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OPENSCIENCEFAIR
PORTO, September, 17th, 2019
Fostering a FAIR Research culture – What works?

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Issues to solve / Objectives (Fostering)

- **Issues** (specific issues to the medical research domain)
- FAIR data are scattered (the strategy is progressing only in fits and starts, with what is required to obtain funding) not so findable, not so accessed, not so interoperable, not so reusable, large European infrastructures (such as ELIXIR and BBMRI) play an important role to ease FAIRification and provide the necessary services to every community → make it **broader** !
- Quality checks, security, safety, reliability, privacy preserving of personal and sensitive data have a **cost** and orientate the FAIR strategy
- Confronted to **very different policies** all over Europe
- Ensuring **privacy preserving** during data analysis (machine learning), workflows, models and metamodels, graphs, data exchanges

- **Objectives**
- 13 Biological and Medical Research Infrastructures in Europe (ELIXIR, BBMRI, EATRIS, ECRIN, EMBRC, ERINHA, INFRAFRONTIER, INSTRUCT..) aim at sharing and reusing, publishing their datasets, as FAIR data resources within well defined case studies (all data made available will be FAIR.)
- The FAIR availability of Europe's life science data is critical to ensuring the reproducibility of biomedical research outcomes

Approach to foster FAIR culture

- Work on competences for FAIR (terms4fairskills)
- Developing a FAIRassist tool (built iteratively as an information and educational resource);
- Developing a common provenance model for processing biological material, data generation and computational workflows
- A metadata catalogue (also referred to as registry)
  - a database collecting and integrating metadata from several resources to facilitate the discovery of third party data
- FAIR enabling components and services registry
  - defines things that other resources need to reference or use to be(come) FAIR

➢ **Coordinate the efforts within the FAIR ecosystem: RDA, CODATA, GOFAIR, FAIRsFAIR, the NIH Commons**

Results to foster FAIR culture: what works / what did not work / proposed improvements

- **Successes**
  - For all the datasets we have referenced metadata, ontologies
  - AI / PID (Persistent Identifiers) Services / Research objects -> common formats
  - Data catalogues (Repositories/Registries) → access mechanisms
  - Data Management Plans
  - Trainings (a lot of training incentives but not enough coordinated to achieve complementarity)
  - Promoting standards (such as ISO TC276)

- **Failures**
  - Financial means ! (sustainable funding)
  - Ensuring security, reliability, privacy is still a barrier for adopting FAIR culture
  - Lack of open data valuation (resources valuation, quality process valuation…)
  - Competition between the EOSC projects / redundancies….lack of coordination

- **Improvements**
  - A clear (unique) roadmap to Open science in practice & liaisons in every European research institute: Research Infrastructures are “doing it for themselves” but the application of their results to their multiple users coming from various research institutes, remains informal.

Quest for the Holy Grail (FAIR everywhere for everyone) / SWOT

Using a SWOT fosters evangelisation (extensibility)