**Framework Contract**

**PLM Engineering Support**

**Summary Technical Specification**

**Abstract***.*

This specification covers the supply of engineering expertise and support services to the ITER Organization for the implementation of a PLM project.

# Background and Objective

The Configuration Management Division (CMD) of the ITER Organization Central Team (IO-CT) is responsible for the implementation in IO (both CT and DA) of a PLM project, aiming at (a) defining and enforcing standardized systems engineering and configuration management processes, procedures, and (b) unifying corresponding supporting IT systems into a single platform. IO decided to use the platform “3D Experience” (also called Enovia v6) from the company Dassault Systems.

The objective of this Call for Tender is

* to select qualified companies able to provide experts in the required fields of work strongly experienced in the implementation, deployment, exploitation and maintenance of a PLM project in the context of a complex engineering projects in the R&D nuclear field based on Enovia v6, and
* to conclude the framework contract that will supply engineering services in the implementation, deployment, exploitation and maintenance of the PLM project, including methodology development and end-users training and support.

# Required Experience

The experts provided by the candidate companies shall have demonstrated capabilities in implementation, exploitation and maintenance of a PLM project with the Dassault System solution, in the context of a complex engineering projects in the R&D nuclear field based on Enovia v6. The specific experience and qualities sought by IO include Expertise in:

* Data migration and integration to external databases (EDB, ENOVIA v5, etc.)
* Configuration management in the context of nuclear and first of kind project
* Engineering and configuration management processes and best practices
* Organization of the project with the PLM
* PLM global communication strategy
* PLM training management
* Complex system engineering
* Nuclear plant engineering for similar research project (first of kind)
* Software and CAD methodologies:
  + – MATRIX/ENOVIA V6
  + – SSD
  + – ENOVIA V5
  + – CATIA V5
  + – Coexistence/coherence of 2D/3D

Please refer to the Framework Technical Specification for more details about the required types of profile: [PLM Project. Framework Contract for Engineering Support (SSZSGR)](https://user.iter.org/?uid=SSZSGR)

# Configuration Management Information System and IT landscape

Current information management system: a distributed system consisting of

* For CAD: Enovia v5
* For Requirement: Rational Dynamic Object Oriented Requirements System (DOORS)
* For 2D: SMDD
* For integration 2D/3D and product breakdown management: home solution (EBD)
* Several part catalogues (SPMat, CADENAS, etc.)

Computer Aided Design

* CAD & catalogues: CATIA V5 (Mechanical + E&S modules)
* CAD mechanical catalogues: CADENAS
* Plant design: PDMS, CATIA V5
* CAD data-base: ENOVIA LCA (Life-Cycle Activities) – VPM V5
* 3D-Live: ENOVIA LCA Viewer
* Assembly & maintenance simulation: DELMIA
* 3D Illustration: 3D-VIA-COMPOSER
* Dedicated process description software (IGE-XAO Visio based, to produce in particular PFD, P&ID…) and associated data-base: See-System-Design (SSD); See-Electrical-Expert and See-Cabling-Manager (or equivalent)
* CAD quality checking: Q-CHECKER
* Isometrics: ISOGEN
* For remote work, the CAD activities must be performed in data sharing mode. The connection to the IO data-bases shall be made via:
  + Teradici or VPN for ENOVIA. If the distance with IO exceeds 1000-1500 km, the Company will connect to the closest DA (DA approval being a pre-requisite)
  + CITRIX for SSD
  + Web for 3D-Live, IDM, EDB

Structural Analysis

* ANSYS Classic
* ANSYS Workbench
* Hyper-mesh

Other analysis software

For specific analyses / functions, the following software packages have been successfully utilised by ITER, and experience with these packages would be considered an asset. However, experience in the TYPES of analysis listed is a requirement.

* PIPE-STRESS and CAESAR II, for piping analysis
* FLOW-MASTER, for hydraulic analysis
* 3DCS, for 3-d tolerance analysis
* OPTICS, for diagnostics optical analysis

Construction

* Intergraph [SmartPlant® Materials](http://www.intergraph.com/products/ppm/smartplant/materials/default.aspx) SPMat
* Intergraph Smartplant For Operator

# Scope of Work

Under the proposed framework contract the contractor will provide services to the ITER Organization on the Cadarache Site, and at remote locations as required by the Organization, to reinforce capability in the fields for implementing a PLM project. The six main areas of work will be:

* Support to Program Management
* Support to Project Management
* Support to Configuration Management and System Engineering
* Support to Data Migration Preparation
* Support to Data Migration Operation
* Knowledge transfer and skills ramp-up

Detailed work description can be found in the section 5 of the Framework Technical Specification: [PLM Project. Framework Contract for Engineering Support (SSZSGR)](https://user.iter.org/?uid=SSZSGR)

# Quality Assurance Requirements

## For the entire duration of the framework contract, Contractors shall hold, and maintain, a valid and relevant ISO 9001 and 14001 certification or comparable.

The missions and tasks executed under this framework contract shall be carried out in compliance with the ITER CAD Manual, and the IO Quality Requirements.

# Contract Basis and Execution

The PLM Engineering Support of the ITER project will be procured via framework contract.

Task Orders will be issued by work area on deliverable basis.

The ITER Organization will award the framework contract and first batch of Task Orders in end of 2016. The initial award will be for a 1 year period, with an option of 3 further years.

The implementation plan of the PLM over the potential 4 years timespan preclude the accurate prediction of resource requirements.

ITER may require the contractor to perform the work either on the ITER site, at a close support locations to be established and maintained by the contractors within easy reach of the ITER site, and at remote locations such as the contractor’s usual place of business. In the case of off-site CAD work, the contractor will be required to implement connection schemes to be defined, to utilise data sharing mode.

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

# Prequalification Requirements

The pre-selection criteria for this Call for Tender shall include, but shall not necessarily be limited to the following requirements, supported by appropriate references:

* Established company with experts having a minimum of 10 years demonstrated experience in providing similar services to large, complex international nuclear field projects, and preferably covering the design, construction and commissioning phases.
* Demonstrated experience in the successful implementation of Enovia v6 based PLM

# Expected Procurement Schedule

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| --- | --- |
| **Procurement Action** | **Tentative Dates** |
| Call for nominations | 3 August 2016 |
| Receipt of nominations | 26 August 2016 |
| Prequalification launch | 30 August 2016 |
| Receipt of Prequalification | 30 September 2016 |
| Issue call for tender | 17 October 2016 |
| Tender submission due date | 22 November 2016 |
| Estimated Contract Award date | 12 December 2016 |
| Estimated Contract Start Date | 9 January 2016 |