PDGS Software Maintenance Industry Day Agenda

9.15 – 9.45  Registration
9.45 – 10.00 Welcome and Introduction
PDGS Application Maintenance Background, Objectives and Expectations
10.00 – 10.30 PDGS Application Maintenance
  • Context
  • Scope
  • Policies
  • Processes
  • Tasks
  • Phases
10.30 – 11.00 Coffee break
11.00 – 11.30 PDGS Application Maintenance Procurement Action
  • Procurement plan and schedule
  • Procurement rules
  • Procurement requirements and documentation
11.30 – 12.30 Oral questions
Industry Day Objectives

- Provide an overview of the PDGS Application Maintenance Procurement Plan
- Present intended PDGS Application Maintenance context, scope and main features
- Introduce the foreseen procurement action in terms of schedule, rules and supporting documentation
- Give an opportunity for questions and networking
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A balanced utilisation of above models to:
- Reduce insourcing
- Removing dependencies
- Lower cost
- Standardised interfaces
- Reuse of knowledge
- Modularity different by missions
1. Support to the on-going transition from ESA lead application development to industry supply of services
   a. Reduced dependency on ESA CFI for service delivery
   b. Overall reduction of the volume and complexity of the ESA application portfolio
   c. Consolidation of design documentation in response to the new paradigm
   d. Federated configuration and change management under ESA responsibility

2. Maintained and controlled consistency and integrity of the applications still needed for core PDGS functionality, particularly in the areas of data access, generation, preservation and dissemination

3. Increased value of maintained application portfolio through both corrective maintenance and evolution of supported items
An industrial consortium able to absorb current and future maintenance tasks
Operations centric focus on application maintenance and evolution
Adaptation of common processes and supporting tool-sets
Single point of contact for applications maintenance management
Improved efficiency over time
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PDGS Application Maintenance
Primary Interfaces

First line help and service desks

Second line support to operations

Problem Investigation Requests

Change Requests

Integrator

Maintainers

Main procurement

Developers

New Application

Operators

Production platform

Validation platform

Application Release

Request or Incident

Request or Incident

Request or Incident

Request or Incident
PDGS Application Maintenance Scope

Supported services

- ESA EO Payload Data Systems and Services
  - Mission Payload Data Ground Segments
    - Cryosat Payload Data Ground Segment
    - SMOS Payload Data Ground Segment
    - SWARM Payload Data Ground Segment
    - ADM/Aeolus Payload Data Ground Segment
    - Third Party Missions Payload Data Ground Segments
    - Heritage Missions Payload Data Ground Segments
  - EO Payload Data Services
    - Data Access and User Services
    - Data Preservation
    - Data Generation

- Fully covered
- Partially covered
1. Maintenance responsibility:
   • Evolution of current applications in scope, but not developing new application in the service scope
   • Corrective maintenance and evolution of ESA provided SW applications (generic and mission specific) currently used in operations by:
     • Services
     • Facilities
     • Provided as CFI to suppliers

2. Criticality classification:
   1. Critical – Application is used to deliver core service
   2. Essential – Application is used to enhance a core service
   3. Supporting – Application is used in a non-critical support function
   Maintenance levels will be defined for each application in accordance with its criticality classification
   Application criticality classification may change during the course of the contract
1. Problem investigation  
   a. Triggered from a need for root cause assessment after one or several incidents  
   b. Closed through delivery of a investigation report and recommendation  

2. Change management  
   a. Triggered by a change request detailing expected behaviour  
   b. Classified in terms of impact and of requirements breach  
   c. Proposed solution expected before implementation for system evolution  
   d. Closed after accepted system release  

3. Release management  
   a. Triggered in Release and delivery management process  
   b. Handed to operations as part of software delivery
Performance measures will be implemented for each of the processes within scope of the contract:

- **Problem investigation:**
  - Timely response
  - Effective recommendations; ratio of solved problems

- **Change management:**
  - Responsiveness
  - Effectiveness; ratio of successfully implemented changes

- **Release management and delivery:**
  - Planning accuracy
  - Effective release delivery; number of regressions; number of issues found in operations

Service performance will be reviewed at regular reviews during the contract.
ESA TellUS – ESA provided Service Management Portal and Platform

- Single-system-of-record for all maintenance processes
- Licenses will be provided as CFI
- Will be used for monitoring of service performance and customer satisfaction
Task 1: Integrator

Task 2: Maintainer
Task 2: Maintainer
Task 2: Maintainer
PDGS Application Maintenance Tasks

Integrator

• EO PDGS maintenance
  a. Maintenance of design documentation;
  b. Definition and execution of acceptance testing and verification of maintainer Subcontractor deliverables;
  c. Management of the as-designed configuration;
  d. Planning and coordination of software changes and releases;
  e. Provision, management and maintenance of a PDGS Test and Verification platform.
PDGS Application Maintenance Tasks
Maintainers

- Sub-system and software application maintenance
  - a. Software design
  - b. Software documentation
  - c. Software build
  - d. Unit tests.

- The Integrator may act as Application Maintainer but shall, in such a case, identify and demonstrate in its proposal an independent organisation for testing, verification, configuration management and quality assurance of maintenance deliverables.
PDGS Application Maintenance
Task breakdown (not exhaustive)

Task 1: Integrator

Management
- Contract management
- Project management
- Configuration management
- Quality assurance

PDGS maintenance
- Design documentation
- System configuration
- System integration

PDGS Sub-system definition and verification
- Requirements management
- Testing and verification
- Acceptance and Delivery

Task 2: Maintainer

Software design
- Application design documentation
- Interface documentation
- Testing documentation

Software delivery
- Code and build
- Unit test
- Delivery to Integrator

Software support
- Problem investigation
- Use-case configuration
- Test data preparation
PDGS Application Maintenance
Contract Phases

Kick-off

Phase-in

Phase 1

Phase 2

Phase-out

- Capture of maintained artefacts
- Knowledge transfer and build-up
- Preparation of test and verification platform
- Interface processes design and implementation
- Service Readiness Review

Phase-out

- Last months of Phase 2
- Preparation and final delivery of all maintained artefacts
- Knowledge transfer to Agency or new supplier
- Close-out Meeting
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Who should bid?

- **Consortium composition:** Understanding of Earth Observation data, data handling and data processing, their status, and related knowledge necessary to manage, maintain and develop PDGS application software according to user requirements.

- The **Prime Contractor** will need to demonstrate a strong ability to manage service processes and coordinate the contributions of the various subcontractors in order to fulfil its overall responsibility.
  - Suppliers currently awarded with tasks within the EMSS support to management function of definition of PDGS application requirements and acceptance of related deliverables are excluded from the role of Prime Contractor.

- **Prime and subcontractor** shall not be tied in by exclusivity agreements, i.e., one can participate in one or more tenders.

- **New subcontractors** will be allowed during contract execution should specific competences be required as a function of new applications or services injected in the scope of work.

- Understanding of security constraints such to ensure compliance of maintained applications with ESA Earth Observation security policies.

- Compliance shall be demonstrated versus all requirements of the Statement of Work. Alternative approaches proposed by the bidders may be presented as options.
1. The procurement is funded under various existing (EOEP-5, Earthnet and LTDP) and future programmes.

2. The ITT will be open to ALL Member States (Earthnet and LTDP are Mandatory Programmes).

3. Bidders will be requested to bid with an already as complete consortium as possible covering all applications within the initial scope.

4. Bidders are asked to assign at least 10% of the proposed price to entities belonging to the following Member States: Czech Republic, Denmark, Finland, Greece, Ireland, Luxembourg, Norway. Their conformance with this request will be positively taken into account as selection element in the Tender evaluation.
Procurement requirements and documentation

1. Expected documentation in the ITT package
   a. Statement of Work
   b. Glossary
   c. Service portfolio
   d. Application portfolio

2. Documentation
   a. List of application in scope (will be published on EMITS before issuing ITT)
   b. Software Artefacts on requests
Procurement schedule

IPC
27 – 28 June ‘17

Industry Day
5 July ‘17

ITT Release
September ‘17

Kick-off
End of ‘17

Start of Maintenance Service
Phase 1
1 July ‘18

Start of Maintenance Service
Phase 2
1 July ‘21

End of Contract
30 June ‘23
1. Initial duration of 3 years + intended 2 years extension subject to funding and Contractor performance.

2. Service contract where the Contractor executes ESA-defined processes for the activities in scope under agreed levels of quality and performance (Service Level Agreement).
   a. Baseline service to be priced at FFP
   b. Evolutions to be priced at FUP within a limit of liability

3. Contractor will set up and use his own infrastructure for the Test and Verification platform.

4. Additional maintenance tasks may be added throughout the contract duration.

5. All software designed, developed, upgraded and maintained under the present subcontract is deemed to be “Operational Software”
Procurement Features and Schedule

What is expected in the proposal in terms of financial information

- There will be a list of initial applications to maintain (initial scope).

- Corrective maintenance of the applications within the initial scope is considered the baseline service and shall be quoted as Fixed Firm Price (FFP) per maintained application.

- A Limit of Liability based on Fixed unit prices (FUP) in the proposal will be agreed at negotiation and converted to FFP in cases where the scope of work is modified due to new applications to maintain or functional evolution projects.
The ITT will be subject to the following set of Procurement Rules and Procedures:

a. Procurement conducted by ESA.

b. ESA procurement rules and procedures: Procurement Regulations, with the Right to Review (PART VI Of the Procurement Regulations), and the Tender Evaluation Manual as published on EMITS.

c. General Clauses and Conditions for ESA Contracts, ESA/REG/002
Primes and subcontractors must register with ESA as an ESA tenderer on
the esa-star registration portal:
https://esastar-emr.sso.esa.int

Intended ITT including list of applications in initial scope and ITT will be
published in English on EMITS: http://emits.esa.int/emits/owa/emits.main

ITT out: End of September 2017
Proposal submission: November 2017
Negotiation: End of 2017
KO: Early 2018
Tenders to be evaluated by ESA Tender Evaluation Board (TEB)

Evaluation criteria and weighting factors will be published in the ITT.

The TEB will make a final recommendation for awarding the contract to the tenderer who offer the most economic and effective employment of the Agency’s resources. This shall be the best combination of the total weighted mark and price considering industrial policy requirements.
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Questions?