Project Acronym:	CONVERGING
Grant Agreement number:	101058521 (HORIZON-CL4-2021-TWIN-TRANSITION-01-01 – Innovation action)
Project Start Date	1st September, 2022
Project Full Title:	Social-industrial collaborative environments integrating AI, Big Data and Robotics for smart manufacturing

CONVERGING

Funded by the Research & Innovation Programme of the European Union

DELIVERABLE

D2.1 – Pilot case scenarios, user requirements & validation metrics definition

Dissemination level:	SEN
Type of Document	R
Contractual date of delivery	28th Feb 2023
Deliverable Leader	FORD
WP / Task responsible	WP2, T2.1, T2.2
Keywords:	use case scenarios, requirements, KPIs, modules

Executive Summary

This document is the outcome of the work performed under T2.1 “AI enriched manufacturing environments - Pilot cases and validation metrics definition” and T2.2 “User requirements extraction for smart human centric manufacturing processes” of WP2 in parallel with the rest of the tasks of the workpackage. The requirements reported at this document will be analysed in T2.3 “Specifications for CONVERGING core enabling technologies” in order to extract the H/W and S/W specifications of the CONVERGING technologies, which will then lead to the design of a reference architecture, in context of T2.4 “Multi agent AI resources interconnectivity - Reference architecture for industrial take-up”.

In particular, this document details the complete set of user requirements that will serve as the foundation of all CONVERGING technical developments. First, the general overview of the AS-IS and TO-BE industrial use case scenarios is described with emphasis on the challenges and KPIs and then, a first use case requirement analysis is outlined. The use case requirement is composed of the main CONVERGING Pillars:

i) reconfiguration and AI based autonomy
ii) big data pipeline
iii) social-industrial environment
iv) smart human-machine collaboration