#### 外部委託業者の募集

References: IO/24/OT/10028999/KRH **"Processes, Methodology and Quality Control of CAD Reference Configuration Data"** (CAD 参照構成データのプロセス、方法論と品質管理) IO 締め切り 2024 年 7 月 12 日(金)

#### ○はじめに

本事前情報通知 (PIN) は、作業契約の入札授与および実行につながる公開入札調達プロセスの最初のステップです。

本文書の目的は作業範囲と入札プロセスに関する技術的な内容の基本的な要約を提供することです。

#### 〇背景

ITER は平和利用の核融合発電の科学的および技術的な実現可能性の実証を目的とした、国際共同研 究開発プロジェクトです。ITER 機構の 7 つのメンバーは、;欧州連合(EURATOM が代表)、日本、 中華人民共和国、インド、大韓民国、ロシア連邦、および米国です。

ITER の敷地はフランス南東部のブーシュデュローヌ地区にあり、ITER 本社(HQ) もあるフランス CEA サン・ポール・レ・デュランス に近いところに位置しています。詳細については、ITER のウ ェブサイト http://www.iter.org を参照して下さい。

#### 〇作業範囲

現在の入札プロセスは、以下のサービス契約の設立を目指しています:

- プロセス、マニュアル、および指示書の文書化
- CAD製造方法とプロセス
- CAD参照構成データの品質管理

作業範囲およびすべての要件は、技術仕様書「ITER\_D\_B8FD6F v1.1」(このPINに添付されています)で 定義されています。

#### ○調達プロセスと目的

目的は、競争入札プロセスを通じて供給契約を落札することです。 この入札のために選択された調達手続きは公開入札手続きと呼ばれます。 オープン入札手順は、次の4つの主要なステップで構成されています。

- ステップ 1-事前情報通知 (PIN) 事前情報通知は公開入札プロセスの第一段階です。IOは、関心のある候補企業に対し、以下の概略日程に示された期日までに担当調達担当官に添付の関心表明フォームで以下の情報を 提出し、競争プロセスへの関心を示すよう正式に要請します。
  - 会社名

- 登録の国名
- 担当者名、emailアドレス、肩書および電話番号

特に注意:

<u>関心のある候補企業は、IO Ariba の電子調達ツール 「IPROC」 に登録してください (まだ登録していない場合)。手順については、</u> <u>https://www.iter.org/fr/proc/overview</u> <u>を参照してください。</u>

## Ariba (IPROC) に登録する際には、お取引先様に最低1名の担当者の登録をお願いしま <u>す。この連絡担当者は、提案依頼書の発行通知を受け取り、必要と思われる場合は入札書類</u> <u>を同僚に転送することができます。</u>

ステップ 2-入札への招待

PIN の発行から 10 作業日経過後、提案依頼書(RFP)を 「IPROC」 に掲載します。この 段階では、担当の調達担当者に関心を示し、かつ IPROC に登録している関心のある候補企 業は、RFP が公表された旨の通知を受けることができます。その後、RFP に詳述されてい る入札説明書に従って提案書を作成し、提出します。

<u>このツールに登録されている企業のみが入札に招待されます。</u>

▶ ステップ 3-入札評価プロセス

入札者の提案は、IOの公平な評価委員会によって評価されます。入札者は、技術的範囲に沿って、かつ、RFPに記載された特定の基準に従って作業を実施するために、技術的遵守を証明する詳細を提供しなければなりません。

▶ ステップ 4-落札

認定は、公開されている RFP に記載されている、コストに見合った最適な価格または技術的に準拠した最低価格に基づいて行われます。

#### ○概略日程

概略日程は以下の通りです:

マイルストーン	暫定日程	
事前指示書 (PIN) の発行	2024年6月28日	
関心表明フォームの提出	2024年7月12日	
iPROC での入札への招待 (ITT) の発行	2024年7月22日	
明確化のための質問の締め切り	2024年8月30日	
明確化のための質問への回答締め切り	2024年9月13日	

入札提出	2024年10月18日	
契約授与	2024年11月15日	
契約調印	2025年1月1日	

#### ○契約期間と実行

ITER機構は2024年の11月ごろ供給契約を授与する予定です。予想される契約期間は36か月の予定です。

#### ○経験

契約者は、IOの規則と安全性の要求に十分に準拠する能力と経験を持っていることを示す必要があります。

ITER での作業に使われる言語は英語です。プロレベルの流暢さが求められます(話す、書く両方)。

#### ○候補

参加は、個人またはグループ/コンソーシアムに参加するすべての法人に開放されます。法人とは、法 的権利及び義務を有し、ITER 加盟国内に設立された個人、企業又は機構をいいます。ITER 加盟国 は欧州連合(EURATOM メンバー)、日本、中華人民共和国、インド共和国、大韓民国、ロシア連邦 、アメリカ合衆国です。

法人は、単独で、またはコンソーシアムパートナーとして、同じ契約の複数の申請または入札に参加 することはできません。共同事業体は、恒久的な、法的に確立されたグループ又は特定の入札手続の ために非公式に構成されたグループとすることができます。

コンソーシアムのすべての構成員(すなわち、リーダーと他のすべてのメンバー)は、ITER 機構に対し て連帯して責任を負います。

コンソーシアムとして許可されるために、その点で含まれる法人はコンソーシアムの各メンバーをま とめる権限をもつリーダーをもたなければなりません。このリーダーはコンソーシアムの各目メンバ ーのために責任を負わなければなりません。

指名されたコンソーシアムのリーダーは、入札段階で、コンソーシアムのメンバーの構成を説明する 予定です。その後、候補者の構成は、いかなる変更も ITER 機構に通知することなく変更してはなり ません。かかる認可の証拠は、すべてのコンソーシアムメンバーの法的に授権された署名者が署名し た委任状の形式で、しかるべき時期に IO に提出しなければなりません。

どのコンソーシアムメンバーも IPROC に登録する必要があります。

【※ 詳しくは添付の英語版技術仕様書「Processes, Methodology and Quality Control of CAD Reference Configuration Data」をご参照ください。】

ITER 公式ウェブ <u>http://www.iter.org/org/team/adm/proc/overview</u>からもアクセスが可能です。

「核融合エネルギー研究開発部門」の HP: http://www.fusion.qst.go.jp/ITER/index.html では ITER 機構からの各募集(IO 職員募集、IO 外部委託、IO エキスパート募集)を逐次更新してい ます。ぜひご確認ください。

## イーター国際核融合エネルギー機構からの外部委託 に関心ある企業及び研究機関の募集について

<ITER 機構から参加極へのレター>

以下に、外部委託の概要と要求事項が示されています。参加極には、提案された業務 に要求される能力を有し、入札すべきと考える企業及び研究機関の連絡先の情報を ITER 機構へ伝えることが求められています。このため、本研究・業務に関心を持たれる企業及 び研究機関におかれましては、応募書類の提出要領にしたがって連絡先情報をご提出下 さい。



## **PRIOR INDICATIVE NOTICE (PIN)**

## **OPEN TENDER SUMMARY**

for

OT 10028999 - Processes - KRH

## "Processes, Methodology and Quality Control of CAD Reference Configuration Data"

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

The purpose of this summary is to provide prior notification of the IOs intention to launch a competitive Open Tender process in the coming weeks. This summary provides some basic information about the ITER Organisation, the technical scope for this tender, and details of the tender process for the provision of Technical Support Services for Equipment Qualification to the ITER Organization.

## 1 Introduction

This Prior Indicative Notice (PIN) is the first step of an Open Tender Procurement Process leading to the award and execution of a Service Contract.

The purpose of this document is to provide a basic summary of the technical content in terms of the scope of work and the tendering process.

The Domestic Agencies are invited to publish this information in advance of the forthcoming tender giving companies, institutions or other entities that are capable of providing these services prior notice of the tender details.

## 2 Background

The ITER project is an international research and development project jointly funded by its seven Members being the European Union (represented by EURATOM), Japan, the People's Republic of China, India, the Republic of Korea, the Russian Federation and the USA. ITER is being constructed in Europe at St. Paul–Lez-Durance in southern France, which is also the location of the headquarters (HQ) of the ITER Organization (IO).

For a complete description of the ITER Project, covering both organizational and technical aspects of the Project, visit <u>www.iter.org</u>.

## 3 Scope of Work

The present tender process is aiming to set up a Service Contract for:

- the Documentation of Processes, Manuals & Instructions
- CAD Production Methods and Processes
- Quality Control of CAD Reference Configuration Data

The scope of work and all requirements are defined in the technical specifications ref. ITER\_D\_B8FD6F v1.1 (attached to this PIN).

## 4 **Procurement Process & Objective**

The objective is to award a Service Contract through a competitive bidding process.

The Procurement Procedure selected for this tender is called the Open Tender procedure.

The Open Tender procedure is comprised of the following four main steps:

Step 1- Prior Indicative Notice (PIN):

The Prior Indicative Notice is the first stage of the Open Tender process. The IO formally invites the Domestic Agencies to publish information about the forthcoming tender in order to alert companies, institutions or other entities about the tender opportunity in advance. <u>Interested tenderers are kindly</u> requested to return the expression of interest form (Annex I) by e-mail by the date indicated in the procurement timetable below.

Step 2 - Invitation to Tender (ITT):

Within 14 days of the publication of the Prior Indicative Notice (PIN), the Invitation to Tender (ITT) will be advertised. This stage allows interested bidders, who have seen the PIN, to obtain the tender documents and to prepare and submit their proposals in accordance with the tender instructions.

Step 3 – Tender Evaluation Process:

Tenderers' proposals will be evaluated by an impartial, professionally competent technical evaluation committee of the ITER Organization. Tenderers must provide details demonstrating their technical compliance to perform the work in line with the technical scope and in accordance with the particular criteria listed in the invitation to tender (ITT).

Step 4 -Contract award:

A service contract will be awarded on the basis of best value for money according to the evaluation criteria and methodology described in the Invitation to tender (ITT).

#### **Procurement Timetable**

The tentative timetable is as follows:

Milestone	Date	
Publication of the Prior Indicative Notice (PIN)	28 June 2024	
Submission of expression of interest form	12 July 2024	
Invitation to Tender (ITT) advertisement	22 July 2024	
Clarification Questions (if any) and Answers deadline	13 September 2024	
Tender Submission	27 September 2024	

Tender Evaluation & Contract Award	4 November 2024		
Contract Signature	30 November 2024		
Contract Commencement	1 January 2025		

## 5 Quality Assurance Requirements

Prior to commencement of any work under this Contract, a "Quality Plan" shall be produced by the selected Contractor and submitted to the IO for approval, describing how they will implement the ITER Procurement Quality Requirements.

## 6 Contract Duration and Execution

The ITER Organization shall award a Service Contract in November 2024. The resulting Contract will be for a period of 36 months.

The working language of ITER is English, and a fluent professional level is required (spoken and written).

## 7 Experience

The tenderer shall form a team of the dedicated staff who shall have the required experience as detailed in the attached technical specifications in order to provide the required support service.

## 8 Candidature

Participation is open to all legal entities participating either individually or in a grouping / consortium. A legal entity is an individual, company, or organization that has legal rights and obligations and is established within an ITER Member State.

Legal entities cannot participate individually or as a consortium partner in more than one application or tender of the same contract. A consortium may be a permanent, legally-established grouping, or a grouping which has been constituted informally for a specific tender procedure. All members of a consortium (i.e. the leader and all other members) are jointly and severally liable to the ITER Organization.

In order for a consortium to be acceptable, the individual legal entities included therein shall have nominated a leader with authority to bind each member of the consortium, and this leader shall be authorized to incur liabilities and receive instructions for and on behalf of each member of the consortium.

It is expected that the designated consortium lead will explain the composition of the consortium members in a covering letter at the tendering stage. Following this, the Candidate's composition must not be modified without notifying the ITER Organization of any changes. Evidence of any such authorization shall be submitted to the IO in due course in the form of a power of attorney signed by legally authorized signatories of all the consortium members.

## 9 Sub-contracting Rules

Sub-contracting is allowed under this Contract. The maximum percentage of sub-contracting is limited to 30% of the total contract value.

All sub-contractors who will be taken on by the Contractor shall be declared with the tender submission in iPROC. Each sub-contractor will be required to complete and sign forms including technical and administrative information which shall be submitted to the IO by the tenderer as part of its tender. The IO reserves the right to approve (or disapprove) any sub-contractor which was not notified in the tender and request a copy of the sub-contracting agreement between the tenderer and its subcontractor(s). Rules on sub-contracting are indicated in the RFP itself.

## **EXPRESSION OF INTEREST & PIN ACKNOWLEDGEMENT**

To be returned by e-mail to: Kathleen.Reich@iter.org\_copy Virginie.Michel@iter.org

ITER Organization / ITER Headquarters Procurement Division, Building 81/143 Route de Vinon-sur-Verdon CS 90 046 13067 St. Paul Lez Durance Cedex France

TENDER No. DESIGNATION of SERVICES: Officer in charge:		OT 10028999 - Processes - KRH Processes, Methodology and Quality Control of CAD Reference Configuration Data Kathleen Reich & Virginie Michel – Procurement Division, ITER Organization					
						WE ACKNOWLEDGE	HAVING READ THE PIN NOTICE FOR THE ABOVE

MENTIONED TENDER

WE INTEND TO SUBMIT A TENDER

Signature:

WE WILL NOT TENDER FOR THE FOLLOWING REASONS: 

COMPANY STAMP

Name:
Position:
Tel:
E-mail
Date:



# IDM UID

version created on / version / status 20 Jun 2024 / 1.1 / Approved

EXTERNAL REFERENCE / VERSION

## **Technical Specifications (In-Cash Procurement)**

# Technical Specification for Processes, methodology and Quality control of CAD Ref Config. Data

The purpose of this contract is to acquire services for: Documentation of Processes, Manual & Instructions CAD Production Methods and Processes Quality Control of CAD Reference Configuration Data

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## 1 Preamble

This Technical Specification is to be read in combination with the General Management Specification for Service and Supply (GM3S) - [Ref 1] that constitutes a full part of the technical requirements.

In case of conflict, the content of the Technical Specification supersedes the content of Ref [1].

## 2 Purpose

The purpose of this document is to specify Work Units (WU) and the related deliverables to support Design Office (DO) on activities in three categories, as outlined below:

## 2.1 Documentation of Processes, Manual & Instructions

The supported activities concern technical drafting, updating and refurbishing of documentation relating to DO's quality processes, mainly comprising:

- Procedures, processes and other documentation related to Management Quality Programme (MQP).
- CAD Manual
- Technical Document Family Cards related to CAD Data
- CAD Data checklists
- "How To Documents"

## 2.2 CAD Production Methods and Processes

The supported activities concern development of the methods and processes used to manage CAD production. The goal is to integrate CAD Production methods and processes with the needs of other IO Departments and task forces as well as decisions of IO management. Methods and process KPIs output may be used by ESD for reporting at all Project levels (Section/Division/Department/Domains)

## 2.3 Quality Control of CAD Reference Configuration Data

The supported activities concern the quality control and maintenance of the *Working Context* and *Approved Configuration* CAD data structures, which are the project reference for all users of ITER CAD data, to ensure use of a common 3D CAD environment.

## **3** Acronyms & Definitions

## 3.1 Acronyms

The following acronyms are the main one relevant to this document.

Abbreviation	Description
CAA	CAD Activities Section (of Design Office)
CAD	Computer-aided Design
CRO	Contract Responsible Officer

GM3S	General Management Specification for Service and Supply
DA	Domestic Agency
DO	Design Office
IO	ITER Organization
KPI	Key Performance Indicator
PRO	Procurement Responsible Officer
MQP	Management Quality Program
QC	Quality Control
TRO	Technical Responsible Officer

## **3.2 Definitions**

**Contractor:** shall mean an economic operator who have signed the Contract in which this document is referenced.

**Domestic Agencies (DA):** Stakeholders of the ITER project, including: European Union, India, Japan, the People's Republic of China, the Republic of Korea, the Russian Federation and the United States of America.

**Design Office (DO):** A unit within the IO with the overall responsibility to manage the CAD resources, CAD Production, CAD Infrastructure and Support Contracts to enable the project to perform its Engineering and CAD activities. It also has the mission to control CAD quality and efficiency of the design activities.

ITER Organization (IO): An international Organization and team located in Cadarache

and responsible, in close partnership with the Domestic Agencies, for the construction, commissioning, operations and maintenance of the ITER facility. The IO is in particular responsible for the requirements definition, the design, the performance, the configuration management, the project schedule, the monitoring of the construction, the assembly the commissioning, and the operations of ITER. The IO is also responsible for establishing appropriate CAD infrastructure platform and design collaboration schemes between the IO, the Domestic Agencies and suppliers.

**Contract Responsible Officer (IO-CRO):** shall mean the IO staff person accountable for the full-cycle contract performance including initiating the procurement request according to the procurement plan(s), preparing the technical documentation, in collaboration with the Procurement Officer, supporting the tendering process, ensuring the overall quality of the input data prepared for the tender and for the contract, and being the IO's single point of accountability for the overall performance of the contract once placed.

**Technical Responsible Officer (TRO):** Any IO staff responsible to the technical definition and provision of input for any given Contract. He/she is responsible to technically validate the deliverable outputs provided by the Contractor under an associated Contract under his/her responsibility.

**Work Unit:** It is a single repetitive and identical task that is used in order to define certain repetitive activities. The Technical Specifications can formulate several Work Unit Types and the Contractor shall assign a fixed cost to each type. The Work Units per se shall not be considered deliverables. One Work Unit or Several Work Units can be delivered as part of a Ticket or request to be completed as a task, the ticket is the formalization of the client's request.

## 4 Applicable Documents & Codes and standards

## 4.1 Applicable Documents

This is the responsibility of the Contractor to identify and request for any documents that would not have been transmitted by IO, including the below list of reference documents.

This Technical Specification takes precedence over the referenced documents. In case of conflicting information, this is the responsibility of the contractor to seek clarification from IO.

Upon notification of any revision of the applicable document transmitted officially to the Contractor, the Contractor shall advise within 4 weeks of any impact on the execution of the Contract. Without any response after this period, no impact will be considered.

Ref	Title	IDM Doc ID	Version
1	General Management Specification for Service and Supply (GM3S)	82MXQK	0.0
2	MQP Document Change Control procedure	VDVFHY	
3	Iter CAD Manual	29FVC2	
4	Procedure for Management of Contextual CAD Data	EGPR3D	
5	Work Instruction for Enovia Management of Contextual CAD Data	EGZQWN	
6	CIS - Working Unit standardization	AVY4VG	
7	ITER Quality Assurance Program (QAP)	22K4QX	

## 4.2 Applicable Codes and Standards

N/A

## 5 Scope of Work

This section defines the specific scope of work for the service, in addition to the Contract execution requirement as defined in Ref [1].

The scope of work is described for each of the three areas of activity to be supported by the Contractor.

## 5.1 **Duration of Services**

The maximum expected duration for this activity is [T0 + 36] months.

T0 shall be the date of the Kick-off Meeting which shall take place within 4 weeks from the entry into force of the Contract (signature by both Parties).

## 5.2 Support of MQP Documentation maintenance

The contractor will support IO-DO to write new or update existing documents describing MQP Procedures and other processes. For each document there is a typical process with several distinct steps, as listed below and further detailed in the sections that follow:

- Assessment of a new document's technical scope or of the changes required to an existing document.
- Collection of Inputs and materials from configuration managers, disciplines experts, and other project interfaces, verifying the outcomes of the assessment previously made.
- Development of a document outline, followed by verification and validation by project interfaces and TRO
- Drafting or update of the documentation
- Organization and monitoring of the documentation reviews and approval through the applicable change process.

## 5.2.1 Assessment of Document Changes

Based on the input provided by the Technical Responsible Officer (TRO), the Contractor shall assess the changes needed in order to:

- Identify the mandatory topics of the document.
- Avoid redundancies or clashes between other documentation (both internal documentation of DO or other IO documentation).
- Propose the optimization of the procedure/process by recommending the addition, modification or deletion of topics.
- Propose methodologies to streamline the work.
- Check with the TRO that the above is coherent with other documentation in place by the project and assess the type of document (Process, procedure, work instruction how to, or other)

## 5.2.2 Collection of Inputs and materials

- Based on the analysis previously made, the contractor shall submit an interfacing plan identifying which matter requires input from, or needs to be checked by, which project entity. This plan shall be checked and may be enriched by the TRO.
- Once the plan is accepted by TRO, the contractor shall conduct interviews with the identified interfaces aiming at collecting the information and materials already existing within the project, as well as possibly identifying missing information. On certain topics, the TRO may decide to participate to the interviews.

• The information and materials shall be gathered and organized in a form to be defined by the Contractor and accepted by the TRO. The form chosen for organization and structured management of inputs may be adapted according to the inputs received during the information gathering task. This adaptation is also part of the contractor's task

## 5.2.3 Development of document outline

- Based on the analysis and the collection of Inputs and materials previously made, the contractor shall develop a main outline of the document.
- This outline shall clearly list the titles of the main sections and sub-sections that should be part of the document, together with a bullet-style description of the important points in these sections.
- This outline shall identify the references to other relevant documentation, owned by IO DO or other project entities.
- If an existing document has been updated, the document outline shall highlight clearly the title of sections that have been modified and/or deleted.
- This subtask, by essence, should be an iterative process involving several reviews and refinement stages with the TRO and possible interfacing process owners.

## 5.2.4 Drafting and update of the Documentation

- Based on the previous sub-sections (5.2.1 to 5.2.3) the Contractor shall draft the targeted document;
- Each document shall be self-standing, with correct referencing to the other documents identified as following the activities defined in sub-sections 5.2.1 and 5.2.3
- The drafted document shall be structured based on the outline accepted by the TRO
- The document shall contain all mandatory topics previously assessed and agreed by the TRO.
- The document shall be compliant with the applicable ITER standards and templates (e.g, MQP standards and templates: <u>ITER\_D\_438T76 MQP Document Template</u>)

## 5.2.5 Organization and monitoring of document reviews, subsequent updates

Once the drafted document is deemed ready by the TRO, the Contractor will expedite the formal review process as follows

In the case of an MQP document:

- Launching the MQP review steps in line with the <u>MQP Document Change Control</u> <u>procedure (VDVFHY)</u>, as delegate to the IO CAD process representative. These reviews might involve interfaces with the DA
- Monitoring the reviews and eventually integrating the reviewers' comments, therefore iterating the MQP document versions.

In the case of a non-MQP document:

• Launching the review and approval workflow in IDM; Collecting and consolidating reviewers comments (including organization of calls, meetings etc. as required to clarify the inputs); Iteration of the process to finalize the document Organizing meetings as required to clarify and consolidate

## 5.3 Support of CAD Production Methods and Processes

The contractor will support the development and maintenance of processes and methods that are used to efficiently manage IO-DO's CAD Production activities. The support task shall comprise the following main activities:

#### 5.3.1 Collection and analysis of inputs:

- Gathering of the latest project's inputs with potential impact on CAD Production processes, including:
  - Decisions of DO and other IO departments.
  - Requirements and priorities of task forces.
  - Requirements and priorities of the Construction team.
- Organization and analysis of inputs to assess potential impacts on CAD production.
- Formulating recommendations, including estimation of effort and schedule, for alignment of CAD production processes to the latest project requirements and priorities

### 5.3.2 Adaptation of Processes and KPIs:

- Creation of new or update of existing CAD Production methods and processes, aligned with the latest project priorities and decision, including creation or update of associated documents (e.g. CAD Manual, how-to, handbooks) or tools (e.g. Excel workbooks and macros; Dashboards and reports in Confluence or Sharepoint,..)
- Definition of new or update of existing KPIs to monitor CAD production situation and control the implementation of latest priorities and decisions
- Tracking, recording and reporting throughout all stages of implementation of new processes.
- Consolidation of data and KPI in an integrated, automatized and streamlined manner.
- Supporting the smooth implementation of new or updated CAD methods and processes by providing instruction and guidance to the designers concerned

## 5.3.3 *CAD production recovery plans (corrective actions)*

- Identification of existing CAD data and technical documentation in need of update or correction for compliance with latest project requirements
- Establishment of a recovery plan or corrective actions with involvement of relevant stakeholders and according to recovery priorities defined by the TRO
- Implementation of the recovery action plan by:
  - Dissemination of information and instructions to CAA designers Production engineers or other relevant users concerned.
  - Providing support and guidance to impacted stakeholders
  - Diagnosis and corrective action to solve issues arising during the implementation phase.
- Tracking, recording and reporting the status throughout implementation of the recovery plan.

## **SERVICE** 5.4 Support of Quality Control of CAD Reference Data

## 5.4.1 Background of the task

To facilitate integration of the ongoing design, IO provides design partners with two sets of **Contextual CAD data** for use as their 3D working environments:

Approved Configuration models Representing the approved configuration baseline

Working Context models	Representing the status of ongoing controlled design
	work which is based on changes under Study or Pre-
	Implementation phase, and on progress in the maturity
	of a design

The models are organized in 'branches' of the ENOVIA V5 CAD structure. There are approximately 500 branches in total, with one branch of each type per system in every building represented in the Digital Mockup.

Ref [5] and [6] are the MQP Process and Working Instruction which describe the specific rules and responsibilities for managing the above data structures. Conformance of the data with these, and general CAD quality requirements (such as CAD Manual [3]) is ensured via various defined checks, including the use of some purpose-built IT reports and other IT tools.

## 5.4.2 Scope of the contractor's activities

The scope of work is:

- To perform checking of the branches, and of associated contextual CAD models,
- against the requirements of [5] and [6], and other QA documents.
- To organize and report results.
- To define, monitor and follow-up on corrective actions
- To perform checking and testing of CAD tools and processes which consume or manage data from the branches (e.g. tagging, data approval, viewers...)
- To contribute to the maintenance and improvement of the QA processes and tools, (produce specifications and bug-reports; prepare test scenarios and associated data; perform tests and interact with IT on corrections and enhancements)
- To assist CAD data owners, by explanation/coaching in correct methodology, as well as hands-on update/correction of discrepant data.
- To assist users of tools and processes which consume data from the branches, typically through level 1 support tickets: (provide guidance on methodology; follow-up on bugs and errors; produce or update training materials)

## 6 Location for Scope of Work Execution

Contractor can perform the work at their own location.

## 7 Work Description

## 7.1 Task Categories and Work Units:

Sections 7.2 - 7.4 list the various tasks to be undertaken by the contractor in the scope of this contract, with associated Work Units (WU) to be used to manage task deliverables and invoicing.

Estimated quantities of Work Units and explanation of WU codes are presented in Section 8

- On initialization of a new task, IO shall submit its request to the contractor with a declared category of Work Unit.
- The contractor shall comment immediately on the categorization made by IO. Five (5) working days after the Work Unit submission by IO and without documented justification by the contractor, the Work Unit is considered as accepted by the contractor, and the execution time-frame shall start.
- The deliverables of the task shall be made available to the IO immediately at the end of the execution time-frame.
- Before invoicing IO for a Work Unit, the contractor shall submit a summary of associated deliverables for acceptance by the CRO. Preparation of the deliverables report is not subject to a dedicated Work Unit.

The expected range of support tasks described below may not exhaustively cover all possible Work Unit sizes that may be assigned during the course of the contract.

For example, support tasks of size 'XS' are not typically foreseen in the context of CAD Production Process and Methods, therefore a Work Unit of this size is not listed in section 7.3. Nevertheless, the TRO may use it should he need to assign a task of corresponding size.

## 7.2 Support of MQP Documentation maintenance

## 7.2.1 Assessment and Summary of document changes

#### 7.2.1.1 Inputs

- Description of the document's functions / objective;
- Mandatory topic(s) to be included in the update;
- Necessary input such as reference documents related to topic and/or previous drafted documents.

#### 7.2.1.2 Description

Identify and existing and newly identified QA documents (procedures, processes, How to, manuals and QA supporting documents (e.g. forms, templates); Classify the documents (e.g. normal procedure/process vs MQP procedure).

Mandatory fields like IDM link to the concerned QA document related IDM links to supporting documentation, classification, DO responsible person, reason for the development or update need of a QA document, priority and update status will be complemented with additional attributes when needed.

#### 7.2.1.3 Deliverables

A report, in MS Word format, describing the mandatory topics of the document; identified and documented interfaces with other IO processes and procedures; identified redundancies or clashes between other DO documentation; proposal of optimization, propose methodologies to streamline the work including a functional diagram / workflow.

#### 7.2.1.4 Associated WU

- Type: Documentation : Engineering Expertise WU D2-XL
- Quantity: 1 to 2

7.2.2 Collection of Inputs and materials from Configuration managers, Disciplines experts, and other Project interfaces

#### 7.2.2.1 Inputs

- Report produced as deliverable of the Assessment and Summary task (7.2.1)
- Main axis and particular points to be investigated with the interfacing entities;
- Nominative identification of the interfacing point;

#### 7.2.2.2 Description

Collect information from the interfacing entities, including items (email, MoM, etc.) that record their endorsement of the provided information. Assemble and structure the information in a collaborative space so it can be used by all relevant DO members. Report on collected information to the task TRO. (If required, the contractor shall create the collaborative space in an Iter IT system designated by the TRO).

#### 7.2.2.3 Deliverables

Report, in MS Word format, about the collected, structured and traced information and inputs, saved in the collaborative space designated for this task.

#### 7.2.2.4 Associated WU

- Type: Documentation : Engineering Expertise WU D2-XL
- Quantity: 1 to 2

## 7.2.3 Development of document outlines

#### 7.2.3.1 Description

The activity comprises development of a comprehensive document skeleton / outline in order to visualize the topics, requirements and associated documents to be referenced, including their sequence within the final document.

This outline shall have three main purposes:

- Serve as a tracking tool to maintain the traceability between the existing documentation and the new proposed structure;
- Identify the topics and structure that the document shall cover; and

- At a simple glance provide an overall picture of interlinked references to other IO relevant documentation;

#### 7.2.3.2 Deliverable

A document, in MS Word format, fulfilling the above requirements. This document will help the TRO to determine and structure the document layout, including the table of content and the identified reference documents.

#### 7.2.3.3 Associated WU

- Type: Documentation : Engineering Expertise WU D2-XL
- Quantity: 1 to 2

## 7.2.4 Drafting documentation

#### 7.2.4.1 Inputs

- Assessment report of the specific topic previously accepted by the TRO (7.2.1)
- Outline of the documentation accepted by the TRO (7.2.3)

#### 7.2.4.2 Description

The activity consists in the technical drafting of the related documentation after the output of previous Sub-sections (7.2.1to 7.2.3) have been accepted.

A typical document to be drafted is in the range of 10 to 20 pages. The complexity and level of detail can vary depending on the topic and number of interfaces; list of examples is provided in <u>Appendix 1</u>

#### 7.2.4.3 Deliverables

A self-standing document, in MS Word format, based on the input of preceding tasks 7.2.1 and 7.2.3. The document shall comply with all requirements provided by TRO and take into account all other references and interfacing procedures in order to ensure coherence within all MQP and QAP associated documentation (Note: these identification of these references and interfacing procedures is a deliverable of the preceding tasks described in 7.2.1 and 7.2.3)

#### 7.2.4.4 Associated WU

- Type: Documentation : Engineering Expertise WU D2-XL
- Quantity: 1 to 2

7.2.5 Organization and monitoring of the MQP reviews, subsequent updates (WU E5):

#### 7.2.5.1 Description

The activity consists in pushing an MQP document, produced as a deliverable of a the drafting task (7.2.4) and accepted by the TRO, through the MQP review workflow as stipulated in ref [2].

The activity also comprises subsequent iterations of reviews and updates, as required to implement reviewers' comments.

#### 7.2.5.2 Deliverables

An approved MQP document together with its supporting MQP Change control process documentation: Essential data, evidences of interfaces reviews, Propagation plans, etc... see Ref [2].

Please note that in order to execute this task with an acceptable level of autonomy, the contractor will need training in IO MQP Change procedures.

## 7.3 CAD Production Process and Methods Support Tasks

### 7.3.1 CAD Production Process and Methods monitoring or execution

#### 7.3.1.1 Description

This task category typically covers monitoring of the project environment and stakeholders, execution of simple processes or update KPI to align CAD production to latest priorities. The contractor shall

- Collect and analyse latest management decisions and issue logs; latest requirements of ENGN task forces; latest Construction requirements
- Establish global situation review by retrieving relevant database information
- Organize and analyse retrieved information, prioritize topics and decisions affecting CAD production, and report concisely to TRO.
- Execute repetitive Method & process tasks to align CAD production to latest requirements

#### 7.3.1.2 Examples

Update a Newsletter; Deliver training to newcomers; Update information in DO SharePoint/confluence portal; Assist CAA section leader for section administration update; Update existing KPI & source database

#### 7.3.1.3 Associated WU

- Type: Quality : Process monitoring WU Q2-L
- Quantity: 1

## 7.3.2 Creation of CAD Production Process, Methods or KPI

#### 7.3.2.1 Description

Based on a determined set of information and input from the TRO, the contractor shall:

- Produce and implement new method(s) and process(es) leading to successful update of CAD production deliverables according to one or more project decision, involving one or more stakeholders and dealing with one or more topic
- Create one or more new KPI defined by TRO

#### 7.3.2.2 Deliverables

How-to; Training; Handbook; KPI in Confluence, SharePoint, Web-based app., Excel/PowerBI (in relation to a consolidated database)

#### 7.3.2.3 Associated WU

- Type: Quality : Process monitoring WU Q3-XL
- Quantity: 1-4

## 7.3.3 CAD Production Recovery Action

#### 7.3.3.1 Description

Based on a determined set of information and inputs from the TRO, the contractor shall:

- Identify CAD data and technical documentation requiring update in order to be aligned with latest project requirements
- Evaluate impact and report to TRO : cost, time, risks
- Implement a recovery plan comprising one or more actions, with involvement of one or more stakeholders

#### 7.3.3.2 Associated WU

- Type: Quality : Process monitoring WU Q3-XL
- Quantity: 1-4

## 7.4 CAD QC Data and Process Tasks:

The contractor will review a set of context/config CAD data against selected quality criteria provided by the responsible officer IO RE. Checking may take into account issues of data

structuring, lifecycle and other metadata.

he checking tools and the needed effort will depend on the category of the task:

## 7.4.1 Minor CAD Data QC task:

#### 7.4.1.1 Description

This category will cover small tasks, answering to ad-hoc needs, such as adjustment of a previously agreed deliverable on request of the TRO or following up on a completed task at the request of a user.

#### 7.4.1.2 Examples

Writing an email to answering a designers request for clarification about the results of a CAD quality check.

#### 7.4.1.3 Typical deliverables

Email; Commented IOCAD ticket

#### 7.4.1.4 Associated WU

- Type: Quality : CAD Data QC : Q1-XS
- Quantity: 1

## 7.4.2 Small CAD Data QC task

#### 7.4.2.1 Description

This task category typically covers basic quality control tasks, done according to an established process and frequency. Checking usually involves use of web-based tools to extract and process data, and present results in tables or charts. The contractor's effort will be mainly to compile these results, highlighting discrepant data, and to distribute them to the CAD data owners, with minimum need for discussion or investigation.

#### 7.4.2.2 Examples

Checking that none of the context branches in one or more Products contain data in a forbidden lifecycle status

Correction or filling of metadata on a small quantity (<50 items) of CAD data in ENOVIA V5

#### 7.4.2.3 Typical deliverables

Updates of Excel tables/charts; Email

#### 7.4.2.4 Associated WU

- Type: Quality : CAD Data QC : Q1-S
- Quantity: 1

### 7.4.3 Medium CAD Data QC task

#### 7.4.3.1 Description

Typically describing a check done according to an established process, periodically or ad-hoc. Extraction of the data may be done directly from ENOVIA, using VPM Navigator / LCA Classic, using web based tools or both. Minimum hands-on processing of the results may be required, using standard Excel functions (lists, filtering,...) or specific macros (provided by the TRO). It may be necessary to produce a short report, as a document or in an IT ticket. Interactions with data owners may be required to understand the causes, explain and resolve issues

#### 7.4.3.2 Examples

Checking for unsynchronized conditions in structure-exposed data Validation of the results produced by an ENOVIA report, by manual comparison with CAD data in ENOVIA

#### 7.4.3.3 Typical deliverables

Updated Excel tables/charts; Word document; IT ticket

7.4.3.4 Associated WU

- Type: Quality : CAD Data QC: Q1-M
- Quantity: 1

7.4.4 Large CAD Data QC task

7.4.4.1 Description

The task typically addresses an issue arising on production, with a level of complexity requiring investigation and analysis. Data needed for the checks may come from IT reporting tools, directly using VPM Nav/LCA Classic or looking to records of previous CAD configuration, such as CMAF. It may require deeper interactions with data owners or IT division, to understand causes, explain and resolve issues

Alternatively the Large task category can cover tasks of similar technical scope and complexity as the above Q1-M, but involving more processing steps or a larger dataset, requiring more effort.

#### 7.4.4.2 Examples

Troubleshooting in case of inconsistencies between production CAD database and reporting tools; Checking coherence of all config. branches with current CMAF baseline

#### 7.4.4.3 Typical deliverables

New or updated Excel workbooks, tables & charts, macros; Word documents, IT tickets

#### 7.4.4.4 Associated WU

- Type: Quality : CAD Data QC: Q1-L
- Quantity: 1

## 7.4.5 Major CAD Data QC task

#### 7.4.5.1 Description

The Very Large task category may concern definition or improvement of a checking process. In this case the contractor may be required to create/adapt and validate macros (Excel or Power BI), make tests and write test reports, update technical specifications or how-to documents, aligned with the new process.

Alternatively the Very Large task category may cover tasks similar to those described in the previous categories, with a larger technical scope of larger scale of checked data, requiring more effort.

#### 7.4.5.2 Typical deliverables

How-to document; Technical specification; test report; Tables, charts, macros in Excel or Power BI; IT tickets

7.4.5.3 Associated WU

- Type: Quality : CAD Data QC : Q1-XL
- Quantity: 1

## 8 Deliverables and Quantities

## 8.1 Work Unit Types and Codes

The table below shows the expected quantity of tasks in each category, with associated Work Units. WU codes are taken from ref [6] and are of the form:

[Deliverable Type][Sub-Type]-[Size]

For example: Q1-XL

Deliverable types relevant for this specification are:

W	ork Unit Type	Work Unit Sub-Type		
Code	Meaning	Code	Meaning	
D Documentation		2	consulting, engineering expertise	
Q	Quality	1	CAD data QC and data recovery	
		2	process monitoring (KPI, reporting,)	
		3	process creation and recovery	

The Size of the ticket or work unit reflects the estimated effort for completion of the task. It is encoded as following:

Size	Estimated effort (`hour)
XS	1
S	4
М	8
L	16
XL	40

## 8.2 Deliverable Quantities

	DERVICE	
WU Type	Task	Estimated
		Quantity over
		36 months
D2-XS	Documentation – consulting & expertise XS	1
D2-S	Documentation – consulting & expertise S	1
D2-M	Documentation – consulting & expertise M	1
D2-L	Documentation – consulting & expertise L	1
D2-XL	Assessment and Summary of document changes	6
D2-XL	Collection of Inputs and materials	7
D2-XL	Development of document outline	8
D2-XL	Documentation drafting	15
D2-XL	Organization/monitoring of document reviews	7
Q1-XS	Minor CAD Data QC task	16
Q1-S	Small CAD Data QC task	24
Q1-M	Medium CAD Data QC task	38
Q1-L	Large CAD Data QC task	34
Q1-XL	Major CAD Data QC task	20
Q2-XS	Quality – Process Monitoring XS	1
Q2-S	Quality – Process Monitoring S	1
Q2-M	Quality – Process Monitoring M	1
Q2-L	Large CAD Production Process and Methods monitoring or execution task	97
Q2-XL	Quality – Process Monitoring XL	1
Q3-XS	Quality – Process creation and recovery	1
Q3-S	Quality – Process creation and recovery	1
Q3-M	Quality – Process creation and recovery	1
Q3-L	Quality – Process creation and recovery	1
Q3-XL	Creation of CAD Production Process, Methods or KPI	35
Q3-XL	CAD Production Recovery Action	14

## 9 Quality Assurance requirements

The Quality class under this contract is Design control – Class 2 and [Ref 1] GM3S section 8 applies in line with the defined Quality Class.

## **10** Safety requirements

No specific safety requirement related to PIC and/or PIA and/or PE/NPE components apply.

## **11 Specific General Management requirements**

Requirement for [Ref 1] GM3S section 6 applies completed/amended with the below specific requirements:"

## **11.1 Contract Gates**

The contract gates are defined in [Ref 1] section 6.1.5, this scope of service call for the following technical gates:

- KOM
- Close-out Meeting

## 11.2 Meeting Schedule

A weekly meeting will be held to monitor task status, progress and possible issues.

## **11.3** CAD design requirements

N/A

## **11.4 Other Requirements**

Certain tasks will require proficiency in tools and processes, as described below:

## 11.4.1 MQP

- To execute this task with an acceptable level of autonomy, and to obtain the necessary database permissions, the contractor must be trained in IO MQP Change procedures.
- The task requires experience in technical writing in the quality assurance domain, including experience in application of quality standards and methodologies relevant to the nuclear industry.
- The contractor must have a demonstrated ability to write clear, accurate, and concise technical English, with attention to detail and the ability to spot errors and inconsistencies.
- Strong written and verbal English communications skills are required for collaboration with different teams and stakeholders.

## 11.4.2 Quality Control of CAD Reference Configuration Data

- Work related to data in the ENOVIA V5 production database will require the use of CATIA V5 and VPM Navigator, Some use of LCA Classic and Navisworks may also be required.
- Manipulation of CAD data in ENOVIA V5 will demand familiarity with ITER processes and advanced database permissions requiring the PBSA certification.
- Some checks require post-processing of data extracted from ENOVIA using Excel or Power BI. This will require at least an intermediate level of competence including manipulation of tables, formulae, pivot tables/charts and macros.

## 11.4.3 CAD Production Methods and Processes

• The task will require proficient use (including development of macros) of Excel and Power BI tools, integrated in databases (Sharepoint, Access) to manipulate large datasets, and produce KPI for weekly dissemination to stakeholders.

- Activities in support of CAD Production planning will require proficiency in MS Project.
- o A high level of engineering and project management skills is mandatory
- A good overview of CAD production tools (CATIA, AVEVA, SSD, SPX) and deliverables requirements (CAD manual and ISO standards) is required, but it is not required to manipulate CAD tools.

## **12** Appendices

## **12.1** Appendix 1: List of MQP Document examples

- 1. <u>Certification and Assignment of CAD roles in the ITER CAD tools (4EQUNW v3.0)</u> (low complexity example)
- 2. <u>Procedure for Management of Contextual CAD Data (EGPR3D v2.0)</u> (medium complexity example)
- 3. <u>Procedure for CAD Work Planning, Specification and Control (U34884 v1.4)</u> (high complexity example)