eit Manufacturing

Project : 23507, PHYGITAL

Progress Review

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eitmanufacturing.eu

Co-funded by the
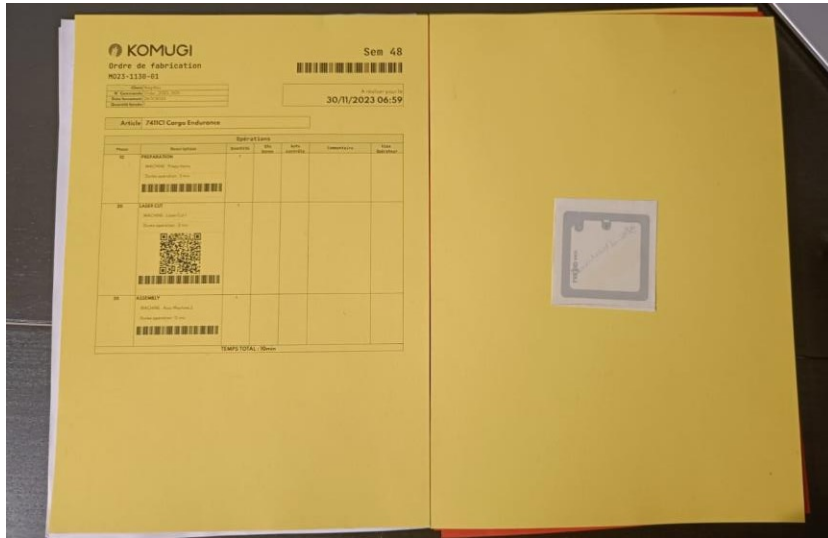European Union

Project Overview

PHYGITAL

- Overall Objective : PHYGITAL system is a connected plug and play wallboard for industrials

- Project Specific Objectives: PHYGITAL offers plug and play solutions that enable the digitization of production management in small factories, without requiring high investments or extensive training of personnel. These solutions are designed to seamlessly integrate into the existing working routines of manufacturing SMEs.

- Main Outcome: digitalization of small / medium industrials

Device description

NFC tag

An NFC tag is implemented on the back of a Manufacturing Order.

The system is very convenient as it suits to many types of manufacturers :
- **Metal sheet and welding** - NFC Tag on the paper
- **Small parts and high values** (ex : watches, luxe, etc;) : NFC Tag on the item
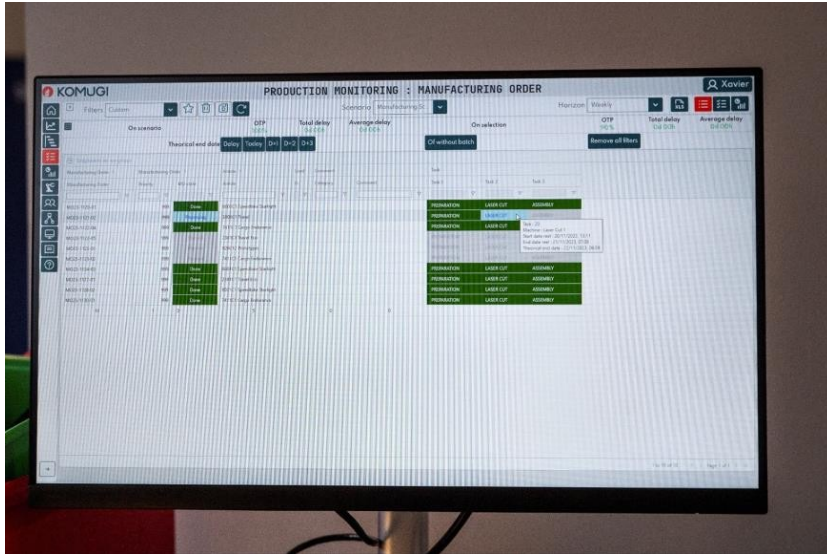- **Small parts and low values** : NFC Tag on the logistic box

Detection boards

Boards allowing detection of NFC tags are implementer in everyday life working furniture (shelves, bench, tray)…

Boards can be set in a vertical or horizontal position according the need.

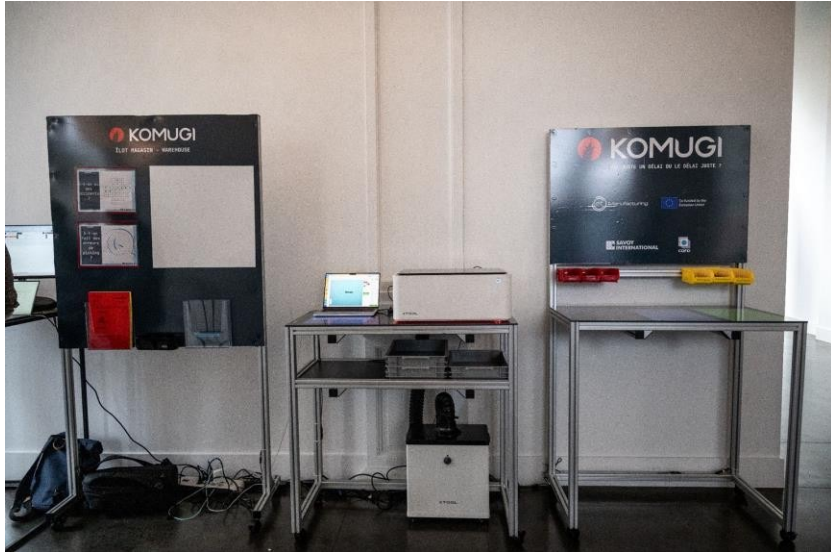Different areas can be define on a same surface.

Software

Komugi's existing software has the data regarding fabrication orders that need to be made and different steps that need to undergo.

Phygital demonstrator

Phygital demonstrator

Demonstrator has one connected board and two workbench (one for laser and one for assembly).
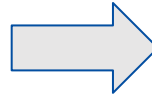
Orders selection

Orders to be made are selected by being transferred to the "TO DO" tray.
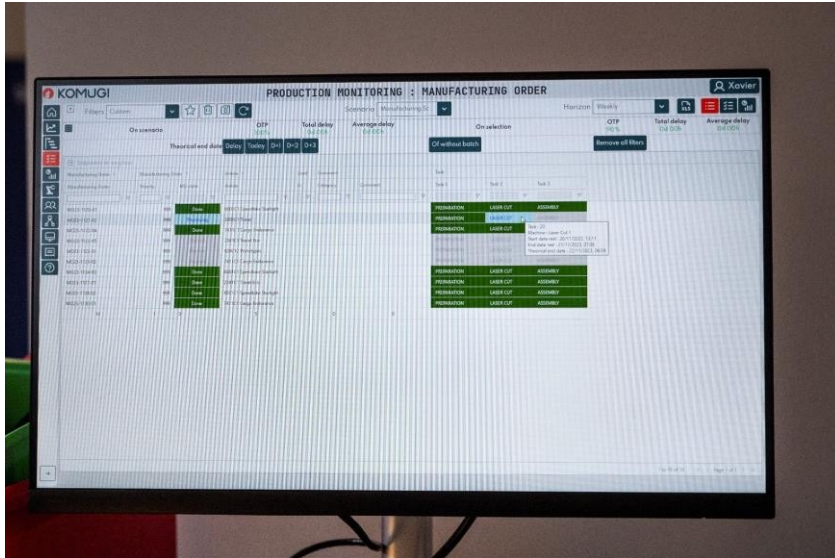
Manufacturing process 1/2

Manufacturing order with
NFC tag is put in the banner.

Laser procedure for the specific
manufacturing order is launched (here
personalisation of the bike).
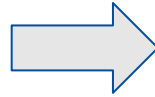
Production monitoring updated automatically

Production monitoring is updated automatically, with no data collection from the worker.

In blue : ongoing task at the laser station for this specific order.
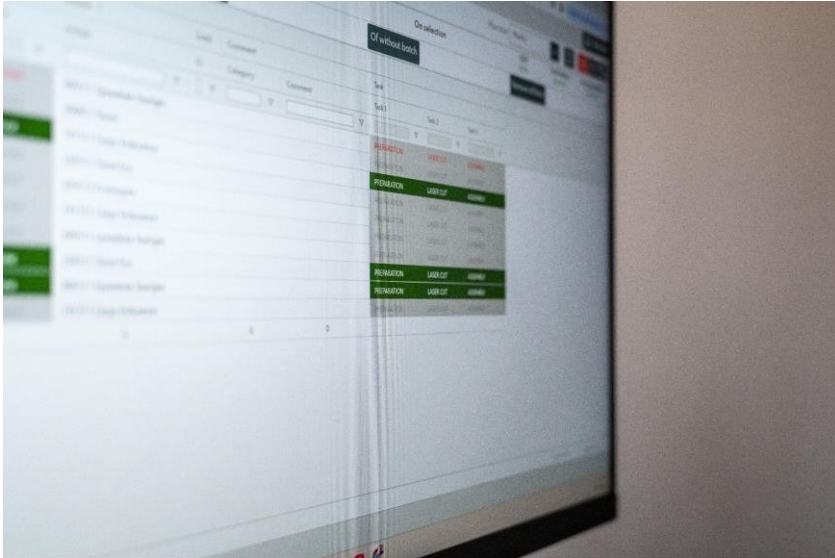
Manufacturing process 2/2

After laser, and awaiting in the waiting assembly area (grey), assembly process is launches (blue area).

Assembly process is finalized and product is stored in the assembled product area (green), ready to be delivered.

Production monitoring updated automatically

Production monitoring is updated automatically, with no data collection from the worker.

Completed task shows all the manufacturing steps have been completed (green).