



# S3E REVERSE for Solvers

## Guidelines for applicants

For start-ups, scale-ups and SMEs from South European and Associate Countries

v.1

Feb 2024

## Disclaimer

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## Document revision history

Version	Date	Description of change
v.2	09/02/2024	1st version of the Open Call #2 for S3E REVERSE Programme



# Table of contents

<b>1 Introduction</b>	<b>4</b>
<b>2 S3E Overview</b>	<b>5</b>
<b>3 S3E Reverse at a glance</b>	<b>7</b>
3.1 Who is this program for?	7
3.2 How is the programme structured?	8
3.3 Selected Challenges	10
<b>4 Eligibility criteria</b>	<b>12</b>
<b>5 Open call submission</b>	<b>12</b>
5.1 Application form questions	12
5.2 Restrictions	13
5.3 Selection Process	13
5.4 Timeline of the 2nd Open Call for Solvers	14
5.5 Application Platform	14
<b>6 The benefits of participating in S3E Reverse</b>	<b>15</b>
6.1 Why a brokerage program?	15
6.2 What's in it for the Solvers?	15
6.3 How else can Solvers benefit?	16
<b>7 General Information</b>	<b>17</b>
7.1 Means of submission	17
7.2 Language	17
7.3 Data protection	17
<b>8 Information and support</b>	<b>18</b>

# 1 Introduction

S3E – Southern European Entrepreneurship Engine is a project, funded by the European Commission, focused on accelerating **deep tech projects, start-ups, and SMEs** that aim at providing solutions towards a more sustainable society and economy in line with Sustainable Development Goals (SDG)<sup>1</sup>.

The S3E program is built around three tracks of carefully designed services tailored to support researchers, research teams, start-ups, scaleups and SMEs in advancing their technologies, products, processes, or services towards the market. Participants in the programs will be selected through open calls.

The aim of **S3E Reverse** is to create an **Innovation and Technology brokerage program** that connects corporates and public organisations (we use **Challenge Organisations** from now on) that face certain challenges related to the SDGs, with mature, scaling start-ups (we use **Solvers** from now on) that can address these challenges through their products, services, and solutions.

The overall goal is to create new collaborations between organisations with specific needs and SMEs/Start-ups that may be able to address them.

We launched this track in November 2023 by scouting Challenges from corporates and organisations. So far (February 2024) we have selected 6 challenges. The scouting of challenges will continue until March 30, 2024. More challenges will be announced in April 2024.

These challenges are carefully evaluated and organised by S3E experts and are published on our website (<https://south3e.eu/>) to invite mature start-ups, SMEs and scale-ups to submit specific proposals for addressing these challenges through Deep Tech solutions.

**This document provides a full set of information for all start-ups and scale-ups that would like to submit their solutions.**

The **Open Call for Solvers** to address these challenges will stay open until June 30 with 2 cut off dates: 30 April and June 30, 2024 but it will work on a *first come - first served* basis, so if our experts and technology brokers identify a good match between a challenge organisation and a solution provider, they will start the brokerage, bringing together the 2 parties and establishing a business collaboration.

This document provides detailed information regarding the S3E Reverse program and its **2nd Open Call for Solvers**, as well as a general overview of the S3E project.

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<sup>1</sup> <https://sdgs.un.org/goals>

## 2 S3E Overview

The S3E – Southern European Entrepreneurship Engine project mission is to develop an engine of growth that will contribute to improve the connectedness and efficiency of the entrepreneurship ecosystems in southern European countries.

S3E consortium partners are:

- **HiSeedTech** - A not-for-profit association founded by private companies that came together with the purpose of enabling the creation of value from knowledge through technology entrepreneurship and open innovation.
- **EPLO Institute for Sustainable Development** – part of an international organization dedicated to mainstreaming the UN Sustainable Development Goals and the EU Green Deal, providing capacity building, policy work and educational programs.
- **IDI** (International Development Ireland) specialises in practical day-to-day implementation for Government agencies in economies which are growing and changing rapidly
- **Australo** Interinnov Marketing Lab SI - is a marketing agency specializing in growth hacking for research and innovation.

The S3E project is co-funded by the European Union's Horizon 2020 European innovation ecosystems under the grant agreement ID: 101072135 ([see here the Cordis fact sheet](#)).

S3E will focus on accelerating **deep tech projects, start-ups, and SMEs** that, by providing solutions towards a more sustainable society and economy, can impact social development and economic growth in these countries and contribute to the timely achievement of the United Nations Sustainable Development Goals (SDGs), in line with the EU Green Deal, the Recovery and Resilience Facility, and the **Next Generation EU** fund.

S3E will provide skills to researchers and technology transfer officers in science-based entrepreneurship and technology commercialization, supporting growth stage start-ups in business development and in procuring investment, and providing technology brokerage for corporates and scale-up stage start-ups and SMEs.

The program is built around **three tracks** of bespoke services tailored to start-ups' varying levels of maturity (i.e., early, growth, and scaling stages):

- **S3E Start:** For research teams and technology transfer officers, S3E offers a hands-on training program to hone their commercial skills and secure early funding for development.
- **S3E Charge:** For growth start-ups, S3E provides mentoring and networking to develop an investment-ready business plan and facilitate access to non-dilutable and dilutable funding
- **S3E Reverse:** For scaling start-ups / SMEs, S3E will set up an Open Innovation ecosystem to broker, connect and match corporates and public organisations (Challenge Organisations) to more mature scaling start-ups through a challenge-solution duality.

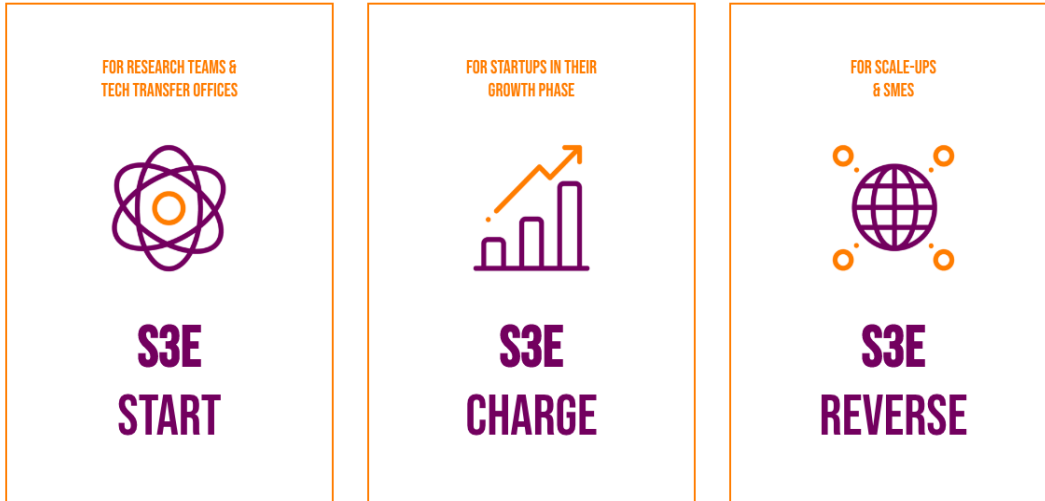


Figure 1. S3E Tracks

## 3 S3E Reverse at a glance

### 3.1 Who is this program for?

**S3E Reverse** is designed to help **start-ups, and SMEs** gain market traction through a pan-European brokerage program that will connect them with corporate and public organisations, with specific challenges and problems, which they can work together to solve.

The program focuses on **challenges** related to any of the 17 **Sustainable Development Goals**:

1. **No Poverty (SDG 1)**: End poverty in all its forms everywhere.
2. **Zero Hunger (SDG 2)**: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. **Good Health and Well-Being (SDG 3)**: Ensure healthy lives and promote well-being for all at all ages.
4. **Quality Education (SDG 4)**: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. **Gender Equality (SDG 5)**: Achieve gender equality and empower all women and girls.
6. **Clean Water and Sanitation (SDG 6)**: Ensure availability and sustainable management of water and sanitation for all.
7. **Affordable and Clean Energy (SDG 7)**: Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. **Decent Work and Economic Growth (SDG 8)**: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
9. **Industry Innovation and Infrastructure (SDG 9)**: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. **Reduced Inequalities (SDG 10)**: Reduce inequality within and among countries.
11. **Sustainable Cities and Communities (SDG 11)**: Make cities and human settlements inclusive, safe, resilient, and sustainable
12. **Responsible consumption and production (SDG 12)**: Ensure sustainable consumption and production patterns
13. **Climate Action (SDG 13)**: Take urgent action to combat climate change and its impacts.
14. **Life below water (SDG 14)**: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. **Life on land (SDG 15)**: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

16. **Peace, justice and strong Institutions (SDG 16):** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. **Partnership for the goals (SDG 17):** Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development.

In the 1<sup>st</sup> Open Call of the project (2023) we selected **15 with the highest degree of potential, impact, innovation, and feasibility.**

In this 2<sup>nd</sup> Open Call we plan to select 15 more, announcing them in 2 rounds (1<sup>st</sup> round in February 2024 and a second round by the end of March 2024). The challenges will be published on the S3E website and can be found in the table of the next page.

### 3.2 How is the programme structured?

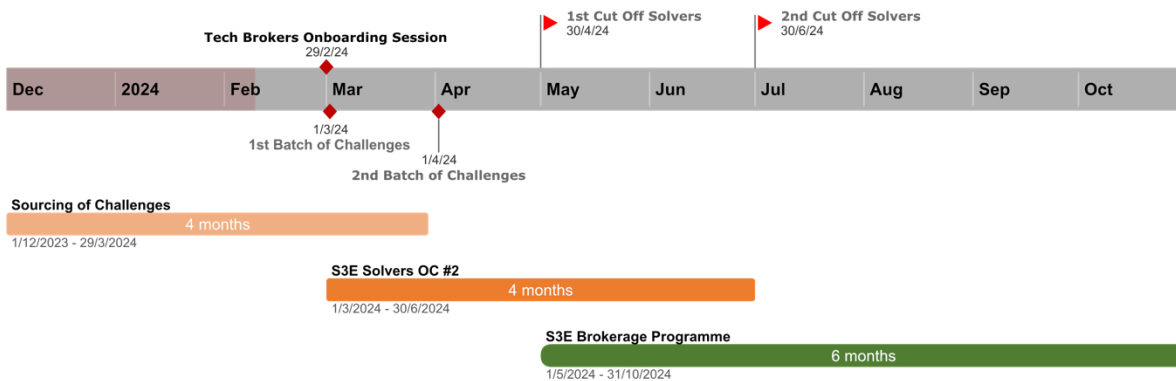
The present call is an **Open Call for solvers** inviting startups and SMEs to submit their ideas, products, and solutions that can address **the specific challenges identified.** Our deep tech brokers will select the most mature and appropriate start-ups or SMEs to **match them with the Challenger Organisations.**

This open call comprises the second step of our **REVERSE Programme,** where SMEs and Scale-ups acting as Solvers, will address and suggest solutions to the challenges and/or problems that the Challenge organisations face in their operations. All these solutions will also help the organisations comply with the UN SDG and create a more sustainable business and ultimately a better world.

Once solvers start to respond to the call, our independent selected experts as **deep tech brokers** will facilitate the matchmaking process between the “challenge organisations” and the “challenge solvers” of this second phase. The selected SMEs and scale-ups (**The Solvers**) will benefit from a **customised innovation support program** designed specifically for them and the coaching and technology brokerage services they will receive.

The programme will operate on a *First come – First Served* for the start-ups/SMEs so when a match is identified the challenge provider organisation, and the solver can start working together immediately.





**Figure 2.** S3E Reverse program timeline

### 3.3 Selected Challenges

Challenge Organisation	Country where the organisation is based	Challenge Title	Challenge Description	Solution Needed / Technology to be Provided	Benefits from Collaboration	SDG GOALS
<b>IDL (Infinitivity Design Labs)</b>	France	Collaborative Intelligence in the Service of Humanity	How can AI be designed to prioritize collaborative intelligence and effectively address human needs? Are there concrete use cases?	Develop solutions demonstrating AI addressing specific human/business needs in various sectors (e.g., healthcare, agriculture). Focus on the collaborative intelligence aspect of AI.	Startups gain experience designing human-centric AI, potential product development, exposure in multiple sectors	3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17
<b>EYATH (Thessaloniki Water &amp; Sewer Company S.A.)</b>	Greece	Route Optimization for Meter Reading Collection	Water meter routes currently lack geographical optimization. Can you reorganize routes for cost and time efficiency, considering walking/vehicle routes and traffic?	Develop a route optimization tool using geographical analysis and network analysis. Consider traffic patterns and existing route parameters.	Company streamlines water meter reading, potentially leading to cost reductions, efficiency gains, and better customer service.	9, 11
<b>Sonae Arauco SA</b>	Portugal	Reduction of Free Melamine Content in Wastewater	Due to melamine's carcinogenic classification, how can free melamine be removed from wastewater from processes like decorative paper impregnation?	Develop a competitive, industrially-applicable, and scalable solution to remove free melamine from wastewater without impacting current production processes.	Company achieves regulatory compliance, improves sustainability through water reuse, potentially avoids costly production changes.	3, 6, 13

<b>University Hospital Cologne</b>	Germany	Improving User Experience for Data Protection and Privacy	How can users have more control over health data usage, enhancing trust in data sharing for research?	Design user-friendly and secure solutions giving citizens/patients greater control over health data; consider routine and research workflows.	Startups create innovative data privacy products, potentially leading to widespread adoption in healthcare.	8, 9
<b>3DSA (General Aviation Applications S.A.)</b>	Greece	Weather Radar Interference	3DSA's weather radars are experiencing interference from wireless communication devices operating on the same frequencies. This disrupts weather monitoring, potentially impacting storm tracking and warnings.	Develop solutions or technologies that mitigate or filter severe interference on weather radar output. The solution should maintain weather radar accuracy in detecting precipitation and storm behavior.	3DSA can provide high-quality weather services, increasing customer satisfaction and potentially preventing damage from severe weather events.	11, 13
<b>I4byDesign Competence Centre</b>	Greece	Integrating collaborative robots into various facets of the food production industry	Address the integration of collaborative robots (cobots) in the food production industry focusing on hygiene, safety, adaptability, human collaboration, quality control, traceability, sustainability, and resource efficiency.	Innovations in cobot technologies that enhance food safety, adapt to diverse environments, facilitate human-robot collaboration, ensure product quality, and promote sustainability.	Advancements in food production efficiency, safety, quality, and sustainability. Enhanced competitiveness and technological innovation in the sector.	2, 3, 6, 9, 12, 17

## 4 Eligibility criteria

S3E Reverse is launching its first open call for applications for **Solvers: start-ups and SMEs with** deep tech solutions to overcome the challenges described above.

Any kind of SME can participate as long as it meets the **following criteria**:

- Is established in any country of the Southern European science-based innovation ecosystem is eligible for the Horizon Europe program including associated countries<sup>2</sup>.
- Is capable of addressing a challenge that has been submitted as part of the conducted open call for Challenges and which is related to the 17 Sustainable Development Goals.
- Can justify the development and / or deployment of a Deep Tech solution.

## 5 Open call submission

The **Solver** is invited to submit a simple and quick application to present the proposed solution to any of the submitted challenges of the previous phase. The application can be submitted through the F6S platform and is available at:

<https://www.f6s.com/s3e-reverse-for-solvers-2/apply>

### 5.1 Application form questions

In application form, the solvers must fill in the following information:

- Solution to a selected challenge and a short description.
- Relevant experience in the particular technology domain/domains in need (Selection).
- Context of the application.
- Response to any initially posed technical key criteria, requirements, or constraints posed by the Challenge organisation.
- Benefits that the solution will bring to the organisation.
- Expression for the type of commercial or business nature for the provision of the solution to the challenge:
  - Custom technology solution provision to be negotiated with the Challenge organisation
  - Collaboration as part of co-financed action under HE or other programmes (RIA, PPI, PCP, etc.)
  - Technology licensing
  - Joint new venture

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<sup>2</sup> For the scope of S3E, Southern European countries include the following European countries: Bulgaria, Croatia, Greece, Italy, Malta, Portugal, Cyprus, Romania, Slovenia and Spain. And the following Associated countries: Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia, Kosovo and Turkey.

- Other (to be defined during the technology brokerage process)
- Relevant SDG if other than the originally selected one by the Challenge organisation (Selection).

## 5.2 Restrictions

**Solver organisations may apply for more than one Challenge**, with different applications. It is also possible that two Solver organisations submit a very similar solution to a challenge. In this case, the Technology Broker may suggest working with both of them (in full confidentiality) to combine the solutions to a challenge in the best possible way and to make the best use of available resources.

## 5.3 Selection Process

The Solvers are going to be selected by an **independent committee of experts** based on the following criteria:

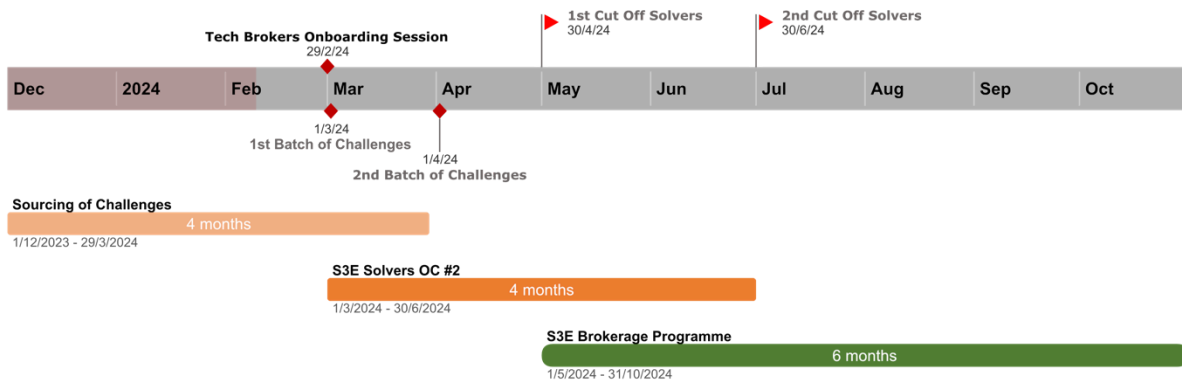
Category	Criteria	Weight
Challenge response	Degree of Innovation and novelty of the proposed solution to a challenge	20%
	Feasibility (Technical, time, budget)	20%
	ESG (Environmental / Social / Governance) Impact	20%
	Relevance to EU priorities	10%
Company	Reliability & Technical Capacity of Organisation	15%
	Robustness of the Organisation	15%

The Selection Committee will be composed of two independent experts (Deep Tech Brokers) and a member of the S3E consortium. Each member will evaluate the Solutions to the challenges individually based on the above criteria. The final ranking will be decided at a consensus meeting of the committee. An independent technology broker from our pool of experts will be assigned to each Challenge organisation and will facilitate all further collaboration. The evaluation will operate on a 'First come – First Served' for the Solvers applicants so when a match is identified the Challenge Organisations and the Solvers can start working together immediately.

In case a selected submitted solution to a challenge requires further elaboration or justification, the appointed tech broker will contact the Solver to improve the description of the Solutions before the publication.

The matching between challenge organisations and solvers will be kept confidential and only anonymised and generalised results will be announced. All Solver Organisations will be notified regardless of the result of the selection process.

## 5.4 Timeline of the 2nd Open Call for Solvers



The open call for the Solver will be launched on the **1st of March 2024**.

The first batch of Challenges will be announced on March 1st with the opening of the call.

The second batch of Challenges will be announced on April 30th.

There will be 2 cutoffs for Solvers: 30 of April and 30 of June.

The call will stay open till **30 June 2024 at 5:00 pm CET**.

As already mentioned, the matching process between the challenge organisations and solution providers will be on a *first come – first serve* basis, so the faster you submit your proposal the more chances you have to be selected for a suitable match.

The solution proposals from scale-ups and SMEs will be evaluated by independent experts and the selected companies will be invited for an interview by our deep tech technology brokers.

Following the final selection interview the technology brokers will work with the selected scale-ups and SMEs to match the submitted challenges with the proposed solutions.

## 5.5 Application Platform

The F6S platform will be the entry point for all challenges' submissions to S3E Open Calls, which is directly linked to the S3E website (<https://south3e.eu/apply-now>).

Submissions received by any other channel after the deadline will be automatically discarded.

Interested start-ups, scale-ups and SMEs can apply via:

<https://www.f6s.com/s3e-reverse-for-solvers-2/apply>

## 6 The benefits of participating in S3E Reverse

### 6.1 Why a brokerage program?

Both the private and the public sector are facing countless challenges that could be addressed through deep tech open innovation. On the other hand, there are so many teams, entrepreneurs, and start-ups that although they have worked and developed wonderful innovative solutions, they cannot find their way to the market, or they fail to focus on the actual problems because simply they are not able to identify them. There is a clear gap of communication and collaboration between the organisations that must respond to specific deep tech challenges and those companies that could help address them.

S3E Reverse has a twofold objective. First to collect challenges from corporates and public organisations and secondly to invite innovative SMEs and start-ups to contribute with Deep Tech based solutions to address those challenges. The aim of our brokerage program is to bridge this gap and match the challenge organisations with the most appropriate start-ups and SMEs that can provide solutions and address these challenges.

The brokerage program is a highly customised program that will be designed explicitly for each case.

### 6.2 What's in it for the Solvers?

Solver organisations (SMEs, mature Start-ups, scale-ups) will apply to **S3E REVERSE** Open Calls to present a Deep Tech Solution to a submitted challenge that will help the challenge organisation solve the problem in need of a deep tech approach and which impacts to the attainment of at least one of the SDGs.

The selected Solver organisations will work with our **Tech Brokers** to better define their Solution to a challenge and develop a solid technical roadmap that will devise the path towards a viable solution.

Through the technology brokerage process both the Challenge and the Solver organisations will be able to match a problem with a potential solution by means of a collaborative and co-creation approach.

**Such collaborations may lead to, amongst others, the direct procurement of innovative solutions, the formation of a new joint venture, the establishment of a research collaboration, or some other type of collaboration that will be explored, defined and agreed by both sides during the technology brokerage phase.**

Moreover, our program will help organisations to team up with innovative scale-ups to partner in a common proposal under Horizon Europe calls for Pre-Commercial Procurement (PCP) or Public Procurement for Innovative Solutions (PPIs) or other opportunities that may improve the capacity of both.

### 6.3 How else can Solvers benefit?

In addition to the technology brokerage, solvers will be able to benefit from a portfolio of appropriate services which will be customised to their specific case by their tech broker:

- **Innovation Readiness Assessment:** a Self-assessment of the solver that will help the company identify weak points or problems in their growth. Our Technology brokers can then suggest specific actions that can help the solver improve their operations.
- **Webinars**, access to the webinars of Tracks 1 & 2, on diverse topics pertinent to the development of the relevant skills (e.g., intellectual property, financials, business development, venture funding.). Note: a total of six webinars (one hours long) will be held.
- **Networking** with industry leaders and showcase opportunities at the S3E Open day and in collaboration with other programmes and initiatives.
- **Gaining market traction** by being connected to larger companies and potential customers or test-beds.

Participation in the above is optional for the Solver start-up or SME. Our technology broker will suggest a customised support programme, but it is up to the Solvers to decide what service they would like to use.



## 7 General Information

### 7.1 Means of submission

The F6S platform will be the entry point for all proposals' submission to S3E Open Calls, which is directly linked to S3E' website: <https://south3e.eu>. Submissions received by any other channel and after the open call duration will be automatically discarded.

### 7.2 Language

English is the official language for S3E Open Calls. Submissions done in any other language will not be eligible and, thus, will not be evaluated. English is also the only official language during the whole execution of the S3E Start program.

### 7.3 Data protection

The proposals are confidential, and each person involved in the program will sign a non-disclosure agreement, namely the reviewers of the proposals.

To process and evaluate applications, S3E will need to collect Data. S3E partners will act as Data Controllers of data submitted through the F6S platform for these purposes. The F6S platform's system design and operational procedures ensure that data is managed in compliance with The General Data Protection Regulation (EU) 2016/679 (GDPR). Each applicant will accept the F6S terms to ensure coverage.

Please refer to <https://www.f6s.com/privacy-policy> to check F6S platform data privacy policy and security measures and to <https://south3e.eu/privacy-policy/> to get informed about the S3E Start Privacy Policy.

## 8 Information and support

For the application form and detailed guidance for applicants, please download the files available at the <https://south3e.eu> website.

The S3E consortium has in place a helpdesk available for all participants and accessible from our website.

More info at <https://south3e.eu/apply-now/>.

Open call #2 for Solvers support material:

- **S3E Reverse for Solvers: Guidelines for Applicants**, this document.
- **S3E Reverse Open Call Text for Solvers #1**, containing information about the open call text, announcing the launch of the new call for solvers and the main conditions to participate.