



[www.egi.eu](http://www.egi.eu)



@EGI\_eInfra

## AI Experiences on the EGI

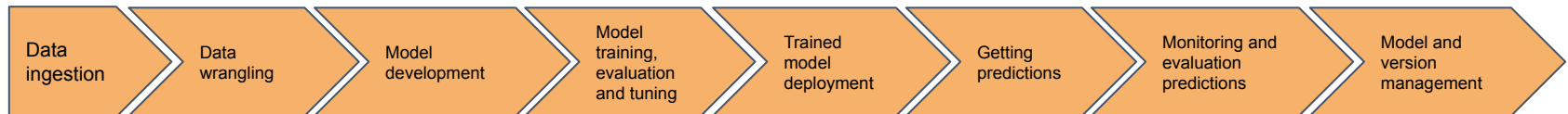
*20th October 2021*

Ville Tenhunen



The work of the EGI Foundation  
is partly funded by the European Commission  
under H2020 Framework Programme

- AI/ML is becoming day after day more usual in projects, services etc.
- EGI is already involved in a series of AI/ML projects that would facilitate the uptake and the support of AI/ML within the EGI infrastructure
- Supporting the uptaking of the AI/ML in the researcher world is a natural action for EGI according to its strategy



- European initiatives on AI
  - Strategies on AI
  - EOSC + GAIA-X; Federative initiatives in Europe
  - Horizon Europe and other funding mechanisms
  - Development on regulations
- Continuous technology development
- Concept development (i.e. on-demand platforms, service layers etc.)
- Open science and FAIR data requirements (incl. FAIR ML models)
- User needs and requirements

## EGI-ACE

EGI-ACE delivers the EOSC Compute Platform and contributes to the EOSC Data Commons through a federation of cloud compute and storage facilities, PaaS services and data spaces with analytics tools and federated access services. EGI-ACE also delivers to EOSC ML/AI services, like DEEP Hybrid DataCloud and SZTAKI AI solution.

## AI4PublicPolicy

The platform will provide **policy development and management** functionalities based on AI, ML, DL, NLP and chatbots.

## Big Data for Next generation energy

Modular big data analytics & AI technologies to improve **decision making in energy**

## DIGITbrain

Concept of digital twin to implement the **smart Manufacturing** as a Service

## LETHE

A project designed to **prevent cognitive decline in an ageing population** at an early time point by a person centric solution

## EOSC Future

Add AI/ML capabilities to the EOSC Portal to **simplify and personalise data and service discovery**.

## EUHubs4Data

An instrument for data-driven cross-border experimentation and innovation

## SoBigData++

Multi-disciplinary research infrastructure for **big data analytics in social sciences**

## StairwAI

The Artificial Intelligence on-demand **platform for low-tech SMEs**



- AI/ML workflow combine data, software and computing needs and requirements
- Based on federated services
- Technology stack include some new layers i.e. libraries, workflow engines etc.
- On-demand platforms
- Still number of requirements based on CPUs and TBs

## Compute



### Cloud Compute

Run virtual machines on demand with complete control over computing resources



### Cloud Container Compute

Run Docker containers in a lightweight virtualised environment



### High-Throughput Compute

Execute thousands of computational tasks to analyse large datasets



### Workload Manager

Manage computing workloads in an efficient way

## Security



### Check-in

Login with your own credentials

## Applications



### Applications on Demand

Share online applications for your data and compute-intensive research



### Notebooks

Create interactive documents with live code, visualisations and text

## Storage and Data



### Online Storage

Store, share and access your files and their metadata on a global scale



### Data Transfer

Transfer large sets of data from one place to another



### DataHub

Access key scientific datasets in a scalable way

## Training



### FitSM Training

Learn how to manage IT services with a pragmatic and lightweight standard



### ISO 27001 Training

Learn how to manage and secure information assets



### Training Infrastructure

Dedicated computing and storage for training and education



[www.egi.eu](http://www.egi.eu)



@EGI\_eInfra

Thank you  
for your attention.

*Questions?*



**This work by the EGI Foundation**  
*is licensed under a Creative Commons  
Attribution 4.0 International License.*



**The work of the EGI Foundation**  
*is partly funded by the European Commission  
under H2020 Framework Programme*