AI4EU

BUILDING THE EUROPEAN AI ON-DEMAND PLATFORM

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BDVA Event
4 November 2020

WP6 Leader   Online

Pilot Experiments with the Platform

" **Industry-Strength Pilot Experiments with the AI4EU Platform**

Objectives

- Demonstrate the exploitability of the AI4EU platform for industrial applications of AI

- Foster the adoption of the platform by industrial champions

- Solve technico-challenges raised by advanced industrial applications

- Stimulate a vibrant partnership between Research and Industry to solve AI application problems*

* Coordinated Plan on the development of Artificial Intelligence in Europe - Adopted on 15/05/2019 Reference: NT/877-EESC-2018-05386-00-00-AC-TRA

Methodology: 8 pilots in different AI-prioritized domains

AI4EU

AI4Citizen (Led by **SAP**)
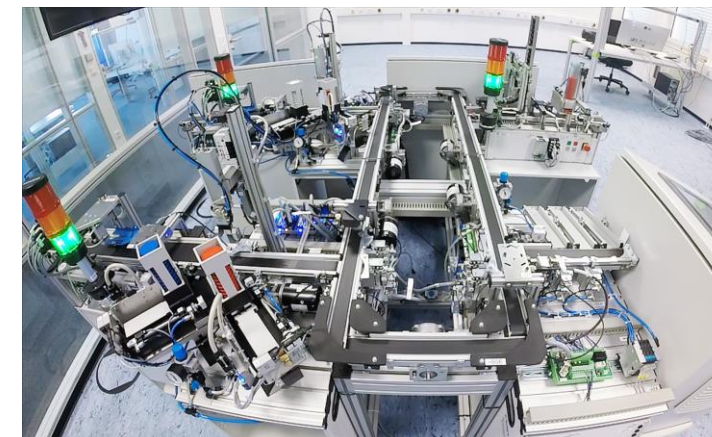An AI-powered Personal Assistant for Public Services

AI4Robotics (Led by **ABB Robotics**)
Intelligent Performance Analytics for Industrial Robots

AI4Industry (Led by **Siemens AG**)
AI-Driven Digital Companion for Production Facility

AI4Media (Led by **InterDigital,** prev. **Technicolor**)
AI-Based 3D-Generation of Animated Video
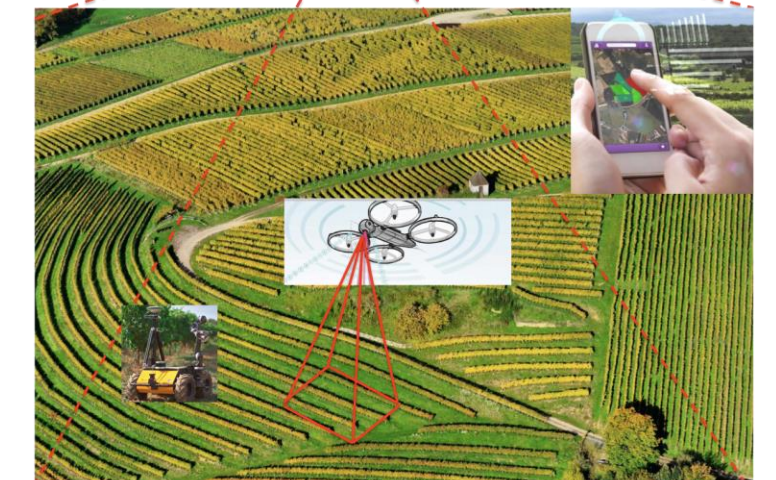
AI4Healthcare (Led by **Nehs**)
Improve quality constancy of medical images reports

AI4Agriculture
(Led by **Atos, Smartrural)**
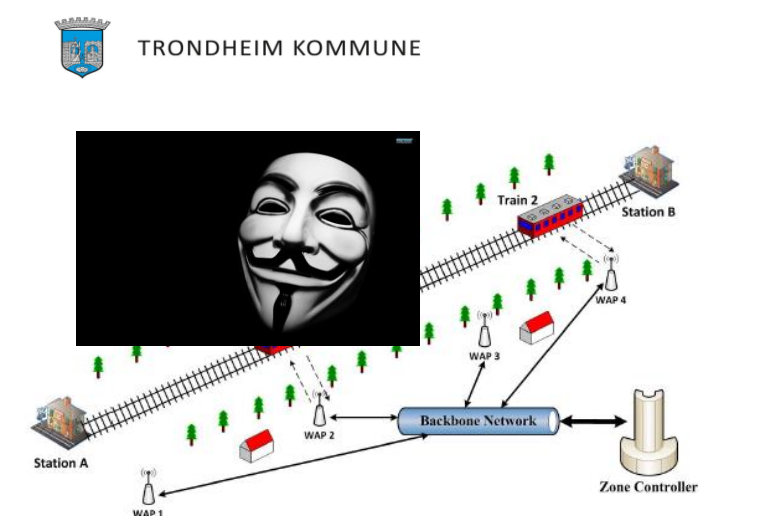Crop quality assessment through computer vision

AI4IoT (Led by **Telenor**)
Air Quality Monitoring

TRONDHEIM KOMMUNE

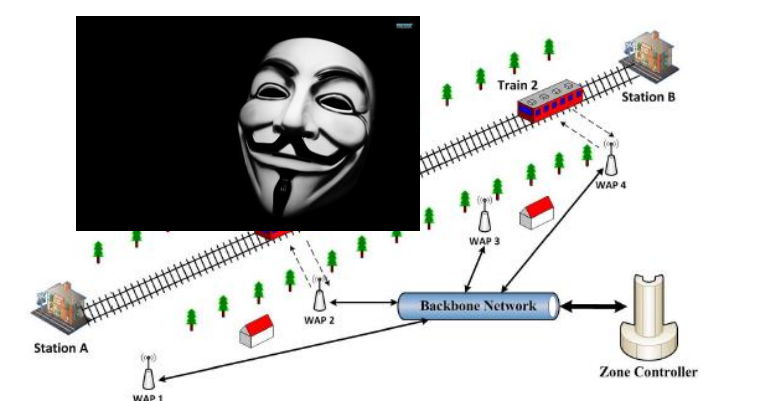**AI4Cybersecurity** (Led by **Thales**)
AI-driven attack learning

" **AI4Citizen**

- Combining AI Chatbot technology, Stable Matching Problem solutions for the newly established Italian scheme called *Aternanza Scuola Lavoro, i.e.,* school-work alternation

- Competences, Team Formation and Chatbot on the AI4EU Catalogue
  https://www.ai4eu.eu/resource/ai4eu-competences
  https://www.ai4eu.eu/resource/sap-conversational-ai
  Team formation (to be released)

- Using the AI4EU platform as a Service

Internal KPIs:
- Students: user acceptance for conversational UX
- Professors: efficiency of team formation

- 2 scientific publications
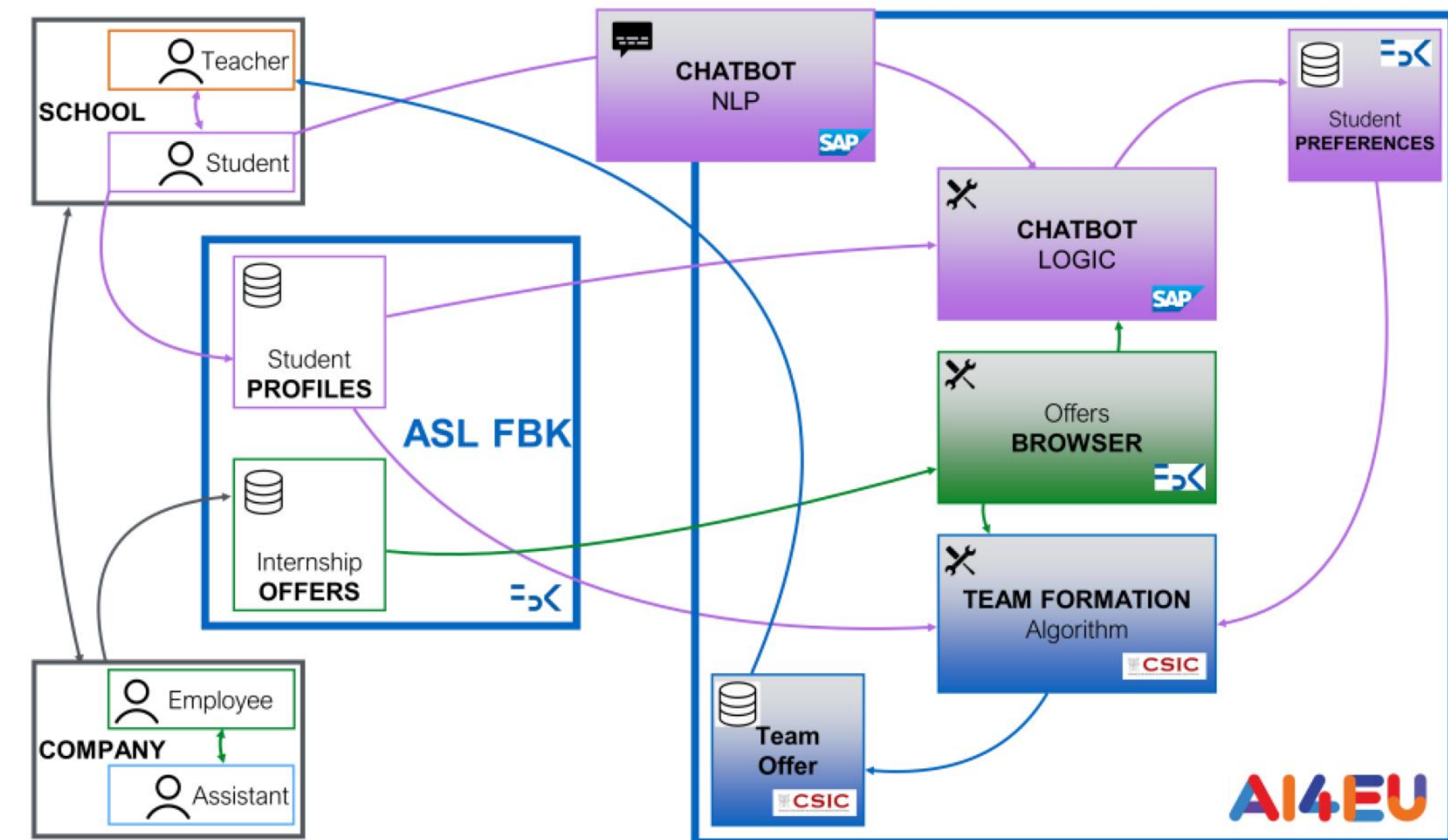
" AI4Robotics

- Constructing predictive maintenance models based on Deep Learning, for individual robot's wear using vibration sensors

- Physical robot experimentation and continuous data collection
- Analysis of the AI4EU Experiment function

- Interpretation/Explanation model available
in the AI4EU Catalogue https://www.ai4eu.eu/resource/lionets-time-series

Internal KPIs
- Robotic movement dataset with 2 sensors + 5 continuous movement patterns
- Collected >80 hours of sensor data
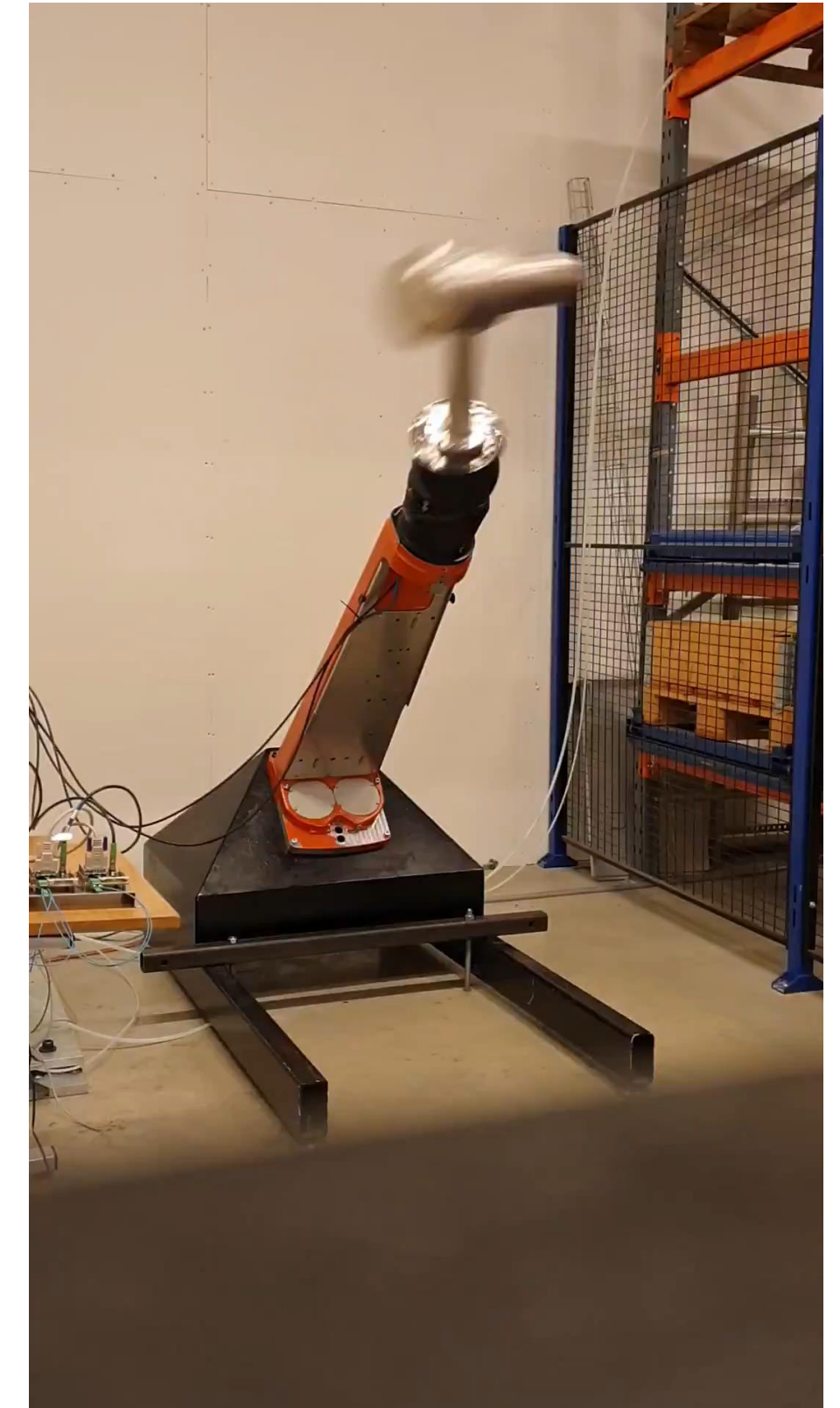
" AI4Industry

- - The Hexlite OWLAPI Plugin https://www.ai4eu.eu/resource/hexlite-owlapi-plugin
  - The Hexlite Solver https://www.ai4eu.eu/resource/hexlite
  - Time-prediction for flexible manufacturing
  https://www.ai4eu.eu/resource/time-prediction-flexible-manufacturing

Internal KPIs:
- 3 scientific papers published about components of the AI4Industry pilot
- Our time-prediction component achieves 96% of R2 measure.

AI4EU Pilot AI4Industry
Advancing Europe through collaboration in AI

SIEMENS
TU WIEN
Fraunhofer IAIS

Sonja Zillner, Siemens AG
Stephan Grimm, Siemens AG
Ivan Gocev, Siemens AG
Peter Schüller, TU Wien
Raoul Blankertz, Fraunhofer IAIS

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" AI4Media

- Rendering of the speaking 3D mesh using audio for mouth and video for identity
- Face to face translation available as a resource in the AI4EU Catalogue
(https://www.ai4eu.eu/resource/ai4eu-media-pilot)

- Pilot Ethical Assessment w.r.t. TrustworthyAI performed within the AI4EU Ethics Observatory

Internal KPIs:
1) Average evaluation made by non-expert users on a set of dubbed videos
2) Comparative evaluation where participants are asked to choose the most intelligible among pairs of dubbed and original videos presented randomly

AI4MEDIA
Preliminary Results

INTERDIGITAL.   AI4EU   Ínría

To Learn About AI4EU Pilot Experiments

https://www.ai4eu.eu/
showcase-ai-pilots

AI4EU

Grant Agreement N°825619

AI4EU Deliverable D6.1

Pilot Execution Plan (PEP)

WP	6	Pilot Experiments with the Platform
Task	6.1	Pilot Requirements, Monitoring and Assessment

Dissemination level[1]	PU	Due delivery date	30/06/2020
Nature[2]	R	Actual delivery date	26/06/2020
		Submission date after the rebuttal	15/09/2020

Lead beneficiary	SRL
Contributing beneficiaries	SAP, ABB, SAG, NEHS, INT, ATO, TEL, THA, CSIC, DLR, FBK, FHG, IMT, INR, ITI, NTNU, ORA, SMR, TUB, TUW, UPC, UPM

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THANK YOU!