



European Space Agency

Welcome to the Webinar!

Before we start...

- Please keep your microphones muted during the webinar and make sure your webcam is switched off.
- You can use the conversation function anytime to submit your questions. They will be addressed during the Q&A at the end of the webinar



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Agenda

ESA Welcome and **Introduction**

About ESA's **Circular Economy** Competition

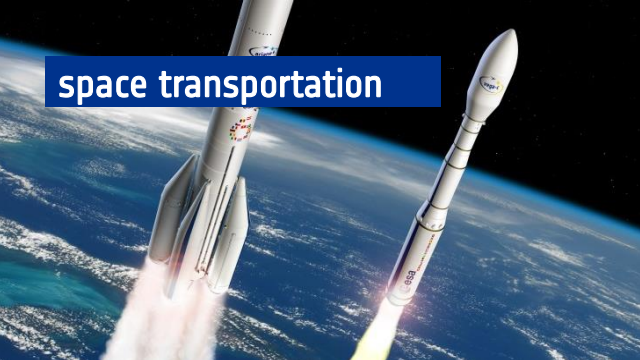
Circular Economy and **Space**

How to Apply to the *Circular Economy* Competition

Q&A Session



space transportation



science



human spaceflight



earth observation



telecommunications
and applications



navigation



exploration

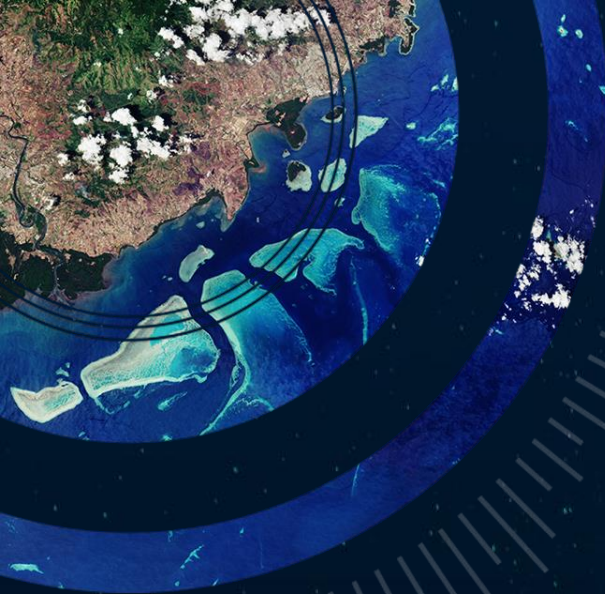


operations



technology





Supporting the Development of
Services on Earth that Involve Space

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ESA SPACE SOLUTIONS



Zero-equity funding (from
€50k to €2M+ per activity)



A personalised ESA
consultant



Technical support and
commercial guidance



Tailored project
management support



Access to our international
network of ESA and partners



Access to our network
of investors



Credibility of the
ESA brand



A top-down view of various reusable items scattered on a teal background. The items include several glass jars and bottles of different shapes and sizes, some with metal lids, some with cork stoppers, and some with red and white checkered fabric covers. There are also several cloth bags, including a white drawstring bag, a beige drawstring bag, and a beige mesh bag. A wooden toothbrush is also visible.

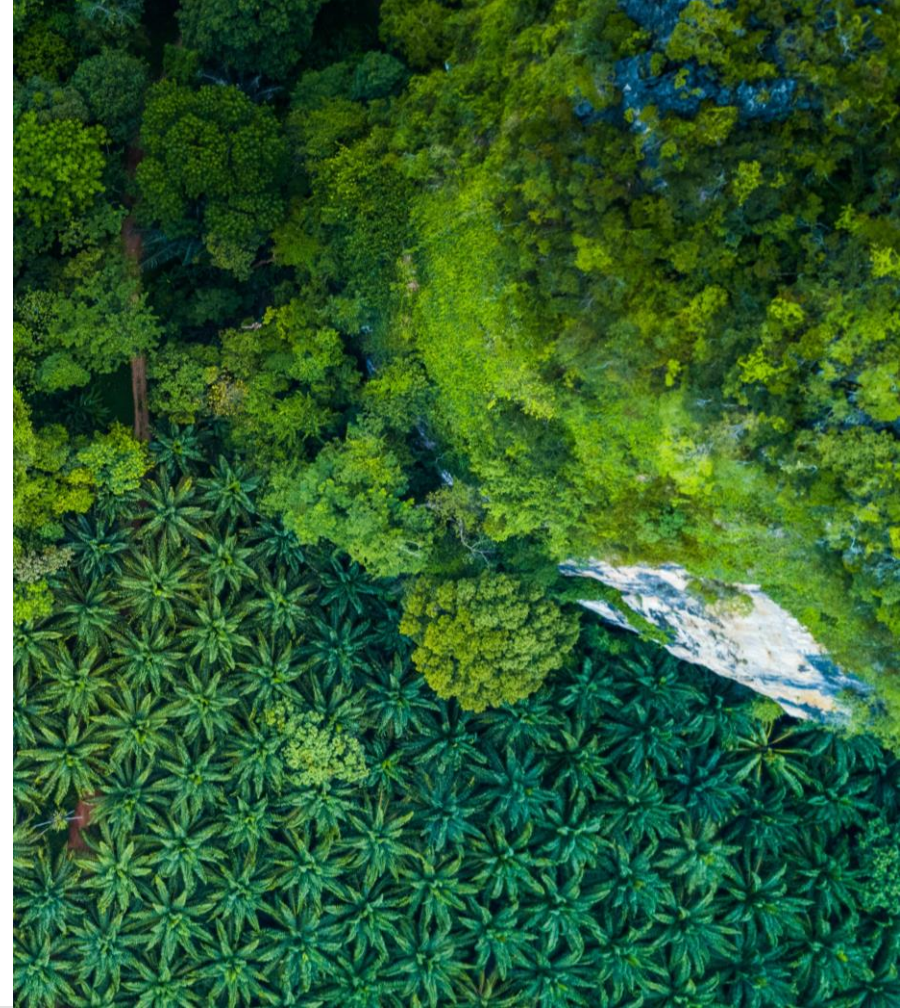
Circular Economy ESA's Kick-Start Competition

Circular Economy: An Introduction

Most organisations today operate in a linear way. This model operates as though there are infinite resources and it generates a lot of waste.

A **circular economy**, on the other hand, treats resources as though they are finite and is based on a make, use and return model. The circular model is based on three principles:

- Design out waste and pollution
- Keep products and materials in use
- Regenerate natural systems



Circular Economy: Kick-Start

Since the topic of the “Circular Economy” is so vast, this Kick-Start has been split into four competitions:

	<u>Opening Date</u>	<u>Closing Date</u>
1. Circular Food & Drinks	03 May 2021	18 June 2021
2. Circular Fashion and Textiles	03 May 2021	18 June 2021
3. Circular Urban Life	21 June 2021	06 August 2021
4. Circular Waste Systems	21 June 2021	06 August 2021

If you are interested in applying please decide which topic your idea falls under and submit a proposal between the opening and closing date.



Circular Economy: About the Kick-Start

Winners of the competition will run a **6 month study**, called a Kick-Start.

During the Kick-Start teams will:

1. Engage with **users** and **potential customers** of the proposed service
2. Assess the **technical** feasibility of the service
3. Develop the **business model** and plan

ESA will provide funding of 75% for a maximum of €60K to each winning team.

Visit: <https://business.esa.int/funding/invitation-to-tender/circular-economy>



Part 3: Circular Urban Life

Circular cities can bring huge benefits, including reduced congestion, less waste and improved air quality.



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Part 3: Circular Urban Life

What kind of ideas would we like to see submitted?

- Use of mapping, digital twinning and AI to determine the optimum design and layout of cities in order to help with resource management, nutrient flows, and reverse logistics. These make the return, sorting and reuse of products possible.
- Use of digitally enabled technology solutions to enable/ enhance:

A collaborative economy – the creation of decentralised networks and marketplaces to unlock the value of underused assets, like Etsy or eBay.

A sharing economy – the sharing of the use of assets that have untapped or unused capacity, like Airbnb.

Collaborative consumption – the reinvention of traditional market behaviours like renting, lending and swapping through the power of digital technology, for example in a model like Zipcar or bike sharing schemes.

On-demand economy – models that directly match customer needs with providers to deliver goods and services, like Uber.

These all play a role in extending the amount of time a product is in use.



Part 4: Circular Waste Systems

The circular economy aims to convert waste into income streams and minimise waste disposal where possible. If disposal is unavoidable, it must be adequately controlled to be safe for human health and the environment.



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We would like to see ideas that:

- ## Your ideas could:

- Use mapping and tracking to design household waste collection systems so that recycling is maximised.
- Use technologies and innovative machinery to separate organic materials, and recover valuable nutrients or generate energy from waste.
- Use IoT to enable product elements to share information about their location, functionality and working condition through sensors.
- Trace products from manufacture to disassembly.

European Space Agency



The Value of Space



Earth Observation

- Satellite Earth Observation enables the monitoring of natural resources like soil and water.
- It can provide key data for monitoring and forecasting air quality and CO2 emissions.
- It can help to detect precise changes on land and optimise water resources.
- Satellite imagery can provide maps required for traffic management and logistics, support land use analysis and urban planning, and improve infrastructure planning and management.



Satellite Navigation

- Satellite Navigation, Positioning and Timing enables accurate tracking and tracing of goods along the supply chain, helping to improve logistics.
- It is key to optimising routes and operating traffic management systems.
- Global Navigations Satellite Systems (GNSS) enables geo-location of objects, goods and in-situ measurements.



Satellite Communications

- Satellite Communications enable communications between central hubs and remote locations when no terrestrial network is available. This is key to supply chain operations.
- It can also support Internet of Things (IoT)/ Machine-to-Machine Communication (M2M), by connecting networks of sensors used to monitor equipment.

Who Can Apply?

- To be eligible for funding, your team must be based in one of the following countries:
Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Spain, or Sweden.
- If you are considering applying, you must inform your **National Delegation to obtain a letter of authorisation** allowing the funding of the proposed activity. Contact details of each National Delegate can be found here: <https://business.esa.int/national-delegations-0>
- However, if your team is based in Luxembourg, Norway, Germany or Ireland you do not have to contact your National Delegate.



How to Apply?

1. Register your team on [esa-star Registration](https://esastar-emr.sso.esa.int) today!
<https://esastar-emr.sso.esa.int>
2. When the Kick-Start opens on 03 May 2021 visit [esa-star Publication](https://esastar-publication.sso.esa.int) and search for this Circular Economy opportunity to download the official competition documents.
<https://esastar-publication.sso.esa.int>
3. Use the official documents to prepare your proposal
4. Reach out to your National Delegate (if applicable) to request a Letter of Authorisation. Contact details of each National Delegate can be found here:
<https://business.esa.int/national-delegations-0>
5. Submit your proposal via [esa-star Tendering](https://esastar.sso.esa.int) before the deadline!
<https://esastar.sso.esa.int>

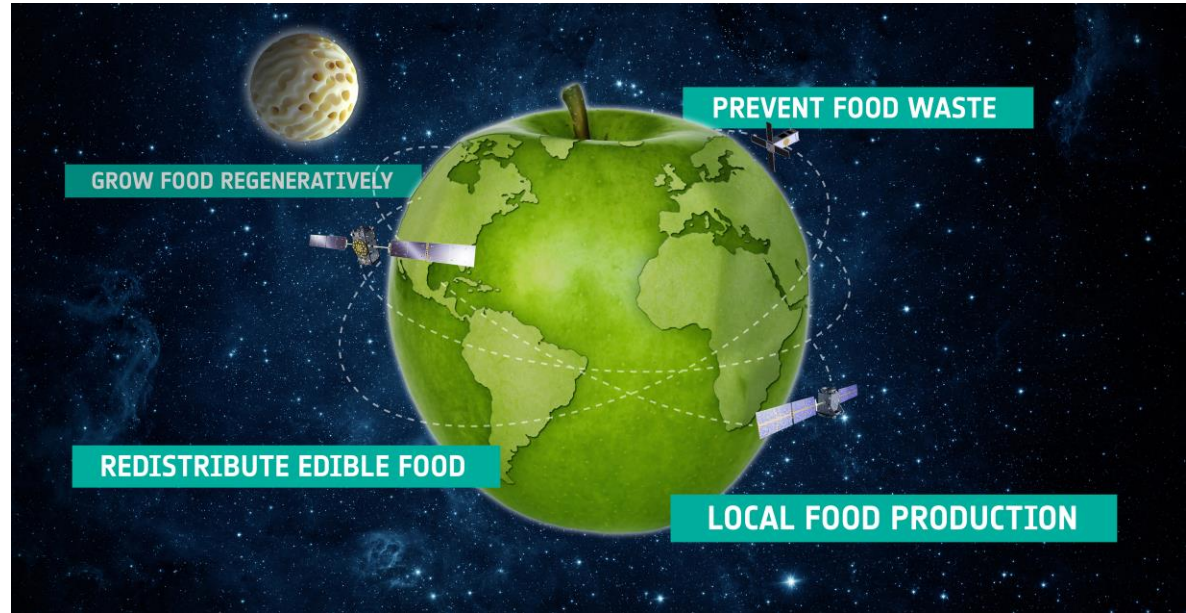
~~Deadline for part 1 and part 2 is 18 June 2021 at 12:00 CEST~~
Deadline for parts 3 and 4 is 06 August 2021 at 12:00 CEST



Proposal Template

Your Proposal should include the following information:

1. Executive Summary (max 1 page)
2. Business Potential (max 5 pages)
3. Technical Concept (max 5 pages)
4. Team and Resources (max 3 pages)
5. Management (max 4 pages)
6. Financials (max 2 pages)



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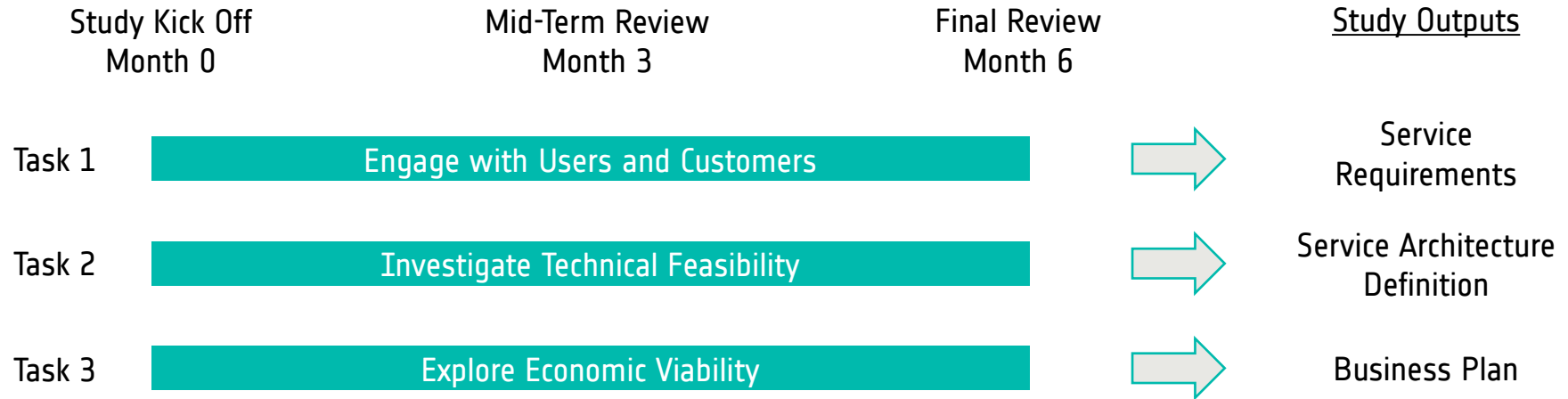
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Kick-Start Study Tasks



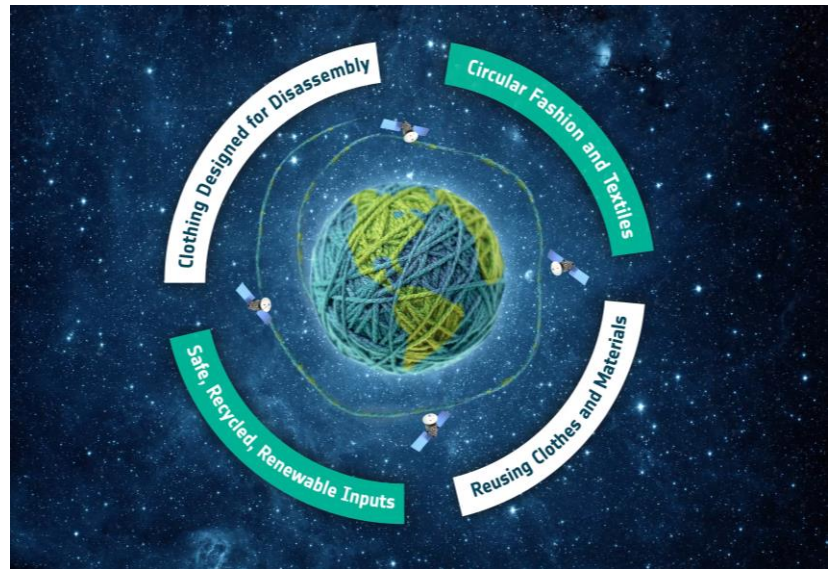
Overall Aim of the Kick-Start



Checklist

Before applying, check that:

1. Your team is proposing a service that could become operational in the near future (1-4 years)
2. Your idea tackles a challenge relating to the Circular Economy
3. Your idea uses satellite data or space technology like satellite communication, Earth observation or navigation.
4. Your team is eligible for funding and has attained a letter of authorisation from the National Delegate (if applicable).
5. There is a market for your service and potential users/customers will be involved in the Kick-Start





Q&A Session

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To learn more about Space and Green Applications download this report:

<https://business.esa.int/sites/default/files/Space%20For%20Green%20Applications.pdf>