

# Ambitious Projects for the Czech Republic: Phase 0/A/B1 Studies Activity Types c) and d)

AO/1-10466/20/NL/GLC/hh  
AO/1-10431/20/NL/GLC/hh

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# DISCLAIMER



This presentation material does not contain sufficient information to be used, in any way, in the context of the ITT (Invitation-to-Tender) [AO/1-10431/20/NL/GLC/hh](#) and [AO/1-10466/20/NL/GLC/hh](#).

This presentation is just to help understand, in a simplified manner, some of the Rules and Procedures associated with ESA procurements and in particular of this ITT.

Please ensure that your Outline Proposal is compliant with the requirements contained in the ITT AO/1-10431/20/NL/GLC/hh and AO/1-10466/20/NL/GLC/hh documentation that will be published on EMITS.



# COVID-19



Tenderers are requested to submit "nominal offers" i.e. without any reservations concerning the expected impacts of the COVID-19 pandemic.

The Contract eventually to be concluded with the recommended Tenderer will be based on the circumstances prevailing (i.e. related to COVID), to the best knowledge of both parties, at the time of the contract negotiations. This whilst preserving the principle of fair competition by ensuring that the basis for recommendation of the selected winner is not altered.



# ESA support of Space-related Activities in the Czech Republic



Since 2016, the Czech Republic and ESA signed an Agreement establishing the “Czech Third Party Framework Project” for implementation of Space related activities in the Czech Republic with the following objectives:

- Development of Czech industry, universities and research centres and ensuring they work together, cooperate and build supply chains
- Alignment of space-related activities carried out in the Czech Republic with the programmes carried out by ESA
- Complement the Czech Republic's participation in the ESA optional programmes,
- Support the implementation of the new National Space Plan 2020-2025 of the Czech government



# ESA support of Space-related Activities in the Czech Republic



## ➤ **ESA role:**

Management of the technical and contractual aspects of the Framework project, according to ESA internal practices ensuring that, as far as possible, the results obtained by the activities are suitable to be integrated in ESA's future missions.

## ➤ **Czech Republic role:**

Programmatic and Financial responsibility over the programme, consequently taking all decisions on programmatic and financial questions taking into account recommendations from ESA.



# Calls for Proposals under the Czech Third Party Framework Project



From 2017 until December 2019, projects have been selected through a Permanently Open Call for Proposals targeting the following activity types:

- a)** Development activities leading to hardware or software products
- b)** Activities (collectively referred to as Studies) preparing for the future

- ❑ 9 submission deadlines
- ❑ 43 proposals have been submitted
- ❑ 26 proposals have been selected  $\cong$  23 M€



# Calls for Proposals under the Czech Third Party Framework Project



From 2020 onwards, the Calls for Proposals target the following activity types:

Call 1	ITT1	AO/1-10382	Permanently open call - next deadlines 28/09/2020 and 14/12/2020	Activity types <b>a) + b)</b> (Developments + Studies)
	ITT2	AO/1-10466	Expected to open 23/11/2020 and close 05/02/2021	Activity type <b>c)</b> (Technology Missions)
Call 2	ITT3	AO/1-10431	Expected to open 05/10/2020 and close 23/11/2020	Activity type <b>d)</b> (Missions with science element)

This presentation will focus on **Call 1 - ITT2** and **Call 2 - ITT3**



# Summary of the rest of the presentation...



1. ESA Tools - Basics of ESA Procurement
2. Activity Types and Approach
3. Overview of the ITTs - Type c) and Type d) activities
4. The Cover Letter
  - Common High Level Programmatic Elements
  - Type c) Programmatic Elements
  - Type d) Programmatic Elements
  - Type d) Evaluation
  - The TEB
5. Overview of the work expected in the study – The SoW for Type c) and Type d)
6. Proposal template overview - Type d) only
  - Common mistakes in open call proposals to ESA
  - The cover letter
  - Step by step walk through with hints and tips

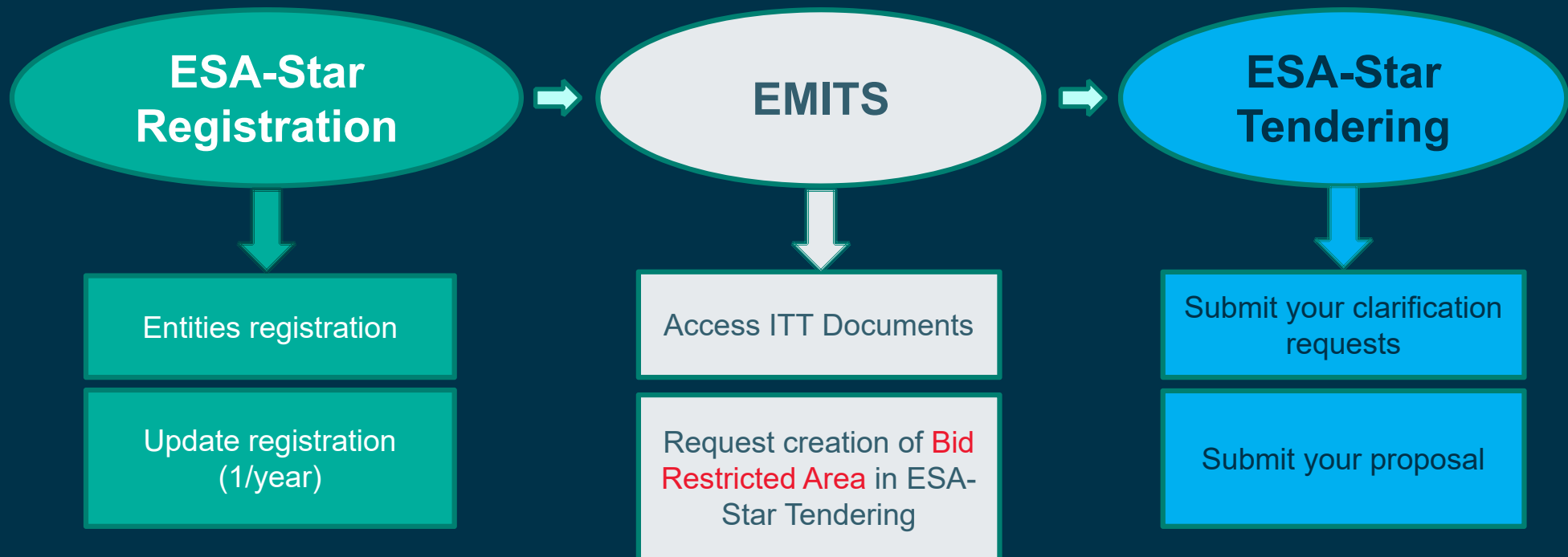




# 1. ESA Tools - Basics of ESA Procurement (1/2)

Main tools supporting the procurement process:

- **ESA-STAR**: ESA's online System for **Registration and Tendering**
- **EMITS**: ESA's online system for publishing **Invitation-to-Tenders (ITT)**



# 1. ESA Tools - Basics of ESA Procurement (2/2)

a) **ESA-STAR Registration** (<https://esastar-emr.sso.esa.int/>)

Registration on ESA-STAR is a **pre-requisite** to do business with ESA

b) **EMITS** (<https://emits.esa.int/>)

All ITT related documents can be found in EMITS. Here you request the system to create a **Bidder Restricted Area** in ESA-STAR Tendering

c) **ESA-STAR Tendering** (<https://esastar.sso.esa.int/>)

In the Bidder Restricted Area you can request for clarifications and **submit the proposal**

## Video:

[http://www.esa.int/spaceinvideos/Videos/2016/03/Bidder\\_Restricted\\_Area\\_creation\\_and\\_structure](http://www.esa.int/spaceinvideos/Videos/2016/03/Bidder_Restricted_Area_creation_and_structure)

**\* Note that your registration must be updated each year – check!**

## 2. Type of activities and approach for ambitious projects

**Type d) = ITT3** = Missions with a scientific element = First to be released

**Type c) = ITT2** = Technical missions = Second to be released

### Approach:

- **STEP 1** (these ITTs)
  - ✓ Open competition
  - ✓ Czech entities decide on the mission and mission goals
  - ✓ Up to 4 winning bids will be recommended by ESA and selected by Czech committee
  - ✓ Winners will perform Phase 0/A and B1 for the mission
  - ✓ End result – fully scoped mission and ready to bid for Phase B2- EOL
- **STEP 2:** Final presentations to Czech Committee, selection by Czech committee of mission(s) to be funded
- **STEP 3:** ITT/RFQ for selected mission(s) + implementation of remaining Phases

## 2. Type of activities and approach for ambitious projects

Financial ceiling for **STEP 1**, **ITT 2** and **ITT 3 Studies**:

**400,000 Euros** excluding co-funding by the Tenderer of at **least 10%** of the cost of the activity and with no profit allowed, i.e. **0% profit**.

The final selected activities, after successful negotiation, will result in Firm Fixed Price contracts that are 90% co-funded by the Czech Third Party Framework Project and 10% by the Tenderer.

➤ **A maximum of 4 activities per proposal type can be implemented ESA as contracts**

# 3. Overview of the ITTs

## ITT/AO Cover Letter

Annex A: Workplans of ESA  
Annex B: Technology Readiness Levels (TRL)

Appendix 1:  
Statement of Work

Appendix 2:  
Draft contract

Appendix 3:  
Tendering Conditions for Express Procurement  
Procedure

Appendix 4:  
Proposal Template

## ITT references

**ITT 2** AO/1-10466/20/NL/GLC/hh

**ITT 3** AO/1-10431/20/NL/GLC/hh

## Publishing dates

**ITT 2** to be published on 23 Nov 2020

**ITT 3** to be published on 5 Oct 2020

## Submission Deadlines

**ITT 2** - 5 Feb 2021

**ITT 3** - 23 Nov 2020

## Budget

**ITT 2** - 1.6M Euros (total), 400k/activity

**ITT 3** - 1.6M Euros (total), 400k/activity

## First contracts

**ITT 2** - Q32021

**ITT 3** - Q22021

### 3. Overview of the ITTs

#### Type of activities

The subject of these ITTs are exclusively for **Activity Types c) and d)**.

Each Type has its own requirements and constraints:

**ITT 2 Type c) activities:** “Ambitious technology demonstration missions” and “Technology/Application missions” aimed at answering the needs of state users.

**ITT 3 Type d) activities:** Space missions with primary purpose of integrating Scientific and Industrial Capacities whilst achieving key industrial technological demonstrations and including scientific excellence complementary to, but not overlapping with current or planned missions by ESA or other space agencies. The mission shall lead to the significant increase of worldwide visibility and renown for Czech scientists and industry.

### 3. Overview of the ITTs

#### Type of activities

Each Type c) or d) study covers the **Phase 0, A and B1** of a mission development:

The study shall include the analysis of the proposed mission and system functions and requirements **for all elements** of the mission architecture, including the space segment (i.e. the platform and its payload(s)), launcher, operations and exploitation concept, as well as ground segments.

## 4. Cover Letter


The Cover Letter contains essential information on the ITT e.g.

- ✓ The name of the responsible **Contracts Officer** (Gian Lorenzo Casini )
- ✓ **Submission deadline** for evaluation
- ✓ All **programmatic** and **price constraints**
- ✓ Description of the **process of evaluation** and selection
- ✓ **Evaluation Criteria**
- ✓ **Instructions and restrictions** for proposals submission

Read the Cover Letter carefully and be sure to comply



## 4. Common programmatic elements

- The current ITTs are for the selection of **Phase 0/A/B1** only.
- The procedure for progressing to the full implementation (RFQ or ITT) shall be agreed between Czech Republic and ESA once the first phase activities have been selected. There is **no guarantee** of a mission being selected.
- The following extract of the Czech national space plan is directly relevant and form part of the programmatic assessment:  *“The ambitious project should bring **benefits both to industry and academia** and by their means to Czech Republic and its citizens....:*
- The term “mission” is intended to cover not only a **self-standing spacecraft** (incl. launch and operations) but in principle also a **hosted payload** on another mission (but including the relevant share of integration, launch and operations costs).
  - The mass and size of the flight hardware shall be limited by the availability of (affordable) existing launch solutions.
- Other states and/or foreign partners could be invited, using its own funding, to cooperate in the development of the mission via the provision of equipment or otherwise.

## 4. Common Programmatic Elements

- For the **proposal**, the tenderer shall consider **typical** break down of the space mission cost in their cost estimations:
  - ✓ Launch 20-25 %
  - ✓ MOC (Mission Operations Cost) 15-20 %
  - ✓ Service Operations 5-10 % (if applicable)
  - ✓ Platform 20-25 %
  - ✓ Payload 15-20 %
  - ✓ Prime 10 %
- The tenderer shall minimize the procurement of hardware and software from outside the Czech Republic, whilst maintaining efficiency and **value for money** and securing **long term benefit** to Czech industry.
  - ✓ Guideline is to not exceed **25 %** of the flight hardware and software cost
  - ✓ All procurements shall be explicitly justified (e.g. vs development cost and long term benefit);
  - ✓ For all procurements outside Czech, preference to **European suppliers**
- That the cost of foreign CFIs that are funded from sources other than C3PFP are **NOT** to be counted as part of the cost of the mission nor towards the procurement limits of non-Czech items.

## 4. Type c) Programmatic Elements

### ➤ Technology demonstration mission

- Czech industry acquires and/or masters its integration capabilities;
- Czech industry demonstrates its technologies/services to gain space heritage faster to accelerate their way to customers and market;
- Czech companies themselves demonstrate their effective and efficient cooperation complementing each other and create supply chain;
- Czech companies and academia demonstrate their effective and efficient cooperation using their natural roles;
- Technologies developed for the mission, provided services and/or capabilities acquired during the mission will help to develop other industrial sectors or can be put or used to non-space markets.

## 4. Type c) Programmatic Elements

- **Technological/application mission focused on meeting requirements of state users.**
  - The Czech Republic increases its reputation and visibility on a global scale and depending on the concrete focus of the mission may increase its strategic value (in military, intelligence, crisis management etc.);
  - Czech industry acquires and/or masters its integration capabilities;
  - The Czech Republic strongly demonstrates broader application of capacities and capabilities of its industry and academia, including extended use of their technologies and services developed so far;
  - Czech companies themselves demonstrate their effective and efficient cooperation complementing each other and create value chain;
  - Czech companies and academia demonstrate their effective and efficient cooperation using their natural roles.
  
- **Mission budget:** For activity Type c) the mission budget (Cost at Completion) limit is not set, however, the tenderer should consider the **overall allocation to activity types a), b) and c), which is 30 MEUR for 2020-2025.**

## 4. Type d) Programmatic Elements

- **Technological/scientific mission focused on disruptive activities or perspective activities with growing attention and interest like utilisation of space resources, space debris removal, in-orbit servicing, planetary defence, space weather etc.**
- The Czech Republic increases its reputation and visibility on a global scale and awakens an interest of main players in further international cooperation;
- Czech industry acquires and/or masters its integration capabilities;
- Czech academia demonstrates its scientific excellence and increase its competitiveness vis-à-vis foreign counterparts;
- The Czech Republic strongly demonstrates broader application of capacities and capabilities of its industry and academia, including extended use of their technologies and services developed so far;
- Czech companies themselves demonstrate their effective and efficient cooperation complementing each other and create value chains;
- Czech companies and academia demonstrate their effective and efficient cooperation using their natural roles.

## 4. Type d) Programmatic Elements

- The call is not intended for national contributions to ESA Science programme missions (PRODEX is the baseline programme for this)
  - The scientific excellence is mandatory criteria for selection.
  - Tenderers' teams shall be composed of both Scientists and Industry, integrating Scientific and Industrial Capacities in the Czech Republic.
  - The proposals shall not duplicate or overlap the current or planned scientific missions that ESA, NASA or another space agency has already committed to.
- **Mission budget:** For activity type d) the mission budget (Cost at Completion) **should not exceed 30 MEUR** (the desired CaC of one mission is, however in the order of 15 MEUR).

## 4. Type d) Evaluation

While Type c) proposals will undergo a normal ESA Tender Evaluation Process (see later slides), Type d) activities shall have an enhanced process that addresses the **Scientific value for money/ Scientific excellence of the proposal**.

- The entire proposal will be evaluated by the TEB according to the criteria in the cover letter
- PART A of the proposal (Overview and Technical approach) will be evaluated, independently and in parallel by a Tender Evaluation Panel (TEP) that will entail a scientific peer review of scientific excellence.
- The Panel will include scientists external to ESA. This panel report will be provided as a separate standalone assessment to the Czech Third Party Framework Project Committee and shall not be taken into account in the TEB marking.
- When submitting a proposal for Type d) activities, be aware that Part A will be shared with this science group (i.e. external to ESA). Part B (management, costing, planning, contracts) will not be shared with the science group.

## 4. The TEB

No.	Evaluation Criterion	Weighting Factors %
1	Objectives, mission definition, scientific and technical requirements, baseline design and technical feasibility and risks of the entire system. The adequacy of the scope and programme of work, background and experience of the team, for the completion of the phase O/A/B1 work.	40%
2	Compliance to the programmatic conditions and goals of the call, including the extent to which the scientific and industrial integration is achieved, the long term benefit to Czech Republic in terms of impact and visibility for science and industry and the procurement approach.	30%
3	Adequacy of management approach; Credibility of the cost estimation (for the full mission) and the proposed schedule;	20%
4	Compliance with the administrative tender conditions of the call for proposals and acceptance of the draft contract.	10%



## 4. The TEB

### Marking

Taking into account the Weighting Factors, the importance of the Criteria in descending order is:

- Criterion 1 – Technical
- Criterion 2 – Programmatic
- Criterion 3 – Management and cost
- Criterion 4 – Legal and administrative

### ESA Marking:

100 Perfect

90 Excellent

75 Very good

60 Good

50 Fair

40 Barely acceptable

<40 Below acceptability

## 4. The TEB

### Selection

The Czech Third Party Framework Project Committee performs the programmatic review:

1. Takes into account ESA summary TEB report containing the summary technical evaluation, marks, ranking and recommendations,
2. Takes into account ESA summary TEP report containing the scientific peer review (for TYPE d) only)
3. Considers programmatic priorities and national interests,
4. Recommends activities for implementation.

## 5. Statement of Work – Type c)

### ITT2 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type c)

#### Objectives:

The ambitious project is focussed on **Space Technology** and **Industrial Capability** building and **in-orbit demonstration**.

The objective of the current activity is the Phase 0/A/B1 phases of development of the mission, demonstrating the **feasibility** of a proposed **baseline design** as well as developing the **detailed planning and costing** for the remainder of the mission development and operation (Phase B2/C/D and E/G) sufficient to form the basis of a proposal for that work.

Mission can be:

- A full technology and capability demonstration **mission** for industrial capabilities, products and/or services
- A **hosted payload**/ flight demonstration for a complex equipment and/or service.
- Development and flight demonstration of a highly complex **sub-system** for a third party mission;

Type c) projects shall meet at **least one**, of the following objectives (the more the better!):

- Forms **industrial cooperation and supply chains** within the Czech Republic to supply ESA and commercial missions.
- Provides an operational **service to a Czech state user**.
- Acts as a catalyst for the private investment in the development of new infrastructure for MAIT (Manufacturing, Assembly, Integration and Test) operations.
- Directly leads to **recurring business**, especially from outside of Czech Republic.
- Have spin off benefits in non-space business.

## 5. Statement of Work – Type c)

### ITT2 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type c)

#### Work logic:

- The work logic closely follows Phase 0/A/B1 as defined in ECSS-M-ST-10C
- Each Phase is 1 task
- Formal ESA review at end of each Phase/ Task

#### Key elements:

- Finalise mission statement, generate of the mission requirements (functional, technical, management and PA/QA requirements), perform concept level trade offs, select baseline concept.
- Identification of the (sub)system concepts to comply with the mission requirements, perform sizings and analysis and simulations to demonstrate feasibility
- Identification, planning and costing of all activities and resources needed to develop and operate both the space and ground segments of the project up to and including disposal.
- Development of a Make/ Buy plan and team organisation for Phase B2 to Disposal (EOL)
- Assess the key technical and programmatic risks and develop plans to mitigate them
- Assess all legal necessities and plan to address them
- Prepare documentation for procurements in Phase B2

At the end of the study, the bid team should be ready to perform Phase B2 to EOL for a firm fixed price

## 5. Statement of Work – Type c)

### ITT2 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type c)

#### Task 1: PHASE 0 – Mission Analysis and Key Requirement Identification

The work will cover:

- Mission statement and objectives: Iteration from the proposal
- Preliminary Technical Requirements Specification: Including Management and PA/QA with reference to standards
- Mission Concept Description, Trade Off and Justification document: Selection of a mission concept and conceptual design
- Preliminary project master plan
- Preliminary cost at completion budget
- Preliminary make / buy plan: At high level (element/ sub-system)
- Risk Assessment: Technical, schedule, management etc.... (i.e. all possible risks to the project)
- Core Team Organisation: Start to identify the full team needed for Phase B2 and onwards

*“Space Mission Analysis and Design”* by Larson and Wertz (Microcosm Press)  
is highly recommended reading

## 5. Statement of Work – Type c)

### ITT2 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type c)

#### Task 2: PHASE A – Feasibility

Focus is on the analysis of the design concepts for each element of the mission for sizing, costing and feasibility/ performance demonstration as well as next step of managerial preparation for following Phases.

#### Management:

Project Management Plan, Engineering (development) Plan and PA and QA Plan to answer to the requirements from Task 1. Master plan (schedule further development), Risk Assessment iteration (including Risk Management Plan). Establish a detailed cost at completion, removing estimates. Iterate the Make / buy plan to more detail.

#### Technical:

- Mission Concept and Architecture Trade-Off, selection of the architecture
- Mission Concept and Architecture design iterations (Ground and ops, Space segment, payload)
- Mission Concept and Architecture Feasibility Assessment (simulations, analysis, sizings etc)
- Technical Requirements iteration to element level (e.g. Ground and ops, Space segment, payload)
- Launcher selection, requirements and interfaces

## 5. Statement of Work – Type c)

### ITT2 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type c)

#### Task 3: PHASE B1 – Preliminary Definition

In Phase B1 the focus is on preparation for the next phases, including procurements and starting work with the full team, while the level of design detail is further improved.

#### Technical Work:

Iterate to next level the Design (and justification), develop the key Interface Control Documents and perform the first steps of the FDIR design. The Technical Requirements Documents will be finalised and the Verification Plan formed.

#### Management Work:

The Procurement Packages (SoW and Technical specifications) for all main procurements/ sub-contracts foreseen in Phase B2 will be prepared. All required Tools and facilities will be identified and a plan drawn up to secure them. The Phase B2-G organisational structure will be finalised, including identification of core team (pre-selected) and open competition elements, taking inputs from a finalised Make/ Buy plan to equipment level.

The planning and costing for the Phase B2-G will be completed in detail with all key dependencies and critical paths identified.

All Legal Requirements will have been identified and a plan to become compliant drawn up.

## 5. Statement of Work – Type d)

### ITT3 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type d)

#### Objectives:

**Integrating Scientific and Industrial Capacities**, also referred to as: Technology Mission\* Integrating Scientific and Industrial Capacities or TMISIC, with the goal of also achieving **scientific return**, bringing world wide renown to Czech Republic.

This activity covers **Phase 0/A/B1** of the development of the mission and shall result in demonstrating the feasibility of a proposed baseline design as well as a detailed planning and costing for the remainder of the mission development and operation (Phase B2/C/D and E/G) sufficient to form the basis of a proposal for that work.

#### Mission can be:

- A full technology and capability demonstration **mission** for industrial capabilities, products and/or services
- A **hosted payload**/ flight demonstration for a complex equipment and/or service.
- Other such developments fitting with the spirit of the above points.

The scientific element must not duplicate or overlap with current or planned future missions of ESA or another space agency.



## 5. Statement of Work – Type d)

### ITT3 - Ambitious Projects for Czech Republic: Phase 0/A/B1 Studies, Type d)

#### Work logic and Tasks:

Follows the same structure and contents as Type c), with addition of elements related to the science aspect:

- Scientific approach, principles and objectives
- Science payload design
- Science Justification and impact
- Science Operations, data processing and later analysis

## 6. Proposal Template overview

During this presentation we go through the Type d) proposal template and will draw your attention to common mistakes and oversights in proposals. It is not a prescriptive 'do it like this' list and the material must be sensibly applied to your particular case.

There is no substitute for a good idea – this presentation will only help you to present your idea in a way it can be understood by reviewers.

Please ensure that your Proposal is compliant with the ITT conditions of tender and cover letter – each of the two ITTs is slightly different.

**REMEMBER:** ESA is only allowed to evaluate what you write in the proposal – do not assume that the reviewers have “your common knowledge” or that “it is commonly known”. We cannot evaluate intentions, “read in-between-the-lines” or guess what you mean. We are only allowed, outside of the proposal, to consult EMITS or other ESA internal information.

## 6. Proposal Template overview

### Proposal template Type c)

#### Cover Letter

#### Template:

**PART 1:** PROJECT OVERVIEW  
AND APPLICATION PART

**PART 2 :** TECHNICAL  
APPROACH

**PART 3:** MANAGEMENT PART

**PART 4 :** FINANCIAL PART +  
PSS FORMS

**PART 5 :** CONTRACT  
CONDITIONS PART

### Proposal template Type d)

#### Cover Letter

#### Template A:

**PART 1:** PROJECT  
OVERVIEW AND  
APPLICATION PART

incl. Science case

**PART 2 :**  
TECHNICAL  
APPROACH

#### Template B:

**PART 3:**  
MANAGEMENT  
PART

**PART 4 :** FINANCIAL  
PART + PSS FORMS

**PART 5 :**  
CONTRACT  
CONDITIONS PART

This presentation will focus on Proposal Template Type d)  
but most elements are common

## 6. Proposal Template overview

### Common Mistakes

VERY BRIEF summary of SOME of the most common mistakes seen that apply also to these ITTs:

#### Criteria 1

1. Objectives (mission goals) difficult to understand, not clearly stated or cannot be demonstrated to have been achieved.
2. Poor or missing technical requirements (e.g. not covering the key points, not quantified or verifiable)
3. Poor or missing engineering approach (e.g. Baseline concept not described)
4. Poor or inadequate program of work (e.g. not covering all of the SoW, SoW work not expanded on)
5. Inconsistency between text, flowchart, WPD and GANTT.
6. Missing experience or facilities and/or having no plan on how to acquire it.
7. Poor WPD (e.g. insufficient detail to understand the full scope of the work)
8. Poor WBS (e.g. too few WPD, WP with tasks for more than one entity)

#### Criteria 2

1. Not meeting the programmatic constraints of the cover letter (e.g. developing industrial teams, cooperation industry/academia, no clear benefit for the country, no user involvement in services and applications proposals, WBS not following ECSS-M-ST-10C, etc.). **READ THE COVER LETTER CAREFULLY AND CREATE A CHECKLIST!!!**
2. IPR poorly addressed (e.g. not clear who will own it)

## 6. Proposal Template overview

### Common Mistakes

VERY BRIEF summary of SOME of the most common mistakes seen as applicable to these ITTs:

#### Criteria 3

1. Poor management (e.g. QA/PA aspects missing, sub-contractor control missing or including a steering group or management 'team' instead of an all powerful Project Manager)
2. Poor planning (e.g. insufficient detail, no dependencies shown, too much in parallel, activities too long to be monitored well)
3. Non-credible costing (e.g. hours not corresponding to described scope work in WPD, procurement of inappropriate items, excessive travel costs, missing the mandatory 10% contribution, applying profit)
4. Poor deliverables (e.g. missing deliverables, no added value over those required in SoW)

#### Criteria 4

1. Some of the documents not signed or missing (e.g. Cover Letter, PSS Forms)
2. Introducing changes on the Proposal Template
3. Introducing changes to the clauses of the Contract.
4. Disagreeing with the Draft Contract (that you accepted by signing the Cover Letter)
5. Leaving incomplete part of the essential information (e.g. milestone payments, deliverables, leaving empty the IPR section, management plan section or any other section – please fill it: if it is the case say that it does not apply and why)
6. Not providing full details of Background Intellectual Property to be used and specifying the deliverables that will be affected by the Background Intellectual Property.

## 6. Proposal Template overview – Type d) Cover Letter

Image of first half page

Appendix 4 to  
ESA AO/1-10431/20/NL/GLC/hh  
Proposal Template  
Page 1

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**ESA TENDERING STANDARDS FOR  
“EXPRESS PROCUREMENT” (“EXPRO” & “EXPRO+”)**

**COVER LETTER and PROPOSAL TEMPLATE v7.9**

*[N.B. Use this template to prepare your proposal. Once the proposal is complete and internally validated, please remove all captions in red colour, delete all ESA headers/footers, add your own logos, headers/footers prior to finalising your proposal for submission to ESA. The proposal shall be submitted in a searchable and indexed PDF file for easier viewing.]*

*When submitting to the “esa-star” system, separate this template according to the required proposal elements and upload those individual elements accordingly]*

**[COVER LETTER]**

From: ..... *(Tenderer to insert name of the company/institute submitting the tender)*

Date: ..... *(Tenderer to fill in the date of the proposal)*

To: EUROPEAN SPACE AGENCY (ESA),  
  
The European Space Research and Technology Centre (ESTEC),  
Keplerlaan 1,  
2201 AZ Noordwijk,  
The Netherlands,  
  
*Att.: Mr Gian Lorenzo Casini (IPL-PTE)*

Subject: **ESA AO/1-10431/20/NL/GLC/hh  
Ambitious Projects (Mission Proposals) for the Czech Republic:  
Phase o/A/B1 Studies (Activity Type D) in the Project  
Arrangement for a Framework Project Implementing ESA’s  
Support Of Space-Related Activities in the Czech Republic**

Category: ESA Express Procurement Plus – [EXPRO+]

Our ref.: Proposal No. .... *(Tenderer to insert its proposal reference number)*

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Dear Sir/Madam,

With reference to the above Invitation to Tender (ITT), we are pleased to present this proposal:

## 6. Proposal Template overview – Type d) Cover Letter

### Contains details on:

- The team submitting the proposal
- Cost of the proposal
- Duration of the proposal
- Who is the point of contact
- Acceptance of contract conditions
- Statement concerning export restrictions
- Statement on free competition
- Legal representative
- Validity of the proposal
- etc.

**It MUST be signed**

**REMEMBER:** by signing the cover letter you are accepting the contract conditions – so do not, in the proposal, state that you want to modify them.

## 6. Proposal Template overview – Type d) Cover Letter

### Hints and tips: The Title

To aid reviewers, take care with the title of your proposal. It should prepare them for what they are about to read and clearly identify your proposal:

- Keep it short
- Keep it clear
- Make it descriptive and relevant
- Do not waste time to think up overly long titles or try to force acronyms for the project.

### Examples

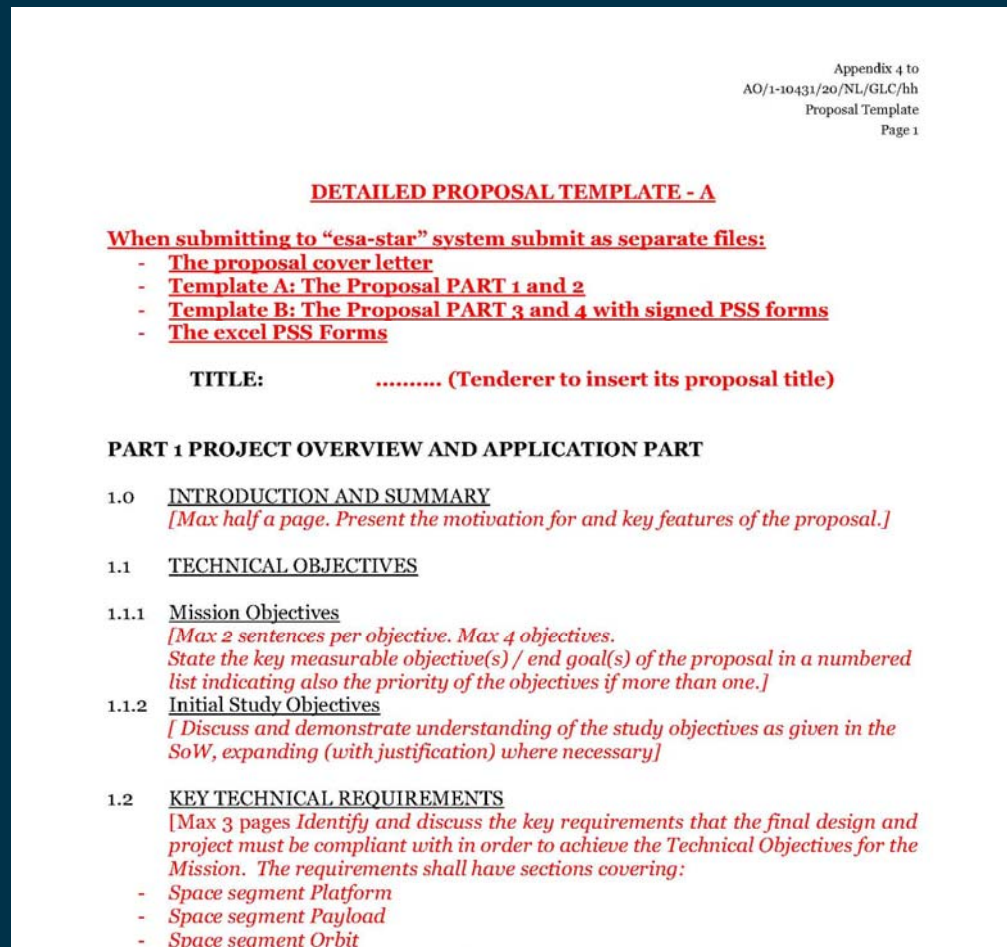
- Simple and concise – but good: *“Increasing coffee sales by responding to customer demands”*
- Overly long and unnecessarily complex: *“Investigating and testing various methods of maximising financial revenue and fiscal returns resulting from bean derived hot beverages sales in a customer focused environment using direct market feedback and other methods.”*
- Trying too hard for an acronym: *“Cash maximising Objectives for increased Financial and Fiscal returns in a European Environment for HOt Beverages Sales (COFFEE HOBS)”*



# 6. Proposal Template overview – Type d)

## Template A: Part 1 – Project Overview and Application Part

Image of first half page



# 6. Proposal Template overview – Type d)

## Template A: Part 1 – Project Overview and Application Part

### PART 1 PROJECT OVERVIEW AND APPLICATION PART

#### 1.0 INTRODUCTION AND SUMMARY

*[Max half a page. Present the motivation for and key features of the proposal.]*

#### 1.1. TECHNICAL OBJECTIVES

##### 1.1.1. Mission Objectives

*[Max 2 sentences per objective. Max 4 objectives.*

*State the key measurable objective(s) / end goal(s) of the proposal in a numbered list indicating also the priority of the objectives if more than one.]*

##### 1.1.2 Initial Study Objectives

*[ Discuss and demonstrate understanding of the study objectives as given in the SoW, expanding (with justification) where necessary]*

#### 1.2 KEY TECHNICAL REQUIREMENTS

*[Max 3 pages Identify and discuss the key requirements that the final design and project must be compliant with in order to achieve the Technical Objectives for the Mission. The requirements shall have sections covering:*

- *Space segment Platform*
- *Space segment Payload*
- *Space segment Orbit*
- *Ground segment Mission control*
- *Ground segment data processing*
- *Project Requirements (Project team, Schedule, Cost, lifetime, reliability etc)*
- *When appropriate the technical requirements shall be associated to a quantitative value or range. Provide a justification / reasoning for such technical requirements with regard to how they are derived from the objectives. Only the highest level requirements need to be provided as the study shall derive the detailed requirements.]*

## 6. Proposal Template overview – Type d)

### Template A: Part 1 – Project Overview and Application Part

#### Hints and tips: The Objectives

The Objective is what you hope to achieve with the proposal (i.e. the end goal) of the mission (not just the Phase 0/A/B1 study) and the key constraints or conditions under which that should be met. This is sometimes called the mission goal in texts. In theory, everything you propose to do should be derivable from this statement.

1. Objectives should:
  - ✓ Be short (1 to 3 sentences)
  - ✓ Be clear and verifiable
  - ✓ Contain the core essence
2. Objectives should not:
  - ✓ Describe the work to be done, the work flow or how to do it
  - ✓ Describe the nice to haves/ options
  - ✓ Be overly long and descriptive

*“...this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to Earth”* – **this was the objective stated for a 24 Billion dollar project.**

In ‘Application’, ‘Technical Business Case’ and ‘Science Case’ parts of the proposal you should justify WHY this is a good objective and how it fits the programmatic constraints!

## 6. Proposal Template overview – Type d)

### Template A: Part 1 – Project Overview and Application Part

#### Hints and tips: The Requirements

For proposals, requirements are the key measureable features that the product or the work must meet in order to be declared successful. They should take into account what the end user needs/ considers important.

#### Requirements are:

- ✓ Clear, verifiable, quantitative and measureable.
- ✓ Requirements tell you what needs to be achieved / realized
- ✓ Requirements are what we all use to measure if the objectives were achieved

Note: Ideally requirements will also be justified in the proposal.

#### Requirements are not:

- ⊗ The facilities, tools, experience or personnel that you need to perform the work.

Note: This are first iteration, highest level requirements only – your KEY requirements that must be achieved if the objective is to be achieved. The requirements will be iterated in detail during the work. For example, a science case looking at the solar cycle will likely need at least one full solar cycle: so an 11year lifetime would be a key requirement.

Examples... (next slide)

## 6. Proposal Template overview – Type d)

### Template A: Part 1 – Project Overview and Application Part

#### Hints and tips: The Requirements

Example (in a cafeteria):

#### Well formulated requirements:

- ✓ The coffee shall be served at a temperature between 85 and 90°C.
- ✓ The coffee shall be delivered to the customer within 4 minutes of being ordered.
- ✓ The coffee shall be dispensed in 200ml +/- 10ml servings.
- ✓ The customer shall receive a biscuit with each coffee, included in the price of the coffee

#### Poorly formulated requirements:

- The coffee has to be a good temperature
- The coffee must be served quickly
- The coffee shall have big serving sizes
- We want people to have biscuits with their coffee

#### Not a requirement at all in this sense:

- ⊗ We need to buy a kettle and coffee cups
- ⊗ We need to hire someone to make the coffee
- ⊗ We should do a trade off on what biscuits to give
- ⊗ We shall get a coffee sellers license

## 6. Proposal Template overview – Type d)

### Template A: Part 1 – Project Overview and Application Part

#### 1.3 SCIENCE CASE

##### 1.3.1 State of the Art

*[Max 1 page. Present and discuss the current state of art / knowledge in the field, identifying prior relevant research studies and results. Identify the current scientific leaders in the field].*

##### 1.3.2 Science Case

*[Max 3 pages. Briefly describe the scientific background to the proposed activity. Outline the key science to be performed, its relevance and the expected scientific impact. Estimate, with justification, the impact on Czech Science including the number of PhDs and publications expected as well as follow on work. Will the proposed activity enable or open-up new areas/ opportunities for Czech science]*

#### 1.4 TECHNICAL BUSINESS CASE

##### 1.4.1 State of the Art

*[Max 1 page. Present and discuss the state of the art in Europe and World-wide in a manner that can be compared to the Technical Requirements and Technical Baseline. Identify the key current market leaders].*

##### 1.4.2 Technical Business Case

*[Max 3 pages. Outline the business plan, identifying which aspects of the mission will result in recurring products or capabilities and for those items address the recurring long term potential market (in terms of number of units and sales value) – with justification vs the State of the Art discussion and Key Technical Requirements – for the key technology(ies) to be developed as part of the mission.*

## 6. Proposal Template overview – Type d)

### Template A: Part 1 – Project Overview and Application Part

#### Hints and tips: Science case

This section shows how the proposal addresses the key programmatic constraints relating to Science and academic/ industrial cooperation are addressed.

#### State of the Art

- What is the current state of art / knowledge in the field, identifying prior relevant research studies and results.
- Identify the current scientific leaders in the field.
- Show how this work will complement or fill gaps in current work and demonstrate it will **not** duplicate or overlap planned efforts/ missions by space agencies.

#### Science Case

- Briefly describe the scientific background to the proposed activity.
- Outline the **key science (and principles)** to be performed, its relevance and the **expected scientific impact**.
- Estimate, with justification, the impact on Czech Science including the number of PhDs and publications expected as well as follow on work.
- Will the proposed activity enable or open-up new areas/ opportunities for Czech scientists?
- How will the work promote **industry and academia cooperation**?
- Don't forget to make it clear **why a s/c is needed** to further the science (instead of other approaches).

## 6. Proposal Template overview – Type d)

### Template A: Part 1 – Project Overview and Application Part

#### Hints and tips: Technical Business Case

This section shows how the proposal addresses the key programmatic constraints of developing new capabilities, generating recurring business (especially in ESA programmes) and developing value added supply chains. This business case should help to guide the make/buy plan during the running of the activity by identifying the key elements that must be developed in Czech Republic

#### State of the Art

- Who are the current competitors in the technical capabilities on which you are focussing?
- What key features must you match or improve on?

#### Technical Business Case

- What is the business plan?
- What are the key technologies and capabilities that you will focus on that will result in recurring business and what is the available market?
- What Czech supply chains will be formed?
- How will industry and academia cooperate?
- In the case of Type c), also describe and justify the service to be provided and to whom.



# 6. Proposal Template overview - Type d)

## Template A: Part 2 – Technical Approach

### PART 2 : TECHNICAL APPROACH

#### 2.1 TECHNICAL BASELINE AND TECHNOLOGY READINESS LEVEL

##### 2.1.1 Technical Baseline

*[Max 8 pages. Present a first iteration of the baseline design covering:*

- Mission Overview, including mission description, launch and orbit details*
- Space Segment Platform, including conceptual design, block diagrams, first iteration of make/ buy plan at subsystem/ equipment level, preliminary dimension and mass/ power budget. Identify all critical technologies / equipments.*
- Space Segment Payload*
- Ground Segment and Operations]*

##### 2.1.2 Technical Readiness level

*[Max 1 page. Identify, in tabular format and with justification, the current level of maturity, in the form of TRL, of all key elements of the mission (Space segment, Payload, Ground segment and, where relevant, key sub-systems equipment and technologies)]*

#### 2.2 ENGINEERING APPROACH

Engineering approach for the study

##### 2.2.1 Technical Steps

*[Present and discuss in detail the technical steps to achieve the objectives of the study, outlined under section 1.1. Note: the steps shall be consistent with those reflected in the Work Logic Diagram in section 2.2.2]*

##### 2.2.2 Proposed Work Logic

*[Insert a flow chart showing the logical flow of work from step to step, with reviews, dependencies and iteration loops (as required). Note that this shall be consistent the WBS and the schedule]*

##### 2.2.3 Implementation aspects

*[Discuss the how the technical steps will be implemented, any key analyses or simulations to be performed or methodology to be used, the reviews and their scope, and how the work performed will be validated. The key tools and references to be used shall be identified as shall any breadboarding activities.]*

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Engineering Approach - Baseline Design

1. What is your proposed technical solution/ baseline?
  - a) Provide sufficient detail for it to be understood by someone else.
  - b) Provide an overview, at high level, of the baseline concept for the mission on which you have based the assumptions for your proposal. It is expected that this will be iterated and changed during the work. (see the proposal template)
  - c) Be sure to cover the key constraints or drivers (pointing performance, agility, data link) needing to be met.
  - d) Use diagrams/ flow charts and tables to the maximum extent

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

Hints and tips: Engineering Approach - Technical Readiness level

Recommended to provide this in a Tabular form, something like:

Mission Element	Start TRL	Discussion
Ground Station	7	We baseline the use of the existing ground station at xxx with only revalidation needed.
Payload	3	We have a lab breadboard demonstrating the basic principles but not designed for a space environment.
Processing Chain	1	Only the concept exists, however, this will be iterated to TRL 4 during the Phase A and B1
...		

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Engineering Approach: Technical Steps and Implementation

Note that the Technical Steps, the Workflow logic and the WBS/ WPD are very strongly linked and should be fully consistent. You should **follow the SoW** but **add detail** and **suggest deviations**/ changes where appropriate for your concept.

1. What are the key stages/ steps in the work/activity? - *Confirm you follow the SoW, add detail where needed*
2. What is the goal/ purpose of each step? – *Show understanding of the SoW*
3. What will be done in each step? – *Add specific tasks relevant to your concept*
4. How will each step be assessed, controlled, reviewed or validated? – *Show understanding of the SoW*
5. How does each step relate to the others? – *Also for the work elements **within** a step*
6. If there are subcontractors: How is the work broken up between companies? Why? – *Keep a clear separation between entities*
7. What are the key trade offs specific to you?

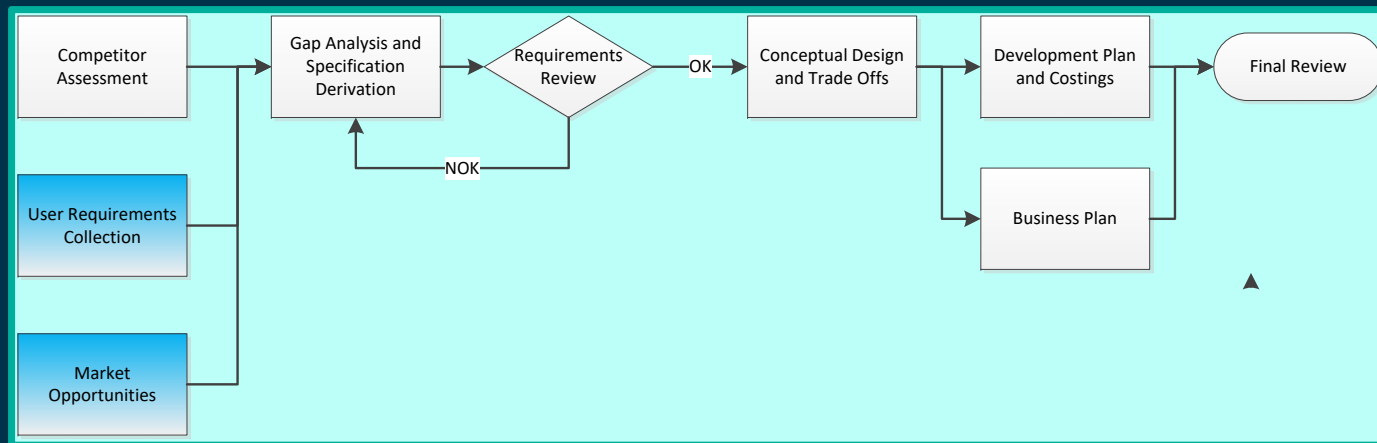
## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Work Logic Flowchart

The Flowchart is intended to show the order in which the work needs to be performed (i.e. the logic) and the checks and balances put in place, i.e. work flow, dependencies, reviews (internal/ external)

Should relate directly to the Work Breakdown Structure (WBS), Milestones and GANTT chart.



- ✓ TIP 1: Separate the work of different entities (colour coding helps)
- ✓ TIP 2: Add detail to the SoW, show next layer down from SoW tasks
- ✓ TIP 3: Ensure consistency with rest of proposal (GANTT, WBS, WPD, Technical Steps)

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Engineering Approach: Technical Steps and Implementation Aspects

##### Implementation

1. Builds on your baseline design and technical steps
2. Shows HOW the technical steps will be performed and the methodology to be used
3. Identify key analyses and tools/ references you will use
4. Discuss any additional work needed over that in the SoW (e.g. Breadboarding)
5. Scope the level of detail that the work will be done to
6. Define any philosophies already decided that drive the work (e.g. that drive the make/ buy plan)

# 6. Proposal Template overview - Type d)

## Template A: Part 2 – Technical Approach

### 2.3 KEY TRADE OFFS, PROBLEM AREAS AND RISKS

#### 2.3.1 Key Trade Offs

*[Identify and discuss the key trade-offs foreseen to be needed during this first study phase in order to mature the technical baseline.]*

#### 2.3.2 Key Potential Problem Areas

*[Identify and discuss the key areas of **technical difficulty** and potential problems foreseen in the space segment (platform and payload), Ground Segment **and management** (e.g. schedule/ costs/ expertise/ facilities) and what work has been included in this first study phase to progress those areas.]*

#### 2.3.3 Key Technical and Schedule Risks

*[Present and discuss in the key technical and schedule risks foreseen for the implementation of the full mission and what steps will be taken during this first study phase to reduce or manage those risks, this should include long lead items.]*

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

Hints and tips: Trade Offs, Problem areas and Risks

All of section 2.3 is to assess **YOUR UNDERSTANDING** of the work

#### Trade Offs:

For **each area** (Operations, Space segment, Payload, Ground segment, Launch, Make/Buy, team...), what are the **key** driving/ defining trade offs that you need to perform in this first study for your concept/ goal?

#### Problem Areas:

What are the driving areas of technical difficulty in the work? Be specific. In elements where there are no driving areas of technical difficulty, state it. This shows you have considered the element. This should show us where you intend to focus efforts and why. Any new tasks introduced above the SoW should be as a result of one of these areas (e.g. BB activities).

Do the same for management (includes facilities, teaming, training, schedule etc.)



## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

Hints and tips: Trade Offs, Problem areas and Risks

#### Technical and Schedule Risks

- Address the Risks in **BOTH Technical and Schedule**. Address 2 aspects:
  - Risks that may arise during this study
  - Risks for the whole mission (key ones)
- Address those that cannot be pre-emptively resolved prior to the start of work.
- Discussion of risks and problems should **include a mitigation plan**:
  - What is the potential impact and what actions will you take to minimise the risk of it becoming a reality?
  - What will you do if it does become a reality?
  - Provide details to show those mitigating actions are credible and feasible.

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Problem areas and Risks

##### Good Example:

✓ “The procured coffee machine breaks down during service”

Mitigation options that will be investigated:

- a) procure a spare machine,
- b) procuring a ready source of spares
- c) ensuring a rapid call out repair service

Prevention actions:

- a) ensure regular servicing and inspection with company X who have X years experience in this
- b) Pre-procure and keep on stock the top parts most at risk of failure

##### Bad Examples:

⊗ “We don’t have someone to make the coffee and are not sure to be able to hire someone.”

⊗ “We might not be able to afford a coffee machine.”

# 6. Proposal Template overview - Type d)

## Template A: Part 2 – Technical Approach

### 2.4 PROGRAMME OF WORK

#### 2.4.1 Contents of the proposed work

##### 2.4.1.1 Work Breakdown Structure (WBS)

*[For the total scope of the activity; clearly showing each foreseen Work Package (WP) with its title and the name of the responsible company/institute. Ensure work packages are split adequately such that sub-contracted work has its own work packages. Main contractor project management activities shall be identified in the WBS]*

##### 2.4.1.2. Work Package Description (WPD)

*[Individual WPD shall be established per work package identified in the WBS, describing the following:*

- *responsible entity (only 1 entity per WP)*
- *beginning and end date of each work package (e.g.: To+1, etc)*
- *person responsible for the work package*
- *description of the activities in the work package, sufficient to understand clearly **the scope and depth of the work** being performed and justify all costings.*
- *inputs to the work package*
- *outputs of the work package*
- *the outputs to the work packages are to be identified (e.g. TN1 etc.) and shall be included in the List of Deliverables.*

*With respect to the standard requirements for management, reporting, meetings and deliverables (Appendix 1 to the Draft Contract), please include a dedicated work package for Management and Reporting. All management tasks, such as meetings, progress reports and final documentation shall be carried out under this work package.*

*For reference see ESA PSS-A20 form, available at <http://emits.sso.esa.int/emits/owa/emits.main> under Reference Documentation / Administrative Documents / PSS Forms / Issue 5.]*

# 6. Proposal Template overview - Type d)

## Template A: Part 2 – Technical Approach

### Hints and tips: WBS

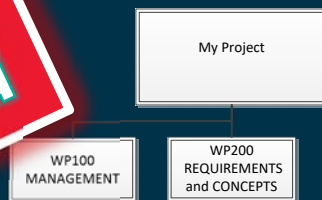
WBS is a management tool to assist the effective definition, monitoring, payment and running of the activity – if in doubt, refer to ECSS.

#### Guidelines

1. Logically structure the main Work Packages following the main tasks of the work flow (preferably 'gated' by reviews)
2. Include WP for management
3. Ensure each company has separate (sub)work packages
4. Ensure all tasks in one work package 'belong together'

#### Examples – BAD, OK, GOOD

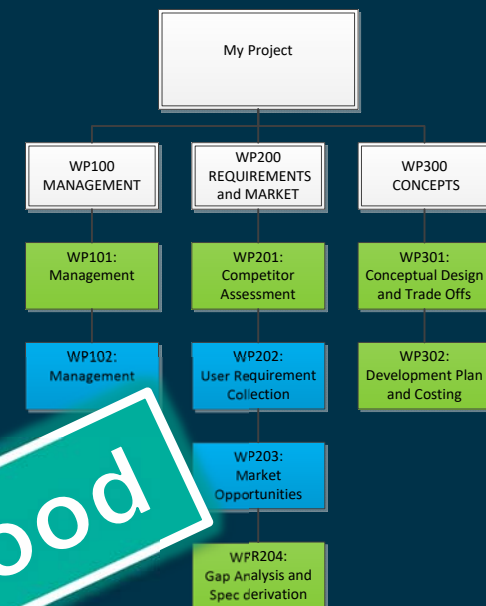
**Bad**



**OK**



**Good**



## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Work Package Descriptions

#### 1. Essential Data:

- a) Work Package (WP) Title, WP Manager, Company
- b) Start and end dates (T0+) and/or EVENT (PDR, CDR)
- c) Inputs
- d) Description of work (e.g.: tasks and sub-task)
- e) Outputs (each WP will result in a number of technical documents, for example output of WP1 (task 1.1 and task 1.2), there will be TN1.1 and TN1.2)

#### 2. TIPS:

- a) WP Manager should be responsible for the work (e.g. have suitable experience and be doing some of the work)
- b) Duration (Start: T0 + 1, End: T0 +5), not Feb 2021 type format.
- c) Describe work (bullets) at sufficient detail to **understand the full scope of work** e.g. level of analysis performed, work flow within the WP, reviews to be held etc. Avoid generic ambiguous high level descriptions (e.g. 'Perform design')
- d) Outputs are all deliverables produced, ensure consistency with Deliverables list and deliverable identifiers.
- e) If in doubt – refer to ECSS template

# 6. Proposal Template overview - Type d)

## Template A: Part 2 – Technical Approach

### Hints and tips: Work Package Descriptions – Examples

WP 1100

**WP Title: Management Phase 1**  
 Company: My Big Coffee Co.  
 WP Manager: C.Puccinno


Start Event: Kick Off Meeting (KOM)      Planned Date: T0  
 End Event: Final Presentation      Planned Date: T0+14M

Inputs: Proposal, KOM Minutes

Tasks:

- Organization of meetings and reviews
- Weekly team meetings
- Monthly progress meetings with sub-contractors
- Produce Progress Reports for ESA
- Schedule update using Microsoft Project
- Identify schedule slippage and instigate mitigation actions
- Quality control of deliverables prior to delivery
- Monitoring and control of actions and action item list
- Evaluation of risks and management of mitigating actions
- Cost monitoring and CCN handling (as required)
- Production of Final Technical Data Package
- Final Presentation

Outputs: Progress reports (D1.1), Final Report (D1.2), Contract Closure Documentation (D1.3)



WP 1100

**WP Title: Management**  
 WP Manager: A.Nonymous

Start Event: Start of project      Planned Date: 1<sup>st</sup> April 2017  
 End Event: End of project      Planned Date: 25<sup>th</sup> Dec 2018

Inputs: None

Tasks:

- Manage the project
- Control the team
- Write reports
- Produce final documents
- Support some technical work
- Participate in meetings

Outputs: Management documentation, final deliverables



## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### 2.5. BACKGROUND OF THE COMPANY(IES)

*[Present an overview of each entity involved in the work addressing the number of personnel; the year in which the entity was established; location of sites; and briefly describe the directly **relevant** experience of each entity with regard to the work allocated to them as part of the study and full mission. Any missing experience shall be explicitly identified.]*

#### 2.6. FACILITIES

*[Identify the facilities (including s/w tools) required to perform the proposed work for this study.]*

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Background and Experience

We are only interested in **DIRECTLY RELEVANT** background and experience.

Silly Example:

1. **Directly relevant** experience for a Coffee maker: Having made coffee before for themselves or having made multiple types of coffee in a café
2. **Partially relevant** experience for a Coffee maker: Having made other (non-coffee) hot beverages, having worked in a café where coffee was made, but not actually making the coffee.
3. **Non-relevant experience** for a Coffee maker: Cleaning the café, playing football, driving a car

**Do not waste space in the proposal with non-relevant experience.**

Relevant patents, papers or publications could be included in Annex(es) (not counted for the page limit) but don't drown us in these – include only the MOST relevant ones.

#### MISSING EXPERIENCE:

If the people or bidding team is missing key background, experience or knowledge – **identify this yourself and explain how you will get it**. Do not hide it or just hope we don't spot it! Much better for you to identify yourself and secure use of an expert consultant or suitable training and allow time for this.



## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Facilities

Facilities are the things needed **in order to complete the work proposed**. You need to identify *what you need* for the proposed work and *whether you have it*, or *how you gain access* to it.

#### 1. Example Facilities

- ✓ Test equipment
- ✓ **Specialist design and analysis software**
- ✓ Specialist computing facilities
- ✓ Specialist manufacturing facilities

#### 2. Examples of things **NOT** considered Facilities:

- ⊗ Your building and address
- ⊗ Your car park
- ⊗ Your desks and office furniture
- ⊗ Standard computers, office s/w and printers – we assume you have these!

## 6. Proposal Template overview - Type d)

### Template A: Part 2 – Technical Approach

#### Hints and tips: Facilities

**Bad**

#### Coffee Shop Example

Sooper Dooper Coffee Co. has a shop with chairs and tables, we have toilets for customers, a cash desk, brush and several mops. We will need to buy more coffee cups and change the cash desk software.

**Good**

#### Coffee Shop Example

Sooper Dooper Coffee Co. has a coffee shop and all facilities and infrastructure to supports its nominal operation. For this activity, use of some specific facilities will be needed:

- Coffee consistency analyser (WP3): Will be procured under this activity as it is needed continuously.
- High pressure burst tester (WP2): Will be rented from 'Pressure test Co.' as required, it is only expected to be needed once.
- Super Nozzle Cleaner (WP4): Will be designed and manufactured as part of this activity
- Coffee CAD Development Software (WP2): We already have 2 full licences.

# 6. Proposal Template overview - Type d)

## Template B: Part 3 – Management Part

Image of first half page

Appendix 4 to  
ESA AO/1-10431/20/NL/GLC/hh  
Proposal Template  
Page 1

### DETAILED PROPOSAL TEMPLATE - B

When submitting to “esa-star” system submit as separate files:

- The proposal cover letter
- Template A: The Proposal PART 1 and 2
- Template B: The Proposal PART 3 and 4 with signed PSS forms
- The excel PSS Forms

TITLE: ..... (Tenderer to insert its proposal title)

### **PART 3 MANAGEMENT PART**

#### 3.1 TEAM ORGANISATION AND PERSONNEL

##### 3.1.1 Proposed team

##### 3.1.1.1 Overall team composition, key personnel

*[Provide an organigram that describes the overall team composition, including participants from all Sub-contractors, if any, and including all key (i.e. having a major role within the team and/or being responsible for one or more WPs, see note here-under) and non-key personnel. The organigram shall clearly show reporting lines, the tasks, position, authority and name of the persons proposed for the work, and in particular the study/project manager and the contracts officer.*

*Provide details and justification regarding the role and responsibilities of the subcontractor(s), if any as well as the role and responsibilities of each Key personnel]*

NOTE: A “key person” is a person, who substantially contributes, in terms of effort and knowledge, to the work carried out under a Contract and who is explicitly nominated to perform such duties. Key persons are individuals with a certain degree of seniority whose knowledge, reputation, and/or skills in the relevant areas or disciplines are critical to achieving the objectives of the Contract.

# 6. Proposal Template overview - Type d)

## Template B: Part 3 – Management Part



### 3.1 TEAM ORGANISATION AND PERSONNEL

#### 3.1.1. Proposed team

##### 3.1.1.1. Overall team composition, key personnel

*[Provide an organigram that describes the overall team composition, including participants from all Sub-contractors, if any, and including all key (i.e. having a major role within the team and/or being responsible for one or more WPs, see note here-under) and non-key personnel. The organigram shall clearly show reporting lines, the tasks, position, authority and name of the persons proposed for the work, and in particular the study/project manager and the contracts officer.*

*Provide details and justification regarding the role and responsibilities of the subcontractor(s), if any as well as the role and responsibilities of each Key personnel]*

*NOTE: A “key person” is a person, who substantially contributes, in terms of effort and knowledge, to the work carried out under a Contract and who is explicitly nominated to perform such duties. Key persons are individuals with a certain degree of seniority whose knowledge, reputation, and/or skills in the relevant areas or disciplines are critical to achieving the objectives of the Contract.*

##### 3.1.1.2 Position and responsibilities of each of the team members within his/her own company’s (or institute’s) and within the proposed team

Key Personnel name	Company	Position within his/her company	Position within the proposed Team	List of responsibilities
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....



## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### 3.1.1.3 Time dedication of key personnel

*[For each key personnel identified in 2.1.1.1 above, provide a time percentage dedication per year]*

Key Personnel	Total Hours dedicated to the Project	Total Working Hours during Project Timeframe	% of Total Working Hours dedicated to the Project
[Function] [Name]....	X	Y	$(X/Y)*100$
[Function] [Name]....			
[Function] [Name]....			
...			
TOTAL			

#### 3.2 CURRICULA VITAE

*[Concise CVs including only the **directly relevant** information for the proposed activity for all key personnel and showing that all major elements of expertise needed are present in the team – or how you will get them]*

#### 3.3 RATIONALE OF THE PROPOSED INDUSTRIAL ORGANISATION

*[Provide a justification for the choice of the entities making up the consortium, ensure compliance with the programmatic constraints of the cover letter..]*

## 6. Proposal Template overview - Type d)

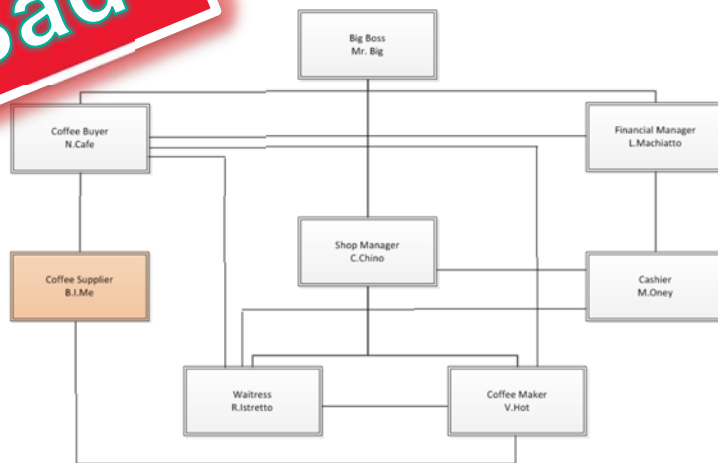
### Template B: Part 3 – Management Part

#### Hints and tips: Overall Team Organisation and Personnel

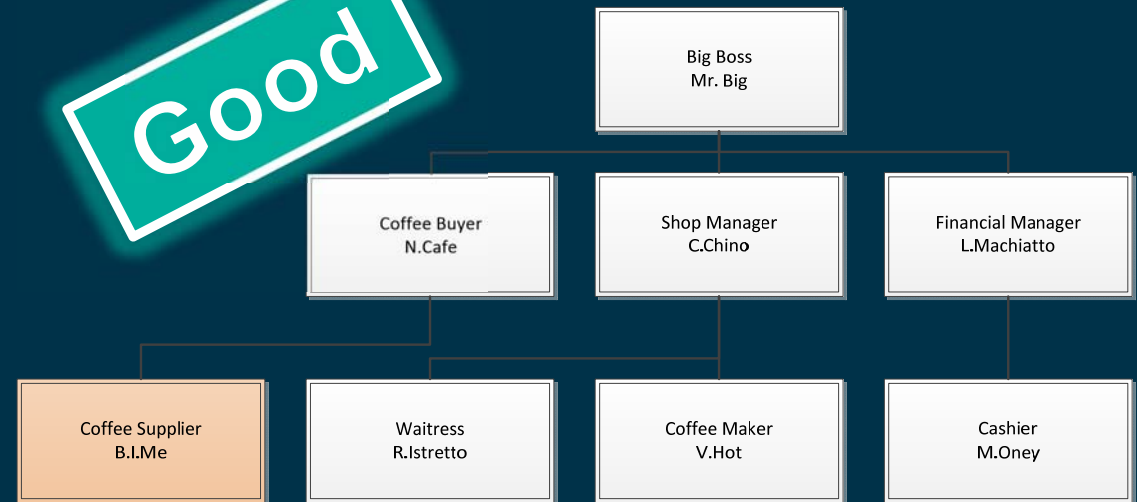
Provide an organigramme for the **full Project Team**, this is intended to show the reporting lines and responsibility/delegation. It does not show who talks to whom on a daily basis.

- Each sub-contractor should have 1 formal contact point
- **NO steering committees** in ESA contracts – Project Manager (in discussion with ESA) is responsible for the direction, quality of work, decisions and timeliness.
- Use colour coding (same as for WBS)

**Bad**



**Good**



## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### Hints and tips: Time Dedication of Key Personnel

1. A Key Personnel is someone playing a **leading role** in the activity OR providing **irreplaceable experience** and expertise.
2. Anyone contributing **<10%** of their time is being used very inefficiently and is by definition **NOT** playing a leading role. (Unless due to unique expertise) – these are not key then...
3. If someone is claimed to be a key personnel because they have irreplaceable experience and expertise – explain the role they play, what this is and how it will be exploited.
4. High numbers of claimed key Personnel does **NOT** make the proposal better. Demonstrated good and effective use of people with the right background and with clear roles is better.
5. The percentage of the working time that each key personnel will dedicate to each Work-package (WP) shall be given. For the management task, if the consortium is not large, the percentage should not be higher than ~10%.

## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### Hints and tips: Industrial Organisation

The WBS should already show who is in the team and what they do, as should the team organization. This section should explain WHY you have this industrial make up and show compliance to the Cover Letter.

1. Why are you prime?
2. Why are the sub-contractors included?
3. How are you compliant with the goals and aims expressed in the cover letter?
4. Refer also to the sub-contracting plan and do not duplicate information.



## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### 3.4 PLANNING

##### 3.4.1. Gantt chart

*[Insert a Gantt chart schedule for the proposed activity, from the start of the activity until the end of the Contract. The Gantt Chart is to include all proposed Work Packages (WP), meetings, milestones, dependencies and highlight the critical path with a clear separation (e.g. colour coding) by entity responsible for each WP/Task.]*

##### 3.4.2 Proposed Schedule

*[Provide supporting text to assist in the interpretation of the GANTT chart, including planning assumptions and constraints, key planning drivers and dependencies]*

##### 3.4.3 Meeting and Travel Plan

*[Complete the table below showing all planned meetings and travels required in the execution of the study work. This should be consistent with the cost given in PSS A2, Exhibit B and shall include not only meetings with the Agency but also meetings with sub-contractors etc. ]*

Meeting	Purpose	Companies attending	Date(s)	Location	Work Package or Milestone
Kick-off meeting				teleconference	

## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### Hints and tips: Planning – GANTT Chart

The GANTT chart shows you can **organise** your work, provides a tool to **monitor the work**, to communicate key dates and to ***show what drives the schedule***.

It shows you understand the work involved in what you are proposing and have thought through the work to be performed and what is dependent on what.

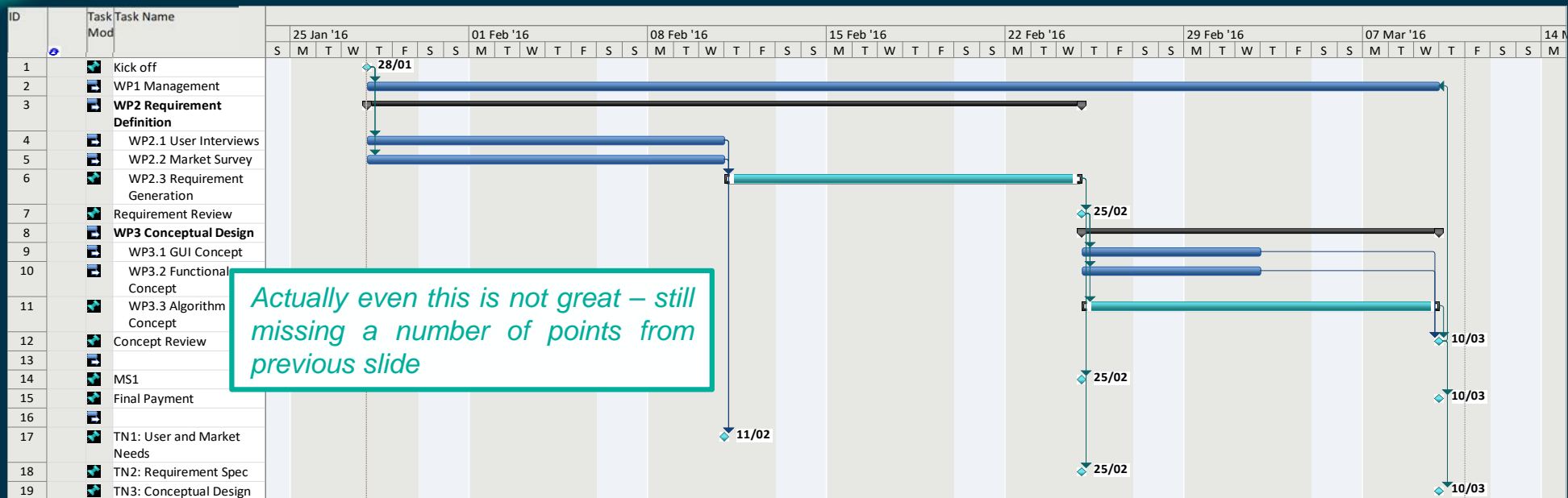
Some tips for GANTT charts:

1. It should link clearly to WBS and Flow Chart – full consistency, perhaps with more detail if needed
2. It should show key events/ deadlines, milestones, reviews and **key** deliverables (e.g. arrival of long lead items)
3. It should show the **key** dependencies between tasks, sufficient that the critical path is known
4. Include to a 'sensible' level (not too much, not too little)
5. It shall be sufficient to monitor the progress on at least a monthly basis, i.e. to be used as an active tool during the activity, not a passive reporting tool only

## 6. Proposal Template overview - Type d) Template B: Part 3 – Management Part

### Hints and tips: Planning – GANTT Chart (examples)

Good

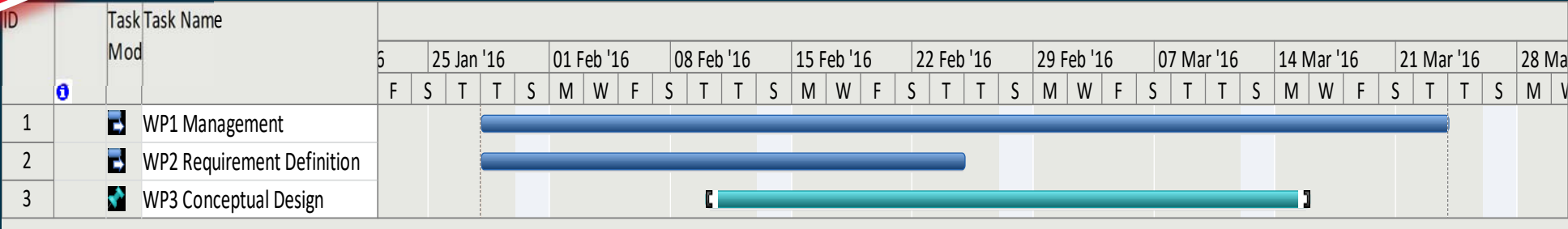


# 6. Proposal Template overview - Type d) Template B: Part 3 – Management Part



Hints and tips: Planning – GANTT Chart (examples)

Bad



## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### Hints and tips: Meeting and Travel Plan

What to include:

- ✓ All meetings with ESA (e.g. progress meetings)
- ✓ All reviews, both internal and with ESA (e.g. Requirements Reviews, Design Review....)
- ✓ All meetings with sub-contractors or potential customers (e.g. progress meetings, working meetings, requirement definition meetings)
- ✓ All travels to facilities (e.g. Test houses, Ground truth measurement areas)
- ✓ Final Presentation

Other information to include

- ✓ Location (should be most relevant location)
- ✓ Purpose of meeting (should be clear and obvious)
- ✓ Number of attendees

What **NOT** to include

- ⊗ Any meeting or travel not DIRECTLY needed for progression of the activity
- ⊗ Ad-hoc meetings to resolve problems (e.g. supply problems)

## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### 3.5 DELIVERABLE ITEMS

*[A list of foreseen deliverables shall be included. The List of Deliverable Items shall be grouped in Documentation, Hardware and Software and shall include sufficient explanation to unambiguously represent the scope of the deliverable.  
For Documentation, the proposal shall indicate, a) list of technical notes b) list of the final deliverables as defined in the Table here-below.  
For Software, the proposal shall indicate, if applicable, a) whether the software will be delivered in object and/or source code, b) the format of delivery, c) if any licenses/Third Party licences will be delivered to ESA]  
Note that the TDP, FR, FP and CCD are mandatory deliverables for all activities*

##### 3.5.1 Documentation

*[For each of the deliverable documents proposed by the Tenderer, a description, in the form of a bullet list of the main contents shall be added. This shall be sufficient to understand the contents, scope and depth of the envisaged document or report]*

Doc ID	Title	Milestone	Description of documents *
<i>D1 or TN1</i>	<i>To be completed by the Tenderer</i>	<i>(e.g. end of Task 1/ PDR/ CDR...).</i>	
<i>D2</i>	<i>To be completed by the Tenderer</i>	<i>...end of Task 2</i>	
<i>D3</i>	<i>To be completed by the Tenderer</i>	<i>...end of Task 3</i>	
TDP	Technical Data Package	Final Review	As defined in section 1.5 of Appendix 1 to the Draft Contract
ESR	Executive Summary Report	Final Review	see above
FR	Final Report	Final Review	see above
CCD	Contract Closure Documentation	Contract Closure	see above
FP	Final Presentation	Final Review	As defined in section 3 c) of Appendix 1 to the Draft Contract.

**Note:** The outputs to the Work Package Descriptions shall be included in the List of Deliverables

## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### Hints and tips: Deliverables

- Deliverables / Technical notes are everything that is delivered to ESA as part of the contract. Deliverables can be Documents, Hardware or Software
- All deliverables should be uniquely specified (e.g.: TN1, TN2.1, TN2.2, etc)
- It is good practice to also include a description or short contents list to clarify the scope.
- List all deliverables in the SoW. Add detail to the description as needed (highlight what you've added)
- Add additional deliverables you consider to be needed that were not requested in the SoW, state why

ID	Title	Review	Type	Description		
TN1	Trade-Off Report	TOR	Doc	ID of key trade offs, trade-off factors, selection	Title	Date
TN2	Design Description	PDR	Doc	Functional design, operational modes, h/v list, materials list, s/w description, ICD	Design documentation	1 <sup>st</sup> April
TN3	Design Justification File	PDR	Doc	Thermal analysis, mechanical analysis, radiation failure modes analysis, reliability analysis	Final Documentation	4 <sup>th</sup> July
H1	Breadboard	FR	H/W	Full electrical BB in non-representative hardware commercial components.	Hardware	5 <sup>th</sup> November
S1	Prototype S/W V1	FR	S/W	Full source code in Visual C++ version 12 executable for Windows v10.	Breadboard	25 <sup>th</sup> December
					Prototype S/W V1	1 <sup>st</sup> Jan 2017

## 6. Proposal Template overview - Type d)

### Template B: Part 3 – Management Part

#### Hints and tips: Standards

Standards have an important economic and social role for enabling our industry to remain competitive on the market and to conquer new markets.

ESA implements the European Cooperation for Space Standardization (**ECSS**) in its programs. This implementation is not mandated for your projects, but it is **very strongly recommended** in order to fulfil the objectives. As part of the work you will have to define and tailor which standards you will use.

ECSS documentation is available for free download from [www.ECSS.nl](http://www.ECSS.nl). Registration on the website is free. Following registration, you may download files that are of interest to your project. Some key ones likely to be of use for this activity include:

- ECSS-M-ST-10C\_Rev.16March2009 Project Planning and Implementation
- ECSS-M-ST-10-01C15November2008 Organization and conduct of reviews
- ECSS-M-ST-40C\_Rev.16March2009 Configuration management
- ECSS-M-ST-80C31July2008 Risk management



## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

Image of first half page

Appendix 4 to  
ESA AO/1-10431/20/NL/GLC/hh  
Proposal Template  
Page 5

#### PART 4 FINANCIAL PART

##### 4.1 PRICE QUOTATION FOR THE CONTEMPLATED CONTRACT:

*[Enter here the total amount quoted as a Firm Fixed Price (FFP), in Euro without cents, delivery duty paid, exclusive of import duties and value added taxes in ESA Member States, etc., in pursuance of the pricing conditions fixed in the "Draft Contract" included in the ITT]*

*Remarks concerning certain price elements:*

##### a) *Charging of royalties and licence fees:*

*ESA will only accept to pay royalties or licence fees on the condition that they are:*

- clearly identified in the tender, with the financial basis for their calculation, method of application and total amount, and*
- demonstrated to be of direct and necessary benefit to the work to be performed (thus not merely the consequence of a general agreement or commitment to a Third Party), and*
- applied only to that part of the effort to be performed by a Contractor or Sub-contractor that is directly related to the subject matter of the licence or royalty agreement.*

##### b) *Quotations free of taxes and custom duties:*

*Prices shall be quoted free of any value added taxes (VAT) and import duties in the Agency's Member States. Please note that subcontractor are not VAT exempt. In this connection you shall pay attention to the provisions stated in Article 3 of the Draft Contract (Appendix 1 to the ITT). In case you consider that you and/or your Sub-contractor(s) will remain subject to payment of taxes or custom duties, you shall indicate separately the applicable rates, the corresponding estimated amounts, and the reason why exemption from such taxes or duties cannot be obtained.*

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### 4.1 PRICE QUOTATION FOR THE CONTEMPLATED CONTRACT:

*[Enter here the total amount quoted as a Firm Fixed Price (FFP), in Euro without cents, delivery duty paid, exclusive of import duties and value added taxes in ESA Member States, etc., in pursuance of the pricing conditions fixed in the “Draft Contract” included in the ITT]*

*Remarks concerning certain price elements:*

##### a) Charging of royalties and licence fees:

*ESA will only accept to pay royalties or licence fees on the condition that they are:*

- *clearly identified in the tender, with the financial basis for their calculation, method of application and total amount, and*
- *demonstrated to be of direct and necessary benefit to the work to be performed (thus not merely the consequence of a general agreement or commitment to a Third Party), and*
- *applied only to that part of the effort to be performed by a Contractor or Sub-contractor that is directly related to the subject matter of the licence or royalty agreement.*

##### a) Quotations free of taxes and custom duties:

*Prices shall be quoted free of any value added taxes (VAT) and import duties in the Agency’s Member States. Please note that subcontractor are not VAT exempt. In this connection you shall pay attention to the provisions stated in Article 3 of the Draft Contract (Appendix 1 to the ITT). In case you consider that you and/or your Sub-contractor(s) will remain subject to payment of taxes or custom duties, you shall indicate separately the applicable rates, the corresponding estimated amounts, and the reason why exemption from such taxes or duties cannot be obtained.*

##### a) Currency and conversion rate:

*For any Tenderer or proposed Sub-contractor located in countries outside of the Euro zone, the exchange rate used to quote their prices in Euro shall be indicated by the company (or institute) in its costing form PSS-A2. Any other factors (such as hedging costs, forward buying rates) used for the purpose of the calculations shall also be indicated]*

#### 4.2 SUBCONTRACTING PLAN

*[Indicate here with more details than in the Cover Letter, for the proposed Subcontract(s), if any, the name of the Subcontractor(s), the country to which the Subcontractor(s) belong(s), the task(s) assigned (with reference to point 1.3.2 of the “Technical Part”), the place of execution of the Subcontracted work as well as the corresponding part and percentage of the total price for the Contract]*

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Hints and tips: Price Quotation

1. The price of the Contract will be a **Firm Fixed Price without VAT**.

The EU provides International Organisations the privilege to be exempted from VAT for intra-community transactions. ESA, as an International Organisation, is classified as non-taxable. ESA applies this privilege by issuing a VAT EXEMPTION CERTIFICATE for its contract. ESA does therefore not have a EU VAT-ID number

⇒ **The VAT Exemption certificate will be provided with the original contract.**

- ❖ **The Prime Contractor is the only one receiving the VAT EXEMPTION CERTIFICATE** as it is the supplier in direct contractual relationship with ESA. It is the Prime Contractor to invoice ESA directly.
- ❖ Sub-contractors will not receive the VAT EXEMPTION CERTIFICATE as they do not stand in a direct contractual relationship with ESA; they are paid by the Prime.

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Hints and tips: Price Quotation

2. The price of the proposed activity must be transparent, clear and credible.

- ✓ **TRANSPARENT:** Where does the money go? (e.g: the cost structure, hardware etc.)
  - ✓ **CLEAR:** Level of details is important => PSS forms
  - ✓ **CREDIBLE:** Are the cost credible to achieve the objectives of the proposed activity ?
- After the contract is signed by both party, ESA does not require financial reporting on the evolution of the spending.
  - All financial details are set in the proposal & at negotiation. The proposal and the minutes of meeting will be part of “the rules of the game” together with the Contract for the overall duration of the contract.
  - Price must be fair and reasonable for the scope of work described in the proposal.
  - You must include at least 10% own contribution (i.e. minimum 40K euro). There is no upper limit to the own contribution

# 6. Proposal Template overview - Type d)

## Template B: Part 4 – Financial Part

### 4.3 DETAILED PRICE BREAKDOWN

#### 4.3.1. PSS costing forms:

*[On the basis of the corresponding instructions to each form, complete and insert in Annex to your Proposal the costing form(s) requested below):*

- **PSS A1** Company Cost Rates and Overheads
- **PSS A2** Company Price Breakdown Form
- **PSS A2** Exhibit A – Other Cost Element Details (if applicable)
- **PSS A2** Exhibit B – Travel and subsistence plan
- **PSS A8** Manpower & Price Summary per WP

*Note that the PSS form templates can be downloaded from EMITS at <http://emits.sso.esa.int/emits/owa/emits.main> under Reference Documentation / Administrative Documents / PSS Forms / Issue 5. Each of the PSS forms must be signed.*

***The PSS forms are to be attached to the Detailed Proposal Template - B, and not uploaded separately in esa-star.***

*In case of participation of Sub-contractor(s) in the contemplated Contract, each Sub-contractor shall fill in the same forms with respect to its share of the activity and the Tenderer shall fill in forms corresponding to its own share and to the total.*

*Any PSS forms including those concerning your Sub-contractor(s) are to be signed by the authorised representative of the company (or institute) concerned]*

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Procedures Specifications and Standards (PSS)

- PSS A1 Company Cost Rates and Overheads
- PSS A2 Company Price Breakdown Form
- PSS A2 Exhibit A – Other Cost Element Details (if applicable)
- PSS A2 Exhibit B – Travel and subsistence plan
- PSS A8 Manpower & Price Summary per WP

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

**esa emits**

ENTITIES LOGIN ESA Home Page Industry Information Entity Registration Service Desk Help

User: Guest

**ESA PSS-A Forms Templates**

The 'PSS forms' are a set of tables defined in the General Conditions of Tender for ESA Contracts ESA/REG/001, rev.3, Annex IV. These tables are used to break down and give transparency to the total price of an industrial proposal.

procedures Specifications and Standards, to which is added an 'A' series of tables, or costing forms.

Suppliers can find the original templates of the required PSS-A forms in this page. The users are recommended to use each template.

PSS	Type of listing	Forms
PSS-A1	COMPANY COST RATES AND OVERHEADS	
PSS-A2 Incl. Exhibit A&B	COMPANY PRICE BREAKDOWN FORM	
PSS-A4	PROJECT MANPOWER AND PRICE BREAKDOWN FORM	
PSS-A6	CONTRACT PRICE SUMMARY FORM	
PSS-A8	PROJECT MANPOWER AND PRICE SUMMARY PER WP	
PSS-A10	COMPANY MANPOWER AND COST PLAN	
PSS-A15	CONTRACT PRICE PROJECTION in THOUSANDS EURO	
PSS-A15.1	COMPANY PRICE PROJECTION VS. PAYMENT PLAN in THOUSANDS EURO	
PSS-A20	WORK PACKAGE DESCRIPTION	
PSS-A40	HIGH-RELIABILITY PARTS PROCUREMENT QUESTIONNAIRE	
PSS-A45	PRODUCT TREE AND HARDWARE BREAKDOWN	

For projects where the use of [ECOS](#) (ESA Costing Software) is required, these forms shall be printed using the ECOS reports.

<http://emits.esa.int>

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Hints and tips: PSS FORMS

Why do we use PSS Forms ?

- **Fairness:** PSSs are standard tools used for all ESA activities/ITT. All costs are presented the same way to allow systematic evaluation.
- **Clarity:** PSSs allow to review clearly where the money is allocated.
- **Evaluation tool:** e.g number of hours spent per key personnel per Work Package, cost per category, hardware cost...

Check carefully the Instruction Page

#### BE AWARE:

We evaluate the cost in detail! We will check both the number of hours and all the cost allocations to verify that the cost are true, fair, commensurate to the work and credible.



## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Hints and tips: PSS FORMS

##### PSSA1

- ✓ Present the labour Cost per Category (Project Manager, Mechanical Engineer, Senior scientist, PhD, Engineer ...)
- ✓ No Names
- ✓ ONE hourly rate for ONE labour cost category
- ✓ Fill in the Internal Facilities' part only if cost will be allocated to it.
- ✓ Show all overheads

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Hints and tips: PSS FORMS

#### PSSA2

- ✓ Full vision of the cost allocated to the activity, for the full activity AND per subcontractor
- ✓ Same labour Cost category as the one listed under PSSA1
- ✓ If applicable, do not forget to include the cost of subcontractors
- ✓ Do not forget to show the company contribution
- ✓ Exhibit A : Details the cost allocated to hardware and miscellaneous
  - TIPS: Cost must be detailed and verifiable against current market price and justified
  - TIPS: All items must be sufficiently described to be independently checked
  - TIPS: No infrastructure elements, no 'normal' tools or office support (this is what your overhead is for)
- ✓ Exhibit B: Detail the travel costs
  - No conference unless strictly linked to the need of the activity. We promote teleconference whenever possible. Not everyone need to come to the Final Presentation.

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### Hints and tips: PSS FORMS

#### PSSA8

- ✓ Cost and Hours are broken down per Work Package
- ✓ We evaluate whether there is too much, not enough hours allocated to each WP
- ✓ Consistency of information is important
- ✓ Do not forget to sign the PSSA8
- ✓ Do not forget the total !

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### PLEASE NOTE!

- All fields in National Currency and in EURO must be filled in.
- Please do not forget to fill in the exchange rate.
- For these activities, no profit can be accepted from any entity involved.
- Final presentation shall take place in the Czech Republic. The cost of attendance/participation to conferences can only be covered if it is directly needed to complete the work being proposed, and shall be fully and clearly justified.
- Overheads on procurements and labour rates are intended to cover admin costs and general office supplies and overheads.
- Mandatory co-funding by the Tenderer shall be specified in PSSA2 item 14 (Reduction for Company contribution)

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

#### 4.3.2 Milestone Payment Plan

*[Provide a Milestone Payment Plan using the table here below, taking into account Article 4 of the Draft Contract. All claims for payment, except the advance, shall be linked to the achievement of defined schedule milestones with tangible deliverables including as the case may be, achieved performance of service. Examples of such milestones are the satisfactory completion of WPs and delivery of the related output.]*

*Note:*

- *under EXPRO/EXPRO+ no direct payments by ESA to Sub-contractors are foreseen]*
- *the payment plan shall be financially neutral as reflected in PSS A15.1*

Milestone (MS) Description	Schedule Date	Payments from ESA to (Prime) Contractor (in Euro)	Country (ISO code)
Progress Payment (MS 1): Upon successful completion of WP xxx and/or successful [review] and acceptance by the Agency of all related deliverable items [Deliverable reference e.g D.1 or TN1 ..].	To + ... months		
Progress Payment (MS 2): Upon successful completion of WP xxx and/or successful [review] and acceptance by the Agency of all related deliverable items [Deliverable reference e.g D.1 or TN1 ..].	To + ... months		
Final Settlement (MS 3): Upon the Agency's acceptance of all deliverable items due under the Contract and the Contractor's fulfilment of all other contractual obligations including submission of the Contract Closure Documentation	To + ... months	<i>(not less than 10% of the total contract price)</i>	
<b>TOTAL</b>			

## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

*Whenever an SME (as per definition in <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003H0361&from=EN>) is involved as Prime or Sub-contractor, it shall be entitled to a 35% Advance Payment irrespective of any cash disbursement needs.*

*The Tenderer shall keep in its files, for possible review by the Agency, the corresponding SME self-certification(s) submitted by any member of its tendering team. The self-certification(s) have to be provided on letterhead of the corresponding entity as per model hereunder:*

*"I confirm that the company I am representing satisfies all the criteria for SME qualification as per definition given in the recommendation 2003/361/EC of the European Commission. "*

*[ + date, name and signature of authorised representative] ]*

*For non SME, an advance payment is not granted automatically. It is required to demonstrate a significant need for cash disbursement at the beginning of the execution of the Contract.*

*Note: The advance payment constitutes a debt of the Contractor to the Agency until it has been offset against a subsequent milestone. The amount of the advance payment should be offset by the same amount.*

Prime (P)	Company Name	ESA Entity Code (at contract signature)	Country (ISO code)	Advance Payment (in Euro)	Offset against	Offset by Euro	Condition for release of the Advance Payment
P				<i>Amount (not more than 35% of the total contract price for SMEs and not more than 10% for non-SMEs)</i>	MS 1	Amount	Upon signature of the Contract by both Parties

# 6. Proposal Template overview - Type d)

## Template B: Part 4 – Financial Part



*[You are requested to indicate below for information purposes only, the Milestone Payment Plan that is envisaged for Sub-contractor(s)]*

For Information purposes only : Amounts in Euro for Contractor and Subcontractor(s)						
Milestone (MS) Description	Prime Contractor	Insert Country (ISO code)	Sub-contractor name	Insert Country (ISO code)	Sub-contractor name	Insert Country (ISO code)
MS1						
MS2						
MS3						



## 6. Proposal Template overview - Type d)

### Template B: Part 4 – Financial Part

- All claims for payment shall be linked to the **achievement of defined schedule milestones**. These milestones are to be in the form of significant events in the programme to be selected on the basis of providing a check point for progress in the work performed, e.g.
  - ✓ Successful completion of Reviews
  - ✓ Acceptance of deliverables
- **Progress reports are not sufficient to make payments**
- **Advance payments** to be made after contract signature, may be agreed in line with:
  - ✓ The Advance payment **constitutes a debt of the Contractor to the Agency** until it has been set-off against a subsequent milestone. The advance payment shall nominally be set-off against the 1st progress payment.
  - ✓ **An advance payment is not granted automatically**; a significant need for cash at the beginning of the contract must be demonstrated.
  - ✓ Advance payments for SMEs may be increased to a maximum of 35% of the contract price. SMEs are classified according to the criteria of the European Commission (Recommendation 2003/361/EC of 6 May 2003 (OJ L 124, 20.5.2003, p. 36)).
- **Two milestone payments during a period of 12 months are allowed**, roughly 1 milestone payment every six months.
- **The final payment milestone shall not be less than 10% of the contract price.**

**Please note!**



# 6. Proposal Template overview - Type d)

## Template B: Part 5 – Contract Conditions



Image of first half page

Appendix 4 to  
ESA AO/1-10431/20/NL/GLC/bh  
Proposal Template  
Page 9

**PART 5 CONTRACT CONDITIONS PART :**

**5.1 INTELLECTUAL PROPERTY RIGHTS**

5.1.1. Background Intellectual Property and Third Party Intellectual Property Rights  
[SELECT **ONE** OF THE TWO OPTIONS]

[OPTION1]  
*[If you intend to use for this activity, your own or Third Party intellectual property rights (IPR), you have to identify them with their IPR status at the time planned for the execution of the proposed activity and to specify with the name of the owner, that you are entitled to get the appropriate licence within your price quotation for the Contract, for their access and use for the performance of this contract and in accordance with the Draft Contract conditions.  
Please, fill in the table below indicating the items covered by Background Intellectual Property Rights (BIPR) which are proposed to be used for the present activity].*

Exact name of BIPR Item	Owner, Country	Description	Reference: Patent / Issue / Revision / Version / Licence #	Contract / Funding Details under which the IPR was created	Name of the affected deliverable
					Include reference of the deliverable



## 6. Proposal Template overview - Type d)

### Template B: Part 5 – Contract Conditions



#### 5.1. INTELLECTUAL PROPERTY RIGHTS

##### 5.1.1. Background Intellectual Property and Third Party Intellectual Property Rights [SELECT **ONE** OF THE TWO OPTIONS]

###### [OPTION1]

*[If you intend to use for this activity, your own or Third Party intellectual property rights (IPR), you have to identify them with their IPR status at the time planned for the execution of the proposed activity and to specify with the name of the owner, that you are entitled to get the appropriate licence within your price quotation for the Contract, for their access and use for the performance of this contract and in accordance with the Draft Contract conditions.*

*Please, fill in the table below indicating the items covered by Background Intellectual Property Rights (BIPR) which are proposed to be used for the present activity].*

Exact name of BIPR Item	Owner, Country	Description	Reference: Patent / Issue / Revision / Version/ /Licence #	Contract / Funding Details under which the IPR was created	Name of the affected deliverable
					Include reference of the deliverable

[END OPTION1]

###### [OPTION2]

*In line with Article 7.3 of the Draft Contract, no Background Intellectual Property and no Third Party Intellectual Property Rights will be used to achieve the objectives of the work.*

[END OPTION2]

## 6. Proposal Template overview - Type d)

### Template B: Part 5 – Contract Conditions

5.1.2 Foreground Intellectual Property  
*[Present the expected Foreground Intellectual Property Rights that will be created as a result of the present activity].*

5.1.3 Ownership of Foreground Intellectual Property (Article 7.2.1 of the draft Contract)  
*[SELECT AND PROVIDE DETAILS OF ONE OF THE TWO OPTIONS]*

*[OPTION 1]*

*Please confirm that the Foreground Intellectual Property Rights created as a result of the present activity will belong to the Tenderer.*

*[END OPTION 1]*

*[OPTION 2]*

*In the case of the participation of Sub-contractor(s), explain the agreement reached between the parties on the ownership of the Intellectual Property and the principles for its exploitation, use and benefits.]*

*[END OPTION 2]*

*Please confirm that the Agency shall have an irrevocable right to use the information used in that application, for its own requirements on the terms set out in Article 7.2.2 of the draft Contract.*

## 6. Proposal Template overview - Type d)

### Template B: Part 5 – Contract Conditions



#### START

We have an Idea! We have a recipe for astronaut food!

**Objective:** supply good tasting protein rich cereal bars to space travellers.



**Original Recipe:**  
Protein rich but tastes awful



'Micro-Ecological Life Support System Alternative' program (MELiSSA) Project: spirulina recipe improved after experiments and testing.

**Final Recipe:**  
Specific modifications from lessons learned result in a good tasting product

BACKGROUND IPR

FOREGROUND IPR



## 6. Proposal Template overview - Type d)

### Template B: Part 5 – Contract Conditions

#### Hints and tips: Intellectual Property Rights

#### 1. Background IPR

- a) Intellectual property existing already BEFORE the ITT.
- b) That is USED for the work of the ITT
- c) That had no ESA financial aid to develop.
- d) Must be listed, must be able to be evidenced (e.g. via patent, notebook or other means)
- e) Impact on the deliverables must be described
  - Which deliverables is it included in?
  - How does it affect that deliverable and ESA's rights?

#### 2. Foreground IPR

- a) Intellectual property developed DURING the Activity
- b) IP shall remain vested in the company
- c) ESA shall also have rights
- d) It shall not affect the deliverables/ rights on the deliverables

## 6. Proposal Template overview - Type d)

### Template B: Part 5 – Contract Conditions



#### 5.2 IMPORT AND EXPORT LICENCES

*[This section is only to be completed in case of items or services that are subject to envisaged or probable inclusion of import/export restrictions, other than those from the Tenderer's own country, in either the body of the work performed under this activity or in a resulting product or service.]*

##### 5.2.1. Import and Export Licences applicable to this Activity

[SELECT **ONE** OF THE TWO OPTIONS]

###### [OPTION1]

The Tenderer declares that no items subject to import or export control will be used in the execution of this activity.

[END OPTION1]

###### [OPTION2]

The Tenderer declares that the following items, subject to import or export control will be used in the execution of this activity:

Item	Control Country of Origin	Type and	Deliverable affected	Comment

## 6. Proposal Template overview - Type d)

### Template B: Part 5 – Contract Conditions

#### 5.2.2. Import and Export Licences applicable to a product or services arising from or resulting from this Activity

[SELECT **ONE** OF THE TWO OPTIONS]

[OPTION1]

The Tenderer declares that any products or services arising from or resulting from this activity will not be subject to import or export control or make use of any import/ export controlled items.

[END OPTION1]

[OPTION2]

The Tenderer declares that the following items, subject to import or export control, are expected to be used in an end product or service eventually arising from or resulting from this activity.

Item	Control Type and Country of Origin	Deliverable affected	Comment

## One on One Meetings

For one on one meetings to discuss potential topics and clarifications prior to release of the ITT,  
email

[Dina.Paula.Carapinha@esa.int](mailto:Dina.Paula.Carapinha@esa.int)

Each requesting entity will be allocated a single 30 minute slot for such meetings.

Available slots

18<sup>th</sup> Sept 14:00-17:00

21<sup>st</sup> Sept 14:00-17:00

Slots will be allocated on a first come first served basis



# Questions?

For clarifications to this presentation, questions on topics and ideas, please email, before 5<sup>th</sup> October:

[Stephen.Airey@esa.int](mailto:Stephen.Airey@esa.int)

After the ITT Opening all questions through ESA-STAR or to:

[Gian.Lorenzo.Casini@esa.int](mailto:Gian.Lorenzo.Casini@esa.int)

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