

4th Call for Outline Proposals under the Plan for European Cooperating States (PECS) in Slovakia

AO/1-9588/18/NL/SC

8 November 2018

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DISCLAIMER



This presentation material does not contain sufficient information to be used, in any way, in the context of the ITT (Invitation-to-Tender) AO/1-9588/18/NL/SC.

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

Please ensure that your Outline Proposal is compliant with the requirements contained in the ITT AO/1-9588/18/NL/SC documentation.



















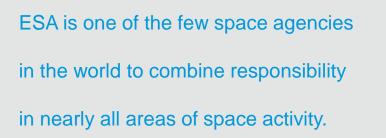


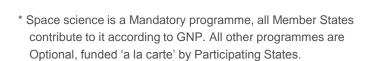




ESA - Activities

























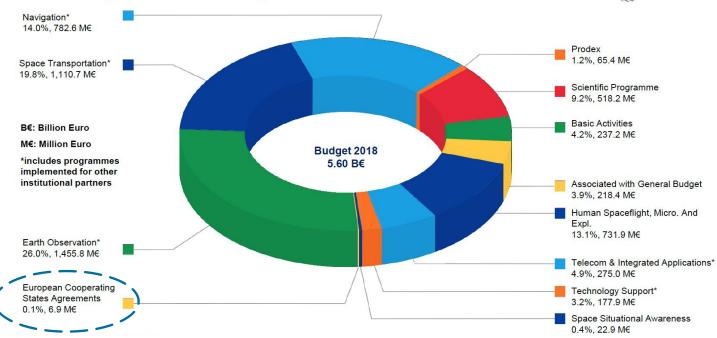
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ESA - budget for 2018: by domain



ESA budget for 2018: by domain





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ESA's industrial policy





The majority of ESA's budget is spent on contracts with European industry.

ESA's industrial policy:

- Ensures that Member States get a fair return on their investment;
- Improves competitiveness of European industry;
- Maintains and develops space technology;
- Exploits the advantages of free competitive bidding, except where incompatible with objectives of the industrial policy.





Plan for European Cooperating States



Slovakia signed the ECS Agreement on 16 February 2015 and PECS Charter on 4 February 2016. So far, Slovakian entities signed 14 PECS contracts and currently have 8 negotiations in process with the ESA PECS Programme.

The current ECS Agreement with Slovakia will last until February 2021. It aims at supporting Slovakian entities for future involvement in ESA programmes and activities and to prepare the ECS participants in the most efficient manner for future association to ESA or for accession to ESA convention.

This is achieved by:

- Familiarizing entities with ESA practices and standards
- Developing competitive capabilities, products & services with respect to European industry
- Developing cooperation between ECS scientific users and industry, and European partners
- Educational initiatives

The Slovakian PECS programme awards contracts to Slovakian entities via Calls for proposals, which is the object of this presentation.

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Overview of Slovak PECS Open Calls



1st PECS Call

19 proposal were received, 7 were funded

Success Rate: ~37%

Scores range: 52 – 70, **Average: 59.9**

2nd PECS Call

20 proposal were received, 8 were funded

Success Rate: ~40%

Scores range: 55 – 75, **Average: 61.6**

3rd PECS Call

13 proposals were received, 7 were funded

Success Rate: ~53%

Scores range: 55 – 68.5, **Average: 63.4**





















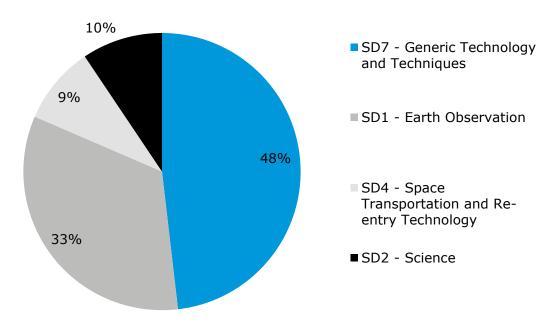




Slovakian PECS Fields of Activity



Commitments per Service Domain































Summary of presentation



- ESA Tools Basics of ESA Procurement
- 2. ITT Package for Permanently Open Call for Outline Proposals
 - a) Cover Letter
 - b) Draft Contract
 - c) Tendering Conditions
 - d) Proposal Template
- 3. The Tender Evaluation
- 4. The Negotiation Period
- 5. Debriefing
- 6. Schedule
- 7. Questions
- 8. Proposal Template (and hints and tips)
- 9. Future PECS Calls Planning

1. BASICS OF ESA PROCUREMENT ESA electronic procurement tools



Main ESA Corporate Applications which are supporting the procurement process:

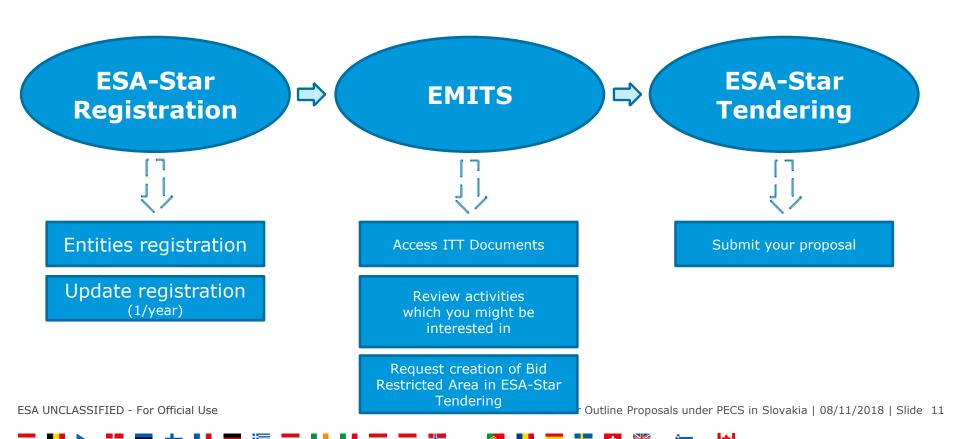
- **ESA-STAR**: ESA's online System for **Tendering** and **Registration** is the electronic Tendering interface for ESA and its external partners.
- **EMITS**: ESA's web-based system for publishing Invitation-to-Tenders (ITT).
- ESA-P: ESA's portal for the supplier <u>once a Contract is signed</u> with ESA. It covers all financial aspects (invoicing/payments) => access ONLY when you have a contract with ESA.

Attention: You may refer to the SK4_Briefing_Handbook Basics of ESA Procurement_8Nov2018_v1.pdf provided for additional information.

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1. BASICS OF ESA PROCUREMENT ESA electronic procurement tools





1. BASICS OF ESA PROCUREMENT ESA - STAR Registration



ESA-STAR Registration (https://esastar-emr.sso.esa.int/)



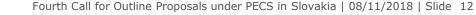
Registration on **ESA-STAR** is a pre-requisite for all entities wishing to do business with ESA.

Without an **ESA-STAR** registration (ESA Entity Code) there is **NO** access to the ITT documents in **EMITS**.

User ID and password will be given to you after the **ESA-STAR** registration is validated by ESA.







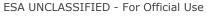
1. BASICS OF ESA PROCUREMENT EMITS - Electronic Mail Invitation to Tender System



https://emits.esa.int/

ESA's web-based system for publishing Invitation-to-Tenders (ITT). It includes:

- A list of intended ITTs for Open Competitions: potential Tenderers may declare their interest and see which companies did the same.
- Many technical, administrative and contractual standards and documents (e.g. PSS-A forms, ESA GCC, engineering standards etc).
- Open Competitive ITTs, Direct Negotiation and Restricted Competition
- Competitive ITTs published by other entities under ESA Best Practices scheme
- NEWS Consultations to industry, Announcements, etc.
- Companies can see the tender documents in case :
 - Participating country in open competition,
 - Direct negotiation with the company,
 - For restricted tenders, if they are a company addressed by ESA.



1. BASICS OF ESA PROCUREMENT ESA – STAR Tendering



ESA-STAR Tendering (https://esastar.sso.esa.int/)



Once you are registered in **ESA-STAR Registration**, you can access **EMITS**.

When you find an ITT in EMITS for which you want to bid, you need ESA-STAR Tendering

In **EMITS** you request the system to create a dedicated work area (the <u>Bidder's Restricted</u> <u>Area in ESA-STAR</u>) where you can:

- 1. submit clarification and extension requests up to the deadlines set by ESA.
- upload and submit offers to ESA.
- 3. recall your proposal at any time before the closing date.

Video: http://www.esa.int/spaceinvideos/Videos/2016/03/Bidder_Restricted_Area_creation_and_structure





1. BASICS OF ESA PROCUREMENT **ESA-P - ESA Portal for suppliers**





You won't need to access ESA-P until you have a contract with ESA

- 1. All financial aspects (i.e advance payments and invoicing/payments) are dealt with using ESA-P, ESA's financial tool based on SAP
- 2. You can request a username and password to our helpdesk: IDHelp@esa.int or +39 06 941 80700, option 2
- 3. Tutorials on how to use ESA-P are available on the supplier's portal: http://esa-p-help.sso.esa.int/QUICK GUIDE How to SUBMIT a MAC or INV or ADV.pdf





2. ITT Package



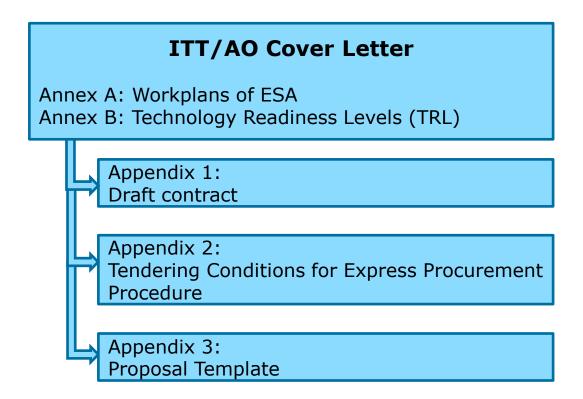
Invitation to Tender (ITT) AO/1-9588/18/NL/SC

Invitation to Tender for the Fourth Call for Outline Proposals under the Plan for European Cooperating States (PECS) in Slovakia



2. ITT Package





2. ITT Package - Cover Letter





estec

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Responsible Contracts Officer
Ms Sandy Courtois (IPL-PTS)
Tel. +31 71 565 8230
Fax +31 71 565 5773
E-mail: Sandy.Courtois@esa.int

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Subject:

Invitation to Tender for the Fourth Call for Outline Proposals under the

Plan for European Cooperating States (PECS) in Slovakia.

REF.:

AO/1-9588/18/NL/SC

Activity No. 1000024234 in the "esa-star" system

ITEM No.:

DRAFT

BUDGET LIN CATEGORY:

ESA EXPRESS PROCUREMENT (EXPRO+) / OPEN-COMPETITIVE

Dear Sir or Madam,

The European Space Agency ("the Agency") and Ministry of Education, Science, Research and Sport of the Slovak Republic hereby invite you to submit an outline proposal, in the frame of the Fourth Call for Outline Proposals under the Plan for European Cooperating States (PECS).

This Invitation to Tender (ITT) has been established and will be processed following the approach, tailored to low- to medium-value procurement actions, called "EXPRESS PROCUREMENT Plus — EXPRO+" and a competitive evaluation procedure will be used.

Your tender is required to conform to the conditions specified in this letter and in the applicable appendices.

Your tender shall be submitted **exclusively in electronic format via the "esa-star" system** [see: https://esastar.sso.esa.int/]. The EXPRO/Tender Conditions contain further information on "esa-star" and its operation.

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2. ITT Package - Cover Letter



The Cover Letter contains a number of essential features regarding the ITT e.g.

- The name of the responsible Contracts Officer (S. Courtois)
- Submission deadlines for evaluation
- All programmatic and price constraints
- Description of the process of evaluation and selection
- Evaluation criteria
- Instructions and restrictions for proposals submission

2. ITT Package – Cover Letter



The ITT/AO is expected to be published on the 3rd of December 2018

The Cover Letter indicates the formal conditions of submission, i.e. the **exact** duration of the tendering period and the exact date (12th of February 2019) and time (13:00 hours CET) by which proposals must be submitted.

Attention: It is highly recommended to submit early to ensure any issues encountered can be resolved and your work successfully submitted before the deadline.



























2. ITT Package – Cover Letter What to submit?



See section 1 of the COVER LETTER:

The present ITT is addressed only to Slovak companies (including SME) or academic and **research organizations.** Potential Tenderers are therefore requested to note that the Agency can only consider Proposals from companies or organizations residing in Slovakia. Consortia including companies & organizations within other ESA Member States may be accepted if duly justified. Tasks assigned to non-Slovak entities shall in any case not constitute the core activities of the proposed study or development and shall not exceed 20% of the total price. This limit does not apply to procurement of equipment required to carry out the work when duly justified.

























2. ITT Package – Cover Letter What to submit?



Tips – when to include a sub-contractor:

✓ If your company/institute has no expertise in space activities an European partner may be part of the team (as sub-contractor) but you have to ensure that you are doing the core activities.

Example: one of the Large-Space-Integrators, defining requirements and/or specifications or performing tests and/or qualification.

- ✓ If test or qualification facilities are necessary and these are not available in the country or the know-how to do it, you may have an European partner within the ESA Member States (as sub-contractor or service provider).
- ✓ Be sure to explain clearly what the sub-contractor is doing and why they are needed.





2. ITT Package – Cover Letter What to submit?



See section 2 of the COVER LETTER:

The total budget earmarked for this ITT is:1.700.000 Euros (One million and seven-hundred thousand Euros).



















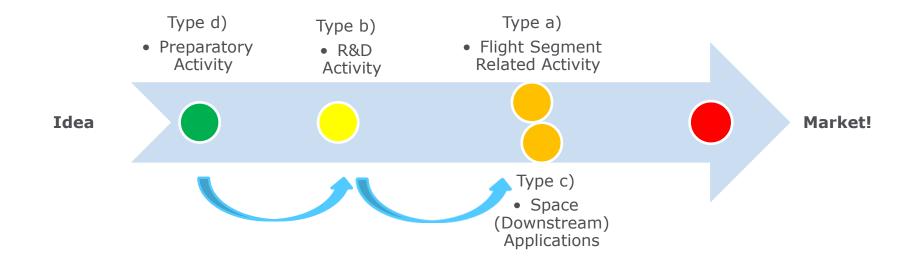


The subject of this ITT is exclusively for the following activity types:

- a. Hardware Activities
- **b.** Research and Development Activities
- **c.** Space Applications
- d. Preparatory Activities
- e. Awareness and Education Activities

2. ITT Package – Cover Letter What type of activities? Expected flow









- d) Preparatory Activities: Paper studies and simple breadboard activities (e.g. feasibility studies, market surveys, user requirements and breadboard demonstrators) aimed at supporting national competitiveness related to ESA programs to which Slovakia may subscribe in the future or the initial steps of a product development for Space with potential for use on ESA missions.
 - No TRL requirements
 - Up to 75 k€
 - May be led by any legal entity depending on the specific context while
 ESA mission related services must be led by industry.

Startup/Spinoff Friendly!



- b) Research and Development activities (including technology demonstrations, industrial processes and their qualification/certification) leading to products (hardware or software) or to generic technologies with potential for re-use.
 - The start TRL shall be at least 2 and the target TRL shall be 4 or below
 - Up to 200 k€
 - Should be led by industry if the target TRL is higher than 3. For target TRL 3, or lower, the proposal may be led by industry or academic/research organisation.













- a) Hardware activities (e.g. flight hardware) related to ESA's missions, in the form of payloads or its sub-systems, or satellite-platform technologies and sensors, or to generic technologies with potential for re-use
 - The start TRL shall be at least 3 and the target TRL shall be at least 5
 - Up to 400 k€
 - Must be led by industry (prime contractor). Exceptions may be granted for activities pertinent to ESA's Space Science Programme, leadership by academia may be allowed if duly justified and in any case an important credible industrial participation is required.





- c) Space applications, products and services making use of ESA/European space infrastructure that is already existing or scheduled for operation in the near term.
 - The start TRL shall be at least 4
 - Up to 150 k€
 - Should preferably be led by industry but in any case the consortia making a proposal must include partners who have the capability to develop the application, product or service to the point where it can be brought to the market and become part of an ongoing, sustainable business.





- e) Awareness and education activities: restricted to the development of university courses and curricula about space technology and its practical application.
 - Up to 50 k€
 - May be led by either industry, universities/research organizations or **other national entities** depending on the context.























2. ITT Package - Cover Letter: Annex B - TRL



ANNEX B of the Cover letter

- Technology Readiness Levels (TRL)
 - Outline Proposal requires that you identify the start and target TRL of the proposed activity.
 - Contains information to help you identify the start and target TRL.
 - TRL is given for Software, Applications and Services as well as Commonly Used Engineering Terms.

2. ITT Package – Cover Letter: Annex B - TRL

ANNEX B



ESA has adopted the Technology Readiness Level (TRL) scale as a way to measure the maturity of a technology. It has now become a well-established standard. Indicate the TRL of the technology to be developed under the Contract using the classification given below(for additional information on definitions, please refer to footnote 4).

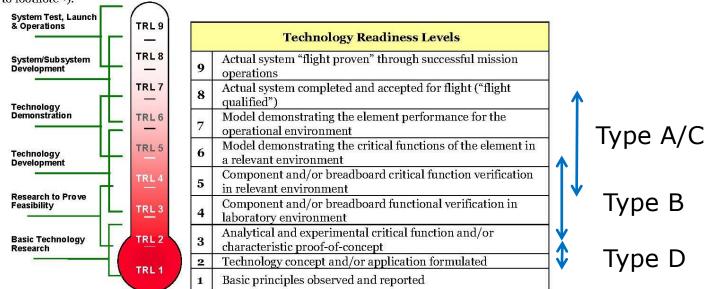


Figure 1 – Technology Readiness Levels adopted in ESA

Regarding the maturity status of software the same number of TRL are indicatively used. A short description using software engineering terms is shown in Figure 2.

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2. ITT Package – Cover Letter What content?



6. The proposed activity shall have potential for further use or development in ESA activities:

a) The proposed activity shall address **AT LEAST** one of the following:

- foster the development of space-related capabilities, especially in industry, in preparation for a potential future accession of Slovakia to the ESA Convention;
- address specific niche markets (no competitive products available elsewhere in Europe or when a second source would be an asset);
- foster the creation of strong and long-term relations between national firms and wellestablished space firms in ESA Member States;
- foster the creation of strong and long-term relations between national firms and national universities and research institutions.





















2. ITT Package – Cover Letter What content?



See section 6 of the COVER LETTER:

- c) Tenderers shall avoid duplication of ongoing and intended activities in ESA activities. Such duplication may lead to rejection of the proposal. Duplication of activities carried out in EU (or Public) programmes may also lead to rejection. The documents in Annex A hereto provide visibility of the workplans of ESA. However, complementarity to these activities is allowed.
- Such duplication will lead to rejection of the Outline Proposal.

Programmatic Alignment: Search the workplans (documents) and the websites supplied (ANNEX A of the COVER LETTER) to be sure that your idea/proposal is not already covered. If it is, your proposal will be rejected.



2. ITT Package - Cover Letter Workplans



ANNEX A of the Cover letter

- Links to workplans for all relevant ESA programmes (recent past, current and future) will be provided.
 - General Studies Programme
 - Technology Research Programme
 - Cosmic Vision
 - Robotic Exploration
 - General Support Technology Programme
 - Earth Observation
 - Global Navigation Satellite System
 - Advanced Research in Telecommunication Systems (ARTES)
 - Telecommunication & Integrated Applications
 - Space Situational Awareness
- Intended Invitations-to-Tender (EMITS) covering all ESA Programmes
- Currently Open Invitations to Tender (EMITS) covering all ESA Programmes

A potential Tenderer must check if the activity s/he plans to present is already in ESA plans and Intended Invitations to Tender (ITT).

2. ITT Package – Cover Letter Compliance and number of proposals



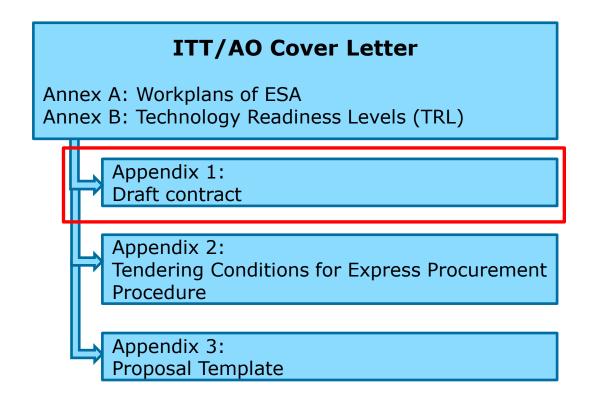
Number of proposals for submission per Tenderer

The number of proposals per Tenderer (as prime contractor) is restricted to a maximum of 2 (two) independent and unrelated proposals.

- You are required to clearly state that you accept all terms and conditions of the Draft Contract (see point 10 of the Cover Letter of the Proposal Template);
- Your tender is valid during a period of fourteen (14) months from the date of tender submission.
- The total number of pages for the proposal shall not exceed 25. These 25 pages excludes the Cover Letter, the PSS forms and Annexes (if any).

2. ITT Package – Appendix 1: Draft Contract





2. ITT Package – Appendix 1: Draft Contract



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DRAFT
with

[Contractor]

[Title of Contract]





2. ITT Package – Appendix 1: Draft Contract



Full compliance to terms and conditions are expected

- The draft Contract, is based on the <u>EXPRO (+) Contract</u> and the "relevant" parts of the ESA General Clauses & Conditions (ESA GC & C) are embedded in the Contract with some adaptations.
- The Clauses with an "Option" will be finalised at the negotiation stage.
- the Draft Contract is tailored for straightforward contracts, should the activity be more complex (e.g. flight hardware activities) the Contract will be adapted accordingly.
- The Annexes form an integral part of the Contract.















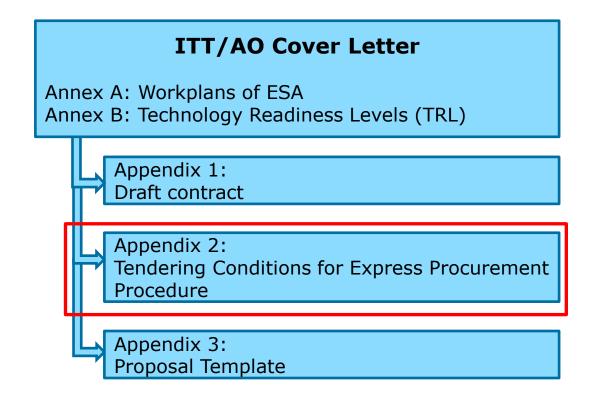






2. ITT Package - Appendix 2: Tendering Conditions





2. ITT Package – Appendix 2: Tendering Conditions



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Appendix 2 to ESA ITT AO/1-9588/18/NL/SC Tendering Conditions (EXPRO/TC)

Page | 1

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NOTE

For the purposes of "EXPRO" and "EXPRO+" categories of Requests for Proposal (RFP) and Invitations to Tender (ITT) aimed, respectively, at the placing of contracts for low- to medium-value procurements through a simplified tendering procedure, the Agency's ESA Procurement Regulations (ESA/REG/001, rev. 4) shall be the applicable regulatory framework, as specified, amended or supplemented by these EXPRO TENDERING CONDITIONS ("EXPRO/TC"). The list of adopted waivers from the ESA Procurement Regulations can be found in Annex I hereto.

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2. ITT Package - Appendix 2: Tendering Conditions



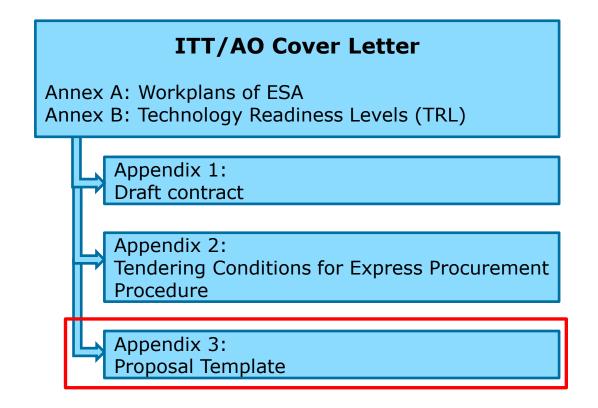
- The EXPRO (+) Tendering Conditions ("EXPRO/TC") apply instead of the ESA General Conditions of Tender.
- What type of Information will you find ?
 - Formal conditions for tendering (eligibility, negotiation, retention etc.)
 - Compliance and Key Acceptance Factors
 - Communication with ESA
 - Proposal submission conditions
 - General considerations regarding ESA-STAR
- The Proposal Template support the compliance with the Special Conditions of Tender.

NOTE: Annex II to the Tendering Conditions contain important practical information for submitting proposals to ESA-STAR.

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Appendix 3 to ESA AO/1-9588/18/NL/SC Proposal Template Page 1 of 5

ESA TENDERING STANDARDS FOR "EXPRESS PROCUREMENT" ("EXPRO+")

COVER LETTER

[N.B. Please use this template to prepare your proposal. Once the proposal is complete and internally validated, please remove all captions in red colour, delete all ESA headers/footers, add your own logos, headers/footers prior to finalising your proposal for submission to ESA.

When submitting to "esa-star" system, separate the Cover Letter from the Detailed Proposal Template according to the required proposal elements]

[COVER LETTER]

Title of the prop
The proposal is
If YES, enter tit

From:

Title of the prop
The proposal is
If YES, enter title

The pro

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

To: The EUROPEAN SPACE AGENCY (ESA)

The European Space Research and Technology Centre (ESTEC),

Keplerlaan 1, 2201 AZ Noordwijk, The Netherlands

Att.: Ms Sandy Courtois (IPL-PTS)

Subject: ESA AO/1-9588/18/NL/SC

Invitation to Tender for the Fourth Call for Outline Proposals under the Plan for

European Cooperating States (PECS) in Slovakia

Category: ESA Express Procurement Plus – EXPRO+

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

Image of first half page



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Structure of the Proposal Template:

- **Cover Letter**
- **Part 1** Technical and Application Part
- Part 2 Management Part
- **Part 3** Financial Part
 - ✓ The PSS forms MUST be submitted by both the Tenderer (contractor) and his sub-contractors (one set each).
 - ✓ Please note that all PSS forms **MUST** be signed.
- Part 4 Contract Conditions Part

























IMPORTANT INFORMATION

- □ All red font paragraphs of the template are for your information Only.
 The red font must be deleted.
- NO CHANGE in the structure, title headings, margins, font are allowed.
- ☐ When submitting to ESA-STAR, two document shall be submitted:
 - The signed Cover Letter
- One single file collating the signed Cover Letter, the proposal, the signed PSS forms and Annexes, if any
- ☐ The total number of pages for the proposal shall not exceed 25 pages.

 These 25 p. exclude the Cover Letter, the PSS forms and Annexes(if any)

3. The Tender Evaluation Board (TEB)



- After the announced submission deadlines, there is a formal opening (Tender Opening Board)
 of the outline proposals that have been submitted. The compliant proposals will be accepted
 for evaluation by the **Tender Evaluation Board (TEB)**. Non-compliant proposals will be
 rejected and not evaluated.
- TEB is composed of ESA staff supported also by ESA experts in the specific area of the proposal.
- Statement of Non-Disclosure and Non-Interest Form signed by all TEB members.
- The TEB members independently assess proposals, then the board convenes to discuss comments and mark the proposals. A TEB report is written containing all details of the collective evaluation.
- A summary of the TEB report with the technical evaluation, ranking of proposals and recommendations is submitted to the delegation. No detailed financial information (e.g. hourly rates) will be disclosed.





3. The Tender Evaluation Evaluation Criteria



No.	Evaluation Criterion	Weighting Factors %
1	Clarity of the technical objectives and definition of the requirements for the proposed work. Quality of engineering approach and discussion of problem areas. Quality and suitability of proposed programme of work. Background and experience of the entity/entities related to the particular field concerned, including adequacy of proposed facilities. Adequacy of the key personnel for the execution of the work.	40 %
2	Prospects for use in ESA programmes including long term benefit for Slovakia. Consistency with programmatic objectives as described in the Cover Letter. Adequacy of the current and targeted maturity status of the development.	20 %
3	Adequacy of management approach. Credibility of the cost estimation and the proposed schedule.	30 %
4	Compliance with the administrative tender conditions (including Intellectual Property Rights) of the call for outline proposals and acceptance of the draft contract.	10%

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3. The Tender Evaluation **Evaluation Criteria**

ESA Marking:



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

100 Perfect

90 Excellent

75 Very good

Criterion 1 – Technical

60 Good

Criterion 3 – Management and cost

50 Fair

Criterion 2 – Programmatic

40 Barely acceptable

Criterion 4 – Legal and administrative

<40 Below acceptability

Please note that only proposals with an overall mark above 50 will be submitted to the Ministry of Education, Science, Research and Sport of the Slovak Republic for programmatic review and possible recommendation for implementation

3. The Tender Evaluation **Programmatic Review**



ESA with the Ministry of Education, Science, Research and Sport of the Slovak Republic performs the programmatic evaluation of the proposals, with an overall mark higher than 50:

- 1. Takes into account the TEB report containing the technical evaluation, marks, ranking and recommendations;
- 2. Considers programmatic priorities and national interests;
- 3. Recommends activities for implementation (subject to final approval by ESA programme boards);
- 4. This meeting is planned for April 2019.























4. The Negotiation Period



See section 11.e) of the COVER LETTER:

- e) For recommended proposals, the Agency will either
 - start the negotiation process to place a contract with the Tenderer on the basis of the submitted Outline Proposal and the comments from the TEB; or
 - issue a request for a full proposal, especially hardware related activities, ii) to those Tenderers that submitted the selected outline proposals; or
 - iii) decide to issue a competitive invitation to tender restricted to the Tenderers positively evaluated if two or more proposals on the same subject were positively evaluated.























5. Debriefing – unsuccessful proposals



See section 11.f) of the COVER LETTER:

f) The contact person of the Prime Contractor mentioned in the proposal (see point 7 in the Cover Letter of the Proposal Template) will be informed in writing of the result of the ITT after a decision has been taken. If the proposal has been unsuccessful, the Tenderer may request the nominated the Agency's Contracts Officer to advise him of the reasons why the proposal has not been retained in a **verbal debriefing**. Any information will be limited to the Tenderer's own proposal.

Important: ask for a debriefing!

It is the best way of learning why your proposal was not recommended and what you need to improve!

Suggestion: even if your proposal was recommended, ask for a debriefing during the negotiation.









6. The Evaluation Process **Expected schedule**



Publication in EMITS

- 3 December 2018

Deadline for Submission of Outline Proposals

- 12 February 2019

Tender Evaluation Board (TEB)

- 10 April 2019

First communications to Bidders

- 29 April 2019
- negative outcomes will be communicated first
- positive outcomes will be conditional to approval by ESA Delegate Bodies

First contracts based on Outline Proposal

- Approximately August to October 2019























7. Questions?



For questions related to specific projects or issues use the one-on-one sessions. In the one-on-one sessions please do not ask general questions – they are very limited in time.

?

For issues **DIRECTLY** related to this Call contact (**PECS Contract Officer**):

Email: sandy.courtois@esa.int Phone: +31 71 565 8230

For issues **NOT** related to this Call, feel free to contact:

Email: Stephen.airey@esa.int Phone: +31 71 565 5395

With (**PECS Support Engineer**) in CC:

Email: Kay.van.der.Made@esa.int Phone: +31 71 565 8780



























COFFEE BREAK?

Slovakia PECS Activity Achievements

New, Associate and Cooperating States, IPL-IPS

08/11/2018

(Coming next: Proposal Template Hints and Tips)

8. Proposal Template (and hints and tips)



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

There is no substitute for a good idea.

This presentation will only help you to present your idea in a way it can be **understood by reviewers**.

Please ensure that your Outline 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.

REMEMBER:

ESA is only allowed to evaluate what is in the 25 pages of the proposal – do not assume that the reviewers have "your common knowledge" or that "it is commonly known". We cannot evaluate intentions, "read in-between-the-lines" or guess what you mean. We are only allowed, outside of the proposal, to consult EMITS 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.



Proposal Template: Common Mistakes



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

Criteria 1

- Objectives difficult to understand or not clearly stated.
- Poor or missing technical requirements (e.g. not covering the key points, not quantified or verifiable, not matching market need)
- Poor or missing engineering approach (e.g. Baseline concept not described, missing reviews or checks, lack of key testing or validation)
- Poor or inadequate programme of work (e.g. missing customer involvement, missing design or development steps) and inconsistency between text, flowchart, WPD and GANTT.
- 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
- Poor WPD (e.g. insufficient detail to understand the full scope of the work, no clear responsibilities, inputs and outputs of each WPD)
- Poor WBS (e.g. spaghetti WBS and flowchart, too many/few WPD, WP not with tasks for more than one entity)

Criteria 2

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

























Proposal Template: Common Mistakes



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

Criteria 3

- 1. Poor management plan (e.g. missing how you will monitor the timely implementation of the activity, sub-contractor control or 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)
- 4. Poor definition of deliverables (e.g. missing deliverables, not covering the full scope of work, deliverables not matching WPD outputs)
- 5. High/very low management 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

- 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)
- 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)

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8. Proposal Template Cover letter

esa

Contains details on:

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

The cover letter MUST be signed



Photo credit: A. Kuipers ISS Nightpod camera 2012

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.

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8. Proposal Template **Cover letter**



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)"



























1.0 <u>INTRODUCTION AND SCOPE</u>

[Present the scope and justification of the need/opportunity for the proposed activity]

1.1 TECHNICAL OBJECTIVES:

[Outline the main technical and programmatic objective(s) and end goal(s) of the proposal. Indicate how it will be determined if the activity object of the proposal has effectively achieved its goals]

1.2 REQUIREMENTS:

[Identify and discuss the technical requirements to be able to achieve the specific Technical Objectives as outlined in section 1.1 above. When appropriate the requirements shall be associated to a quantitative value. The verification approach for each requirement shall be identified. Provide a justification / reasoning for such requirements]

1.3 TECHNOLOGY READINESS LEVEL:

[Identify with justification the current level of maturity of the technology (TRL) and the level of technical maturity to be reached at the end of the activity (TRL). Please refer to Annex B 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 expected. Please note that for education, awareness and earth observation related activities, TRLs do not apply]

Attention: It is highly recommended to refer to the <u>SK4_PECS_PROPOSAL SUBMISSION HIGH</u>
<u>LEVEL CHECKLIST_8Nov18.pdf</u> provided when filling in the proposal template.

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Hints and tips: The Objectives

The Objective is what you hope to achieve with the proposal (i.e. the end goal) and the key constraints or conditions under which that should be met. This is sometimes called the mission goal in texts. In theory, everything you propose to do should be derivable from this statement.

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

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

In **'Application'** part of the proposal you should justify **WHY** this is a good objective and how it fits the programmatic constraints!

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Hints and tips: The Requirements

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

Requirements are:

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

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

Requirements are not:

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

If you are not in a position to properly define a full set of clear, well formulated requirements then consider to either look at a preparatory activity or include an activity focused on requirement definition and include a work package to this end.

Examples... (next slide)







Example (in a cafeteria):

Hints and tips: The Requirements

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



Photo: Samantha Cristoforetti waiting for her ISSpresso 2015

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1.4 ENGINEERING APPROACH

1.4.1 State of the Art

[Present and discuss the state of the art. In this section, an overview of other solutions to address the objectives of the proposal are to be described. The objective of this section is for the bidder to demonstrate that they are aware of the field where they intent to contribute, and knowledgeable of the State of the Art].

1.4.2 Technical Steps

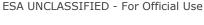
[Present and discuss in detail the scientific/technical steps to achieve the objectives outlined under section 1.1. Note: the steps shall be consistent with those reflected in the Work Logic Diagram in section 1.7.1]

1.4.3 <u>Implementation aspects</u>

[Present a first iteration of the baseline design or concept and discuss the trade-offs that need to be taken into account. In this section, the bidder is to show the overall logic of the work being proposed including any key review(s) and decision points. Discuss how the work performed will be validated (e.g. test plan and test approach) and how achievement of the objectives will be proven/ demonstrated]

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









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

- What is your proposed technical solution/ baseline?
 - Provide sufficient detail for it to be understood by someone else (e.g. what technique, what waveband, what key technology?)

- What alternatives exist?
 - 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?
 - What evidence is there that it will work? C.

























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

Coffee Shop Examples

State of the art example.



The current state of the art in coffee production is the Caffeine Blaster 100 as used by Star Coffee – 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.



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

Strongly linked to the **Proposed Work Logic** – in fact, this is the text description and justification of the flow chart and to the Work Breakdown Structure (WBS).

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

























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

Coffee Shop Examples

Technical solution/ baseline example (very brief)



In order to achieve the objectives, we will develop our Coffee Master 2000 hot beverage production unit. The Coffee Master 2000 will be based on our Patent # 1234 which uses high pressure steam, partial preparation, automatic end user programmable software adaptation settings to enable the optimal and rapid production of more than 100 types and variations of hot beverage. It is capable of producing 6 beverages simultaneously with 1 operator. A breadboard has already been built and demonstrated the proof of concept of Patent # 1234. A functional diagram of the CM2000 is given in Fig 1.



1.5 TECHNICAL FEASIBILITY, PROBLEM AREAS AND DEVELOPMENT RISK:

[Provide evidence as to the feasibility of achieving the requirements and objectives identified in sections 1.1 and 1.2.

Identify, present and discuss the main technical problem areas and key development risks that may be expected during the execution of the activity in order to reach the proposed TRL level.

Propose mitigation and preventative actions to reduce the likelihood and potential impact of such risks/problems and discuss credible alternative design or implementation solutions to avoid identified potential technical problems that could become showstoppers]

1.6 APPLICATION OF TECHNOLOGY DEVELOPMENT

[Present the justification and reasoning for the objectives and evidence to show that such objectives meet the criteria of the call as outlined in the Cover Letter of the ITT under point 6. In addition: In the case of applications/services show the interest/involvement of potential users/ customers. For products show the potential market.

The bidder should provide an overview about the expected benefits of the proposed activity to your company/institution.

If the application is pertinent to an ESA Programme(s) please identify which programme would be relevant to your proposal; indicate the structuring effect of the proposed activity, in terms of possible continuation in ESA programmes, the relevant time frame, targeted missions, and cooperation potential]



Hints and tips: Problem areas and Risks

The problem areas and risks discussions are intended to cover TECHNICAL and PROGRAMMATIC 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 **shows you understand the work** you are proposing.

Discussion of risks and problems should include a mitigation plan:

- What is the potential impact and what actions will you take to minimize the risk of it becoming a reality?
- What will you do if it does become a reality?
- Provide details to show those mitigating actions are credible and feasible.



























Hints and tips: Problem areas and Risks

Good Example:

"The procured coffee machine breaks down during service"

Mitigation options that will be investigated:

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

Prevention actions:

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

Bad Examples:

"We don't have someone to make the coffee and are not sure to be able to hire someone." "We might not be able to afford a coffee machine."



























Hints and tips: Application of Technology Development

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.

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TECHNICAL IMPLEMENTATION / PROGRAMME OF WORK

1.7.1 Proposed Work Logic

[Insert a flow chart showing the logical flow of work from step to step, with reviews, dependencies and iteration loops (as required). Note that this shall be consistent with section 1.4, the WBS and the schedule]

1.7.2 Contents of the proposed work

1.7.2.1 Work Breakdown Structure (WBS)

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

























1.7 TECHNICAL IMPLEMENTATION / PROGRAMME OF WORK

1.7.2.2 Work Package Description (WPD)

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

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

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

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

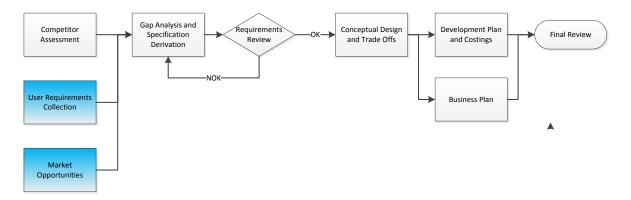




Hints and tips: Flowchart

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

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









Hints and tips: WBS

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

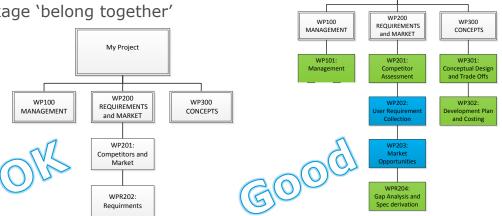
Guidelines

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'

Examples - BAD, OK, GOOD





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My Project



Hints and tips: Work Package Descriptions

- **Essential Data:**
 - Work Package (WP) Title, WP Manager, Company a.
 - Start and end dates (T0+) and/or EVENT (PDR, CDR)
 - Inputs C.
 - Description of work (e.g.: tasks and sub-task)
 - 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

TIPS:

- WP Manager should be responsible for the work (e.g. have suitable experience) a.
- b. Duration (Start: T0 + 1, End: T0 + 5).
- 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')
- Outputs are all deliverables produced, ensure consistency with Deliverables list and deliverable identifiers.



























Hints and tips: Work Package Descriptions – Examples

WP 1100

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

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

Inputs: Proposal, KOM Minutes

Tasks:

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

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

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WP 1100

WP Title: Management

WP Manager: A.Nonymous

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

Inputs: None

Tasks:

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

Outputs: Management documentation, final deliverables









































1.8 BACKGROUND OF THE COMPANY(IES)

[Present an overview of the company addressing the number of personnel; the year in which the company was established; location of sites; and Briefly describe the directly relevant experience for the Contractor and Sub-contractor(s), if any, for the performance of such a work (the Tenderer may submit additional information on the general background of the entities beyond the 25 pages with Annexes)]

1.9 **FACILITIES**

[Identify the facilities (including s/w tools) required to perform the proposed work. Submit a brief description of the intended facilities to be used, making it clear how the rights to use those facilities has been secured for this activity (e.g. own facilities, to be bought, to be constructed, sub-contracted, rented...). (the Tenderer may submit additional information on the entities facilities beyond the 25 pages with Annexes)].





















Hints and tips: Background and Experience

We are only interested in DIRECTLY RELEVANT background and experience.

Silly Example:

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

Do not waste space in the proposal with non-relevant experience. Relevant patents, papers or publications could be included in Annex(es) (not counted for the page limit).

If the people or bidding team is missing key background, experience or knowledge – **identify this yourself** and explain how you will get it.







Hints and tips: Facilities

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

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

























Hints and tips: Facilities

Coffee Shop Example - 'Bad'

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

Coffee Shop Example - 'Good'

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

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



























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, see note here-under) and non-key personnel. The organigram shall clearly show reporting lines, the tasks, position, authority and name of the persons proposed for the work, and in particular the study/project manager and the contracts officer.

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

NOTE:

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





2.1.1.2 <u>Reporting lines within the team</u>

.....

2.1.1.3 Time dedication of key personnel

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

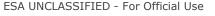
year]

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

2.2 CURRICULA VITAE

[Concise CVs including the directly relevant information for the proposed activity for all <u>key</u> personnel and showing that all major elements of expertise needed are present in the team]



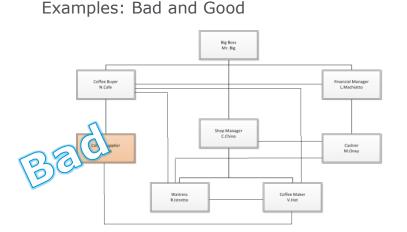


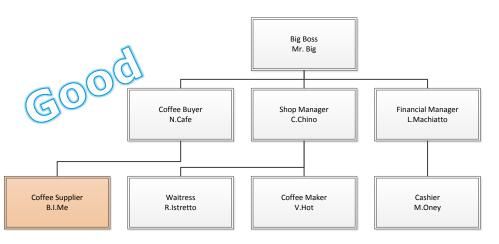


Hints and tips: Overall Team Organisation and Personnel

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.





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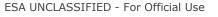




Hints and tips: Time Dedication of Key Personnel

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%.





2.3 MANAGEMENT PLAN

Present your management plan, policies and procedures for this activity including a discussion of the management control organisation (reporting, monitoring, scheduling), the procedure that will be used to exercise control over the project and the proposed subcontracting control (if any), and means for settling disagreements should be described. Include also quality control aspects such as document management and approval, action item tracking, configuration control.... Indicate the authority of the project manager to timely obtain the needed project resources























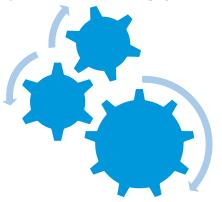


Hints and tips: Management Plan

Role of the management plan in the proposal is to give confidence that the activity will be kept on track, on schedule and on cost to lead to a successful conclusion, with every aspect under control and traceable for the entire duration.

Things to cover in a management plan:

- a) Team organisation including roles and responsibilities of key personnel and sub-contractors.
- b) How is technical progress monitored and controlled? (e.g. Progress reports and meetings)
- b) How are tasks given to people?
- c) How is schedule and cost controlled?
- d) How are actions traced?
- e) How are risks identified, traced, managed and controlled?
- f) What configuration and version control is done?
- g) How is the project status communicated to ESA and how often?





2.4 PLANNING

2.4.1. Gantt chart

[Insert a Gantt chart schedule for the proposed activity, from the start of the activity until the end of the Contract. The Gantt Chart is to include all proposed Work Packages (WP), meetings, milestones, dependencies and highlight the critical path. The schedule from the start of the activity until the end of the contract shall, in principle, not exceed two (2) years unless duly justified. If the scope of the activity is software development then this must be delivered and the standard 6 months warranty period should be reflected in the Gantt chart. This might lead to a total period exceeding 2 years.]

2.4.2 Proposed Schedule

[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]

2.4.3 Meeting and Travel Plan

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







Hints and tips: Planning - GANTT Chart

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

It shows you understand the work involved in what you are proposing.

Some tips for GANTT charts:

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





















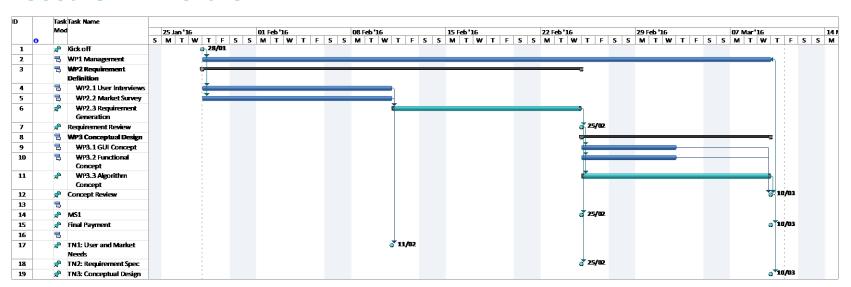






Hints and tips: Planning – GANTT Chart (examples)

Good GANTT chart



































Hints and tips: Planning – GANTT Chart (examples)

Bad GANTT chart

ID		Task	Task Name																																			
		Mod	1	6		25 Ja	ın '16	;	C)1 Feb	'16		08	Feb	'16		15 F	eb '1	.6	2	2 Fe	b '16		29	Feb '	16	0	7 Ma	ar '16	i	141	Mar	'16		21 M	ar '16		28 Ma
	0			F	S	T	Т	S	;	M V	V I	F	S	T	T	S	М	W	F	S	T	T	S	М	W	F	S	T	Т	S	М	W	F	S	Т	T	S	M V
1		3	WP1 Management					-		_	_	_	_	_		_			_	_	_	_	-	_	_	_	_		_		-	_		_				
2		3	WP2 Requirement Definition					=		_	_	_	_	_	_	_		_	_	_	_																	
3		x₽	WP3 Conceptual Design																			_		-		_						j						





































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, 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)

Other information to include

- Location (should be most relevant location can be 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, promotional activities...)
- Ad-hoc meetings to resolve problems (e.g. supply problems)



























2.5 DELIVERABLE ITEMS

[A list of foreseen deliverables shall be included. The List of Deliverable Items shall be grouped in Documentation, Hardware and Software and shall include sufficient explanation to unambiguously represent the scope of the deliverable.

For Documentation, the proposal shall indicate, a) list of technical notes b) list of the final deliverables as defined in the Table here-below.

For Software, the proposal shall indicate, if applicable, a) whether the software will be delivered in object and/or source code, b) the format of delivery, c) if any licenses/Third Party licences will be delivered to ESA]

Note that the TDP, FR, FP and CCD are mandatory deliverables for all activities

2.5.1 Documentation

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

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





FSA



Hints and tips: Deliverables

- Deliverables / Technical notes are everything that is delivered to ESA as part of the contract. Deliverables can be Documents, Hardware or Software
- All deliverables should be uniquely specified (e.g.: TN1, TN2.1, TN2.2, etc)
- It is good practice to also include a description or short contents list to clarify the scope.

ID	Title	Review	Туре	Description								
TN1	Trade-Off Report	TOR	Doc	ID of key trade offs, trade-off factors, selection and justification								
TN2	Design Description	PDR	Doc	Functional design, operational r		Date						
TN3	Design Justification File	PDR	Doc	materials list, s/w description, I Thermal analysis, mechanical a	Design documentation	1 st April						
				modes analysis, reliability analy	Final Documentation	4 th July						
H1	Breadboard	FR	H/W	Full electrical BB in non-represe components.	Hardware	5 th November						
S1	Prototype S/W V1	FR	S/W	Full source code in Visual C++ vexecutable for Windows v10.	Breadboard	25 th December						
	Examples of go	Prototype S/W V1	1 st Jan 2017									
A UNCL	ASSIFIED - For Official Use			Fourth Call for Outline	* * * * * * * * * * * * * * * * * * * *	1 3411 2017						

Hints and tips: Standards





European Cooperation for Space Standardization

ESA implements the European Cooperation for Space Standardization (ECSS) in it's programs. This implementation is **not required** for PECS projects, but it is **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 on the website is free.

The key document to start with for project management is:

ECSS-M-ST-10C Project Planning and Implementation (Chapter 4,5 and Annex A)



8. Proposal Template **Part 3 - Financial Part**

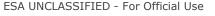


PRICE QUOTATION FOR THE CONTEMPLATED CONTRACT: 3.1

[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 ITT1

Remarks concerning certain price elements:

- a) Charging of royalties and license 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.



8. Proposal Template Part 3 - Financial Part



(cont.)

3.1 PRICE OUOTATION FOR THE CONTEMPLATED CONTRACT:

Remarks concerning certain price elements:

- b) Quotations free of taxes and custom duties:

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





8. 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**.

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 EXCEMPTION CERTIFICATE as they do not stand in a direct contractual relationship with ESA; they are paid by the Prime.



8. 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 <u>financial envelopes given per category in the ITT are **LIMITS** they are **NOT** goals. Price must be fair and reasonable for the scope of work described in the proposal.</u>



8. Proposal Template Part 3 - Financial Part



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 EMITS at http://emits.sso.esa.int/emits/owa/emits.main under Reference Documentation / Administrative Documents / PSS Forms / Issue 5. Each of the PSS forms must be signed.

The 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").

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

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



8. Proposal Template **Part 3 – Financial Part: PSS costing forms**



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

















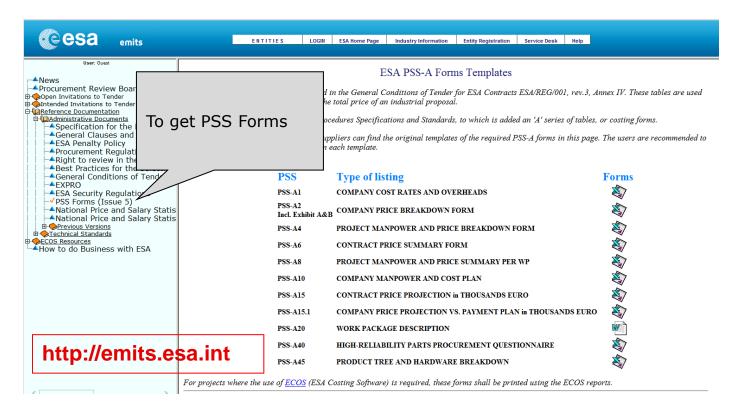






8. Proposal Template Part 3 - Financial Part: PSS costing forms





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8. Proposal Template Part 3 – Financial Part: PSS costing forms



Hints and tips: PSS FORMS

Why do we use PSS Forms?

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

Check carefully the Instruction Page

BE AWARE: We evaluate into details the cost. We will challenge the number of hours and the cost allocation to verify that the cost are true and credible.





8. Proposal Template Part 3 - Financial Part: PSS costing forms



Hints and tips: PSS FORMS

PSS A1

- ✓ 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.

8. Proposal Template Part 3 – Financial Part: PSS costing forms



Hints and tips: PSS FORMS

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.





8. Proposal Template Part 3 – Financial Part: PSS costing forms



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?

OMPANY	Y PRICE BREAKDOWN F	ORM		Form N	lo. PSS A2	Page no.	of	f	Issue 5
RFQ/ITT	No.:				COMPANY				
Proposal	I/Tender No.:				Name:				
Type of F	Price:				Country:				
Economi	ic Condition:								
National	Currency (NC):	XYZ			Representative				
Exchang	je Rate (X):	1 EURO =	1.00000	XYZ	Name and Title:				
Contrac	ctual Phase:			•	Signature:				
Project/v	Nork Package(s):								
								TOTAL (NC) XYZ	(EURO)
L/	ABOUR							'	
irect Labo ode / L	our cost centres or categor Descripion	ries	No. of FTE (calculated) U = W / V	Sold Hours per ManYear V	Manpower Effort No. of Hours W	Gross Hourly Rate in NC			
Pr	oject Manager		0.1	1,750	175	100.00		17,500.00	17,50
W	aiter staff		2.0	1,750	3,500	20.00		70,000.00	70,0
Co	offee buyer		0.0	1,750	80	75.00		6,000.00	6,0
								0.00	
								0.00	
								0.00	
								0.00	
								0.00	
								0.00	
								0.00	
			<u> </u>		7			0.00	
1 To	otal Direct Labour Hours an	d Cost	2.1		3755.0		Α	93,500.00	93,5
IN	ITERNAL SPECIAL FA	CILITIES							
ode	Description			Type of unit	No. of units	Unit rates in NC			
								0.00	
								0.00	



	1	1		- I		1	0.00	0.0
2	Total Internal Special Facilities Cost					В	0.00	0.00
	OTHER DIRECT COST ELEMENTS	Base amounts in NC	+ OH %	OH amounts in NC				
3.1	Raw materials	5,000		0			5,000.00	5,000.0
3.2	Mechanical parts						0.00	0.0
3.3	Semi-finished products						0.00	0.0
3.4	Electrical & electronic components						0.00	0.0
3.5	HIREL parts							
	a) procured by company						0.00	0.0
	b) procured by third party						0.00	0.0
3.6	External Major Products	30,000		0			30,000.00	30,000.0
3.7	External Services	10,000		0			10,000.00	10,000.0
3.8	Transport and Insurances						0.00	0.0
3.9	Travel and Subsistence	5,000		0			5,000.00	5,000.0
3.10	Miscellaneous						0.00	0.0
3	Total Other Direct Cost	50,000.00		0.00		С	50,000.00	50,000.00
4	SUB-TOTAL DIRECT COST				(A+B+C)	D	143,500.00	143,500.00
	GENERAL EXPENSES	Cost items to which	ch % applies	Base Amount in NC	OH %			
5	General & Administration Expenses			93,500	8.0%	E	7,480.00	7,480.0
6	Research & Development Expenses					F	0.00	0.0
7	Other					G	0.00	0.0
8	TOTAL COMPANY COST				D+(E+F+G)	н	150,980.00	150,980.00
		Cost items to which	ch % applies	Base Amount in NC	%			
9	PROFIT			0.0	0.0%	1	0.00	0.00
10	COST WITHOUT ADDITIONAL CHAR	GE				J		0.0
11	FINANCIAL PROVISION FOR ESCAL	ATION				K		0.0
12	TOTAL COMPANY PRICE	(H+I+J+K)	L	150,980.00	150,980.00			
13	TOTAL SUB-CONTRACTOR PRICE		M		0.0			
14	REDUCTION for COMPANY CONTRIB	BUTION		N	980.00	980.0		
	+							

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%?</p>

Total – less than max price?

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Hints and tips: PSS A2 Exhibit A - Key review points by Technical Experts

COMPANY PR	ICE BREAKDOWN FORM	EXHIBI	T "A" TO PSS A2			Issue
			Page No.		No. of Pages	
RFQ/ITT No.:			COMPANY NAME:			
Proposal/Tende	er No.:		Name and Title:			
National Curren	icy:					
Contractual Pha	ise		Signature			
Applicable	to PSS-A2 elements: 3.1-3.4 - 3.6 - 3.7 - 3.10 - 10					
Project / W	/ork Packages					
•	-					
Cost El. No.	ITEM DESCRIPTION	Type of Price	Purchase	Purchase Amount	Exchange rate	Amount in NC
			Currency		1 NC =	
3.1	Coffee beans		Euro	3,000.00	1.00000	3,000.0
3.1	Tea leaves		Euro	2,000.00	1.00000	2,000.0
3.6	Coffee brewer 2000		Euro	20,000.00	1.00000	20,000.0
3.7	2 year service agreement for Coffee Brewer 2000		Euro	10,000.00	1.00000	10,000.0
	+	+	+			

Bought in items

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

External Services

- Clearly described?
- Clearly needed?
- Value for money?





































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

TRAVEL PLAN AND COST	DETAIL			EXHIBIT "B" TO PSS	-A2								Issue
RFQ/ITT No.:									Project:				
Proposal/Tender No.:									Company:				
Contractual Phase													
Economic Condition:								T	ype of Price:				
National Currency (NC)*:							Exch	ange	(X): 1 EURO =	1		0	
WP Reference Number	WP Title	Purpose/Event	Departure	Destination	Nr. of Trips	Avg.People per	Travel Cost	B/E	Avg.Days per	Subsistence Cost	A/R	Total Cost	Total Cost
						Trip	p.p. (NC)		Trip	p.d. (NC)		(NC)	(EURO)
WP 2	Coffee procurement	Inspection and audit	AMS	Kenya	1	1	1,900	E	10	200	Α	3,900	3,90
WP 4	Management	Final Presentation	AMS	Noordwijk	1	2	50	E	2	250	Α	1,100	1,10
												- 0	
						7				1	ľ	0	
						1						0	
												0	
												0	

Meetings:

- Matching meeting plan?
 Matched to scope of
- All clearly justified?

People:

Matched to scope of meeting?

Travels:

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

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Hints and tips: PSS FORMS

PSSA8

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





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 at key part)?
- Hours spent on management reasonable?

WP Title		WP1	WP2	WP3	WP4								
WP Number		Shop set up	Coffee	Equipment setup	Management								
			procurement		_								Total WBS-Le
Labour Hours per category	Hours												1
Project manager	#				175								17
Waiter staff	#	2,000		1,500	173								3,50
Coffee buyer	#	2,000	80										5,51
Conce bayer	#												·
	#												
	#												
	#												
	#												
Total Labour Hours	#	2,000	80	1,500	175								3,75
Total Labour Cost	NC	40,000.00	6,000.00	30,000.00	17,500.00								
2. Internal Special Facilities Cost	NC												
·													
3.1-3.4 Material Costs	NC	5,000.00											
3.5 High Rel Parts Costs	NC												
3.6 External Major Products Cost 3.7 External Services Cost	NC NC			30,000.00 10,000.00									
3.8 Transport/Insurance Cost	NC NC			10,000.00	L								
3.9 Travel and Subsistence Cost	NC		3,900.00		1,100.00								
3.10 Miscellaneous Cost	NC		5,000.00		1,100.00								
Total Other Costs (sum of above 3.x)	NC	5,000.00	3,900.00	40,000.00	1,100.00								50,000.
				,		1				1	_		
Sub-Total Direct Cost	NC												
5 7. General expenses	NC												
8. Sub-Total Company Cost	NC												
9. Profit Fee	NC	3,200.00	480.00	2,400.00	1,400.00								
10. Cost without additional charge	NC												
11. Financial Provision for escalation	NC						<u> </u>						
12. Total Company Price	NC										1		
12. Total Company I fice	EURO						+						
	23110		1			l			-				
13. Total Sub-Contractors Price	NC												
	EURO												
						•		•	•	•	•		
14. Reduction for Company contribution	NC				-980.00								
15. Total Price for ESA	NC	48,200.00	10,380.00	72,400.00	19,020.00						1		150,000.0
	ELIDO	48 200 00					1	l	1	1	1	 	,000.0

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8. 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.

8. Proposal Template Part 3 - Financial Part



3.2.2 Milestone Payment Plan

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			



























8. 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. The amount of the advance payment should be offset by the same amount.

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

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8. Proposal Template Part 3 – Financial Part



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

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















8. 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. 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.

























8. Proposal Template Part 3 - Financial Part



3.3 COST TO COMPLETION

[A cost to completion is not required for Education, Awareness or Preparatory Activities. A cost to completion would be positive for all other activities with a completion TRL of 6 or less. This information is provided for information only and is not binding in any way for either party (ESA or Tenderer)]

3.3.1 <u>Further steps/ Activities needed to complete the development</u>
[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]

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





8. Proposal Template Part 4 - Contract Conditions Part



4.1 INTELLECTUAL PROPERTY RIGHTS

4.1.1. <u>Background Intellectual Property</u>

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

[OPTION1]

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

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

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

[OPTION2]

In line with Article 6.3 of the Draft Contract, no Background Intellectual Property and no Third Party Intellectual Property Rights will be used to achieve the objectives of the work.

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8. Proposal Template Part 4 - Contract Conditions Part



4.1 INTELLECTUAL PROPERTY RIGHTS

4.1.2 Foreground Intellectual Property

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

4.1.3 Ownership of Foreground Intellectual Property (Article 6.2.1 of the draft Contract)

[SELECT AND PROVIDE DETAILS OF ONE OF THE TWO OPTIONS]

[OPTION 1]

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

[OPTION 2]

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

Please confirm that the Agency shall have an irrevocable right to use the information used in that application, for its own requirements on the terms set out in Article 6.2.2 of the draft Contract.

8. Proposal Template **Part 4 – Contract Conditions Part**



Hints and tips: Intellectual Property Rights

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





























8. Proposal Template **Part 4 – Contract Conditions Part**



START

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

> Original Recipe protein rich but tastes awful

BACKGROUND IPR

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



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

Fourth Call for Outline Proposals under PECS in Slovakia | 08/11/2018 | Slide 123



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

FOREGROUND IPR

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8. Proposal Template Part 4 - Contract Conditions Part



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 <u>Import and Export Licences applicable to this Activity</u> [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 ar	d Deliverable affected	Comment
	Country of Origin		

8. Proposal Template **Part 4 – Contract Conditions Part**



(Cont.)

IMPORT AND EXPORT LICENCES 4.2

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 Country of	Type Origin	and	Deliverable affected	Comment

























9. Future PECS Calls Planning



Attention: These are TENTATIVE ONLY!

	4th PECS Call (This Call)	5th PECS Call (Expected)	6th PECS Call (Expected)			
Industry/Academia Briefing	8 November 2018	September 2019	March 2020			
Publication of the Call on EMITS	3 December 2018	October 2019	March 2020			
Proposal Submission Deadline	12 February 2018	December 2019	April 2020			
Recommendation/R egret Letters	29 April 2019	February 2020	July 2020			

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Thank you for your attention!

HoS New, Associate and Cooperating States, IPL-IPS:

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New Member States

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Poland: <u>Stephane.Combes@esa.int</u> / Support: <u>Kay.van.der.Made@esa.int</u>

Estonia: <u>Stephen.Airey@esa.int</u> Hungary: <u>Gertrud.Talvik@esa.int</u>







Questions?































