

The Proposal Template: Hints & Tips



Summary of the presentation



- Disclaimer
- Common Mistakes
- The proposal template Cover Letter
- The proposal template Part 1 Technical and Application
- The proposal template Part 2 Management
- The proposal template Part 3 Financial
- The proposal template Part 4 Contract Conditions

Disclaimer



• This presentation material does not contain sufficient information to be used, in any way, in the context of any ESA CfPs (Call for Proposals).

 This presentation is just to help understand, in a simplified manner, some of the key elements associated with the template for this call.

Proposal templates can vary; however, some main elements are provided in this presentation to serve as an
example and guidance. Do not copy any part of the examples given.



Please ensure that your Proposal is compliant with the requirements contained in the specific CfP documentation!

Proposal Template (hints and tips)



During this presentation we 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 CfP conditions of tender and cover letter – each CfP can be different. Do not use a previous template from any other CfP.

Remember:

- ESA is only allowed to evaluate what is in the 25 pages of 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 ESA-STAR or other ESA internal information.
- The TEB members have to read typically 20+ proposals in total per TEB the easier you make it for them to read and understand, the better for both them and you.





Proposal Template – Common Mistakes





VERY BRIEF summary of SOME of the most common mistakes seen:

Criterion 1: Technical aspects



- Objectives difficult to understand or not clearly stated.
- 2. Poor or missing technical requirements (e.g. not covering the key points, not quantified or verifiable, not matching market need).
- 3. Poor or missing engineering approach (e.g. baseline concept not described, missing reviews or checks, lack of key testing or validation).
- 4. Poor or inadequate programme of work (e.g. missing customer involvement, missing design or development steps) and inconsistency between text, flowchart, WBS, WPD and GANTT.
- 5. Missing experience or facilities no information on relevant work done by the company, no or poor relevant CVs for the key personnel, no (or poor) information on facilities and/or having no plan to acquire it.
- 6. Poor WPD (e.g. insufficient detail to understand the full scope of the work, no clear responsibilities, inputs and outputs of each WPD).
- 7. Poor WBS (e.g. spaghetti WBS and flowchart, too many/few WP, WP with tasks for more than one entity).

Criterion 2: Programmatic aspects and long-term benefits

1. Not meeting the programmatic constraints of the cover letter (e.g. not related to ESA needs or programmes, not space related, not credible start or target TRL, no clear benefit for the country, no user involvement in services and applications proposals).

Proposal Template – Common Mistakes



Criterion 3: Management, planning, costing parts

- 1. Poor management plan (e.g. missing how you will monitor the timely implementation of the activity, subcontractor control, including a steering group or management 'team' instead of a Project Manager).
- 2. Poor planning (e.g. insufficient detail, no dependencies, too much in parallel, not matching scope of WPD).
- 3. Non-credible costing (e.g. hours not corresponding to described scope work in WPD, procurement of inappropriate items, excessive travel costs, price = max. available envelope, procured items not detailed or justified). The goal is fair costing w.r.t. entities standard cost structure!
- 4. Poor definition of deliverables (e.g. missing deliverables, not covering the full scope of work, deliverables not matching WPD outputs).
- 5. High (>10%) / very low (<5%) management hours w.r.t. total hours.
- 6. Inconsistency between PSS forms and proposal (costed travels not in meeting plan, facilities/service costed for but not mentioned in proposal).

Criterion 4: Compliance with administrative tender conditions

- 1. Some of the documents not signed or missing (e.g. Cover Letter, PSS Forms).
- 2. Non-compliance with tender conditions (e.g. Introducing changes to the Proposal Template or exceeding the maximum number of pages).
- 3. Disagreeing with the Draft Contract (that you accepted by signing the Cover Letter).
- 4. 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).

Proposal Template – Common Mistakes - ChatGPT





ChatGPT on the perils of using ChatGPT for technical proposals... (with which we fully concur)!

"The heedless deployment of ChatGPT for the composition of exalted formal technical proposals serves as a prelude to a veritable Shakespearean tragedy, replete with a tempest of perilous pitfalls and woeful repercussions.

Behold, the core sin of ChatGPT, for it is but a mere conduit of algorithmic patterns, bereft of the profound wellspring of domain-specific knowledge and contextual acuity so profoundly requisite for the meticulous construction of precise and accurate technical proposals. This lamentable inadequacy begets a pandemonium of inaccuracies, shrouded in the mists of misunderstanding, and plagued by a dearth of technical erudition within the composition. Furthermore, ChatGPT, like a capricious maven of linguistic arts, flirts with the peril of inadvertently infusing biases and inappropriate lexicons into the sacred tapestry of the proposal, thus casting a long shadow upon its professionalism and moral rectitude. Deprived of the faculties to engage in the noble art of rigorous inquiry and the verification of information veracity, ChatGPT's creation may verily descend into a labyrinthine netherworld, a nightmarish domain of erroneous data and references, heretical to the gods of intellectual integrity.

The over-reliance upon ChatGPT for such august undertakings may be likened to a tragic fall from grace, wherein the quality, reliability, and probity of the document shall be irreparably besmirched, and it shall be consigned to the annals of ineffectuality, unfit for the discerning gaze of noble professional and technical audiences. Hence, it is paramount to wield ChatGPT as a humble tool, an adjunct to human sagacity, and to accompany its output with the indomitable vigilance of human scrutiny, for to do otherwise would be to court calamity and ignite the flames of intellectual hubris."

Proposal Template – Cover Letter





The Cover Letter contains details on:

- The Title
- The team submitting the proposal
- The Cost of the proposal
- The type of activity (a, b, c, d, e, f, g)
- The **Duration** of the proposal
- Who the point of contact is
- The Acceptance of contract conditions
- The Statement concerning export restrictions
- The Statement on free competition
- The Legal representative
- The Validity of the proposal



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.



The Cover Letter MUST be signed!



Proposal Template – Title





Hints & Tips: The Title

Each call may have many proposals. To aid reviewers, pay attention to 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 OK: "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)"







- 1.0 Introduction and Scope
- 1.1 Technical Objective
- 1.2 Requirements
- 1.3 Technology Readiness Level
- 1.4 Engineering Approach
- 1.5 Technical Problem Areas and Risk
- 1.6 Prospect for Exploitation and Use
- 1.7 Technical Programme of Work
- 1.8 Background of the Company(ies)
- 1.9 Facilities





1.0 Introduction and Scope

 Provide the background and rationale of what you are proposing to do.

• Keep it **succinct** (<u>not more than half a page</u>), but **clear** enough to provide **sufficient context** for your development.







1.1 Technical Objective

The Objective is what you hope to achieve with the proposal (i.e. the end goal) 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.

Objective should:

- 1. Be **short** (1 to 3 sentences)
- 2. Be clear and verifiable
- 3. Contain the **core essence** of what should be achieved

Objective should not:

- 1. Describe the work to be done, the workflow or how to do it
- 2. Describe the nice to haves/options
- 3. 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' part of the Proposal you should justify WHY this is a good objective and how it fits the programmatic constraints!







1.2 Requirements

For proposals, requirements are the **key measurable 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:



Note: Ideally requirements will also be justified in the proposal

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

Requirements are not:

• The facilities, tools, experience or personnel that you *need* to perform the work.

If you are not in a position to properly define a full set of clear, well formulated requirements then consider to:

- ...either look at a preparatory activity,
- ...or include an activity focused on requirement definition and include a work package to this end.





1.2 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 at 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:

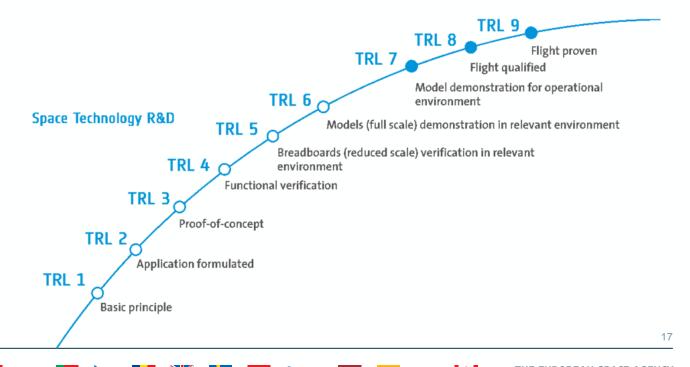
- We need to buy a kettle and coffee cups
- We need to hire someone to make the coffee
- We should do a trade off on what biscuits to give
- We shall get a coffee sellers license





1.3 Technology Readiness Level

- Indicate and substantiate the current TRL level of the technology.
- Please note that the type of activity proposed, Type a or b, has to be compatible with the start and end TRL indicated in the Cover Letter of the CfP.







1.4 Engineering Approach

1.4.1 State of the Art

- Provide a brief overview of "State of the Art".
- Explain why you chose your proposed baseline instead of others, what benefit does it have over the others?
- Show you know your competitors and their products.

1.4.2 <u>Technical Steps</u>

- Present and discuss in **DETAIL what work will be done**, i.e the breakdown of the work into the sequence of engineering steps needed to achieve the objective.
- This needs to correspond to the Work Flow Logic Chart!
- This is the text description and justification of the flow chart and the Work Breakdown Structure.



This is expected to be the core/bulk of the proposal

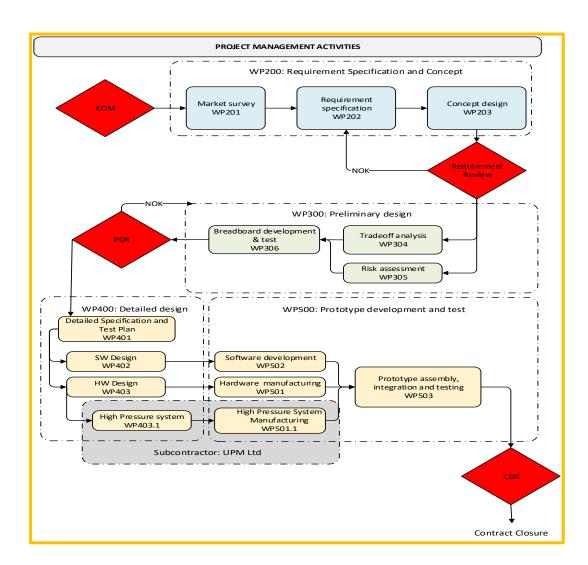




1.4 Engineering Approach

1.4.3 Proposed Work Logic

- Include the reviews and decision points (check points).
 Technical ECSS reviews are key for credibility and typically align with payments.
- Consistency with WBS (and easy traceability).
- Parallel/serial consistency is logical (consistent with GANTT chart).
- Subcontractor work is clear.
- Dependencies are clear.



→ THE EUROPEAN SPACE AGENCY





1.4 Engineering Approach

1.4.4 Implementation aspects

Present a first iteration of the baseline design or concept (diagram)!

Have you answered these questions?

- 1. What is your baseline design/ concept?
- 2. **HOW** will the work be done? What METHODOLOGIES will be used, what key ANALYSES and SIMULATIONS will be done?
- 3. What is minimum TESTING and VERIFICATION that will be done?
- 4. Is the SCOPE and 'depth' of work sufficiently clear?



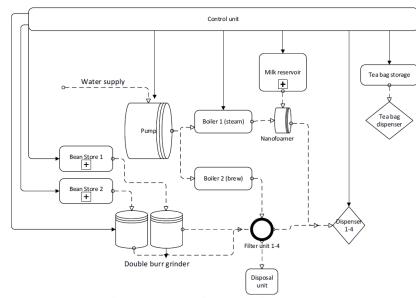


Figure 1. Functional Diagram of CM2000

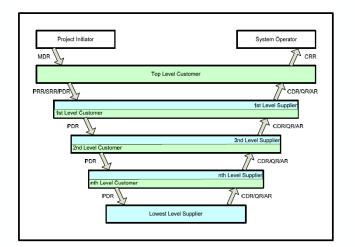


Figure 4-4: Review life cycle





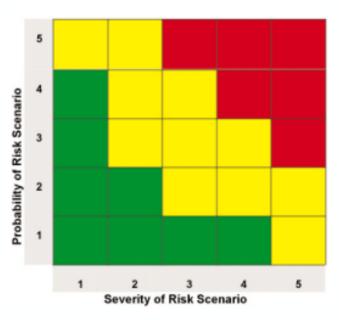
1.5 Technical Problem Areas and Risks

The problem areas and risks discussions are intended to cover primarily TECHNICAL (and PROGRAMMATIC where there is a key dependency/ timeliness issue), problem areas and risks that may arise DURING the work and cannot be pre-emptively resolved prior to the start of work.

Correct identification of risks and potential problems **shows you understand** the work you are proposing and can manage it properly.

Discussion of risks and problems should include a mitigation and prevention actions:

- What is the potential impact if the problem/risk arises?
- **Prevention:** What actions will you take to minimise the risk of it becoming a reality?
- **Mitigation:** What will you do if the worst case happens, how will you ensure the project can continue (can it?)?
- Provide details to show those mitigating actions are credible and feasible.
- **DO NOT** focus on manpower issue, management issues
- **DO** include technical issues, risks and problems
- DO include planning issues related to critical path items







1.6 Prospect for Exploitation and Use

- 1.6.1 Compliance with the programmatic constraints of the Cover Letter
- Justify that the activity meets the objectives of the call (be explicit w.r.t. cover letter!)

1.6.2 Business Case Summary

Is there a valid **business case** for continuing after this activity?

- 1. Market: Who will use the technology developed? What will they use it for? Why is it needed?
- 2. Profitability: What are your expected revenues and sales? Why are your expected recurring costs?
- 3. Planning: What is the plan to commercialisation? What is the plan for business development?
- 4. Benefits: What are the short- and medium-term benefits to you, to ESA and to the European Space Sector?

If you don't know the answers to all these and can't convince us then why should we finance the development? ... Think about a preparatory activity.





1.7 Technical Implementation / Programme Of Work

1.7.1 Work Breakdown Structure (WBS)

- Logically structure the main Work Packages following the main tasks of the workflow (preferably 'gated' by reviews).
- Work logic is preferably 'gated' by technical/engineering reviews.
 - Preliminary Requirements Review (PRR), System Requirements Review (SRR), Preliminary Design Review (PDR), etc. These typically are aligned with payment milestones.
 - See ECSS-M-ST-10C Project Planning and Implementation (Chapter 4,5 and Annex A) for standard review definitions.
- Include WP for management.
- Ensure each company has separate (sub)work packages.
- Ensure all tasks in one work package 'belong together'.



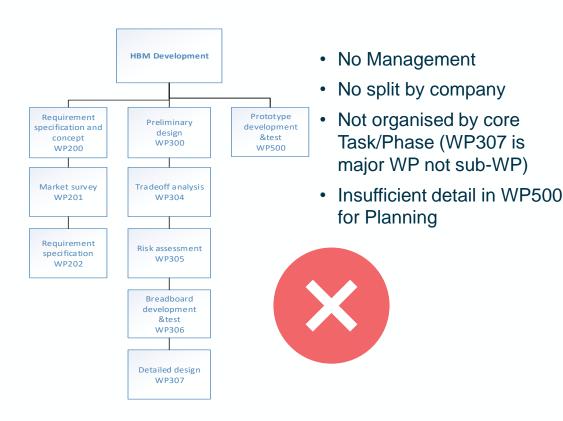
This section should be coherent with the earlier sections of the proposal!

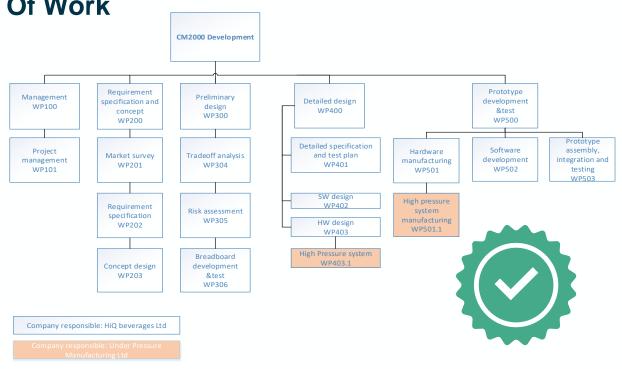




1.7 Technical Implementation / Programme Of Work

1.7.1 Work Breakdown Structure (WBS)





- ✓ Management is partly clear w.r.t. entities, but work package leaders aren't shown and require cross referencing
- ✓ Clear split by company and management of subcontractor is implied. Color coding by company/entity is good
- ✓ WP400 is significant with necessary subordinate WPs
- ✓ WP500 Subordinate WPs give fair indications core tasks & credible planning





1.7 Technical Implementation / Programme Of Work

1.7.2 Work Package Description (WPD)

- The WPDs form the **detailed description** of the work that will be performed.
- They scope the work and the deliverables.
- They allow a basis for the costing.
- They discriminate the work and responsibilities of the different companies/entities.

Note that the ECSS propose a standard template for a WBS and WPD (for the WPD the ESA PSS A20 form can be used).



This section should be coherent with the earlier sections of the Proposal!







The outputs to the Work Package Descriptions shall be included in the List of Deliverables!

BAD EXAMPLE

PROJECT: CM2000 Development	PHASE: 1	WP: 200
WP Title: Requirement Specification	Sheet 1 of 1	
WP Manager: Mr. Bean		
Start Event: KOM End Event: End of project	Planned Date: 1st April 2018 Planned Date: 1st April 2019	
Tasks: Do market survey Write Requirement Specification		
Outputs: Technical Note		

- Too high level
- Too open to interpretation
- Scope undefined
- Deliverable undefined

- Company missing
- No inputs
- Actual dates used
- Not linked to planning (events)

GOOD EXAMPLE

PROJECT: CM2000 Development	PHASE: 1	WP: 201		
WP Title: Market Survey		Sheet 1 of 1		
Company: HiQ Beverages Ltd		Issue Ref: 1		
WP Manager: Mr. Bean		Issue Date		
Start Event: KOM	Planned Date: T0	15.08.2018		
End Event: RR	Planned Date: T0+3			
Inputs:				
• SoW				
 Approved proposal 				
 KOM Minutes of Meeting 				
• AD1				
• RD1				
Tasks:				
 Perform a survey of all current 				
 Compare key requirements 				
 Compare key performance i reliability) 				
 Compare and analyse cost (
 Identify and analyse custom provider) 				
 Assess the current annual de Europe 				
 Perform trend analysis for h 				
 Identify most popular hot be requirements 	everages and key end-user			
 Collect and analyse new and popular hot beverages 				
Assess the potential future r requirements	narket for any evolving			
	t currently addressed by HBM			
Specifically Excluded Tasks:				
No competitor machines wi	ll be procured and tested			
No taste testing/ surveying v				
Outputs:				
D01: Current and Future Market Assessment Report				
D02: Emerging Hot Beverage Requ	iirement Report			





1.8 Background of the Company(ies)

We are only interested in RELEVANT background and experience.

Coffee 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).
- If the people or proposed team is missing key background, experience or knowledge identify this yourself and explain how you will get it.







1.9 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.

Example Facilities

- 1. Test equipment
- 2. Specialist design and analysis software
- 3. Specialist computing facilities
- 4. Specialist manufacturing facilities

Examples of things **NOT** considered Facilities:

- 1. Your building and address
- 2. Your car park
- Your desks and office furniture
- 4. Standard computers, office s/w and printers









- 2.1 Team Organisation and Personnel
- 2.2 Curricula Vitae
- 2.3 Planning
- 2.4 Deliverable Items





2.1 Team Organisation and Personnel

2.1.1 Proposed team

2.1.1.1 Overall team composition, key personnel

- Provide an organigram that describes the overall team composition.
- Include participants from all subcontractors, if any.
- Include all **key** (i.e. having a major role within the team and/or being responsible for one or more WPs) personnel.







NOTE: Key Personnel!

A Key Personnel is someone playing a **leading role** in the activity OR providing **irreplaceable** experience and expertise.

- 1. 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).
- 2. 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.
- 3. High numbers of claimed Key Personnel does not make the proposal any better. Demonstrated good and **effective use of people** with the right background and with clear roles is better.
- 4. 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%.

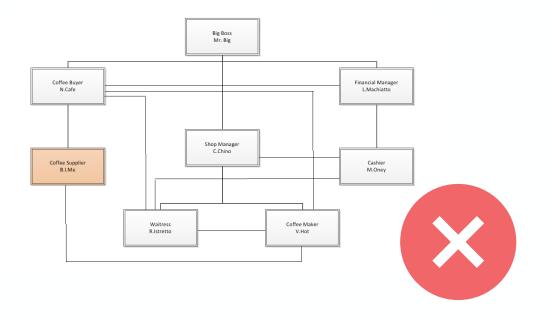


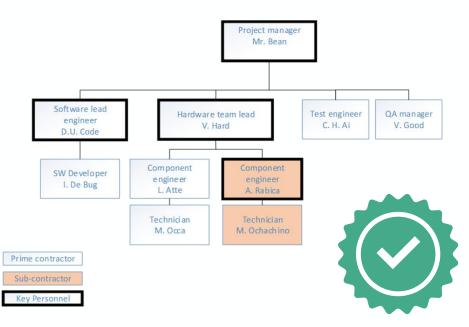


2.1.1.1 Overall team composition, Key Personnel

Provide an organigramme for the Project Team (including subcontractor(s), if any), this is intended to show the reporting lines and responsibility/delegation. It does not show who talks to whom on a daily basis.

- Each subcontractor 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.









2.1.1.2 Rationale of the proposed industrial organisation

- Rationale of the team composition
- Rationale of the split of work between Prime Contractor and subcontractor(s) (if any)
- Justification for the choice of subcontractor(s) (if any)

2.1.1.3 Time dedication of Key Personnel

Check consistency with PSS Forms

Key Personnel	Responsibilities under this activity	Total Hours dedicated to the Project	Total Working Hours during Project Timeframe	% of Total Working Hours dedicated to the Project
[Function]		X	Υ	(X/Y)*100
[Name]				
[Function]				
[Name]				
[Function]				
[Name]				
TOTAL				





2.2 Curricula Vitae

- CVs (of Key Personnel) shall not be attached to the proposal but shall be submitted separately in the dedicated Curriculum Vitae folder in esa-star.
- The CVs should ONLY be included in the dedicated folder for CVs on Esa-Star.







2.3 Planning

2.3.1 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.

Some tips for GANTT charts:

- 1. It should link clearly to WBS and Flow Chart
- 2. It should show milestones, reviews and **key** deliverables
- 3. It should show the **key** dependencies between tasks
- 4. Include to a 'sensible' level (not too much, not too little) ask can you monitor progress?
- 5. Is there a critical path? Is it shown and discussed?





Bad GANTT chart

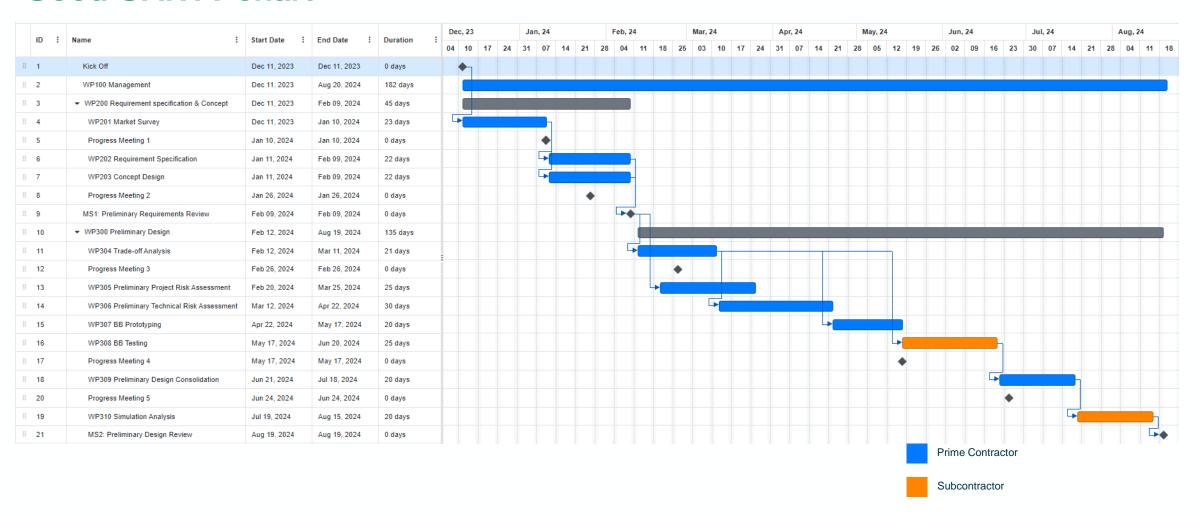
Not done in a project management tool giving little confidence in the PM experience of the bidder!







Good GANTT chart







2.3 Planning

2.3.2 Proposed Schedule

Provide a synthetic summary of the planning assumptions that are needed to correctly interpret the provided Gantt Chart.

2.3.3 Meeting and Travel Plan

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 involving travel, **field trips**, travels to test houses.

- All meetings with ESA (e.g. progress meetings note these may be via telecon)
- All reviews, both internal and with ESA (e.g. Requirements Reviews, Design Review, Test Readiness...)
- 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 (at ESA premises)

NOT to include:

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





2.4 Deliverable Items

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.

2.4.1 <u>Documentation</u>

- Ensure there is a detailed description of each deliverable to avoid later discussion! (i.e. a table of contents)
- Ensure consistency with WPDs!

2.4.2 Other Deliverables (Hardware, Software, Models, Data, etc.)

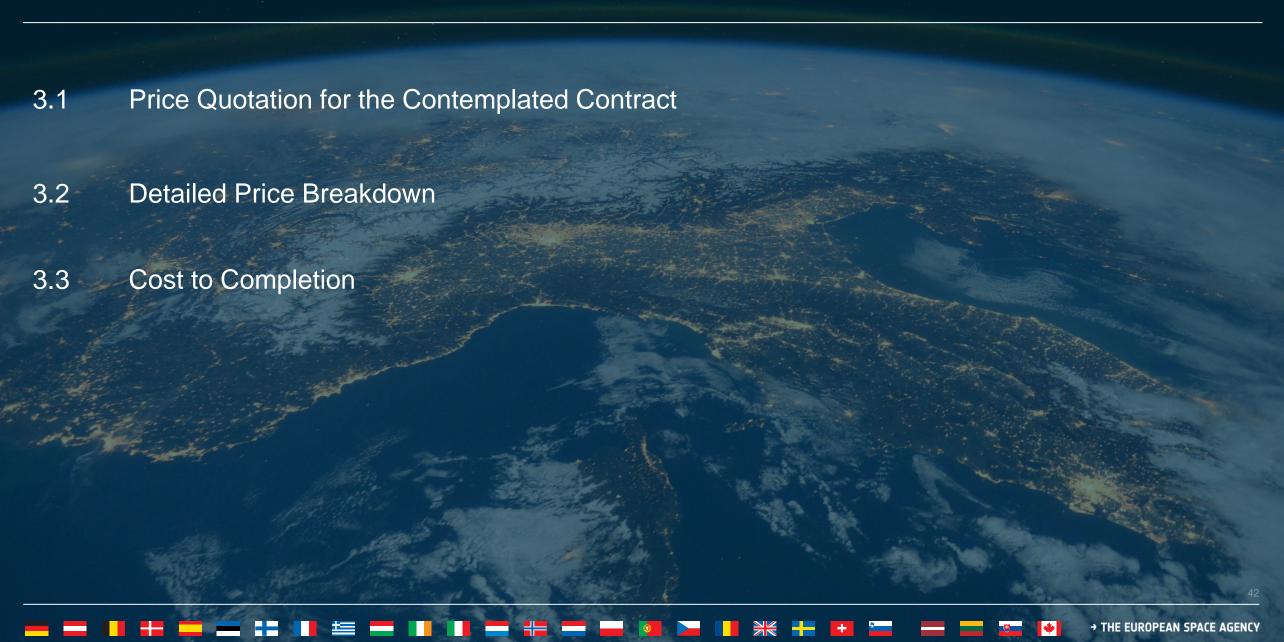
Often other deliverables are forgotten















3.1 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 CfP]

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 Proposal, 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 subcontractor that is directly related to the subject matter of the licence or royalty agreement.





3.1 Price Quotation for the Contemplated Contract

Remarks concerning certain price elements:

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 CfP). In case you consider that you and/or your subcontractor(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.

c) Currency and conversion rate:

For any Tenderer or proposed subcontractor 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].





Hints & 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 <u>non-taxable</u>. ESA applies this privilege by issuing a VAT EXEMPTION CERTIFICATE for its contract. ESA does therefore not have an EU VAT-ID number.

The VAT Exemption certificate will be provided with the 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.
- Subcontractors 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.





Hints & 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 all duration of the contract.
 - The <u>financial envelope in the CfP is an earmarked budget it is **NOT** a goal. Price must be fair and reasonable for the scope of work described in the Proposal.</u>





3.2 Detailed Price Breakdown

3.2.1 <u>Procedures Specifications and Standards (PSS) costing forms</u>

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

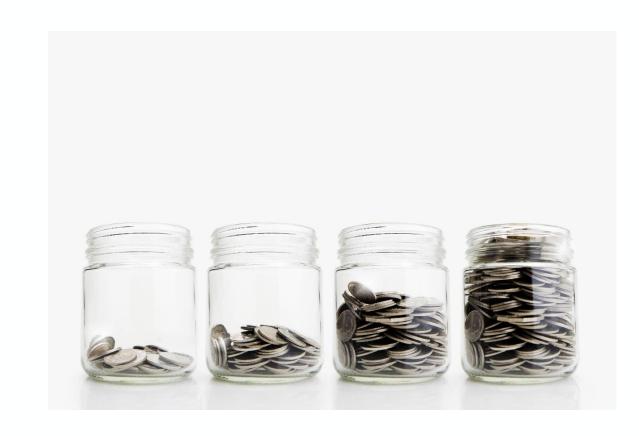
- PSS A1 Company Cost Rates and Overheads
- PSS A2 Company Price Breakdown Form
- PSS A2 Exhibit A Other Cost Element Details (if applicable)
- PSS A2 Exhibit B Travel and subsistence plan
- PSS A8 Manpower & Price Summary per WP
- Note that the PSS form templates can be downloaded from esa-star Publication at <a href="https://esastar-publication.sso.esa.int/supportingDocumentation under Reference Documentation/Administrative Documents/PSS Forms/Issue 5. Each of the PSS forms must be signed.
- Note for co-funded activity, the PSSA2 Exhibit A and Exhibit B, and PSSA8 should present the total cost of the activity including the co-funded amount. No profit can be charged on co-funded activity. The amount co-funded by the Tenderer shall not include any additional co-financing from other public R&D or other public programmes. The difference between the total cost of the activity and the total price of the present Contract shall be funded by the Contractor through [its internal funds/or specify as required], and shall not be recharged to the Agency in other Contracts, nor in the form of overhead.
- For fully funded activity, the profit shall not exceed eight percent (8%) of the base cost defined in item no. 9 of PSS A2 form, issue 5 ("Company Price Breakdown Form").





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

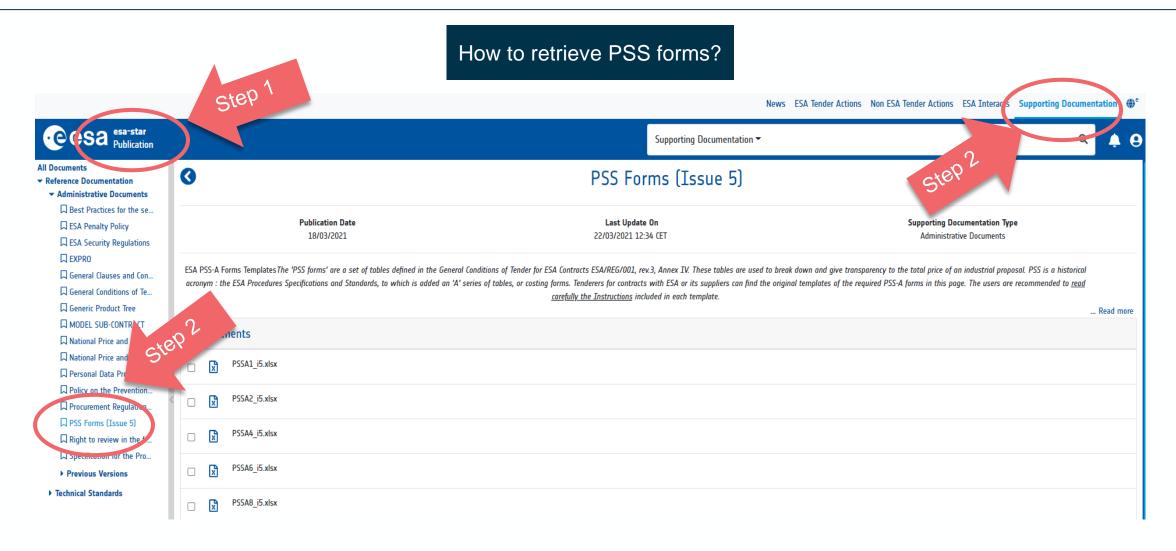




All PSS forms must be provided and signed, even if empty.











Why do we use PSS Forms?

- Fairness: PSSs are standard tools used for all ESA activities/CfP. 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...

Carefully check the Instruction Page

BE AWARE

- We evaluate in detail the cost.
- We will challenge the number of hours and the cost allocation to verify that the cost are true and credible.
- Use the standard cost categories effective for any other work done by your organisation.





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





PSSA2

- ✓ Full vision of the cost allocated to the activity
- ✓ If applicable, do not forget to include profit and cost of subcontractors
- ✓ **Exhibit A**: Details the cost allocated to hardware, services and miscellaneous
 - TIPS: Cost must be detailed and verifiable against current market price
- ✓ Exhibit B: Details 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.
- ✓ The instruction provides all the definitions related to OTHER DIRECT COST ELEMENTS.





Hints & Tips:
PSS A2 – Key review points by
Technical Experts

Total # hours Total # FTE

- Are these reasonable for the duration and scope of work?
- Do they match the # and time allocation of key people?

COMPA	NY PRICE BREAKDON	WN FORM		Form N	lo. PSS A2	Page no.	1		Issue 5
RFQ/I	TT No.:	18.187.04			COMPANY			'	
Propo	sal/Tender No.:	1			Name:	CIC Beverages			
Туре	of Price:	FFP	Firm Fixed Price		Country:	Netherlands			
Econo	omic Condition:	2025							
Nation	nal Currency (NC):	EUR			Representative				
Excha	nge Rate (X):	1 EURO =	1.00000	EUR	Name and Title:	Mr. Bean			
Contr	actual Phase:	N/A			Signature:				
	t/Work Package(s):							TOTAL (NC)	TOTAL (EURO)
								EUR	NC/X
	LABOUR								
	abour cost centres or c Description	eategories	No. of FTE (calculated) U = W / V	Sold Hours per ManYear V	Manpower Effort No. of Hours W	Gross Hourly Rate in NC			
	Project Manager		0.2	1,600	300	39.24		11,772.00	11,772.0
	Senior Engineer		0.9	1,800	1,550	57.84		89,652.00	89,652.0
	Junior Engineer		0.3	1,800	550	36.72		20,196.00	20,196.0
	rechnician		0.2	1,800	400	28.44		11,376.00	11,376.0
	QA Manager		0.0	1,800	80	48.72		3,897.60	3,897.6
								0.00	0.0
								0.00	0.0
								0.00	0.0
								0.00	0.0
								0.00	0.0
			3		3			0.00	0.0
	Total Direct Labour Hou		1.6		2880.0		Α	136,893.60	136,893.6
	INTERNAL SPECIAL	FACILITIES			1	I Init nata			
Code	Description			Type of unit	No. of units	Unit rates in NC			
	Pressure Testing Cham	nber		Day	1	1,000		1,000.00	1,000.0
								0.00	0.0
								0.00	0.0
								0.00	0.0
					1			0.00	0.0
2	Total Internal Special F	acilities Cost					В	1,000.00	1,000.00





Hints & Tips: PSS A2 – Key review points by Technical Experts

Other direct cost elements - % of overall cost reasonable? (details reviewed in Exhibits)

Profit <= 8%?

Costing should be done from the bottom up. A reduction can be offered, if the budget exceeds the financial envelope for the activity type.

	1	1						
	OTHER DIRECT COST ELEMENT	Base amounts in NC	+ OH %	OH amounts in NC				
3.1	Raw materials	1,455		0			1,455.00	1,455.00
3.2	Mechanical parts	1,973		0			1,973.00	1,973.00
3.3	Semi-finished products						0.00	0.00
3.4	Electrical & electronic components	733		0			733.00	733.00
3.5	HIREL parts							
	a) procured by company						0.00	0.00
	b) procured by third party						0.00	0.00
3.6	External Major Products						0.00	0.00
3.7	External Services	3,000		0			3,000.00	3,000.00
3.8	Transport and Insurances	3 100		0			3,100.00	3,100.00
3.9	Travel and Subsistence						0.00	0.00
3.10	Miscellaneous	600		0			600.00	600.00
3	Total Other Direct Cost	10,861.00		0.00		С	10,861.00	10,861.00
4	SUB-TOTAL DIRECT COST				(A+B+C)	D	148,754.60	148,754.60
	GENERAL EXPENSES	Cost items to whic	h % applies	Base Amount in NC	OH %			
5	General & Administration Expenses					E	0.00	0.00
6	Research & Development Expenses					F	0.00	0.00
7	Other					G	0.00	0.00
8	TOTAL COMPANY COST				D+(E+F+G)	Н	148,754.60	148,754.60
		Cost items to whic	h % applies	Base Amount in NC	%			
9	PROFIT			148,154.6	8.0%	1	11,852.37	11,852.37
10	COST WITHOUT ADDITIONAL CHAR	GE				J		0.00
11	FINANCIAL PROVISION FOR ESCAL	ATION				K		0.00
12	TOTAL COMPANY PRICE				(H+I+J+K)	L	160,606.97	160,606.97
13	TOTAL SUB-CONTRACTOR PRICE			-		М	23,969.00	23,969.00
14	REDUCTION for COMPANY CONTRI	BUTION				N		0.00
15	TOTAL PRICE FOR ESA				(L+M-N)		184,575 97	184,575.97

Total – less than earmarked budget?





Hints & Tips: PSS A2 – Key review points by Technical Experts

COMPANY PR	RICE BREAKDOWN FORM	EXHIBIT	T "A" TO PSS A2			Issue
			Page No).	No. of Pages	
RFQ/ITT No.:	18.187.04		COMPANY NAME:	CIC Beverages		
Proposal/Tende	er No.:		Name and Title:	Mr. Bean		
National Currer	ncy: EUR					
Contractual Pha	ase N/A		Signature			
Applicable	to PSS-A2 elements: 3.1-3.4 - 3.6 - 3.7 - 3.10 - 10					
Project / W	Vork Pac WP300, WP400, WP500					
		_				
Cost El. No.	ITEM DESCRIPTION	Type of Price	Purchase	Purchase Amount	Exchange rate	Amount in NC
_			Currency		1 NC =	
3.1	Raw Materials: Copper, Stainless Steel for component mnufacturing	FFP	EUR	1,455.00	1.00000	1,455.0
3.2	Mechanical Parts: Soldering support equipment, seals, slides, hinges, toggle clamps	FFP	EUR	1,973.00	1.00000	1,973.0
3.4	Electrical & Electronic Components: resistors, capacitors, LEDs, transistors e.t.c	FFP	EUR	733.00	1.00000	733.0
3.7	External Service: Test facility use ASTM f2990 Certified commerical coffee brewers facility at Brewzone, Italy	FFP	EUR	3,000.00	1.00000	3,000.0
3.10	Micellaneous: raw food material for testing (coffee, cocoa beans, tea, sugar, milk)	FFP	EUR	600.00	1.00000	600.0

Bought in items

- Justified by scope of work?
- Not representing infrastructure?
- Not representing 'normal work' items?
- Sufficiently identified?
- Reasonable cost?

External Services

- Clearly described?
- Clearly needed?
- Value for money?
- Referenced in the proposal?





Hints & Tips: PSS A2 Exhibit B – Key review points by Technical Experts

TRAVEL PLAN AND COST I	DETAIL			EXHIBIT "B" TO PSS-A2	!								Issue 1
RFQ/ITT No.:									Project:				
Proposal/Tender No.:									Company:				
Contractual Phase													
Economic Condition:									pe of Price:				
National Currency (NC)*:							Exch	hange (X): 1 EURO =	1	0		
WP Reference Number	WP Title	Purpose/Event	Departure	Destination	Nr. of Trips	Avg.People	Travel Cost	B/E	Avg.Days per	Subsistence Cost	A/R	Total Cost	Total Cost
						per Trip	p.p. (NC)		Trip	p.d. (NC)		(NC)	(EURO)
		Test facility use ASTM					200			200		1,600	1,600
		f2990 Certified					1			4			
WP500	Testing		Tallinn, Estonia	Rome, Italy	1	2	•	E	3	/'			
		brewers facility at						$ \setminus $					
	<u>/</u>	Brewzone, Italy											
WP100		Final Presentation at	Tallinn, Estonia	Noordwijk,	1	2	250		2	250		1,500	1,500
VVI 100	Management	ESTEC	Tallilli, Estorila	Netherlands	'	2			2				
Total Cost, WBS level 1	(equal to the item 3.9 of PSS-	A2)										3,100	3,100

Meetings & Travels:

- Matching meeting & travel plan?
- All clearly justified?

People:

 Matched to purpose of meeting?

Travels:

- Flight costs reasonable?
- # days reasonable?
- Subsistence reasonable? (often too low)





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 PSS forms
- ✓ Do not forget the total!





Hints & Tips: PSS A8 – Key review points by Technical Experts

Hours per work package

- Matching/ reasonable for scope of work described in WP?
- Reasonable spread of hours (i.e. focus at key part)?
- Hours spent on management reasonable?
- Is the PSS complete? (Often not fully filled out)
- Procurements associated to correct WP?

COMPANY MANPOWER A	ND PRICE SU	JMMARY PER	WP				Fo	rm no. PSS	A8				Page X of Y	Issue 5
ITT/RFQ:		18.187.04									Price Type:			
Proposal/Tender No.:		1									nomic Conditions:			
Company Name:		HiQ Beverages Ltr	d								Currency (NC):	EUR		
Contractual Phase:		N/A								Exchange	e Rate: 1 EUR =		01-1900	
WBS-Level (Number and Title):		1		Workpackage										
14	/P Title	M	Dit	Preliminary	Detailed Design	Davids and								
V	/P IIIIe	Management	Requirement Specification and	Design		Prototype Development &								
			concept	Design		Test								
WD N	lumber	100	200	300	400	500							 	Total WBS-Level
		100	200	300	400	300			l	l	l	l		TOM WDG-Level
Labour Hours per category	Hours													
Project Manager	#	300												300
Senior engineer	#		190	140	680	540								1,550
Junior Engineer	#		50	100		300								550
Technician	#			120	40	240								400
QA Manager	#			10	10	60								80
	#													
	#													
	#													
Total Labour Hours	#	300	240	370	830	1,140							l l	2,880
Total Labour Cost	NC	11,772.00	12,825.60	15,669.60	44,628.00	51,998.40								136,893.60
2. Internal Special Facilities Cost	NC					1,000.00								
3.1-3.4 Material Costs	NC			1,933.00		2,472.70								4,405.70
3.5 High Rel Parts Costs	NC												i i	
3.6 External Major Products Cost	NC												i i	
3.7 External Services Cost	NC					3,450.00								3,000.00
3.8 Transport/Insurance Cost	NC													
3.9 Travel and Subsistence Cost	NC				780.00	2,718.00								3,498.00
3.10 Miscellaneous Cost	NC					630.00								630.00
3. Total Other Costs (sum of above 3.	x) NC	0.00	0.00	1,933.00	780.00	9,270.70								11,983.70
4. Sub-Total Direct Cost	NC	11,772.00	12,825.60	17,602.60	45,408.00	62,269.10								149,877.30
5 7. General expenses	NC	441.45	480.96	587.61	1,673.55	1,949.94								5,133.51
8. Sub-Total Company Cost	NC	12,213.45	13,306.56	18,190.21	47,081.55	64,219.04								155,010.81
9. Profit Fee	NC	977.08	1,064.52	1,455.22	3,766.52	5,137.52	 							12,400.86
Cost without additional charge	NC	377.00	1,004.02	1,400.22	3,700.32	3,137.32								12,400.00
Financial Provision for escalation	NC													
														1
12. Total Company Price	NC	13,190.53	14,371.08	19,645.43	50,848.07	69,356.56								167,411.67
. ,	EURO													
														•
13. Total Sub-Contractors Price	NC				12,943.80	11,026.10								23,969.90
	EURO													
14. Reduction for Company contribution	n NC													
15. Total Price for ESA	NC												1	
	EURO	13,190.53	14,371.08	19,645.43	63,791.87	80,382.66							†	191,381.57
	20.10		,	. 5,5 . 5. 10	22,. 2	23,232.00			·	·		·	1	,

→ THE EUROPEAN SPACE AGENCY





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 non-profit organisations, no profit can be accepted. For other organisations, the profit shall not exceed 8% of the Total Company Cost shown on line 8, which excludes the base value of 3.5b. Subcontractor prices are not considered to be own company cost and, being already inclusive of profit, are shown on line 13 of the PSS A2 (Issue 5).
- Final presentation shall take place at the Agency's premises. The cost of attendance/participation to conferences can only be covered if it is directly pertinent to the work being proposed, and shall be justified.
- Overheads on procurements and labour rates are intended to cover admin costs and general office supplies and overheads.





3.2.2 <u>Milestone Payment Plan</u>

Determines how much gets paid, when and what are the conditions for payment

ESA pays against achieved results = Payment milestone dates typical align with technical review milestones successfully concluding with all associated deliverables accepted by the Agency.

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





Hints & Tips:

Not more than 2 payments in a 12 month period!

Balance to be cash neutral!

Acceptable Milestone Description

Preferred description is linked to a review

Payments should be balanced to predicted expenditure profile

Milestone (MS) Description	Schedule Date	Payments from ESA to (Prime) Contractor (in Euro)	Country (ISO code)
Progress (MS 1): Upon successful completion of the Requirements Review and acceptance of deliverables D1a, D1b, D1c, D2 and D3.	To + 2 months	75,000	EE
Progress (MS 2): Upon successful completion of the Preliminary Design Review and acceptance of deliverables D4a-c, D5, D6a-b, D7.	To + 7 months	74,570	
Final Settlement (MS3): Upon successful completion of the CDR and 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 +18 months	41,812	
TOTAL	•	191,382	





Hints & Tips:

The maximum advance payment is 35% SME status is sufficient justification for automatic 35% AP!

All non-SMEs must provide clear justification for all AP up to 35%!

Note:

The advance payment constitutes a debt of the Contractor to the Agency until it has been offset against a subsequent milestone.

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				Amount	MS 1	Amount	Upon signature of the Contract by both Parties

In this case the 66,984€ would be paid at contract signature. At the first milestone (75K€) on a further 8,016€ would actually be transferred.

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	HiQ Beverages Ltd		EE	66,984	MS 1	66,984	Upon signature of the Contract by both Parties





You are requested to indicate for information purposes only, the Milestone Payment Plan that is envisaged for subcontractor(s)

	For Information purposes only: Amounts in Euro for Contractor and Sub-contractor(s)											
Milestone	Prime Contractor HiQ Beverages Ltd	Insert Country (ISO code) EE	Subcontractor A Under Pressure Manufacturing Ltd	Insert Country (ISO code) LV								
Advance	61,984		5,000									
MS-1	8,016		0									
MS-2	55,600)	18,970									
MS-3	41,812		0									
TOTAL	167,412	2	23,970									

See page 32 of example proposal





PLEASE NOTE!

- 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.
 - Advance payments for SMEs are 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)).
- The final payment milestone shall not be less than 10% of the contract price.



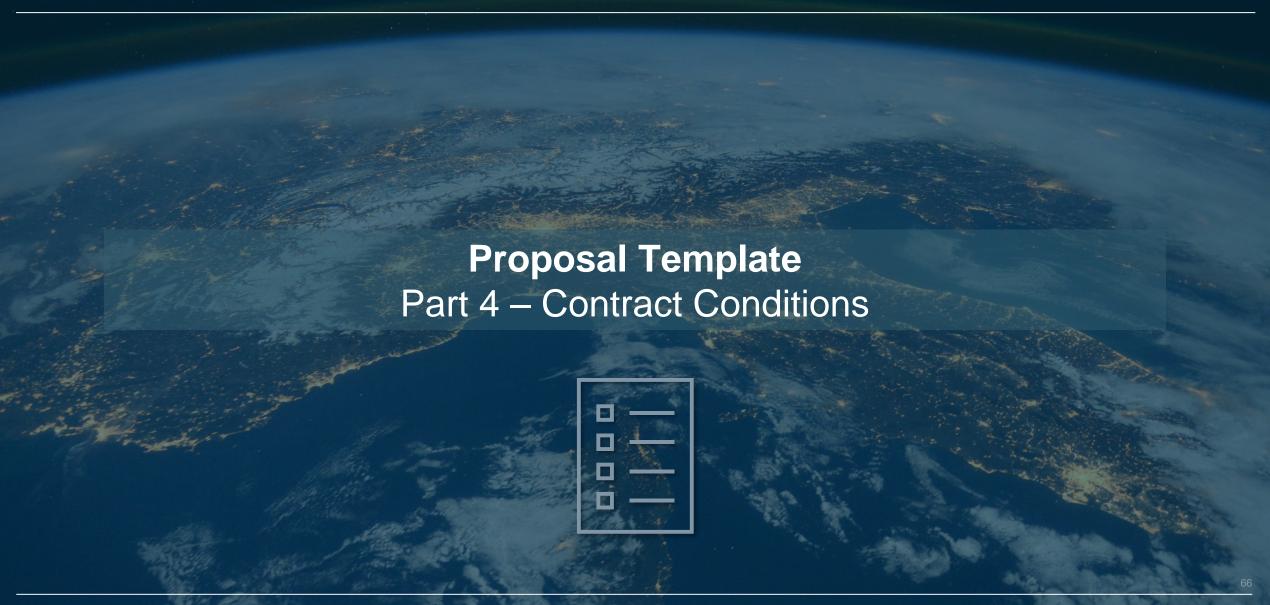


3.3 Cost To Completion

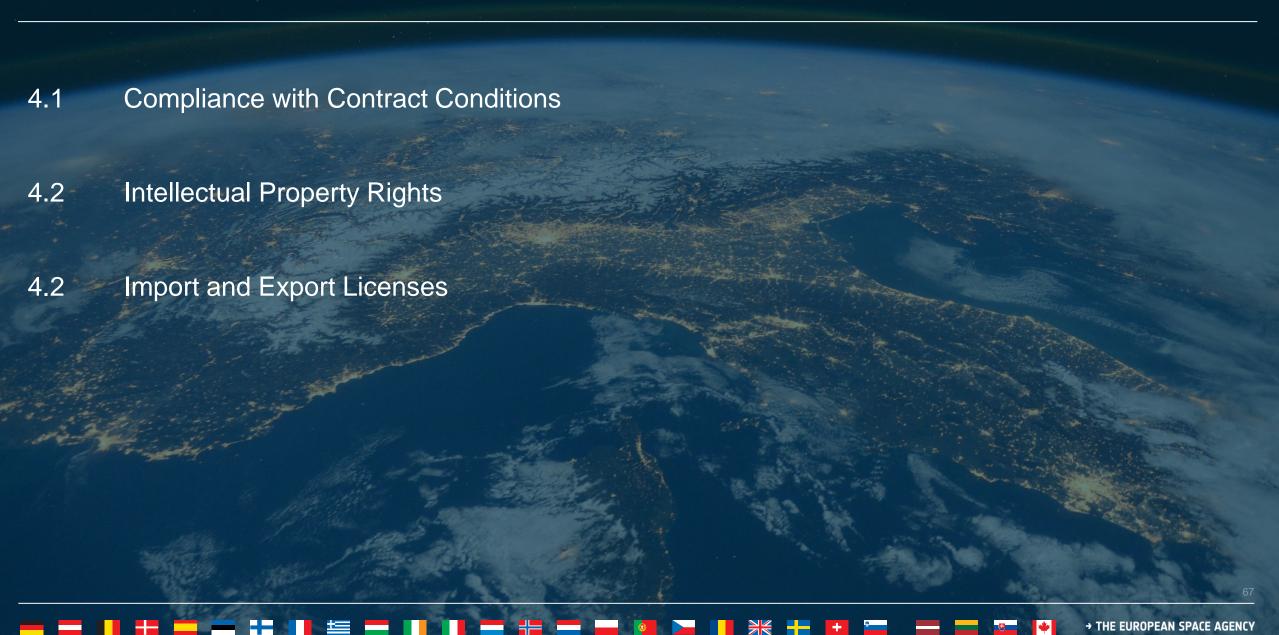
- A cost to completion is requested for an indication of the further investment foreseen to make the product or service market ready.
- This information is provided for information only and is not binding in any way for either party (ESA or Tenderer).
- Complete the table below identifying the main development steps / activities that would be needed AFTER COMPLETION OF THIS ACTIVITY to progress the work to higher TRL - if applicable.
- Provide a rough estimate of the expected cost of each further step or activity and the expected end TRL at the end of each step or activity (two levels above the final TRL achieved during the proposed work).

Further Activity	Step/	Estimated (Euro)	cost	Estimated date	Start	Estimated date	Estimated at end of st	













4.2 Intellectual Property Rights

4.2.1. Background Intellectual Property and Third-Party Intellectual Property Rights

Background IPR

- a. Intellectual property existing already BEFORE the CfP.
- b. That is USED for the work of the CfP
- 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?

4.2.2 Foreground Intellectual Property

Foreground IPR

- Intellectual property developed DURING the Activity
- b. IP shall remain vested in the company
- c. ESA and the Government of Czech Republic shall also have rights
- d. It shall not affect the deliverables/rights on the deliverables

Hints & Tips:

Foreground IPR is typically expected out of any technical development.

FIPR contributes to advancement of products and services and commercial business cases.





4.2 Intellectual Property Rights

4.2.3 Ownership of Foreground Intellectual Property

Please review carefully Articles 6 of the Draft Contract. Please provide two statements of compliance:

- 1. the Contractor will own all Intellectual Property Rights and have the right to apply for, and to own, any
 Registered Intellectual Property Rights arising from Work performed under this Contract in line with the clause Articles
 6.2.1 the draft Contract and
- 2. 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 6.2.2 the draft Contract.

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





4.3 Import and Export Licenses

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.

4.3 <u>STATEMENT RELATING TO EXPORT IMPORT LICENCES / AUTHORISATIONS AND RELATED</u> DOCUMENTATION

There <u>are</u> no export or import restriction issues and thus no need to obtain specific licences or authorisations. or include and complete the following statements as <u>appropriate</u>

Export or import restrictions and/or a need of adequate licences or authorisations exist, and the status regarding such requirements is at present the following:

 the Tenderer/Subcontractor ... (name) has obtained the following authorisation(s) in order to submit this tender:

and/or

 the Tenderer/Subcontractor ... (name) will need to obtain, prior to the placing of a Contract, the following authorisation(s):

and/or

 the Tenderer/Subcontractor ... (name) will need to obtain the following authorisation(s) for the implementation of the contract:

Security Measures applied to submitted Proposals



ISTRIBUTION

TEB participants are granted access, in esastar, to admitted tenders only after signing a Non-Disclosure and Non-Interest Form

SECURITY

The latest ESA Security Directives are applicable to the procurement process and the admitted Proposals.

TYSOUS STORY

Proposals not admitted for evaluation and those not recommended for contract award, are deleted from the esa-star system.



