



## Data-driven method based on a process mining approach for Automated Digital Twin generation, operations, and maintenance in circular value chain

### Kick-Off Meeting // January 16 & 17, 2023

On January 16th 2023, the project's Kick-Off Meeting was realized and it milestone AUTO-TWIN's official launch. The consortium travelled to Milan for the 2-day meeting that was hosted by the coordinator partner, the Politecnico di Milano.

Throughout the meeting, there was also a link where the partners, who weren't able to be physically present, could use to attend remotely.

During these 2 days, 44 experts in technologies and circular value chains were given the chance to meet each other and engage in an extensive and productive conversation about the project's objectives and working plan, work packages, the technologies and the use cases that will be used, as well as what are our next actions.

### FACTS ABOUT AUTO-TWIN

DURATION	BUDGET	PARTNERS	COORDINATOR	FIELDS
36 months	7,2M	13	Andrea Matta (POLITECNICO DI MILANO)	Sustainable economy, social sciences, natural sciences

### ABOUT THE PROJECT

**AUTO-TWIN:** *Data-driven method based on a process mining approach for Automated Digital Twin generation, operations, and maintenance in circular value chains* is a 36-month project that is funded under the HORIZON Research and Innovation Actions.

The Consortium consists of 13 partners from 7 countries and is under the coordination of the Politecnico di Milano.

AUTO-TWIN is a new method for creating digital twins, which are digital replicas of physical systems.

It aims to address the limitations of current system engineering models by introducing a breakthrough method for **automated process-aware discovery** towards **autonomous Digital Twins generation**.



This is done by adopting an **International Data Space (IDS)-based common data space**, which enables the automated process of creating digital twins, thus making it more efficient and cost-effective. Additionally, AUTO-TWIN integrates **novel hardware technologies** into the **digital thread**, which is a key component of creating digital twins, to create **smart Green Gateways**.

The solutions that AUTO-TWIN will introduce they will be demonstrated in 3 use cases (circular economy value chains):

1. Battery Cloud Platform / State-of-Health
2. PET Endless Recycling
3. Sterilization Process - Health Sector

The solutions provided by AUTO-TWIN digital is composed by a toolset to build agile, sustainable and responsive production environment and supply chains.

#### Expected Outcomes of the project:

- Provide a range of support solutions and innovative digital tools for engineers, technicians and operators on the factory floor
- Reduction of the dependency from imported raw materials or harmful materials for the European manufacturing sector
- Define specifications and standards for data, products, and/or business processes, that can be agreed and commonly used by many industrial actors and across different industry sectors
- Reduce the skills and knowledge gap for the actors involved

## CONSORTIUM



## CONTACT INFORMATION

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