



FAIR4Health: Improving Health Research in EU through FAIR Data

Swiss Research Data Day 2020

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Online

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FAIR4Health Consortium

Coordinated by **Virgen del Rocío University Hospital, Andalusian Health Service (SAS)**

17 partners from **11 EU and non-EU countries**

- 6 health research organisations
- 2 universities, experts in data management
- 4 academic partners with strong background on medical informatics
- 5 business actors



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FAIR4Health Project

- ❖ To **facilitate and encourage** the EU Health Research community **to FAIRify, share and reuse** their datasets derived from publicly funded research initiatives.

- ❖ **FINDABLE**
ACCESSIBLE
INTEROPERABLE
REUSABLE

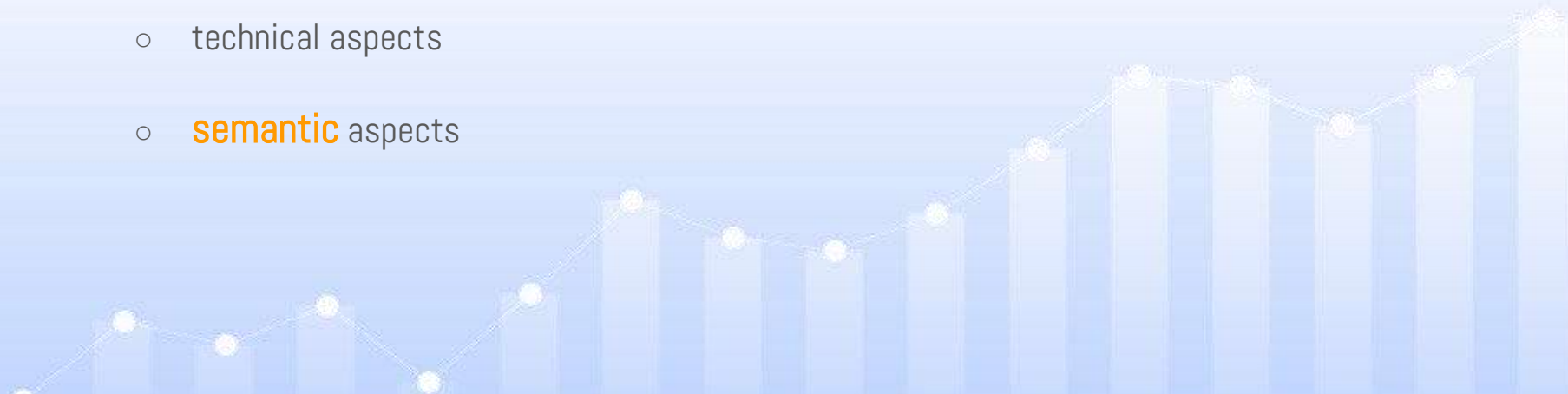
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Objectives

1. To design and implement an effective **outreach strategy at EU level.**
2. To produce a **set of guidelines** to set the foundations for a **FAIR data certification roadmap.**
3. To develop and validate an intuitive, user-centered **FAIR4Health platform and FAIR4Health agents.**
4. To demonstrate the potential **impact in health research and health outcomes.**

Challenges

- ❖ Sharing **meaningful** data is an important challenge in the field of personalized medicine.
- ❖ Various aspects should be taken into account:
 - legal and ethical aspects
 - technical aspects
 - **semantic** aspects



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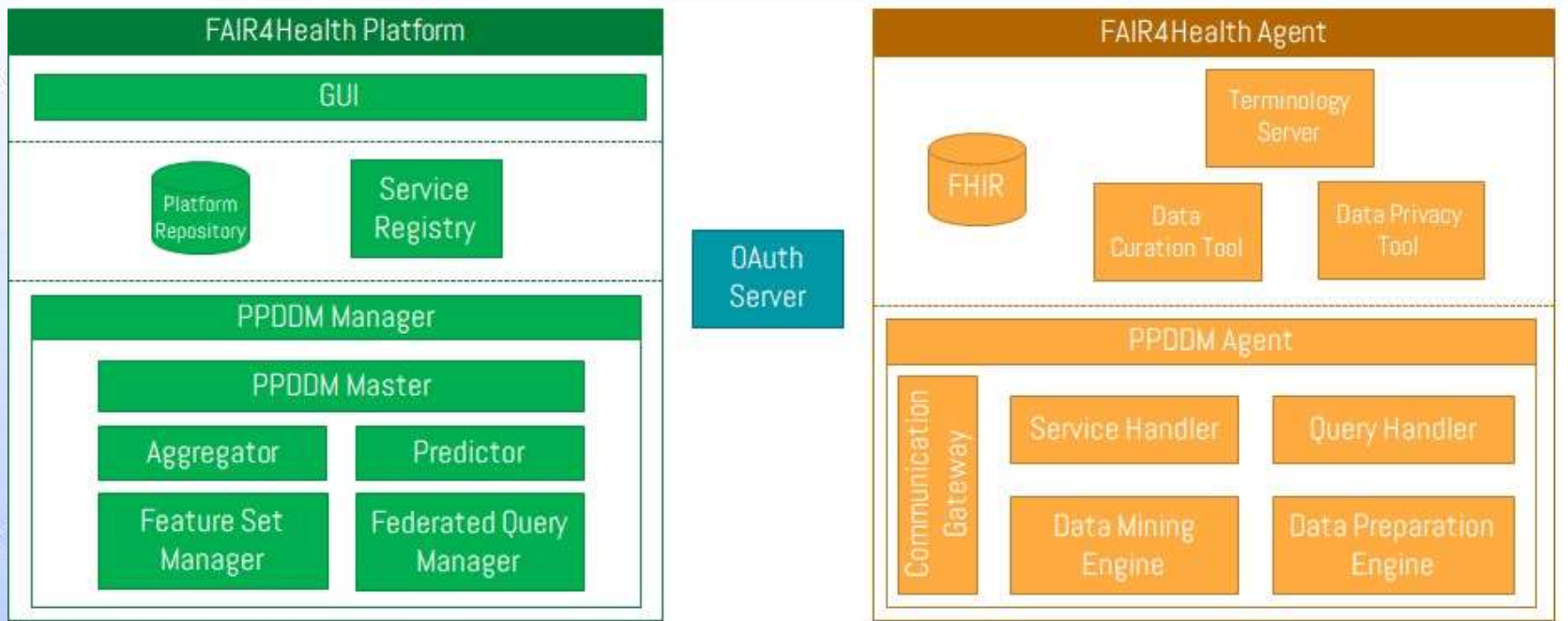
FAIRification tools

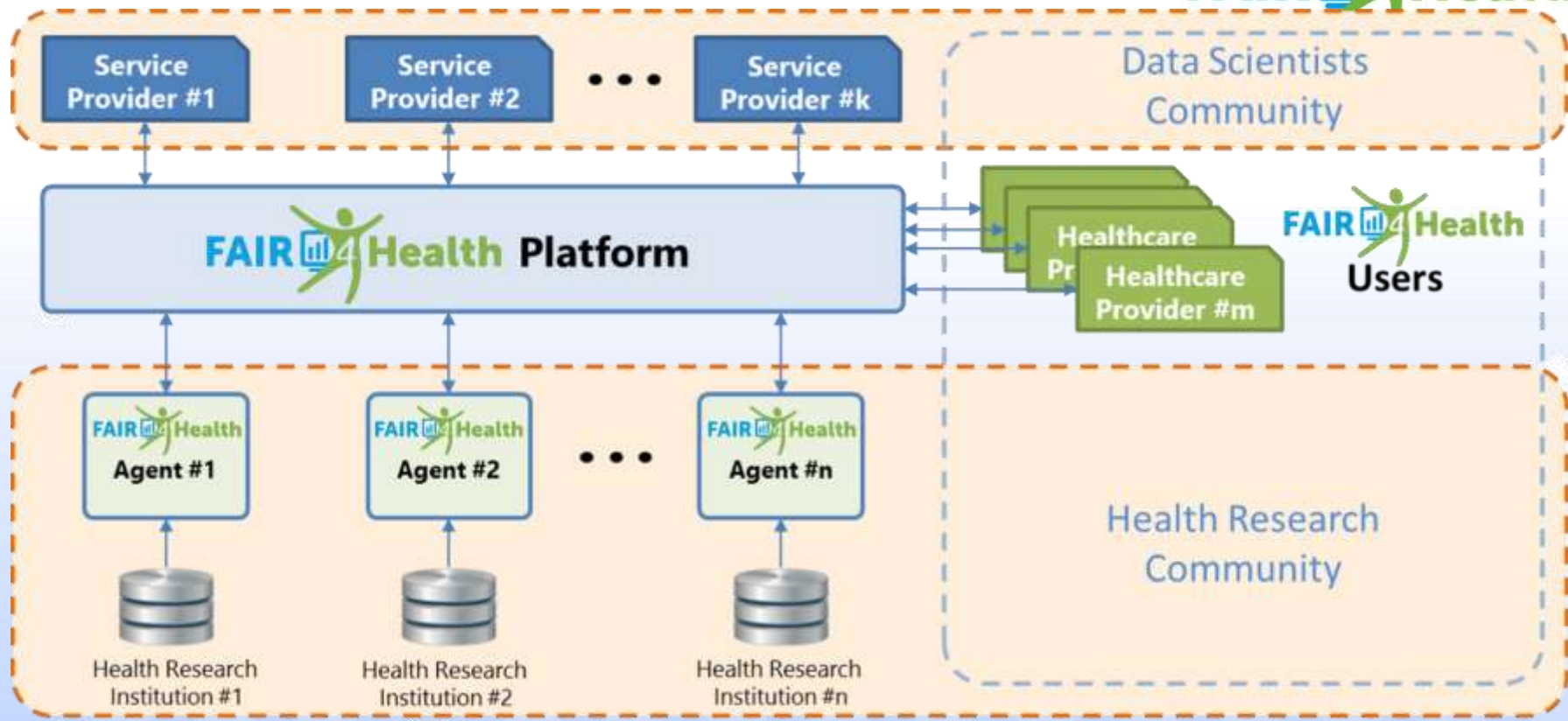
- ❖ FAIRification tools enable users to transform the raw data into FAIR datasets.
- ❖ They are composed of:
 - FHIR repository
 - Health Digital Terminology
 - concept translation and mappings (SNOMED CT, LOINC, ICD, etc.)
 - Data Curation & Validation tool
 - connect health data sources and migrate data into a HL7 FHIR Repository
 - Data Privacy tool
 - privacy challenges on sensitive health data via de-identification & pseudonymization techniques

Technological Platform



To enable the translation from raw data to FAIR data, a user-centered FAIR4Health platform and FAIR4Health agents are being developed.





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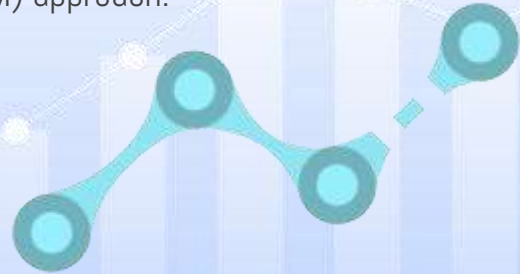
Pathfinder Use Cases

To validate the FAIR4Health platform and demonstrate the feasibility of FAIRifying medical research data, two pathfinder case studies prototypes will be performed on real medical data:

#1 To support the **discovery of disease onset triggers and disease association patterns** in comorbid patients and **demonstrate the reproducibility of research.**



#2 To develop and pilot a **prediction service for 30-days readmission risk** in COPD patients making use of a privacy preserving distributed data mining (PPDDM) approach.

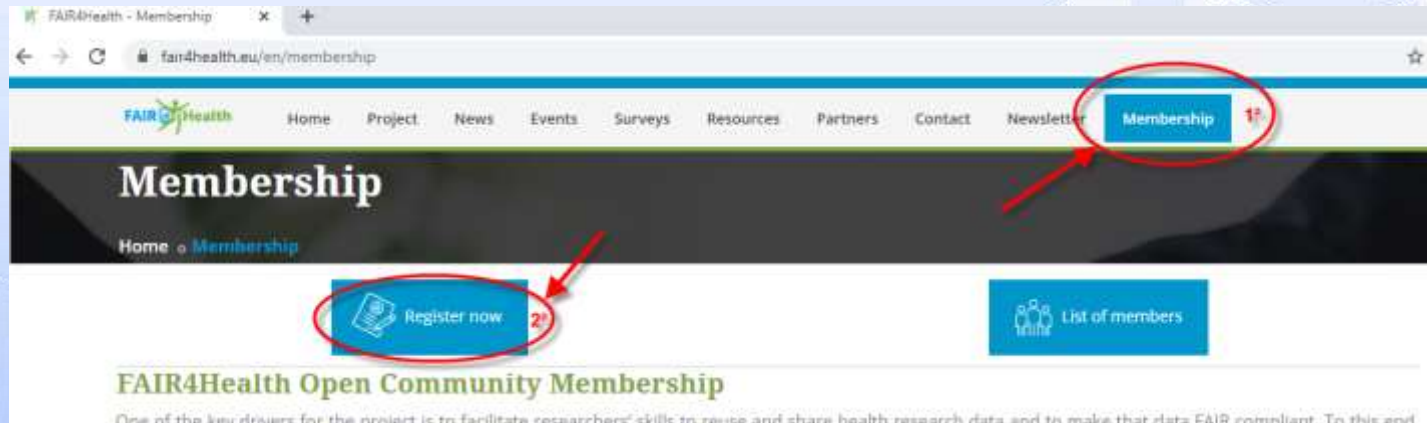


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Join the FAIR4Health Open Community!

On behalf of FAIR4Health project, we would like to invite you to register as **FAIR4Health Open Community Member**.

In this section into FAIR4Health website: <https://www.fair4health.eu/en/membership>, you will find the Membership definition, a button to register as a new member, and a button to check the current list of members.



FAIR4Health

THANK YOU!



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www.fair4health.eu

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