Data Driven Policy Cluster

Co-creating digital tools for better governance

Data Driven Policy Cluster: Introduction

CCGRID 2022 – 19 May 2022

Antonio Filograna(Engineering Ingegneria Informatica S.p.A., DECIDO)

Data Driven Policy Cluster is s group of 5 projects that have received funding from the European Union's Horizon 2020 research and innovation programme. Policy Cloud - GA #870675, Decido - GA #101004605, AI4PublicPolicy -GA #101004480, DUET - GA #870697, Intelcomp - GA #101004870.

The Data Driven Policy Cluster

- **5 H2020 research projects** using the European Cloud Infrastructure for Public Administrations
- Developing **policy prediction tools** to support data-driven decision making
- **Co-creative** development processes
- **19 pilots**, from health and climate change to mobility and radicalisation.
- Pilots **produce & reuse data**

Joint Roadmap & Evidence Based Policymaking Summit 2021 towards using European Cloud Infrastructure for Public Administrations.

Data Driven Policy Cluster
Co-creating digital tools for better governance

Policy Briefs

The Data Driven Policy Cluster published 3 policy briefs to advance evidence based policymaking:

- **Governance Ethics**: DOI 10.5281/zenodo.6366119
- **Policy-Prediction**: DOI 10.5281/zenodo.6457625
- **Co-creation & stakeholder engagement**: DOI 10.5281/zenodo.6538128

DECIDO PROJECT OVERVIEW

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Event: CCGRID 2022

Date: 19/05/2022

Decido

eviDEnce and Cloud for more InformeD and effective pOlicies

This project has received funding from the European Union's Horizon 2020 research and innovation under grant agreement N° 101004605

PROJECT PARTNERS:

101004605 — DECIDO — H2020 - SC6 - GOVERNANCE - 2018 - 2019 - 2020 / H2020 - SC6 - GOVERNANCE-2020

DECIDO at glance

Title

eviDEnce and Cloud for more InformeD and effective pOlicies

Topic

DT GOVERNANCE 12-2020

Innovation Action

Duration

36 months

Start Date
1st March 2021

Costs

EUR 4,327,255

Consortium

14 PARTNERS

Key Words

#cloud
#evidence-based
#policy-making
#EOSC
#co-creation

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Consortium as whole

14 Partners:

- **PA**: KAJ, CTO
- **LE**: ENG
- **Consulting**: EY
- **Research & Academia**: FOKUS, KPRF, KAMK, NTUA, TECNALIA
- **NGO**: EGI, LC, Vol.TO, SCN, Ibercivis

PARTNER/ COMPETENCE	ENG	TECNALIA	LC	FOKUS	KPRF	KAJ	NTUA	KAMK	CTO	SUSTAINABLE CITY	EGI.EU	EY	ARAGON	VOL.TO
POLICY MAKING			X	X		X	X		X	X			X	X
EVIDENCE-BASED POLICY MAKING			X	X		X	X		X	X				X
DATA ANALYTICS	X	X		X			X	X			X			
BIG DATA	X	X		X				X			X			
CLOUD	X	X		X				X			X			
ICT	X	X		X			X	X			X			
ETHICS/LEGAL	X				X						X			
STAKEHOLDER ENGAGEMENT		X	X		X	X			X	X			X	X
BUSINESS	X											X		
DISSEMINATION& COMMUNICATION	X	X	X		X					X		X		X
TRANSFER & EXPLOITATION	X	X	X	X	X			X			X			
EOSC SERVICES											X			

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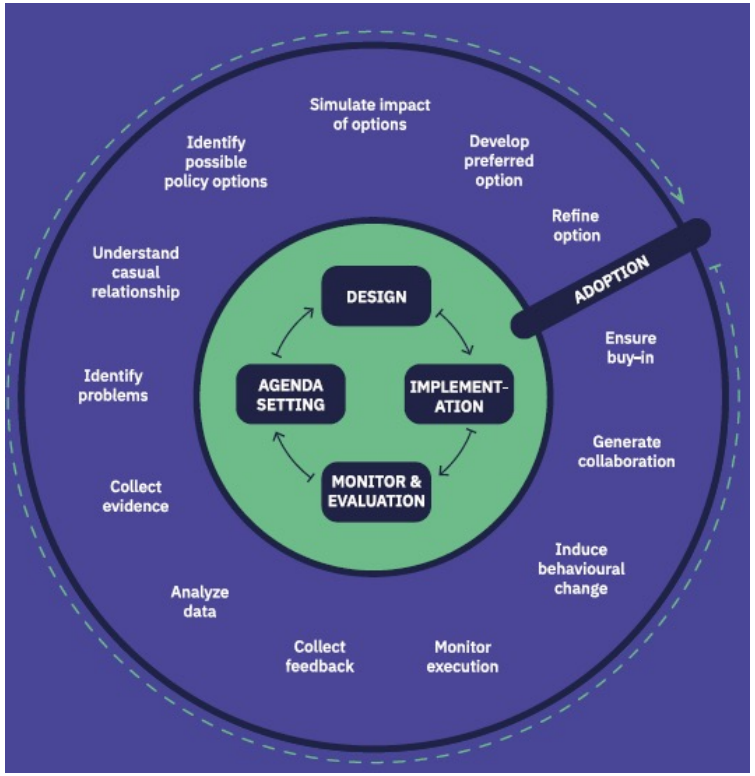
Background

Policy making is the process of creating and monitoring policies to solve societal challenges. In this respect, it is often conceptualized as a **policy cycle**, consisting of several different phases, such as agenda setting, policy formulation, policy implementation & monitor and policy evaluation.



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Scope of the project

The mission of DECIDO is to demonstrate the groundbreaking impact of the adoption of innovative methodologies, tools and data enabling the effective development of better **evidence-based policies** by public authorities.

DECIDO will serve as an intermediary between the **public sector, the citizen science world** and the European Cloud Infrastructure (ECI) through the direct collaboration with **EOSC** and will provide storage capacity and processing power through **EGI infrastructure**.

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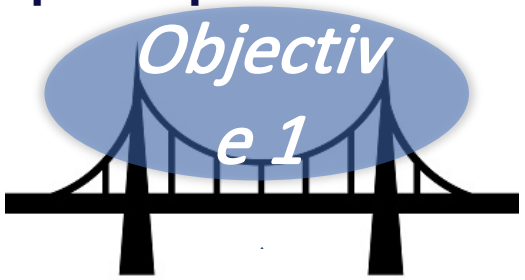
Creation of a **BRIDGE** between Public Authorities and **European Open Science Cloud**



EOSC

Objectiv
e 2

to widen the use of the **European Cloud Infrastructure** services and data to Public Authorities

Objectiv
e 3

to enable and encourage Public Authorities to use appropriate infrastructures, services, data and methodologies to apply a more **evidenced informed** approach to policies

Identification of **a set of pathways, recommendations** and a sound **business plan**...

Objectiv
e 4

...addressing Public Authorities through the transition towards the use of the European Cloud Infrastructure and the application of **evidence and co-creation** in the policy lifecycle.

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Outputs of DECIDO

SCOPE

DECIDO will serve as an intermediary between the **public sector, the citizen science world** and the European Cloud Infrastructure (ECI) through the direct collaboration with **EOSC** and will provide storage capacity and processing power through **EGI infrastructure**.

Out 1: WEB PORTAL

An easy to use portal will be released to **define**, **manage** and **evaluate PA policies** in a collaborative manner leveraging services offered by EOSC (Catalogue and Marketplace), external services/tools to EOSC, data made available by EOSC (mainly through services B2Find and EGI DataHUB) and by other data providers (e.g. European Data Portal), including Public Administrations themselves.

Out 3: BUSINESS PLAN

A robust and realistic **business plan** will be developed backed up by a detailed cost-benefits analysis of ex-ante (not using DECIDO results) and ex-post (using DECIDO results).

Out 2: CITIZEN ENGAGEMENT

The focus for the **involvement of local actors** will be on: (1) the **methodological** side (e.g. co-creation of indicators), (2) the identification of **needs** and priorities, and (3) the **data generation** (e.g. through citizen science experiments where applicable).

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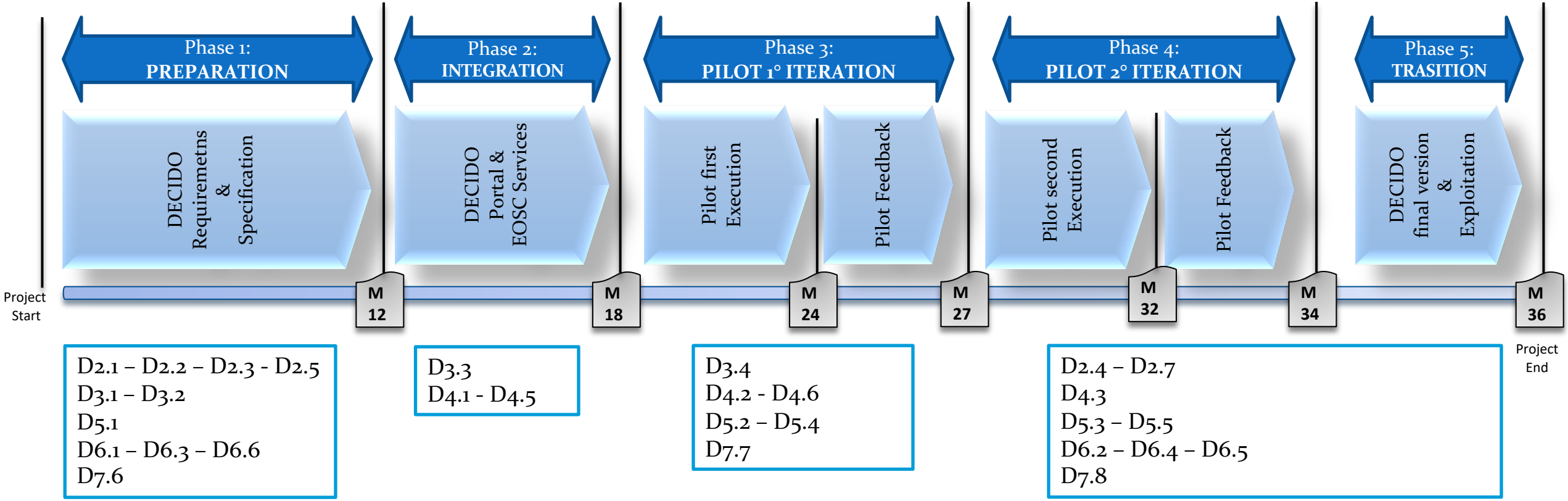
DECIDO timetable



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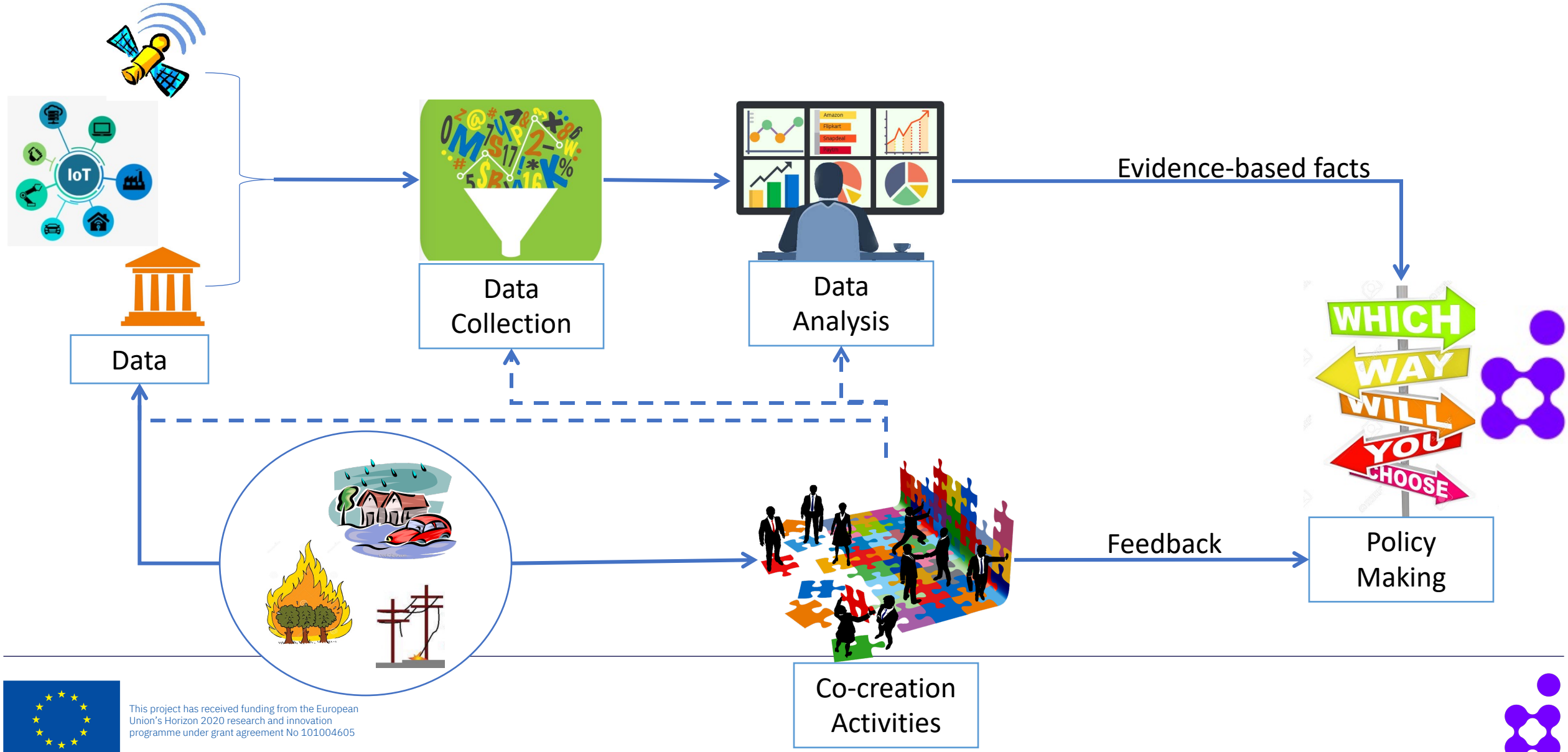
Brief example of the use of DECIDO



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Policy-making expected impact

Policy makers will be able to reduce the time needed to generate good quality services as well as improve policy making services

Citizens will actively participate and contribute to public policy making, have higher data access for better and informed decisions

Businesses will accelerate innovation and business development and reduce costs related to innovation generation

Research centres and scientists will access a large volume of data for scientific purposes

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Pilots in a nutshell

Kajaani
Finland

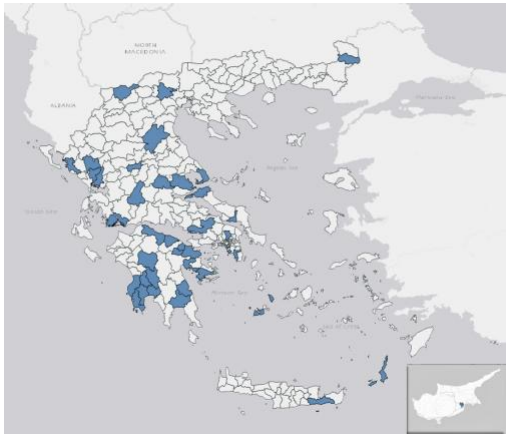
Forest fire

Meisino Park
Italy

Flood

Greek Municipalities

Power Outage



Aragon Region
Spain

Wildfires

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Pilot
Overview

1.Finland

Pilot on Forest fires in Kajaani, Finland

Prevention and preparedness for forest fires. Mapping of resources, interdepartmental procedures for evacuation, and mitigation of damages.

Pilot on forest fire and evacuation

Context and needs:

- Increasing threat of forest fires across the Nordics (Sweden 2018, Finland 2020 & 2021)
- Great travel distances, long **intervention times**
- Small population, **large rural areas**
- Limited access to **environmental data** across all departments
- Limited communication and **information sharing** across departments
- Review of **current procedures** across the departments of the City of Kajaani

Hackathons

- First hackathon. Topic: How to get **better information** about resources and expertise from private companies in forest fire? How **to reduce workload** for first responders?
- Second Hackathon with relevant stakeholders (including citizens) to analyze which kind of **data** and in which **format** (including visualizations) they need to manage and be informed about emergency situations caused by forest fire
- Third hackathon focused on KAJ and KAMK. Use of the **DECIDO portal** and the **datasets** provided by third parties.

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Pilot
Overview

2.Italy

Pilot on floods in Meisino Park and in Murazzi and on social crisis following a pandemic or the outbreak of a conflict;

Improve design of emergency policies related to the above mentioned issues.

Pilot on floods, on food waste and on asylum seekers from Ukraine

Contexts

- Ineffective **weather warnings** before possible floods;
- **Waste in the distribution of food** to families in difficulties as a consequence of the Covid19 pandemic;
- **Communication issues** in welcoming the asylum seekers from **Ukraine**; moreover the data coming from different sources do not coincide regarding the presence of refugees fleeing the war on the territory of Piedmont and Turin;
- Review of the current intervention procedures in the City of Torino.

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Pilot on floods, on food waste and on asylum seekers from Ukraine

Hackathons on floods and on food waste

- First hackathon, whose result was proposing the creation of **modular and evolutionary alert messages** starting from basic information on the weather alert and then providing - upon request - an access to other more in-depth information;

- Second hackathon, whose result was proposing the creation of **specific labels** with a similar graphic design to the labels bearing information on the energy consumption of household appliances, so that they could communicate, based on colours, how long each product will still be edible.

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Pilot on floods, on food waste and on asylum seekers from Ukraine

Hackathon on asylum seekers from Ukraine

- Third hackathon. The participants, who came from different organisations and sectors, put forward **different points of view**, which came to light thanks to the hackathon: for example, that migrants from Ukraine need to be approached differently from others, since in most cases they expect to stay in Italy only for a short time;

- So, **collecting and analysing data** on the **expectations of different national groups of migrants** towards their host country appears to be the most convincing approach for a successful reception and social inclusion;

- The **hackathon method reduces the level of conflict**, because the discussion that is generated between participants due to their different points of view is never polemical, but always constructive;

- The result of the hackathon was proposing the creation of a multilingual **information hub** capitalising on news and data from several sources, in order to identify the concrete needs of Ukrainian refugees and help them in the best possible way.

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Pilot
Overview

3.Greece

Pilot on Power Outage on the island of Halki – Greece

Power outage management of public infrastructure and cultural assets on the island of Halki via emergency response mechanisms.

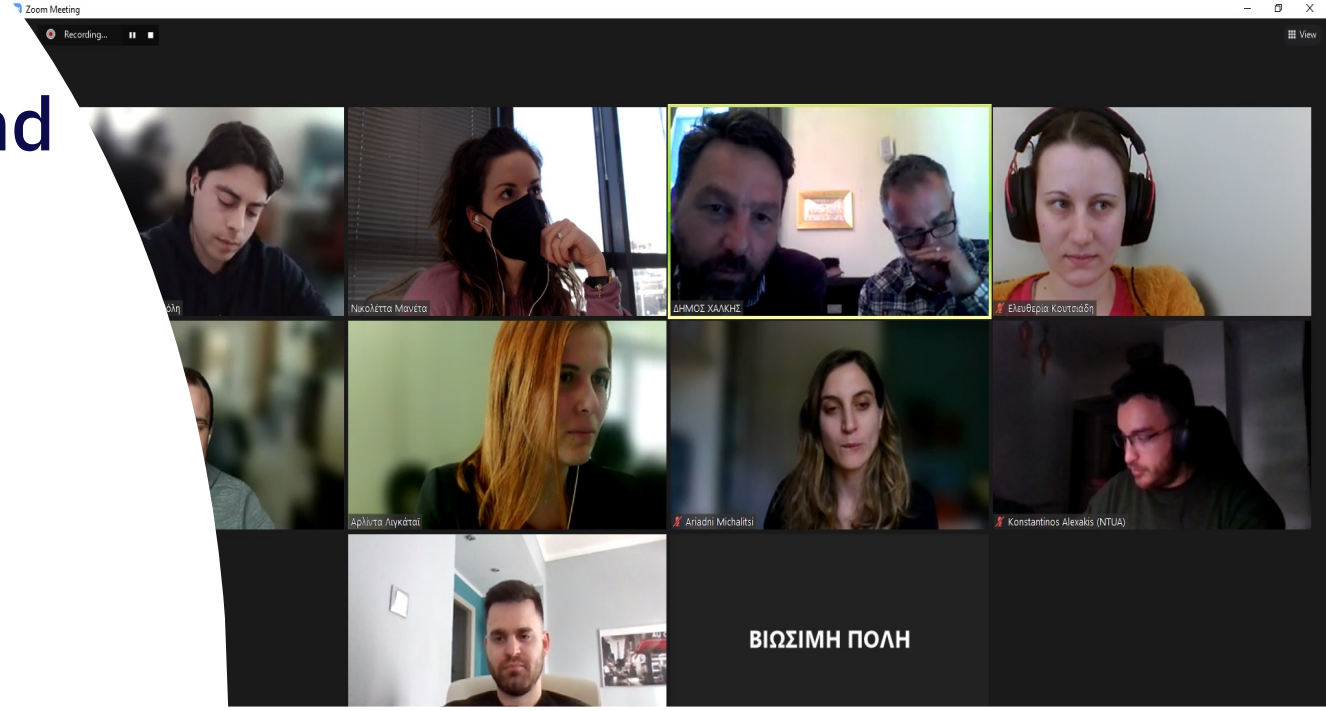
Pilot on power outage on the Island of Halki, Greece

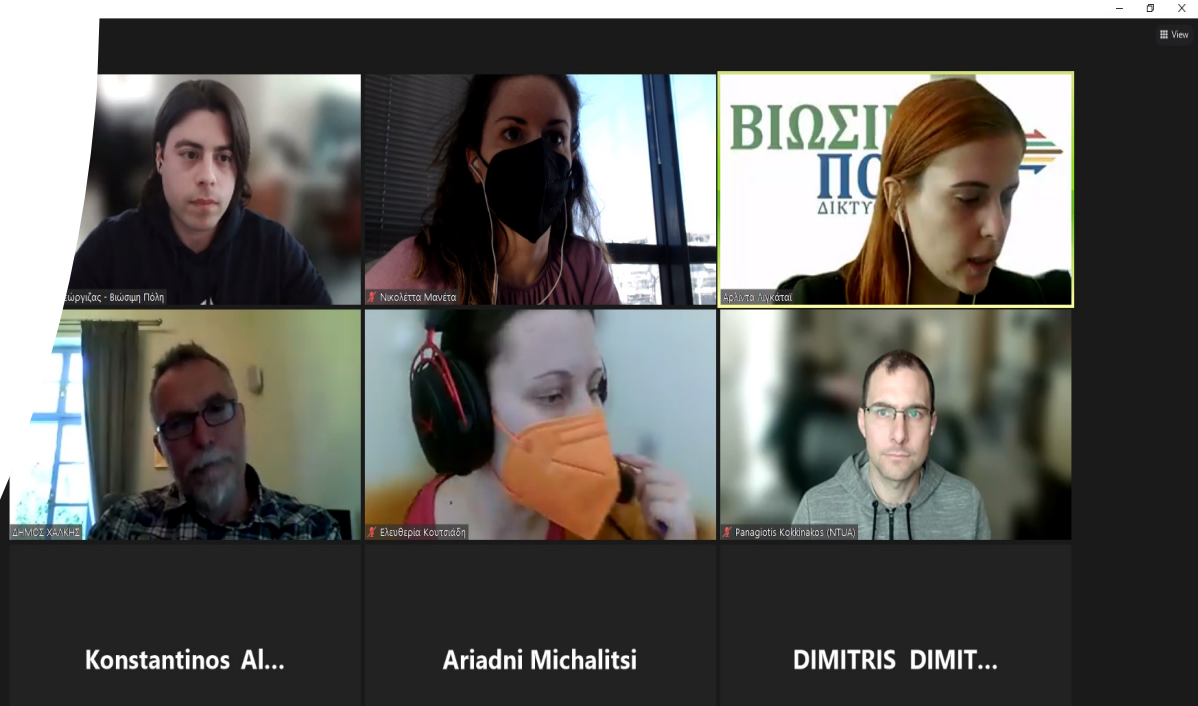
Contexts

- Frequent **power outages** due to difficulties with power distribution on Greek islands
- **Lack of** a concrete and specific **policy** for managing such events
- **Formulation** though co-creation, **adaptation** and **implementation** of a new evidence-based policy for the management of sudden power outages in the municipality of Halki

Hackathons

- First Hackathon: information about **previous power outages** and previous management policy
- Result: preparation and initial formation of the **co-creation team**





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Pilot next activities

- Create an **archive of power outages** before the beginning of the pilot in September (the island is most affected during summer due to tourism)
- **Engage** the co-creation team and **organize** co-creation session
- Use the DECIDO platform to design a **new solution** for power outage response for the Island of Halki

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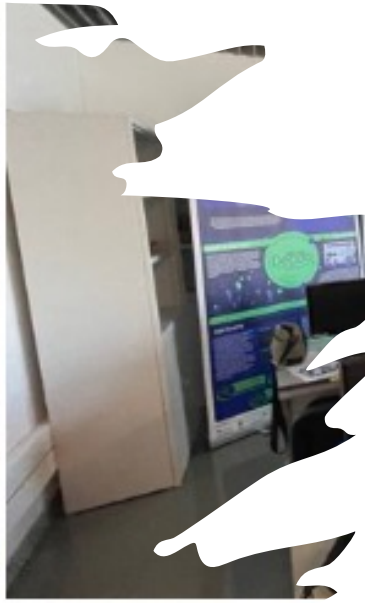
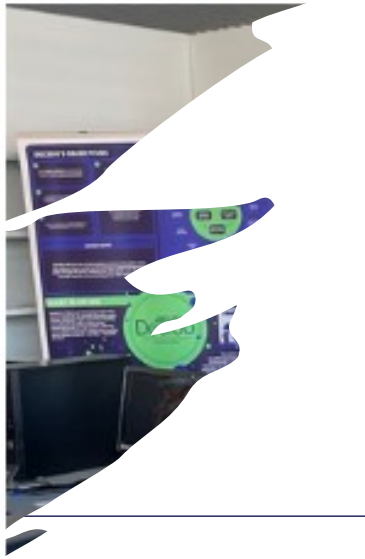
Pilot
Overview

4.Spain

Pilot on Wildfires in the Aragon Region – Spain

Improve the design of emergency policies related to wildfires and management emergency situations





Hackathon and results

- Take advantage of the **infrastructure created** in the Aragon Open Laboratory and their map of stakeholders. Look for common pathways.
- Take advantage of the Academia (University of Zaragoza) and share **DECIDO services** with them while pilot is running. Their feedback is very valuable
- Work with **citizen science associations** (like Geoinquietos), they can provide workload to map critical points / infrastructures, etc.
- Move from controlled fires to the management of emergency situations due to fog/smoke cause by wildfires. How to **communicate** is essential.

From Data to Decision-making: DECIDO methodology

Write the **storytelling** with pilot needs and challenges

EUROPEAN OPEN SCIENCE CLOUD

Understand what **services, EOSC** can provide

DATA CATALOG

Definition of the DECIDO **Data Catalogue**

Data from **Co-creation** activities

Policy **Evaluation** & **Feedback**

Improve policy based on **evidence-facts**

Visualisation of **Dashbord** to take decision

Implementation of **algoriths** to analyse those data

Definition of how to **use** the selected **data**

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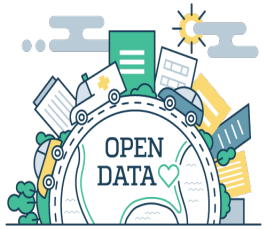
DECIDO main Results in the first year

PA Needs & Challenges

Impact Assessment Framework

Co-creation activities



DECIDO Data Catalogue

DECIDO Architecture

Ethics & Privacy Analysis

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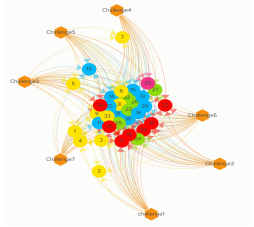
Policy-making needs & challenges

BigPolicyCanvas

SONNETS

More than 100 publications released after 2019

22 interviews



Base of Needs' List

Needs & Challenges Identification

Needs & Challenges Identification & Validation

Needs & Challenges Mapping & Analysis

Background work

Desk Research

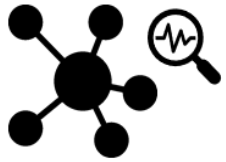
Qualitative Interviews

Content analysis

28 needs

33 needs
3 challenges

34 validated & prioritised needs
7 challenges



Needs & challenges mapping & analysis

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Policy-making needs & challenges

Interviews

Interview Questions

- Are you aware of any Big Data or Cloud services technologies that may cover part of the needs & challenges you identified before?
  - ➢**Only 33% of the interviewees answered that they use Big Data or Cloud services technologies in their professional activity.**
- Are you familiarised with the EOSC (European Open Science Cloud) services?
  - ➢only **29%** answered that they are familiar with the term
  - ➢**none of them have used any of these services**

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Policy-making needs & challenges

How will DECIDO **address** the challenges?

Employees might not be familiar with new Technologies

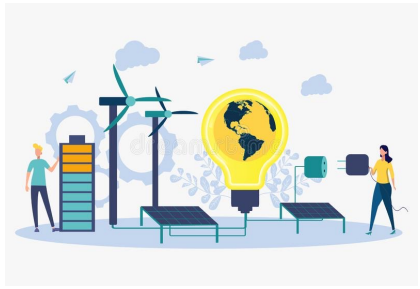
Co-Creation of a Training Plan with stakeholders

Be compliant with GDPR/legislation

Data Privacy Impact Assessment

Lack of data

DECIDO Data Catalogue



Find available resources

EOSC services & infrastructure

DECIDO solutions

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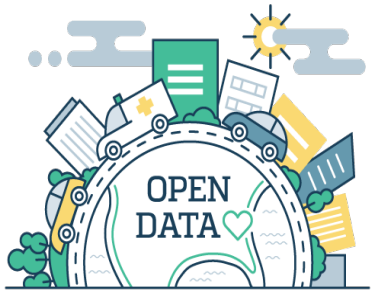
DECIDO Data Catalogue

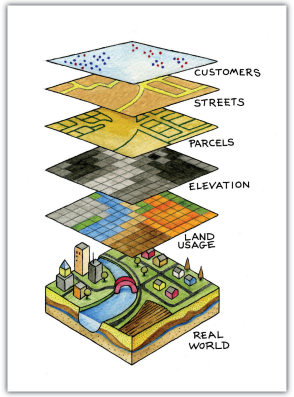
EUROPEAN DATA PORTAL

Data from EDP

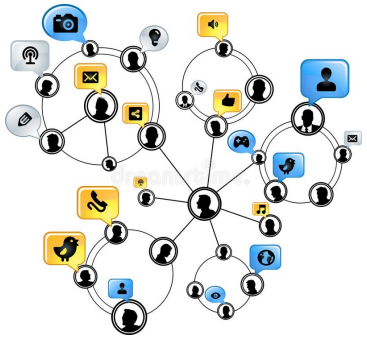


Open Data from municipalities

Data from co-creation activities



GIS data



Crowdsourced data

Satellite data from Copernicus or Corine

EUROPEAN OPEN SCIENCE CLOUD

EOSC data

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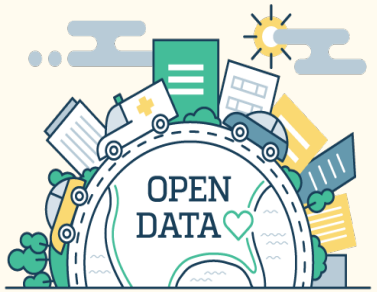
DECIDO Data Catalogue



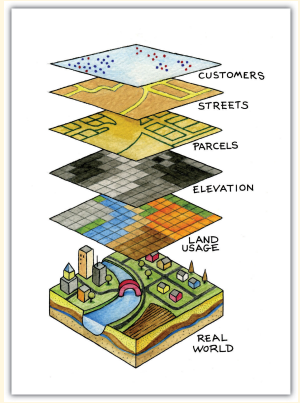
- Flood areas
- Main waterways
- Energy consumption
- Past power outages

Open Data from municipalities

EUROPEAN OPEN SCIENCE CLOUD

- Climate data
- Earthquake data
- Calendar data
- Statistical data on the mental health

EOSC data



- Flood probability
- Location and category of municipal buildings
- Local GIS

GIS data

- Land uses
- Vegetation index
- Satellite images

Satellite data from Copernicus or Corine

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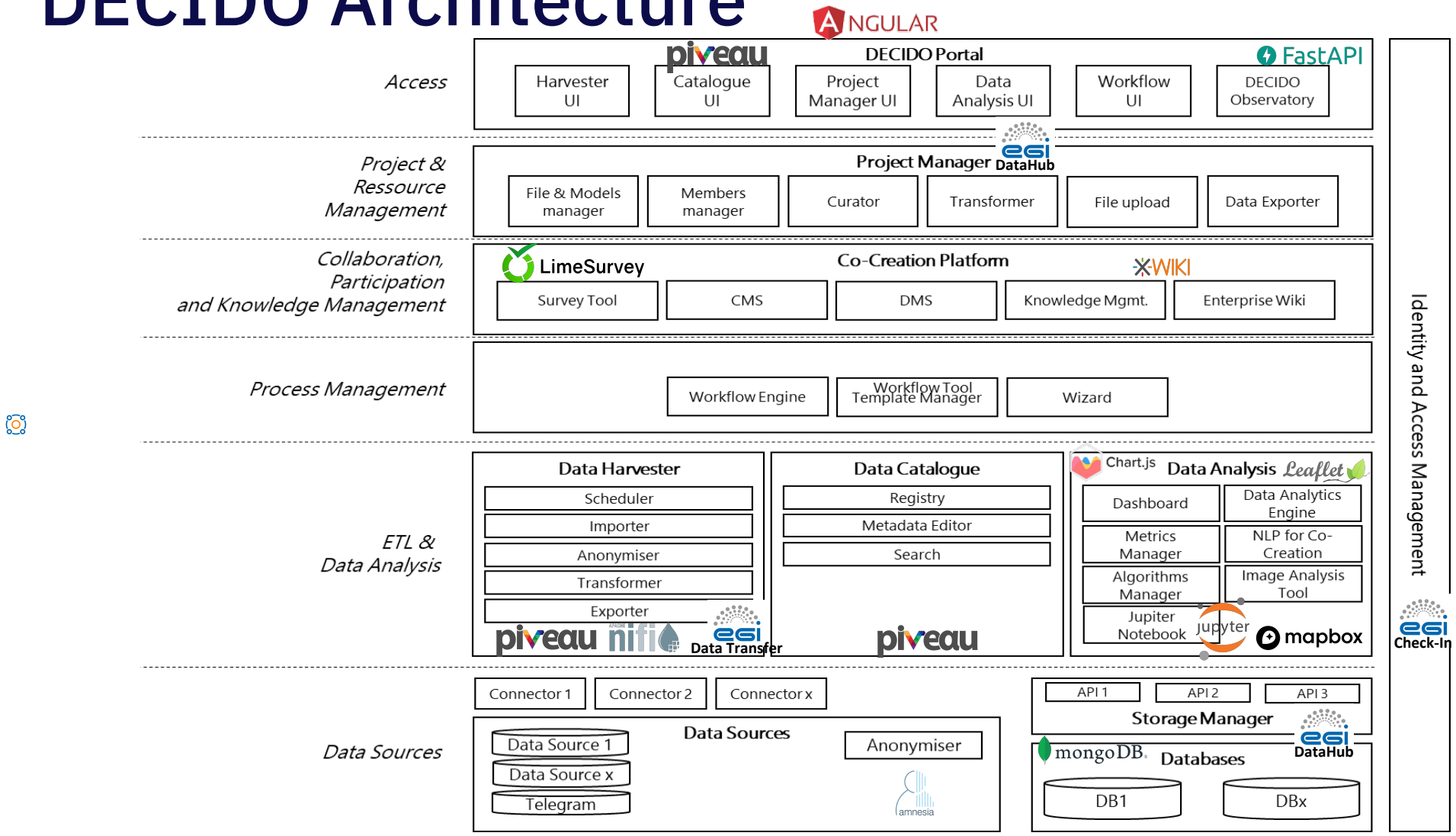
DECIDO Architecture



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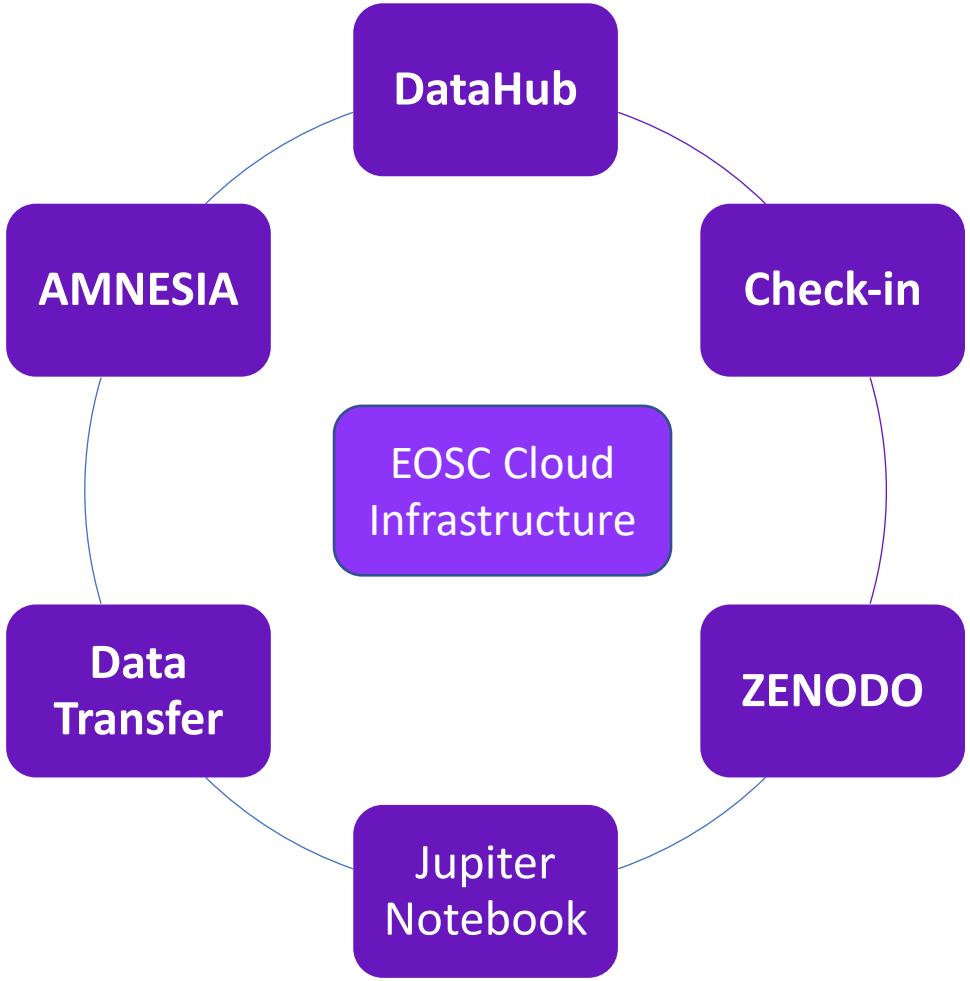
EOSC services to be used in DECIDO



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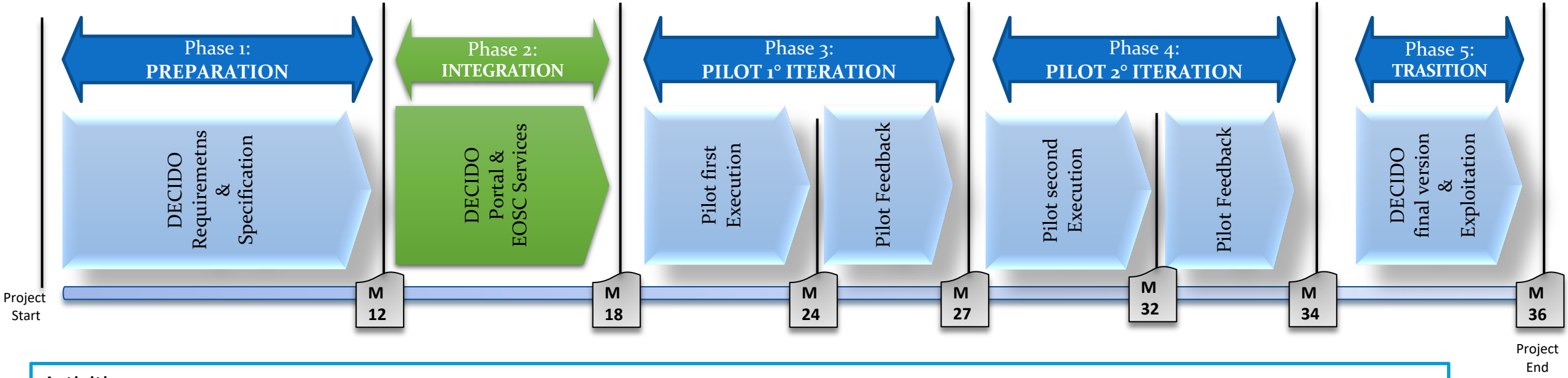
Next steps



Activities:

1. Set-up of DECIDO technical environment
2. Definition, implementation and integration of DECIDO Portal
3. Creation of DECIDO Observatory

Outputs :

1. List of EOSC services and data to be used in the pilots
2. DECIDO Portal and integration with EOSC services and data
3. DECIDO Observatory

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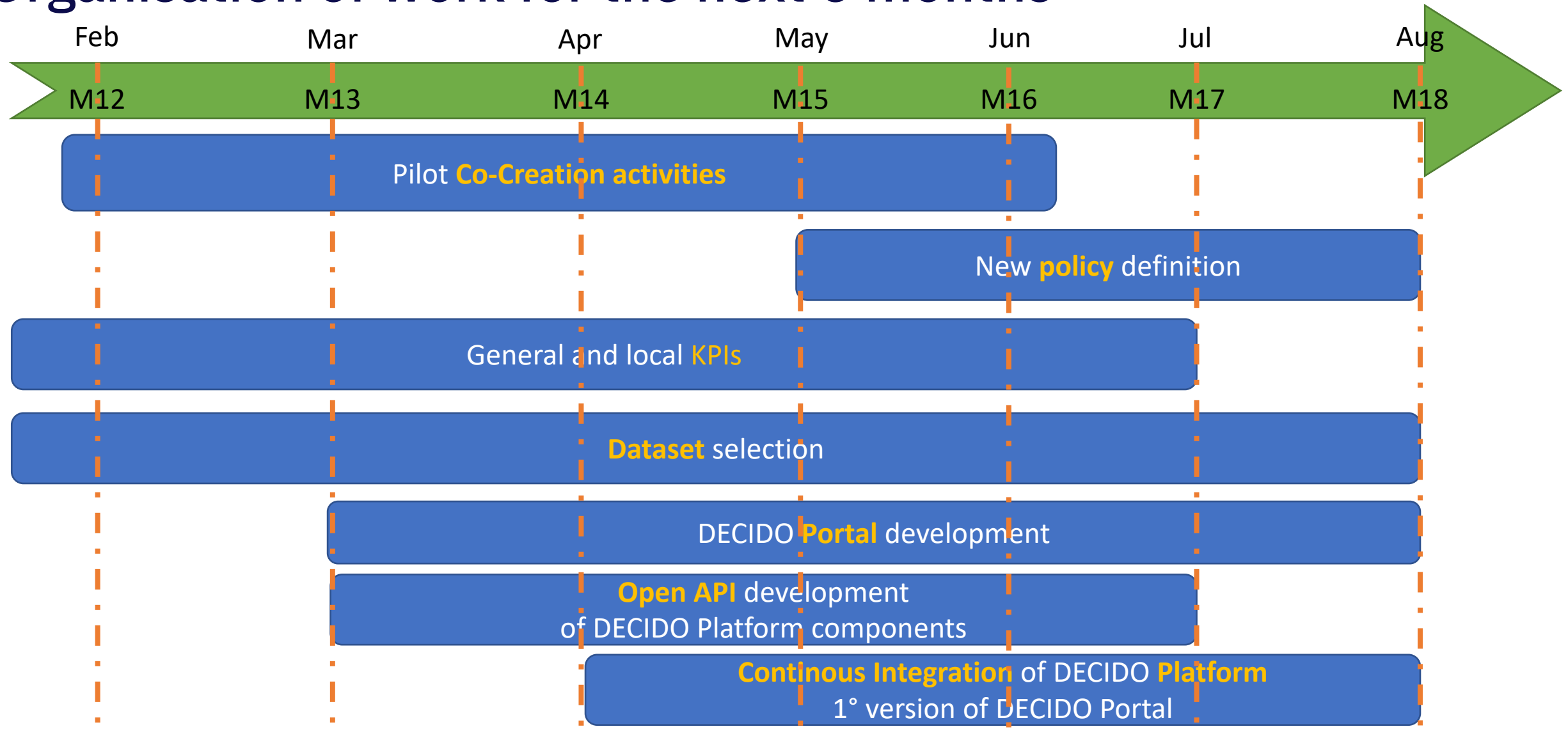
Organisation of work for the next 6 months



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THANKS FOR YOUR ATTENTION

Decido

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Website: https://www.decido-project.eu

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