

MANUWORK Newsletter



Preface

Dear Reader,

MANUWORK is a European Union funded Research & Innovation Project under the H2020 Program. The project has started on 1st October 2016 and will last until the 31th March 2020. The project engages 13 organizations from various EU countries and the consortium is coordinated by the Laboratory for Manufacturing Systems and Automation (LMS) of the University of Patras, Greece.

MANUWORK aims at the development of an integrated platform for the management of manufacturing workplaces of the future that will be characterized by the complementarity between humans and automation. This requires new methods and tools for the design and operation of optimized manufacturing workplaces in terms of ergonomics, safety, efficiency, complexity management and work satisfaction.

As the developed modules start to take shape, the first prototypes are available to be tested in the project industrial pilot cases. As MANUWORK marches towards the validation phase, these prototypes will be tested by the industrial experts so as to provide valuable feedback until they reach their final form. The five prototypes are available to the public to get some insight into them through videos that are uploaded in the project's YouTube channel.

The main goal of this newsletter is to present the first prototypes of MANUWORK, which are also presented through our new YouTube channel. Finally, recent project activities and future events are presented.

Sincerely,

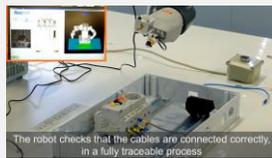
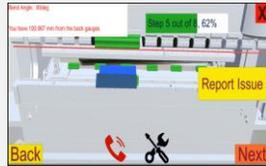
The MANUWORK project consortium

The project

MANUWORK – Balancing Human and Automation Levels for the Manufacturing Workplaces of the Future (FOF-04-2016, Grant agreement no: 723711) is a European Union funded H2020 Research & Innovation Project.

The project started on **1st October 2016**. The overall work plan is divided into work packages and their sub and covers **42 months** of industrial driven requirements, research, development and realization of final demonstrators.

- Phase 1: Industrial requirements and system specification.
- Phase 2: Modules development
- **Phase 3: Integration**
- Phase 4: Pilot cases execution and assessment



MANUWORK first versions of the prototypes

As the developments are reaching a high level of readiness, a series of prototypes are available for demonstration. The tools aim to present the multiphased impact of MANUWORK developments in the factories of the future, aiming to make the human the center of the production. Videos for each tool are available in our new YouTube channel.

RAPpID is an industrial social networking solution, being developed by We+, that aims to facilitate knowledge distribution and improve connectivity within a manufacturing company. RAPpID tells a story. The name originates from the joining of three words – “Rapid + App + Id”, three words that dissolve and integrate with each other to interpret our message: “A fast way to communicate!”. RAPpID speaks about rapidity, simple applications, and key users, as well as readiness and quality of communication, with the goal of getting in touch quickly to share, together, the most ideal and winning solutions for everyone.

The prototypes reveal how the MANUWORK developments aim to shape the factories of the future into a more inclusive and satisfactory environment for the human workforce, which is also highly efficient and develops the skills of the operators.

Teaser Videos

Videos of the Prototypes are now available in our YouTube channel. Use the following links to view them:

- ✓ [RAPpID, our new Industrial Social Network](#)
- ✓ [The Skimatic tool](#)
- ✓ [An Authoring tool for quick AR Instructions generation](#)
- ✓ [AR Instructions for bending machine operators](#)
- ✓ [How people with disabilities may be included in the Factories of the Future](#)

The **Skimatic** tool, being developed by CEA, facilitates the assignment of operators in working groups, based on their skills and the requirements of the tasks. The tool improves the human resource allocation, while it also supports the development of their capabilities through their progressive involvement into more difficult tasks. The tool is suited for production lines where the operators are not assigned to dedicated workstations but are called to work in groups.

Two prototypes that take advantage of Augmented Reality (AR) in the factories of the future have also been developed presented. The first one is an **authoring tool**, being developed by VICOMTECH, may support the fast development of AR instructions and the second AR application, being developed by LMS, **supports press brake machine operators**. AR introduces a great approach of providing technical information to the human operators in an agile and easily perceivable way.

Moreover, TEKNIKER has developed a robotic solution to support of **people with disabilities** in the Factories of the Future. Persons with cognitive disabilities have useful skills and capacities to carry out assembly jobs in industrial processes. Guided by automations and supported by Augmented Reality they are capable of completing the task, while the automation validates the quality of the process.

Next Steps

The focus now shifts towards the validation of the developments in the MANUWORK pre-pilots and pilots. Experts from the industrial partners will be called to validate how the developed solutions could improve the status quo, integrating new technologies and new approaches in the current practice.

List of selected events

- On 27 June 2018, MANUWORK project was presented in EFFRA Factories of the Future Community Day to researchers from all across Europe.
- On 20 and 21 of September 2018, MANUWORK Consortium had a General Assembly meeting in Turin, Italy in order to discuss on the so far progress and prepare for the closing of an important Project Milestone that was accompanied with a number of deliverables and a Review meeting
- On 17 October 2018, MANUWORK had a Review Meeting in Brussels. The project consortium presented to the Project Officer and the Reviewer the current progress and received valuable feedback for the future steps.
- On 23 October 2018, MANUWORK participated in ASSETS 2018, a Conference dedicated on the integration of persons with disabilities in the workplace, presenting how MANUWORK developments may support workers with cognitive disabilities in the Factories of the Future
- On 31 October 2018, MANUWORK participated in IndTech 2018, where the current progress was presented to industrial stakeholders.

Upcoming events

- Project General Assembly, March 2019, Paris, France

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Consortium

