

# PDS Project (Pressious Data Space)



## Vision of AI REGIO

By 2030, EU will lead the worldwide competition for an ethical and sustainable adoption of AI in Manufacturing, by integrating regional Digital Innovation Hubs and pan-EU open Digital Manufacturing Platforms via a cross-border network of SME-driven Industrial Experiments and Didactic Experimental Facilities. General Data Protection Regulations (GDPR) and Data Sovereignty will drive the European AI strategy for personal and non-personal Data Sharing Spaces.

## PDS Goal

To that end, the PDS project will build an embryonic Data Space for Manufacturing, in the domain of Offset Printing, showcasing the benefits of enhancing the value of the manufacturing data, before they are used in advanced AI applications.

## Expected Impact on PressiousArvanitidis



### A. Business:

Significant cost reduction, reflected in material/scrap reduction and on the reduction of human and energy resources, as a result of process standardization and early detection of possible failures.

### B. Environmental:

Progression to a more environmentally friendly solution, by minimizing the use of raw materials and enhancing circular economy principles, while ensuring the company's environmental awareness and will even help in identifying more harmful materials in the production line that result in waste and cost.

### C. Impact on Industry 4.0:

The development of the experiment will significantly facilitate the evolution of the factory by moving the production chain from the state of ex post management to the state of ex ante prediction of resource management. The company will also be benefited by gaining expertise in AI techniques for anomaly detection concerning the equipment and consumables involved in the manufacturing process, thus allowing for an effective resource management policy to be placed.

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## Expected Impact on the National Kapodistrian University of Athens



As the largest university in Greece and the EM, the project will help to extend the undergraduate and graduate courses, introducing new research topics on the field of artificial intelligence, zero defect management, data spaces and circular economy, while enabling knowledge and technology exchange between the university and the DIH.

## Expected Impact on the nZEB Smart House (DIH)



### A. Extension of DIH Available Domains:

Extension of DIH available domains by adding the new one related to printing and creation of opportunities for further collaboration. Further tools and services can be developed for the DIHs based on the needs of the experiment. These new tools would be used and applied to other domains and cases that the DIH is currently operates

### B. Promotion of Data Spaces in Greece:

The MDS creation will promote the DIH activities related to creation and operation of data space as CERTH is the Greek National Hub of IDSA aiming to promote data spaces in Greece

### C. Promotion of Clusters in Greece:

Contribution to CERTH's DIH activities related to promotion of clusters in Greece. CERTH coordinates the established Agile 4.0 cluster (14 members already available) and the newly established AI4Design testbed. The proposed example can contribute further to this activity as will offer options for new collaborations and clusters' extension and will add further core technologies to these initiatives. Currently, IDSA principles and EFF Data Spine are the major technologies for the cluster's setup. AI REGIO offerings can be added to them or collaborate with them.



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