# Proposal writing workshop

## Presentation 3: Proposal Tips

# Summary of the presentation

- Disclaimer
- Common Mistakes
- The proposal template Part 1 – Technical
- The proposal template Part 2 – Implementation
- The proposal template Part 3 - Financial
- The proposal template Part 4 - Contractual

# Disclaimer

This presentation material does not contain sufficient information to respond to an ESA ITT.

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

Please ensure that your tender is compliant with the requirements contained in ESA ITTs.

# Proposal Template

During this presentation we will draw your attention to **common mistakes** and oversights in tenders. We will also give you **examples, hints and tips** as to how to write a proposal responding to an ESA EXPRO ITT.

Please ensure that your tender is compliant with the ITT conditions of tender and cover letter – each ITT can be different.

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

# Proposal Template

# Common Mistakes/ Checklist before submission

# Proposal Template – Common Mistakes

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

**Criterion 1: Background and Experience and adequacy of Facilities**

1. 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
2. Information provided not focused on the relevant information
3. No information on how missing experience will be addressed/ compensated for

**Criterion 2: Understanding of the Requirements, Objectives and problem areas**

1. Objectives not demonstrated as clearly/ correctly understood.
2. Poor or missing technical requirements review (e.g. not highlighting the driving requirements, not including any discussion, being non-compliant without good reason, pure repetition of the SoW)
3. Identification of problem areas and solutions not addressed.

**Criterion 3: Program of work and engineering approach**

1. Poor or missing engineering approach (e.g. Baseline concept not described, deviating from proposed reviews without discussion, lack of first iteration of key testing or validation)
2. Poor or inadequate program of work (e.g. blind cut and paste of SoW without discussion, deviation from SoW without discussion) and inconsistency between text, flowchart, WPD and Gantt.
3. Poor WPD (e.g. insufficient detail to understand the full scope of the work, no clear responsibilities, inputs and outputs of each WPD missing)
4. Poor WBS (e.g. spaghetti WBS and flowchart, too many/few WPD, WP with tasks for more than one entity)
5. Poor or inconsistent Flow Chart (missing reviews, inconsistent with rest of proposal)
6. Deviating from the SoW without justification or reasoning

# Proposal Template – Common Mistakes

## Criterion 4: Management Costing and Planning

1. Poor planning (e.g. insufficient detail, no dependencies, too much in parallel, not matching scope of WPD, not matching SoW without discussion, tasks too long to monitor progress)
2. 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)
3. Poor deliverables (e.g. not covering, as a minimum, those requested in SoW)
4. High/very low management hours.
5. Inconsistency between PSS forms and proposal (costed travels not in meeting plan, facilities/service costed for but not mentioned in proposal)

## Criterion 5: Contractual and Administrative

1. Some of the documents not signed or missing (e.g. Cover Letter, PSS Forms)
2. Introducing changes on the Proposal Template
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, or any other section – please fill it: if it is the case say that it does not apply and why)
5. IPR poorly addressed (e.g. not clear who will own it, confusing sharing of the IPR, necessary license not covered)

# Proposal Template Part 1
# Technical Part

# Proposal Template: Part 1 – Technical Part

1.1 TECHNICAL REQUIREMENTS AND OBJECTIVES:

1.1.1 Concise functional analysis of the technical requirements
- 1.1.1.1 Proposed consolidation of the RFP/ITT requirements
- 1.1.1.2 Suggested modifications to the requirements

1.1.2 Understanding of the main technical objectives of the RFP/ITT

1.1.3 Proposed approach to reach the main technical objectives of the RFP/ITT

1.1.4 First Iteration of Task xx

➢ **See page 2 -11 of example proposal**

# Proposal Template: Part 1 – Technical Part

## 1.1 TECHNICAL REQUIREMENTS AND OBJECTIVES:

This section has several purposes:

- To be sure you **have read and understood the requirements and objectives**
- To check your expected compliance (of your solution) to the technical requirements (and by default the objectives)
- To demonstrate your knowledge of the area and objectives by assessing and supplementing the requirements

The requirements in the SoW are a first draft and maybe unintentionally incomplete, inconsistent or impossible to achieve (usually not but….).

Not all requirements are created equal – some are more important than others, some are 'nice to have' and some will be technically driving. ESA generally do not discriminate this. Show your knowledge and experience by identifying these.

It is usually easiest to present this section mainly in tabular form, but drawing attention to and discussing the key driving requirements/ introducing the tables in textual form. (See next slides)

➢ **See page 2 of example proposal**

# Proposal Template: Part 1 – Technical Part

## 1.1.1 Concise functional analysis of the technical requirements

- Draw attention to the key driving requirements (e.g. for the objectives or for design impact) and state why.
- Draw attention to missing requirements (if any) and how they will be addressed
- State how you will arrive to a consolidated set of agreed requirements during the course of the work.

### 1.1.1.1 Proposed consolidation of the RFP/ITT requirements

| No. | Req. | Compliance | Estimate | Discussion |
|---|---|---|---|---|
| | | C/PC/NC | | |
| | | | | |

### 1.1.1.2 Suggested modifications (and additions) to the requirements

| No. | Req. | Justification |
|---|---|---|
| | | |
| | | |

➢ See page 2-5 of example proposal

# Proposal Template: Part 1 – Technical Part

## Hints and tips: Requirement Analysis – Example 1/2

### 1.1.1 Concise functional analysis of the technical requirements

- Driving requirements: RCM1 + 7 (essential to the objective), RCM2,3,4,6 (drives the design), RCM11
- Missing requirements: Suggestion to add safety standard
- Approach to consolidate requirements: Task 1 and RR.

RCM3 (refills) implies that the hot beverage maker must be connected to a water system independent of the unit as other solutions would lead to solutions unable to meet *RCM 5 (installation) or RCM6 (recurring cost)…..*

#### 1.1.1.1 Proposed consolidation of the RFP/ITT requirements

- We have tried to add a variety of 'poor' and conflicting requirements to show how to handle such situations in a proposal.

| No. | Req. | C | Estimate | Discussion |
|---|---|---|---|---|
| **RCM3** | The HBM shall be capable of producing at least 5,000 beverages between refills (minimum of 2000 for any one variant). | **NC** | 1000 bean based beverages of all variants. 500 tea beverages. | Key design driver affecting the size of dedicated storage units. This requirement means the HBM has to have the capability to be connected to a water supply network. Given that the optimal amount of coffee per cup requires 15cm3 of beans, the maximum sized storage unit still compliant with RCM5 and RCM6, would produce 1000 bean-based beverages (coffee or cocoa). Similarly, the amount of tea bags stored can be maximum 500. |

➢ See page 2-4 of example proposal

# Proposal Template: Part 1 – Technical Part

## Hints and tips: Requirement Analysis – Example 2/2

### 1.1.1.2 Suggested modifications (and additions) to the requirements

- Examples of a proposal to modify (and reasoning) and to add a requirement

| No. | Req. | Justification/ Modification |
|---|---|---|
| **RCM5** | The HBM shall be able to be carried and installed by 2 people without special lifting equipment or tools. | It is suggested to modify this to allow special tools for the installation under the condition that they are included in the recurring price of the unit. This will allow significantly more flexibility in the design of the unit. |
| **New 1** | The HBM shall be compliant with the EU hot water handling safety standards listed in EU/HotWater-safety/001 v2 | Compliance with this standard is mandatory to be able to sell the unit in the EU but is not listed in the requirements, it is suggested to add this requirement. |

➢ See page 5 of example proposal

# Proposal Template: Part 1 – Technical Part

## Hints and tips: Formulating New Requirements

Example (in a cafeteria):

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

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

**Not a requirement at all in this sense:**
- We need to buy a kettle and coffee cups
- We need to hire someone to make the coffee
- We should do a trade off on what biscuits to give
- We shall get a coffee sellers license

# Proposal Template: Part 1 – Technical Part

## 1.1.2 Understanding of the main technical objectives of the RFP/ITT

The Objectives are described in the SoW. In your proposal, you need to show you understand them and have correctly interpreted them and picked up on the key points. Avoid simply repeating the objective(s).

## 1.1.3 Proposed approach to reach the main technical objectives of the RFP/ITT

*See following slide for hints and tips.*

➢ See page 5-9 of example proposal

# Proposal Template: Part 1 – Technical Part

### 1.1.3 Proposed approach to reach the main technical objectives of the RFP/ITT

Things to include:

1. What is your proposed technical solution/ baseline?
    a. Provide sufficient detail for it to be understood by someone else (e.g. what Technique, what waveband, what key technology?)
    b. Include a block diagram!

2. What alternatives exist?
    a. Brief overview of “State of the Art”
    b. Explain why you chose your proposed baseline instead of others, what benefit does it have over the others?

3. What evidence is there that it will work?
    a. Provide sufficient detail that the credibility can be understood/ checked by someone else

➢ See page 6-9 of example proposal

# Proposal Template: Part 1 – Technical Part

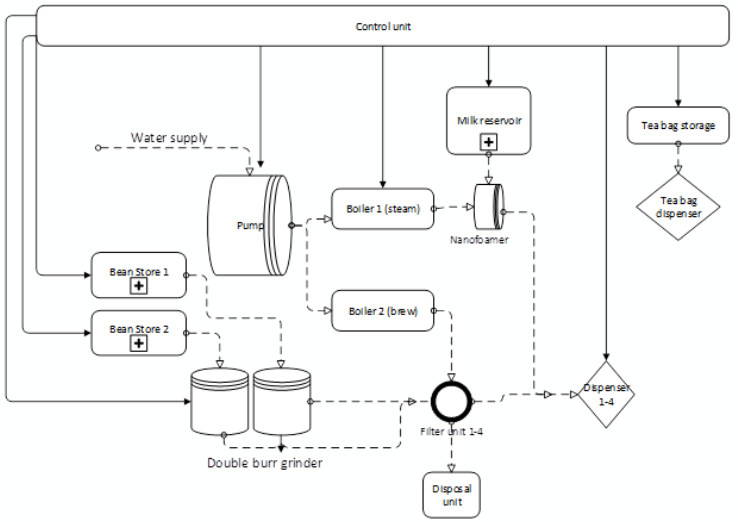
## Understanding of the objectives and technical approach

### HBM Examples

What is your proposed technical solution/ baseline?

*In order to achieve the objectives, we aim to develop Coffee Master 2000 hot beverage production unit. The Coffee Master 2000 will be based on our Patent #1234 for software controlled super-automation process of coffee machines, which uses high pressure steam and fully automatic end user programmable software settings to enable the optimal and rapid production of more than 5 types and variations of hot beverage.*

*It is capable of producing 4 ready-to-consume beverages simultaneously without the need of a dedicated operator.*




A picture is worth a thousand words

➢ See page 6-9 of example proposal

**Understanding of the objectives and technical approach**

## HBM Examples

### What alternatives exist/ What is the state of the art?

*The current state of the art in coffee production is the Caffeine Blaster 100 as used by Star Clucks – the market leader in this area. The Caffeine Blaster 100 can prepare 10 different types of coffee and can prepare 2 cups simultaneously.*

*The Caffeine Blaster 200 is currently in development and scheduled to be released in 6 months. The CB200 can prepare 12 different coffee types and 4 simultaneous beverages. Other coffee production machines are the protected property of the provider (e.g. Lotsa Coffee) and not for sale to competitors.*

### What evidence is there it will work?

*A breadboard has already been built and has demonstrated the proof of concept of Patent # 1234 thereby ensuring that this is a low-risk approach.*

➢ See page 6-9 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.1.4 First Iteration of Task xx

- The Tasks to have a first iteration may be listed in the proposal template.
- The purpose is to gain an insight into how the bidder thinks, how they understand the problem and to check they have the same understanding as the TO.
- It is also used to help check the scope of the work
- If testing is needed, it is **ALWAYS** a good idea to put a first high level iteration of the test plan/ test flow – whether asked or not.

➢ See page 9-11 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.2 POTENTIAL PROBLEM AREAS:

1.2.1 Identification of the main problem(s) or problem area(s) likely to be encountered in performing the activity

1.2.2 Proposed solutions to the problems identified

1.2.3 Proposed trade-off analyses and identification of possible limitations or non-compliances

➢ See page 11-13 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.2 POTENTIAL PROBLEM AREAS

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

➢ **See page 11-13 of example proposal**

# Proposal Template: Part 1 – Technical Part

## Examples: Problem areas

### HBM Example:

| Problem | Description | Impact | Mitigation | Prevention |
|---|---|---|---|---|
| **Nanofoamer cannot produce bubbles of less than 30microns at the set power limits.** | Creation of bubbles less than 30microns, might increase power consumption exponentially. Nanofoamer power consumption of above 1000W would significantly increase running costs of the unit. | Low | Relax the requirement to 40microns or 50% efficiency. | Design replaceable foam inducer head for the foamer unit with an option to size up to 40micron bubbles.<br>Early testing of the nanofoamer. |

### Bad Examples:

"We don't have someone who is an expert in nanofoamers and are not sure to be able to hire someone."

"The project might be late"

### Common, useless one:

"A key person might leave – we would hire a new key person"

➢ **See page 11-13 of example proposal**

# Proposal Template: Part 1 – Technical Part

## 1.2.3 Proposed trade-off analyses and identification of possible limitations or non-compliances

Discuss the trade-offs made between competing concepts to arrive at the proposed baseline/solution. Identify further (lower level) trade-off analyses anticipated to be carried out at later stages of the development (foreseen to influence design, cost, schedule etc or as a preventative measure to address some problem areas identified).

This discussion substantiates and provides justification for the technical choices made for the baseline design.

**HBM Example:**

A high level trade-off between a super-automated high pressure system based on our patented software process and a semi-automated high pressure system has been carried out as part of the proposal. The following parameters were considered:

**Efficiency (preparation time and throughput)**
Semi-automatic HBMs require an operator for manual milk frothing and bean granularity setting. Super–automation decreases the time of any bean-based beverage production by 60% (5 +/- 2sec) by simultaneous milk frothing during coffee brewing and a further 10% by simultaneous dispense. Further, software controlled bean grind settings negate the need for manual adjustment, further decreasing total preparation time.
Semi-Auto: 0
Super-Auto: ++

➢ See page 12-13 of example proposal

**Running cost**
The increase in efficiency does incur higher power consumption than semi-automatic units due

# Proposal Template: Part 1 – Technical Part

## 1.3 TECHNICAL IMPLEMENTATION AND PROGRAMME OF WORK

1.3.1 Proposed Work Logic

1.3.2 Contents of the proposed work

1.3.2.1 Work Breakdown Structure (WBS)

1.3.2.2 Work Package Description (WPD)

➢ See page 14-17 of example proposal

# Proposal Template: Part 1 – Technical Part

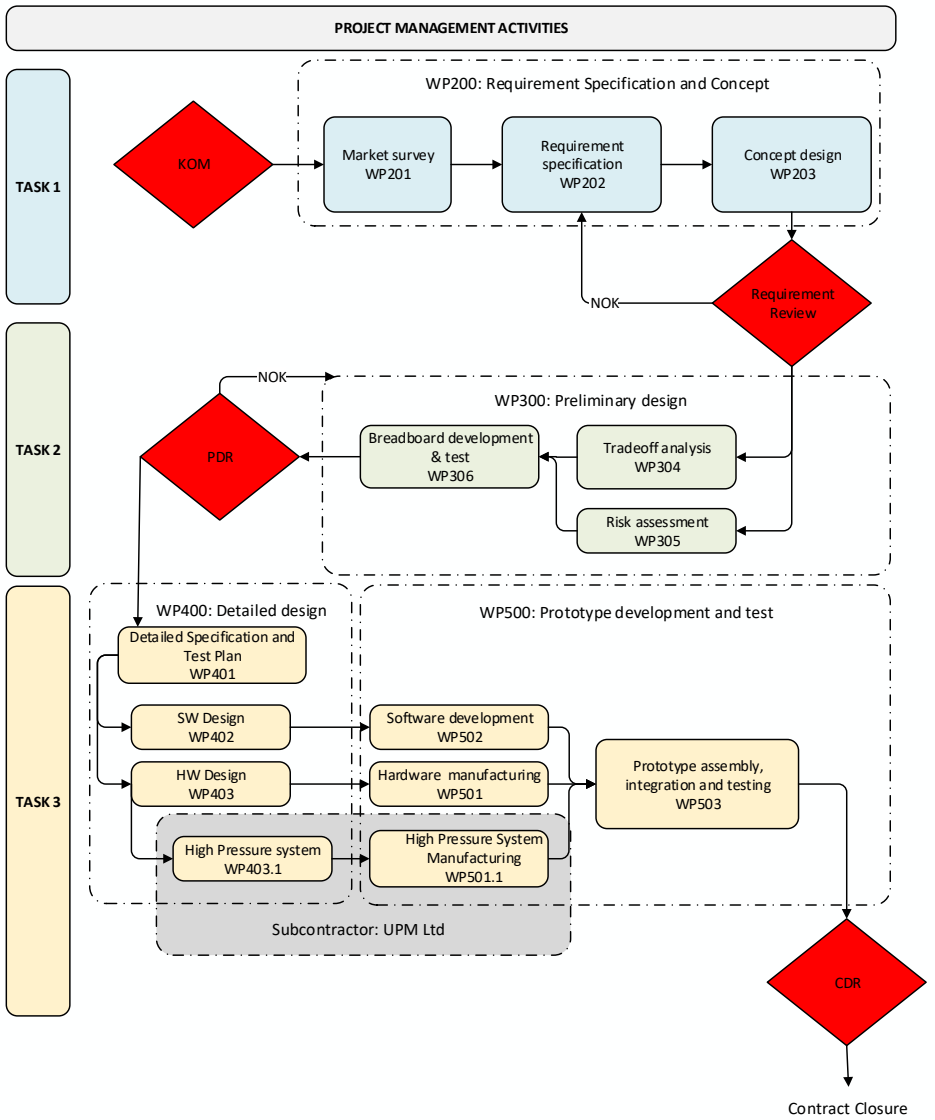
## 1.3 TECHNICAL IMPLEMENTATION AND PROGRAMME OF WORK

- Describe the logical flow of the work, the reviews and the dependencies. Show this also in a Flowchart. The Flowchart is intended to show the order in which the work needs to be performed (i.e. the logic) and the checks and balances put in place, i.e. work flow, dependencies, reviews (internal/ external).
- Any deviation from that in the SoW should be justified. You do not have to copy the flow in the SoW (it may be wrong or incomplete) but you do have to justify why you deviate. This shows you understand the work.
- Must be consistent with the Work Breakdown Structure (WBS), Milestones and GANTT chart.
- Be sure to cover:

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?**
   Subcontractors shall be included only if they cover **specific items/skills** not available at the Prime. In no case they should be responsible for the bulk of the activity.
7. What are the **key trade offs**? What are the key decision points?

➢ **See page 14-17 of example proposal**

# Proposal Template: Part 1 – Technical Part




## Hints and tips: Work Logic – example

- Include the reviews and decision points
- Consistency with WBS (and easy traceability)
- Parallel/serial consistency is logical (consistent with GANTT chart)
- Sub-contractor work is clear
- Dependencies clear

➢ See page 15 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.3.2.1 Work Breakdown Structure (WBS)

WBS is a management tool to assist the effective definition, monitoring, management, payment and running of the activity.
Guidelines

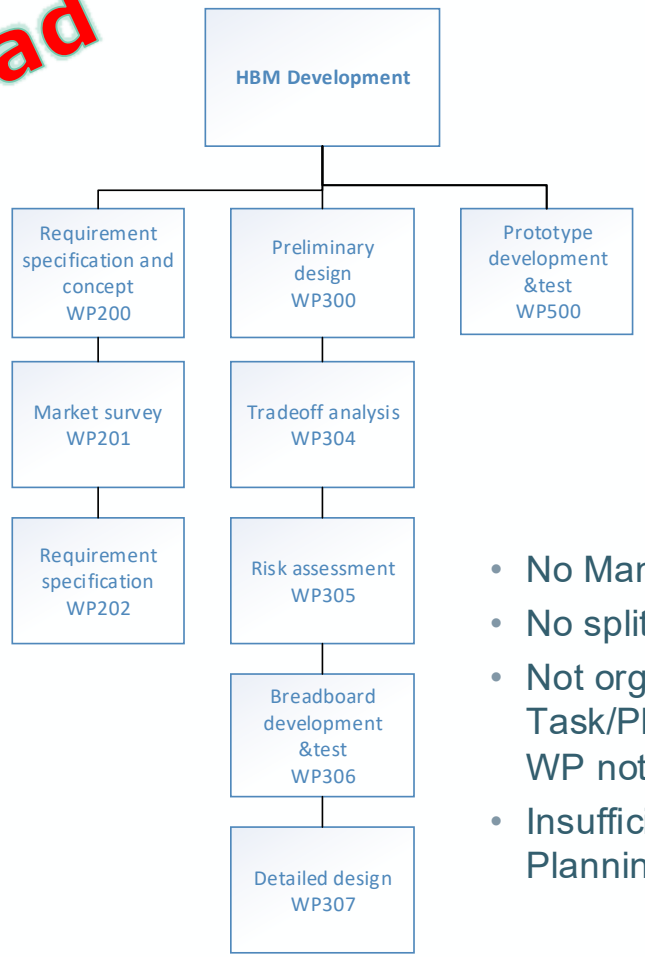
1. Logically structure the main Work Packages following the main tasks of the work flow (preferably ‘gated’ by reviews)
2. Include WP for management
3. Ensure each company has separate (sub)work packages
4. Ensure all tasks in one work package ‘belong together’

➢ See page 16 of example proposal

# Proposal Template: Part 1 – Technical Part

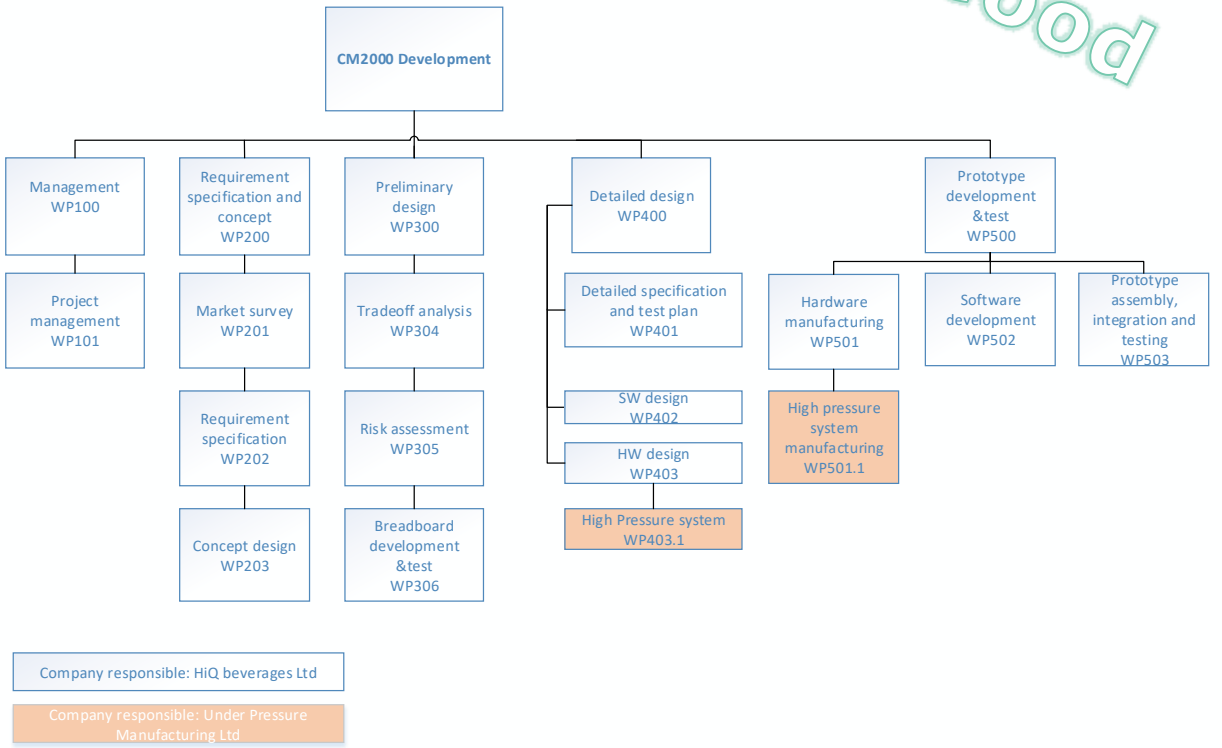
## Hints and tips: WBS - Example

Bad




- 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

Good




➢ See page 16 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.3.2.2 Work package Description (WPD)

a. The WPDs form the detailed description of the work that will be performed
b. They scope the work and the deliverables
c. They allow a basis for the costing
d. They discriminate the work and responsibilities of the different companies/ entities
e. They must be consistent with the WBS, Gantt chart and Work Flow/ Logic diagram!!

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

➢ **See page 17 of example proposal**

# Proposal Template: Part 1 – Technical Part

## Work Package Descriptions – Examples

**Bad**

| PROJECT: CM2000 Development PHASE: 1 | WP: 200 |
|---|---|
| WP Title: Requirement Specification and Concept<br><br>WP Manager: Mr. Bean<br><br>Start Event: KOM Planned Date: 1st April 2018<br>End Event: End of project Planned Date: 1st April 2019 | Sheet 1 of 1 |
| Tasks:<br>• Do market survey<br>• Write Requirement Specification<br><br>Outputs:<br>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<br><br>Company: HiQ Beverages Ltd<br>WP Manager: Mr. Bean<br><br>Start Event: KOM Planned Date: T0<br>End Event: RR Planned Date: T0+3 | Sheet 1 of 1<br><br>Issue Ref: 1<br><br>Issue Date<br>15.08.2018 |
| Inputs:<br>• SoW<br>• Approved proposal<br>• KOM Minutes of Meeting<br>• AD1<br>• RD1<br><br>Tasks:<br>• Perform a survey of all current HBMs available on market<br>• Compare key requirements and capabilities<br>• Compare key performance indicators (efficiency, lifetime, reliability)<br>• Compare and analyse cost (unit cost, running cost)<br>• Identify and analyse customer requirements (coffee provider)<br>• Assess the current annual demand for hot beverages in Europe<br>• Perform trend analysis for hot beverage demand in Europe<br>• Identify most popular hot beverages and key end-user requirements<br>• Collect and analyse new and emerging requirements for popular hot beverages<br>• Assess the potential future market for any evolving requirements<br>• Identify consumer needs not currently addressed by HBM<br><br>Specifically Excluded Tasks:<br>• No competitor machines will be procured and tested<br>• No taste testing/ surveying will be performed<br>Outputs:<br>D01: Current and Future Market Assessment Report<br>D02: Emerging Hot Beverage Requirement Report | |

➢ See page 17 of example proposal

# Proposal Template: Part 1 – Technical Part

## Hints and tips: Work Package Descriptions

1. Essential Data:
    a. Work Package (WP) Title, WP Manager, Company
    b. Start and end dates (T0+) and/or EVENT (PDR, CDR)
    c. Inputs
    d. Description of work (e.g.: tasks and sub-task)
    e. Outputs (each WP will result in a number of technical documents, for example output of WP1 (task 1.1 and task 1.2), there will be TN1.1 and TN1.2
2. TIPS:
    a. WP Manager should be responsible for the work (e.g. have suitable experience)
    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.
    e. Excluded tasks are those that an expert could reasonably expect to be included in the scope of work of the work package but will not be done (e.g. due to time or money)

➢ See page 17 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.4 BACKGROUND:

1.4.1 Existing own concepts/products relevant to the activity and/or to be used

1.4.2 Third Party's concepts/products relevant to the activity and/or to be used

1.4.3 Other technical achievements relevant to the activity and/or to be used

1.4.4 Background of the company(ies)

➢ See page 18 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.4.4 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**.

➢ **See page 18 of example proposal**

# Proposal Template: Part 1 – Technical Part

## Background of the companies - Example

**Prime contractor: HiQ Beverages Ltd**

HiQ Beverages is one of the leading process innovators ion Eastern Europe in beverage production software and machinery. Founded in 1990, the company has more than 20 years of experience in specialized beverage production systems and over 10 years of experience in automation software.

We specialize in full automation software for liquid mixing and dispension, for which we hold multiple patents (Patent #1234, Patent#5566).
We are dedicated to research, development and manufacturing of small to medium scale beverage handling and production units to customers worldwide. Our products are in accordance with international quality standards and we have ISO-9001 certification since 2007.

HiQ Beverages Ltd customers include market leading soft drink producers (Not-A-Cola Company, Sipsy Co).

HiQ Beverages Ltd operates on Unix-based OS with internal servers and has the full software licenses (RoboQ, EXent 5.0, SinTouch) required for the foreseen work.
HiQ Beverages has a full mechanical workshop, in-house pressure test chamber and a lifetest facility. See Annex for details.

- Overview of company: (size, age, years of experience and general heritage)
- Key relevant technical knowledge mentioned
- Key relevant customers mentioned
- Key facilities (relevant to this project) mentioned (or reference to Annex)

➢ See page 18 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.5. TECHNICAL RESERVATIONS – TECHNICAL COMPLIANCE:

1.5.1 Reservations

1.5.2 Technical Compliance Matrix (Statement of Work / Technical Requirements)

➢ See page 18-19 of example proposal

# Proposal Template: Part 1 – Technical Part

## 1.5. TECHNICAL RESERVATIONS – TECHNICAL COMPLIANCE:

- Compliance statements at heading level of SoW
- Shows you have read and understood all of what the SoW asks you to do
- Freely refer to other sections for details

| REQUIREMENT | COMPLIANT (Y/N/P) | REMARKS |
|---|---|---|
| 1. Introduction | Y | Title |
| 1.1 Scope of the Document | Y | Information only – noted |
| 1.2 Applicable and Reference Documents | Y | Compliant with listed Ads |
| 1.3 Acronyms and Abbreviations | Y | Information only – noted |
| 1.4 Background and Objectives | P | Partially compliant with objectives (full compliance with scope) |
| 1. Work to be Performed | Y | Title |
| 2.1 Work Logic | Y | See section 1.3.1 |
| 2.2 Tasks | Y | See section 1.3 |
| Annex B | P | See dedicated compliance table in section 1.1.1.1 |

➢ **See page 19 of example proposal**

# Proposal Template Part 2
# Implementation Part

# Proposal Template: Part 2 – Implementation Part

## 2.1 TEAM ORGANISATION AND PERSONNEL

2.1.1 Proposed team

2.1.1.1 Overall team composition, key personnel

2.1.1.2 Reporting lines within the team

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

2.1.1.4 Time dedication of key personnel

2.1.2 Curricula Vitae

2.1.3 Rationale of the proposed industrial organisation

➢ See page 20-23 of example proposal

# Proposal Template: Part 2 – Implementation Part

### 2.1.1 Proposed team (see also 2.1.3)

The project team is led by the prime contractor HiQ Beverages Ltd, with Under Pressure Manufacturing Ltd as a subcontractor. The subcontractor is required due to their extensive expertise and heritage in high pressure systems design and manufacturing and will be responsible for the design of all the high pressure components of the CM2000. Such expertise is not available within HiQ Beverages Ltd. at this stage

- Introduces the team
- For small teams this can already address section 2.1.3

### 2.1.1.1 Overall team composition, key personnel

- States how many people in team
- Identifies key people and what they are responsible for/ why they are key

The team consists of 10 people, 4 of which are considered key due to their expertise significant contribution to the key project tasks.

The project manager is Mr. Bean from HiQ Beverages Ltd. Mr. Bean will be the main contact point with ESA as well as the subcontractor and supplier, and will oversee all management tasks and contractual aspects of the project, including sub-contractor management, scheduling, project control and risk management.

➢ See page 20 of example proposal

# Proposal Template: Part 2 – Implementation Part

## Hints and tips: Reporting lines within the Team

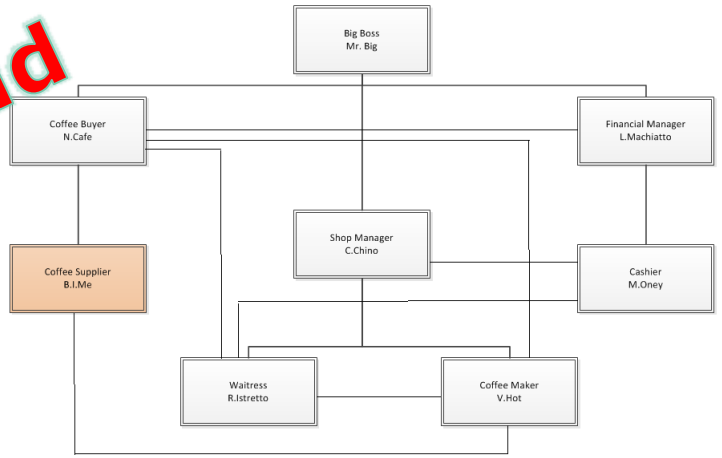
### 2.1.1.2 Reporting lines within the team

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

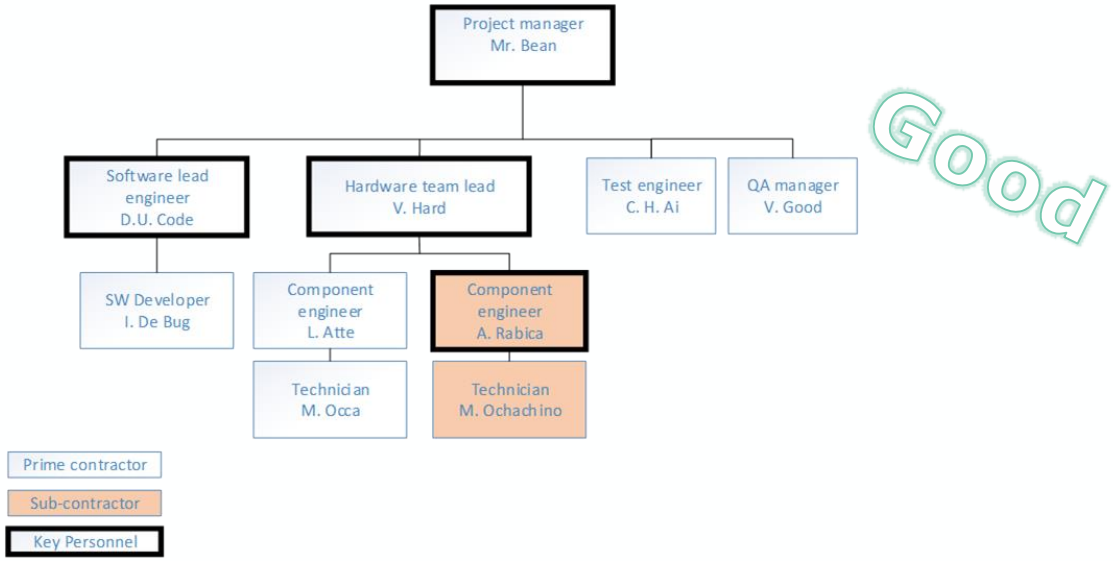
- Each sub-contractor should have 1 formal contact point
- NO steering committees in ESA contracts – Project Manager (in discussion with ESA) is responsible for the direction, quality of work, decisions and timeliness.

Examples: Bad and Good

Bad

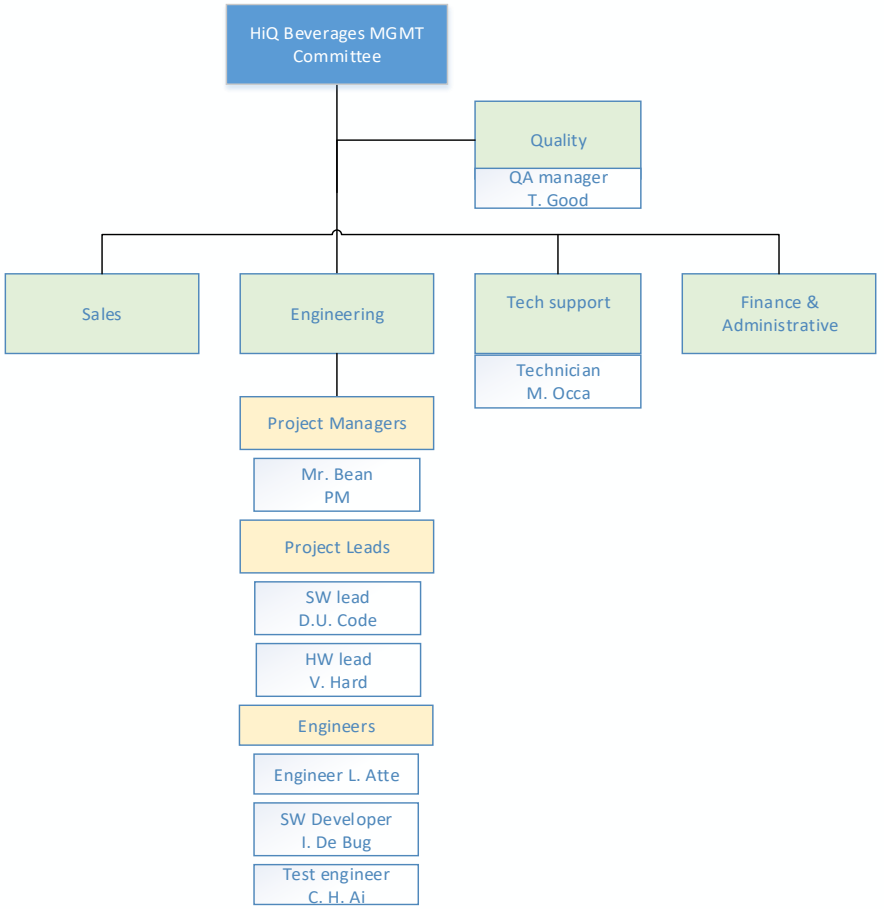



Good




➢ See page 20-21 of example proposal

# Proposal Template: Part 2 – Implementation Part




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

- Intended to show the lines of reporting and authority of the team within company organisation
- How easy is it for the PM to direct the work of the others?
- Note – sometimes this is suppressed from the template

➢ See page 21-22 of example proposal

# Proposal Template: Part 2 – Implementation Part

### 2.1.1.4 Time dedication of 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%.

➢ See page 22 of example proposal

# Proposal Template: Part 2 – Implementation Part

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

| Key Personnel | WP100 Management | WP200 Requirement Specification and Concept | WP300 Preliminary design | WP400 Detailed design | WP500 Prototype development and test | Total hours | % of total working time |
|---|---|---|---|---|---|---|---|
| **Project manager** Mr. Bean | 57 | 23 | 12 | 8 | | 530 | 33 |
| **SW lead engineer** D.U.Code | | 12 | 7 | 41 | 40 | 760 | 42 |
| **HW team lead** V. Hard | | 12 | 16 | 48 | 24 | 660 | 37 |
| **Component engineer** A. Rabica | | | | 67 | 33 | 240 | 13 |
| **TOTAL** | | | | | | **2190** | |

Percentage working time is reasonable for their activities?

Note the 13% would likely be picked up and questioned by the TEB

Distribution of work is seen. Is it logical? Does it match the key persons role? Is it consistent with the PSS forms?

Total number of hours is for the key persons. It is not expected to be the same as the total hours for the project but difference must be explained in the proposal.

If project manager hours don't match the project management role, it needs to be explained

➢ **See page 22 of example proposal**

# Proposal Template: Part 2 – Implementation Part

## 2.1.2 Curricula Vitae

One summary resume per **key** person

Include:

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

**Dean Umberto Code (Software lead engineer)**

Relevant experience:

2014- ...: Software Developer, HiQ Beverages, Estonia

- Software quality monitoring in C++ and SQL in Unix and Linux environments
- Develop automation scripts to test storage appliances in Python and C/C++
- Development of base framework with Java, JSP, Struts, CSS, HTML, JavaScript, Oracle, and MS SQL Server

2008 – 2014: Automation Engineer, Smartest Vacuum Cleaners GmbH, Germany

- Design, development and testing of microcontroller-based embedded systems in Raspberry Pi Platforms using automata-based programming for building smart home appliances.
- Design of protocol stacks for SoC HW/SW Interfaces

2007-2008; Junior Software Developer, Robocop Technologies OÜ, Estonia

- Basic function design in LISP and HDL
- Schematic capture and PCB layout software Design with sensors, encoders, SPI, I2C, CAN and EtherCAT devices

Education:

2005-2007: MSc Technical University Of Matrix, Automation Engineering

2001-2005: BSc Technical University Of Matrix, Computer Science & Mechatronics

➢ See page 22-23 of example proposal

# Proposal Template: Part 2 – Implementation Part

## 2.2 PLANNING

2.2.1 Proposed schedule and milestones

2.2.2 Bar chart

## 2.3 LIST OF DELIVERABLE ITEMS – SPECIFICATION OF ANY NON-CONFORMANCE

2.3.1 Deliverable Items

2.3.2 Non-conformances / limitations / additions regarding deliverable items

➢ See page 23-28 of example proposal

# Proposal Template: Part 2 – Implementation Part

## 2.2 PLANNING

### 2.2.1 Proposed schedule and milestones

This section explains your planning, and provides the justification for it:

- Synthetic summary of duration with reasoning/ justification
- planning assumptions (e.g. envisaged starting date, holidays, etc.)
- meetings/videoconferences
- major technical milestones
- Identification and discussion of critical path/ key dependencies (if any)
- Identification and discussion of any margins

Be sure it is consistent with the Bar Chart and the travel and meeting plans

Identify and justify and deviation from the SoW (apart from finishing sooner than the max duration!)

➢ **See page 23-24 of example proposal**

# Proposal Template: Part 2 – Implementation Part

## Hints and tips: Meeting and Travel Plan

### What to include:

- 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….)
- 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)

Other information to include

- Location (Face to Face location or Telecon too!)
- Purpose of meeting (should be clear and obvious)
- Number of attendees

### What NOT to include

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

➢ See page 23-25 of example proposal

# Proposal Template: Part 2 – Implementation Part

## Example: Meeting and Travel Plan

| Meeting | WP or Milestone | Purpose | Attendees | Date | Location |
|---|---|---|---|---|---|
| KoM | MS1 | Kick-Off Meeting | ESA, HiQ | To | Teleconference |
| Progress meeting #1 | MS1 | Results and conclusions of market survey | HiQ | To + 4w | HiQ, Lithuania |
| Progress meeting #2 | MS1 | Progress assessment of requirement specification and concept design | HiQ | To + 6w | HiQ, Lithuania |
| RR | MS1 | Requirements Review | ESA, HiQ | To + 2mo | HiQ, Lithuania |
| Progress meeting #3 | MS2 | Review of trade-off analysis, consolidation for breaboard development and test plan | HiQ | To + 4mo | HiQ, Lithuania |
| Progress meeting #4 | MS2 | Breadboard development progress | HiQ | To + 5mo | HiQ, Lithuania |
| PDR | MS2 | Preliminary Design Review | ESA, HiQ | To + 7mo | HiQ, Lithuania |
| Co-engineering meetings (8) | MS2 | HW and SW consolidation for detailed design | HiQ, UPM | To + 7mo (4weeks) | HiQ, Lithuania; telecoference |
| Progress meeting #5 | MS3 | Progress of design activities | HiQ, UPM | To + 9mo | UPM, Latvia |
| Internal review #3 | MS3 | Detailed design review and prototype devepment planning | HiQ, UPM | To + 13mo | HiQ, Lithuania |
| Progress meeting #7 | MS3 | Prototype development and test progress | HiQ, UPM | To + 15mo | Teleconference |
| Critical performance testing | MS3 | Test at ASTM F2990 Certified Commercial Coffee Brewers Testing Facility | HiQ, UPM | To + 16mo | Brewzone, Italy |
| Internal review #4 | MS3 | Prototype development and test results review | HiQ, UPM | To + 18mo | Teleconference |
| CDR | MS3 | Critical Design Review | ESA, HiQ, UMP | To + 18mo | HiQ, Lithuania |
| Final Review | MS3 | Final Presentation of Project Outcome | ESA, HiQ | To + 18mo | ESTEC, ESA, Netherlands |

- Includes all reviews
- Includes all meetings with Sub-contractors
- Includes all tests where travel is needed
- Includes all meetings with ESA (irrespective of travel need)

➢ See page 25 of example proposal

### 2.2.2 Bar 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?

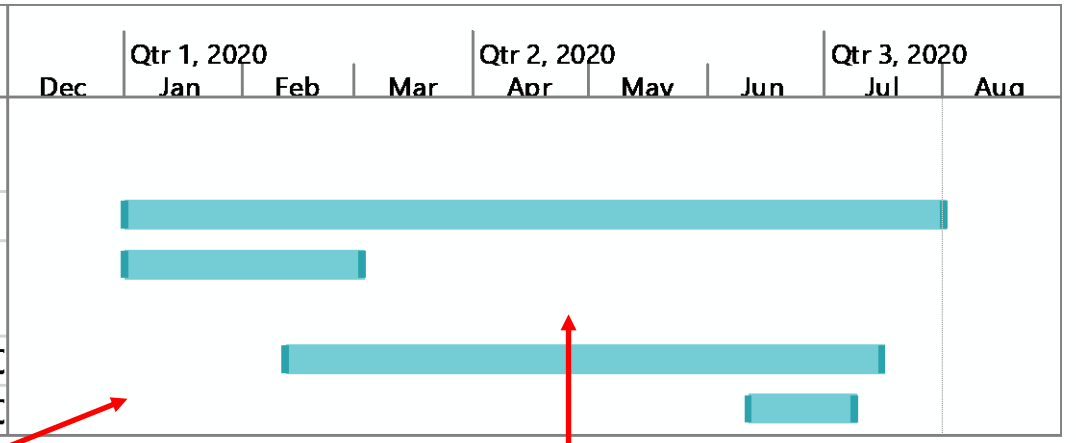
➢ **See page 25-26 of example proposal**

# Proposal Template: Part 2 – Implementation Part

## Planning – Gantt Chart (examples)

### Bad Gantt chart

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 1 | CM2000 Development | | | |
| 2 | Management | 153 days | Wed 01/01/20 | Fri 31/07/20 |
| 3 | Requirement Specification | 44 days | Wed 01/01/20 | Mon 02/03/20 |
| 4 | Design Work | 111 days | Wed 12/02/20 | Wed 15/07/20 |
| 5 | Testing | 20 days | Thu 11/06/20 | Wed 08/07/20 |




Names not matching WBS titles

Insufficient granularity (not matching WBS)

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

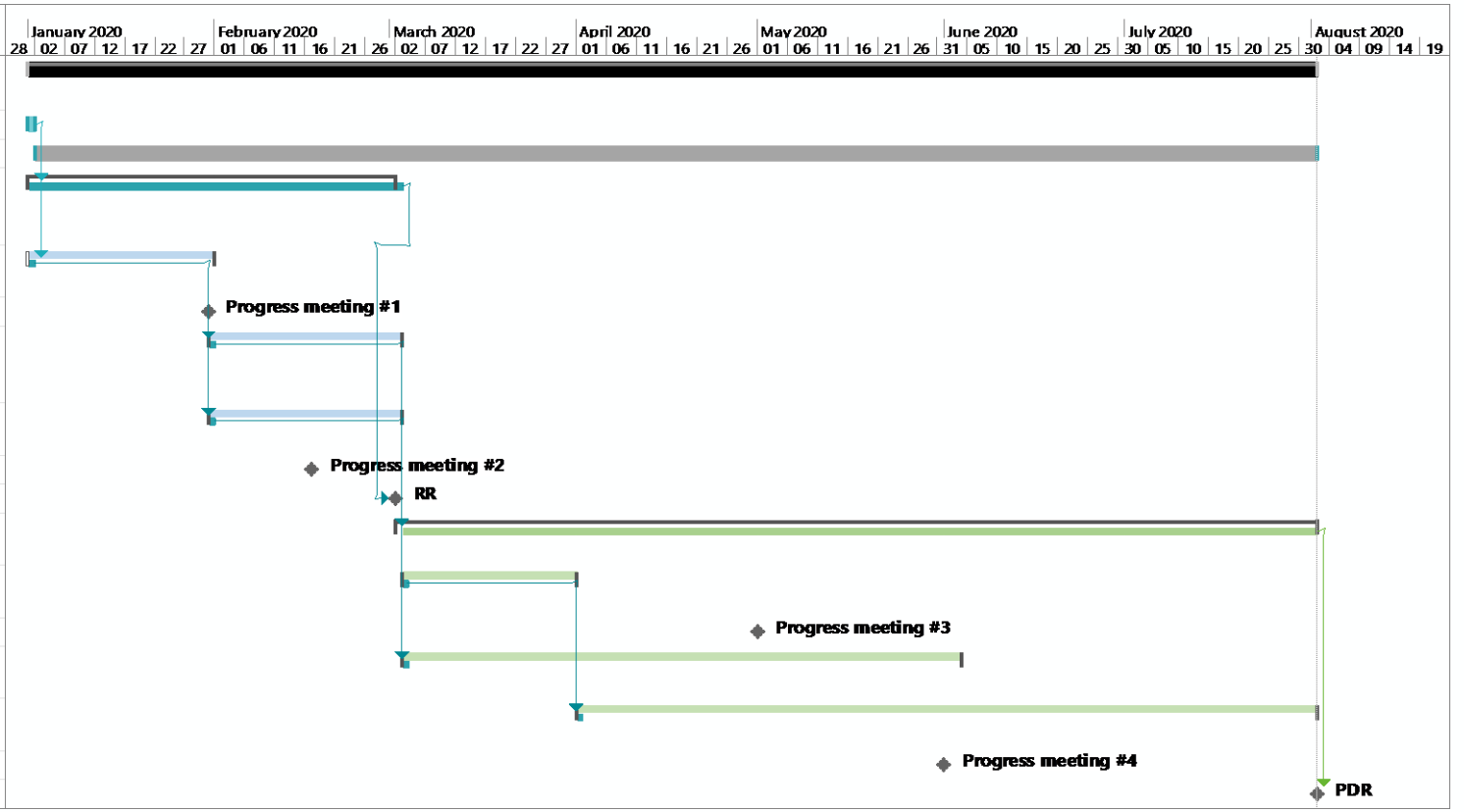
➢ See page 26 of example proposal

# Proposal Template: Part 2 – Implementation Part

## Planning – Gantt Chart (examples)

### Good Gantt chart

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 0 | **CM2000 Development Phase** | **153 days** | **Wed 01/01/20** | **Sat 01/08/20** |
| 1 | **Kick-Off** | **1 day** | **Wed 01/01/20** | **Wed 01/01/20** |
| 2 | **WP100 Management** | **153 days** | **Thu 02/01/20** | **Sat 01/08/20** |
| 3 | **WP200 Requirement specification and concept** | **44 days** | **Wed 01/01/20** | **Sun 01/03/20** |
| 4 | **WP201 Market survey** | **23 days** | **Wed 01/01/20** | **Fri 31/01/20** |
| 6 | *Progress meeting #* | 0 days | Fri 31/01/20 | Fri 31/01/20 |
| 7 | **WP202 Requirement Specification** | **22 days** | **Fri 31/01/20** | **Mon 02/03/20** |
| 9 | **WP203 Concept design** | **22 days** | **Fri 31/01/20** | **Mon 02/03/20** |
| 11 | *Progress meeting #2* | 0 days | Mon 17/02/20 | Mon 17/02/20 |
| 12 | **RR** | 0 days | Mon 02/03/20 | Mon 02/03/20 |
| 13 | **WP300 Preliminary Design** | **111 days** | **Mon 02/03/20** | **Sat 01/08/20** |
| 14 | **WP304 Tradeoff Analysis** | **21 days** | **Tue 03/03/20** | **Tue 31/03/20** |
| 16 | *Progress meeting #* | 0 days | Fri 01/05/20 | Fri 01/05/20 |
| 17 | **WP305 Risk Assessment** | **67 days** | **Tue 03/03/20** | **Wed 03/06/20** |
| 19 | **WP306 BB Development&Tes** | **89 days** | **Wed 01/04/20** | **Sat 01/08/20** |
| 21 | *Progress meeting #* | 0 days | Mon 01/06/20 | Mon 01/06/20 |
| 22 | **PDR** | 0 days | Sat 01/08/20 | Sat 01/08/20 |




➢ See page 26 of example proposal

# Proposal Template: Part 2 – Implementation Part

## 2.3 LIST OF DELIVERABLE ITEMS – SPECIFICATION OF ANY NON-CONFORMANCE

- Be sure to address the deliverables requested in the SoW
- Do not be afraid to suggest reasoned modifications
- Ensure there is a description of each deliverable to avoid later arguments
- Ensure consistency with WPDs

| No. | Title | Milestone | Contents/ Notes |
|---|---|---|---|
| D1a | Requirements Specification | RR | As described in SoW |
| D1b | Current and Future Market Assessment Report | RR | Assessment of Current competitor. Assessment of competitor specifications and prices. Assessment of evolution of HBM machines |
| D1c | Emerging Hot Beverage Requirement Report | RR | Assessment of beverage types currently on offer, assessment of sales per type and evolution of these year by year from 2000 to 2017. |
| D2 | Conceptual Design Document | RR | As described in SoW |

1.1.1 Non-conformances / limitations / additions regarding deliverable items

As can be seen in Tables 5 and 6, a number of changes and additions to the required deliverables from the SoW are proposed.

a) As part of the market survey in WP200 two documents are produced that are used as inputs to the Requirement Specification (D1). These will also be delivered.

b) While all of the details requested for the Design Reports will be delivered, it is more practical and efficient for this to be delivered split across multiple documents that reflect the different elements of the design and the split of work between companies. A summary will still be included in the high level document but as a result deliverables D4b and D4c have been added. The same logic has been applied to the Test Plan (D6).

c) The VCD (D10) we consider needs to also be delivered at the PDR. This has been added.

➢ See page 26-28 of example proposal

# Proposal Template: Part 2 – Implementation Part

## 2.4 Management and Administrative Compliance Matrix

- Confirm compliance at heading level of SoW
- Freely refer to other sections for details

| REQUIREMENT | C | REMARKS |
|---|---|---|
| 3.1 General | Y | Title |
| 3.1.1 General | Y | The nominate Project Manager has full decision authority for this activity. |
| 3.1.2 Communications | Y | Understood and agreed |
| 3.2 Access | Y | Understood and agreed, access will be given on site only to non-deliverable items and documents |
| 3.3 Reporting | Y | Title |
| 3.3.1 Minutes of Meeting | Y | Understood and agreed, company procedures state MoM shall be issued within 5 days. |
| 3.3.2 Bar-chart schedule | Y | Understood and agreed. The latest bar chart schedule in form of GANTT chart will be presented at each meeting and with each progress report. |
| 3.3.3 Reporting | Y | Understood and agreed. Monthly progress reports will be delivered and shall correspond to the template and detail level requested by ESA. |
| 3.3.4 Problem Notification | Y | Understood and agreed. Best efforts will be made to ensure such notification is within 72 hours of such an event or problem occurring. |
| 3.3.5 Technical Documentation | Y | Understood and agreed |
| 3.4 Meetings | Y | Understood and agreed. Progress meetings will be every 2 months. |
| 3.5 Deliverable Items | Y | See section 2.3.1 |
| 4. Schedule and Milestones | Y | See Figure 8 – Gantt chart |
| 4.1 Duration | Y | See section 2.2 |
| 4.2 Milestones | Y | See section 2.2 |
| Annex A | Y | Information only - noted |

➢ **See page 28-29 of example proposal**

# Proposal Template Part 3
# Financial Part

# Proposal Template: Part 3 – Financial Part

3.1 PRICE QUOTATION FOR THE CONTEMPLATED CONTRACT:

3.2 SUB-CONTRACTING PLAN

3.3 DETAILED PRICE BREAKDOWN

3.3.1 PSS costing forms:

- PSS A2 (Breakdown of total price per participating company or institute)
- PSS A1
- PSS A8
- PSS A15.1

3.3.2 Milestone Payment Plan

3.3.3 Travel and Subsistence Plan

➢ See page 30-32 of example proposal

# Proposal Template: Part 3 – Financial Part

## Hints and tips: Price Quotation

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

➢ See page 30 of example proposal

# Proposal Template: Part 3 – Financial Part

## Hints and tips: Price Quotation

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

✓ **TRANSPARENT:** Where does the money go? (e.g: the cost structure, hardware etc.)

✓ **CLEAR:** Level of details is important => PSS forms

✓ **CREDIBLE:** Are the cost credible to achieve the objectives of the proposed activity ?

- ❑ After the contract is signed by both party, ESA does not require financial reporting on the evolution of the spending.
- ❑ All financial details are set in the proposal & at negotiation. The proposal and the minutes of meeting will be part of "the rules of the game" together with the Contract for the all duration of the contract.
- ❑ The financial envelope in the ITT is a ceiling budget – it is **NOT** a goal. Price must be fair and reasonable for the scope of work described in the proposal.

➢ **See page 30 of example proposal**

# Proposal Template: Part 3 – Financial Part

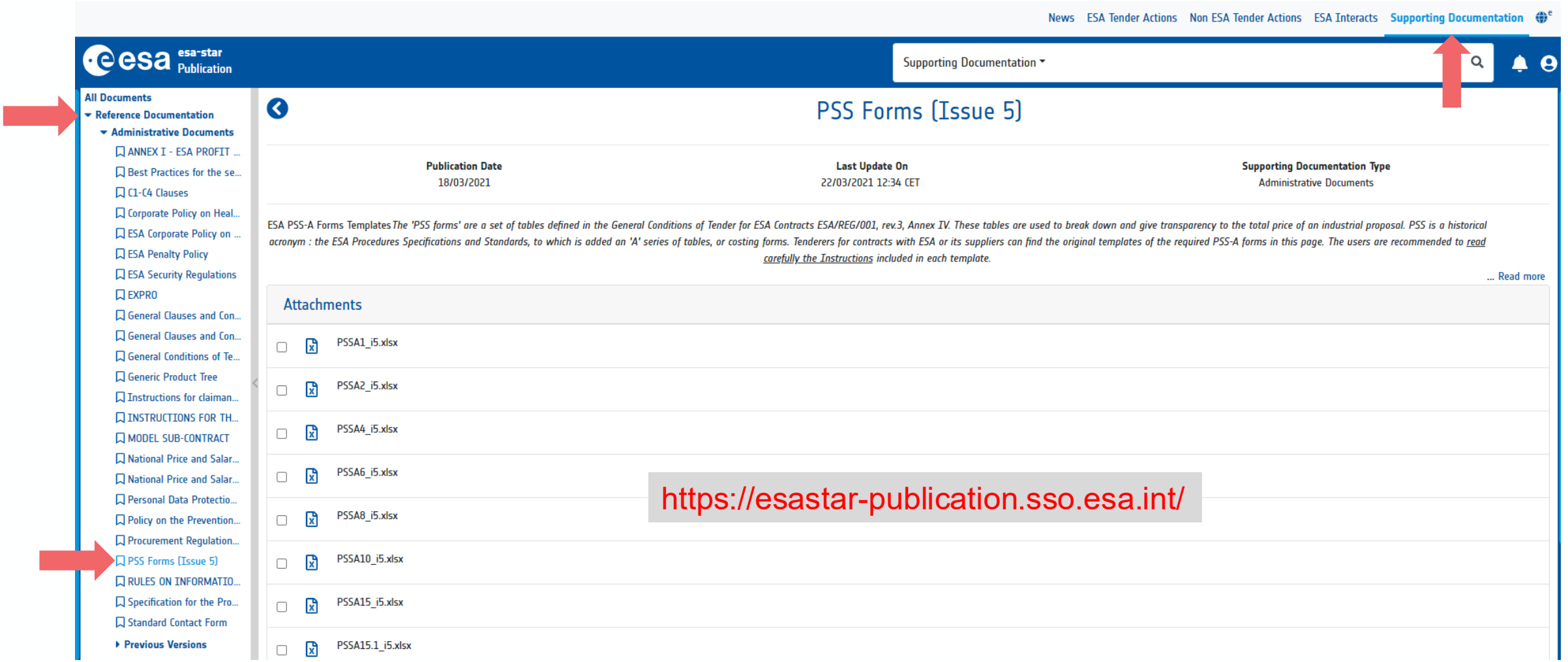
## Hints and tips: Price Quotation

### 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
- PSS A15.1 Company Price Projection vs Payment Plan

➢ See page 34-38 of example proposal

# Proposal Template: Part 3 – Financial Part




➢ See page 34-38 of example proposal

# Proposal Template: Part 3 – Financial Part

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.

➢ See page 34-38 of example proposal

# Proposal Template: Part 3 – Financial Part

## 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.

➢ See page 37 of example proposal

# Proposal Template: Part 3 – Financial Part

## 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.

➢ **See page 34-36 of example proposal**

# Proposal Template: Part 3 – Financial Part

**Hints and 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?

| COMPANY PRICE BREAKDOWN FORM | | | | Form No. PSS A2 | | Page no. 1 of 1 | | Issue 5 |
|---|---|---|---|---|---|---|---|---|
| RFQ/ITT No.: | 18.187.04 | | | COMPANY | | | | |
| Proposal/Tender No.: | 1 | | | Name: | HiQ Beverages Ltd | | | |
| Type of Price: | FFP | Firm Fixed Price | | Country: | Lithuania | | | |
| Economic Condition: | 2023 | | | | | | | |
| National Currency (NC): | EUR | | | Representative | | | | |
| Exchange Rate (X): | 1 EURO = | 1.00000 | EUR | Name and Title: | Mr. Bean | | | |
| Contractual Phase: | N/A | | | Signature: | | | | |
| Project/Work Package(s): | | | | | | | | |

| | | | | | | | TOTAL (NC) EUR | TOTAL (EURO) NC / X |
|---|---|---|---|---|---|---|---|---|
| | LABOUR | | | | | | | |
| Direct Labour cost centres or categories Code / Description | | 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 | 11,772.00 |
| | Senior Engineer | 0.9 | 1,800 | 1,550 | 57.84 | | 89,652.00 | 89,652.00 |
| | Junior Engineer | 0.3 | 1,800 | 550 | 36.72 | | 20,196.00 | 20,196.00 |
| | Technician | 0.2 | 1,800 | 400 | 28.44 | | 11,376.00 | 11,376.00 |
| | QA Manager | 0.0 | 1,800 | 80 | 48.72 | | 3,897.60 | 3,897.60 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |
| 1 | Total Direct Labour Hours and Cost | 1.6 | | 2880.0 | | A | 136,893.60 | 136,893.60 |
| | INTERNAL SPECIAL FACILITIES | | | | | | | |
| Code | Description | | Type of unit | No. of units | Unit rates in NC | | | |
| | Pressure testing Chamber | | Day | 1 | 1,000 | | 1,000.00 | 1,000.00 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |
| | | | | | | | 0.00 | 0.00 |

➢ See page 35 of example proposal

# Proposal Template: Part 3 – Financial Part

## Hints and tips: PSS A2
### Key review points by Technical Experts

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

Profit <= 8%?

Total – less than earmarked budget?

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2 | *Total Internal Special Facilities Cost* | | | | | B | *1,000.00* | *1,000.00* |
| | **OTHER DIRECT COST ELEMENTS** | *Base amounts in NC* | *+ OH %* | *OH amounts in NC* | | | | |
| 3.1 | Raw materials | 1,455 | 5.0% | 73 | | | 1,527.75 | 1,527.75 |
| 3.2 | Mechanical parts | 1,973 | 5.0% | 99 | | | 2,071.65 | 2,071.65 |
| 3.3 | Semi-finished products | | | | | | 0.00 | 0.00 |
| 3.4 | Electrical & electronic components | 733 | 10.0% | 73 | | | 806.30 | 806.30 |
| 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 | 15.0% | 450 | | | 3,450.00 | 3,450.00 |
| 3.8 | Transport and Insurances | | | | | | 0.00 | 0.00 |
| 3.9 | Travel and Subsistence | 3,180 | 10.0% | 318 | | | 3,498.00 | 3,498.00 |
| 3.10 | Miscellaneous | 600 | 5.0% | 30 | | | 630.00 | 630.00 |
| 3 | *Total Other Direct Cost* | *10,941.00* | | *1,042.70* | | C | *11,983.70* | *11,983.70* |
| 4 | **SUB-TOTAL DIRECT COST** | | | | (A+B+C) | D | 149,877.30 | **149,877.30** |
| | **GENERAL EXPENSES** | *Cost items to which % applies* | | *Base Amount in NC* | *OH %* | | | |
| 5 | General & Administration Expenses | 1 | | *136,893.60* | 3.75% | E | 5,133.51 | 5,133.51 |
| 6 | Research & Development Expenses | | | | | F | 0.00 | 0.00 |
| 7 | Other | | | | | G | 0.00 | 0.00 |
| 8 | **TOTAL COMPANY COST** | | | | D+(E+F+G) | H | **155,010.81** | **155,010.81** |
| | | *Cost items to which % applies* | | *Base Amount in NC* | *%* | | | |
| 9 | PROFIT | 1 | | 155,010.8 | 8.0% | I | 12,400.86 | **12,400.86** |
| 10 | COST WITHOUT ADDITIONAL CHARGE | | | | | J | | 0.00 |
| 11 | FINANCIAL PROVISION FOR ESCALATION | | | | | K | | 0.00 |
| 12 | **TOTAL COMPANY PRICE** | | | | (H+I+J+K) | L | **167,411.67** | **167,411.67** |
| 13 | TOTAL SUB-CONTRACTOR PRICE | | | | | M | | 23,969.90 |
| 14 | REDUCTION for COMPANY CONTRIBUTION | | | | | N | | 0.00 |
| 15 | **TOTAL PRICE FOR ESA** | | | | (L+M-N) | | **167,411.67** | **191,381.57** |

➢ See page 35 of example proposal

# Proposal Template: Part 3 – Financial Part

## 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 | | | | |
| Contractual Phase | N/A | Signature | | | |
| **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 | Exchange 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?

➢ **See page 35 of example proposal**

# Proposal Template: Part 3 – Financial Part

## 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: | 2023 | | 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 | Vilnius, Lithuania | 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 | | Brewzone, Italy | 1 | 2 | 300 | E | 2 | 150 | R | 1,200 | 1,200 |
| WP500 | Prototype Development and Test | Final Presentation of Project Outcome | | 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)

➢ **See page 36 of example proposal**

# Proposal Template: Part 3 – Financial Part

## 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!

➢ See page 38 of example proposal

# Proposal Template: Part 3 – Financial Part

**Hints and 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 on key part)?
- Hours spent on management reasonable?
- Is the PSS complete? (Often not filled out)
- Procurements associated to correct WP?

**COMPANY MANPOWER AND PRICE SUMMARY PER WP** Form no. **PSS A8** Page X of Y Issue 5

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITT/RFQ: | 18.187.04 | | | | | | | | | | | Price Type: | FFP | | |
| Proposal/Tender No.: | 1 | | | | | | | | | | | Economic Conditions: | 2023 | | |
| Company Name: | HiQ Beverages Ltd | | | | | | | | | | | National Currency (NC): | EUR | | |
| Contractual Phase: | N/A | | | | | | | | | | | Exchange Rate: 1 EUR = | 1 | | |
| WBS-Level (Number and Title): | 1 | Workpackage | | | | | | | | | | | | | |

| WP Title | | Management | Requirement Specification and | Preliminary Design | Detailed Design | Prototype Development & Test | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WP Number | | 100 | 200 | 300 | 400 | 500 | | | | | | | | Total WBS-Level |
| Labour Hours per category | Hours | | | | | | | | | | | | | |
| Project Manager | # | 300 | | | | | | | | | | | | 300 |
| Senior engineer | # | | 190 | 140 | 680 | 540 | | | | | | | | 1,550 |
| Junior Engineer | # | | 50 | 100 | 100 | 300 | | | | | | | | 550 |
| Technician | # | | | 120 | 40 | 240 | | | | | | | | 400 |
| QA Manager | # | | | 10 | 10 | 60 | | | | | | | | 80 |
| ... | # | | | | | | | | | | | | | |
| ... | # | | | | | | | | | | | | | |
| ... | # | | | | | | | | | | | | | |
| Total Labour Hours | # | 300 | 240 | 370 | 830 | 1,140 | | | | | | | | 2,880 |
| 1. 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 | | | | | | | | | | | | | |
| 3.6 External Major Products Cost | NC | | | | | | | | | | | | | |
| 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 | 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 |
| 10. Cost without additional | NC | | | | | | | | | | | | | |
| 11. Financial Provision for | NC | | | | | | | | | | | | | |
| 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 | NC | | | | | | | | | | | | | |
| 15. Total Price for ESA | NC | | | | | | | | | | | | | |
| | EURO | 13,190.53 | 14,371.08 | 19,645.43 | 63,791.87 | 80,382.66 | | | | | | | | 191,381.57 |

➢ See page 38 of example proposal

# Proposal Template: Part 3 – Financial Part

## PLEASE NOTE!

**All fields in National Currency and in EURO must be filled in.**
Please do not forget to fill in the exchange rate.

**For 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.**

➢ See page 34-38 of example proposal

# Proposal Template: Part 3 – Financial Part

## 3.3.2 Milestone Payment Plan

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

| Milestone (MS) Description | Schedule Date | Payments from ESA to (Prime) Contractor (in Euro) | Country (ISO code) |
|---|---|---|---|
| Progress (MS 1): Upon successful completion of the RR and successful review and acceptance of deliverables D1a, D1b, D1c, D2 and D3. | To + 2 months | 75,000 | LT |
| Progress (MS 2): Upon successful completion of the PDR and successful review and acceptance of deliverables D4a-c, D5, D6a-b, D7. | To + 7 months | 74,570 | |
| Final Settlement (MS 3): 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 | |

➢ See page 30-31 of example proposal

# Proposal Template: Part 3 – Financial Part

## 3.3.2 Milestone Payment Plan

- 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 RR and successful review and acceptance of deliverables D1a, D1b, D1c, D2 and D3. | To + 2 months | 75,000 | LT |
| Progress (MS 2): Upon successful completion of the PDR and successful review and acceptance of deliverables D4a-c, D5, D6a-b, D7. | To + 7 months | 74,570 | |
| Final Settlement (MS 3): 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 | |

➢ See page 31 of example proposal

# Proposal Template: Part 3 – Financial Part

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* *(Advance always needs justification. SMEs can be granted 35% without justification)* | 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 | | LT | 66,984 | MS 1 | 66,984 | Upon signature of the Contract by both Parties |

➢ **See page 31 of example proposal**

# Proposal Template: Part 3 – Financial Part

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)*** **LT** | **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 | |
| Final 1 | 41,812 | | 0 | |
| **TOTAL** | 167,412 | | 23,970 | |

➢ See page 32 of example proposal

# Proposal Template: Part 3 – Financial Part

## 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:
  - 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**.

➢ **See page 30-32 of example proposal**

# Proposal Template Part 4
# Contract Conditions Part

# Proposal Template: Part 4 – Contract Conditions Part

4.1 BACKGROUND INTELLECTUAL PROPERTY RIGHTS

4.2 SPECIFICATION OF ALL INPUTS TO ENTER INTO THE BLANKS EXISTING IN THE DRAFT CONTRACT

4.3 OTHER REMARKS ON THE DRAFT CONTRACT

➢ See page 33 of example proposal

# Proposal Template: Part 4 – Contract Conditions Part

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

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

Original Recipe – protein rich but tastes awful

**BACKGROUND IPR**

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

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

**FOREGROUND IPR**

➢ **See page 33 of example proposal**

# Proposal Template: Part 4 – Contract Conditions Part

## Hints and tips: Intellectual Property Rights

1. Background IPR
    a. Intellectual property existing already BEFORE the ITT.
    b. That is USED for the work of the ITT
    c. That had no ESA financial aid to develop.
    d. Must be listed, must be able to be evidenced (e.g. via patent, notebook or other means)
    e. Impact on the deliverables must be described
        - Which deliverables is it included in?
        - How does it affect that deliverable and ESA's rights?
2. Foreground IPR
    a. Intellectual property developed DURING the Activity
    b. IP shall remain vested in the company
    c. ESA shall also have rights
    d. It shall not affect the deliverables/ rights on the deliverables

➢ See page 33 of example proposal

## 4.1 Background Intellectual Property Rights

Example of Table to be completed

| Exact name of BIPR Item | Owner | Description | Patent # or Ref. / Issue / Revision / Version # | Contract / Funding Details under which the IPR was created | Date of creation of the version of the BIPR listed here | Licence | Affected deliverable with comments | Protected Format (Y/N) |
|---|---|---|---|---|---|---|---|---|
| Software controlled super-automation | HiQ Beverages Ltd | Intelligent multi- functional and configurable precision control of hot beverage machines | Patent #1234 | Self funded | 1st April 2000 | N/A | D4b -Software Preliminary Design.<br><br>This document will be marked company confidential and distribution is limited to the ESA TO only. | N |

*Table 11: Background IPR*

➢ See page 33 of example proposal

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