

Writing proposals for Earth Action (with some specific thoughts on the Open Call)

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ESA
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Team structure

- There is no secret agenda for team structure, number of partners etc. You decide what makes sense with respect to the requirements and tasks and explain to us how what you propose ensures the requirements are adequately addressed. Every partner should be making a clear contribution with clear added value
- There is no secret agenda for the number of MS to be involved – again what makes sense given the scope and objectives of the tender – you choose and justify the choice in the proposal
- There is no need for elements such as advisory committees etc – ESA contracts depend on the industry project manager deciding with the ESA technical officer

Involvement of users

- Appropriate user involvement depends on the tender – there are various possibilities, eg:
 - ESA have already agreed with a set of core users what will be done and they agree to work with whoever wins the ITT – in such cases we often state not to contact these users until the tender is awarded
 - ESA specify the domain to be addressed and industry is required to engage relevant users
 - Some mix of both of the above
- For early stage technical developments, user involvement may not make sense – you decide and justify your choice in the proposal

- Statements of work normally contain background information explaining the context of the ITT and requirements to be addressed
- It is good practice to include a review discussion to show you understand the background and you are building on relevant expertise
- In some cases bidders also identify additional or complementary requirements to be addressed based on their own experience. If you do this, make sure you back this up with evidence

- The statement of work includes a description of the tasks to be executed and the deliverables to be provided
- **Do not just cut and paste these into your proposal template!!!! (VERY VERY IMPORTANT)**
- Instead, proposals should contain an overview of the approach to the tasks and the overall technical solution envisaged and then detail on how the specified tasks will be executed....It is not enough to say “yes we will do all that stuff you ask for”

- It is very important you identify the problems to be addressed in your proposed development and elaborate how you are going to address these.
- This is a fundamental part of your proposal and we place considerable emphasis on this

Many companies spend most of their time at ESA hosted workshops meeting with ESA staff to discuss ITTs of interest – this is fine as long as the ITT is not open.

Also at ESA events outside of ESA premises (eg LPS) – again this is fine if the ITT is not open

It is the responsibility of the relevant ESA staff to ensure industry has sufficient information to prepare their proposals

Participating to the events that shape our workplan also ensures CY industry (or national) priorities are taken into consideration

What ESA staff cannot do:

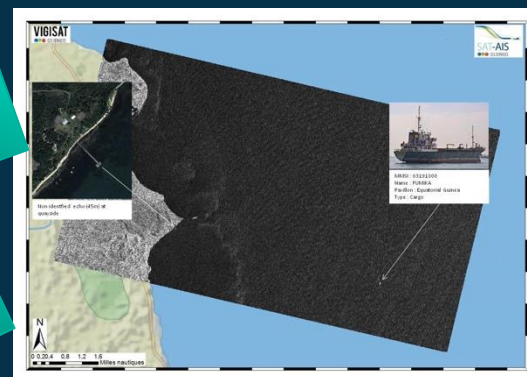
- Give advice on potential partners, content for specific proposals etc
- Send documents associated with tenders outside of the formal tendering process
- Give review comments on draft proposals
- Put you in contact with specific user entities associated with an upcoming or open ITT

Open Call – specific considerations

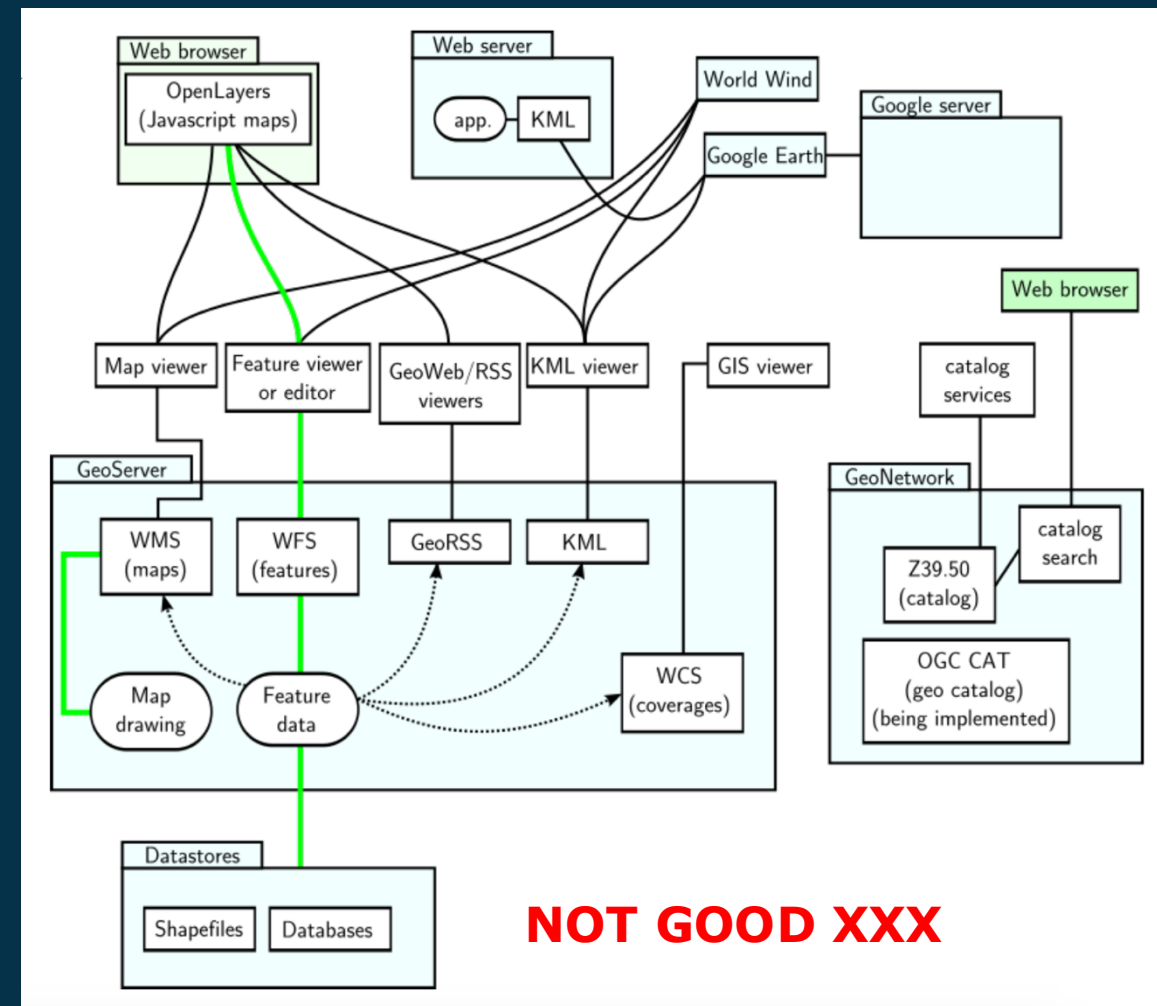
Is your proposed development really a small, “quick and dirty” verification that a new methodology could work and could be the basis for significant follow-on activity (either inside or outside of ESA)?

Things that may not be in scope:

- Theoretical assessments (the scope is activities leading to short term EO data exploitation)
- Commercial demonstrations with new customers (InCubed, BASS etc may be better suited to this)
- A larger scale development where the ESA funds cover only a small part of the overall development costs (POC is for trying out new stuff that then leads to larger scale activity)
- Development of applications or science based exclusively on non satellite data
- A development where the core issues do not relate to EO data



GOOD ✓ ✓ ✓



Submitting a proposal – just complete a template

- What do you want to develop & what for?
- What are the technical steps to be executed?
- What will the development do?
- What are the target requirements to meet?
- What is the innovation you propose?
- What are the technical problems and what will you do about them?
- Why should we do this activity?

3) SECTION 3: IMPLEMENTATION AND MANAGEMENT (3,25 pages)

3.1 Scientific/technical implementation steps (750 words)

3.2 Work Breakdown Structure (“WBS”) (only for the regular innovative activities) (250 words)

3.3 Work Package Description (“WPD”) (only for the regular innovative activities) (250 words per WP)

3.4 Allocation effort of the key personnel of the proposed activity (250 words)

Name Key Person	Organization	Project Role	Key expertise	Effort dedicated to the Project (Total working hours and percentage)

3.5 Gantt chart (250 words)

- [Insert a Gantt chart schedule for the proposed activity, covering from the start of the*

Note that there is no need for a letter of support from your national delegation

General issues to take into account

Very general issues

- Your proposal is evaluated by technical experts, not venture capitalists or technology journalists
- We can only assess what is written in the proposal – we are not allowed to bring in external information into an assessment
- There is no constraint on the number of proposals you can submit

More specific considerations

- It is very important to demonstrate the innovative content of the proposal and your capacity to address the underlying technical issues, risks etc and that risk mitigation actions are credible, feasible and appropriate
- Do **not** use ChatGPT to draft the proposal (see next slide and think about the implications!!)
- Keep the scope focussed on the fundamental technical issues to be addressed – everything else can be addressed later under other activities

Why chatGPT should not be used to write proposals (as prepared by chatGPT)

In Shakesperian format

O, fair readers, lend me thine ears,
As I speak of a tool that doth stir fears.
ChatGPT, though wondrous in its might,
Should not compose proposals in the night.

For in the realm of technical lore,
Clarity and precision doth we implore.
And ChatGPT, with its flowery tongue,
May muddle the message, from where it doth belong.

Audience, too, must we consider,
For clarity maketh the message clearer.
Experts and decision-makers, they seek
Information plain, not language oblique.

Thus, dear friends, I doth proclaim,
ChatGPT's power, though great, hath a bane.
In writing technical proposals, we must be wise,
Choosing language that doth open the eyes.

In Biblical format

And lo, in the land of technology, there arose a tool known as ChatGPT, which boasted great powers of language generation. Yet, the wise ones of the land saw that this tool was not fit for the task of crafting technical proposals. For in the scrolls of wisdom, it is written that clarity and precision are of utmost importance in matters of technical discourse. The language of ChatGPT, though vast and varied, may lack the precision required to convey complex technical details with accuracy.

Moreover, in the kingdom of business and professional communication, a certain level of professionalism and formality is mandated. The whimsical and unpredictable nature of ChatGPT's output may not align with the tone and style required for technical proposals that command respect and authority. Thus, the sages advised caution in relying on ChatGPT for the composition of technical proposals, urging the sellers of wares and services to choose wisely and with discernment their tools, so that the message may be clear, the details precise, and the communication effective in the eyes of all who behold them.

As a Limerick

When using ChatGPT for proposals, take care
Its language may not be quite fair.
In the realm of technicality,
A necessity is clarity
So choose your words with utmost flair

How the proposal hangs together

Proposal should address an innovative development



A truly innovative proposal will contain inherent technical issues that will have to be resolved

Proposal should contain a clear list of these technical problems to be addressed and what is the proposed approach for addressing them



Description of technical steps should demonstrate credible developments to address the identified problems

Background and Experience

Entity experience with the relevant EO methods, data and the target application domain, demonstrated links with relevant stakeholders, Key personnel experience and expertise, access to the required facilities (data, processing, tools etc)

Understanding of requirements and discussion of problem areas

How do the stated requirements translate into targets and performance thresholds, what do they represent with respect to current SOTA, what are the issues associated with realizing these targets, how will these issues be addressed within the proposed programme of work,

Credibility of technical solution and proposed programme of work

Is the proposed technical solution clear, is it consistent or an advance over current SOTA, what trade-offs in terms of technical solution implementation are considered, do the technical development steps credibly address the stated requirements, is the approach within each development step clear and credible, is the overall structuring of the work well matched to effectively addressing the requirements and problem areas

Management and Costing

Does WBS have clearly delineated WPs, deliverables, responsibility and interface points, are the resources per WP consistent with scope and objectives, is schedule credible and consistent with stated objectives, are external procurements, travel etc consistent with scope and objectives to be achieved

Typical issues on the starting point

Lack of explicit technical content in the proposal

Proposal content

- we have a user
- we want to develop a prototype application



WP1
User Requirement
Collection

WP2
Application/Service
capability
specification

WP3
Application/Service
capability
development

Does not enable a technical assessment of the proposal

Proposal content

- we want to develop a prototype application
- We will use a ML based processing method



WP N
Literature Review
and identify
model approaches

WP N+1
Implement ML
model

Does not enable a technical assessment of training data, validation, method etc

- AI is not magic and does not enable magic to happen or laws of physics to be ignored
- Models need training data and training
- Are you using the best model for generating the required information? If so demonstrate this in the proposal

- Do not just list the steps
- Make sure the critical activities are described to a level of detail that lets us verify that this is a credible approach

- What test areas are to be used for verification and why? To what extent will they enable a sufficiently comprehensive verification
- How is the process for generating derived information to be validated? What validation data are to be used and how is their adequacy to be assessed?

- Are the datasets you plan to use fit for purpose? If s, demonstrate this to the proposal reviewers
- Are detection/measurement reliability and update times adequate for detecting changes of interest?
- If you are using costly commercial data in the initial project, is this viable as a long term solution?

Moving Forwards – talk to us (and come to the events!)

Future EO creates significant opportunity for private (& public) sector

ESA mandate is to build/strengthen industrial competitiveness in Member States – to achieve this we need:

- Regular interaction with companies on plans, strategies, opportunities, issues etc
- Regular interaction with national delegations on strategic priorities, constraints, issues, opportunities,
- Regular interaction with stakeholders in sectors connected to space (eg users of space based applications, industrial operators in complementary technology sectors etc)

We cannot do this just sitting in our offices.....

We can discuss sensitive information - eg:

- Longer lead time development ideas
- Innovative new data processing & management approaches
- Strategies for exploiting upcoming large national/regional/EU investments in addressable sectors etc...

If you don't tell us what you are looking for, you might not find it...



Not ESA!!

Different types of stakeholder involvement



Ministry of Stuff
Agency for Useful Things

To whom it may concern:
Proposal from Campbell Symptomatics

Dear Sir

My name is Bob, I am head of strategic contemplation and I support the proposal named in the title of this letter

Best regards



Bob



ਬਣੀਆਂ ਚੀਜ਼ਾਂ ਦਾ ਮੰਤਰਾਲਾ
ਅਸੰਭਵ ਸੰਕਲਪਾਂ ਦਾ ਵਭਾਗ

To whom it may concern:
Proposal from Campbell Symptomatics

Dear Sir

The Ministry of Generally Useful Concepts has been in discussion with Campbell Symptomatics since 2019 with respect to implementation of a national jam manufacturing programme. We are extremely interested in the potential of EO derived information to optimize fruit plant planning and yield estimation as well as support the required logistics management to ensure harvest, production and export are effectively implemented. We will provide all data collected within a set of test sites to support training of the envisaged AI models and validation of the overall methodology. In addition, we plan to participate in all review meetings to ensure our priorities are effectively addressed.

Thank you in advance for your consideration
Best regards



Bob
Head of Jam Logistics and Fruit Strategy
Ministry of Generally Useful Concepts



Министерство на измислените неща
Отдел за невероятни концепции

Уважаеми господине
моля, приемете това писмо като индикация за условна подкрепа за предложението, посочено в заглавието. Нашата подкрепа зависи от промяна в правилото за офсайд за волейбол с пълен контакт и получаване на големи количества трамвайно въже от оферента

Моля, имайте предвид, че ако не изберете това предложение, ние ще отвлечем вашия нравояд и ще изпратим всичките ни свекърви да живеят при вас

благодаря ви за разглеждането на това писмо

искрено Ваш



български боб

Better than nothing
but not much help

Demonstrates reason for engagement
and commitment to proposed activity

Not much help (at least
without a translation)

And Finally.....

Please make sure of the following (at least twice):

- The cover letter contains a validity period, a firm fixed price (which you state is the firm fixed price) and a signature of the relevant person in your organization. Also proposed contract duration and domain under which proposal is submitted
- Allocations to each partner and associated geographic return are clear
- All relevant codes are included
- The proposal contains a firm fixed price
- All PSS forms are signed by the relevant person in each partner entity

Contractual conditions - Our job is to build industrial competitiveness (your competitiveness) and not swindle you out of IPR. Please make sure your lawyers understand this before letting them loose on objecting to contractual conditions etc.

Please remember to press the submit button on ESA-STAR otherwise we cannot access your proposal



Earth Action – let's do it

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