

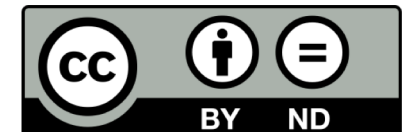
EOSC DIH: Bridging Industry with the EOSC

Marcin Plociennik, PSNC
EOSC DIH Business Pilot Coordinator

EGI Conference 2021 - Oct 2021



The EOSC Future project is co-funded by the
European Union Horizon Programme call
INFRAEOSC-03-2020, Grant Agreement 101017536





Role of Industry in EOSC

Customer

Making use of existing EOSC services



Provider

Offering services to EOSC



Partner

Co-development



Procurement

Participate in the procurement framework



eoscfuture.eu



@EOSCFuture



EOSCfuture





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.



eoscfuture.eu



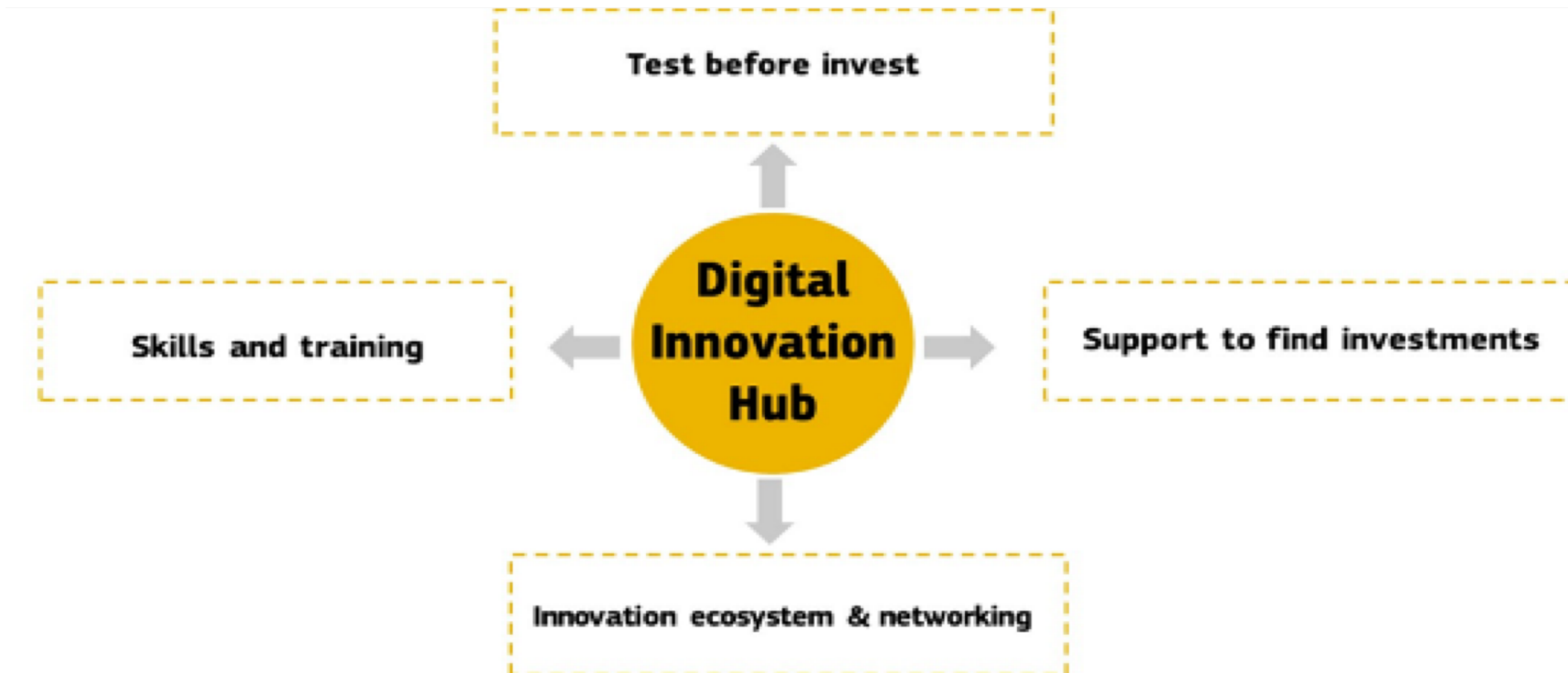
@EOSCFuture



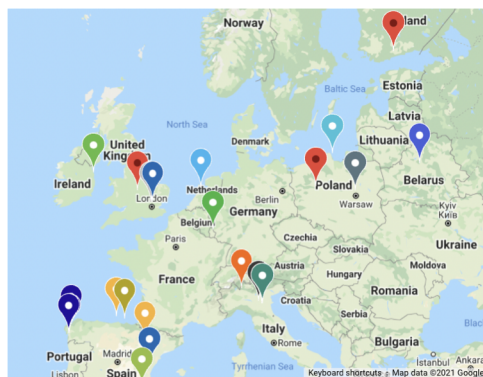
EOSCFuture



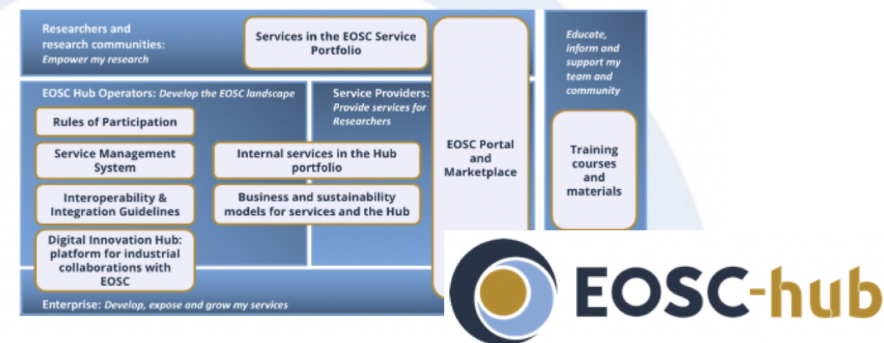
DIH Service Needs



- **Multi partner initiative**
- **Builds on the EC initiative to onboard industrial partnerships within the EOSC**
 - **Joint effort** from years of individual e-Infrastructure industry engagement programs
 - Focused on (not limited to) **start-ups and SMEs** and **pre-commercial** activities
- EOSC DIH activities embedded within EOSC Future WP8.2



EOSC-hub Key Exploitable Result



18

SUCCESS STORIES

30

INDUSTRY EVENTS

600K

DIRECT SME SUPPORT
(€)

4

SERVICES IN EOSC MP

620K

CPU HOURS

30+

SME EVENTS

EOSC DIH - services

Piloting & 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
- Machine Learning / AI
- Open Research data
- Tools & applications



EOSC DIH
DIGITAL INNOVATION HUB

Training & Support

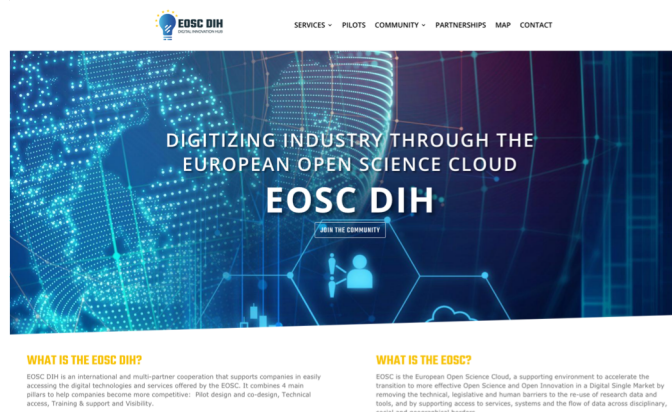
- Technical consultancy
- Service management
- Commercialization and business coaching
- Brokerage to funding and opportunities

Visibility

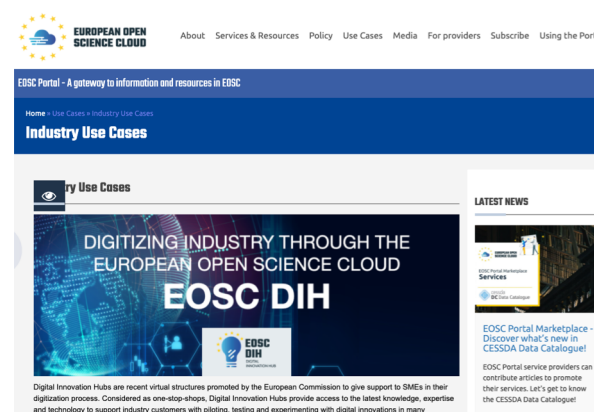
- Media Exposure
- Participation to events
- Promotional print material
- Inclusion in marketplace
- Networking

Online presence

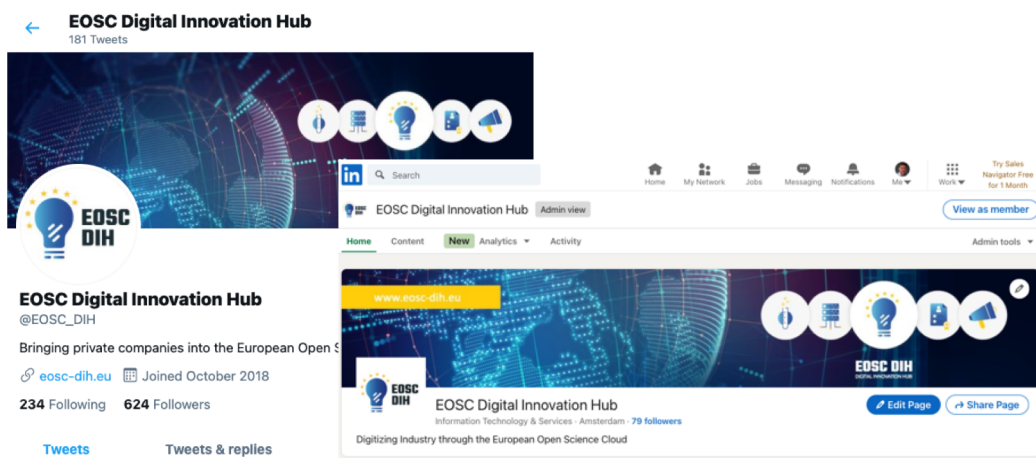
Website



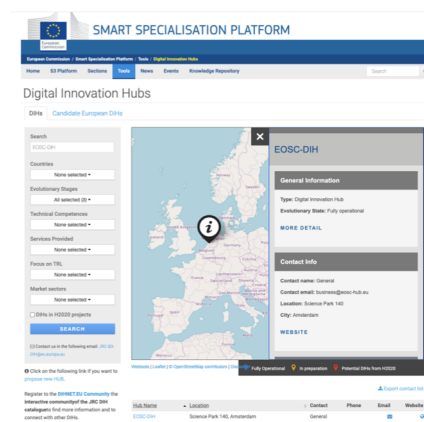
EOSC Portal inclusion



Social Media



EC DIH Catalogue



Industry Collaborations – various level of engagement

Partnerships



Networks & DIHs



Providers





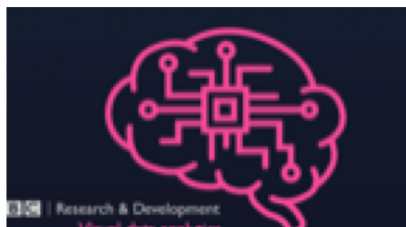
EOSC Future - Ongoing and planned collaboration agreements

Name	Type	Sector	Country / Region	Opportunity	Website
DICE	Project	Data Mgmt.	Europe	Services + Pilots	www.dice-eosc.eu
EGI-ACE	Project	Compute	Europe	Services + Pilots	www.egi.eu/projects/egi-ace
C-SCALE	Project	Earth Observation	Europe	Services + Pilots	c-scale.eu
OpenAIRE-Nexus	Project	Data	Europe	Services + Pilots	www.openaire.eu/openaire-nexus-project
EOSC Synergy	Project	EOSC Regional	Europe	Services + Pilots	www.eosc-synergy.eu/
L4SMEs	Project	SME Support	Europe	Multiplier	leadership4smes.eu
Collabwith	SME	Human Network	Europe	Multiplier	collabwith.co
NASU	EDIH	National DIH	Ukraine	Regional DIH Connection	www.nas.gov.ua
Leonardo	SME/EDIH	Aerospace, Defence	Italy	Regional DIH Connection	www.leonardocompany.com
BDVA/EUH4D	Project	Big Data	Europe	Multiplier	euhubs4data.eu

Example of the Business Pilots and sectors



Finance



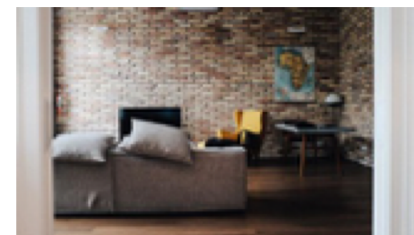
Video



AI



Trucking



Furniture



Environment



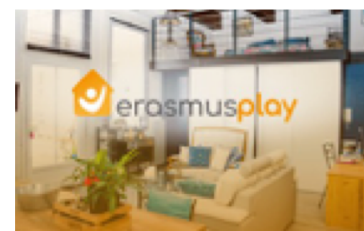
Compute Credits



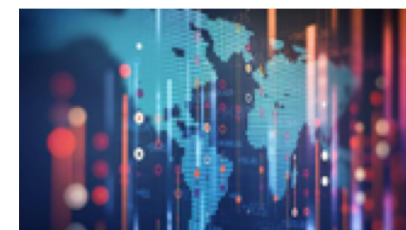
FAIR data



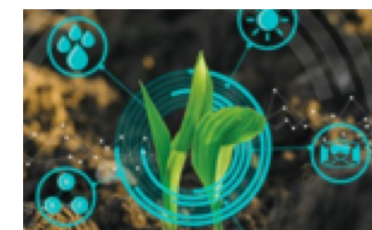
Space



Accommodation



Security



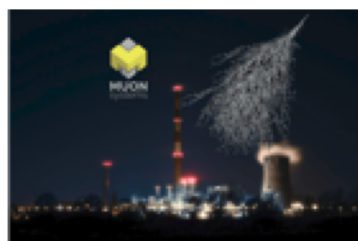
Agriculture



Health



Collaboration



Manufacturing



Blockchain



Seaport



Sports

EOSC Future - Newly onboarded Business Pilots



DigiFarm

Detecting agricultural field boundaries using deep neural network models and super-resolution Sentinel-2 EO-data

[read more](#)



Trango. Trip and go.

Best Location for Car Sharing

[read more](#)



MiCADO - Cloud and Container Orchestrator

Orchestration Framework for Cloud Resources and Application Container

[read more](#)



BIGcoldTRUCK: Big data analytics for cold chain logistics optimization in refrigerated trucks.

Data analysis to predict the demand of goods, optimise the routes in real-time and provide visualizations and descriptions.





DigiFarm pilot



DigiFarm

Detecting the world's highest accuracy field boundaries to power precision agriculture.

- DigiFarm is a Norwegian based ag-tech startup established in 2019.
- DigiFarm's core vision is to detect the world's most accurate field boundaries and seeded acres to power precision agriculture, using AI.

The pilot will include:

- developing and modeling a training deep neural network model for detection of entire-country sized regions including Germany, Austria, Belgium and the United Kingdom.
- Usage of the EOSC infrastructure
- Evaluation of the available EOSC technologies



eoscfuture.eu



@EOSCFuture



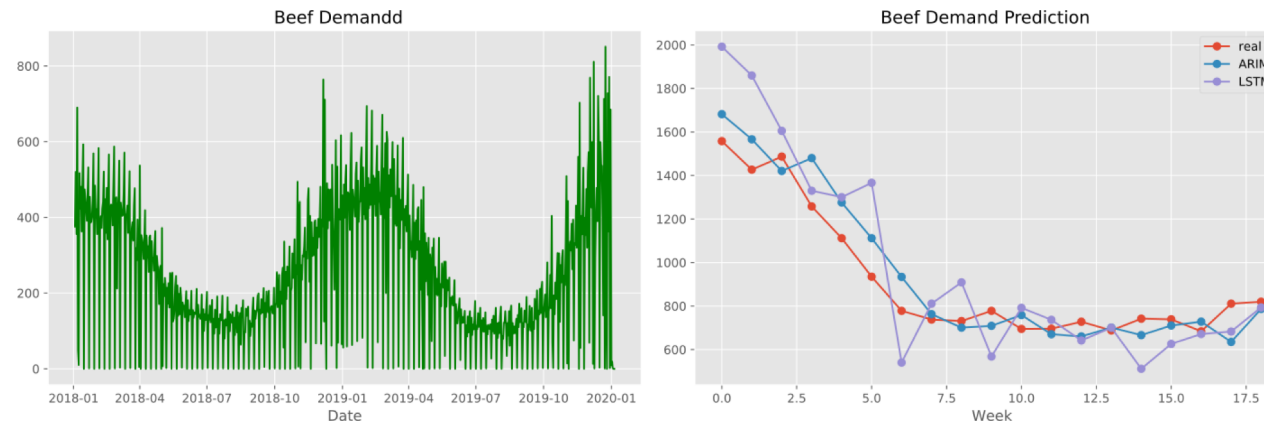
EOSCfuture



BIGcoldTRUCKS: BIG data analytics for COLD chain logistics optimisation in refrigerated TRUCKS

1. HPC Computing: Deep Hybrid Data Cloud

- ARIMA, LSTM
- Deepaas API



Goals

Provide descriptive tool:

1. Organise storage
2. Organise trips
3. Detect quality loss

Needs

1. Data management, storage and access
2. Access to HPC for Machine Learning

2. Elasticsearch

- Product's rankings
- Trip durations
- Seasonality of product's demand
- Geographic representation



	NoElastic	Elastic	Improvement (%)
Product's ranking	1,107	0,022	98
Product's ranking	1,03	0,057	94
Groups of product's ranking	1,493	2,47	-65
Groups of product's ranking	1,55	4,578	-195
Trip durations	3,444	1,697	51
Seasonality of product's demand	1,163	0,051	96
Geographic representation	0,978	0,062	94

Table of retrieval time for 1 month data



Business Pilot Success Story Publication



2019 Edition



2021 Edition



eoscfuture.eu



@EOSCFuture



EOSCfuture





Example of the Business Pilots and sectors

- **Initial pilots helped to define the DIH, and its operation**
 - Focus of new pilots was diversifying from IaaS
- **Pilots are now a mix between**
 - Resources: Computing/storage support
 - e.g. DataFurn, Muon, BBC R&D, DigiFarm
 - Providing technological expertise
 - e.g. Knowco4EOSC, IBISA, Erasmus Play
 - Co-design using EOSC services
 - e.g. Cyberhab, DCP
 - Support and co-development with other projects
 - e.g. BI Insight, BIGcoldTRUCK, DEIPDASFD
- **Requested Expertise**
 - ML/DL/AI
 - Security
 - AAI
 - BigData technologies
 - Domain services e.g. Geo, Agri

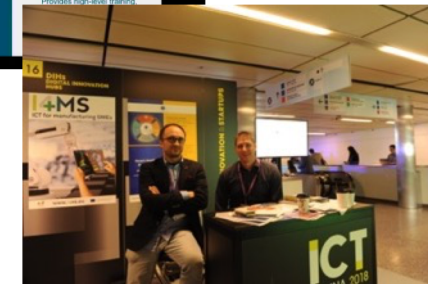
Support channels

- Communication channels
 - Slack workspace (EOSC DIH)
 - Trello boards
 - Status meetings
 - Technical meetings with the required experts
 - Website: forum, newsletter
- Community forums
 - Networking
 - Innovation workshops
- Webinars
 - Marketing, exploitation, IPR, technology transfer models
- Events participation
 - Success stories promotion
- Publishing success stories

Technology Transfer Models Webinar

24.09.2020

[Download presentation](#)





How to get involved?

- Expression of Interest – co-creation (next slide)
 - Attract wider community
 - Target specific areas
- Join our community
 - Establish a partnership
 - defining specific engagement areas
 - Contribute expertise in a specific field/area
 - Join our Slack workspace: https://join.slack.com/t/eoscdih/shared_invite/zt-w88st24l-u171lDok4LTYd8KZjavP4w
- Ask us through webpage
 - If you have a pilot idea
 - If you want to kick start engagement
 - <https://eoscdih.eu/contact/>
- Collaboration with other projects
 - Being an exploitation channel for EOSC projects!!!!
 - Defining long term collaboration scope and agreements
 - <https://eoscdih.eu/partnerships/>

Expression of Interest

EXPRESSION OF INTEREST



WHAT WE ARE LOOKING FOR

The EOSC DIH is looking to onboard pilots to

- **develop, integrate or validate their services.**
- **benefit from using EOSC services**
- **Cover key areas,** but not limited to:
Industry 4.0, Green Deal, Mobility, Health, Energy, Agriculture, Public Administration, Earth observation or Environmental monitoring.

Phase	Description	Time
EoI	The EOSC DIH is open to receive EoI from applicants.	15/10/2021 to 15/11/2021
Evaluation	Eligible applicants will be evaluated by members of the EOSC DIH. Highest score evaluation will be invited to sign a Service Level Agreement (SLA) before implementing their pilot.	15/11/2021 to 30/11/2021
Execution	Execution of pilots developing solutions using EOSC DIH services.	Starting on 1/12/2021 and duration of 3-8 months

<https://eosc-dih.eu/expression-of-interest>



eoscfuture.eu



@EOSCFuture



EOSCfuture



Contact



eosc-dih.eu

[@EOSC_DIH](https://twitter.com/EOSC_DIH)

business@eosc-dih.eu