

How to write good proposal

12/09/2023

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→ THE EUROPEAN SPACE AGENCY

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

This presentation material does not contain sufficient information to be used, in any way, in the context of any ESA ITTs (Invitation-to-Tender).

This presentation is just to help understand, in a simplified manner, some of the key elements associated with ESA proposals.

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 ITT documentation.

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 ITT can be different. Do not use a previous template from any other ITT.

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 / Checklist before submission



Proposal Template – Common Mistakes

VERY BRIEF summary of SOME of the most common mistakes seen: **NB! CHECK YOUR PROPOSAL AGAINST THIS LIST!**

Criteria 1

1. 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).

Criteria 2

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).

Criteria 3: Management, planning, costing parts

1. Poor management plan (e.g. missing how you will monitor the timely implementation of the activity, sub-contractor 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).

Criteria 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).

Contains details on:

- **Title**
- The team submitting the proposal
- **Cost** of the proposal
- What **type** of activity (**a, b, c, d, e, f, g** or h)
- **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.

Hints and 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)”*

Proposal Template

Part 1 – Technical and Application Part



1.0 INTRODUCTION AND SCOPE

1.1 TECHNICAL OBJECTIVES

1.2 REQUIREMENTS

1.3 TECHNOLOGY READINESS LEVEL

1.0 INTRODUCTION AND SCOPE

Provide the background and rationale of what you are proposing to do. Keep it succinct (not more than half a page), but clear enough to provide sufficient context for your development.

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

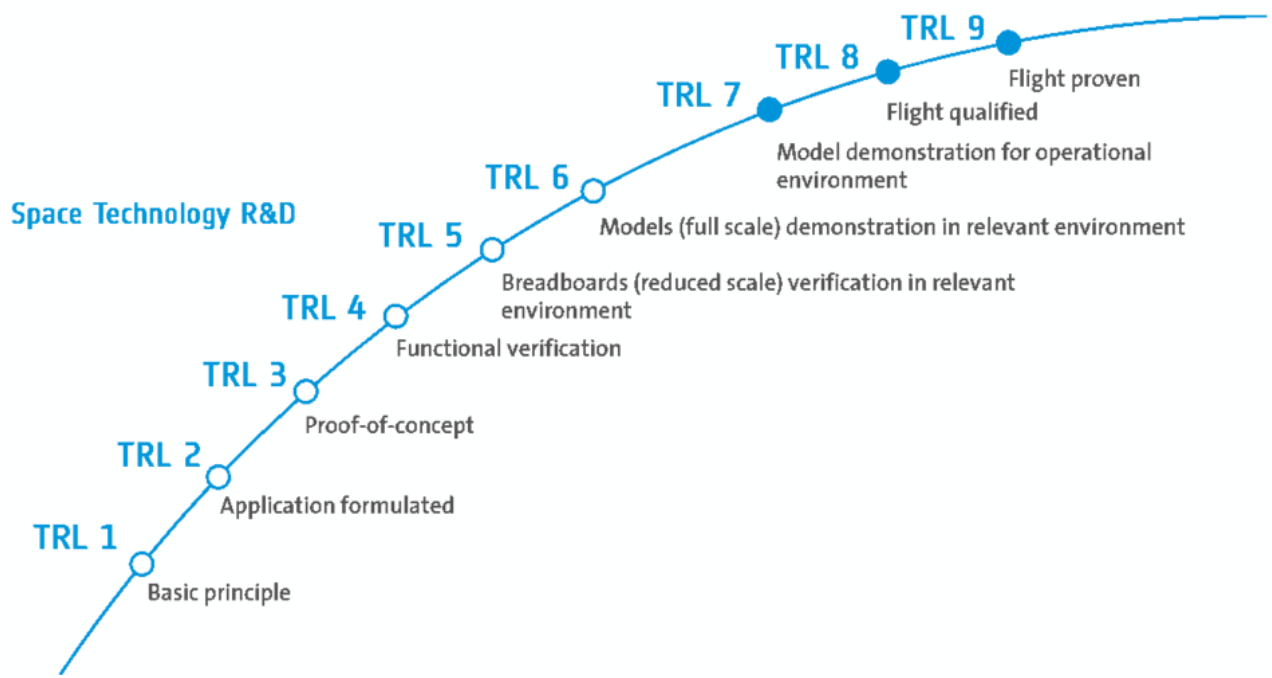


1.3 TECHNOLOGY READINESS LEVEL

Indicate and substantiate the current TRL level of the technology.

Refer to **Annex A** to the ITT Cover Letter for the description of TRLs.

Please note that the type of activity proposed, Type a, b or c has to be **compatible** with the start and end TRL indicated in the **Cover Letter** of the call.



1.4 ENGINEERING APPROACH

- 1.4.1 State of the Art
- 1.4.2 Technical Steps
- 1.4.3 Proposed Work Logic
- 1.4.4 Implementation aspects

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

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?

1.4.2 Technical Steps

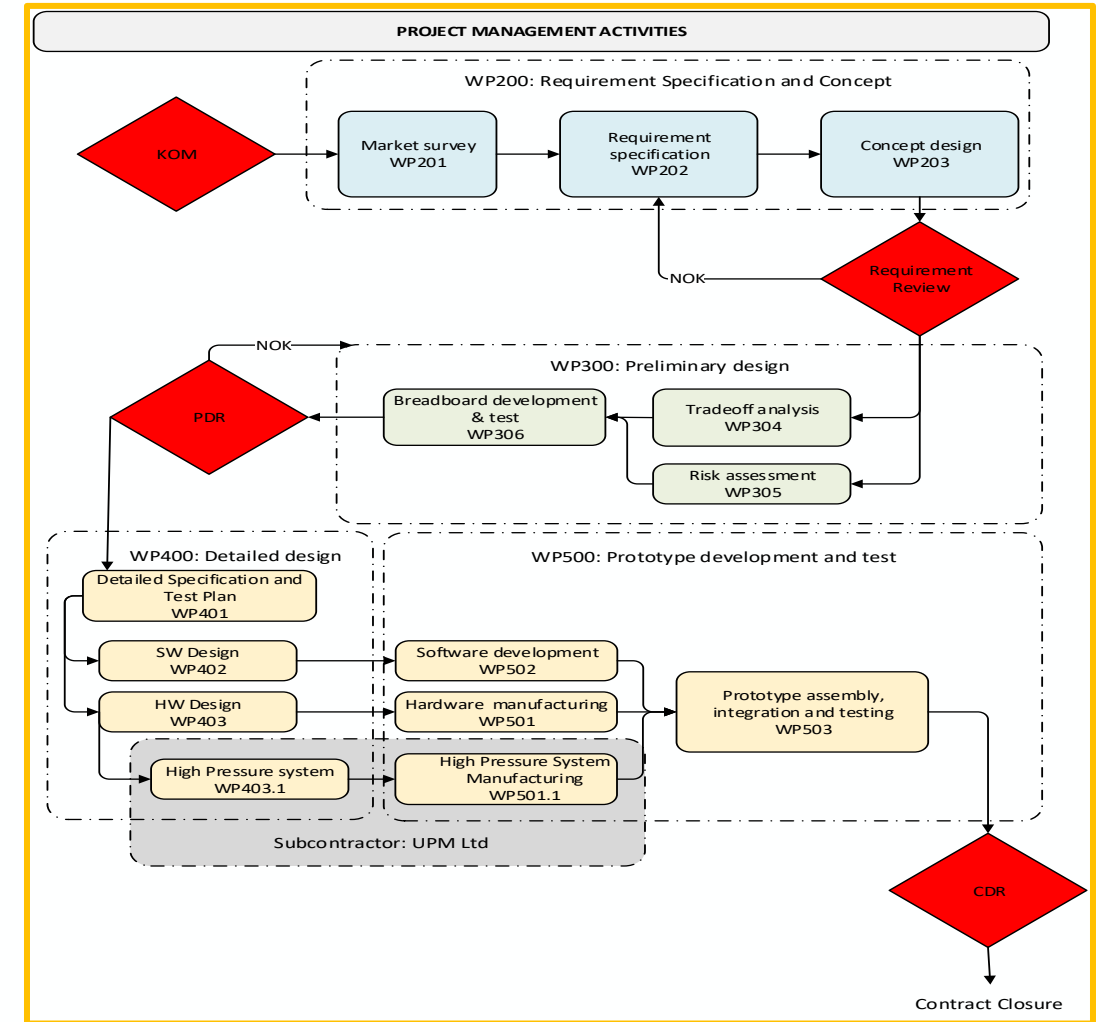
Present and discuss **in DETAIL** the scientific/technical steps to achieve the set objectives.

This needs to correspond to the **Work Flow Logic**! This is the text description and justification of the flow chart and the Work Breakdown Structure.

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)
- **Sub-contractor work** is clear
- Dependencies clear



1.4 ENGINEERING APPROACH

1.4.4 Implementation aspects

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

Have you answered these questions?

1. What are the **key stages/ steps** in the work/activity?
2. What is the **goal/ purpose** of each step?
3. What will be done in each step?
4. How will each step be assessed, controlled, **reviewed** or validated?
5. How does each step relate to the others?
6. If there are subcontractors: **How** is the work broken up between companies? **Why**?
7. What are the **key trade offs**? What are the key decision points?

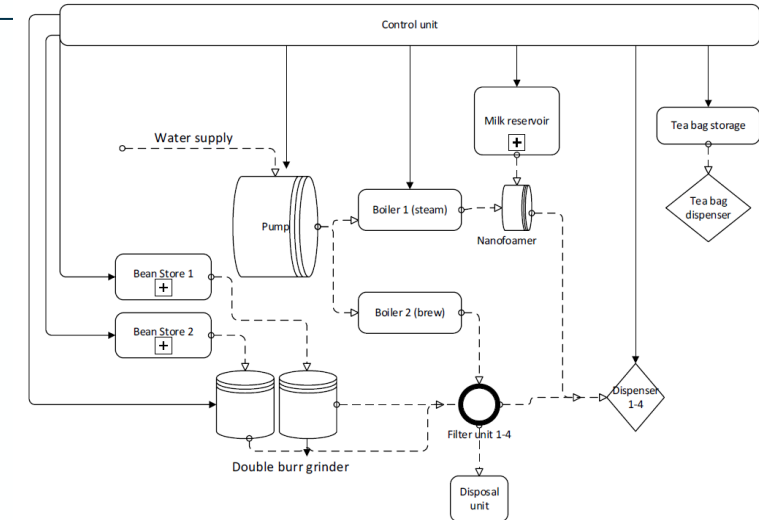


Figure 1. Functional Diagram of CM2000

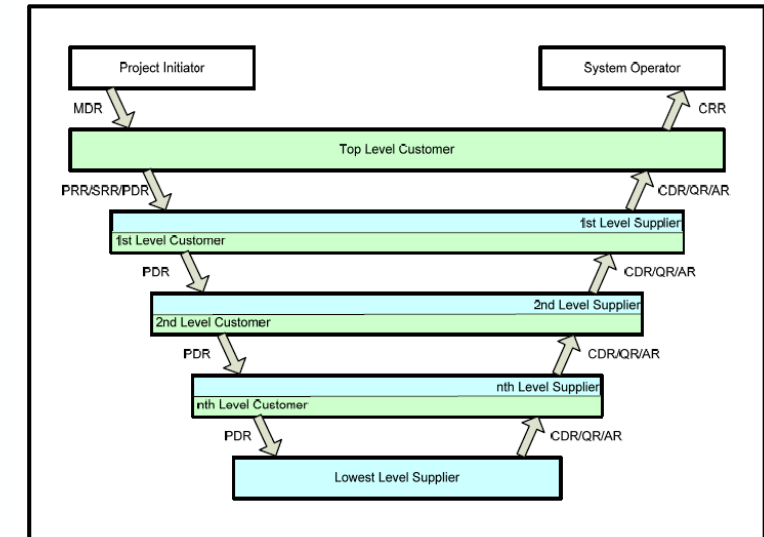


Figure 4-4: Review life cycle

1.6 PROSPECT FOR EXPLOITATION AND USE

This is very strongly linked to the objectives and the requirements (in particular the user requirements).

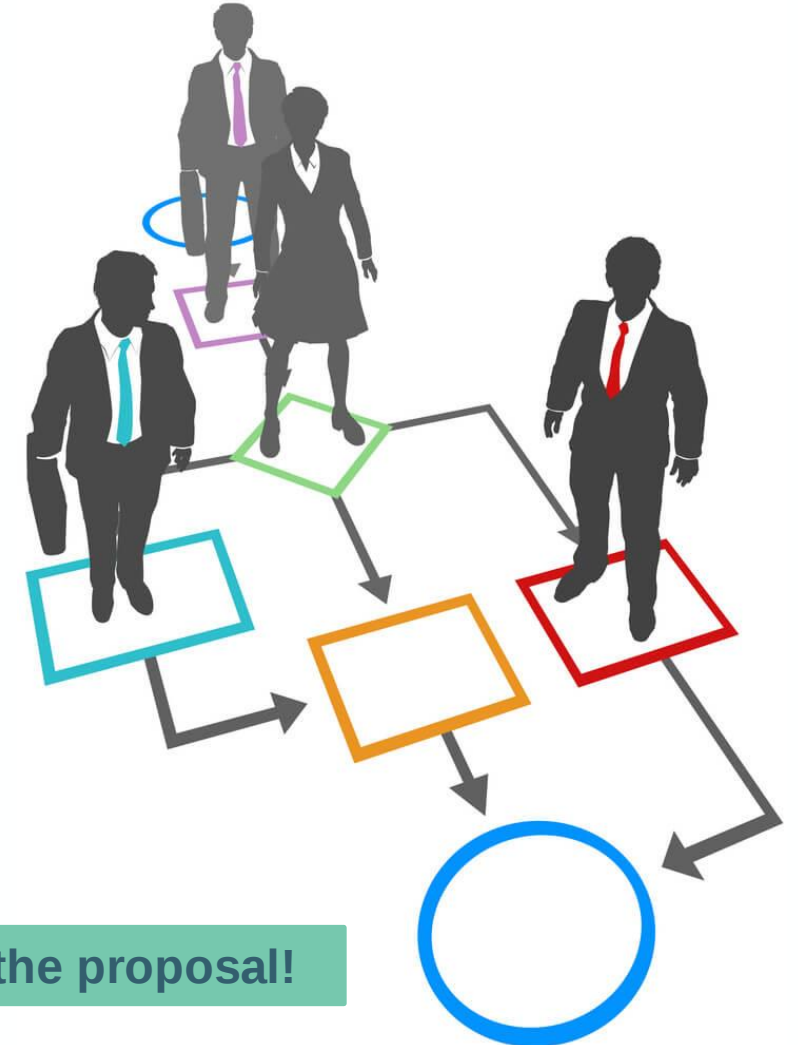
1. Who will use the technology developed?
2. What will they use it for?
3. Why is it needed?
4. What are the competing technologies/ methods?
5. Why could this be better?
6. Is there a valid business case for continuing after this activity?
7. Does it match the programmatic constraints of the call? (BE EXPLICIT WRT COVER LETTER)

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)

1.7.2 Work Package Description (WPD)

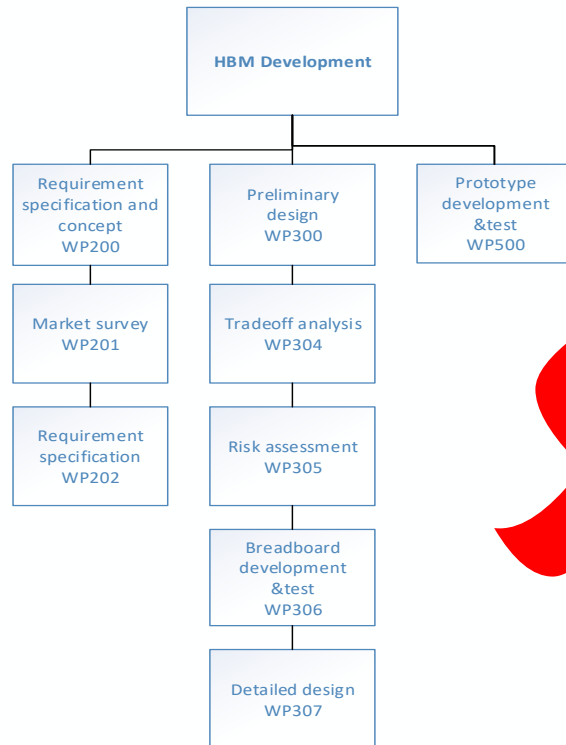


TIP! These sections should be coherent with the earlier sections of the proposal!

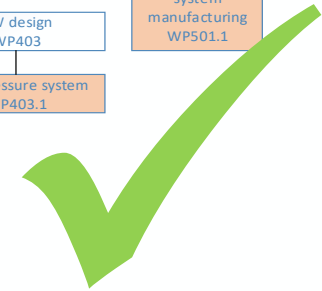
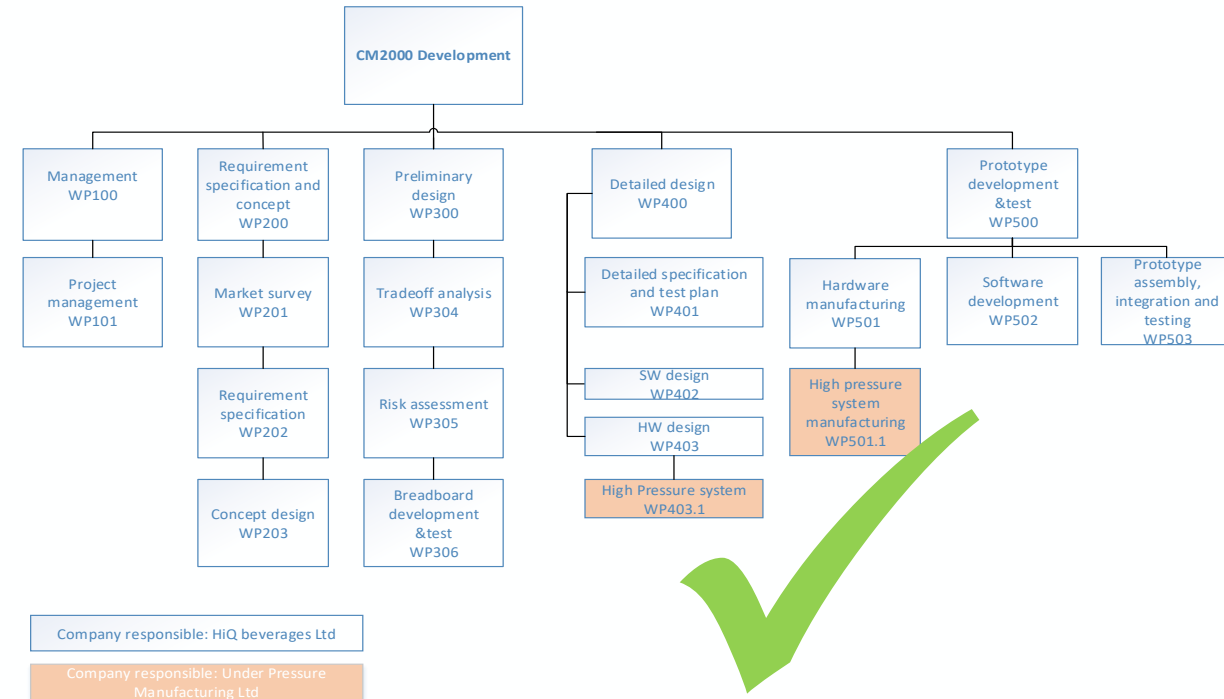
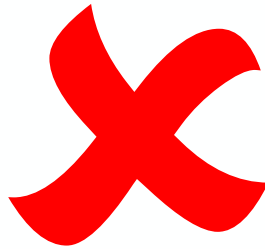
1.7.1 Work Breakdown Structure (WBS)

- Logically structure the main Work Packages following the main tasks of the work flow (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’

1.7.1 Work Breakdown Structure (WBS)



- No Management
- No split by company
- Not organised by core Task/Phase (WP307 is major WP not sub-WP)
- Insufficient detail in WP500 for Planning



- ❑ 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

1.7.2 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)

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)
- b. Duration (Start: T0 + 1, End: T0 +5).
- c. Describe work (bullets) at sufficient detail to understand 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.

Bad

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

PROJECT: CM2000 Development	PHASE: 1	WP: 200
WP Title: Requirement Specification and Concept		Sheet 1 of 1
WP Manager: Mr. Bean		
Start Event: KOM	Planned Date: 1 st April 2018	
End Event: End of project	Planned Date: 1 st 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

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: 15.08.2018
Start Event: KOM	Planned Date: T0	
End Event: RR	Planned Date: T0+3	
Inputs: - SoW - Approved proposal - KOM Minutes of Meeting - AD1 - RD1		
Tasks: - Perform a survey of all current HBMs available on market - Compare key requirements and capabilities - Compare key performance indicators (efficiency, lifetime, reliability) - Compare and analyse cost (unit cost, running cost) - Identify and analyse customer requirements (coffee provider) - Assess the current annual demand for hot beverages in Europe - Perform trend analysis for hot beverage demand in Europe - Identify most popular hot beverages and key end-user requirements - Collect and analyse new and emerging requirements for popular hot beverages - Assess the potential future market for any evolving requirements - Identify consumer needs not currently addressed by HBM		
Specifically Excluded Tasks: - No competitor machines will be procured and tested - No taste testing/ surveying will be performed		
Outputs: D01: Current and Future Market Assessment Report D02: Emerging Hot Beverage Requirement 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 bidding 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.

1. Example Facilities
 1. Test equipment
 2. Specialist design and analysis software
 3. Specialist computing facilities
 4. Specialist manufacturing facilities
2. Examples of things **NOT** considered Facilities:
 1. Your building and address
 2. Your car park
 3. Your desks and office furniture
 4. Standard computers, office s/w and printers



Proposal Template

Part 2 – Management



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, 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) personnel.

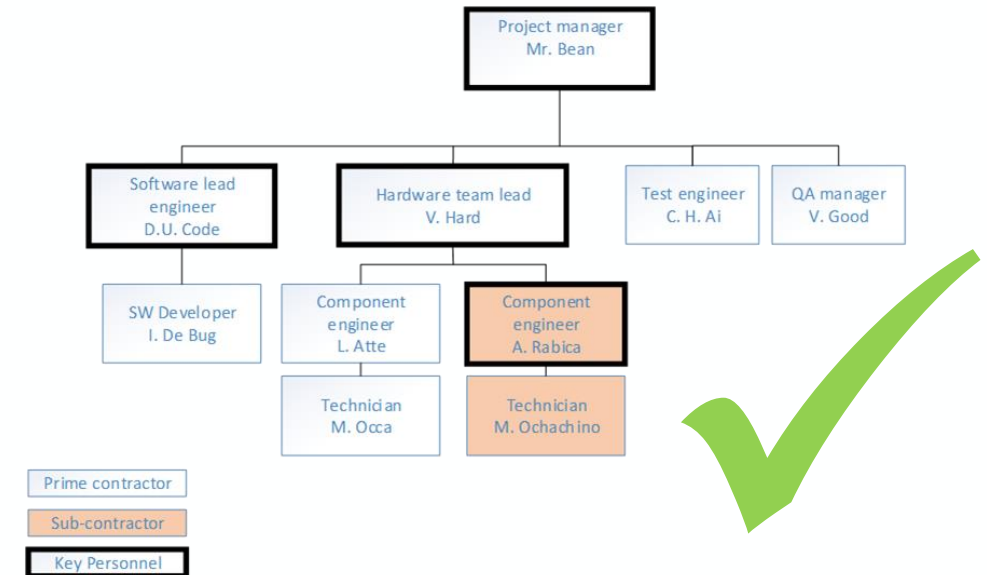
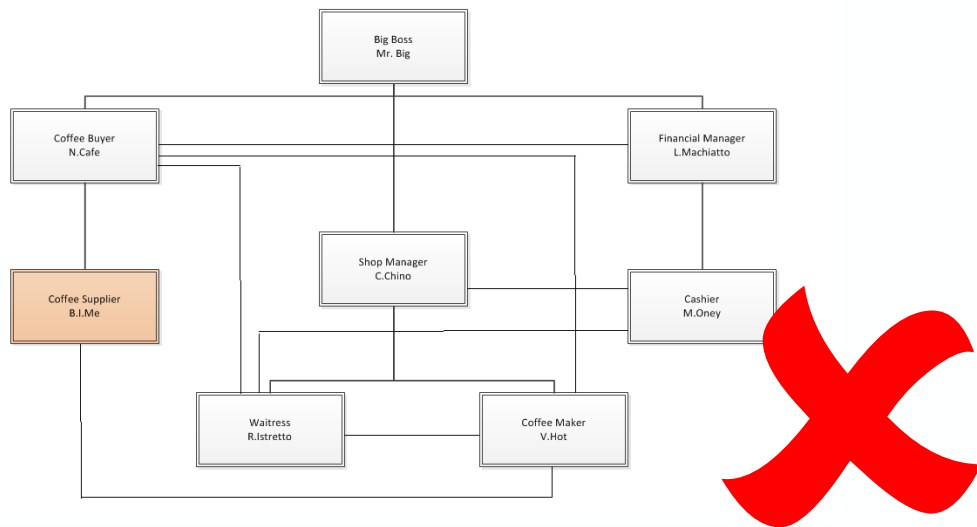
A Key Personnel is someone playing a **leading role** in the activity OR providing **irreplaceable** experience and expertise.

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 sub-contractor(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 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.



2.1.1.2 Rationale of the proposed industrial organisation

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

2.1.1.3 Position of each of the team members within his/her own company's (or institute's) structure and within the proposed team

- Clear and short description (not WP responsibility only)

2.1.1.4 Time dedication of key personnel

- Check consistency with PSS Forms

2.2 Curricula Vitae

One summary resume per **key** person

Include:

- Role
- Relevant experience
- Very summarised version of other experience

Full CV can be included in an Annex

2.3 Management of Subcontractor(s)

Most space developments require multidisciplinary International teams.

In cases where you involve of Subcontractor(s), present the management plan and procedures to exercise monitoring and control over the contributions from subcontractor(s) (e.g., progress meetings, reports, supplier reviews).



2.4 PLANNING

- 2.4.1 GANTT chart
- 2.4.2 Proposed Schedule
- 2.4.3 Meeting and Travel Plan

2.4.1 GANTT chart

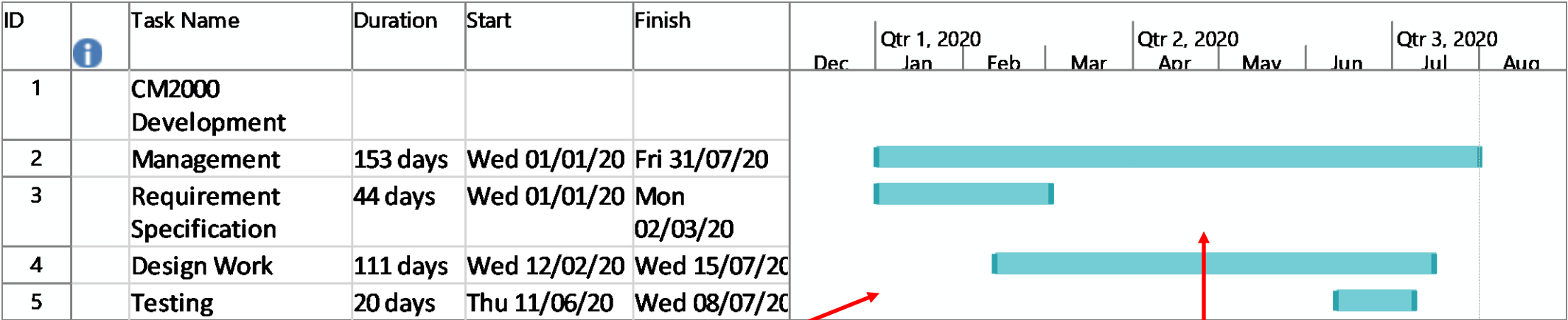
The GANTT chart shows you can organise your work, provides a tool to monitor the work, to communicate key dates and to ***show what drives the schedule***.

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

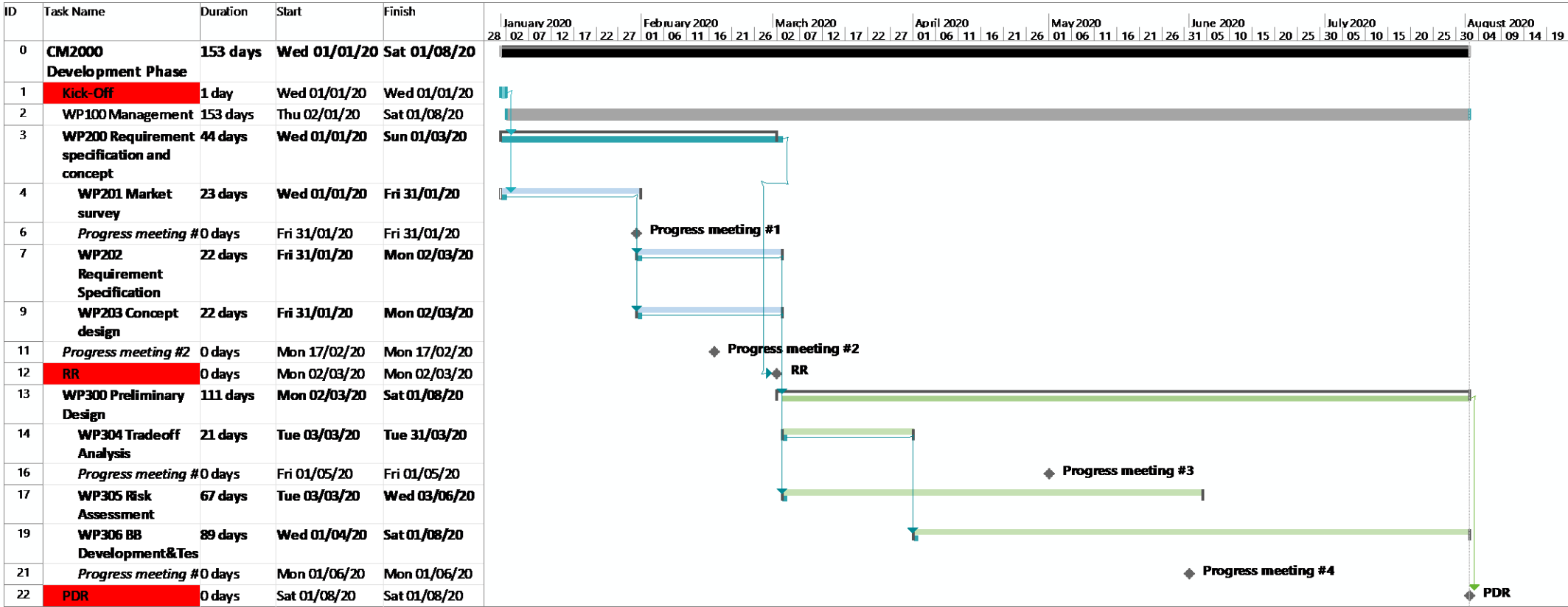


Names not matching
WBS titles

Insufficient granularity
(not matching WBS)

No dependencies or critical path shown
No discrimination between entities
No meetings/ key points

Good GANTT chart



Provide a synthetic **summary** of the schedule including duration, planning assumptions (e.g. envisaged **start date**, **holidays** etc.) and identifying and explaining **key planning drivers** and dependencies.

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)

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.

- **Ensure there is a description of each deliverable to avoid later discussion!**
- **Ensure consistency with WPDs!**

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→ THE EUROPEAN SPACE AGENCY

Proposal Template: Part 2 – Management Part

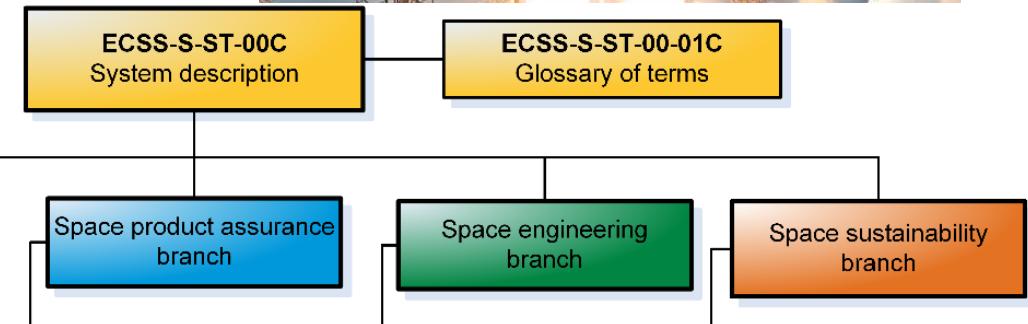


ESA implements the European Cooperation for Space Standardization (ECSS) in its programs. This implementation is for RPA projects, but it is **strongly recommended** to implement them at least partially to better understand the way ESA programs work and the terminology used and resulting requirements.

ECSS documentation is available for free download from www.ECSS.nl. Registration is free.

Some key documents to start with are:

- ECSS-M-ST-10C Project Planning and Implementation (In particular, Chapter 4,5 and Annex A)
- ECSS-M-ST-80C Risk Management
- ECSS-E-10A System Engineering
- ECSS-E-ST-10-06C Technical Requirements Specification
- ECSS-Q-ST-20C Space Product Assurance - Quality Assurance



Proposal Template

Part 3 – Financial Part



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 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.

3.1 PRICE QUOTATION FOR THE CONTEMPLATED CONTRACT:

b) Quotations free of taxes and custom duties:

c) 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]

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.

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 all duration of the contract.
- ☐ The financial envelope in the ITT is an earmarked budget – it is **NOT** a goal. Price must be fair and reasonable for the scope of work described in the proposal.

3.2 DETAILED PRICE BREAKDOWN

3.2.1 Procedures Specifications and Standards (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 esa-star Publication at [https://esastar-publication.sso.esa.int/supportingDocumentation under Reference Documentation/Administrative Documents/PSS Forms/Issue 5](https://esastar-publication.sso.esa.int/supportingDocumentation%20under%20Reference%20Documentation/Administrative%20Documents/PSS%20Forms/Issue%205). 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

How to retrieve PSS forms?

The screenshot shows the ESA STAR Publication website interface. The top navigation bar includes links for News, ESA Tender Actions, Non ESA Tender Actions, ESA Interactions, and Supporting Documentation. The left sidebar lists various document categories, with 'PSS Forms (Issue 5)' highlighted. The main content area displays the title 'PSS Forms (Issue 5)', publication date '18/03/2021', last update '22/03/2021 12:34 CET', and a list of downloadable Excel templates (PSSA1_i5.xlsx, PSSA2_i5.xlsx, PSSA4_i5.xlsx, PSSA6_i5.xlsx, PSSA8_i5.xlsx). Red arrows and circles highlight the navigation steps: Step 1 points to the 'esa-star Publication' logo, and Step 2 points to the 'Supporting Documentation' menu item and the 'PSS Forms (Issue 5)' link in the left sidebar.

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 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.

Total – less than earmarked budget?

→ THE EUROPEAN SPACE AGENCY

Hints and tips: PSS A2 Exhibit A

Key review points by Technical Experts

COMPANY PRICE BREAKDOWN FORM			EXHIBIT "A" TO PSS A2				Issue 5
			Page No. 1		No. of Pages 1		
RFQ/ITT No.: 18.187.04			COMPANY NAME: HiQ Beverages Ltd				
Proposal/Tender No.: 1			Name and Title: Mr. Bean				
National Currency: EUR			Signature				
Contractual Phase N/A							
Applicable to PSS-A2 elements: 3.1-3.4 - 3.6 - 3.7 - 3.10 - 10 Project / Work Pac CM2000 Development; WP300, WP400, WP500							
Cost El. No.	ITEM DESCRIPTION	Type of Price	Purchase Currency	Purchase Amount	Ex change rate 1 NC =	Amount in NC	
3.1	Raw Materials: Copper, Stainless Steel for component manufacturing	FFP	EUR	1,455.00	1.00000	1,455.00	
3.2	Mechanical Parts: Soldering support equipment, mechanical seals, slides, hinges, toggle clamps	FFP	EUR	1,973.00	1.00000	1,973.00	
3.4	Electrical & electronic components: resistors, capacitors, LEDs, transistors, etc	FFP	EUR	733.00	1.00000	733.00	
3.7	External Test Facility: ASTM f2990 Certified Commercial Coffee Brewers Testing Facility at Brewzone, Italy	FFP	EUR	3,000.00	1.00000	3,000.00	
3.9	Travel and Subsistence: Meeting with Subco, testing travel to Italy (see Exb. B)	FFP	FFP	3,180.00	1.00000	3,180.00	
3.10	Miscellaneous: raw food material for testing (coffee, cocoa beans, tea, syrups, milk)	FFP	FFP	600.00	1.00000	600.00	

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 and tips: PSS A2 Exhibit B
Key review points by
Technical Experts

TRAVEL PLAN AND COST DETAIL							EXHIBIT "B" TO PSS-A2							Issue 1		
RFQ/ITT No.:	18.187.04								Project:		CM2000 Development					
Proposal/Tender No.:	1								Company:		HiQ Beverages Ltd					
Contractual Phase	N/A															
Economic Condition:	2018								Type of Price:		FFP					
National Currency (NC)*:	EUR								Exchange (X): 1 EURO =		1	EUR				
WP Reference Number	WP Title	Purpose/Event	Departure	Destination	Nr. of Trips	Avg. People per Trip	Travel Cost p.p. (NC)	B / E	Avg. Days per Trip	Subsistence Cost p.d. (NC)	A / R	Total Cost (NC)	Total Cost (EURO)			
WP400	Detailed Design	Progress meeting #5	Tallinn, Estonia	Riga, Latvia	1	2	100	E	2	120	R	680	680			
WP500	Prototype Development and Test	Critical Performance test at ASTM F2990 Certified Commercial Coffee Brewers Testing Facility	Tallinn, Estonia	Brewzone, Italy	1	2	300	E	2	150	R	1,200	1,200			
WP500	Prototype Development and Test	Final Presentation of Project Outcome	Tallinn, Estonia	Noordwijk, Netherlands	1	2	250	E	2	200		1,300	1,300			
Total Cost, WBS level 1 (equal to the item 3.9 of PSS-A2)												3,180	3,180			

Meetings:

- Matching meeting plan?
- All clearly justified?

People:

- Matched to scope 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!

- 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?

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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 organizations, 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.**

3.3.2 Milestone Payment Plan

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

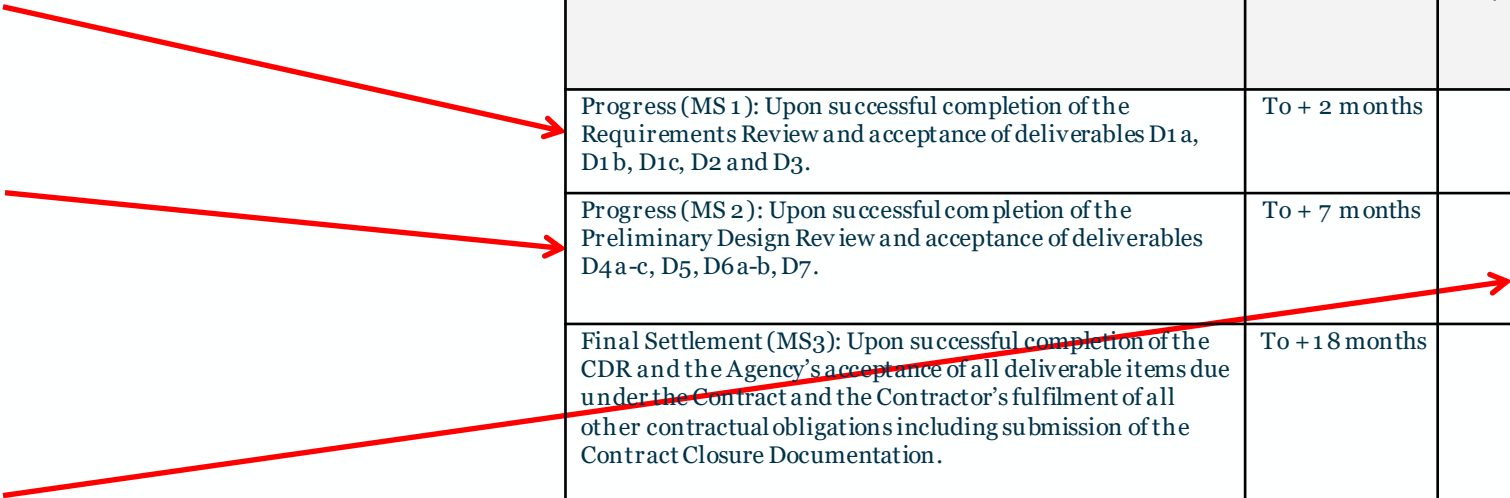
ESA pays against achieved results = Payment milestone dates typical align with technical review milestones successfully concluding with all associated deliverables accepted by the Agency.

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 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 deliverable items [Deliverable reference e.g D.1 or TN1 ..].	To + ... months		
Final Settlement [1] (MS 3): Upon the Agency’s [OPTION] final acceptance of software and [END OPTION] and 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	(not less than 10% of the total contract price)	
TOTAL			

Hints and 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 D1 a, D1 b, 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 D4 a-c, D5, D6 a-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 and tips:
SME status is sufficient justification for automatic 35% AP!
All non-SMEs must provide clear justification for <= 10% AP!

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 <i>(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

In this case the 66,984€ would be paid on 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 Sub-contractor(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	Sub-contractor 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		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 would be positive for all activities with a **completion TRL of 6 or less** (not necessary for education activities). This information is provided for **information only** and is not binding in any way for either party (ESA or Tenderer).

3.3.1 Further steps/ Activities needed to complete the development

Identify each of the main development steps / activities that would be needed AFTER COMPLETION OF THIS ACTIVITY to progress the work to higher TRL - if applicable.

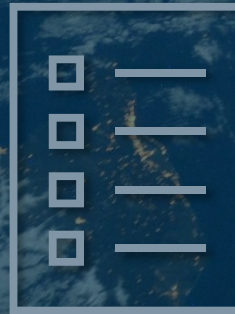
3.3.2 Estimated Cost per step

Provide a **rough estimate** of the expected cost of each further step or activity that would be needed in order **to reach higher TRL** (two levels above the final TRL achieved during the proposed work) – if applicable.

<i>Further Step/ Activity</i>	<i>Estimated cost (Euro)</i>	<i>Estimated Start date</i>	<i>Estimated end date</i>

Proposal Template

Part 4 – Contract Conditions



4.1 INTELLECTUAL PROPERTY RIGHTS

4.1.1 Background Intellectual Property and Third Party Intellectual Property Rights

4.1.2 Foreground Intellectual Property

4.1.3 Ownership of Foreground Intellectual Property

2. Foreground 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?

- 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

Hints and tips:

Foreground IPR is typically expected out of any technical development. FIPR contributes to advancement of products and services and commercial business cases.

4.1.2 Foreground Intellectual Property

Present the expected FIPR that will be created as a result of the activity.

4.1.3 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 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.]

4.2 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.

4.2.1 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.

[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 Type and Country of Origin	Deliverable affected	Comment

(Cont.)

4.2 IMPORT AND EXPORT LICENCES

4.2.2 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.

[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

DISTRIBUTION

TEB participants are granted access, in esa-star, 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 tenders.

DISPOSAL

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

Questions?



You made it!



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You made it! Questions?
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