

ONE4ALL PROJECT

PERIODIC UPDATE ON OUR ACTIVITIES

Project ONE4ALL General Assembly Padova

Our consortium held the 4th General Assembly in Padova on September 18-19, 2024, marking the project's **18-month milestone**. Hosted by [IBT](#), this two-day event focused on reviewing the progress of key Work Packages and planning for the next phase.

Day 1 featured updates on:

- *WP1: Human and Sustainability Impact Assessment*, which evaluates the social and environmental impact of the project's innovations.
- *WP2: Data-Driven Digital Twins*, developing digital replicas of production systems for real-time analysis and optimization.
- *WP3: Intelligent Orchestration Platform*, aimed at improving coordination between machines and human operators through AI.
- *WP4: Innovative Reconfigurable Cyber-Physical Production Module*, designing flexible production systems that integrate digital and physical components.

In the afternoon, participants visited IBT's site to see the collaborative robots (cobots) in action, followed by a networking dinner (picture below).



Figure 1: Consortium at IBT premises

Day 2 focused on *WP6: Dissemination, Exploitation, and Communication* and *WP7: Project Management*, including preparations for the October 2024 project review meeting. The consortium also reviewed the first reporting period and discussed the upcoming *WP5: Demonstration Activities*, set to begin in January 2025.

ONE4ALL scientific articles

The ONE4ALL consortium is proud to share the publication of three conference proceedings, now available on Zenodo. These publications, produced by the researchers of [Karlsruhe Institute of Technology](#) and [University of Southern Denmark](#), showcase our ongoing research and technological advancements.

- The first conference proceeding, [Challenges in Developing Digital Twins for Labor-intensive Manufacturing Systems: A Step towards Human-centricity](#), presents our approach to embedding environmental and human-centric considerations into cyber-physical production systems.
- The second paper, [Essential Data Requirements for Industrial Energy Efficiency with Digital Twins: A Case Study Analysis](#), explores the intelligent orchestration platform developed within WP3, which enhances decision-making between robots and human operators.
- The third publication, [Validation of Digital Twins in Labor-intensive Manufacturing: Significance and Challenges](#), focuses on the role of digital twins in optimizing production processes, detailing their implementation and benefits within WP2.

These publications contribute to our goal of advancing sustainable and intelligent production systems and are freely accessible for the research community.

More scientific articles will be available on [ONE4ALL Zenodo community](#).

ONE4ALL dissemination events attended

In the first 18 months of the ONE4ALL project, the consortium actively participated in several **key events to disseminate** the project's innovations and outcomes.

- *IBT* showcased at the **11th SPS Fair 2023** in Parma (May 2023) and the **SPS Trade Fair in Nurnberg** (November 2023), presenting solutions like the J-Actuator and prototypes for automatized end-of-line tasks.
- *CRIT* attended the **European Manufacturing Conference** (September 2023) and the **R2B Fair in Bologna** (June 2024), promoting the project's relevance to industrial partners and SMEs.
- *TUDO* participated in **Open Living Lab Days** (September 2023), emphasizing user-centric innovation.
- *KIT* presented at the **Eurosim Congress** (June 2023, figure 2) and the **EDI40 Conference** (April 2024), highlighting advancements in digital twins and ONE4ALL methodology.
- *INNO* showcased Digital Maturity and Sustainability tools at the **Achema Fair** (June 2024).

These events fostered engagement with industry stakeholders, promoting the project's vision for sustainable, flexible and intelligent manufacturing.

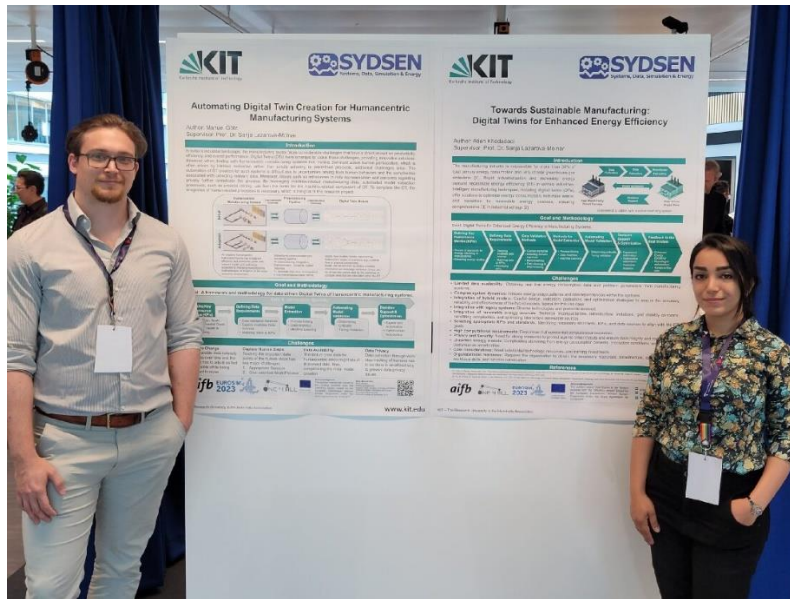


Figure 2: KIT representing ONE4ALL project at Eurosime Congress

Want to know more about the project?

More details on the project activities, results, consortium are available on the official website:
<https://one4allproject.eu/>

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