below presents the general acceptance criteria related to the test process. Depending on the type of development, different acceptance criteria are, by default, applicable. Those types[11] are:

- Type A: New application
- Type B: Major modifications to existing systems
- Type C: Minor modifications or corrections (excl. critical-priority fixes) to existing systems
- Type D: Corrections of critical priority issues to existing systems

Id	Description	DEV Provider involvement	Development Type			
			A	B	C	D
OiS Acceptance Criteria						
EK3	Usage, Monitoring, Security & Performance Requirements	YES	X	X		
EK5	Design Infrastructure requirements	YES	X	X		
EK8	Automatic deployment	YES	X	X	X	
EK9	Integration Environment (All modules i.e. Portal, eSearch, ePayment, TMDSView, FileNet, RCD-EXA,.etc.)	YES	X	X		
EK10	Test Environment - All modules/Production data/Timing independent	NO	X	X		
EK11	Pre-Prod Environment – All modules/Production data/Timing independent	NO	X	X		
EK12	AdminTool – Testing workarounds, queues, usage, stats, data etc.	YES	X	X		
EK13	Performance Testing, Stability Testing, Security Testing	YES	X	X		
EK14	PreProd Environment – "broken" servers, services, dbs, components etc	YES	X	X		
EK16	Back-up center BCP – run from Sabadell	YES	X	X		
EK21	Rollout/ Rollback sequence	YES	X	X	X	X
EK24	Deployment – Sanity test with 1,000 entries automated before OK given	NO	X	X		
EK25	AdminTool – Testing again real user data (scripts) & tools reporting	NO	X	X		
DEVOPS Acceptance Criteria						
DEVOPS1	All standards related to delivery structure are respected	YES	X	X	X	X

[11] These types should not be confused with types of services listed in the Service Catalogue.

Id	Description	DEV Provider involvement	Development Type A	B	C	D
DEVOPS2	All technical standards mentioned in the design document are respected	YES	X	X	X	
DEVOPS3	Deployment of the systems must be automated	YES	X	X	X	
DEVOPS4	No issues related to installation with severity higher than “minor”. Maximum ten issues with severity minor.	YES	X	X	X	
DEVOPS5	All non-functional requirements in the design document are respected	YES	X	X		
OiS Security Acceptance Criteria						
SEC1	All security requirements indicated in the security assessment or impact assessment must be implemented	YES	X	X	X	
SEC2	No security issues detected during the site acceptance tests that have a severity higher than “Minor”	YES	X	X	X	
SEC3	For any security issue higher than “Minor”, an explicit acceptance by the Project Owner of the associated risk would be necessary before allowing to go into production	YES	X	X	X	X
Architecture Acceptance Criteria						
ARCH1	All requirements indicated in the design document must be implemented	YES	X	X	X	
ARCH2	For any change of technology, explicit approval by the Architecture team would be necessary	YES	X	X	X	X
ARCH3	Other implementation approaches may be used as long as they fit into the Design Principles and justification	YES	X	X	X	X
ARCH4	Technology boundaries specified in the design document must be respected/preserved	YES	X	X	X	X
Quality Assurance Acceptance Criteria						
QA1	Entry and exit criteria for all test levels have been reached	YES	X	X	X	
QA2	Acceptance criteria for automated test cases are fulfilled.	YES	X	X	X	
QA3	Basic sanity check defined and executed	YES				X
QA4	Regression tests defined and executed based on risks analysis	YES	X	X	X	
QA5	Static and dynamic code metrics measured on the whole code are equal or better to production version	YES		X	X	X
QA6	Code churn fulfils EUIPO standards	YES	X	X	X	X
QA7	New test cases are created/modified/extended in order to cover the bug fixes	YES		X	X	X
QA8	Automated tests validation and execution is part of SAT. It should cover service, service integration, UI tests.	YES	X	X	X	X

For each service request, the specific acceptance criteria will be described in detail in the corresponding RfO. Depending on the nature of the request and the needs stemming from it, the above list can be extended or reduced.

5.2.2. **Test levels**

The table below presents an overview of the different test levels per SDLC phase, with the responsible party for each of them.

Responsible	Test Level	Sub Test Levels	SDLC phase
DEV Provider	**Factory Acceptance Tests**	Code inspection reviews Unit Tests Unit Integration Tests Code - Static Analysis Code Audits System Tests Service Tests System Integration Tests Service Integration Tests Factory Acceptance Tests	Implementation
QC Provider	**Site Acceptance Tests**	Site Acceptance Tests	Acceptance
Business Analysts	**BA Tests**	Business Analysts Tests	Acceptance
Project Manager	**User Acceptance Tests**	User Acceptance Tests	Acceptance
QC Provider	**Production**	Sanity Tests	Acceptance
Test Deliverable Provider	**Test Deliverables**	Test Deliverable Review	All
Test Managers	**Quality Control Audits**	Quality Control Audits	All

The table below presents a description and the goals for each test level:

Test Levels/Sublevels	Goals	Description	Responsible
Mock-up review	1. Receive BA feedback early on the project 2. Detect possible gaps in the requirements	Based on the requirements and use cases, mock-ups will be created before implementing particular requirement/use case. Mock-up should be reviewed by business analysts in order to validate and approve them.	EUIPO (BA Lead)
Code – static analysis	1. Enforce code compliance to standards 2. Identify potential problems in the design and implementation	Before committing any new code into version control system (VCS), developers will perform static code analysis on their machines. Developers should detect and avoid introduction of new violations to VCS. Issues found will be investigated and fixed before committing to VCS.	DEV Provider
Unit tests	1. Design and specify the behaviour of units through unit tests 2. Find issues in units during coding, refactoring and adapting code	Provider will write unit tests for the units that are being developed. Different design techniques must be used based on required test thoroughness. Before unit can be committed to VCS developers must execute and verify coverage of unit tests on their machines.	DEV Provider
Unit integration tests	1. Demonstrate that a logical group of units work together as designed 2. Demonstrate that changes introduced in data structures are properly integrated and do not cause side effects 3. Find errors in interfaces, components and component integrations	Provider must develop a strategy of unit integration tests based on required test thoroughness. Before tests can be committed into VCS, developers will execute the tests on their machines.	DEV Provider
Code - reviews	1. Increase code quality and maintainability 2. Spread knowledge amongst the different team members 3. Improve collective code ownership 4. Evaluate the code while it is being written	Based on the team knowledge, code severity, complexity and required test thoroughness, development team leads must develop review strategy that must be followed. It must cover peer-reviews and walkthroughs.	DEV Provider
Service Tests	1. Demonstrate that developed services meet functional, non-functional specification and technical design.	Developed services will be tested in isolation in development environment with respect to functional, non-functional specification and technical design. It must include negative tests.	DEV Provider

Test Levels/Sublevels	Goals	Description	Responsible
System Tests	1. Validate system specification and requirements without dependencies with other systems. 2. Demonstrate that the system works as a whole with all internal components	Iteratively completed functional areas/requirements/use cases of the system will be tested by quality engineers and presented to the business analyst. After fixing all issues found, implementation will be presented/tested to/by users to get early feedback. Integrations with other systems will be mocked to maximize the test coverage and minimize execution time. It must include exploratory testing and negative tests.	DEV Provider
System Integration Tests	1. Demonstrate that integrations with other systems work as designed	Iteratively functional areas/requirements that require integration with other systems will be tested to demonstrate that the communication/integration work as designed. In order to perform the tests other systems need to be available in version that supports that integration.	DEV Provider
Service integration tests	1. Demonstrate that developed service fulfils service integration contracts 2. Find errors in services chains	Iteratively consistency between services will be tested. It consists of a chain of existing services and new ones. In the first place integration between internal services needs to be tested. It must include negative tests.	DEV Provider
Factory Acceptance Tests	1. Test production procedures related to deployment, data migration, system migration etc. 2. Test maintenance procedures 3. Validate functional requirements using E2E business scenarios 4. Validate non-functional requirements 5. Demonstrate the system works with all external dependencies (systems) 6. Validate complex workflows 7. Ensure release candidate readiness for Site Acceptance Testing	Iteratively fully implemented requirements/use cases/business scenarios will be tested with all necessary system dependencies. Installations and migrations will be performed the same way as in the production environment according to procedures that will be delivered as a part of a release candidate. Release candidate test results from different test levels will be summarised. Final package will be reviewed by quality engineers and exit criteria and entry from different levels will be validated. It must include exploratory testing and negative tests.	DEV Provider
Site Acceptance Tests	1. Validate deployment and migration procedures 2. Validate business scenarios, functional and non-functional requirements in close to production environment 3. Ensure release candidate readiness for User Acceptance Testing 4. Ensure production, operational readiness 5. Validate the deliverables (documentation, tests scripts)	Release candidate will be deployed in close to production environment. Business scenarios, functional and non-functional requirements will be validated by Quality Control team according to Site Acceptance Test Plan. It must include exploratory testing and negative tests.	EUIPO (QC Provider, Operations Provider)
BA Tests	1. Validate business and users scenarios with the various workflows and user requirements 2. Ensure system is correct for the business usage and satisfies users expectations	Business analysts will perform free testing before UAT sessions.	EUIPO (BA Lead)
User Acceptance Tests	1. Validate business and users scenarios with the various workflows and user requirements 2. Ensure system is correct for the business usage and satisfies users expectations	Users will test business and users scenarios for various workflows. Additional free testing will be performed to increase the test coverage.	EUIPO (BA Lead)
Production	1. Validate Production environment stability.	QC Provider will check the stability of Production environment.	QC Provider
Test Deliverables	1. Validate test deliverables generated/updated.	Test Deliverable Consumer will review the deliverables generated/updated by the corresponding provider, according to the defined acceptance criteria.	Test Deliverable Provider
Quality Control Audits	1. Ensure the acceptance criteria defined for the company.	Audits will be performed along SDLC to check the quality level in the different phases of the process.	QC Provider

5.2.3. **Test automation**

Manual testing requires time and effort to ensure the software code works properly and completely. It requires preparation of extensive documentation (e.g. test specifications), careful recording of the findings and accurate reporting. These tasks are considerably time-consuming and highly repetitive.

This is why one of the main objectives of the Office, which should be realised in the context of the resulting FWC, is to gradually and steadily move towards the full use of automated testing tools which are capable of executing tests, reporting outcomes and comparing results with earlier test runs in a fast and reliable way. This way, tests carried out with these tools can be run repeatedly, something which is very important for the software development and maintenance services.

The use of automated testing tools is not something new for the Office. In fact, they are being used by the Office for several years already. For example, some of the tools that are used, or were used, are the following: SONAR for inspection of code quality, Junit for unit testing, SOAPUI for integration testing, JMeter for performance testing, Selenium, Cucumber and Gherkin for UI and functional testing.

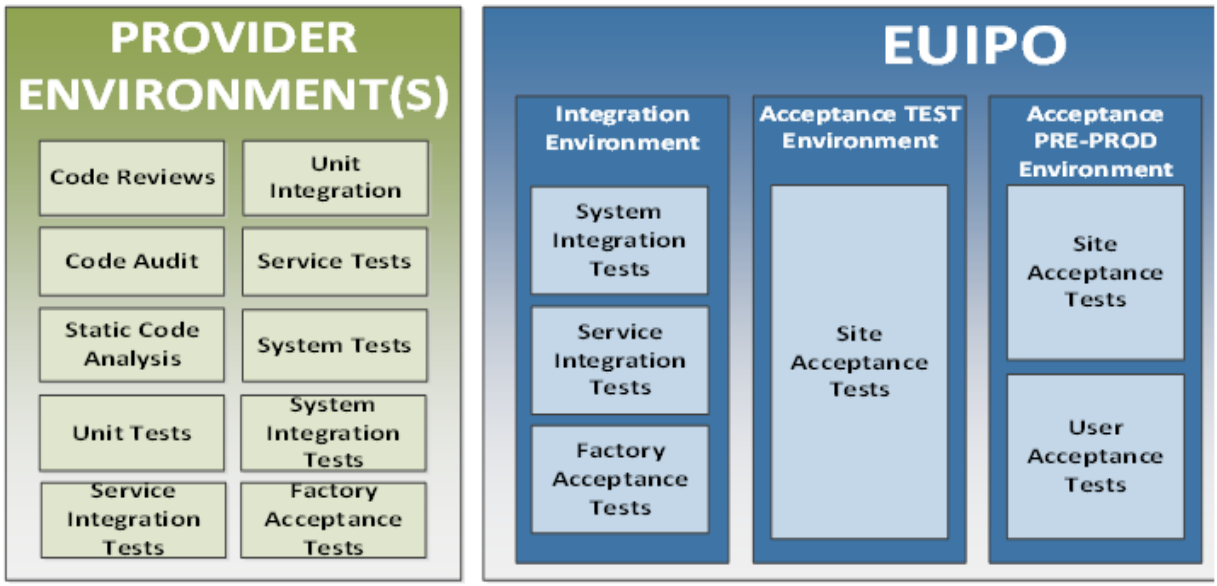
The test strategy of the EUIPO is to continue investing in this area, with special interest in the extension of functional testing automation. In particular, the Office's intention is to go in the direction of Behaviour Driven Development (BDD). BDD has been adopted in a couple of projects to serve as Proof-of-Concept and the idea is to enforce it for more software development and maintenance activities.

More details on BDD and how it is used by the EUIPO are provided in the *Annex F - EUIPO Applications Architecture.*

5.2.4. **Test environments**

For the different environments of the Office refer to *6.2 Technical environments*.

As far as testing is concerned, the following graph summarises the different testing environments needed, and what test levels and sublevels will be executed in each environment:



Provider Environment(s)	Integration Environment	Test Environment	PRE-PROD Environment
- Environment characteristics defined by DEV Provider. - Infrastructure set up by DEV Provider - Software releases installed and configured by DEV Provider. -It is the principal environment to execute FAT.	- Environment with all the dependencies and integrations related to the EUIPO systems. -Infrastructure set up by the EUIPO - Software releases installed and configured by DEV Provider. -It will be used by the DEV Provider to execute specific Integration Tests with applications which are not available in their own environments due to license or other issues	- A mirror of the production environment with respect to the software releases and version - Infrastructure set up by the EUIPO - Software releases installed and configured by the EUIPO.	- A mirror of the production environment in every way - Infrastructure set up by the EUIPO - Software releases installed and configured by the EUIPO.

5.2.5. **Quality audits**

In conformity with Article 22 of the FWC General Conditions, the Office may audit the Contractor during the execution of a requested service. The Contractor must allow the Office, or its QC provider acting on behalf of the EUIPO, to perform quality audits in areas not limited to the following:

- Appropriate profiles are working on the service according to FWC specifications;
- Proper control procedures are being followed;
- Required documentation is maintained;
- The Contractor's status report accurately reflects reality;
- The configuration management activities are performed;
- The baselines are controlled;
- Software development libraries are correctly used;
- Approved changes to the baseline are made correctly and consistently;
- Verification and validation are performed according to the plan;
- The testing activities are performed adequately and efficiently;
- The test reports are accurate and complete;
- Resolution of nonconformities and defects takes place as agreed.

5.3. Plan IT Investments Process

The Plan IT Investment Process supports the implementation of Requests for Change (RfC) and serves as a gateway for the involvement and collaboration of the business and IT in the planning and prioritisation of IT-enabled change.

This process helps the EUIPO to understand better and respond more rapidly to the needs of its stakeholders, while ensuring added business value by investing optimally.

Requests start with an assessment of the benefits that are expected to stem from the change. This assessment is based on the business needs and challenges. Technology development, budgetary factors and current IT capabilities are then included to give a holistic view of the situation. The organisation can then translate these considerations into plans and investment decisions to derive the greatest business value from every single investment, which are then put forward to the EUIPO's Executive Director for decision.

For more information on the process, see *Annex D – EUIPO Work Process: Plan IT Investments.*

As with the case of the SDLC described in the previous section, this process as well is subject to the continuous improvement cycle within the Quality Management system in place in the organisation.

As such, the Contractor must comply with the quality management standards and principles established during the FWC duration. Any modifications to the process will not have any implication to the execution of the FWC.

5.4. 'Manage incidents and problems' process

Incident management refers to activities aimed to restore normal service operation as quickly as possible while minimising any adverse impact on business operations. It includes incident detection and recording, investigation and diagnosis, resolution and recovery, and finally closure.

Problem management can proactively avoid the occurrence of incidents, errors, and additional problems. Problem investigation helps to discover the root cause of incidents, to improve or correct the situation and to prevent the incident from recurring. It is related to activities undertaken to minimise the adverse impact on the business.

For more information on the process, see *Annex E - EUIPO Work Process: Manage Incidents and Problems.*

As with the case of the other processes described in the previous section, this process as well is subject to the continuous improvement cycle within the Quality Management system in place in the organisation.

As such, the Contractor must comply with the quality management standards and principles established throughout the Office at any given point in time. Any modifications to the process will not have any implication to the execution of the resulting FWC.

6. Technical Architecture and Standards

The EUIPO technical architecture and standards are based on standards promulgated by international, European or national bodies, such as ISO, IEEE, UN/CEFACT, CEN, W3C, OASIS, OMG, WIPO, etc. or de facto industrial standards, such as J2EE, JVM, Unix and Windows Operating System.

In order to promote interoperability, portability and flexibility, international standard bodies must have precedence over the technical products of other organisations. However, for matters relating to the internet, World Wide Web Consortium (W3C)[12] final recommendations take precedence.

Java applications and web services must be developed following a loosely coupled, service-oriented and component-based architecture. Any exception must obtain prior authorisation from the EUIPO.

Any changes to standard objects in off-the-shelf products, commercial or open-source, are not permitted. Any exception must obtain prior authorisation from the EUIPO.

6.1. EUIPO applications architecture

6.1.1. **Foundation**

The Architecture team is in charge of delimiting and defining the ecosystem of the EUIPO IT by means of the following documents.

1. Reference Architecture (RA)
2. IT & Security Standards
3. Booklets
4. High Level Architecture (HLA).

All the pertinent documentation is subject to continuous improvement and evolves following the up-to-date IT industry's best practices and latest technologies. *See Annex F for the relevant reference, standards and booklets.*

Reference Architecture details the technology (including specific versions when applicable) of the IT configuration items for new projects and legacy systems, fostering the open-source instead of commercial solutions. It also defines the strategy for the next 2-4 years. As such, it is the basis for concrete solution architectures.

The **IT & Security Standards** establish a set of criteria that describes a desired level of performance. There are five type of standards: technical, product, process, reference and security. Examples are criteria about how code must be documented using JavaDoc, or how naming must use lower camel case notation.

Booklets are written to provide specific details on how common open-sources technologies must be applied to be reused by different applications.

For each new software development, the Architecture team is in charge of defining technical components and overall solutions, with responsibility for the definition of the design in the scope of a project or a system. The Architecture team produces a **High-Level Architecture (HLA)**, which is aligned with the Reference Architecture and IT & Security Standards. When a technology can be reused, a reference to the specific Booklet related to such technology will be included in the HLA.

All this documentation must then provide the necessary information to allow:

- architecture that ensures maximum availability, robustness and scalability;

[12] More information can be found here: https://www.w3.org/

- software stack: OS, DB, Application Server and its configuration (DB, Application Server parameters);
- monitoring systems to collect and report system performance (i.e. user experience);
- maintenance and security strategy.

The EUIPO collaborates on international cooperation programmes with the trade marks and designs national offices or European agencies. In this case, the use of open-source technologies will be a requirement.

6.1.2. Technologies in use

The EUIPO's applications are mainly developed in Java using open-source technologies; PHP is only used for customising certain functionalities in PHP-based open-source off-the-shelf software packages such as Drupal, Moodle, Limesurvey, etc.

Web applications are based on communication between the server side and the client side (browser). JavaScript is the development language for the client side and it is interpreted by the browser. It has been included in this section for this reason, as well as the standardisation based on ECMA[13] and the push of good practices within the JavaScript community.

Legacy Web applications use Spring (sometimes Boot) technologies to register themselves with a central service registry (e.g. Consul) so that they can be looked up later 'by name' through a central load balancer such as HAProxy. However, with the establishment of the new Cloud-native architecture, now Spring Boot and Cloud are the core technologies used, and all the service registry is delegated to Kubernetes.

An Enterprise Event Bus platform (Apache Kafka) is also in place as the backbone for event processing, where each event can be consumed by all sorts of heterogeneous technologies, such as Elasticsearch for indexing, Big Data (Hadoop) for batch/offline processing, Spark/Flink for stream analysis and processing, machine learning. The table below summarises the reference architecture currently in place at the EUIPO:

Area	New Development[14]	Legacy[15]	Strategy[16]
Java Application Servers	Spring Boot (embedded server)	Weblogic , JBoss	Future versions of non-legacy products
Web Servers	Apache	IIS Web Server	Future versions of non-legacy products
Search Frameworks	Elasticsearch	Solr	Future versions of non-legacy products
Document, Web and Content Management Platforms	Liferay Drupal Alfresco Oracle Web Content	FileNet IMS FileNet P8 Joomla Apache Jackrabbit	Future versions of non-legacy products
Security	MS AD CAS IAM	In-house development	Oracle Identity Manager

[13] For more information please refer to https://www.ecma-international.org/memento/tc39.htm
[14] The 'New Development' column describes the technology currently used for new developments.
[15] The 'Legacy' column lists technologies that are still in use but that are no longer used for new developments. However, the systems based on these technologies still require corrective or adaptive maintenance.
[16] 'Strategy' gives an indication of the technologies that the EUIPO is considering for future developments within 2 to 4 years. There is no guarantee that these will be the final choice, as better options might appear on the market. The EUIPO is also looking into microservices and containerisation platforms.

Workflow Engines	Activiti	Filenet P8	Future versions of non-legacy products
Business Rules Management System	Drools	N/A	DSL
Big Data	Hadoop Spark Cassandra	N/A	Future versions of non-legacy products
ESB	Spring Integration	Oracle ESB JBoss ESB Mule ESB	Future versions of non-legacy products
JMS	Active MQ	JMS in Oracle ESB, Weblogic and JBoss	Future versions of non-legacy products
Load Balancing	F5 Big IP HA Proxy	Apache Web Server	Future versions of non-legacy products
Databases	Oracle RAC with Data Guard Maria DB + Galera NoSQL: MongoDB, Redis	Informix MySQL	Extended Oracle RAC CockroachDB

6.2. Technical environments

The EUIPO hosts four types of environments:

- **Integration**: this is the environment which is used for the integration tests of any delivered software release by the Contractor. Depending on the outcome of this activity, a decision is made on whether the release can be installed in Test environment so that the acceptance phase is launched.

- **Test**: this is the environment which is used for the acceptance phase of any delivered software release.

- **Pre-production**: this is the environment which is in principle a copy of the production environment; it is used for replicating issues that may happen in production, for stress testing of a new software release as well as for other purposes (e.g. performance).

- **Production**: this is the environment where the production releases are deployed and run.

The maintenance of these environments, both software and hardware, is the responsibility of the Office and it is supported by a different service provider in the context of a separate FWC. The only exception to this is the Integration environment, where installations of any new software releases is the responsibility of the Contractor as part of the Type 1, Type 2 and Type 3 services. The Contractor's development team will be connected to this environment via a VPN set up for this purpose.

The Contractor must host all the environments required to develop and maintain properly the applications in the scope of this FWC. For this, the Contractor is expected to have development environments for corrective maintenance activities and for other development activities such as adaptive maintenance and projects. **All costs derived from the set-up and maintenance of these environments must be included in the daily rates**.

For the new in-house applications, an automatic deployment strategy based on Jenkins and Ansible has been implemented in the context of the Cloud-native Architecture. In complex deployments, the Contractor will be formally required to assist the EUIPO DevOps team in the installation of the software in any of the environments.

6.3. Information Security architecture

The EUIPO is certified to ISO 27001, and Information Security is an integral part of its information systems during their entire life cycle. This begins with the appropriate definition of security requirements, undertaken through the IT Security Standards.

Part of the IT Standards, the IT Security Standards, are based on the Open Web Application Security Project (OWASP), and their main objective is to manage the business processes of the EUIPO in a secure way. This is carried out not only by establishing the mechanisms for the protection of confidential information, but also by implementing the means to ensure data integrity, that is to say, making sure that the information is properly protected against tampering, regardless of the confidentiality level — and application availability.

The main areas covered by the IT security standards are:

- user management
- session management
- data validation
- data management
- data communications
- business continuity
- monitoring

All IT security standards are testable and have an associated test scenario, in order to verify whether the standards have been properly implemented.

6.4. EUIPO technical infrastructure

6.4.1. **Data centres**

The EUIPO manages two data centres (DCs) that are closely interconnected, plus a Quorum Room. Business Continuity and High Availability is guaranteed by redundant power and cooling equipment. Two different telecom companies provide up to 2 x four 10 Gb Ethernet interconnections and 2 x two 8 Gbps Fibre Channel interconnections.

At the time of implementation of any application or system, although two physical locations are available, only one logical DC will be considered, as the EUIPO has an Extended Data Centre. Consequently, designs must produce active-active solutions that enable provision of 100 % of the service from both sites without disruption. For services that do not require active-active solutions, the EUIPO accepts solutions where the switch or failover and back are processed with as much automation as possible.

The EUIPO is currently analysing the possibilities offered by cloud providers of setting up Disaster Recovery as a service, but in general, all applications must cope with the total blackout of one full physical DC.

6.4.2. **Networking and telecommunications**

The computer networking model is based on the TCP/IP family of protocols implementing the Cisco enterprise architecture model. The IP version is IPv4. The data links layer is Ethernet with 1 Gbps for users' endpoints and 1 Gbps/10 Gbps for servers, depending on the bandwidth demand of each server. Backbone links bandwidth is 20 Gbps but is scalable to 80 Gbps. OSPFv4 is the default routing protocol for the EUIPO's intranet.

The network is segmented in several areas:

- A DMZ security zone: contains any authentication or authorisation mechanism (CAS, AD, etc.) used by the EUIPO's Front Office applications.

- Zone 1: comprises the dynamic content and the business logic of the applications. Integrations are performed by means of an ESB with a load balancer also acting as a WAF for protecting services' invocations.

- Zone 2: includes any data and file repository required to guarantee consistency and integrity. Search engines are also hosted in Zone 2. A load balancer is available where functionality by data or application server is not provided.

- Zone 3: contains all infrastructure needed for support services such as, but not limited to, backup, monitoring, etc.

For security reasons, non-production and production environments are segregated: physically for servers and storage; logically for network and security.

Each data centre is connected to internet at a speed of 1 Gb (two different ISPs). VPN is in place for the connection with the EUIPO's external providers.

6.4.3. **Servers**

All new software developments are deployed on virtual servers (VMWare ESXi or Oracle VM on an Intel platform).

A great effort is currently ongoing into consolidating the EUIPO platforms in order to simplify management, maintenance, budgeting and deployment. There are only a few systems still running on Solaris servers; the large majority run on Oracle Linux, RedHat Enterprise Linux, CentOS (when a project requires the use of open-source technologies) or Windows Server (when required for support reasons).

6.4.4. **Internal end-user platforms**

The EUIPO's internal staff use homogeneous platforms. Therefore, the environment is tightly controlled with the following configuration: PCs with Windows 10 OS, Microsoft EUIPO 2017, Internet Explorer 11.x, Firefox, ESR 24.x, Chrome 33.x browsers; new software developments must support Chrome and Firefox last stable versions and be backward compatible with supported versions of Internet Explorer.

As the EUIPO is extending the use of mobile devices, web applications must be responsive as defined in the non-functional requirements and must provide an appropriate user experience adapted for mobility. Currently, the EUIPO mobile devices are mainly based on an IOS platform but this may change in the future.

6.4.5. **External users**

The EUIPO's external customers use more heterogeneous platforms than the ones managed by the EUIPO. Therefore the number of technologies and products to be provided/supported is larger, including MS Edge, Internet Explorer, Firefox, Chrome, Safari, Opera, and Android browser.

The support for external customers' technologies involves a very broad scope, as some of the EUIPO's customers use the latest devices and technologies, whereas others do not update technology very often.

Annexes

Annex A: Glossary

Annex B: List of EUIPO IT systems

Annex C: EUIPO Work Process: Software Development life Cycle (SDLC)

Annex D: EUIPO Work Process: Plan IT Investments

Annex E: EUIPO Work Process: Manage Incidents and Problems

Annex F: EUIPO Applications Architecture

7. Annexes

A – Glossary

ANNEX A: GLOSSARY AND ABBREVIATIONS

Term	Definition
ALE	Application Link Enabling
AM	Asset Management
Architecture Team	EUIPO team in the Digital Transformation Department responsible of the ownership of EUIPO's IT Architecture.
BOUDT	Business Objects Universal Designer Tool
BPC	Business Plan and Consolidation
BPMN	Business Process Model and Notation
Business Blueprint	The Business Blueprint is a SAP document that provides written documentation of the results of the requirements-gathering sessions. It verifies that a proper understanding of requirements has been communicated. This document also finalizes the detailed scope of the project.
CCC	Customer Competence Center
CfT	Call for Tender
CO	Controlling
Contractor	The awarded organisation that delivers services
COTS	Commercial Off the Shelf
CRM	Customer Relationship Management
CRT	Conflict Resolution Transport
CSN	Customer Support Network
CTS+	Change and Transport System
DevOps Team	EUIPO team in the Digital Transformation Department responsible for the installations of software.
DTD	Digital Transformation Department
Eclipse IDE	Java-based open source platform that allows a developer to create a customized Integrated Development Environment (IDE) from plug-in components built by Eclipse members. SAP's strategic choice of new development tool for: · SAP NetWeaver Developer Studio. · SAP Eclipse Tools for SAP Hana Cloud Platform. · SAP UI Development Toolkit for HTML5. SAP NetWeaver Gateway Plug-in for Eclipse.
ERP	Enterprise Resource Planning
EU	European Union
FI	Finance
FP	Fixed Price
FPA	Function Points Analysis
FPR	Fixed Productivity Ratio regarding mandays required for the implemenation of a function point
FTE	Full Time Equivalent
Function point	A function point is a 'unit of measurement' to express the amount of business functionality in an information system. Function points are used to compute the functional size of software

B – List of EUIPO IT Systems

IIMPORTANT - Please note that this information is meant to give a global picture of the EUIPO's current IT Systems and the principal technology upon which they have been built. It does not provide neither a detailed description of the systems nor all the technologies that those systems are composed of. During the life-cycle of the FWC, the list of systems will most probably change since new systems will be implemented and some others may be decommissioned.

CI ID+	CI Name	Principal Technology Used
FRONT OFFICE SYSTEMS		
IS201	EWS - eSearch Mobile	Java, Android SDK, iOS
IS078	Online Access to Files (OAF)	Java
IS007	CTM Download	Java
IS125	EWS - Portal	Java, Liferay (v6.2 EE)
IS126	EWS - eSearch	Java
IS147	EWS - Case Law	Java
IS161	EWS - Harmonized eFiling	Java
IS203	EWS - Inter partes eFiling	Java
IS159	EWS - Admin Tool	Java
IS160	EWS - EM Payment Plataform	Java
IS034	RCD e-filing	Java
IS033	TM e-filing	Java
BACK OFFICE SYSTEMS		
IS003	CTM Community Search System	Java
IS030	CTM Madrid Protocol System (MPS)	Java
IS067	LCT-Language checker	Java
IS072	Boards of Appeal Single Tool	Java
IS045	Correspondence (COR)	Java
IS002	EuroNICE	Java
IS042	ADM - Administration Module	Java
IS044	PER - Persons	Java
IS084	FileNET Access Component (FNA)	Java
IS140	OHIM Similarity Application (OSA2)	Java
IS111	Image Processing tool	Java
IS138	Translation Gateway (BTJC)	Java
IS151	Decision Desktop	Visual Basic
IS179	IPTool	Java, Activiti
IS193	DAS	Java + .Net
IS207	G&S Comparer	Java
IS208	Similarity Feeder	Java
IS211	RG Support Tool	Java
IS213	Trade Marks & Design Repository	Java
IS214	Classification Helper	Java, RxJava, Kafka, Elasticsearch, Kubernetes
IS139	OHIM Search Algorithm (OSA)	Grails, Groovy
IS059	Agenda (AGD)	Java
IS046	Certificates & Publication	Java
IS041	Common mail dispatch (QFMan)	Visual Basic
IS047	RCD EXA	Java
IS065	Multi-Platform Communications (MPC)	Java
IS086	RCD Hague Agreement (HAL)	Java
IS173	Unified Quality Check Tool Phase 2	Java
IS112	X-marks	Black box, Windows app
IS028	Common Payment System (CPS)	Java
COOPERATION SYSTEMS		
IS134	CF1.2.7 - User Satisfaction Survey	Limesurvey

IS154	ECP - Back Office	Java
IS155	ECP – Front Office	Java
IS176	ECAP III	Drupal
IS197	EUAgency Extranet	Drupal
IS152	CCCT-Common Call Centre Tool	JIRA, Confluence
IS132	CF1.2.11 Common Gateway for Applications	Liferay
IS133	Quality	Liferay
IS149	TMDSView	Java, SOLR
IS131	CF1.2.10 Cesto	Java
IS150	Forecasting Tool	WEKA, Excel
IS196	DesignClass	Java
IS146	Similarity of Goods and Services	Java
IS144	Terminology Maintenance Console (TMC)	Java
IS148	Terminology Maintenance Console (Staging)	Java
IS145	TMClass	Java
IS202	ePlatform	Java
IS175	TMDSView - Centralized data component	Java, MongoDB
OBSERVATORY SYSTEMS		
IS141	Enforcement Database	Java
IS142	ACIST - AntiCounterfeiting Intelligence Support Tool	Java
IS158	Orphan Works	Java
IS198	Anti-Counterfeiting Rapid Intelligence System (ACRIS)	Java
IS200	Agorateka	Drupal
IS215	Ideas Powered	Drupal
IS216	Authenti-city	Drupal
ACADEMY SYSTEMS		
IS210	eLibrary	Java, Cloud-based application / ExLibris
IS137	EUIPO Academy Learning Portal	Moodle
BUSINESS SUPPORT SYSTEMS		
IS004	Insite (EUIPO intranet)	Drupal
IS017	ARCAD	Coldfusion
IS099	Microsoft Office applications	Mcrosoft Office
IS172	Sharedox	Alfresco 5.1
IS178	Minisites	Drupal
IS180	Condeco	C++
IS206	Pan-European Seal Talent Bank	Drupal
IS217	New Generations Guidelines	SDL Product

C – EUIPO Work Process: Software Development life Cycle (SDLC)

Please refer to the following documents which can be found inside the *Annexed Documents* folder:

- QSD-0208 Manage SDLC (to-be) (draft).pdf
- QSD-0208 Manage Software Development Lifecycle (current).pdf

The *Annexed Documents* folder is located at the same directory as the present document.

Any reference to BITD (Business Information Technology Department) in the annexed documents should be read as DTD (Digital Transformation Department).

D – EUIPO Work Process: Plan IT Investments

Please refer to the following document which can be found inside the *Annexed Documents* folder:

- QSD-0207 Plan IT investments.pdf

The *Annexed Documents* folder is located at the same directory as the present document.

Any reference to BITD (Business Information Technology Department) in the annexed documents should be read as DTD (Digital Transformation Department).

E – EUIPO Work Process: Manage Incidents and Problems

Please refer to the following document which can be found inside the *Annexed Documents* folder:

- QSD-0209 Manage Incidents and Problems.pdf

The *Annexed Documents* folder is located at the same directory as the present document.

Any reference to BITD (Business Information Technology Department) in the annexed documents should be read as DTD (Digital Transformation Department).

F – EUIPO Applications Architecture

Please refer to the following document which can be found inside the *Annexed Documents* folder:

- EUIPO Applications Architecture.docx

The *Annexed Documents* folder is located at the same directory as the present document.

Any reference to BITD (Business Information Technology Department) in the annexed documents should be read as DTD (Digital Transformation Department).