

# Appendix 1

## EDRS European Data Relay Satellite System

### Proposal Content guidelines

**European Space research and Technology Centre  
(ESTEC)**

**European Space Agency**

**Keplerlaan 1, P.O. BOX 299, 2200 AG Noordwijk,  
The Netherlands**

The Respondent to this AO may be a single Bidder or a group of Bidders, each one contributing with a well defined role in the proposed Data Relay Service Initiative.

The respondent to the ESA AO shall produce a short (50 pages) document.

Guidelines for the content and structure of the document are given here below. The main aim of this document is to provide the Agency with the necessary information for an informed evaluation of the proposal.

#### Structure of the document:

Signed Cover Letter

#### General

- Introduction;
- Overall missions' descriptions (services, top level architectures of space, ground, and user segments, role model in the service delivery);
- Estimated proposed missions' ROM cost for CAPEX and OPEX, and total funding requirements to ESA.

#### Technical

- EDRS service summary (list of services considered by the respondent including non ESA user related services);
- EDRS system overall architecture indicating high level interfaces (commercial/administrative/technical) with the ESA potential users;
- Value chain definition from service provider to subscriber (who sells what to whom under which conditions);
- Preliminary assessment of operational concept assessment (how are individual EDRS system elements operated and used, including EDRS user platform and missions and their interaction);
- Preliminary key features for Space segment requirements:
  - Coverage;

- Frequency plan;
- EIRP, G/T, special functions, connectivity;
- Space to ground interface.
- Preliminary concept definition of all payloads:
  - Payload technical description (mass, power, others);
  - Critical technology;
  - Recommended pre-developments.
- Ground infrastructure requirements:
  - Satellite Control Centre architecture and interfaces;
  - Mission and operation Centre(s) architecture and interfaces.
- User terminals (on board the served user platform):
  - Key technical performances.
- Regulatory preliminary analysis:
  - Candidate frequency bands;
  - Identification of ITU frequency filing ;
  - Critical items / action plan.

### Implementation

- Overall EDRS system/service roll out scheme and schedule;
- Key milestones and major elements of the proposed development, validation, operation plans for the space and ground segments.
- Preliminary program risk analysis and contingency plan

### Management and contractual

- Industrial Organisation:
- Proposed respondent to this AO / Agency / manufacturing industry contractual relationship framework
  - Sharing of responsibilities and commitments;
  - Sharing of risks ;
  - Internal organization of the respondent to this AO for the missions ensuring a single management interface with the Agency.

### Financial

- Definition of all costs (recurring and non-recurring costs) CAPEX and OPEX for all the EDRS elements (the bidder is expected to get cost estimation through consultation with the industry);
- Proposal for financing sharing scheme between respondent to this AO and ESA.
- Business case demonstrating a sustainable exploitation of the EDRS infrastructure

Statements of concurrence:

- Statements of concurrence with the Data Relay Service requirements and principle agreement on pro-forma Service Level Agreement (SLA) as per Appendix 2;
- Statement of concurrence with the principles of the Programme Implementation Plan as per Appendix 4;
- Statements of concurrence with the funding scheme (Appendix 5) for EDRS, i.e.:
  - the funding that will be made available for each element of EDRS;
  - the funding requirements for ESA on the basis of ROM costs for each technology element/equipment that would need to be developed.