ARTES Competitiveness & Growth Full Proposal

Part 2

Business Plan

Proposal title

Proposal Reference: reference number

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

Material presented in this plain style must not be removed nor modified, unless stated otherwise by an explanatory note.

Parts highlighted in yellow may or may not need to be filled in, depending on the scope of the proposal (please refer to the related explanatory notes to determine if they apply or not). The table below provides a summary of optional sections depending on the different cases.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Space Segment | Ground Segment | Application | System | Confirmed Business case | SME support |
| Definition |  | | | | 1, 2, 3.1, 3.2, 3.4-3.8 |  |
| Technology |
| Product |
| Demonstration |

Text in red font must be modified and/or completed by the Tenderer for the proposed activity (this supplementary information should be presented in plain typeface, i.e. not red, in the final version of the Full Proposal).

This style is used for explanatory notes and guidance to help you to develop the Full Proposal content. They should be removed from the final document before submission.

A single Part 2 shall be included covering all Development Phases for which support is being requested under the ARTES C&G Call for Proposals.

The Business Plan should be based on that provided in your Outline Proposal, which contains the Financial Forecast Workbook (Excel® spreadsheet), updated as appropriate to include the most recent information.

The Financial Forecast Workbook forms an integral part of the Business Plan (Part 2 of the Full Proposal) and shall be attached as Annex 1 to this document. It is available at: <https://artes.esa.int/documents>

Use of this Full Proposal Template is **mandatory**. The Tenderer shall not change the structure of this Full Proposal Template (i.e. the table of contents must remain unchanged) and adhere to its guidelines and requirements. However, the format and lay-out can be modified, e.g. to be in-line with the Tenderer’s corporate identity.

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*The Business Plan is intended to analyse the strategic context and commercial potential of the output of the proposed activity and to demonstrate that the Contractor’s initiative is conceived to lead to a commercial exploitation.*

*The Business Plan shall provide the commercial rationale for the proposed development activities with the key commercial aspects, including the potential satcom target market, the target customers, the competitive environment and own positioning, as well as the market strategy.*

*The extent of information provided in this section shall be in line with the maturity of the proposed development phase(s) (e.g. for the initial Development Phases such as Definition and Technology, only preliminary information on the business case is required).*

*Please note that the Business Plan presented in this document shall be related to the target product(s) to be sold on the market. The target product(s) may include other elements or features not covered by the proposed activities.*

*Elements 3.1 to 3.6 below can also be presented using a single page Business Model Canvas (available at* [*https://artes.esa.int/documents*](https://artes.esa.int/documents)*).*

*The supporting spreadsheet (“C&G Space Segment and System – Financial Forecast Workbook”, or “C&G Ground Segment and Applications – Financial Forecast Workbook”) can be downloaded from the same location.*

*Assuming favourable feedback on your outline proposal by the Agency, the business plan provided here in the outline proposal should be carried forward to form part of your associated Full Proposal (with updated information, as appropriate).*

# Market Analysis

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2).*

The position of our product in the market is summarised in the matrix below.

Table 1‑1 Market Positioning

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Product** | | |
|  |  | **Existing** | **Incremental** | **New** |
| **Market** | **Existing** | X | X | X |
| **Incremental** | X | X | X |
| **New** | X | X | X |

Our product is addressing the sector of …… (e.g. provide a few examples), which has the following characteristics: …. (e.g. geographical reach, trends, sales model).

The Total Available Market (TAM) of the targeted product is the following:

*TAM (the total worldwide market available for your product) shall be presented, including quantitative figures. If the product is new (not existing), market of a similar product may be used.*

The Serviceable Available Market (SAM) of the targeted product is the following:

*The SAM (the market you can really address with your product and your channels, it comprises all your potential customer segments) shall be presented including quantitative figures and assumptions.*

*In case you already have a market share of this market, you shall present it including quantitative figures and factual information (for instance, sales existing products in this market, or of previous generation, for the different customer segments).*

Our projection in terms of Serviceable Obtainable Market (SOM or target market) we aim to capture in the short term for each of the identified customer segments is shown in Table 3 (“Product Sales Assumptions for the Commercial Exploitation Phase”) of the financial forecast workbook.

The assumptions behind these sales projection are …

*Present the SOM (The percentage of the Serviceable Available Market that your company could realistically reach in the short term) and the underlying assumptions that led to the projected sales volumes over time taking into account competition, trends, demand forecast, sales channels and other elements that could have influence. This value is usually estimated taking into account specific customers (or group of customers) within the customer segment to which you actively try to sell the product/s to.*

# Competitive Landscape

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2).*

Our key competitors and the nature of the competition are identified in the table below.

Table 2‑1 Summary of the Competition

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Competitor** | **Nature of Competition** | **Description of competitor product** | **Market Share** | **References** |
| ……… | ……… | ……… | ……… | ……… |
| ……… | ……… | ……… | ……… | ……… |
| ……… | ……… | ……… | ……… | ……… |

*Columns 1 & 2: show the competitors already present in your market (SAM) or serving it partially, indicate the nature of the competition highlighting their value proposition in relation to the market you are trying to serve for each of the identified competitors. It shall include the Strength/Weakness of competitor’s product compared to targeted product. For example, an existing or potential supplier of the same type of product with same characteristics and lower price, a new entrant to the market with an innovative value proposition, a market incumbent.*

*Column 3 - Description of competitor product: Quantify the nature of the competition as far as possible (e.g. provide estimates of their market share, competitiveness in terms of pricing, etc.).*

*Column 4: Quantify their market share.*

*Column 5: provide references to substantiate your assessment of the competition (e.g. web links, references to market analyses, data sheets, etc.).*

Our key competitive differentiations are summarised in the following table.

*Identify your competitive advantage and competitive strategy. (e.g. using a SWOT analysis).*

Table 2‑2 SWOT Analysis

|  |  |
| --- | --- |
| STRENGTHS  - List of strengths | WEAKNESSES  - List of weaknesses |
| OPPORTUNITIES - List of opportunities | THREATS - List of threats |

*Strengths are characteristics that give you an advantage over your competitors. Weaknesses are characteristics that place you at a disadvantage with respect to the competition. Opportunities are (usually external) elements that you could exploit to improve your business prospects. Threats are elements (e.g. external influences) that could threaten your business prospects. Add supplementary material as necessary to fully describe the competitive environment.*

*On the basis of the SWOT analysis, please identify your strategic options to achieve the commercial goals.*

# Business Model Canvas

*The following sections can be presented using a single page Business Model Canvas (available at* [*https://artes.esa.int/documents*](https://artes.esa.int/documents)*).*

## Customer Segments and Value Proposition

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2).*

The table below identifies the key customers/customer segments targeted by our product(s) and the specific characteristics of our product(s) that will address the customer problems/needs.

Table 3‑1 Customer Segments/Needs and Key Product Characteristics/Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| **Customer/Customer Segment** | **Customer Problems/Needs** | **Product Characteristics Addressing this Problem/Need** | **Key product requirement** |
| ……… | ……… | ……… | ……… |
| ……… | ……… | ……… | ……… |
| ……… | ……… | ……… | ……… |

*Each customer segment targeted should be clearly identified. Add any supplementary text you feel is necessary to clarify the nature of your intended customers and to explain their main needs.*

*Add any supplementary text that you feel is necessary to explain your value proposition fully. For example, you could explain how the proposed development fits into your overall product development strategy to meet the needs of the customers in the longer term.*

*Indicate whether or not the adoption of the product is going to change the way the customers are traditionally running their business, for instance, if the product is bringing a disruptive innovation.*

*The proposed development activities shall increase the competitiveness of the target product(s). Such activities may include all developments necessary to achieve such a goal (e.g. new features, tools, processes, techniques and technologies).*

*Please note that the Business Plan presented in this document shall be related to the target product(s) to be sold on the market. The target product(s) may include other elements or features not covered by the proposed activities.*

## Revenue Streams

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2).*

In the commercial exploitation stage, our product(s) will be sold to our customers as described in the table of the financial forecast workbook.

*Show here the product/s pricing scheme as reported in the financial forecast workbook: Refer to the relevant table that records your assumptions regarding the product revenue stream:*

* *“Product Pricing” for the Ground Segment and Applications.*
* *“Product Sales Assumptions for the Commercial Exploitation Phase” for the Space Segment and Systems.*

*Present the underlying assumptions that led to the projected product unit sale price and unit cost. This shall include, for instance:*

* *a description on how cost reduction will be achieved;*
* *a justification that the projected unit sale is competitive.*

*For the Definition and Technology Phases an estimation (target) shall be provided in line with the maturity of the proposed activity. Provide estimated ROM prices including all features, even if they are developed outside of the proposed development activities.*

## Cost Structure

The key elements of cost for realising the value proposition

The following assumptions have been made when deriving the figures provided in this table: ……

*Refer to the relevant table(s) in the financial forecast workbook that record your assumptions regarding the costs associated with the commercial exploitation phase:*

* *Table “Cost of Sales”, Table “Operational Expenditures” and Table “Capital Expenditures” for the Ground Segment and Applications.*
* *Table “Development Costs” for the Space Segment and Systems.*

*You should list the most important costs that characterize your business opportunity in terms of:*

* *Key resources costs (e.g. hubs, satellite bandwidth, sales personnel, financing)*
* *Key activities costs needed in order to pursue your business opportunity (e.g. R&D, sales, marketing, creating and delivering value, maintaining Customer Relationships, and generating)*
* *All development costs required to reach the final product ready for commercial exploitation shall be provided. This should include costs linked to previous, current and future developments that are directly relevant to reach the final targeted commercial product (for instance, delta qualification required for other product variants not covered by the EQM, material, parts & processes evaluations / qualifications, etc.). This may include operations cost.*

*Optionally, you may also provide a copy of the relevant table(s) in this section.*

## Channels

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2) or a Space Segment product fitting in the grey area as identified in Table 1-1*.

In the commercial exploitation stage, our product(s) will be sold to the customers via these channels.

*Indicate whether or not the sales channels are already established. If not, explain how they will be created. If customers are new for your company (i.e. your company has not sold products to them in the past), please explain your approach to reaching these customers.*

## Customer Relations

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2) or a Space Segment product fitting in the grey area as identified in Table 1-1*.

Our relationships with the key customers already exist/must be created/have to be improved.

*Provide factual information, for instance, existing contracts with figures. If the product targets only one specific customer, a letter of interest from this customer has to be attached to the outline proposal, confirming the adequacy of the value proposition. Indicate whether or not customer representatives will be involved in the proposed project and, if so, the kind of formal agreement that you intend to set up with them.*

## Key Activities

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2) or a Space Segment product fitting in the grey area as identified in Table 1-1*.

*You should describe crucial activities you must do to make your business model work. (e.g. Key Activities for the Value Proposition, for establishing the channels, to have in place the key resources, to establish the customer relations, to secure the agreements with the key partners).*

## Key Resources

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2) or a Space Segment product fitting in the grey area as identified in Table 1-1*.

*You should describe crucial resources (physical, intellectual, human, financial) you must have to make your business model work. (e.g. Key Resources for the Value Proposition, for having channels in place, to establish the customer relations, to secure the agreements with the key partners, to make your revenue stream work).*

## Key Partners

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2) or a Space Segment product fitting in the grey area as identified in Table 1-1*.

*You should describe crucial stakeholders (suppliers, partners, users, etc.) you must have to make your business model work.*

The Key partner during the commercial exploitations of the product are listed in the table below.

Table 3‑2 Key Partners

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Partner Type** *(e.g. Satellite Prime, Operator, Service Provider, Supplier, User, Customer)* | **Partner Name** *(company name, country, web link)* | **Involvement in the Project** *(e.g. none, subcontractor, supplier, integrator)* | **Type of Agreement** *(e.g. NDA, partnership agreement, contract)* | **Existing Agreement** |
| ……… | ……… | ……… | ……… | Yes |
| ……… | ……… | ……… | ……… | No (planned) |
| ……… | ……… | ……… | ……… | ……… |

# Financial Indicators

*Refer to the relevant tables and figures in the financial forecast workbook that quantify the expected return on investment:*

* *Table “Profit & Loss and Cash Flow Statement” and Table “Financial Indicators with and without ESA Support” for the Ground Segment and Applications.*
* *Table “Financial Indicators” and Figure “Cumulative Discounted Cash Flow” for the Space Segment and Systems.*

The financial forecast is detailed in the attached financial forecast workbook. It shows the impact of ESA financial support on the return on investment.

*Provide a copy of the relevant tables/figures in this section, replacing the placeholders below.*

A copy of the relevant information is provided below:

The Internal Rate of Return (IRR), the Net Present Value (NPV) and the break-even point are ….

# Value Chain and project team

*This section is optional if you propose to develop a product with a “confirmed business case”  
(ref. Letter of Invitation, section 2.2) or a Space Segment product fitting in the grey area as identified in Table 1-1*.

The following diagram describes the team composition and their role in the commercial exploitation phase of the product / service.

Figure 5‑1 Project Team Composition and Roles

**EXAMPLE**

*Provide a diagram which illustrates the value chain and the interactions among customers, users, project team and other key stakeholders (e.g. regulators) in the commercial exploitation phase of the product you intend to realise. Include a discussion of the changes, if any, introduced in the value chain by the proposed new system and/or service.*

The following table provides an overview of the positioning of the different Subcontractor(s) and key external actors together with their position in respect to the development and commercial exploitation of the proposed project.

Table 5‑1 Partners’ Positioning

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Partner** | **Background and Experience** | **Role in the project implementation** | **Role in commercial exploitation** | **Key obstacle for partnership (e.g. IPR constraints)** |
| ……… | ……… | ……… | ……… | ……… |
| ……… | ……… | ……… | ……… | ……… |
| ……… | ……… | ……… | ……… | ……… |

1. Financial Forecast Workbook
2. Terminology

|  |  |
| --- | --- |
| Application Segment: | Consists of activities related to the utilisation of satellite telecommunications for the provision of downstream applications and pre-operational services with the active participation of users and other relevant stakeholders. |
| Breadboard (BB): | An initial development model for a space product, electrically and functionally representative of the complete end item, or of one or more key elements of the end item. It is used to prototype the intended design and to mitigate technical risks. Verification is typically performed in a laboratory environment. |
| CAPEX: | Capital Expenditure or CAPEX is investment in the long-term, consisting of assets that are bought by the company and go on the balance sheet. The value of those assets is typically depreciated over the years. |
| Customer Segment: | A group of customers identified on the basis of their needs, behaviours, or other traits that they share. |
| Customer: | An individual or an organisation that meets three criteria: 1. they have a problem they want to solve; 2. they have money/budget to spend to solve the problem; 3. they are willing and authorised to execute the buying decision. |
| Definition Phase: | Consists of the set of activities in which system performance requirements are defined, and system level analyses are performed. |
| Demonstration Phase: | Consists of the activities needed to validate the operational effectiveness and capabilities of the final product in its final configuration and within the user utilisation environment. |
| EGSE: | Electrical ground support equipment. |
| Engineering Model (EM): | Flight representative model in terms of form, fit and function used for functional and failure effect verification. The engineering model is usually not equipped with high reliability parts or full redundancy. The engineering model is also used for final validation of test facilities, ground support equipment and associated procedures. See ECSS‑S‑ST‑00‑01C. |
| Engineering Qualification Model (EQM): | Model which fully reflects the design of the flight model except for the parts standard, used for functional performance and EMC verification and possibly for qualification. Military grade or lower-level parts can be used instead of high reliability parts, provided they are procured from the same manufacturer with the same packaging. Functional performance qualification includes verification of procedures for failure detection, isolation and recovery and for redundancy management. The engineering qualification model may also be used for environmental testing if the customer accepts the risk, in which case the qualification model rules apply. See ECSS‑S‑ST‑00‑01C. |
| Flight Model (FM): | End product that is intended for flight. The flight model is subjected to formal functional and environmental acceptance testing. See ECSS-S-ST-00-01C. |
| Ground Segment: | Consists of all the ground-based elements of a satellite communication system. |
| Ground Support Equipment (GSE): | Non flight product (hardware/software) used on ground to assemble, integrate, test, transport, access, handle, maintain, measure, calibrate, verify, protect or service a flight product (hardware/software). See ECSS‑S‑ST‑00‑01C. |
| Market: | A broad landscape of buyers looking to solve different types of problems. A market can comprise many different types of customer segments. |
| MGSE: | Mechanical ground support equipment. |
| Model: | Physical or abstract representation used for calculations, predictions or further assessment. Model can also be used to identify particular instances of the product e.g. flight model. See ECSS‑S‑ST‑00‑01C. |
| OPEX: | Operational costs, or OPEX, are the costs associated with the day-to-day running of the company or the used up expenses. |
| Pre-operational Stage: | Utilisation of a service performed as part of an applications project, used to validate the requirements and assess the success criteria. This corresponds to the pilot stage. |
| Product: | A product is any hardware, software, system or sub-system, service or application item that is ready for commercial exploitation. |
| Product Development Plan: | Is the development logic to develop a product ready for commercial exploitation using the C&G Development Phases as required (Definition, Technology, Product, and Demonstration), but including as a minimum a Product Phase or a Demonstration phase. |
| Proto Flight Model (PFM): | Flight model on which a partial or complete proto flight qualification test campaign is performed before flight. See ECSS‑S‑ST‑00‑01C. |
| Qualification: (space products) | That part of verification which demonstrates that the product meets specified qualification margins. This can apply to personnel, products, manufacturing and assembly processes. See ECSS‑S‑ST‑00‑01C. |
| Qualification Model (QM): | Model which fully reflects all aspects of the flight model design, used for complete functional and environmental qualification testing. A qualification model is only necessary for newly-designed hardware or when a delta qualification is performed for adaptation to the project. The qualification model is not intended to be used for flight, since it is over-tested. See ECSS‑S‑ST‑00‑01C. |
| Scaled Engineering Model (Scaled EM): | Engineering model that is not fully representative of the end product, but is sufficiently representative to permit the verification of critical functions of the product in a relevant environment. Critical functions are those functions of the product that deserve control and special attention in order to mitigate technical risks. |
| Space Segment: | Part of a space system, placed in space, to fulfil the space mission objectives. Space segment activities relate to any product to be used on a spacecraft. |
| Technology Phase: | Consists of the activities performed to mitigate the technical risks of the product development up to and including the manufacturing and test of a representative model of the product (e.g. an Engineering Model), but excluding qualification or industrialisation. |
| Validation: | Process which demonstrates that the product is able to accomplish its intended use in the intended operational environment. The user shall have a key role in this process. Validation addresses whether a product will satisfy the needs of its users. Validation proves it is the right product. |
| Value Proposition: | This is a statement of the value that a company or solution offers to its customers and/or partners. It is expressed from the perspective of the value to the target customer and addresses the main benefit(s) derived by the use of the product. |
| Verification: | Process which demonstrates through the provision of objective evidence that the product is designed and produced according to its specifications and the agreed deviations and waivers, and is free of defects. Users are not involved in the verification. Verification addresses whether a product satisfies the requirements placed upon it. Verification proves the product is right. |

1. Letter of Interest from Our Customer

*if you are targeting a single customer only attach a letter of interest from that customer here*