ARTES AGILE

ARTES 4.0 Technology & Product Developments

Full Proposal

Part 5

Implementation Proposal

Proposal title

Proposal Reference: reference number

Notes for the use of this template (to be removed from the Proposal)

**INTRODUCTION:**

ARTES AGILE supports development activities within the ARTES 4.0 Technologies and Products in the Strategic and Generic programme Lines: C&G, Scylight, 4S and 5G. It is intended to facilitate short duration technical de-risking activities critical to the definition and development of future products and services for the SatCom sector.

ARTES AGILE activities are intended for NewSpace developments (allowing for fast to fail, iterative or agile developments) that are limited in duration and limited to an ESA Firm Fixed Price of less than €250,000.

ARTES AGILE activities address high technology risk developments which are necessary to confirm the viability of a product development plan. Therefore ARTES AGILE activities are limited to an agreed derisking plan, with no provision for increasing the scope of work via a contract change note (CCN).

The procurement process is described in the cover letter for ARTES AGILE.

(<https://artes.esa.int/documents>).

**NOTES:**

1. Material presented in this plain style must not be removed nor modified, unless stated otherwise by an explanatory note.
2. Parts highlighted in yellow in this template should be modified as appropriate for your proposed activity.
3. Text in blue and in a smaller font size (*example*) is for guidance and can be removed from the completed outline proposal document.
4. Text in grey (example) do not need to be filled in for the Outline Proposal, but may need to be filled in for the Full Proposal

**Table of Contents**

[1 Work Breakdown Structure 3](#_Toc90544819)

[2 Development Timeline 4](#_Toc90544820)

[3 Review Meeting Plan 4](#_Toc90544821)

[4 Deliverable Documents 5](#_Toc90544822)

[5 Deliverable Hardware and Software 7](#_Toc90544823)

[Annex 1: Generic Deliverable Documents 9](#_Toc90544824)

[Annex 2: Work Package Descriptions 11](#_Toc90544825)

The Implementation Proposal shall provide the detail and rationale for the implementation of the proposed activity. This includes the description of the work breakdown into work packages, the logic of the work to be performed and the timeline for carrying out the activity. It shall also cover the mandatory mid term and final review outcomes and any proposed additional reviews. Contract deliverables are also to be listed.

# Work Breakdown Structure

The figure below presents the work breakdown structure, covering the entire scope of the proposed work.

**Work breakdown structure**



A work package description form (PSS-A20) is presented in Annex 2 herewith for each of the work packages at the lowest level of the work breakdown structure.

# Development Timeline

Insert a flow chart showing the work logic flow step by step, with reviews, dependencies, and critical path clearly shown. Bar charts embedded in the proposal document should have sufficient resolution, both on screen and in print, for all elements of the bar chart to be easily read.

Chart, bar chart

Description automatically generated

# Review Meeting Plan

## Review Meetings

The proposed review meetings are summarised in the table below. Each review meeting will be attended by the Agency’s representative(s), the project manager, and other members of the project team as required.

For ARTES AGILE activities, there will be only three milestone reviews: 1) Kick-Off; 2) Mid-term Review; and 3) Final Review. Only the MTR and FR are payment milestones.

The Mid-Term Review should be scheduled at a logical point where the activity is developed to a required level of maturity to fully describe the tasks needed to take the activity to the final review.

The objectives and deliverables of the MTR shall encompass appropriate development achievements (e.g. those from PDR, TRR, SRR, etc).

Exceptionally, additional reviews can be added by the bidder as required by their development strategy.

Complete the following table as appropriate for the proposed Development Phase. For guidance, typical review objectives are provided in the following Excel® spreadsheet:

A list of mandatory reviews is included in Table 1.

**Review meetings**

|  |  |  |
| --- | --- | --- |
| **Title** | **Date (months)** | **Objectives** |
| Kick-off Meeting | T0 | 1. Present the project and the company(ies) 2. Present the overall project planning (including verification plan) 3. Review all planned deliverables 4. Present work to be carried out until MTR 5. … |
| MTR | T0 + … | 1. Present the outcomes of the work packages (WPX.X, WPX.Y,…) 2. … |
| Final Review | T0 + … | 1. Present a summary of the outcome of the development phase, including conclusions and recommendations. 2. Present the updated business plan 3. Present the technology risk assessment. 4. Propose an outline of future product development strategies. 5. Present the test or operational data gathered during the phase. 6. Confirm that all outputs, deliverables and work have been successfully completed/delivered to the satisfaction of the Agency and as defined in the contract. 7. … |

## Progress Meetings

In addition to these review meetings, progress meetings will be held periodically, with no more than eight (8) weeks between consecutive meetings. The right for ESA to call for specific progress meetings is acknowledged.

The objective of each progress meeting will be to present a summary of the current status of the activity and to report on any problems and schedule slippages.

# Deliverable Documents

The contractor confirms that they will deliver all relevant documents to the agency that demonstrate that the contract and review objectives have been achieved as detailed below:

## Generic Deliverable Documents

Generic deliverable documents that are specific to, and mandatory for ARTES 4.0 Technology & Product Developments, are listed in Annex 1.

## Documentation Delivery Plan

The following documents will be delivered to the Agency at the indicated reviews:

Complete the following table as appropriate for the proposed work. Typical deliverables are provided in the following Excel® spreadsheet:

**Documentation Delivery Plan**

| **Document Reference** | **Deliverable Document** | **Contributing Work Package(s)** | **Kick Off** | **MTR** | **Final Review** |
| --- | --- | --- | --- | --- | --- |
| **Management** | | | | | |
| … | title | WP…, etc. | update | update | final |
| … | title | WP…, etc. | - | - | final |
| … | title | WP…, etc. | update | etc. | … |
| **Engineering** | | | | | |
| … | title | WP…, etc. | … | … | … |
| … | title | WP…, etc. | … | … | … |
| … | title | WP…, etc. | … | … | … |
| **(Document category)** | | | | | |
| … | Title | WP…, etc. | … | … | … |
| … | Title | WP…, etc. | … | … | … |
| **Generic Deliverable Documents** | | | | | |
|  | Final report |  |  |  | final |
|  | Business Plan |  |  |  | final |
|  | Technology Risk assessment |  |  |  | final |
|  | Development plan and technology roadmap |  |  |  | final |
|  | Final Data Package |  |  |  | final |
|  | High resolution Image |  |  |  | final |
|  | Monthly Progress reports |  |  |  | final |
|  | Project WebPage |  |  | update | final |
|  | Contract Closure Documentation |  |  |  | final |

## Proprietary Documents

Include this section if, exceptionally, proprietary documents are included in the documentation delivery plan that are proposed to be made available for review by the Agency at Contractor’s premises only.

The table below identifies proprietary documents that will be made available for review by the Agency at our premises only.

**Proprietary Documents**

| **Review Meeting** | **Document Reference** | **Document Title** |
| --- | --- | --- |
| … | … | … |
| … | … | … |

# Deliverable Hardware and Software

## Hardware

No hardware will be produced and delivered to the Agency.

or

(delete the inapplicable paragraph)

The hardware items that will be produced and delivered to the Agency under a resulting contract are listed in the table below.

**Hardware items to be delivered to the Agency**

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliverable ID** | **Description** | **Completion Review** | **Number of Items Delivered** |
| … | … | … | … |
| … | … | … | … |
| … | … | … | … |
| … | … | … | … |

## Software

No software will be produced and delivered to the Agency.

or

(delete the inapplicable paragraph)

The software items that will be produced and delivered to the Agency under Article 2.1.2 of the resulting contract are listed in the table below.

**Software items to be delivered to the Agency 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Deliverable ID** | **Description** | **Completion Review** | **Number Delivered** | **Delivery Format(s)** | **Deliverable Licences** |
| … | … | … | … | … | … |
| … | … | … | … | … | … |
| … | … | … | … | … | … |
| … | … | … | … | … | … |

1. In accordance with Article 3.1.3 of the Draft Contract, if applicable, also include licences to be purchased and delivered to the Agency.
2. Generic Deliverable Documents

**Final Report**

The Final Report shall be prepared in the general form and quality of an item suitable for technical journal publication. It shall be written in a concise yet instructive manner and shall not exceed 20 pages (containing colour photographs, if applicable).

It shall describe the major technical, operational and commercial accomplishments of this contract, especially:

* objective of the activity
* key issues
* results of the work incl. description of the new product/service developed
* main benefits
* perspective (further technical and commercial evolution).

The final report may be made available to all ESA Participating States and Persons and Bodies. Therefore if the Final Report includes commercially sensitive information, two versions of the final report shall be provided.

The version containing commercially sensitive information shall be marked “Proprietary Information”. The version not containing commercially sensitive information shall not be marked “Proprietary Information”.

**Business Plan**

An updated business plan shall be prepared and presented in the general form that would be used in a standard ARTES 4.0 proposal (https://artes.esa.int/technology-product-developments-full-proposal-templates). It shall cover the key points of:

* Market Analysis
* Competitive Landscape
* Customer segment and value proposition
* Value chain
* Revenue streams
* Cost Structure
* Sales Channels
* Customer Relations
* Key activities, resources and partners
* Financial Indicators

**Technology Risk Assessment**

An assessment of the key technological risks identified in the activity shall be prepared and presented. It shall detail:

- the remaining risks identified for the development of the technology, product or service

- the impact on the development moving forward.

- possible future developments and risk mitigations.

**Development Plan and Technology Roadmap**

The development plan and technology roadmap shall build on the technological risks identified in the Technology Risk Assessment. It shall propose a development approach which logically addresses the remaining risks with individual risk mitigation actions. It shall present an estimate of the development costs and development timeline that is required to bring the technology/product/service to market.

Indicate whether a future ARTES 4.0 Technology and Products activity will be requested and for which Development Phase(s) would be targeted.

**High resolution images**

High-Resolution (>2 MB) Photographs shall be delivered, shall be releasable to the public and shall be delivered in a format that can easily be processed electronically (e.g. not in PDF).

**Video**

A video illustrating the results achieved may be delivered using common high-definition video format (e.g. mp4), and shall be releasable to the public if applicable.

**Monthly Progress Reports**

A concise monthly progress report will be provided to the Agency within the first five working days of each month.

A template can be found at the following link: <https://artes.esa.int/documents>

**Minutes of Meetings**

Formal written minutes of meetings attended by the Agency will be agreed and, as far as possible, be signed and made available to the Agency at the end of the meeting. If this is not possible the minutes will be provided to the Agency no later than five working days from the date of the meeting. The minutes will, as a minimum, identify all agreements made and actions accepted during the meeting.

The action item list will be included in the minutes and will be updated in accordance with the meeting outcome. Each action item will be assigned a unique identifier in the format X.Y, where X is the meeting number in which it originated and Y is the action number, starting from 1 at each meeting.

**Project Web Page**

As part of the first review data package the Contractor shall produce a Project Web Page which shall be suited for publication by ESA in the Telecommunications and Integrated Applications web site. The Project Web Page shall be produced using the template given under: http://artes.esa.int/documents. An update of the paragraph called “Current Status” shall be provided together with the minutes of each review meeting. A final version of the Project Web Page shall be provided together with the Final Report. This final version shall include a paragraph summarising the most significant achievements of the project.

1. Work Package Descriptions

Provide completed work package descriptions for each work package identified in the work breakdown structure

|  |  |
| --- | --- |
| PROJECT: … | WP: … |
| WP Title: …  Company: …  WP Manager: …  Start Event: … Planned Date: …  End Event: … Planned Date: … | Sheet … of …  Issue Ref …  Issue Date … |
| Inputs:  …  Tasks:  …  Outputs:  …  Each work package shall have one or more items as outputs | |