



We e-shape EuroGEO

7-9 Dec.2022 | Athens



EuroGEO
Showcases:
Applications
Powered
by Europe

“
**Blazing new trails
for EO markets**
”

EuroGEO
Workshop
2022

- www.e-shape.eu
- Horizon2020-e-shape
- @eshape_eu
- e-shape project

e-shape (EuroGEO Showcases: Application Powered by Europe) a short introduction

Thierry RANCHIN

MINES Paris – PSL / ARMINES



e-shape

Learn more here:



EuroGEO



GROUP ON
EARTH OBSERVATIONS



The e-shape project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 820852

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EuroGEO in a nutshell

- **Delivering an integrated European contribution to GEO** and increasing GEO benefits for Europe
- **Acting as an incubator to produce and test EO services and applications in cooperation**
- **Delivering** specific EO applications benefiting from integrating global datasets made available through GEOSS with Copernicus/European countries/organizations
- **Promoting, scaling up and developing EO applications in association with users**
- Building on Copernicus Data & Information Access Services (DIAS) + Horizon 2020/Horizon Europe resources/GEO
- **Supporting the implementation of the Green Deal and GEO engagement priorities**



● e-shape

Fast Facts for You

68 partners
7 showcases
37 pilots
4 years grant


agriculture


health


renewable
energy


ecosystem


water


disaster


climate



WP1 - Project Management
and Coordination

Strategic activities

WP2 – Showcases and Pilots Co-design

WP3 – Implementation

WP4 – Users' Uptake, Capacity Building and Liaison

WP5 – Towards operability and Sustainability

SHOWCASES



Pilots

WP6 – General Communication, Dissemination and help desk

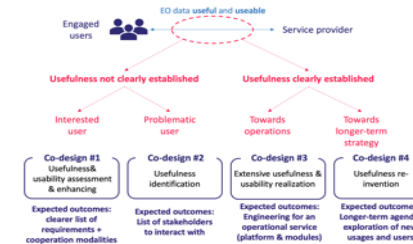
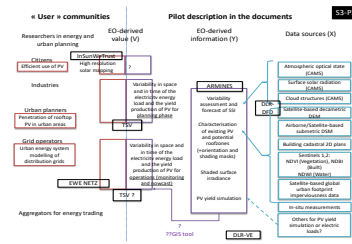


Co-design built in e-shape

Co-design to grow an ecosystem of efficient EO-based service designers

Co-design approach in two phases: “diagnosis” phase + “action” phase

#1 Diagnosis process to identify blocking points in the ecosystem’s growth



Representation of each pilot’s ecosystem
 (“value-information-data” framework)

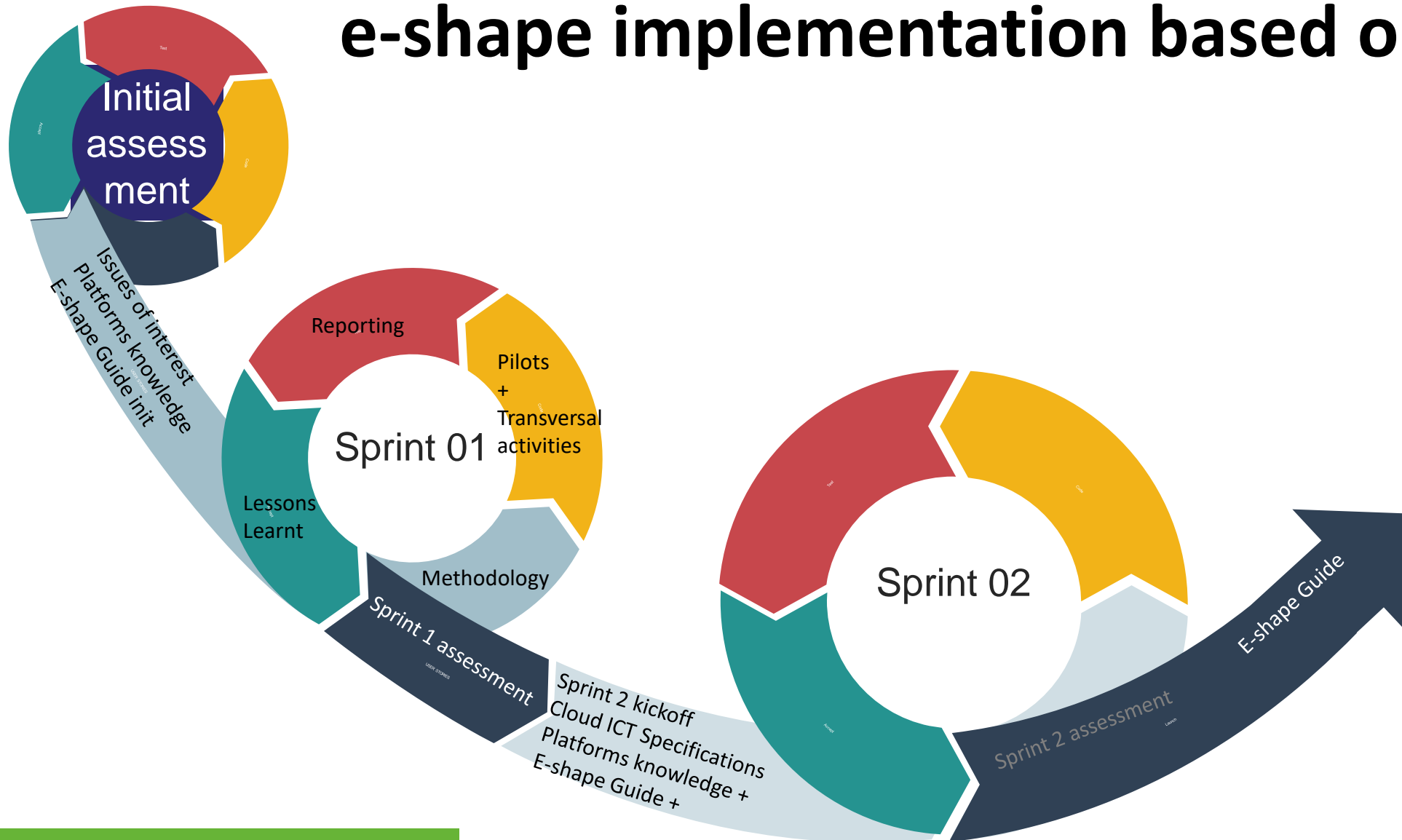
Identification of blocking
 points (i.e. *co-design needs*)

#2 Implementation of co-design actions to unlock blocking points

One pattern for each type of co-design: *building resilient fits with stakeholders*



e-shape implementation based on 2 sprints





Users' uptake

- User's uptake survey and identify **primary users communities**
- Creation of a network of secondary connection communities both regionally and at EU level
- Series of users' uptake events
- **Capacity Building Best Practice Guide**
- Promoting the use of services at sectorial, national and international level



Sustainability

- Access to knowledge
 - *Market, policy, tech and investment trends*
 - *Guidance on Innovation and Intellectual Property*
 - *up-to-date understanding of national EO Maturity*
 - *understanding and promotion of socio-economic value*
 - *supporting capacity development*
- Access to markets
 - *opening doors to wider user communities*
- Access to capital
 - *helping EO actors to navigate the funding landscape*
 - *onboarding additional pilots with high maturity*
- **Follow closely the e-shape Sustainability Booster <https://sustainability.e-shape.eu/>**



Active
communication
team



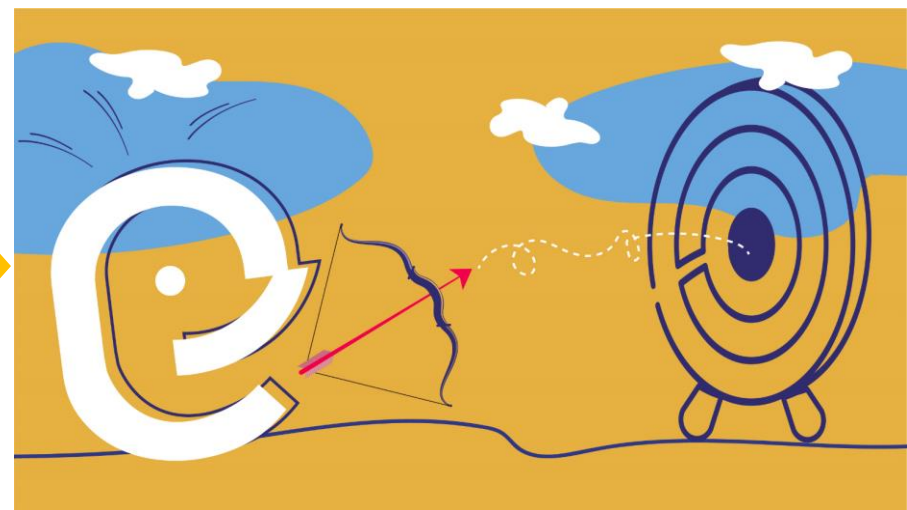
Active pilots &
work packages



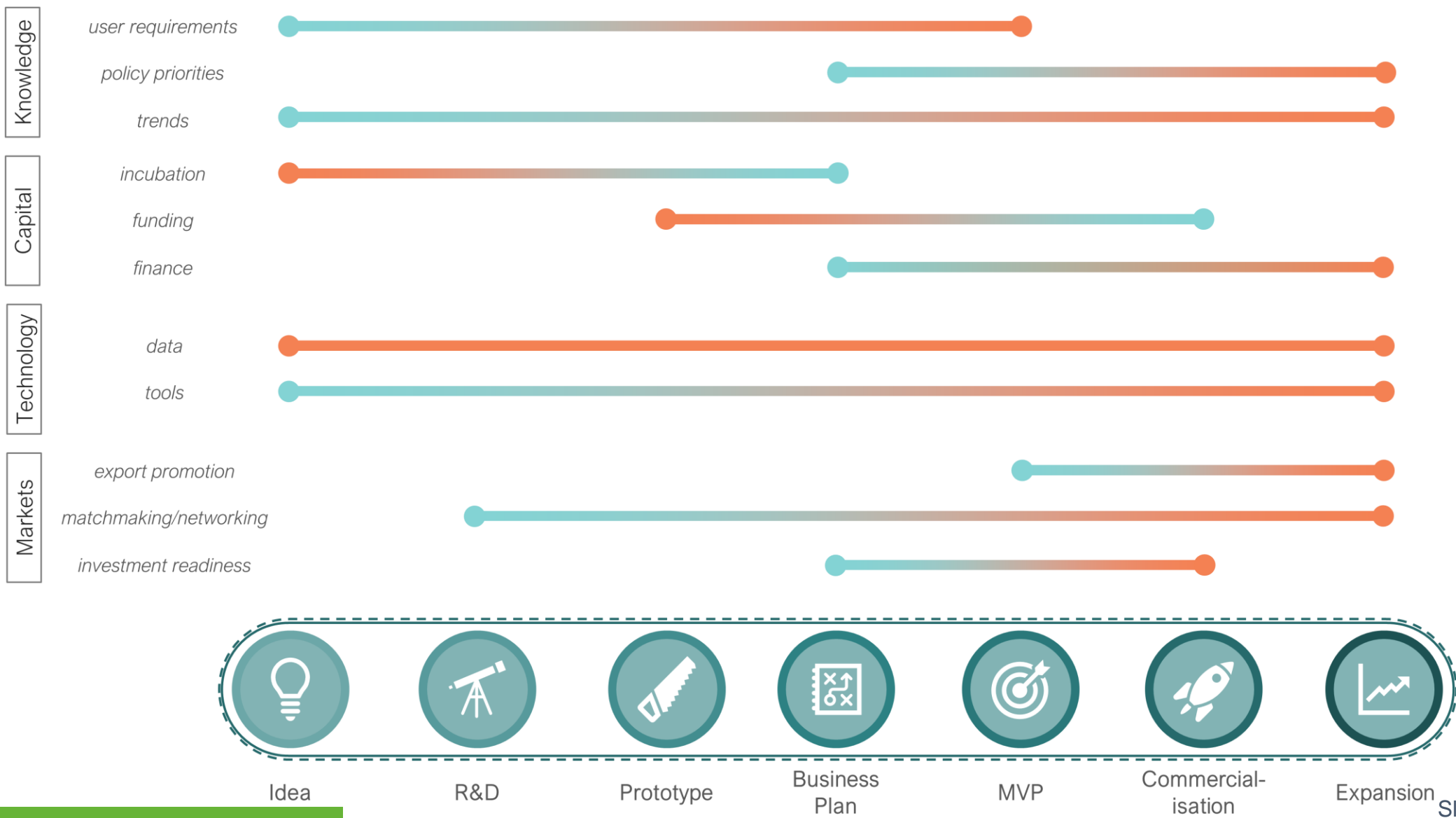
More
than...

Success by harnessing the power of communication! e-shape in figures

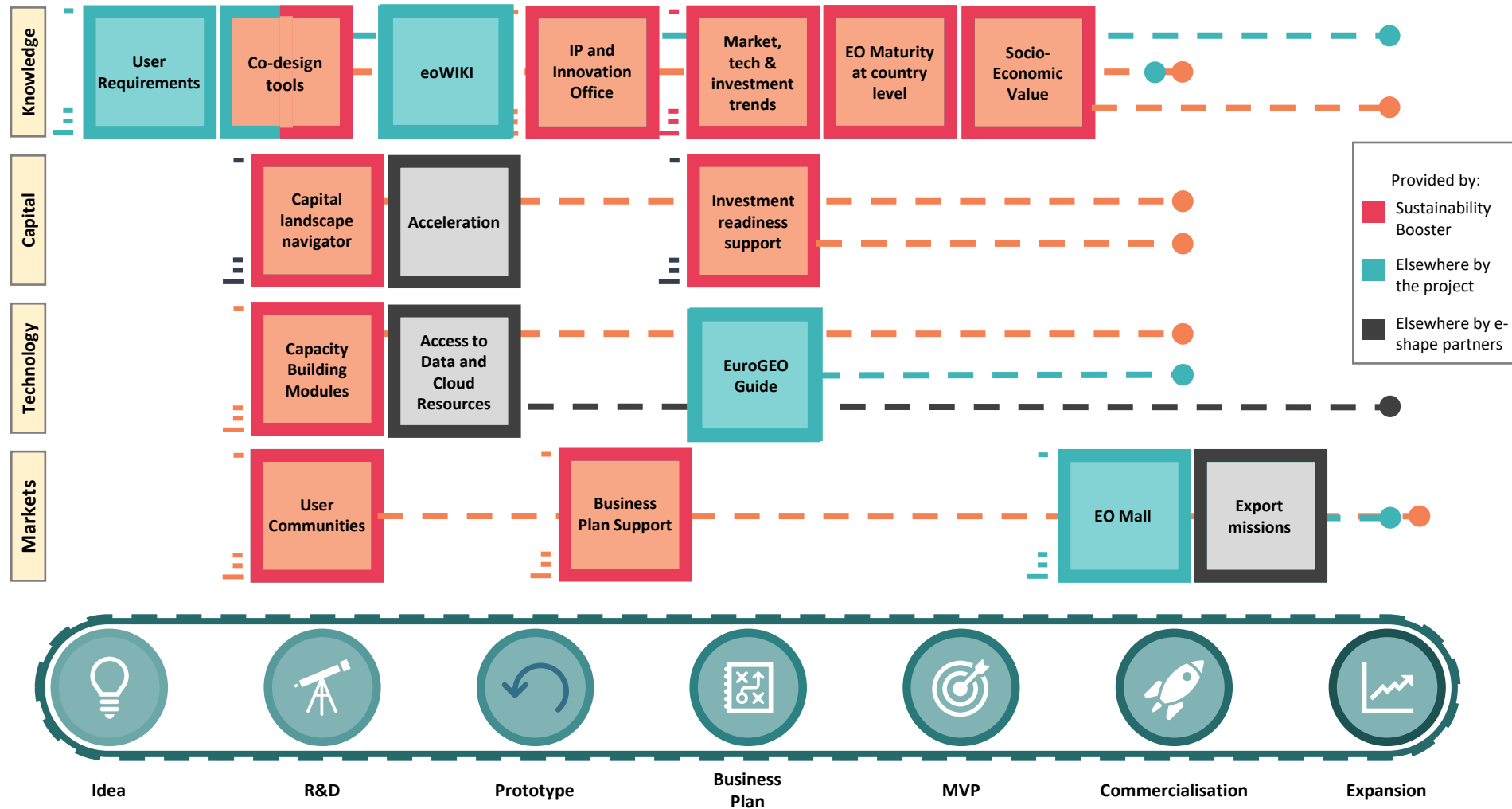
100	Publications (popularized)
60	Publications (scientific)
FB 300 Twitter 1000 LinkedIn 900 YouTube 2.300	Social Media
26.000	Website (unique visitors)
100	Events promoted
30	Success Stories
10	Services promoted



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e-shape (EuroGEO Showcases: Application Powered by Europe) impacts and legacy

Thierry RANCHIN

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e-shape legacy (1)

- Strategic activities and outputs
 - **Portfolio of EO applications** by European service providers in 7 thematic areas
 - Co-design methodology
 - EuroGEO guide for implementation
 - Capacity building Best Practice Guide
 - Sustainability booster



Portfolio of EO applications

- Access through the webservice-energy.org catalogue
- Harvested by the GEO portal
- Harvested by the GEO Knowledge Hub: a pilot = a package

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Web service - Energy Catalogue x + <https://tinyurl.com/5dk34cks>

geocatalog.webservice-energy.org/geonetwork/srv/eng/catalog.search#/search?isTemplate=n&resourceTemporalData=...

Connexion au client W... MINES PARISTECH - C... GEO - Group on Earth ... Home | webservice-en... SoDa Service - Knowle... Min&Tel - Accueil PSL - Research Univer...

Web service - Energy Catalogue Search Map Sign in English

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Filter

Type of resources
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facet-cat.keyword
☐ Applications (31)
☒ E-shape (31)

Available in
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☐ View service

Keywords

1 - 30 on 31 Sorted by relevancy

e-shape pilot S1-P7 - DynaCrop - unlocking EO intelligence across the food...

e-shape

The food production sector must undergo a major change in order to sustain food production for a growing ...

World from Space

On going

e-shape pilot S6-P6 - MountainNow

e-shape

Climate change is changing mountains, creating new needs for safety and adaptation.

One Earth sàrl - MountainNow

On going

e-shape pilot S5-P6 - EO based phytoplankton biomass for WFD reporting

e-shape

A good water quality is the base of a healthy ecosystem with rich biodiversity. Aquatic ecosystems also provide essential ...

Water Insight B.V.

On going

e-shape pilot S6-P4 - ReSAgri - Resilient & Sustainable ecosystems including...

e-shape

Natural hazards

e-shape pilot S4-P1 - mySPACE

e-shape

In order to secure

e-shape pilot S7-P5 - Seasonal preparedness

e-shape

Transportation and

MAP

Powered by GeoNetwork 4.0.5.0 About Github API Share on social sites



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Search e-shape

https://tinyurl.com/yubzduvs

← → ↺ 🏠

🔒 https://gkhub.earthobservations.org/communities/e-shape?q=&f=resource_type%3Aknowledge&l=list&p=1&s=108

📧 ⬇️ 📄 📄 🔍 ☰

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<https://e-shape.eu/index.php/> Project EuroGEO, Group on Earth Observations

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Resource types

Clear

☐ Software

☒ Knowledge Package

☐ Video/Audio

☐ Publication

☐ Dataset

GEO-VENER

March 3, 2022 (v1)

Knowledge Package

Metadata-only

High photovoltaic penetration at urban scale - H2020 e-shape pilot project

MENARD, Lionel

Context: Rooftop PV systems in urban areas are very interesting because they do not emit air pollutants nor GHGs during their exploitation, they produce electricity where this electricity is consumed, and they add value to unused urban roofs and parking shades and may reduce urban heat island effect. But, due to complex shading effects in urban ...

Uploaded on November 24, 2022

April 14, 2022 (v1)

Knowledge Package

Metadata-only

e-shape pilot S7-P4 - Hydropower in snow reservoir – climate service

IKONEN, Jaakko

The Finnish Meteorological Institute has recently developed a web-service that provides detailed hydrometeorological information to support more efficient hydropower production operations in Northern Finland. This service aims to reduce uncertainties in spring, snowmelt driven, runoff forecasts through assimilation of satellite data-based cryosp...



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Four dimensions of co-design legacy

1. Direct impact on the pilot's development

Progressively weaving robust interactions between EO and usage ecosystems

Co-design diagnosis

*"It really helped us actually make clear what was the initial intention, what is visible now, what the users actually want. So, **it wasn't only about the users' needs but also about our own needs in order to better coordinate our pilot.** So yeah it was really helpful for us." (S2-P3)*

*"The fact that it is a team [i.e. the research team on co-design] outside the development team [i.e. the pilot] is very good because it reveals what we said to you and you put it in a clear graphical way **and it helped us to formalise what we wanted to do.**" (S3-P2)*

Co-design actions

*"For me it was **really eye opening that we could use it in such a broad way to look at all sort of possibilities** rather than trying narrow down what we wanted to do. [...] The way we ask questions during the workshops – not just in this context but also in our other projects and activities – has changed to be more exploratory and focused on the potential seen by each stakeholder rather than on the willingness to test or buy our services." (WIND)*

2. Longer-term impact for the consortium partners

Strengthening co-design competencies of e-shape partners

*"This way of doing the co-design is of interest since it **provides a guideline to be 'systematically' applied for such internal co-design approach.** To illustrate the genericity of this co-design approach, we did recently a very fruitful session of co-design with our IT teams [...] for the second round of coding of the pilot, following the same guidelines." (S3-P2)*

*"We will **continue to organise user workshops so we maintain a co-design cycle** and continue to improve our insights in the ecosystem in the future." (S3-P3)*



Four dimensions of co-design legacy

3. Co-design routinisation beyond e-shape

- **Guidebooks** (diagnostic tool & guidelines for workshops)
- Developing **co-design as-a-service** (e.g. training of consultancy companies)
- Establishing co-design as a **critical component of EuroGEO/GEO**, e.g:
 - Diffusion of best practices
 - Setting-up co-design training for the EO community
 - Ensuring co-design quality (labelling system)
 - Funding future research on co-design advances

4. Academic legitimacy of co-design methods

Three publications in progress in innovation management:

- a) at the level of methods: ‘resilient-fit’ between initially far-distant actors, rediscussing the logic of relationship ‘creation’ in management → **paper submitted to *Creativity and Innovation Management***
- b) at the level of design processes and actors: specific forms of actors - coined “data genericity designers” - organising the valorisation of the same data into multiple contexts, especially designing the “relational system of data” → **paper submitted to *Technovation***
- c) at the level of ecosystem development: co-design serving as a diagnostic tool to conduct ‘anchoring’ strategies of EO data into heterogeneous ecosystems (in order to build EO-based resources to tackle grand challenges) → **paper accepted in *IEEE Transactions on Engineering Management***



EuroGEO guide for implementation (in progress)

A unique source and guidelines to increase the usage and exploitation of EO gathering the project experiences from all partners.

- Data (selection, source, access)
- New technologies (AI, Machine Learning, Deep Learning, DataCubes, ...)
- Cloud technologies
- Platform selection
- Integration Deployment
- Exploitation
- Standards, Interoperability
- Copernicus and e-shape
- Open-source software

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What does eoMall offer

- Discover commercial services fitting your needs
- Compare commercial services easily
- Learn how commercial services are currently used
- Access to selling points

eoMALL supporting the research to business activities within euroGEO

[Learn more about the eoMALL for EuroGEO](#)



[Learn more about the eoMALL platform](#)

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What Can Earth Observation
Do for My Organisation?

eoWIKI – Develop Your Knowledge on Earth Observation



EO Taxonomy

Success Stories

Best Practices

Tech & Policies

EO Ecosystem

Develop Your Knowledge On Earth Observation



provided by European Association of Remote Sensing Companies



EO Taxonomy

This area provides the top-level structure of the taxonomy of Earth Observation services,



Success Stories

This area provides a consolidated list of success stories for interested user



Best Practices

This section provides comprehensive insights into user-related challenges and geo-



Technology & Policies

The Technology Watch keeps you up to date on the latest technology supporting the



EO Ecosystem

This area provides a mapping of the EO ecosystem including:

- Service Providers

To come: Capacity Building Best Practice Guide

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Community of users
engaged– 2 secondary



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e-shape Sustainability Booster

https://sustainability.e-shape.eu

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e-shape Sustainability Booster

Insights Innovation and IP Investment

SCALE YOUR EARTH OBSERVATION SOLUTION

EXPERT ADVICE ON INNOVATION, FINANCE AND SUSTAINABILITY

5.00%

Privacy - Terms





e-shape legacy (2)

- But also:
 - DMP self assessment tool (FAIR and GEO principles)
<https://gkhub.earthobservations.org/records/0ksgt-7v316>
 - EO Maturity indicators
 - PERL (Pilot Exploitation Readiness Level)
 - On-boarding process
 - Socio-economic value studies of EO in selected sectors
 - Innovation and IP office
 - Market trends observatory
 - EuroGEO governance study
 - Communication and Dissemination





e-shape impacts

- A new understanding of co-design for the community + applicable methodology (37 pilots) + dissemination in other European projects, support to GEO Secretariat on the road to post-2025, towards the use in DestinE
- Supports and links to DG RTD, DG DEFIS, EUSPA, Copernicus program, French Presidency of European Union (Copernicus 2035 symposium), GEO, ESA, ...
- Support to organisation of EuroGEO Workshops since 2020
- Dissemination of FAIR and GEO principles in the EO community
- Dissemination of the Cloud paradigm, interoperability, standards, etc. in the EO community. Comparison of DIAS
- Capacity building workshops
- Users uptake strategy
- On demand use of the sustainability booster: 37 business plans, 6 SMME demand to go further (On 1/9/2022) - Ressources for 5 more pilots
- Proposals for an EuroGEO governance



e-shape Position Paper for the future of EuroGEO

- <https://www.e-shape.eu/index.php/news-events/the-vision-of-the-e-shape-partners-for-the-future-of-eurogeo>

We e-shape EuroGEO



This position paper is a **key** contribution to shape the discussion regarding the future of EuroGEO. It sets a path where EuroGEO would take a complex, multi-faceted role leading to coordinate the EU contributions to GEO & stimulate the European EO ecosystem.

e-shape is blazing the trail of the EO sector for the years to come.

Professor Thierry Ranchin | MINES Paris - PSL University



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Lessons learned

- EO sector is techno-centric → co-design is a game-changer
- DIAS offers are complex and the community need a support for understanding of usage and negotiation
- Need of support to shift from an incentive approach (grants) to a PPP and to leverage resources
- Need of an actor (aggregator of financing systems combining grants, private support, equity, fundraising, etc...)
- Interaction with EUSPA, Cassini, Copernicus downstream, Copernicus Thematic Hub, DestinE etc.
- The maturity of each country underlines the european fragmentation (techno, research innovation etc.) and the need for fit to countries/regions capacity building and support services
- e-shape built on legacy. Need to construct through R&D the future foundations of future services.
- e-shape as a common actor on support to EuroGEO

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