



Implementation and Support of PDM/PLM Solutions

Summary Technical Specification

BACKGROUND AND OBJECTIVES

The Project Information System Section/Division of the ITER Organization Central Team (IO-CT) is responsible for the implementation, operation and evolution in IO of PDM/PLM solutions organized around Dassault Systèmes solutions (CATIA/ENOVIA V5 & 3DEXperience) and other large scale data management systems (SmartPlant Foundation, ICP/EDB – in-house content management system)

The objective of this Technical Summary is to provide the technical general requirements necessary to identify qualified companies with extensive experience in the required fields of work, and proven track records in the implementation, operation and maintenance of PDM/PLM systems primarily based on CATIA/ENOVIA V5 & 3DEXperience as well as the other software platforms used by the ITER Organization. The services in the implementation, operation and maintenance of those systems are also part of the scope of work described in this document.

REQUIRED EXPERIENCE

The candidate companies shall have demonstrated capabilities in implementation, operation and maintenance of CATIA/ENOVIA V5 & 3DEXperience solutions and other large scale data management systems, for large and complex facilities, preferably in an international environment and in a complex contractual and organization setup (comparable to the ITER project). IOs cost containment objectives also favour companies with a proven track record of delivering projects on time and within budget. The specific experience and qualities sought by IO include:

- Expertise in designing and implementing solutions in CATIA/ENOVIA V5 & 3DEXperience in large, multi-disciplinary projects and in an international environment;
- Expertise in the implementation of CATIA/ENOVIA V5 & 3DEXperience customizations
- Expertise in integrating CATIA/ENOVIA V5 & 3DEXperience with other large scale data management systems
- Expertise in the configuration of customization needed for integration CATIA/ENOVIA V5 & 3DEXperience with other design tools
- Expertise in designing, implementing, operating and supporting other data management systems (for instance: SmartPlant Foundations or other similar tools)
- Expertise in installing and maintaining CATIA/ENOVIA V5 & 3DEXperience infrastructure and day to day system administration on servers located in many locations
- Capability to mobilise and manage centralised, site-based resources, and also to establish and manage satellite facilities for remote working;
- Proven track record of delivering projects on schedule and within budget;
- Ability to respond rapidly to changing resource requirements, to accommodate peak demands, and to provide specific expertise.

The current configuration management information system as well as design and engineering capability of the ITER Project, comprising IO and the Domestic Agencies, has been developed around specific software applications. The engineering analysis and integration services to be provided under the framework contract shall be executed in this environment, and accordingly, the candidate contractors shall have demonstrated knowledge of the listed software and proven experience of integration of a PLM solution compatible with the landscape described in the next section.

IT ENVIRONMENT

Current information management system: a distributed system consisting of

- For CAD: ENOVIA V5 & 3DEXperience
- For Requirements: Rational Dynamic Object Oriented Requirements System (DOORS)
- For 2D: SMDD
- For integration 2D/3D and product breakdown management: home solution (Engineering Database EDB)
- Several part catalogs (SPMat, CADENAS, etc.)
- Change Management (PDMS system, plus other embedded workflows)
- Document Management System IDM

Computer Aided Design

- CAD & catalogues: CATIA V5 (Mechanical + E&S modules) and CATIA V6 for DMU Visualization, Integration, Clash, Issues.
- CAD mechanical catalogues: CADENAS
- Plant design: PDMS, CATIA V5
- CAD data-base: ENOVIA 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](#) (SPMAT)

Intergraph SmartPlant Foundation (SPF), Owner & Operators (SPO) and Construction (SPC)

SCOPE OF WORK

Under the proposed contract the contractor will provide services to the ITER Organization on the Cadarache site (France), and at remote locations as required by the Organization.

The main areas of work will be:

- Solution architecture: delivery of the system and data architecture, formalisation of relevant processes and methods , functional and technical specifications for systems components and systems interfaces, deployment and implementation plan
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- Platform administration and support: administration & configuration of the CATIA/ENOVIA V5 & 3D Experience platform,
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- Product development: configuration and customization (when required) of functionalities of the CATIA/ENOVIA V5 & 3DExperience platforms and other data management systems
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- Integration of CATIA/ENOVIA V5 & 3DExperience platform with other large scale data management systems

QUALITY ASSURANCE REQUIREMENTS

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

The missions and tasks executed under this contract shall be carried out in compliance with IO Quality Requirements.

WORK BASIS AND EXECUTION

The ITER Organization will award the contract and the first batch of Orders in 2016. The initial award will be for a 2 years' period, with an option of 3 further years.

ITER may require the contractor to perform the work either on the ITER site, at a close support location 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 remote work outside IO premises, the contractor will be required to implement connection schemes to be defined.

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