



**UNIMORE**  
UNIVERSITÀ DEGLI STUDI DI  
MODENA E REGGIO EMILIA

# RE-SEARCH ALPS

A project to map labs in the Alpine region

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AG1 internal meeting Milan 06.06.2017 | 06<sup>th</sup> June 2017

# The idea behind the RE-SEARCH ALPS \_ labs as valuable assets

Scientific and technical laboratories,

research centers, innovation centers (both public and private)

- » are **pillars for the supply of scientific and technical knowledge** to the society
- » constitute an **asset** to support economic and social development.

Data on those infrastructures

- » are valuable for **enterprises, public administrations, universities, service centers**, among others
- » are **complementary in industrial policy measures** supporting SMEs in using knowledge-intensive services and research activities provided by labs in the area.

# The idea behind the RE-SEARCH ALPS \_ a web tool to access that asset

a goal of EUSALP Action Group 1

» to support with this knowledge the systemic goal to enhance innovation ecosystems

BUT this knowledge *is not available for potential users*

→ Need of a tool

» to know and map Laboratories and Research Centers in the Alpine Macroregion

→ Our solution: **Re-search Alps**

Connecting Europe Facility 2014-2020 | CEF TELECOM CALLS FOR PROPOSALS 2016 | CEF-TC-2016-2

## Three main goals:

1. definition of a set of **metadata** able to represent the relevant characteristics of **laboratories, research and innovation centers – “labs”**
2. creation of an **open dataset** describing the **“labs”** in the seven countries of **EUSALP**  
→ focus on the 48 Regions of the Alpine Area.
3. development of a **semantic and multilingual web application** for
  - » **querying the dataset**
  - » **retrieving the results** in open and structured formats and
  - » **visualizing geo-referenced data**

# Methodology\_metadata

- development of a **metadata model**
  - » **standard coding to be inserted in the European Data Portal**
- possible structure
  - » **master data section** includes all the details for identifying (legally and geographically) the entity
  - » **capacity section** includes metadata describing the size in terms of staff, facilities, funded projects, supplied services, patents, publications, ...
  - » **activity section** includes metadata reporting the research areas, the types of services supplied, the expertise, ...
  - » **cooperative section** includes Research projects for which data is available at the national or European level
  - » **publication section** describing papers available at the national or European level
  - » **patents section describing patents** available in European repositories

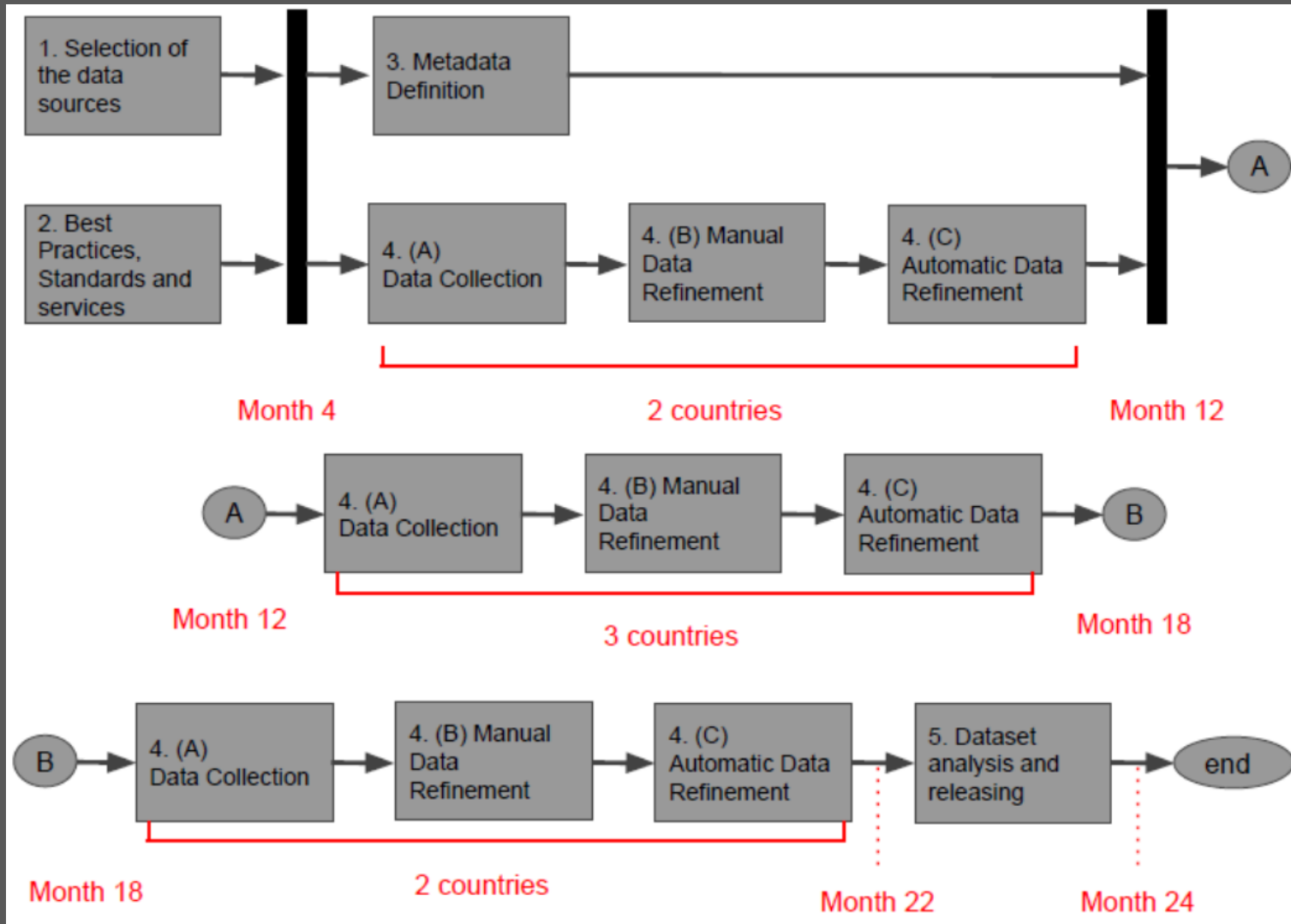
# Methodology\_integration & update

- allow to “virtually” integrate the local, national datasets, by mapping their schemas into the common dataset
- integrate in a **unique dataset** selected data which are already available in specific datasets and websites
  - » In this way, updates at the local level will be automatically propagated to the RE-SEARCH ALPS dataset and the process for generating a new release of the dataset simplified

# Methodology\_multilingual

- » since the data describing “labs” are located in different Countries → a **multilingual approach** is needed
- » keep the data in their **original form**
- » allow the users to query them
  - in the native language of the 7 EUSALP countries
  - in English.

# Project Phases





# Consortium

2 academic organizations\_ IT: UniMORE and UniMIL

1 SME\_ FR: Data Publica C-Radar

2 Ministries for research\_ MENSUR-FR and MIUR-IT data provider

supported by:

- Eusalp Action Group 1 → other PAs participating in EUSALP will be involved in the project directly as providers of data and user requirements
- AGIRE Foundation, Switzerland
- FTI Burgenland, Austria
- Ministry of Education Science and Sport, Slovenia
- Elsevier, The Netherlands, data provider (Scopus)

# Re-search Alps



METADATA DEFINITION

DATASET CREATION

DATASET QUERING AND VISUALIZATION



## DATA PROVIDERS



## Partners in Re-Search Alps

Interested users

# Eusalp National and regional authorities\_role

- Re-Search Alps **needs** the support of EUSALP authorities that
- » indicate already existing solid / certified data collections;
  - » provide a list of research centers, existing and active in their areas, and facilitate the communication with them;
  - » become testers and then users of the developed tools;
  - » participate in project meetings;
  - » help in the dissemination and communication process.

**UniMIL** will manage the communication  
between  
Re-Search Alps and EUSALP members

# How to contribute now!

- We need national/regional **datasets** and **list of websites** describing labs and their research activities
- Please fill in the form available at
- <http://bit.ly/RAproject>

# Re-Search Alps goals **meet** Eusalp\_goals

Two key objectives established by EUSALP (especially AG1)

- » to know and map Laboratories and Research Centers all across the Alpine Macroregion
- » to carry out comparative analysis while developing useful tools for users (enterprises, public administrations, universities, service centers, among others)

**Re-Search Alps can support the achievement of EUSALP objectives with**

- » a dataset of Laboratories and Research Centers insisting in the Eusalp AREA
- » a query engine for an easy access to the dataset
- » a tool for visualizing geo-referenced data

## Further steps

- July 2017: kick-off of the project with the collaboration of Eusalp countries and regions!

**Thanks for your attention**

**Q&A**

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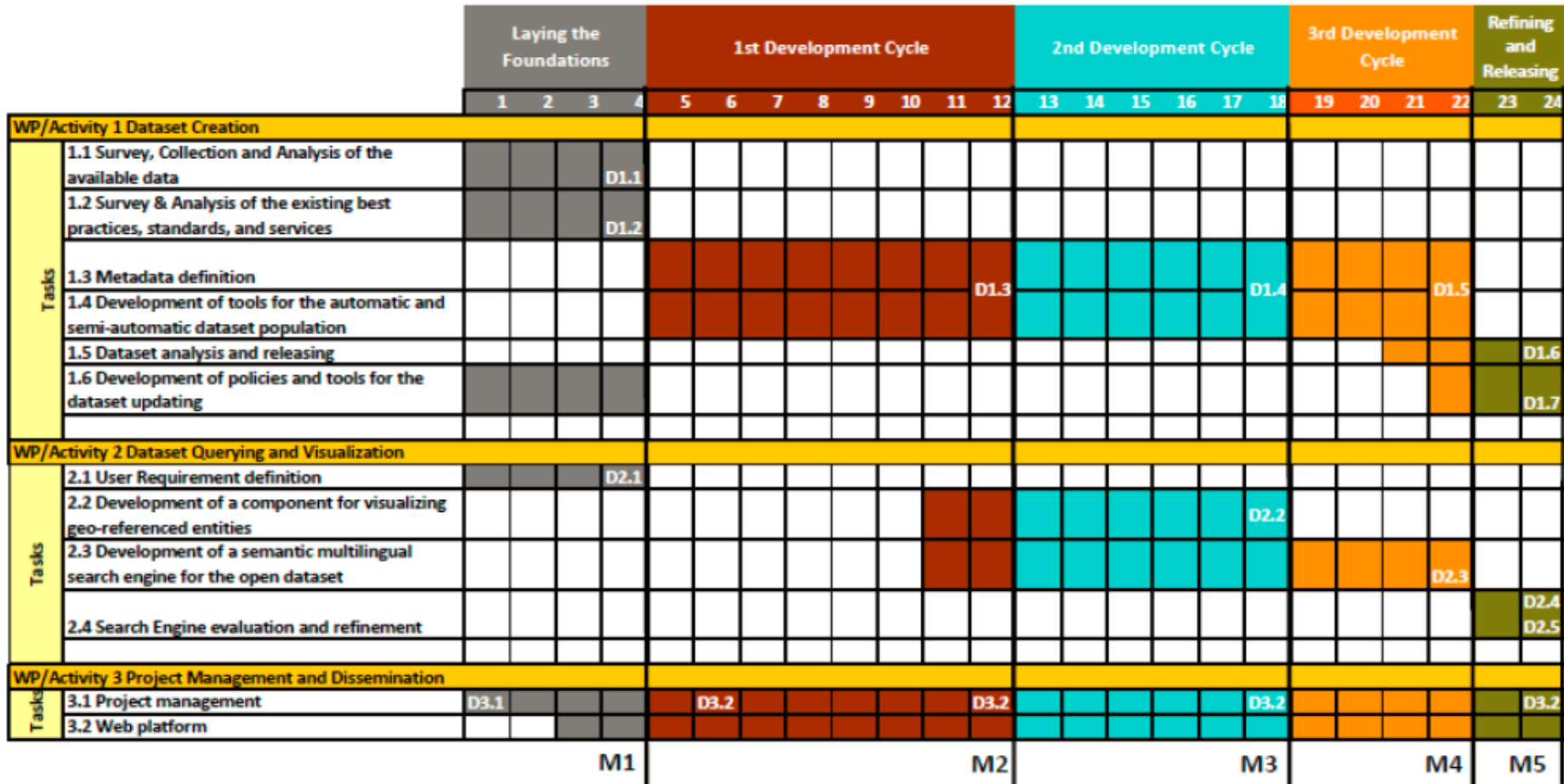
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# Project Phases\_details

- Phase 1) **Laying the Foundations**: this phase lays out the foundations, thus **surveying the available datasets, analyzing the available building blocks to be included in the project and defining the user requirements for the querying and visualization search system.**
- Phase 2) **1st Development Cycle**: in this phase, the **set of metadata and the dataset describing laboratory, innovation and research centers related to a partial number of countries** (at least 2) will be released. The first development phase includes also the development of the software tools that will be extended and adopted in the other phases for the inclusion of the rest of the countries in the dataset / metadata.
- Phase 3) **2nd Development Cycle**: in this phase the metadata and the dataset describing the labs will be enriched **by including new countries** (3). Moreover, we will achieve the first results related to the software applications, with the **release of the component for visualizing georeferenced entities** and the first version of the **component for querying the dataset.**
- Phase 4) **3rd Development Cycle**: in this phase, the metadata and the dataset will be completed by including the data related to the last countries. The data will be accessible by the users through the query engine developed in the project.
- Phase 5) **Refining and Releasing the Dataset and the Search and Visualization Engine**: in this phase, the dataset will be analyzed to **discover possible inconsistencies and outliers.** The software components will also accurately be tested to discover possible bugs and **improving the usability.**



# Gantt



		Participants			
		UNIMORE	DATA PUBLICA	UMIL	MENESR MIUR (& other PAs)
<b>WP/Activity 1 Dataset Creation</b>					
Tasks	1.1 Survey, Collection and Analysis of the available data	L	P	P	P
	1.2 Survey & Analysis of the existing best practices, standards, and services	L	P	P	P
	1.3 Metadata definition	L	P		
	1.4 Development of tools for the automatic and semi-automatic dataset population	P	L	P	P
	1.5 Dataset analysis and releasing	L	P	P	P
	1.6 Development of policies and tools for the dataset updating	P	P	L	
<b>WP/Activity 2 Dataset Querying and Visualization</b>					
Tasks	2.1 User Requirement definition	P	L	P	P
	2.2 Development of a component for visualizing geo-referenced entities			L	
	2.3 Development of a semantic multilingual search engine for the open dataset	P	L		
	2.4 Search Engine evaluation and refinement	L	P	P	P
<b>WP/Activity 3 Project Management and Dissemination</b>					
Tasks	3.1 Project management	L	P	P	P
	3.2 Web platform	L	P	P	P

# Milestones\_m.4 & m.12

- **M1 (m.4) Project's Foundations Laid:** The preliminary phase of the project is completed. This phase aims at (1) surveying the data and metadata available at the national level, (2) learning about the last best practices and standards defined by the Share-PSI network, W3C and INSPIRE, (3) collecting the user requirements for the software component for querying and visualizing the open dataset. All the information will be available to the partners via the public deliverables and internal project documents and website
- **M2 (m.12): 1st Development Cycle Completed:** the first partial project results, i.e. a set of metadata and a dataset describing Laboratories and Research and Innovation Centers related to two EUSALP Countries, will be released. The metadata will follow the best practices and the standards proposed by Share-PSI network, W3C and INSPIRE. The dataset will be built according to two main methodologies: virtual integration of the schemas of the existing data sources, copy and replication of the data via ETL processes. The software tools and the methodologies adopted in this phase will be extended and adopted in the subsequent project phases.

# Milestones\_m.18 / m.22 / m.24

- **M3 (m.18): 2nd Development Cycle Completed:** in this milestone, the second partial project results (i.e., the metadata and dataset describing Laboratories and Research and Innovation Centers related to five EUSALP Countries) will be obtained. This milestone will also provide the component for visualizing geo-referenced entities
- **M4 (m.22): 3rd Development Cycle Completed:** in this milestone, the complete metadata and dataset describing the EUSALP region will be obtained. Moreover, the Search and Visualization Engine released in this milestone will allow users directly querying the dataset.
- **M5 (m.24): Final release of the Search and Visualization Engine.** in this milestone, all the project outcomes are released in their final version: the dataset and metadata are refined and the software application integrates the querying and the visualization components. Strategy for keeping the project outcomes updated, disseminated and available beyond the completion of the project have been designed and implemented.