CompBioMed
A Centre of Excellence in Computational Biomedicine

Webinar series

Webinar #8
The EOSC Digital Innovation Hub: open data services for biomedicine and business

28 May 2019

Presenter:
Sy Holsinger (EOSC-hub project)

Welcome!

Moderator:
Ben Czaja (UvA)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 675451

In collaboration with: EOSC Digital Innovation Hub

About Presenter: Sy Holsinger

- Background
  - Studied Business Mgmt. & Communications (U.S.)
  - 10+ years experience in EC projects
- At EGI Foundation
  - Business and sustainability model development
  - Strategy planning; market/trend analysis
  - Industry engagement programme manager
  - Project management
  - In-house ITSM consultant
  - Expert, trainer, auditor (ISO 19011) in:
    - FitSM standard (service management)
    - ISO/IEC 27001 (information security)
  - Co-Chair of ITEMO (IT Education Management Organization) FitSM working group

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Webinar Content

- European Open Science Cloud (EOSC) and the EOSC-hub project
- Role of SMEs/Industry in European Initiatives
- Intro to Digital Innovation Hubs (DIH) and the EOSC DIH
  - Overview
  - Services
  - Success Stories
- Conclusions and Opportunities
- Q&A

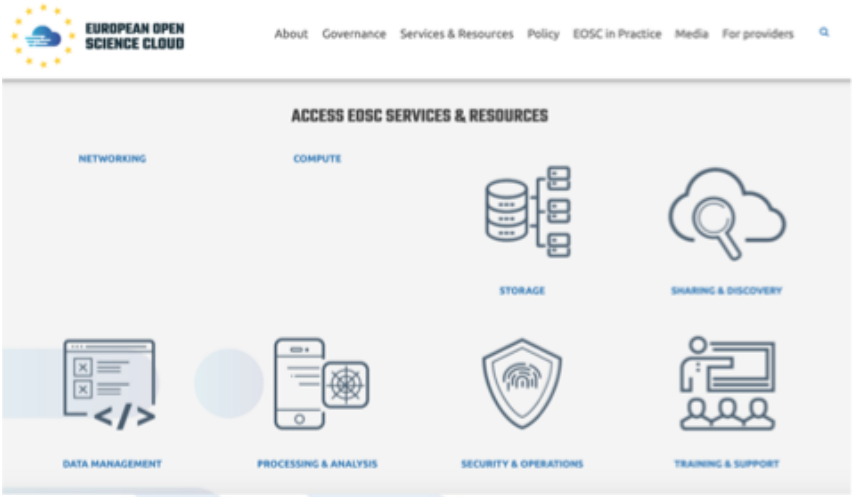
European Open Science Cloud and EOSC-hub Project

Brief Intro

EOSC and EOSC-hub Project

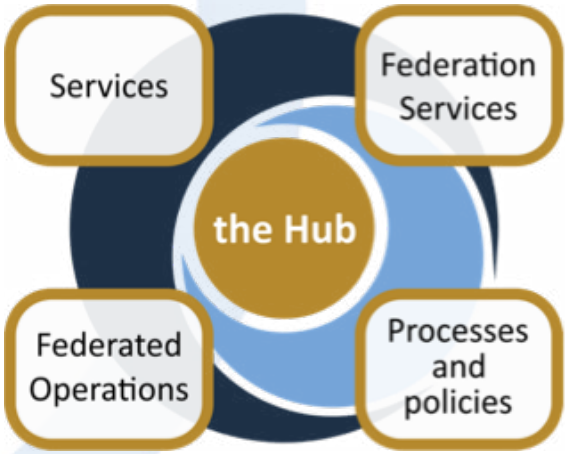
EOSC = European Open Science Cloud

- EC Initiative for Open Science and Innovation
- Reduce fragmentation of services for research and innovation from decades of individual investments, providing
  - Governance and funding
  - Data culture and FAIR data
  - Services and architecture



EOSC-hub

- H2020 Project: Integrating and managing services for the European Open Science Cloud
- 100 Partners, 76 beneficiaries (75 funded)
- 3,874 PMs, 108 FTEs
- €33,331,180, funded by:
  - EC: €30,000,000 (call H2020-EINFRA-2016-2017)
  - EGI Foundation Participants: €3,331,180
- 36 months: January 2018 – December 2020



EOSCDIH

SMEs/Industry in European Initiatives

Digital Single Market and Roles in EOSC

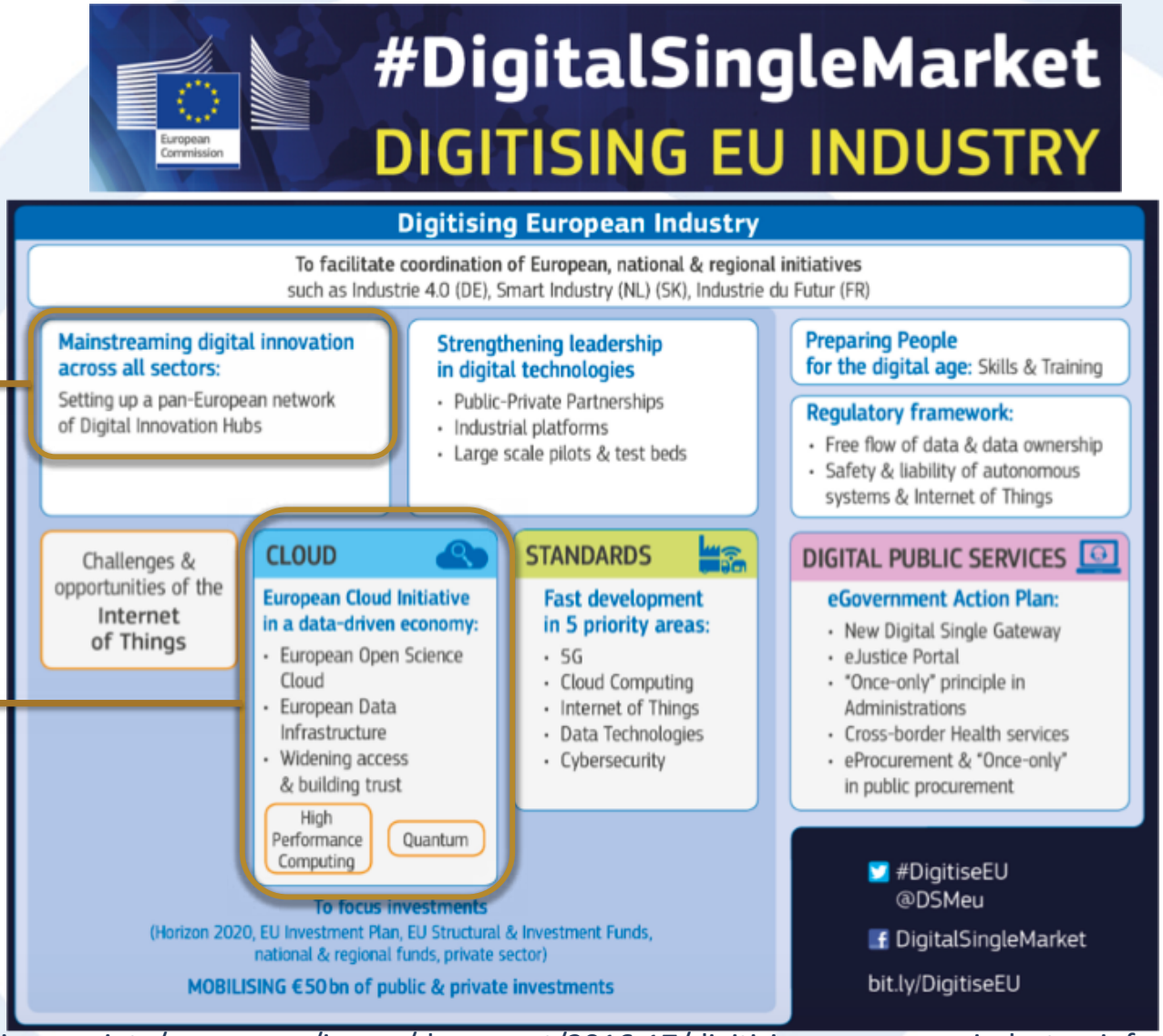
EOSCDIH

http://ec.europa.eu/information_society/newsroom/image/document/2016-17/digitising_european_industry_infographics_v5_15260.jpg

EOSCDIH

Created the EOSC DIH

EOSC identified as a key component



http://ec.europa.eu/information_society/newsroom/image/document/2016-17/digitising_european_industry_infographics_v5_15260.jpg

Some state of play

EOSC Opportunity

	SMEs	Large Enterprises
E-Commerce	44% purchased online in 2017 20% recieved orders online	63% purchased online in 2017 44% recieved orders online
Big Data	3% analyse own big data	14% analyse own big data
Cloud computing	20% use cloud computing services	45% use cloud computing services
Enterprise Resource Planning Software	33% use ERP software for information sharing	76% use ERP software for information sharing
RFID Technology	12% use Radio Frequency Identification Technologies	44% use Radio Frequency Identification Technologies

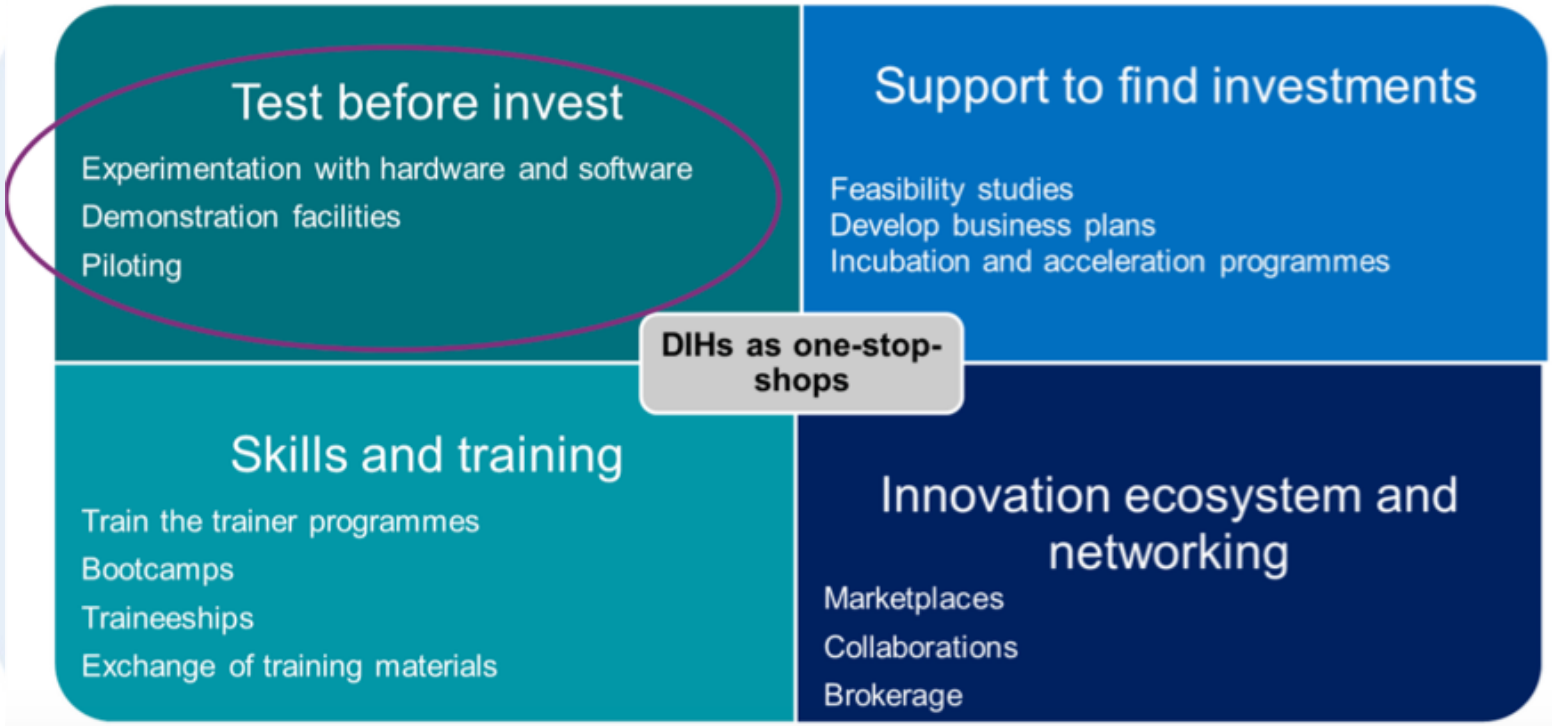
Every year, technology is getting a little bit smarter. That is why, in 2019, the keynote theme will be "Integrated Industry – Industrial Intelligence". This reflects the increasing digitally driven integration of humans and machines in the age of artificial intelligence.

Source: Hannover Messe, 2019

Source: PwC Europe Monitor - Innovation and Digital Transformation: How do European SMEs perform? (October 2018)

Service Needs

A group of organisations with complementary expertise and a non-profit objective, offering a set of services to companies – especially SMEs (incl. Start-ups) and mid-caps – to support their digital transformation through a one-stop-shop.



*Andrea Halmos, European Commission, DG CONNECT Unit A2, Technologies & Systems for Digitising Industry

Role of Industry in the EOSC

Customer

Making use of existing EOSC services

Provider

Offering services to EOSC

Partner

Co-development

Procurement

Participate in the procurement framework

EOSCDIH

EC Digital Innovation Hub Initiative

Background and landscape

EOSCDIH

Digital Innovation Hub

EC definition

What is a Digital Innovation Hub?

An ecosystem of start-ups, SMEs, large industries, researchers, accelerators and investors that fosters the creation of partnerships to stimulate innovation.

EOSCDIH

Digital Innovation hub

A one-stop-shop providing services to companies in the region through a multi-partner cooperation

- Access to Specialist Expertise and Infrastructure
- Brokering/matchmaking
- Awareness Creation around Digital Technologies
- Innovation Scouting
- Digital Maturity Assessment.
- Visioning and Strategy Development for Businesses
- Mentoring

European Landscape of DIHs

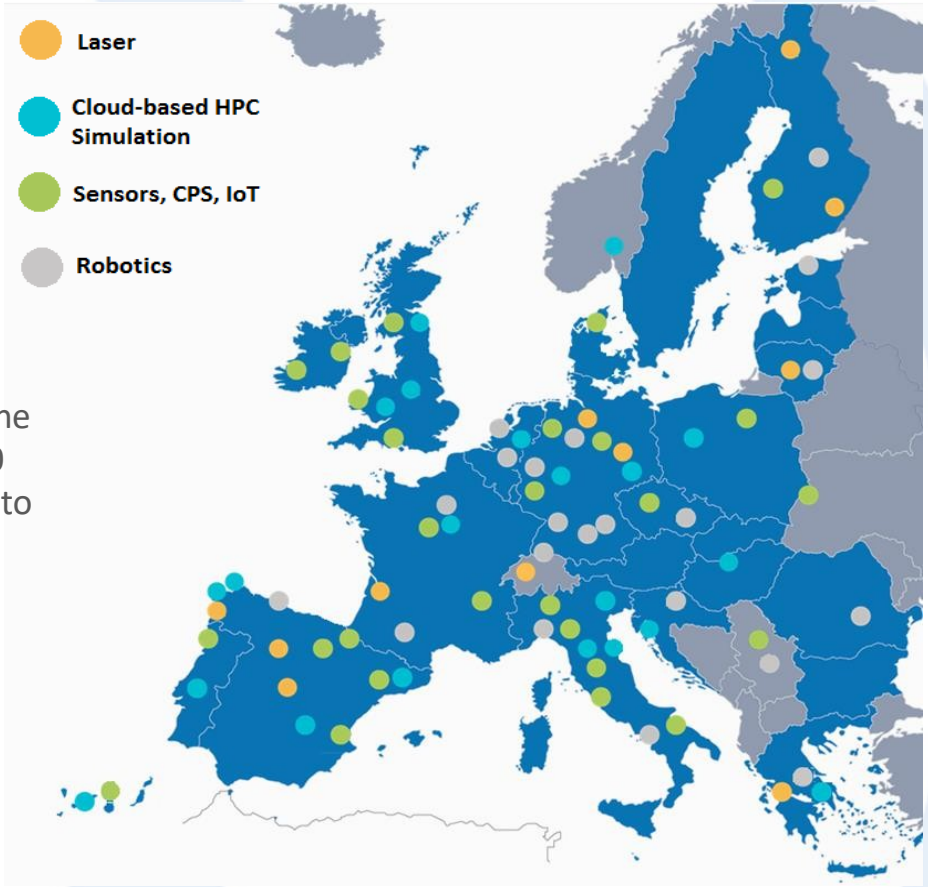
Agile, and demand-driven, Digital Innovation Hubs in Europe are sustainable innovation ecosystems, not just a gateway to services.

Running DIH initiatives

22 innovation hubs all over the European continent, soon expanding worldwide

Digital Innovation Hubs in H2020: The EC is focusing EUR 300M in H2020 (2018-2020) – short time from idea to hands-on experimentation and development.

€110m of funding has been invested in I4MS since 2013; - 11 large projects funded by Fp7 and H2020, 70 competence centres;

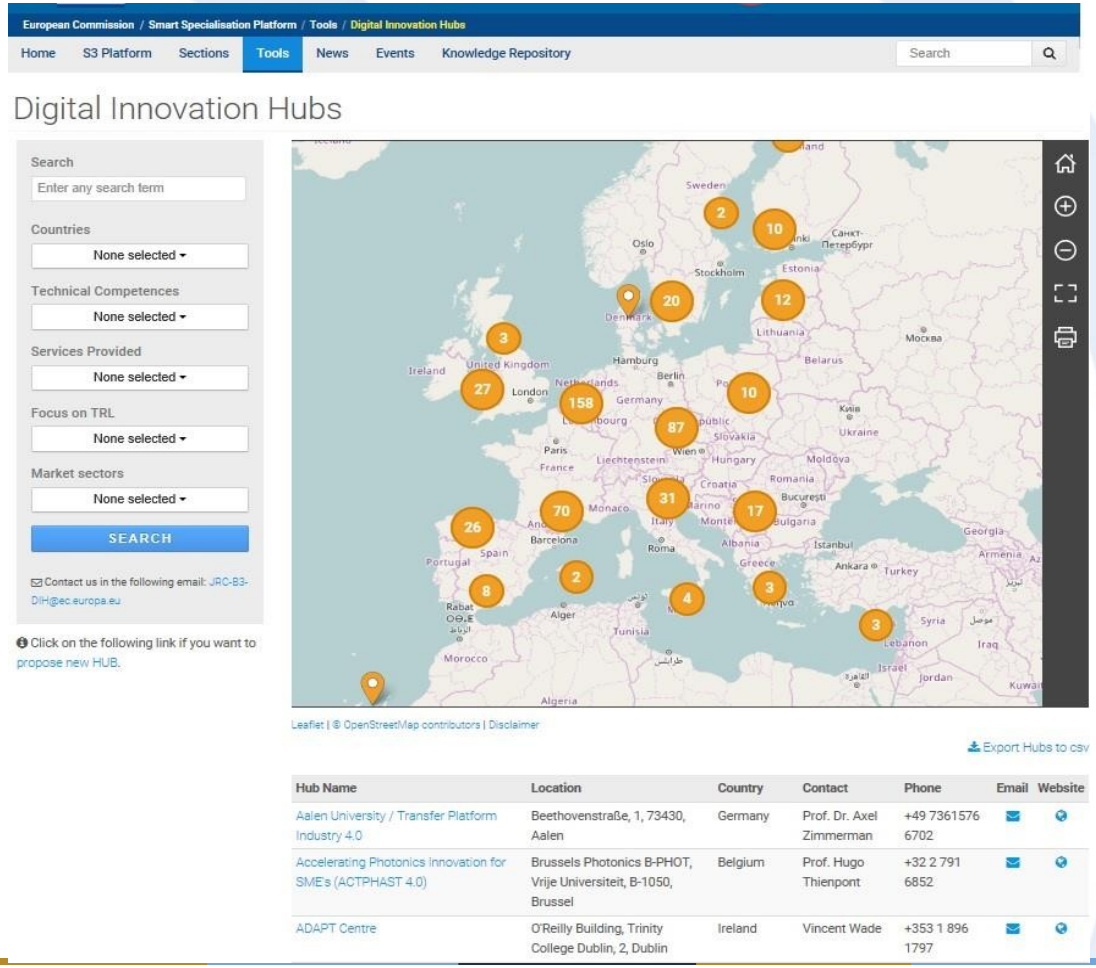


Digital Innovation Hubs Catalogue

First version available:

- Fact-sheets with profile, contact data, service examples for regional, national, and EU- supported DIHs
- Map-based search tool by technical competences, market sector, services

http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool



DIHNET.EU Project

Launch 3 Working Groups

To derive recommendations to the High-Level Governance Meeting within 1 year

1. WG on Digital Innovation Hubs addressing issues such as
   - Raising awareness and engaging SMEs
   - Improving access to finance for SMEs
   - Networking and collaboration including business models
   - Role of Member States/regions for the development of DIHs
   - Reinforce digital skills and training dimension

2. Joint WG of DEI and Multi Stakeholder Platform (MSP) on standardization activities of Digital Industrial Platforms
   - Coordination of platform building and piloting activities
   - Synchronization and acceleration of standardization efforts

3. WG on Future Partnerships

WP 2018-2020 ICT

"Digitizing and transforming European industry and services" calls for digital innovation hubs (€300M)

- DT-ICT-01-2019: Smart Anything Everywhere (SAE) Initiative, with the "widening" part for industrial regions that are currently underrepresented in I4MS and SAE
- DT-ICT-02-2018: Robotics – Digital Innovation Hubs
- DT-ICT-03-2020: I4MS (phase 4) - uptake of digital game changers and digital manufacturing platforms
- DT-ICT-04-2020: Photonics Innovation Hubs
- DT-ICT-05-2020: Big Data Innovation Hubs

In SC2: DT-RUR-12-2018: ICT Innovation agriculture – Digital Innovation Hubs for Agriculture
+ Support action DT-ICT-06-2018: Coordination and Support Activities for Digital Innovation Hub network

EOSC Digital Innovation Hub

Objectives, pilots and ongoing collaborations

EOSCDIH

EOSC Digital Innovation Hub

- Builds on the EC initiative to **onboard industrial partnerships** within the **European Open Science Cloud**
- **Joint effort** from years of individual e-Infrastructure industry engagement programs
- Focused on (not limited to) **start-ups and SMEs**
- Starts with **6 business pilots** selected during project preparation; open for many more
- To **persist beyond** the life of any support project (e.g. **EOSC-hub** project – www.eosc-hub.eu)

EOSC DIH: Overview

https://www.eosc-dih.eu/

Key Figures

Start:
1st January 2018

48 Service offerings

25 Partners

6 Pilots running

Mission

"To bring private companies into the European Open Science Cloud through concrete business cases."

Driven by

Advanced Computing for Research

INDIGO - DataCloud
Better Software for Better Science

EUDAT Collaborative Data Infrastructure

PSNC

F6S

CINECA

EOSC DIH: Objectives

- Offer **access** to **e-Infrastructure resources** to support **pilots**, prototyping, scaling-up, design, performance verification, testing, demonstration, etc.
- Facilitate **partnerships** with **SMEs/industry, innovation clusters, accelerators** and **investors** that stimulate **innovation**
- Increase **visibility** on a **European/International level**
- Provide **business coaching** and training to “accelerate” **market uptake** and **exploitation** results
- Support access to **funding/grants**
- Develop **long-term business** relationships

EOSC-DIH: Services

Piloting and co-design

- Pilots/proofs of concepts
- Service/Product design
- PaaS/SaaS Integration
- Performance verification
- Testing

Technical access

- Compute (HTC, HPC, Cloud)
- Storage (Online/Archive)
- Data management
- Research data
- Tools & applications

Training & Support

- Technical consultancy
- Service management
- Commercialization and business coaching
- Brokerage to funding and opportunities

Visibility

- Media Exposure
- Participation to events
- Promotional print material
- Inclusion in marketplace
- Networking

Piloting and co-design

PaaS/SaaS Integration

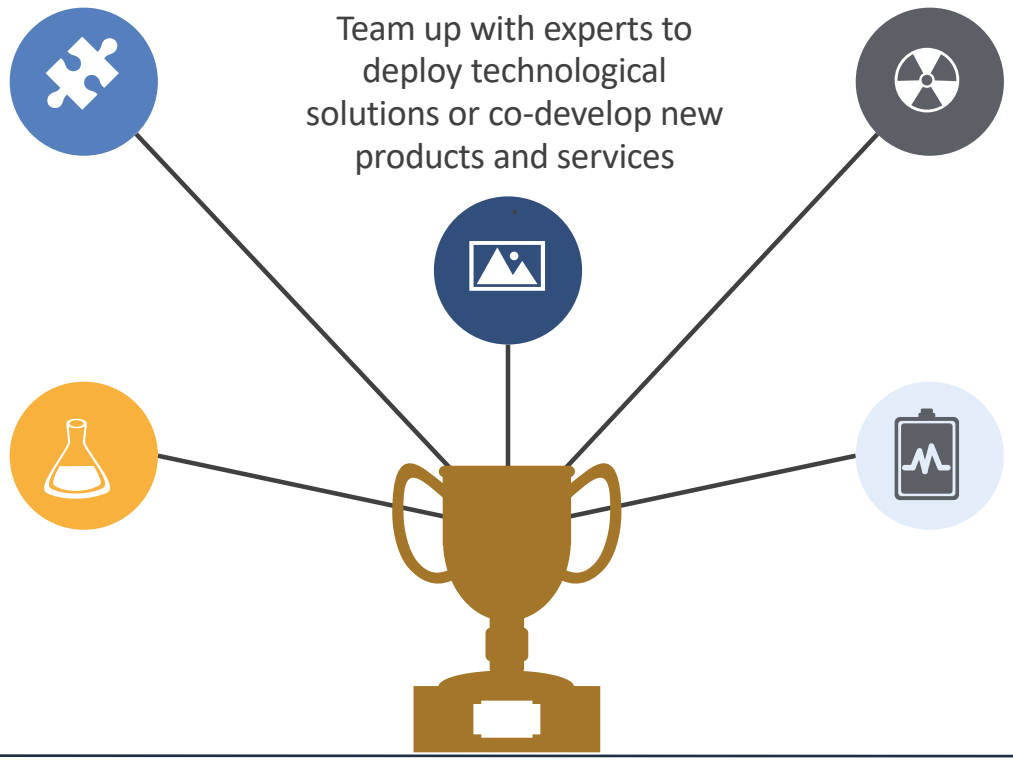
Integrate new services and tools in the EOSC ecosystem

Service/Product design

Team up with experts to deploy technological solutions or co-develop new products and services

Testing

Support to define in details scenarios using EOSC-hub services for creating added value business services



Pilots/Proofs of concepts

Support to define in details scenarios using EOSC-hub services for creating added value business services

Performance verification

Support of the benchmarking and verification of the new services before pushing to the service catalogue.

EOSCDIH

Technical Access

Use open research data sets, tools and applications and access our extensive computing capacity

Compute

- EGI Cloud Container Compute
- EGI Cloud Compute
- EGI High-Throughput Compute

Authentication

- B2access
- EGI Check-in

Research Data

Tools & Applications

- Climate Analytics
- Arts & Humanities
- Structural biology
- Particle Physics
- Atlantic Coast Forecast
- Earth Observation
- EGI Apps on Demand
- EGI Notebooks

Storage & Data Management

- B2Handle
- B2Share
- B2Drop
- EGI DataHub
- EGI Online Storage
- EGI Archive Storage
- B2Stage
- B2Find
- B2Safe
- CernVM File System
- Services for Sensitive data

Training and Support

Technical consultancy

Obtain dedicated support and consultancy to use computing capacity and applications of the EOSC ecosystem to develop great innovation

Service Management

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

Commercialization & business coaching

Support market take-up and commercial boost strategy, through tailor-made coaching, market insights and network with stakeholders

Brokerage to funding opportunities

Access to funding and business opportunities through our extensive network

Visibility services

Participation to events
Inclusion in print materials
Media exposure on our websites
and social networks

Media Exposure & Events

Market your services in the EOSC ecosystem

Inclusion in Marketplace

Access to our extensive network of experts

Networking

Vouchers, Marketplace, Platform

Vouchers

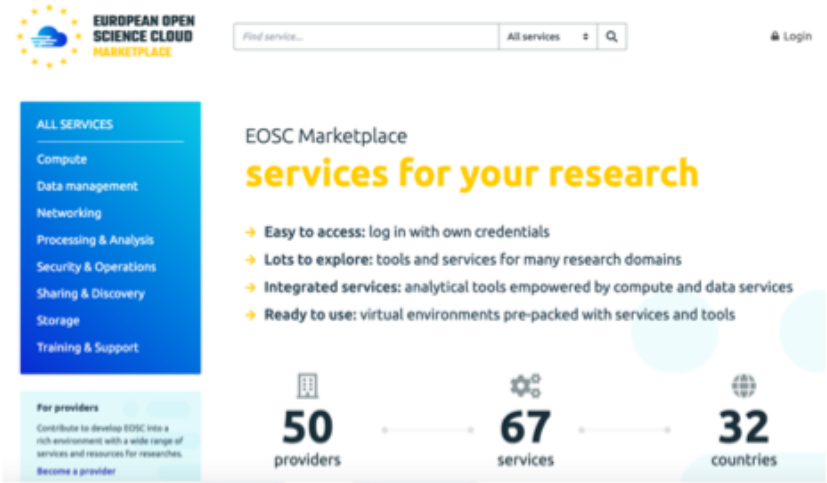
Drawing at EOSC-hub Exhition Booth
Stand number: EC6
Wed 5 Dec 16:00-16:30 Coffee break

€5,000 service voucher!

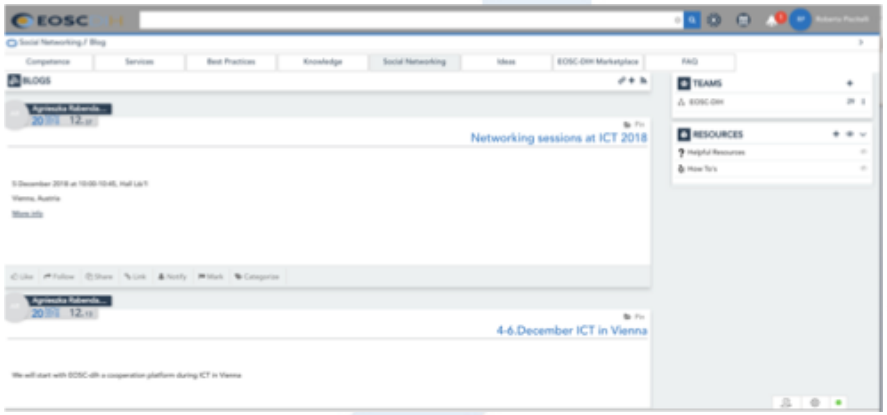
- Up to 40.000 CPU hrs on HPC or 300.000 CPU hrs on Cloud
- 1 TB work area storage (+ 1 TB scratch area storage)
- 40 hours of specialized support

*additional options based on use case

EOSC Marketplace



Collaboration Platform



*prototype based on

MIDIH
MANUFACTURING-INDUSTRY
DIGITAL•INNOVATION•HUBS

EOSCDIH

Initial 6 Business Pilots

Pre-selected to kick start the DIH - open for many more!

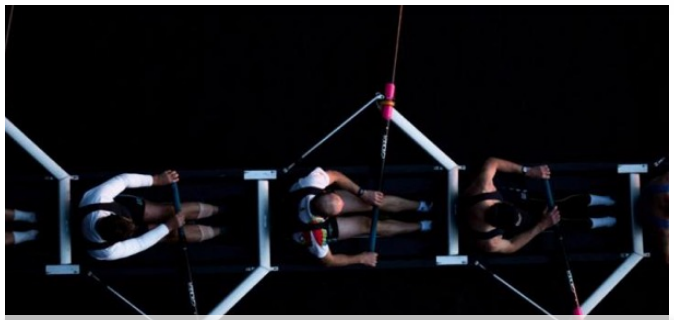
EOSC DIH: Our Initial 6 Business Pilots

ACTION Seaport

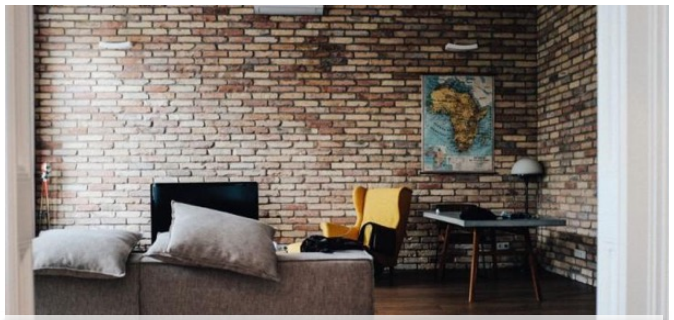
Space Weather Data for the DRACO Observatory

CyberHAB

Bot Mitigation Engine

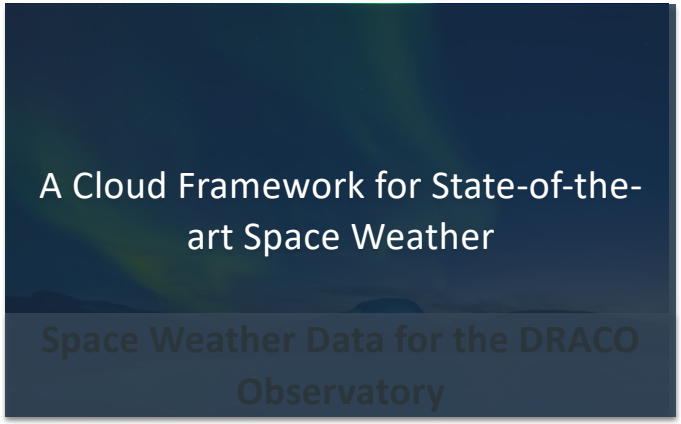


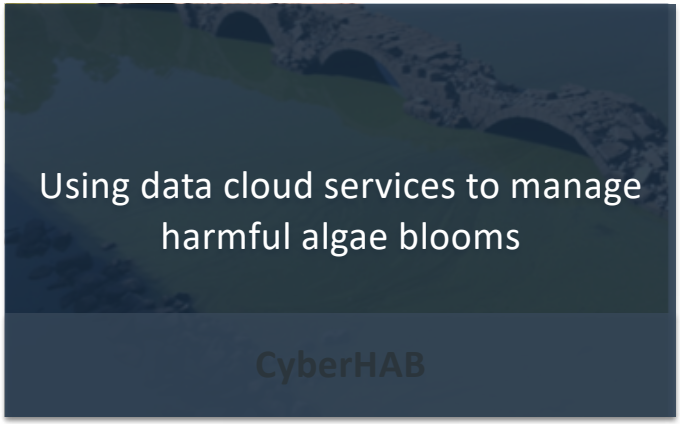
Sport Smart Video Analysis

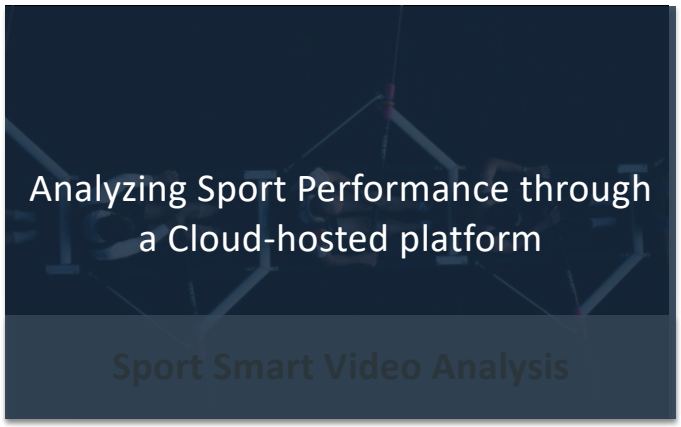


Furniture Enterprise Analytics Datafurn

EOSC DIH: Our Initial 6 Business Pilots





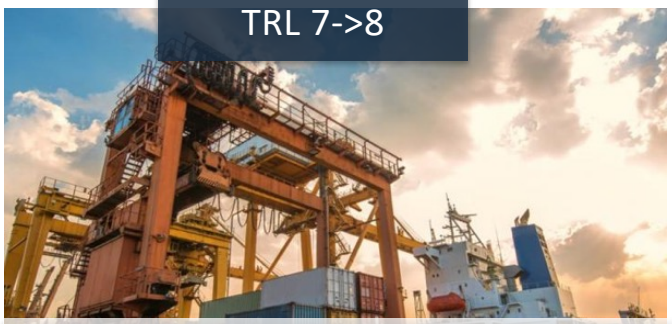


EOSC DIH: Our Initial 6 Business Pilots

Acquired

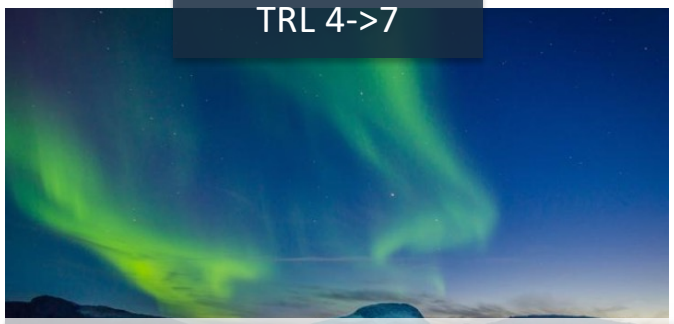
Bentley Advancing Infrastructure

TRL 7->8



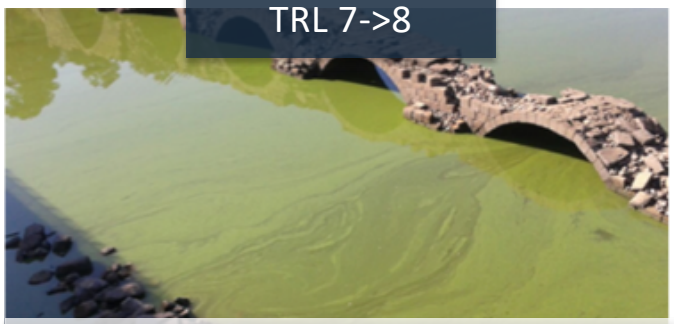
ACTION Seaport

TRL 4->7



Space Weather Data for the DRACO Observatory

TRL 7->8



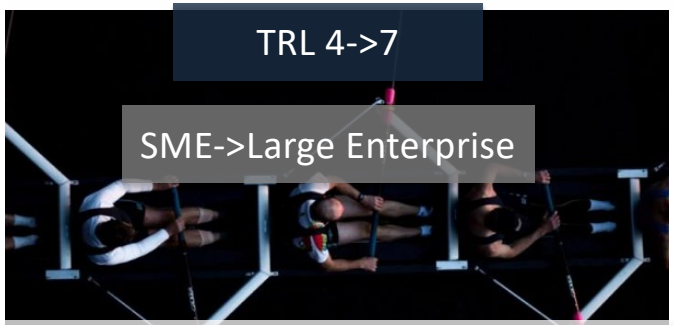
CyberHAB

TRL 2->7

Bot Mitigation Engine

TRL 4->7

SME->Large Enterprise



Sport Smart Video Analysis

TRL 5->8

Furniture Enterprise Analytics Datafurn

EOSCDIH

Why Collaborate

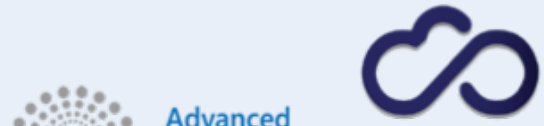
- **Why should industry engage the European Open Science Cloud (EOSC)?**
  - Diverse services; Exploit research data; Expertise; Wide visibility; Funding opportunities
  - Single point for discovery, request and access of services and expertise
  - Collaborate on a European and international scale
  - Promote services (agreeing to the 'rules of participation')
  - Participant in procurement framework

- **Are you already in a Digital Innovation Hub?**
  - EC wants to create a pan-European 'network' of DIHs, we should work together

Additional Collaborations (at various stages)

BBC R&D, kampal, Uber Cloud, ENGINEERING, POLITECNICO MILANO 1863, rasdaman raster data management, TERRAQUE, FORTISSIMO, BDV, Cloudi Facturing, SPORE DATA, DISTRIBUTED COMPUTE LABS

EOSC DIH Partners



Contact Us!

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- Hugo Cantão (F6S)
- Catherine O'Donoghue (F6S)
- David Wright (UCL)

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Q&A

To pose a question, you can write your question
in the “Questions” tab

Thank you for participating!

…don't forget to fill in our feedback questionnaire…

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