ARTIFICIAL INTELLIGENCE AND BIG DATA
CSA FOR PROCESS INDUSTRY USERS, BUSINESS DEVELOPMENT AND EXPLOITATION

AI CUBE

CONSORTIUM

CiaoTech PNO

Fraunhofer IML

ZLC | MIT GLOBAL SCALE NETWORK

IRIS TECHNOLOGY GROUP

KIIT

THE PROJECT

The overall objective of AI-CUBE project is to contribute harnessing and optimizing the potential of AI and BD in the European process industry. AI-CUBE will define a roadmap that will serve as guidance for researchers, managers, and operators, and include specific recommendations for all involved industrial sectors and organizations' functions and processes. To achieve this, the specific objectives of AI-CUBE are:

- Draw a multi-dimensional AI and BD map (or a "CUBE") that will map available good practices , and assess the current state-of-play and level of penetration of AI and BD within the different organizational processes across the 8 SPIRE process industry sectors

- Build on identified good practices to develop future AI and BD business cases and define a roadmap of the RD&I actions needed in each SPIRE sector

- Detect the white spots of AI and BD solutions that can be covered adapting good practices from other process industries, outlining an adaptation roadmap

- Define the data requirements, skills and RD&I requirements for future AI and BD business cases to emerge within the different process industry sectors

All these will converge into 8 AI and BD roadmaps, one for each SPIRE sector, indicating a route map and practical recommendations on AI and BD business cases, transferability of good practices from other industries, data, skills and RD&I requirements, in line with the A.SPIRE 2050 vision.

THE CONCEPT

The AI-CUBE concept is based on a tri-axial mapping of AI and BD technologies. It allows to map and visualize the status of AI & BD use and penetration per SPIRE sector and per macro-application-process areas.

The '**Cube Concept**' allows to set the stage for the development and integration of four sets of key results, which are key to drive the opportunity assessment and take-up of AI and BD by the European process industries:

- **Maturity Level Assessment**: A novel AI and BD Maturity Level Assessment framework to support companies in assessing the level of implementation of technologies.

- **The AI-CUBE tool**: to be used as mapping tool by individual industries or sectors to assess their state of advancement in AI and BD and the needs for further development.

- A set of inspirational **AI and BD Business Cases** in the process industries and a **AI-CUBE Business Model Game**: to be used by industries or the sector, to stimulate reasoning about how AI and BD can innovate their Business Models and Value Chains for the future and, hence, what actions to take.

- **Roadmaps and Infographics**: A set of several roadmaps and easy to consult Infographics, that outline the path towards: i) transferring good AI & BD practices form one SPIRE sector to another; ii) further developing and taking-up technology solutions towards AI & BD Business Cases of the future for the different SPIRE process industry sectors.

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