Innovating for Impact: ARSINOE Innovation Bazaar and Open Tender Initiatives

Inna Petrenko | BRIGAID Connect

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ARSINOE at a Glance

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Climate-resilient regions through systemic solutions and innovations

ARSINOE Challenges

Climate change is complex and interconnected with other global challenges, such as food security, water scarcity, biodiversity depletion and environmental degradation. The worsening climate crisis is impacting socio-economic aspects as well as natural resources (species, habits, forest plantations, watersheds). It is no longer sufficient to use traditional approaches to innovation that focus only on one aspect of the problem.

ARSINOE will apply a three tier approach to address this growing complexity, interdependencies and interconnectedness in order to propose Climate Change Adaptation solutions.

ARSINOE Objectives

- Facilitate a fundamental transformation of economic, social and financial systems that will trigger an exponential change in decarbonization rates and strengthen climate resilience.
- Support recovery from the COVID-19 crisis and climate resilience.
- Help communities and scientists in efficiently evaluating the environmental and economic effects of climate change.
- Offer advanced Environmental Intelligence services and tools.
- Quantify, model, and manage climate risk in a systematic way through resilience.
- Facilitate knowledge transfer and exploitation for start-ups and SMEs.

9 Case Studies

CASE STUDY 1
The Athens Metropolitan Area (EL)

CASE STUDY 2
Mediterranean ports - Piraeus (EL), Limassol (CY) and Valencia (ES)

CASE STUDY 3
Main river basin (DE)

CASE STUDY 4
Ohrid / Prespa Lakes (AL, MK & EL)

CASE STUDY 5
Canary Islands (ES)

CASE STUDY 6
Black Sea (RO, BG & TR)

CASE STUDY 7
Region of Southern Denmark (DK)

CASE STUDY 8
Torbay and Devon county (UK)

CASE STUDY 9
Sardinia (IT)

ARSINOE Concept

- **System Innovation Approach (SIA):** addresses the growing complexity, interdependencies and interconnectedness of modern societies and economies. It focuses on the functions of the cross-sectoral system "as a whole" and on the variety of actors.
- **Climate Innovation Window (CIW):** is the EU reference «innovations marketplace for climate adaptation technologies». ARSINOE will develop, test and validate new innovations to be included in the CIW.
- **Climate change adaptation solutions in Innovation packages:** pathways to solutions are co-created and co-designed by and with stakeholders to form an innovation package for resilience to climate change. These will be proposed and adapted to different regions according to their needs and the challenges they face.

ARSINOE Open Calls

Based on the needs identified in our 9 Case studies, ARSINOE will publish open calls to identify promising or mature innovations to be included in the ARSINOE Innovation Packages and proposed on the Climate Innovation Window.

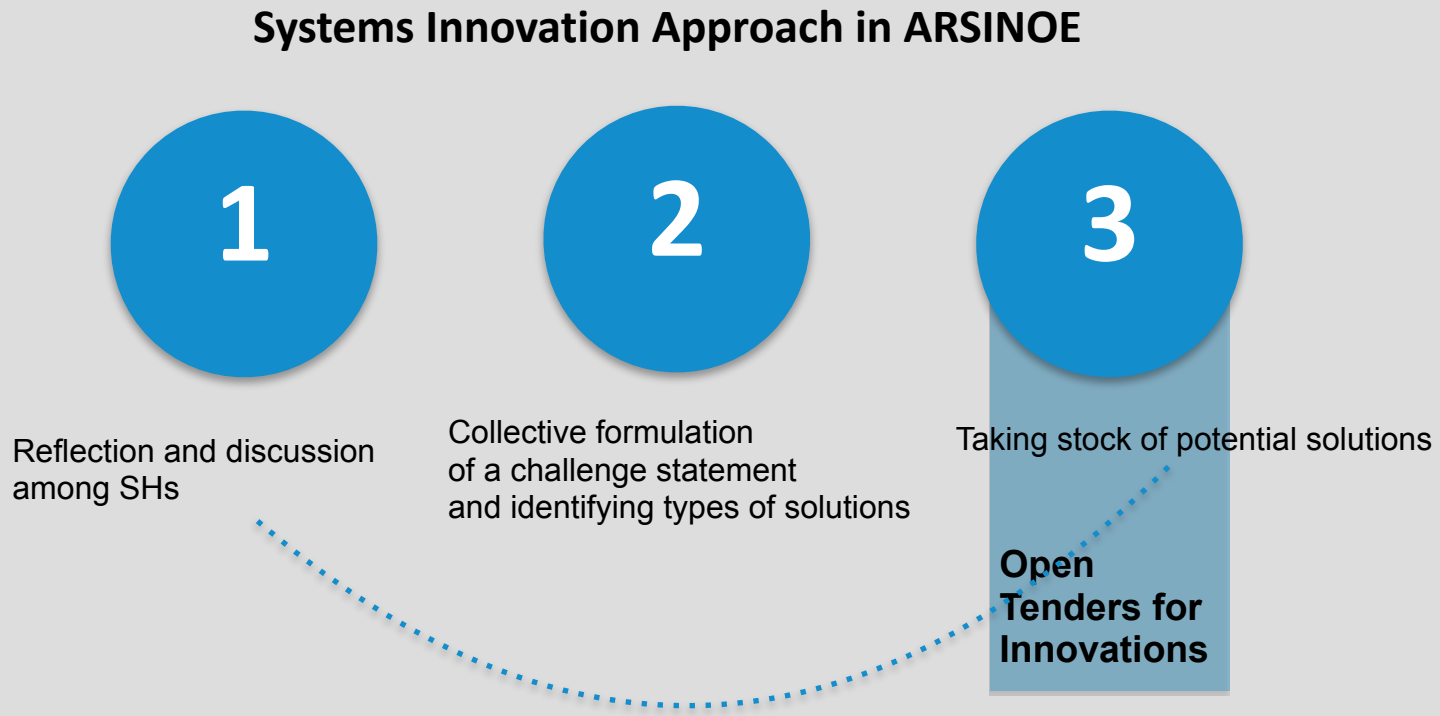
✓ **Who do they target ?**
SMEs, Start-ups, Spin-offs, Universities or RTD institutes, Multi-nationals or subsidiaries/ daughter companies

What we offer ?
Grants of max 50 000€ per innovator + Innovations to be showcased and proposed on the Climate Innovation Window

When ?
The first Call will open at the end of 2022 and a second Call is scheduled for 2023

Open Tenders for Innovations mechanism is a core stone of the project identifying and supporting promising climate adaptation solutions that match the needs in participating 9 Case Studies

Taking stock of Europe's most promising and innovative ideas to drive climate resilience developing innovation pathways by regions co-designed with local partners and in collaboration with innovators



Applications

- Submission of online applications via arsinoe-project.eu/open-call

Evaluation & Selection

- Review and evaluation by the appointed committee
- Submission of 2-page demonstrator proposals by shortlisted innovators
- Assessment and selection by the **contracting party**

Contracting

- Preparation of collaboration agreement
- Signing of collaboration agreement

Evaluation Committee

Applications evaluated according to:

- **3 types** of "Readiness Levels": Technical, Social, and Market;

- **4 qualitative criteria**: Feasibility, Innovative Vision, Promising Innovations, and contribution to social and governance transformation.

- The **high-ranking** applications were identified per case study, considering a minimum average score for transition to the second phase.

Summary of OTIs and funding provided

1st OTI: 3 CSs

19 applications

2nd OTI: 7 CSs

82 applications

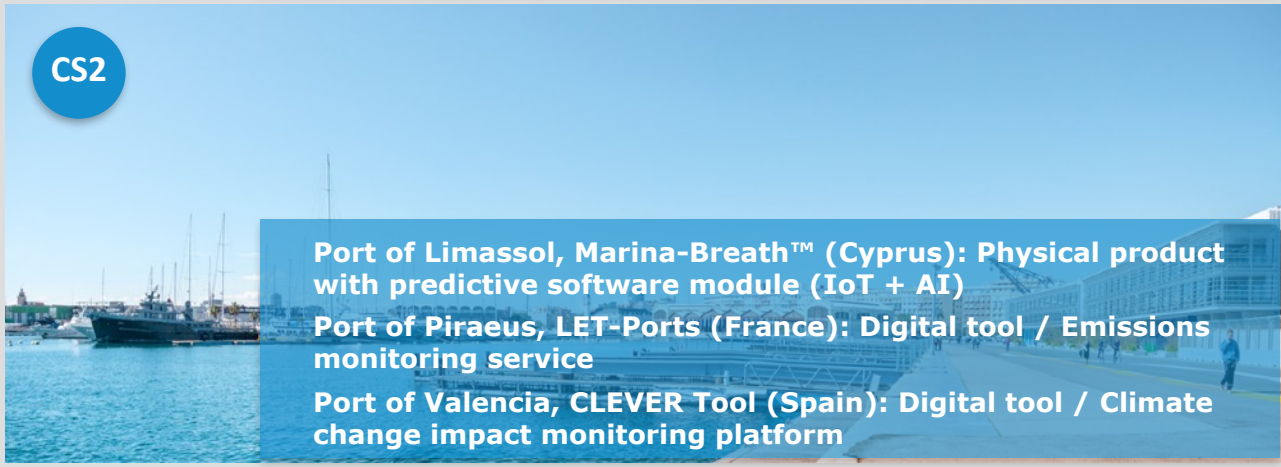
9 CSs in 14 Locations

23 innovations implemented

1 million euros: max 50K grant

Case study	Total applications received	Individual applications targeting the case study	Total innovations funded
CS1 City of Athens (Greece)	22	14	3
CS2 Port of Piraeus (Greece)	8	3	1
CS2 Port of Limassol (Cyprus)	7	1	1
CS2 Port of Valencia (Spain)	7	2	1
CS3 Main River Basin (Germany)	12	4	2
CS4 Ohrid & Prespa Lakes (Albanian Demarcation)	9	2	1
CS4 Ohrid & Prespa Lakes (North Macedonian Demarcation)	18	5	1
CS5 Canary Islands (Spain)	14	4	1
CS6 Southwestern Black Sea (Turkey)	9	2	1
CS6 Danube Delta (Romania)	5	1	1
CS6 Ropotamo (Bulgaria)	12	3	1
CS7 Southern Denmark (Denmark)	14	6	3
CS8 Torbay and Devon County (South-West England/UK)	15	6	2
CS9 Mediterranean Island (South Sardinia/Italy)	16	8	4

Innovation examples



Type of innovations or functional domain

1. Digital Tools / Software Platforms

📊 **Keywords**: dashboard, analytics, AI, forecasting, IoT

- Kausal Platform (CS1)
- ARGOS (CS8)
- CLEVER Tool (CS2)
- LET-Ports (CS2)
- IRRIBIGDATA (CS3)
- SICMA Canarias (CS5)
- Lobelia.AgroClimate (CS9)
- Flood-MapEx (CS7)

2. Nature-Based Solutions (NbS) / Green Infrastructure

🌳 **Keywords**: urban nature, cooling, shade, biodiversity

- Urban Green Oasis (CS1)
- SingularRibbon (CS1)
- Torbay NbS model (CS8)

3. Physical Products / Engineering Innovations

⚙️ **Keywords**: sensor, physical device, hardware

- Marina-Breath™ (CS2)
- Smart Monitoring Sensors (CS6 Turkey)
- Biostimulants (CS9)
- Rain harvesting and solar pumping (CS9)

Type of innovations or functional domain

4. Conceptual Frameworks / Governance Models

🧭 **Keywords**: policy, legal tool, brand, co-design

- PGI for Pane Coccoi (CS9)
- IWRS / Build Green (CS4)
- Torbay governance model (CS8)

5. Education & Capacity Building

📚 **Keywords**: awareness, curriculum, behavioural change

- Tap Water Friendly Main Cycle Route (CS3)
- Torbay School & Community Learning (CS8)

6. Climate Risk & Water Monitoring

💧 **Keywords**: water quality, early warning, flood resilience

- ARGOS (CS8)
- Water Quality Sensors (CS6 Bulgaria)
- LET-Ports (CS2)
- IWRS (CS4)

7. Agriculture & Food Innovation

🌾 **Keywords**: crop, irrigation, local food, climate-smart agriculture

- IRRIBIGDATA (CS3)
- Biostimulants (CS9)
- Lobelia.AgroClimate (CS9)

Connecting to the CIW platform

Living Labs select from existing CIW technologies, propose new solutions, and incorporate innovations from Open Tender for Innovations.

Successful solutions are validated and added to the CIW, expanding its marketplace and providing regions with cutting-edge, tailored technologies.

Search ...

Issues Areas Solutions TRL Level SRL Level Search

Living Waste

The proposed solution involves developing an integrated process to convert pomace and seeds into useful co-products, oil, grape powder, and crushed seeds. By transform...

MULTI-HAZARDS
AGRICULTURE ECOSYSTEM-BASED APPROACHES
ENGINEERING AND BUILT ENVIRONMENT

Volodymyr Iksar ARSINOE Network

Data-driven Flood Risk Management Platform

Our innovation provides the technical basis for data-driven flood risk management in the 21st Century. The platform provides the technical infrastructure and functiona...

COASTAL FLOODS HEAVY PRECIPITATION
RIVER FLOODS
COASTAL AREAS DISASTER RISK REDUCTION
MODELS AND TOOLS

Ed Hartwell ARSINOE Network

FLood aUtonomous and dIgital Driven alert system – FLUID

The innovation proposed here, combines the micro-station solution with that of autonomous drones to trigger the deployment of an autonomous drone over the area in ques...

COASTAL FLOODS HEAVY PRECIPITATION
RIVER FLOODS
COASTAL AREAS DISASTER RISK REDUCTION
MODELS AND TOOLS

Jean-Christophe Poisson ARSINOE Network

PRAM

PRAM is an affordable IoT device with a 3D mm-wave radar that monitors and maps flood waters, wave overtopping, and road damage. It offers real-time flood modeling, in...

COASTAL FLOODS HEAVY PRECIPITATION
RIVER FLOODS
COASTAL AREAS DISASTER RISK REDUCTION
ENGINEERING AND BUILT ENVIRONMENT

Stephen McNulty ARSINOE Network

Search ...

Issues Areas Solutions TRL Level SRL Level Search

AirNode and Libelium

Aim 1 To determine air pollution source from either vessels, port operation or external source outside boundary of port authority. Aim 2 To identify more specifically ...

MULTI-HAZARDS
HEALTH URBAN AREAS
ENGINEERING AND BUILT ENVIRONMENT

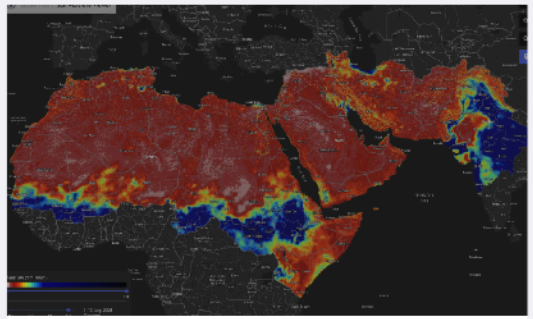
Gordon ARSINOE Network

Integrating Rain harvesting and sdar pumping

The proposed innovation is an integrated system which combines already well known and commercialized products such as rain-water-harvesting and solar pumps. Rainwater ...

DROUGHTS
AGRICULTURE DISASTER RISK REDUCTION
WATER MANAGEMENT
ENGINEERING AND BUILT ENVIRONMENT

Luca Masala Tested in ARSINOE



Lobelia.AgroClimate

Lobelia.AgroClimate platform for Soil Moisture Monitoring and Climate Risk Assessment data is a comlete digital solution designed for agriculture and environmental man...

DROUGHTS HEAVY PRECIPITATION
MULTI-HAZARDS
AGRICULTURE DISASTER RISK REDUCTION
MODELS AND TOOLS

Thaís Fontenelle Tested in ARSINOE

Protected Geographical Indication for Pane Coccoi

The Denomination aim to protect the quality standards of agri-food products, safeguard their production methods, provide consumers with clear information on the charac...

HEATWAVES
AGRICULTURE ENERGY
GOVERNANCE AND SOCIAL INNOVATIONS

Maria Antonietta Dessi Tested in ARSINOE

Mapping the concerns and issues of problem owners and solution providers, looking at commons and bottlenecks.

ARSINOE succeeded to unleash the underlying ideas and potential solutions.

Research: Interviews and dialogs

5 CITIES

The Hague (Netherlands), Lisboa (Portugal),
Vejle (Denmark), Thessaloniki and Athens (Greece)

9 INNOVATORS

Droughts, Multihazard, Coastal floods, Heavy precipitation, Heatwaves, River floods

#1. USING OR ACCESSING INFORMATION

A.

Adaptation plans are sometimes not concrete and specific.

Municipalities cannot identify the solutions needed to meet adaptation objectives. Consequently, they cannot set the right procurement requirements for the solutions in need.

B.

Involvement of other actors in the design and implementation of adaptation plans (insurance companies, innovators, ...).

The challenge is to break down the current silos in order to have a multiplier effect and jointly define plans and design solutions.

#2. PLANS ARE NOT ENOUGH, INVESTMENT IS NEEDED

A.

Local budgets are often not sufficient.

Innovators have funding problems, but so do municipalities, who need public funding cooperation to get their adaptation plans off the ground.

B.

To use and optimize the available budget in the right way.

The market is not mature, but the needs are, and it is urgent to respond to them, through new approaches to innovation or cross-cutting strategies to share adaptation costs.

#3. INNOVATIVE CONSULTANTS ARE NEEDED

A.

Cities need guidance to define strategy and budget while controlling investment.

Innovation is scarce. That is why finding innovative consultants to help them achieve their goals is difficult.

B.

Avoid confusing contemporary solutions with innovative solutions.

Understanding that innovators can be consultants is one way to guarantee innovative consultancy.

#4. BUREAUCRACY IS AN OMNIPRESENT OBSTACLE

A.

Tendering procedures do not encourage innovative start-ups, they lack focus on truly innovative solutions.

Generic specifications make them to compete with non-specialists without any recognition or advantage.

B.

Public procedures take much time, which makes it really complicated to attract external partners (innovators/alliances).

In addition, funding systems and procedures are complex and localized.

#5. CULTURAL BARRIERS

A.

Local language is a barrier to co-operation with other European innovators.

Foreigners lack knowledge of local practices and legislation, local contacts, full time presence on site.
It's difficult to maintain long-term relationships with them.

B.

Solutions need to be well designed to simplify implementation.

When product features are well defined, it is much easier to overcome limitations.

#6. BRIDGING GAPS BETWEEN CITIES AND CITIZENS

A.

Sometimes, citizens do not get involved in the planning of their local authorities.

Coordination with the third helix is essential for them to understand adaptation measures and plans, and to create the expectation of reception.

B.

People need to feel that the changes are for their own benefit.

People are the key to tackling the challenge of climate change. To engage them in the process, so they change their behaviour and they support the municipality in its proposals for building resilience.

#7. ENABLING ECOSYSTEM

A.

One or two actors are not capable to cope on their own.

Developed ecosystem which enables the virtual circle to spin is needed to overcome the barriers and bottlenecks.

B.

There are ways to set up effective and all-inclusive environment.

The ecosystem is not mature and yet very fragile. It is time to focus on the development of sustainable, supportive and efficient ecosystems and infrustructures together.

THANK YOU

CLIMATE INNOVATION WINDOW

https://climateinnovationwindow.eu/

Join us now

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TAKING EUROPEAN INNOVATION GLOBAL

ARSINOE
CLIMATE-RESILIENT REGIONS THROUGH SYSTEMIC SOLUTIONS AND INNOVATIONS

info@arsinoe-project.eu

www.arsinoe-project.eu

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