



# CeADAR

## Ireland's DIH for applied AI

*'making the possible real'*

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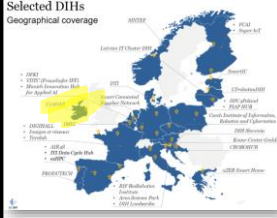
TECHNOLOGY CENTRE  
NATIONAL INSTITUTE FOR  
DIGITAL INNOVATION SUPPORT

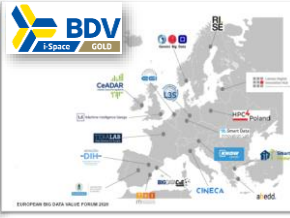
1

# Digital Innovation Hub for AI

Selected DIHs

Geographical coverage






2019 CeADAR selected to become one of 30 AI Digital Innovation Hubs from 150 applicants across Europe and the only one in IRL

This network of AI hubs was launched as part of a preparatory action by the European Commission for the EDIH programme

2015 Co-founder of the European Data Science & AI Awards now supported by EC BDVA/DAIRO

2

# AI technologies & sectors



3

# our current EU H2020 partners



EUHubs4Data & DIH-World are defining the blueprint for collaboration for DIHs in AI and EDIHs in AI



DIH-WORLD

Also harmonise and widen the language of European DIHs to address the digital innovation hubs cluster

Emphasis on advancing digital technologies of European manufacturing SMEs in all sectors

43 partners including 27 SMEs in AI and Manufacturing, Skills and companies involved in Smart Manufacturing



EUHUBS4DATA

Aim: to create the European reference for Big Data experimentation and innovation

A one-stop shop that enables European companies can easily access the economic opportunities offered by Big Data

Data driven cross border experiments through three interlinked spin-offs for industry




23 partners inc. 12 SMEs

4

# a small sample of funded projects underway with industry partners

5

# inspection robots



- vertically climbing robots
- multiple inspection cameras
- digital twin generation
- condition inspection
- fault detection

6

## energy generation and I4.0



- Wind turbines & generators:
  - Predictive analytics of system component integrity (predictive maintenance)
- Consumer-side
  - demand prediction
  - behaviour analysis (smart meters)
- Wind turbine output power prediction

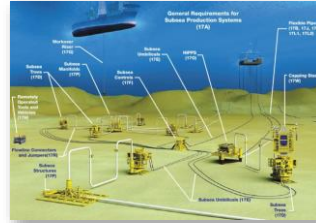


7

## preventative maintenance (I4.0)



- highly sensed pumps & valves in subsea oil & gas pipelines
- failure prediction of pumps & valves
- reduced inspection, intervention and maintenance costs



8

## natural language processing



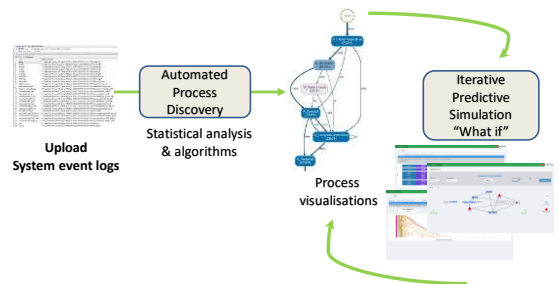
- FinTech: regulatory docs
- searching within patents
- analysis of legal contracts
- tech assisted legal review
- **industry process logs**

9

## process visualisation & simulation



- SimXpert is developed as a data driven **web application**;



10

## AI at work in production



- computer vision inspection for QA
- optimisation of production using ML
- ML for sensory panels in food production



- Machine & reinforcement learning for QA of sub-systems and final system assemblies
- reducing factory energy consumption
- predictive maintenance
- supply chain
  - optimisation
  - Blockchain

11