

IoTWeek

Dublin — June 20-23, 2022



ITI INVESTIGATE
TO INNOVATE

Innovating in the era of Trustworthy AI

Daniel Alonso

Responsible Promotion and Positioning ITI

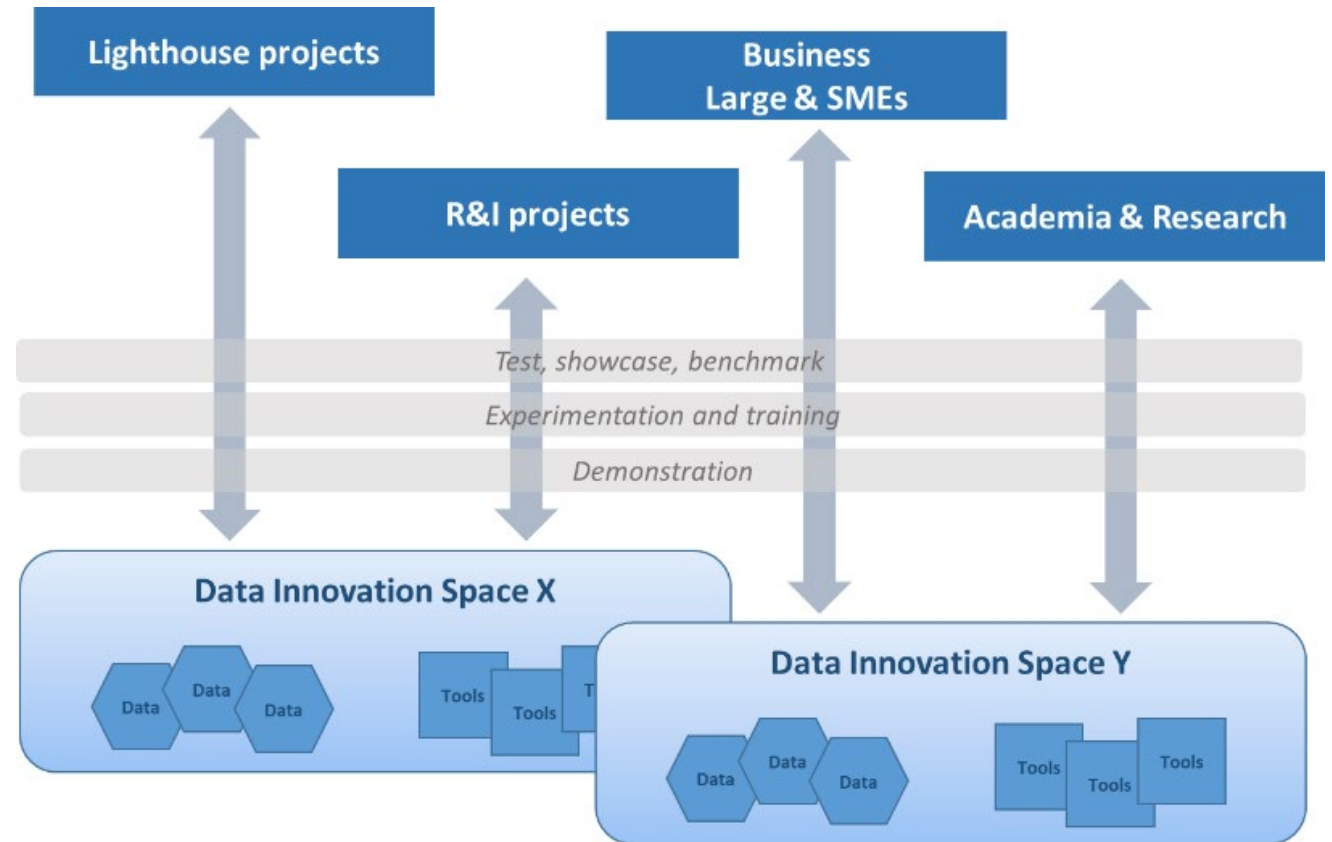
Chair of BDVA i-Spaces

Coordinator of EUHubs4Data

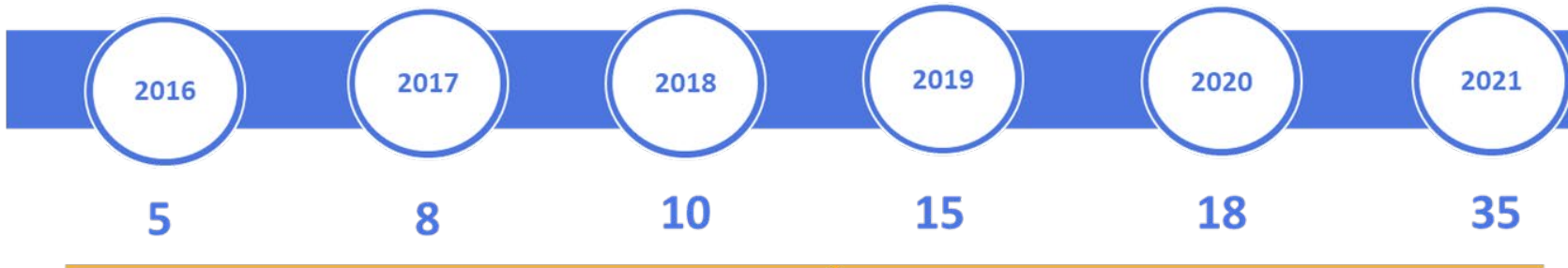
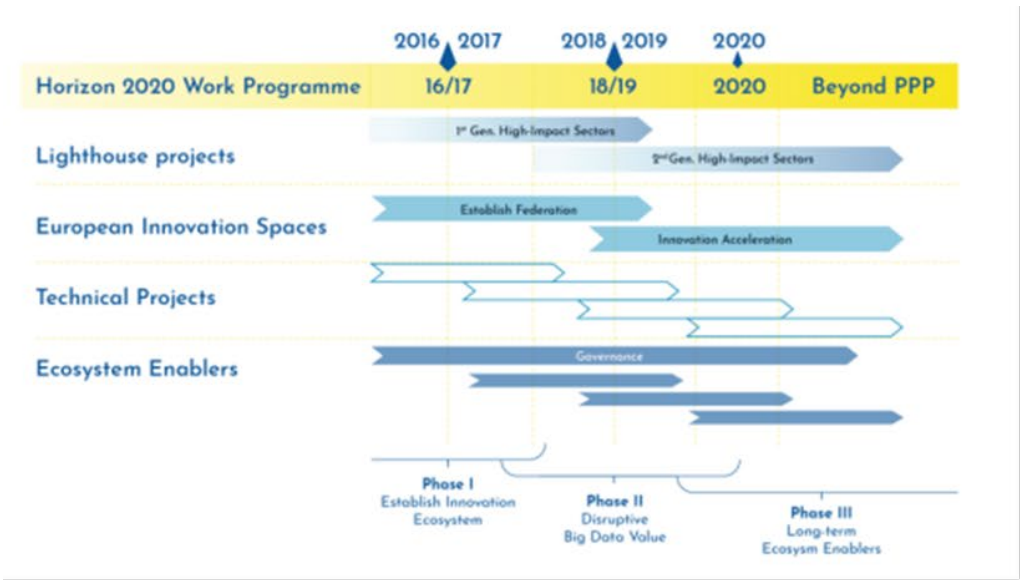
GLOBAL VISION:

IoT TODAY AND BEYOND

IoTForum

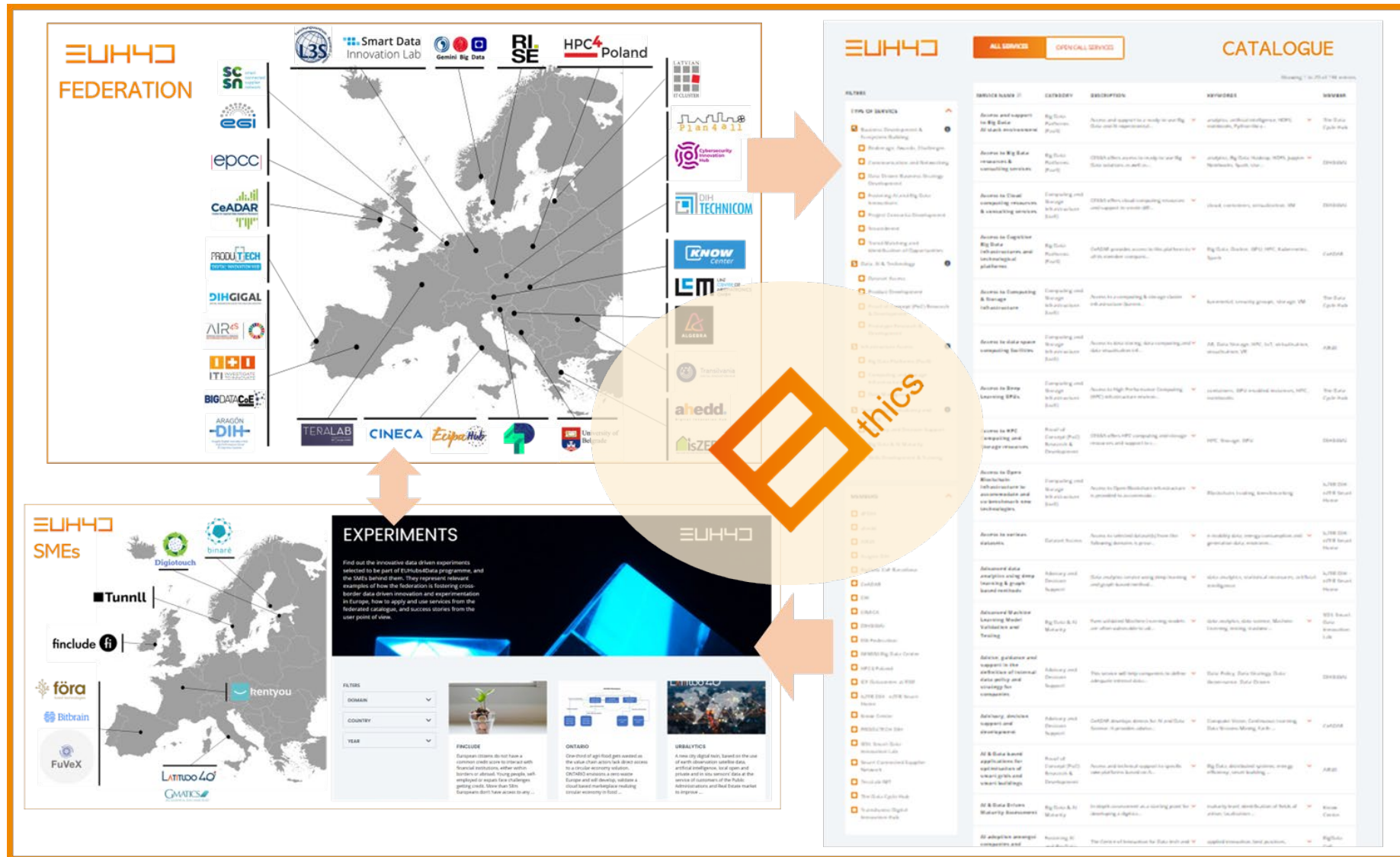


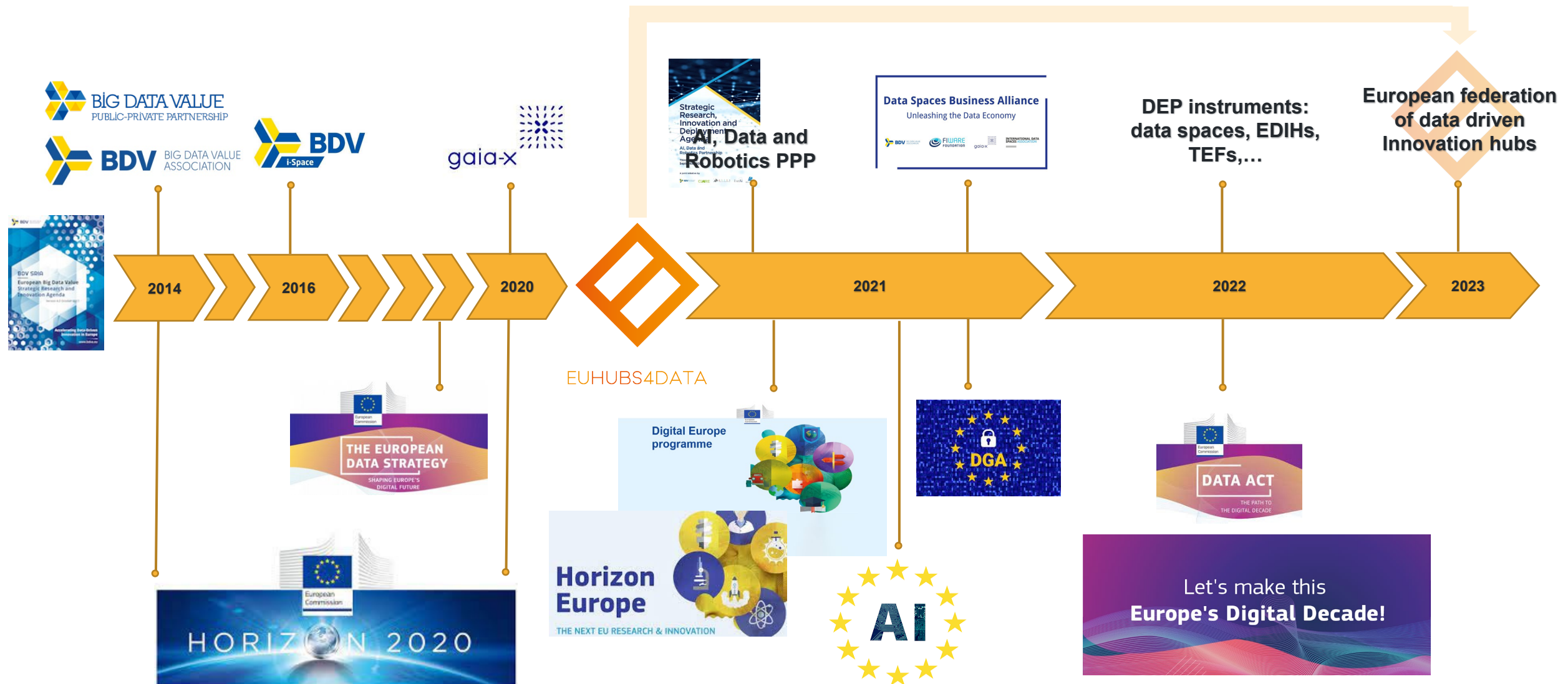
Experimentation environments to allow small actors (SMEs, start-ups, ...) to have their data driven solutions quickly tested, piloted and exploited before going to the market

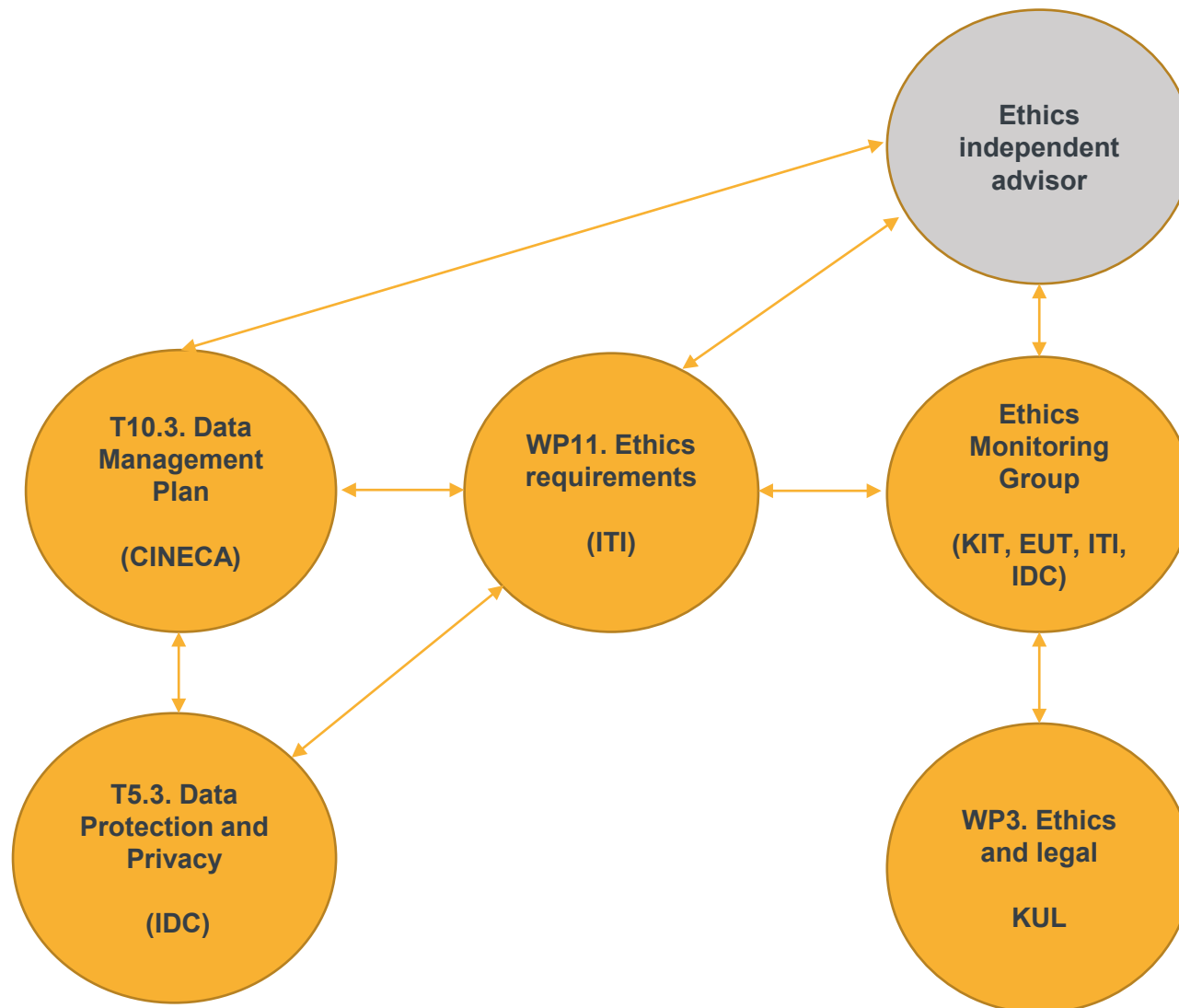


**Federation of
i-Spaces / data
driven hubs**









- Ethics monitoring group created
- External Ethics Advisor selected and hired
- Defined process to assess applications and selected experiments
- Monitoring of experiments
- Assessment of critical ethical issues arising during the project

- Data management of sensitive personal data
- Processing of potentially sensitive personal data
- Specification of the Datasets used
- Missing data set description
- Unclear GDPR applicability
- Contractual basis for processing of public personal data
- Sensitivity of potentially used data sets
- Ineffective/unclear anonymization
- Consensual processing of personal data
- Ethical and Legal expertise in the medical domain
- Dual Use or potential danger of abuse of the results
- Potential use of AI in medical applications
- Potential ethical concerns related to the environment
- Project timeline and potential checkpoints
- Discrimination based on sociodemographic data
- Responsibility and safety
- Application of the GDPR to historic data sets
- Opacity in automated decision making

Ethics a major concern in data driven innovation ... appropriate measures to be taken (with the help of the DIHs)

... probably all mostly uncritical and/or handled , but we wouldn't have known without the experiments

The biggest risk we see is unawareness and lack of experience of most SMEs

- Biometric identification system (without agreement**)
- Critical infrastructure
 - road traffic, water, gas, heating and electricity
 - digital infrastructure**
 - emission/pollution control**
- Education and vocational training
 - Admission
 - Assessment & Steering**
- Employment
 - Recruitment&Selection
 - Performance evaluation
- Access to public & private services
 - Benefits
 - Creditworthiness
 - Emergency Response
 - Insurance Premiums/Claims
- Law enforcement
 - Offender / victim /crime prediction & profiling
 - „lie detectors“
 - detect deep fakes
 - Reliability of evidence estimation
 - ~~Big data forensics**~~
- Immigration
 - Profiling
 - Document forensics
 - Eligability checks
- Judicial authorities
 - Interpreting the law

Guess how many EUH4D experiments in the first round would fall into one of these categories ...

High-risk AI systems

FINCLUDE

INDIVIDUAL
CREDITWORTHINESS
ASSESSMENT PLATFORM

COMPANY	DOMAIN
FINCLUDE	FINTECH
COUNTRY	YEAR
IRELAND	2021



LONG RANGE PLANNER

LONG-RANGE DRONES
MISSION PLANNER TO
ENHANCE POWER LINE
DIGITIZATION

COMPANY	DOMAIN
FUVEX	ENERGY
COUNTRY	YEAR
SPAIN	2021



IOT-SESOD

IOT SECURITY SOFTWARE
DATA:FOUNDATION FOR
SECURE/TRUSTWORTHY
DIGITAL EUROPE AND EU
CYBERSECURITY

COMPANY	DOMAIN
BINARE OY	CYBERSECURITY
COUNTRY	YEAR
FINLAND	2021



- High-risk AI systems developed on the basis of training, validation and testing data sets that meet the quality criteria
- Training, validation and testing data sets shall be relevant, representative, free of errors and complete
- Appropriate statistical properties, including, where applicable, as regards the persons or groups of persons on which the high-risk AI system is intended to be used

**i-Spaces might be the only way to
achieve this ...**

- Advanced Machine Learning Model Validation and Testing
- Design and development of AI models, their training and validation
- MLOps Infrastructure

→ Continuous testing at the core of risk management

- Assessment on data governance
- Assessment on ethical aspects of AI
- AI Consulting
- AI Training & Consulting for data-driven strategy
- Consultancy for Architecture Specification

→ Appropriateness of measures & best practices...

We really want to see ethics as an innovation opportunity!

- Outcome of the project: ethics handbook for practitioners
- Ethics as a service -> ethics innovation
- Service catalogue including more specific services
- EUH4D / i-Spaces as a unique testing environment where to assess AI risk, check data governance, ... -> regulatory sandboxes

Learning from the collaboration with other initiatives, addressing needs of regional companies, adapting EUH4D offer to regional specificities.
Already in place:

- Training services in ethical and regulatory aspects around health applications
- Ethics assessment
- Support to the development of unbiased AI applications
- Customizable technological infrastructure for the development of AI experiments

- Early to know if AI regulation will boost innovation ... SMEs are barely aware of this ...
- But definitively includes additional steps in the development, testing and experimentation phases
- Regulatory sandboxes concept fits perfectly with i-Spaces
- i-Spaces are not only useful, in some cases the most appropriate
- EUH4D, i-Spaces group and individual i-Spaces are already working on that ...



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Thank you!

Find more:

www.iti.es

<https://thedatacyclehub.com/en/>

<https://euhubs4data.eu/>

dalonso@iti.es

iotweek.org