DELIVERABLE

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Deliverable D2.2 Tender Specifications

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EXECUTIVE SUMMARY

Deliverable 2.2 presents the tender requirements and assessment procedures that have been in included in the Call for Tender of the PREFORMA Pre-Commercial Procurement. This deliverable compiles the content from the following tender documents:

- the **Challenge Brief**, which sets forth the overall challenge for long term preservation of digital files to be addressed by the PREFORMA Research & Development activities, i.e. empowering memory institutions to gain control over the technical properties of preservation files by developing an open-source conformance checker and establishing a healthy ecosystem around an open source 'reference' implementation.

- the **Exclusion Criteria** from the Invitation to Tender, which covers the tender criteria for avoiding the selection of technology providers that have been sentenced or are subject to a judicial procedure involving fraud, corruption, money laundering or organised crime.

- the **Minimum Requirements** from the Invitation to Tender, which covers the tender criteria for ensuring the services offered are meeting the core objectives defined in the PREFORMA Challenge Brief and that these services are compliant with the definition of Research & Development services defined by the EU public Procurement directive 2004/18/EC, as well as the Swedish national requirements concerning safety, ethics, and healthcare regulation.

- the **Assessment of Tenders** from the Invitation to Tender, which presents the formal procedure for evaluating the received tenders and selecting the technology providers.

- the **Question and Answers Document**, which contains the most common PCP-related questions that tenderers should read before filling out the Tender Form.

By compiling these five sections in one deliverable, PREFORMA aims to provide:

- a clear description of the research and development component of the PREFORMA PCP and the relation between the PREFORMA challenge and the PREFORMA tender

- the scope and a detailed description of the challenge that the PREFORMA PCP addresses, and

- a transparent and comprehensive overview of the criteria used for selecting technology providers that can participate in the research and development activities.

1. INTRODUCTION

1.1 STRUCTURE OF THE DOCUMENT

This deliverable presents the tender requirements and assessment procedure that have been included in the Invitation to Tender, the Challenge Brief and the Q&A Document of the PREFORMA Pre-Commercial Procurement. The deliverable has been organised as follows:

Chapter 1 - sets out the structure and the objectives of the deliverable

Chapter 2 -sets out the PREFORMA Challenge Brief

Chapter 3 - lists the minimum requirements for PREFORMA tenders

Chapter 4 - lists the exclusion criteria for PREFORMA tenders

Chapter 5 - describes the assessment procedure for PREFORMA tenders

Chapter 6 - describes the format and procedure for answering questions from PREFORMA tenderers

1.2 OBJECTIVES OF THE DELIVERABLE

Memory institutions, in Europe and elsewhere, are facing a situation where transfers of electronic documents or other electronic media content for long term preservation are continuously increasing. Data are normally stored in specific file formats for documents, images, sound, video etc. produced by software from different vendors. This software is controlled neither by the institution that produces the files, nor by the institution that holds the archive. Data objects meant for preservation that pass through an uncontrolled generative process can jeopardise the whole preservation exercise.

PERFORMA (PREservation FORMAts for culture information/e-archives) is a Pre Commercial Procurement project co-funded by the European Commission under its FP7-ICT Programme. The main objective is to give memory institutions full control of the process of the conformity tests of files to be ingested into archives. This shall be obtained by research and development aiming at a set of tools which will enable the testing process to happen under full control of the institutions.

The pre-commercial procurement, following the procedures for tenders in public sector, will match the memory institutions professional knowledge and the supplier's skills in research and development including promotion of products.

The objective of this deliverable is to provide a comprehensive overview of the tender requirements and assessment procedures.

It compiles three chapters from the Invitation to Tender plus the Challenge brief and the Question and Answer Document, which will be made available to interested technology providers through publication of a Call for Tenders at the Tender Electronically Daily (TED) website.

Compiling these tender documents in one deliverable, PREFORMA aims to provide:

- a clear description of the research component of the PREFORMA PCP and the relation between challenge and tender

- the scope and a detailed description of the challenge that the PREFORMA PCP addresses, and

- a transparent and comprehensive overview of the criteria used for selecting technology providers that can participate in the research and development activities.

1.3 RELATIONSHIP WITH OTHER TASKS/DELIVERABLES

This deliverable is produced by PREFORMA Work Package 2: Requirements & Assessment and the following related tasks:

- T2.2 Functional requirements

- T2.3 Technical specifications

- T2.4 Supplier selection

It provides the outcomes of actions described in deliverable D2.1 Overall Roadmap (chapter 2.1 Operational procedures and chapter 3 Functional and technical specifications). These outcomes are the functional requirements and the overall technical specifications and performance criteria for the PREFORMA conformance checker, defined by T2.2 and T2.3, and also the assessment procedure for selecting technology providers that can participate in the research and development phase, defined by T2.4.

2. CHALLENGE BRIEF

2.1 JUSTIFICATION

The aim of the challenge brief is to set forth the overall challenge for long term preservation of digital files to be addressed by the PREFORMA Research and Development activities, i.e. empower memory institutions to gain control over the technical properties of preservation files by developing an open-source conformance checker and establishing an ecosystem around an open source 'reference' implementation. The challenge brief explains how suppliers are expected to engage in the research activities in collaboration with memory institutions and academic partners.

The Challenge Brief will be included as a separate procurement document, tenderers are required to agree on the Challenge Brief as a whole to be invited in the PREFORMA Research & Development work.

The Challenge Brief has been prepared by T2.2 functional requirements and T2.3 Technical specifications, based on the concrete needs of the memory institutions, gathered in the requirements survey and through the requirements workshop in Brussels. The Challenge Brief includes:

- a concise description of the PREFORMA Challenge (cf. section 2.2.1),

- a description of the research and development activities in which suppliers are expected to engage (cf. section 2.2.2),

- a description and enumeration of the open source projects, including the standard specification documents to be addressed in each project (cf. section 2.2.3),

- a description of the OAIS functions, use cases, deployment contexts and functional components of the Conformance Checker (cf. Section 2.2.4), and

- a description of the OAIS functions and the stakeholders to be addressed by the open source project and the ways in which tenderers are expected to advance the adoption and improvement of the reference implementation (cf. Section 2.2.5).

The Challenge Brief provides the outline for the first set of evaluation criteria in the PREFORMA Scoring Model, which measures the impact of the services on the PREFORMA Challenge.

The Challenge Brief will be broken down into a subset of items, allowing each individual member of the Evaluation Committee to make a quantitative assessment of the impact on the PREFORMA Challenge. These impact assessments will be used for preparing a preliminary ranking of the different tenders.

2.2 CONTENTS OF THE PREFORMA CHALLENGE BRIEF

2.2.1 The PREFORMA Challenge

PREFORMA aims to establish a set of tools and procedures for gaining full control over the technical properties of digital content intended for long-term preservation by memory institutions.

(Digital content)

Digital content is stored in files with specific file containers and encodings for capturing text, images, sound and moving image, depending on the systems and use cases the files originate from.

These files can be produced by external organizations and transferred to memory institutions, or produced in-house by memory institutions as digital reproductions of items in their collections and holdings.

(Long-term preservation)

Long-term preservation of these files requires exact knowledge and control over their technical properties, allowing memory institutions to develop an appropriate preservation strategy for the digital content (e.g. by transforming, re-packaging and emulating these files).

(Full control)

To obtain this knowledge and control, preservation files are usually generated using 'standard' file formats, which normalize the way digital content is captured in a digital file. Yet, these preservation files are always generated using software that implements one particular interpretation of the 'human readable' specifications in the 'standard' document. Inevitably, ambiguities in these specifications lead to different interpretations and hence software producing different implementations of the 'standard' file format.

In practice, a uniform implementation of a 'standard' file format is hard to enforce, because the software producing preservation files is controlled neither by the organization that produces them, nor by the memory institution that has to preserve the file.

2.2.2 Research and development activities

The PREFORMA *research and development*[1] activities, deployed within the triple helix of suppliers, universities and memory institutions, are conceived as *applied research*[2], exploring critical factors in the quality of standard implementation within the objective of developing two strategies that empower memory institutions to gain control over the technical properties of preservation files.

(strategies)

PREFORMA develops two strategies that empower memory institutions to gain control over the technical properties of preservation files:

- develop an open-source conformance checker, and

- establish a healthy ecosystem around an open source 'reference' implementation for specific file formats.

(research topics)

The *basic research*[3] objective, underlying these two strategies, is to explore critical factors in the quality of standard implementation. This involves acquiring knowledge about:

- how to establish a methodology or an objective frame of reference to interpret and implement the standard specifications against the background of the current variations of interpretations and implementations by software vendors; is there a need to consolidate the diverse implementations or is a better approach to centralize the interpretation to a specific implementation (i.e. promote one interpretation and implementation as the standard)?

- given the answer to the first question, how to determine whether a file is what it claims to be, i.e., in this context, what makes a file a valid file, i.e., conform to the "standard"?

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[1] The PREFORMA R&D effort is conceived along the *research & development* concept defined in par. 63 of the Frascati Manual:
"*Research and experimental development* (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledgy, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications."
OECD, Frascati Manual. Proposed standard practice for surveys on reserach and experimental development, PDF file, 2002: 31/ Accessed on 9 June 2014. http://browse.oecdbookshop.org/oecd/pdfs/free/9202081e.pdf

[2] "*Basic research* is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particula application or use in view. *Applied research* is also original investigation undertaken in order to acquire new knowledge, It is , however, directed primarily towards a specific practical aim or objective. [...]"
Ivi, pag. 64.

[3] Cfr note 2 above.

- how can the open source project continue to be developed and sustained in the short and long run; can an open source community operate as the normative source for the answer to the first and second question?

Besides providing a free and open solution for conformance checking at memory institutions, the development of a conformance checker and a reference implementation are instrumental to these research questions. The output of the research is shared with the stakeholders that contribute to the ecosystem around the reference implementation.

(coordination of research)

Research and development activities are performed within the 'triple helix' of universities, memory institutions and suppliers.

- suppliers are the locus for the development of the conformance checker software and the test files that exemplify the reference implementation

- universities provide knowledge and technology for designing, prototyping and testing the software and the test files,

- memory institutions provide the organizational framework for the R&D activities and establish a network of common interest for sharing the results of the project.

Suppliers can take advantage of the interaction with universities and memory institutions to raise their technological level. On the other hand they will benefit from the recommended practices set forth by the network of common interest, since this will reduce fragmentation for their market. They will be able to develop single solutions for a larger market and to be more aware of and closer to the actual demand of their customers.

(open source project)

The use of open file formats and open source software is considered to be fundamental for establishing long-term sustainable preservation workflows at memory institutions. As for PREFORMA, it ensures long-term availability of the conformance checking software and test files, independent of the specific memory institutions and suppliers involved in the PREFORMA PCP.

Therefore the research & development activities of PREFORMA will be organized in a series of open-source projects that each focus on establishing a reference implementation for one particular media type.

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2.2.3 Open source projects

The PREFORMA open source projects each address a particular set of standard file formats that are (1) open standards[4], (2) considered appropriate for long term preservation by digital preservationists and (3) relevant for the memory institutions participating in PREFORMA.

These file formats cover three major media types: text, image and audiovisual media.

Text

The open source project on text media researches tools and procedures for establishing a reference implementation for **PDF/A**.

Basic research should involve checking for the existence of PDF/A -functionalities and whether they are implemented in accordance with the specifications for PDF/A. The functionalities to examine could for example be the following:

- the use of annotations, images and digital signatures,

- the use of compression schemes and transparency,

- the use of character sets and fonts,

- the use of interactive features such as executable scripts, forms and navigation tools,

- embedded administrative and structural metadata, and

- dependencies on external resources.

The conformance checker developed in this open-source project validates PDF/A files against all following standard file format specifications:

- ISO (2005). Document management -- Electronic document file format for long-term preservation -- Part 1: Use of PDF 1.4 (PDF/A-1). ISO/TC 171/SC 2, ISO 19005-1:2005.

- ISO (2008). Document management -- Portable document format -- Part 1: PDF 1.7. ISO/TC 171/SC 2, ISO 32000-1:2008.

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[4] O**pen standards** are standard specifications that meet the following requirements, defined in the European Interoperability Framework for Pan-European eGovernment Service (version 1.0 2004):

- The standard is adopted and will be **maintained by a not-for-profit organization**, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision etc.).
- The standard has been published and the standard specification document is **available either freely or at a nominal charge**. It must be permissible to all to copy, distribute and use it for no fee or at a nominal fee.
- The **intellectual property** - i.e. patents possibly present - of (parts of) the standard is made irrevocably **available on a royalty-free basis**.
- There are no **constraints on the re-use** of the standard

- ISO (2011). Document management -- Electronic document file format for long-term preservation -- Part 2: Use of ISO 32000-1 (PDF/A-2). ISO/TC 171/SC 2, ISO 19005-2:2011.

- ISO (2012). Document management -- Electronic document file format for long-term preservation -- Part 3: Use of ISO 32000-1 with support for embedded files (PDF/A-3). ISO/TC 171/SC 2, ISO 19005-3:2012.

The conformance checker determines if a file is a PDF/A file or if it is something else. It also checks all different conformance levels in **PDF/A-1**, and **PDF/A-2**, and **PDF/A-3** and provides detailed information on the criteria that have not been fulfilled.

Image

The open source project on image media researches tools and procedures for establishing a reference implementation for **uncompressed TIFF**.

Basic research should involve checking for the existence of TIFF -functionalities and whether they are implemented in accordance with the specifications for TIFF. The functionalities to examine could for example be the following:

- the use of 'baseline', 'extension' and 'private tags',

- the use of color profiles,

- assessment of user-specific acceptance criteria based on technical parameters of the digital image, and

- executing automated fixes for making TIFF files compliant with baseline specifications,

The conformance checker developed in this open-source project validates uncompressed TIFF files against all following standard file format specifications:

- ISO (2001). Electronic still-picture imaging — Removable memory — Part 2: TIFF/EP image data format. ISO/TC 42, ISO 12234-2:2001

- ISO (2004). Graphic Technology -- Prepress digital data exchange -- Tag image file format for image technology (TIFF/IT). ISO/TC 130. ISO 12369:2004

The conformance checker determines if a file is an uncompressed TIFF file or if it is something else. It also checks the use of 'baseline', 'extension' and 'private' tags, as well as user-specific acceptance criteria. The tool provides detailed information on the criteria that have not been fulfilled.

Audiovisual

The open source project on audiovisual media researches tools and procedures for establishing a reference implementation for an audiovisual preservation file, using **FFV1**, **Dirac** or **JPEG2000** for encoding video or moving image, **uncompressed LPCM** for encoding sound and **MKV** or **OGG** for wrapping audio- and video-streams in one file.

Basic research activities involve defining a profile for an audiovisual preservation file that allows for:

- capturing uncompressed or mathematically lossless compressed audio- and video- or image streams,

- preserving the image and sound properties of the 'original' audio-visual resource,

- capturing a comprehensive set of preservation data

Basic research should also involve checking for the existence of standard functionalities and whether they are implemented in accordance with the corresponding specifications.

The conformance checker developed in this open-source project validates one container file format and one video/image codec, chosen by the supplier from the standards mentioned above, and uncompressed LPCM encoded audio. The supplier is asked to select a specific set of standards from the list below.

- MKV: Matroska – Technical Details.
                http://www.matroska.org/technical/index.html
- OGG: Ogg - Documentation. https://xiph.org/ogg/doc/
- JPEG2000:   ISO (2004). Information technology - JPEG 2000 image coding system: Core coding system. ISO/IEC JTC 1/SC 29, ISO/IEC 15444-1:2004
- FFV1:   FFV1 Video Codec Specification,
                http://www.ffmpeg.org/~michael/ffv1.html
- Dirac: Dirac Specification Version 2.2.3 (2008),
                http://diracvideo.org/download/specification/dirac-spec-latest.pdf
- LPCM: IEC (2014). Digital audio interface - Part 1: General. IEC/TC 100, IEC 60958-1 ed3.1 Consol. with am1: 2014

This selection provides the reference implementation that the files will be checked against. The conformance checker determines if a file is conform the selected standard specifications or if it is something else. It also provides detailed information on the criteria that have not been fulfilled.

2.2.4   Conformance checker

The first strategy researched in PREFORMA is to develop an open-source toolset for conformance checking of digital files, intended for long-term preservation in memory institutions.

A conformance checker:

- verifies whether a file has been produced according to the specifications of a standard file format, and hence,

- verifies whether a file matches the acceptance criteria for long-term preservation by the memory institution,

- reports in human and machine readable format which properties deviate from the standard specification and acceptance criteria, and

- performs automated fixes for simple deviations in the metadata of the preservation file.

The conformance checker software developed by PREFORMA is intended for use within the OAIS Reference Framework[5] and development is guided by the user requirements provided by the memory institutions that are part of the PREFORMA consortium.

OAIS Environment (reference framework)

The conformance checker facilitates memory institutions in *obtaining sufficient control of the information* in an OAIS Archive, *provided to the level needed to ensure Long Term Preservation*[6].

The conformance check enables implementation of the following OAIS functions[7]:

- **Quality assurance** at Ingest, validating (QA results) the successful transfer of the SIP to the temporary storage area.

- **Generate AIP** at Ingest, transforming one or more SIPs into one or more AIPs that conform to the Archive's data formatting standards and documentation standards.

- **Archival Information Update** at Ingest, providing a mechanism for updating (repackaging, transformation) the contents of the Archive.

Additionally, the conformance checker must allow Producers to check whether a file conforms to the technical criteria before submission of a file to an OAIS Archive.

Use cases (document life cycle)

Development of the conformance checker focuses on four use cases that facilitate the interaction between the supplier, academic research and memory institution. They are compliant with the OAIS Reference Model and represent conformance checking procedures at different moments in the life cycle of a preservation file:

1. Conformance Checking at **Creation Time**: Producers pro-actively check if technical properties of a file meet the acceptance criteria of an OAIS Archive, e.g. government agencies checking conformance of text documents to be deposited at public archives when the document is made available.

2. Conformance Checking at **Transfer time**: Archives check the technical properties of files ingested in the OAIS Archive, assessing whether they meet the acceptance criteria for ingest and conformance to the relevant preservation file formats, e.g. libraries monitor the preservation status of digital publications deposited in their digital repository.

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[5] ISO 14721:2012 Space data and information transfer systems -- Open archival information system (OAIS) -- Reference model

[6] CCSDS 650.0-M-2 Reference Model for an Open Archival Information System (OAIS). Magenta Book. Issue 2, PDF file, June 2012: 38. Accessed on 12 May 2014. http://public.ccsds.org/publications/archive/650x0m2.pdf.

[7] CCSDS 650.0-M-2 Reference Model for an Open Archival Information System (OAIS). Magenta Book. Issue 2, PDF file, June 2012: 4-6 – 4-8 . Accessed on 12 May 2014. http://public.ccsds.org/publications/archive/650x0m2.pdf.

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3. Conformance Checking at **Digitization time**: Archives check the technical properties of digital representations of collection items, internally or externally produced, if they meet the requirements specified in the digitization tender, e.g. museums doing quality control on the digital representations and documentation, produced by photographers.

4. Conformance Checking at **Migration time**: Archives check the technical properties of files that are repackaged or transcoded, following the rules defined in the preservation strategy of the OAIS Archive, e.g. libraries doing quality control when transcoding audiovisual files from a 'transmission' to a 'preservation' format.

5.

Deployment (environment)

The conformance checker allows for deployment in different infrastructures and environments.

- **PREFORMA Website**: Deployment at the PREFORMA project website, demonstrating the scope and functionality of the tool. The PREFORMA website should be considered as the deliverable for the PREFORMA project.

- **Evaluation framework**: Deployment within an evaluation framework that allows for gathering structured feedback on the conformance checking process. PREFORMA will require deployment within the DIRECT infrastructure for test and evaluation of the tool in the PCP procedure.

- **Stand-alone**: The tool must allow for packaging it in an executable and run it on a PC. This ensures the conformance checker can be used in small-scale institutions without centralized IT infrastructure.

- **Networked**: The tool must allow for deployment in network-based solutions (dedicated server, cloud solutions) for digital repositories.

- Integration in **legacy systems**: The tool must allow for plugging it into proprietary legacy systems via API's.

Components (architecture)

The conformance checker allows for modular deployment. Since OAIS archives usually contain multiple file types, the conformance checker should enable checking multiple reference implementations in one operation. For this purpose, the conformance checker allows for integrating other conformance checker components maintained within the PREFORMA ecosystem via one shell.

The design of the conformance checker therefore complies with the following functional architecture that facilitates modular deployment of multiple conformance checkers in one tool.

The conformance checker comprises four functional components:

- the **shell**: The conformance checker should interface with other systems through a 'shell' which allows for interfacing multiple conformance checkers at the same time. This might in the future allow integrating the conformance checkers of different suppliers into one application.

- the '**implementation checker'**: which performs a comprehensive check of the standard specifications listed in the standard document.

- the '**policy checker'**: which allows for adding acceptance criteria, always compliant with the standard specifications, that further differentiates the properties of the file. This might for example include limiting conformance to PDF/A-1b. Or limiting the colors-space of TIFF-files to ECI-RGB or aRGB. Or limiting the audiovisual file to 'progressive scanned' video.

- the '**reporter'**: which interprets the output of the implementation checker and policy checker and allows for defining multiple human and machine readable output formats. This might include a well-documented JSON or XML file, a human readable report on which specifications are not fulfilled, or a fool-proof report which also indicates what should be done to fix the non-conformances.

- the '**metadata fixer'**: which allows for simple fixes of the metadata embedded in the file, making them compliant with the standard specification.

Integration of multiple conformance checkers via one shell should be established as follows:
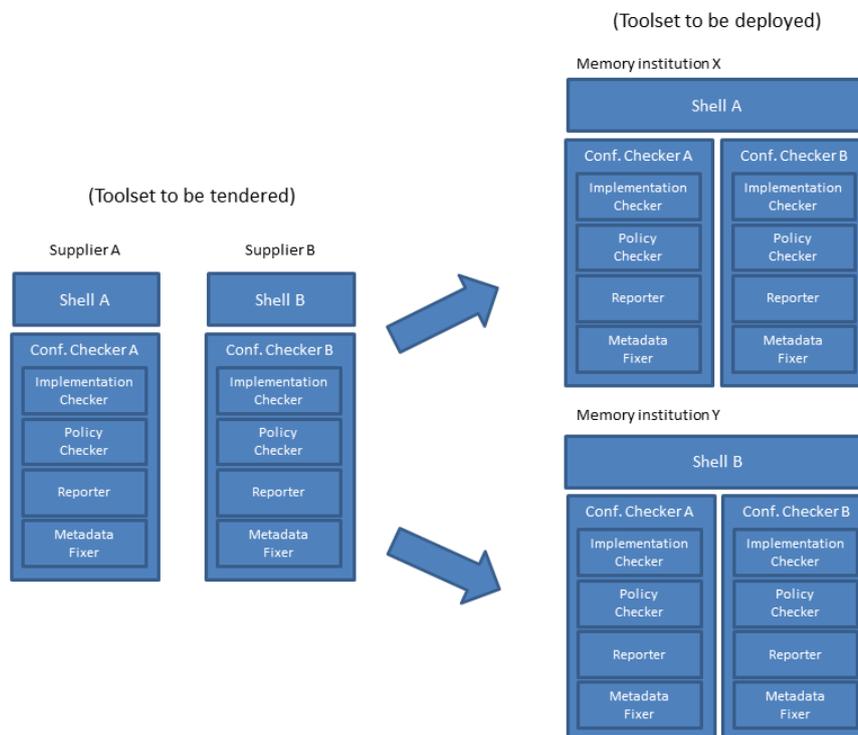
Open-source development

The open-source approach is fundamental for achieving the overall objectives of the PREFORMA challenge. This approach implies that:

- all software developed in the PREFORMA project is licensed under "GPL v3 or later" and "MPL v2 or later", enabling that anyone that has adopted such software has the right to freely read, use, improve and redistribute the source code for such software.

- all software developed in the PREFORMA project will be released using established open source development practices with early and frequent releases of developed software and associated artefacts.

- all software developed in the PREFORMA project will be made available on an open platform, e.g. GitHub or equivalent.

- all file formats researched in the PREFORMA project will be available under licensing conditions that allow for implementation in open-source software, including allowing for implementation in open source software which is licensed under "GPLv3 or later" and "MPLv2 or later".

- all file formats researched in the PREFORMA project will be available under licensing conditions that allow for use and external distribution of open source software (licensed under "GPLv3 or later" and "MPLv2 or later") in which these file formats are implemented.

- all files produced in the PREFORMA project will be released under a CC-BY-SA license.

(long term sustainable preservation workflow)

This open-source approach must ensure that memory institutions will always have access to the required tools for deploying a long-term sustainable preservation workflow, supported and maintained by the associated ecosystems.

(business opportunities)

PREFORMA will advocate a number of business opportunities for the selected technology providers, all in line with presently used Open Source software models:

Combinations with other software offerings
Technology providers are invited to use the open source software developed in PREFORMA as a complement to proprietary licensed software products in their portfolio, e.g.

- in combination with text, image or moving image editors, facilitating the production of preservation files

- in combination with digital repositories, facilitating assessment of files being ingested and processed by a Trusted Digital Repository.

- in combination with transcoding software, facilitating validation when migrating files.

Offer supplementary proprietary solutions

Technology providers are invited to develop supplements to the open source software and provide them using other licenses during and after the PREFORMA project. This may include:

- additional conformance checkers for other preservation formats that plug into the same environment/ecosystem

- additional reporter modules that facilitate integration of the open-source software in other proprietary software products

Selling professional services

Technology providers are invited to provide services for deploying the open source software at memory institutions, e.g. providing

- consulting
- customization
- technical support

(pre-commercial procurement)

The PREFORMA PCP, following the rules for tenders in public sector, will match the memory institutions professional knowledge with the supplier's skills in development and promotion of products and create a win-win situation. Joint procurement will enable PREFORMA to build a sustainable network of common interest, where the public procurers can remain in contact and cooperate beyond the EC funding period.

2.2.5   Reference implementation

The conformance checker authorizes a 'reference implementation' for a standard file format, i.e. an implementation of a 'standard' specification that is to be used as a definitive interpretation for that 'standard' specification.
The second strategy to gain control over the technical properties of preservation files is to establish a **network of common interest** that advances:

- the **adoption** of such a 'reference implementation' by other software applications, and

- continuous **improvement** of the 'standard' specification through engagement in the standardization process.

OAIS Environment

The network of common interest facilitates following OAIS functions by memory institutions operating an OAIS Archive[8]:

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[8] CCSDS 650.0-M-2 Reference Model for an Open Archival Information System (OAIS). Magenta Book. Issue 2, PDF file, June 2012: 4-12 – 4-15 . Accessed on 12 May 2014. http://public.ccsds.org/publications/archive/650x0m2.pdf.

- **Monitor Designated Communities** for Preservation Planning, interacting with Archive Consumers and Producers to track changes in their service requirements and available product technologies.

- **Develop Preservation Strategies and Standards** for preservation planning, developing and recommending strategies and standards, and for assessing risks, to enable the Archive to make informed tradeoffs as it establishes standards, sets policies, and manages its system infrastructure.

- **Establishing Standards and Policies** by the Administration of the Archive system and maintain them.

Stakeholders

The network gathers all stakeholders that control different stages in the lifecycle of a preservation file, providing a sustainable and viable ecosystem for the deployment of tools developed by PREFORMA as well as tools adopting the reference implementation. These stakeholders include:

- **developers**, controlling the production of preservation files, e.g. by file editors or transcoders, thus aiming at improving the effectiveness and interoperability of their software.

- **digital preservationists**, controlling the acceptance and management of preservation files in digital repositories, thus aiming at improving the preservation status of the digital collection they maintain and the effectiveness of the ingest procedures.

- **standardization bodies**, maintaining the formal specifications of file formats in standards, thus aiming to improve the specification of the standard.

Adoption

PREFORMA communicates the achievements of the project with developers and digital preservationists, raising interest to integrate the reference implementations in existing software products and digital repositories. PREFORMA establishes appropriate communication procedures to provide stakeholders with technical information facilitating adoption by the corresponding stakeholder.

These procedures include contributions by technology providers, such as:

- providing demonstration files with good and bad samples of the corresponding reference implementation,

- providing comprehensive documentation of the source code, which allows for automated generation of the internal API of the application,

- providing comprehensive documentation of the conformance checker for developers, such as quick start guide, cookbooks and other tutorials,

- online availability at the development platform for technical support to other developers deploying the conformance checker, and

- marketing the reference implementation and conformance checker at conference for professional networks of developers and digital preservationists.

Improvement

PREFORMA researches critical factors in the quality of the 'reference implementation' by assessing the files and tools produced by the project. Technical details on precisely what is incorrect will be tailored to the needs of each specific stakeholder group. PREFORMA establishes appropriate feedback procedures for each stakeholder to share the results of this assessment.

These procedures include contributions by technology providers, such as:

- Drafting proposals for changes and additions to the standard specifications, and

- Participating in technical workgroups that maintain a standard specification.

3. EXCLUSION CRITERIA

3.1 JUSTIFICATION

The aim of the exclusion criteria is to avoid selecting technology providers that have been sentenced or are subject to a judicial procedure involving fraud, corruption, money laundering or organised crime.

The following chapter presents the complete set of exclusion criteria as they will be included in chapter 4: Exclusion criteria of the Invitation to Tender. It has been based on the Invitation to Tender template produced by the SILVER PCP project[9].

The Exclusion criteria cover the first phase of the compliancy check in which Riksarkivet does some basic checks of companies, verifying the declarations made by the tenderer. The tenderer will be requested to sign up to a specific form included in the call for tenders, in which they declare meeting all exclusion criteria. Any tenderer or related subcontractor that does not meet the exclusion criteria will be excluded by Riksarkivet from further participation in the PREFORMA PCP.

3.2 CONTENTS OF THE EXCLUSION CRITERIA

A tenderer will be excluded from further participation in the PCP if it or any subcontractor on whose resources it relies upon in this procurement:

- Is bankrupt or is being wound up, is under compulsory administration or is the subject of a composition or has indefinitely stopped its payments or is subject to a prohibition on conducting business,

- Is the subject of proceedings for a declaration of bankruptcy, for an order for compulsory winding up or administration by the court or composition or any other similar proceedings,

- Has been convicted by a judgment which has the force of res judicata for an offence relating to professional practice,

- Has been guilty of grave professional misconduct and the authority can prove this, or

- Has not fulfilled its obligations relating to social insurance charges or tax in its own country.

- In some material respect has failed to provide information requested or provided incorrect information required pursuant to this invitation to tender document.

Tenderers shall explicitly assure that they are not subject to any of the exclusion criteria in bullets 1-5 above. Please see document [Tender Form_4].

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[9] Lundstrm, J. & Widmark, N. (eds.), Deliverable D2.3: Generic Pre-Commercial Procurement Templates, SILVER, PDF file, February 2014: 13

If Riksarkivet becomes aware that a tenderer, a representative of the tenderer, or subcontractor, under a judgment that has entered into final legal force has been sentenced for a criminal offence listed below, such tenderer will be excluded from the PCP:

- Criminal offences referred to in Article 2 of Council Framework Decision 2008/841/JHA of 24 October 2008 on combating organized crime.

- Corruption as defined in Article 3 of Council Act of 26 May 1997 preparation on the basis of Article K.3.2 c Treaty on European Union, the Convention on the fight against corruption involving officials of the European Communities or officials of Member States of, and Article 3.1 Council Joint Action 98/742/JHA of 22 December 1998 adopted by the Council on the basis of Article K.3 of the Treaty on European Union, on corruption in the private sector.

- Fraud within the meaning of Article 1 of the Convention drawn up on the basis of Article K.3 of the Treaty on European Union for the Protection of the Communities' financial interests.

- Money laundering as defined in Article 1 of Council Directive 91/308/EEC of 10 June 1991 on measures to prevent the financial system for money laundering, amended by European Parliament and Council Directive 2001/97/EC.

4. MINIMUM REQUIREMENTS

4.1 JUSTIFICATION

The aim of the minimum requirements is to ensure that the services offered by the tender are:

1. meeting the core objectives defined in the PREFORMA Challenge Brief,

2. within the scope of the definition of Research & Development services defined by the EU public Procurement directive 2004/18/EC, and

3. compliant with the national requirements concerning safety, ethics, and healthcare regulation.

The following chapter presents the complete set of minimum requirements as they will be included in Chapter 5: Minimum requirements of the Invitation to Tender.

The minimum requirements for Meeting the PREFORMA Challenge (cf. section 4.2.1) has been prepared by T2.2 functional requirements and T2.3 Technical specifications. They enumerate the mandatory requirements that have been described more comprehensively in the Challenge Brief, including the technical requirements for the source code, the functional requirements for the conformance checker application, operational requirements for establishing the open source project and the requirements for the distribution of IPR.

The requirements in this chapter ensure that technology providers fully commit to the overall scope and approach of the PREFORMA PCP, i.e.

- an open source approach to the development, availability and user and developer documentation of the conformance checker,

- facilitating the process of conformance checking in different stages of the life-cycle of the preservation file, and

- a modular and interoperable architecture that ensures easy deployment in a various set of deployment contexts.

The minimum requirements also enumerate the standard specification documents for implementing the different reference implementations.

The section on R&D Services (cf. 4.2.2) has been based on the Invitation to Tender template produced by the SILVER PCP project[10].
The section on national requirements (cf. 4.2.3) has been added by the procuring authority.

The minimum requirements cover the last phase of the compliancy check in which Riksarkivet verifies the declarations made by the tenderer. The tenderer will be requested to sign up to a specific form included in the call for tenders, in which they declare meeting all minimum

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[10] Lundstrm, J. & Widmark, N. (eds.), Deliverable D2.3: Generic Pre-Commercial Procurement Templates, SILVER, PDF file, February 2014: 14

requirements. Any tenderer or related subcontractor that is not able to provide this declaration will be excluded by Riksarkivet from further participation in the PREFORMA PCP.

4.2 CONTENTS OF THE MINIMUM REQUIREMENTS

4.2.1   Meeting the PREFORMA Challenge

Riksarkivet requires that the tenders meet the following minimum requirements as to meeting the objectives defined in the PREFORMA Challenge Brief.

Source code

The source code delivered by tenderer meets the following technical requirements:

- Source code MUST be built for **portability** between technical deployment platforms. (platform independent)

- Source code MUST be built in a **modular** fashion for improved maintainability.

- The Conformance Checker MUST allow for **deployment** in the five **infrastructures/ environments** defined in the Challenge Brief.

- The Conformance Checker MUST **interface** with other software systems via **API's**.

Functionality

The PREFORMA Conformance Checker application delivered by the tenderer meets the following functional requirements:

The Conformance Checker MUST implement the **five functional components** described in the Challenge Brief: Shell, Implementation Checker, Policy Checker, Reporter and Metadata fixer

The **Shell** component of the Conformance Checker MUST:

- facilitate conformance checking of files at four moment in the life cycle of a digital document, identified in the **use cases** of the challenge brief, i.e. conformance checking at **creation** time, **transfer** time, **digitisation** time and **migration** time,

- allow for **automating** the procedures for checking, reporting and fixing preservation file,

- allow for configuring fully automated, **periodical checks**,

- allow for **batch processing** of extensive file sets,

- allow for configuration of **additional components** in particular implementation checkers, policy checkers and reporters for other preservation file formats that are developed in the PREFORMA ecosystem,

- allow for **use by non-expert users**, and

- be operational in a closed zone with **no Internet access**.

The **Implementation checker** component of the Conformance Checker MUST allow for checking compliancy of one of the following sets of **standard specifications**:

- Compliancy with the **PDF/A-1**, **PDF/A-2**, and **PDF/A-3** standard specifications as defined in:

    o ISO (2005). Document management -- Electronic document file format for long-term preservation -- Part 1: Use of PDF 1.4 (PDF/A-1). ISO/TC 171/SC 2, ISO 19005-1:2005.

    o ISO (2008). Document management -- Portable document format -- Part 1: PDF 1.7. ISO/TC 171/SC 2, ISO 32000-1:2008.

    o ISO (2011). Document management -- Electronic document file format for long-term preservation -- Part 2: Use of ISO 32000-1 (PDF/A-2). ISO/TC 171/SC 2, ISO 19005-2:2011.

    o ISO (2012). Document management -- Electronic document file format for long-term preservation -- Part 3: Use of ISO 32000-1 with support for embedded files (PDF/A-3). ISO/TC 171/SC 2, ISO 19005-3:2012.

- Compliancy with the **TIFF** standard specifications as defined in:

    o ISO (2001). Electronic still-picture imaging — Removable memory — Part 2: TIFF/EP image data format. ISO/TC 42, ISO 12234-2:2001

    o ISO (2004). Graphic Technology -- Prepress digital data exchange -- Tag image file format for image technology (TIFF/IT). ISO/TC 130. ISO 12369:2004

- Compliancy with three standard specifications for respectively multimedia container, video and audio encoding, selected from the following list:

    o **MKV** multimedia container as defined in Matroska – Technical Details. http://www.matroska.org/technical/index.html

    o **Ogg** multimedia container as defined in OGG Documentation. https://xiph.org/ogg/doc/

    o **Lossless JPEG2000** image encoding as defined in ISO (2004). Information technology - JPEG 2000 image coding system: Core coding system. ISO/IEC JTC 1/SC 29, ISO/IEC 15444-1:2004

    o **Lossless FFV1** video encoding as defined in FFV1 Video Codec Specification, http://www.ffmpeg.org/~michael/ffv1.html

    o **Lossless Dirac** video encoding as defined in Dirac Specification Version 2.2.3 (2008), http://diracvideo.org/download/specification/dirac-spec-latest.pdf

    o **Linear PCM** audio encoding as defined in IEC (2014). Digital audio interface - Part 1: General. IEC/TC 100, IEC 60958-1 ed3.1 Consol. with am1: 2014

The **Policy checker** component of the Conformance Checker MUST allow for checking **technical parameters** of files, based on the **acceptance criteria** of files in an OAIS Archive, including:

- technical metadata for still images,

- technical metadata for text,

- technical and structural metadata for audio and video streams in an audio-visual container file.

The **Reporter** component of the Conformance Checker MUST provide:

- a **machine readable** report, including preservation metadata for each file checked and allowing external software agents to furtherprocess the file.

- The machine readable report will be produced using a **standard XML format**, implemented by all conformance checkers in the PREFORMA ecosystem, which allows the reported module to combine output from multiple checker components in one report. At the end of the design phase (February 2015), a proposal for such standard output format will be made by the consortium.

- a **human readable** report, assessing the preservation status of a batch of files as a whole, reporting to a non-expert audience whether a file is compliant with the standard specifications, and addressing improvements in the creation/digitisation process.

The **Metadata fixer** component of the Conformance Checker MUST allow for performing fully **automated fixes** of incongruities in the **metadata** embedded in the file, based on the report of the implementation checker. Such automated fixes may include:

- making embedded technical metadata conform with the properties of video and audio essence contained by the preservation file, and

- normalising embedded administrative metadata about the preservation file.

Open source project

Each open source project established by the tenderer meets the following operational requirements:

Work practices:

Development of software in open source projects in PREFORMA MUST utilise **effective open source work practices**. Effective open source work practices include:

- use of nightly builds, use of an open platform for open development (e.g. Github),

- use of software configuration management systems (e.g. Git),

- use of issue/bug trackers, use of forums, use of mailing lists for different stakeholder groups (users, developers, etc.),

- use of IRC, provision of roadmaps, provision of documentation, provision of easy hacks, etc.

All development of **software** in PREFORMA MUST be conducted and provided in open source projects at **open development platforms** (e.g. GitHub, or equivalent).
All development of **digital assets** (related to developed open source software) in PREFORMA MUST be provided at **open development platforms** (e.g. GitHub, or equivalent).

Releases:

For each executable of developed software that is provided in an open source project, the source code MUST always be provided for that executable.

For each executable of developed software that are provided in an open source project, instructions for how to create the executable from the source code MUST always be provided.

For each executable of developed software that are provided in an open source project at the PREFORMA open source portal, open source tools (provided under any license approved by Open Source Initiative) for creation of the executable from the source code MUST be provided.

There MUST always be executables for several different platforms (at least for: MS Windows 7, Mac OSX, common Linux distributions such as Ubuntu, Fedora, Debian, and Suse).

Interaction:

Individuals in companies contracted by PREFORMA will adopt a work-practice which promote a **diverse long-term sustainable Open Source community** (which have active participants and contributors from several different organisations).

Individuals in companies contracted by PREFORMA for development and provision of software and associated digital assets in Open Source projects MUST be **responsive** with respect to contributions to the project and are expected:

- to engage in activities in a timely fashion,

- to promote an open collaboration and become active community members which adhere to established community values and work-practices.

- to promote external contributions to each Open Source project.

- to be active contributors in other relevant Open Source projects that are related to the Open Source project for which they are contracted.

Project leaders and coordinators for each Open Source project will promote an open collaboration in order to develop **sustainable Open Source business ecosystems** related to each Open Source project.

Project leaders and coordinators for each Open Source project MUST be **responsive** (with respect to contributions to the project) and are expected

- to engage in activities in a timely fashion ,

- to promote an open collaboration according to established community values used by Open Source projects with associated sustainable communities.

The open source projects conducting development of software for PREFORMA MUST actively engage in interacting with relevant **organisations that** maintain the standard specifications used by the open project. The aim is to provide feedback, resolve technical issues, and contribute to a dialogue for improvement of the technical specifications of standards.

The open source projects conducting development of software for PREFORMA MUST actively engage in interacting with relevant **software providers** (i.e. those providers which have developed software used for creation of files in the specific file format checked by the PREFORMA software) for provision of feedback, resolving technical issues, and contribute in a dialogue for improvement of their interpretation of the technical specifications of standards implemented in their software.

IPR distribution

The software and digital assets delivered by tenderer are made available under the following IPR conditions:

All software developed during the PREFORMA project MUST be provided under the two specific open source licenses: "GPLv3 or later" and "MPLv2 or later".

All source code for all software developed during the PREFORMA project MUST always be identical between the two specific open source licenses ("GPLv3 or later" and "MPLv2 or later").

All digital assets developed during the PREFORMA project MUST be provided

- under the open access license: Creative Commons CC-BY v4.0.

- in open file formats, i.e. an open standard as defined in the European Interoperability Framework for Pan-European eGovernment Service (version 1.0 2004)

Since all software developed and used by each tenderer will be licensed under two specific Open Source licenses ("GPLv3 or later" and "MPLv2 or later"), there is no need for a tenderer to transfer copyright of developed software to PREFORMA. It should be noted that if a tenderer so desires it is possible to establish collaboration with organisations (e.g. with FSF, PREFORMA partners, and/or other foundations) for protecting the continued openness of developed software during and beyond PREFORMA.

However, a tenderer shall not require transfer of copyright from external contributors to an Open Source project they provide on an open platform since such requirements are most likely to inhibit external contributions to the Open Source project. Hence, such requirements for copyright transfer would inhibit the overall PREFORMA goal of promoting establishment of a long-term sustainable ecosystem related to each Open Source project.

4.2.2 Compliance with the EU definition of R&D Services

Riksarkivet requires that the tenders meet certain minimum requirements as listed below.

This procurement is carried out under the explicit exemption for R&D services under article 16(f) of the EU public procurement directive 2004/18/EC. Tenderers are kindly asked to observe that the object of the procurement thus is restricted to cover research and development services (basic research, applied research, and experimental development), and not products or other supplies, or commercial development activities[11]. For further information about what is

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[11] The contract price that is offered can thus only include items that are inseparable from, and indispensable to, the R&D services that are purchased. Please refer to the chapter on 'Fixed Price Breakdown' in the tender form for information on items that can be included in the contract price, in addition to the labour price for executing the R&D activities needed to address the PCP challenge. Examples are price of equipment needed to develop the prototypes or test products, price for installing such prototype or test equipment on the procurer's premises for the duration of the test phase, the price of travel and accommodation to test sites). Please note that contracts providing more than only services are only still considered a public service contract if the value of the services (in this case the labour price for executing the R&D activities needed to address the PCP challenge) exceeds that of the products covered by the contract (e.g. equipment needed to perform the R&D service as explained above).

considered to be R&D services, please see the *Frascati Manual, Proposed Standard Practice for Surveys on research and Experimental Development* (OECD, latest edition 2002).

It is an absolute requirement that the services offered by the tenderer are within the scope of the above definition of R&D services. The tenderer accepts, upon request from the contracting authority, to provide complete and clear information about the allocation of monies paid by the contracting authority, in order to allow control of this requirement being fulfilled (that the contract value is attributable directly and exclusively to legitimate R&D services), whether during the procurement period or during the contractual period. This requirement and these obligations on the part of the tenderer apply also, where applicable, to Phase 2 and Phase 3.

Possible other public financing

Tenderers are requested to declare other sources of public financing received in areas of work related to the scope of the PREFORMA PCP. In case, tenderers have received or are receiving public financing that is subject to the State aid rules, offers shall be excluded in the case that an award of a PCP contract would result in double public financing or accumulation of different types of public financing that is not permitted by the EU State aid rules.

4.2.3   Compliance with national requirements

All research, developments and tests must be compliant with national requirements concerning safety, ethics and healthcare regulation in place in the countries of the PREFORMA consortium. The tenderer shall confirm that this contractual requirement can be honoured and fulfilled.

5. ASSESSMENT OF TENDERS

5.1 JUSTIFICATION

The Assessment of Tenders chapter presents the formal procedure for evaluating the received tenders and selecting the technology providers that can participate in the PREFORMA Research and Development activities.

The chapter describes:

1. the composition of the Evaluation Committee,

2. the evaluation criteria for the received tenders, including a number of quality criteria as well as price, and the weighting of the individual criteria in preparing the ranking,

3. the formal procedure for preparing the preliminary ranking, and

4. the formal procedure for finalising the ranking in the consensus meeting.

The following section presents the assessment procedure as it will be included in Chapter 6: Assessment of Tenders of the Invitation to Tender.

The chapter has been based on the Invitation to Tender template produced by the SILVER PCP project[12]. However, the procedure has been adapted to the particular case of PREFORMA.

5.2 CONTENTS OF THE ASSESSMENT OF TENDERS

5.2.1 General Assessment Process

The supplier selection will be done in a way which is inspired by methods commonly used within the European Commission when evaluating proposals. It will be done by an Evaluation Committee, which is chaired by the Project Coordinator, and composed by one representative from each partner, and two external experts. Evaluation of tenders will be performed using a three-step model: a) Compliance check, b) Individual evaluation of each offer by at least three experts who are members of the Committee and c) Consensus Meeting.

The compliance check consists of a check to make sure that tenders passed the following criteria: a) Is the tender subject to any of the exclusion criteria?, b) Are the requirements in the administrative instructions met?, c) Are the minimum requirements set forth in the Invitation to Tender met?

In the individual evaluation process, each tender is evaluated by at least three experts belonging to the Evaluation Committee. Based on the experts´ assessments, the preliminary ranking is made, discussed and agreed upon during the Consensus Meeting between all the Members of the Evaluation Committee, to be sure that the assessments of all tenders are

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[12] Lundstrm, J. & Widmark, N. (eds.),Deliverable D2.3: Generic Pre-Commercial Procurement Templates, SILVER, PDF file, February 2014: 15-7

consistent and equal. The Committee will make the final decision on which tenderers are to be awarded contracts.

The criteria and the method for evaluating the bids in phase 2 and 3 will essentially be based on the criteria and the method used in evaluating the original tenders as set out below, but may be elaborated or developed in further detail within those frames.

Shortly after the final date for receipt of tenders, an award decision will be sent tenderers, containing the reasons for the decisions taken. Contracts will thereafter be signed after a stand-still period of 10 days.

The Authority is committed to providing a high quality, responsive and accessible service. For tenderers that feel unhappy about the service they receive or that wish to make a suggestion about how the Authority might improve, the Authority has a complaints procedure. Complaints submitted through this procedure should be concerned with the way in which a decision has been made or an action taken, rather than objections to the merits of the actual decision or action. More information on the complaints procedure can be found in the Decision notice.

5.2.2   Assessment criteria and weighting

The maximum score a tender can get is 150 points. Only tenders with the following minimum scores are eligible for a contract:

- 60% of the maximum number of points: 90 points.

- 60% of the maximum number of points scored for the impact criterion: 42 points.

- 60% of the maximum number of points scored for the first sub-criterion of the impact section: 12 points.

The assessment criteria and their weighting are listed below. The full scoring model will be added to the Invitation to Tender.

Criteria	Maximum points
Impact on the challenge	
I. The extent of how well the proposed idea/ solution/ technology meets the challenge as detailed in the Brief, and whether it will have the desired impact	20
II. Potential of the proposal to address future/ wider challenges in the area in an innovative way (e.g. by developing or employing novel concepts, approaches, methodologies, tools, or technologies)	10
III. The extent to which the approach demonstrates commercial feasibility, and whether it is a realistic commercialisation plan / route to market	20
IV. The extent to which the approach is cohesive with the open source development values and objectives that are central to the PCP	20
Technical approach	
IV. Validity of the technical approach that will be adopted	10
Quality of the tender	
V. The extent to which the tender shows a clear plan for the development of a working solution, and whether it is a reasonable plan to finish phase 3 in time	10
VI. Effectiveness of the project management	10

VII. The extent to which the tenderer and/or subcontractor appear to have dedicated the resources (e.g. human capital, equipment etc.) necessary to perform the scope of the tender	10
VIII. The extent to which crucial risks (technical, commercial and other) to project success appear to be identified, and how effectively these will be managed	10
Price	
IX. Prices for Phase 1, will be evaluated according to the relative evaluative model, with 30 points given to the tender which offers the lowest price.[13]	30

Tender prices shall be stated in [euros] currency, exclusive of VAT. Duties, custom fees, taxes or other charges, if any, shall be included in the tender price. Please notice that whereas Riksarkivet expects indicative prices for all three phases, only the price offered for the first phase will be included in the tender evaluation.

It is incumbent upon the tenderer who seek to obtain points to supply information which enables the scoring of the tender.

The scoring will be made according to an absolute scale, meaning that several tenderers can receive the same score and that the point a particular tenderer receives is not affected by the points other tenderers have received.

If two tenders are awarded the same number of total points in the evaluation process, they will, if necessary, be separated by drawing of lots performed by two officers of the contracting authority, or – if requested by either of the concerned tenderers – before a public notary or a representative of the local Chamber of Commerce. This will also apply to awards made for phase 2 and phase 3.

Successful tenderers will be advised according to the published key dates and will be, if awarded a contract, expected to mobilise rapidly to start the project. It is important that Phase 1 projects start soon after the contract has been issued, so that all projects can be assessed fairly and move on to Phase 2 and Phase 3 concurrently and smoothly.

Suppliers can expect that the weighting of the price criterion will increase in Phase 2 and in Phase 3.

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[13] http://www.upphandlingsstod.se/sites/default/files/2010_8_English.pdf, p. 12.

6. PROCEDURE FOR ANSWERING QUESTIONS

6.1 JUSTIFICATION

The Question and Answers Document presents the template for sharing the answers on all questions the procuring authority receives about the PREFORMA PCP with all interested suppliers.

The document contains the most common PCP-related questions such as who might apply, when the tender must be submitted and how, whether one company/or university/other entity might submit several tenders or just one and so on. Tenderers are advised to read the Question and Answers Document before filling out the Tender Form.

The following section presents the initial list of questions and answers that will be made available via the competition area of the PREFORMA website, as part of the information package provided to the tenderers. The document will be regularly updated, including answers to questions received during the publication of the Invitation to Tender.

The Question & Answer document will be made available as part of the information package accompanying the Invitation to Tender and the contents will also be available via the PREFORMA website at http://www.preforma-project.eu/faq.html:

The Question and Answers Document has been based on the template produced by the SILVER PCP project[14]. Evidently, the questions and answers have been adapted to the particular case of PREFORMA.

6.2 CONTENTS OF THE QUESTION AND ANSWERS DOCUMENT

The Questions and Answers document will be regularly updated until **2014-07-30**. Tenderers should therefore visit **www.preforma-project.eu/** for the most recently updated version of the Questions and Answers document. The latest answered question or clarification will be put in reversed chronological order, to make it easy to find the updates.

Questions	Answers
Is my organisation eligible to submit a tender to the PCP?	This PCP is open to all legal entities that locate a relevant portion of the R&D and operational activities related to the PCP contract in the European Economic Area, or in a country having concluded a Stabilisation and Association Agreement with the EU, and that can demonstrate a route to market for their tendered solution.
I am a Pre-Startup Company, may I apply?	Yes, but contracts must be awarded to legal entities.
I am based at a University, may I apply?	Universities may apply, however they must demonstrate a route to market, i.e. the tender must include a plan to commercialise the results.
As a University, should I use Full Economic Cost (fEC)?	No. Prices should be calculated to reflect fair market value.
Can I submit multiple tenders?	Yes.
My company is a Registered Charity, can I apply?	Yes, registered charities are equally eligible to the PCP via their trading company limited by guarantee. All organisations must demonstrate a route to market.
Can I work in collaboration with other companies?	Yes, tenders from consortia are accepted as well as tenders from single legal entities. Contracts will be signed with all legal entities in a consortium. A consortium may change partners, if new partners can prove they have the same competences as replaced partners, and if they agree with all rights and obligations (including binding unit prices etc.) in the framework agreement and specific contracts. Also, tenderers may identify components of the work which

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[14] Lundstrm, J. & Widmark, N. (eds.),Deliverable D2.3: Generic Pre-Commercial Procurement Templates, SILVER, PDF file, February 2014: 15-7

	they wish to subcontract and may also employ specialist consultants or advisers if they believe this will increase the chances of the project being successful. Subcontractor must be stated in the tender. If the tenderer wishes to rely on the resources of a subcontractor, the tenderer is advised to submit a written commitment from such subcontractor to make available his resources to the tenderer for the full duration of the contract. Tenders are evaluated on having adequate resources.
Can I work with other subcontractors in phase 2 and phase 3 than in phase 1?	Yes. An innovative solution is the goal.
How do I submit my tender?	Instructions on how submit a tender can be found in the Invitation to Tender document (Invitation to Tender_1).
	Details of the challenge and expected outcome of the projects can be found in the Challenge Brief. Invitation to Tender and Challenge Brief will be available in the Call Documents section of the website. You are strongly advised to read all published PCP tender documents before completing the Tender Form.
What is the deadline for tenders?	This information will be available in the Tender section of our website and within the published competition documents.
How will the successful tender be chosen?	Tenders will be first reviewed by at least three experts belonging to the Evaluation Committee, which is composed by one representative from each partner of the PREFORMA Consortium plus two external experts. Based on the experts´ assessments, a preliminary ranking is made, discussed and agreed upon during a Consensus Meeting between all the Members of the Committee, to be sure that the assessments of all tenders are consistent and equal. The Committee will make the final decision on which tenderers are to be awarded contracts.
	Please see Invitation to tender for more detailed information.
Is the PCP a subsidy?	No. The tenderer signs contracts with certain obligations to fulfil. Chosen tenderers will be obligated to provide R&D services at tendered prices.
Who owns the Intellectual Property generated by the Project?	All software developed during the PREFORMA project must be provided under the two specific open source licenses: "GPLv3 or later" and "MPLv2 or later". All digital assets developed during the PREFORMA project must be provided under the open access license "Creative Commons CC-BY v4.0" and in open file formats, i.e. an open standard as defined in the European Interoperability Framework for Pan-European eGovernment Service (version 1.0 2004).
	For more detailed information, see the Invitation to Tender and the Framework Agreement.
Is price also taken into consideration of the assessors?	Yes.

Should prices include VAT?	No. Tender prices shall be stated in EUR currency, exclusive of VAT. Duties, custom fees, taxes or other charges, if any, shall be included in the tender price.
Will my tender be treated confidentially?	Tenderers should indicate which parts of the information in the tenders that may be sensitive from a secrecy point of view, and for what reason disclosure of such information may be harmful to the tenderer.
When can I start?	First, the Decision Notice will be published and distributed to all tenderers. Two copies of the contracts will be sent to the tenderers awarded contracts for signature. The two signed copies should be returned to the contracting authority (Riksarkivet) as soon as possible. When this is finalised you can start. The aim is to have this completed by the end of October 2014.
Who should I contact if I have any further questions?	Questions on the specifics of this PCP should be sent to info@preforma-project.eu or to the contact person mentioned in the Invitation to Tender