Space Connection Assessment – the "We Need More Space" check

European Space Agency Business Incubation Centres (ESA BICs)

Introduction

To be accepted for incubation in an ESA BIC, the applicant must present a business idea with a valid *space connection*. This document provides a guideline to help all parties involved to assess the space connection of your business idea.

The use of the document is not mandatory, but recommended especially in cases where the space connection is not clear beforehand and needs elaboration or justification.

The principle for assessment is based on the main characteristics of a valid space connection. The principle should work for the majority of business ideas expected to be proposed to an ESA BIC. However, as innovations tend to lead to new types of technologies and applications that fall outside the range of commonly proposed ideas, it may happen that more information is needed at a later stage.

It may also happen that a space connection found valid now may turn out to be invalid at a later stage, if the initial assumptions don't hold anymore.

For the applicant to the ESA BIC

Please contact your ESA BIC to discuss the space connection in advance of submitting your application.

Applications for the ESA BIC are typically considered with the following types of space connections (please use the check-boxes to indicate in which category your idea falls):

- Downstream – Your idea is about utilising space systems or exploiting space technology in a non-space domain, in one of the following areas:
  - Applications
    - Satellite Navigation
    - Earth Observation
    - Satellite Communication
  - Technology Transfer
    - Hardware
    - Software or Firmware
    - Knowledge, processes
    - Intellectual Property Rights (IPR)

- Upstream – Your idea is about exploiting new technology in the space domain, or you intend to be active as a supplier to the space sector, in one of the following areas (including systems, sub-systems, components, and services):
  - Launchers
  - Satellites
  - Ground systems
  - Human spaceflight
  - Other

If the space connection of your business idea is in one of the above areas, please continue the initial assessment below. Otherwise please contact your ESA BIC for clarification and guidance.

Assessment of the Space Connection

Below follow the main criteria against which the space connection will be evaluated. To do the initial assessment please proceed as follows:

- First, go to the relevant section "Downstream" or "Upstream".
- Read the text carefully and answer the questions clearly and concisely. Note that further details of your space connection should be described in the application. This document should *just contain the key arguments*.
- When finished, send the initial assessment to the ESA BIC. Preferably, this should be done well in advance of submitting the application such that guidance can be given by the ESA BIC, if needed.
- Normally the ESA BIC should be able to advise whether the space connection is sufficient. Note that the ESA BIC Tender Evaluation Board still may reject an application if it deems the space connection to be insufficient.

Downstream: Application/Technology Transfer

Criterion 1. "We *need* space"

Firstly, the reviewers of your application need to understand that "space" is actually needed. In other words, they must be convinced that

- Space provides a feasible solution to solve the problem, and
- Space offer a technical, cost, or other advantage compared to other non-space or existing solutions.

When analysing the need for space, you must understand the requirements for the product/service that you plan to bring to the market and to what degree both your own and any existing alternatives meet these requirements.

Please provide a very brief explanation to the reviewers of your application why space is needed:

<We need space because …>

Criterion 2. We need *more* …

Furthermore, for the ESA BIC to support your business idea, the space-based solution must be more than what is obvious or already commonly in use. Generally, we expect that *some innovative step is taken*, for example that data is being analysed or combined with other sources to generate new information, or that software or hardware is being integrated to provide a new technical solution.

There are some space connections that are *normally not considered sufficient*, for example:

- If the business idea builds on "re-packaging" of space-related data, software, or hardware, we consider the space connection too weak.
- In case the business idea is related to re-using a technology/product/service that has been commercialised by another ESA BIC start-up, this will not be considered a sufficient space connection on its own.
- Likewise, if the proposed technology transfer from space has already taken place in the non-space domain that is targeted, additional arguments would be needed.
- We will normally not support the development of "yet another" Location Based Service for mobile phones.
- We will normally not support development of applications using Earth Observation data merely as background maps or similarly, with no or only little additional processing taking place.

Cases where the technical solution is standard but the novelty is rather in the business model, or where a market segment is addressed in which space is still not used in a way that may be standard elsewhere, may still be acceptable.

Please describe very briefly for the reviewers of your application why your solution is "more" than the state-of-art and what the specific innovation is.

<We do more …>

Criterion 3. Space is *available*

In order for the ESA BIC to be able to support your start-up, you also need to make sure that the space you need is available in practice. Data, services or products are often commercially available or even available for free, however – especially for IPR including technologies – it happens that licenses need to be negotiated.

In some cases, the price for using space technology or data can be a limiting factor for your business idea. The price is not assessed as part of the space connection, but instead when evaluating your business case. However, you are advised to already now consider whether the price could substantially impact your business. For example, while you may use Earth Observation data provided by any party, raw or in a processed form, the price difference may be significant.

In any case, incubation may not start before access to the data, services, IPR or technology you need is granted.

If you intend to use an ESA patent or other IPR/technology with space origin, you need to investigate and confirm in advance that the IPR/technology provides advantages with respect to the state-of-art. For ESA patents, please contact the ESA patent office at patent@esa.int who will provide assistance. A positive statement from the ESA patent office is required with the proposal if you plan to use an ESA patent, although it is not sufficient on its own for your company to be accepted to the incubation programme.

Please indicate the status of availability:

- Available for free
- Commercially available
  - Price is known
  - Price is unknown or needs to be negotiated
- Availability is unknown or needs to be negotiated
- In case of IPR including technologies, the owner has been contacted and a positive statement has been received regarding access to IPR

Please describe very briefly for the reviewers of your application the status of availability:

<Space is available …>

Upstream

For upstream business ideas the space connection is normally obvious. In the proposal to the ESA BIC you will have to explain how the business idea can be realized. There are however situations when it is not immediately clear that a proposed technology, service, etc. would be useful in a space context, for example:

- New types of systems, sub-systems or components that provide new functions (i.e. not merely replacing existing technology with something better),
- Technology and services intended to be used onboard the International Space Station (ISS) or related to other human spaceflight activities.

In such situations we *request that a Letter of Interest from a potential customer or user* is provided together with the proposal. This letter should:

- Confirm the usefulness of the proposed technology, service, etc., in a space context,
- Declare the customer's/user's intention to participate in trials during the incubation,
- Preferably contain a statement of becoming a customer if the development of the idea is successful.
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If in doubt, please contact your ESA BIC to understand whether a Letter of Interest is advisable. (Note that such a letter is *always* useful and that it is never too early to engage potential customers!)

In case you have been in contact with experts at ESA to discuss your idea, please provide references (name, e-mail, and telephone number) in your proposal.

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Document change record

V1.0	23/06/2020	First version for release
V1.1	30/09/2022	Added request to inform ESA when previous contact has been made