



FACTS4WORKERS PROJECT PRESS RELEASE

PROMISING PROGRESS ACHIEVED IN FIRST HALF OF THE PROJECT

1. Introduction

FACTS4WORKERS is a 4-year project financed under the European Horizon 2020 Research and Innovation programme – Factories of the Future Public Private Partnership. The goal of FACTS4WORKERS is to increase problem-solving and innovation skills of workers participating in pilots at industrial partners' factories. Represented are industrial cases from automotive, plastics, steel, and tooling industry. In the end the project consortium aims to introduce advanced IT-based solutions that would increase average worker productivity by 10% for workers participating in pilots. Solutions targeted by the FACTS4WORKERS project include: Personalised augmented operator, Worked-centric rich-media knowledge sharing/management, Self-learning manufacturing workplaces, In-situ mobile learning in the production. The FACTS4WORKERS project aims to spur similar innovations and projects within the targeted European industries, increasing the industrial potential of Europe. Such worker-centric solutions would enable workers become the smart element in smart factories, by interacting with a flexible smart factory infrastructure. The FACTS4WORKERS consortium comprises of 15 partners from 8 different European countries. The consortium led by Austrian research institute Virtual Vehicle, comprises of large enterprises, SMEs research centres and universities.

2. Activities done in the first half of the project

Work done in the first half of the project can be divided into 8 work packages:



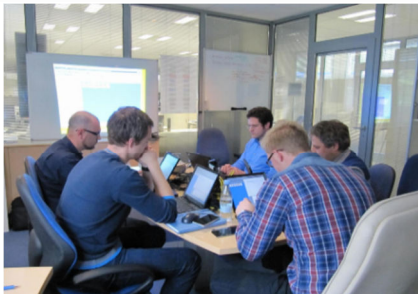
Work Package 1 (WP 1) – Worker needs, organizational requirements, and Industrial Challenges: work in this WP started with interviews with shop floor workers at each industrial partner pilot site thus capturing workers' and organisations' needs. The industrial partners are: Schaeffler (automotive), Thyssen Krupp (steel), Hidria Rotomatika (automotive), Hidria TC (automotive), EMO Orodjarna (tooling) and Thermolympic

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(plastics). Discussions were made via visits at the sites and focus group discussions. After obtaining the current status of the problem that the IP wishes to address with the solutions, worker scenarios were created providing the first ideas on the possible solution deployment.

Work package 2 (WP 2) – Worker-Centric HCI/HMI Building Blocks (BB): A technology monitoring report capturing the state-of-the-art regarding current technologies was prepared and on the basis of it, several prototype human-machine interfaces (HMI) for the front-end of the solutions enabling efficient information flow between the shop floor worker and the machine were prepared, including: chat and video chat, dashboard, cockpit view, semantic search and solution recommender etc. Some BBs have already been developed to their early demonstration stage and is undergoing first proof of concept testing.



Work package 3 (WP 3) – Worker-Centric Service Building Blocks: Activities in WP3 provide a preliminary definition of each context-of-use in terms of information requested by the workers to support their empowerment and a technical concept needed to provide such information. Preliminary workflow descriptions for the con-texts-of-use for all industrial cases were made – the back-end part of each project solution. Developed service BBs include: multimedia management, issue overview, task manager, work history modules etc.

Work package 4 (WP 4)– Smart Factory Infrastructure: In the first two years FACTS4WORKERS project succeeded in creating first test solutions field of semantic search engine building block - The Semantic Workflow Engine - that operates and connects the Front end HMI solutions with the back ends of the Services (Service BB's) in a flexible way. The special purpose developed software code for each pilot use-case helps the worker make the best decision based on previous inputs – detecting possible problems and eliminating possible worker's mistakes. Two of the industrial UCs are at a very advanced stage at this point and their presentation to the interested public is planned for 2017 preferably at the annual Hannover Messe in Germany.



Work package 5 (WP 5) – Deployment: Smart Factory Industrial Challenges: WP5 is the WP that enables the deployment of the developed FACTS4WORKERS solutions on the industrial partners' shop floors at their pilot sites. Since deployments are planned in the project's third year 2017, huge effort way put in place by the project partners. Accomplished results in this field include generic



integration plan for all UCs that enables the transfer of individually developed solutions to an integrated system at the shop floor. Based on this, technical requirements for successful implementations were defined (e.g. Hard- and Software components, security issues and restrictions). Further, in order to enable connection of different kind of data between parts of the developed software and hardware systems, connectors needed were defined and their procurement coordinated with industrial partners. This means that foundations for first test deployments are well in place.

Work package 6 (WP 6) – Demonstration & Evaluation of Smart Factory Solution: The main tasks of WP6 have been the focus on the development of the FACTS4WORKERS Evaluation Framework. The bricks used for building the Evaluation framework have been already developed in the first year. The tasks driving to the development of the evaluation framework confirmed that some risks identified before are finally materializing since, as expected, it's hard to deal with both different sources and type of data to meet our measurement goals (productivity and also satisfaction). Thus, a permanent and joint effort is being held to identify and isolate data (and their possible and proper acquisition methods) in order to reach the project measurement goals. In parallel and in strong correlation to WP1 activities, evaluation interventions were performed to analyse the mock ups and demonstrators already developed for the IPs. The evaluations helped the developers to maintain a real and continuous contact with the workers. In addition, they help with generation of some important scientific papers. A State of the Art research was also completed for methods and tools used for evaluation of satisfactions with the developed solutions.



Work package 7 (WP 7) – Dissemination and Future Exploitation: A detailed Project Dissemination and Exploitation Plan has been prepared by the consortium, defining project partner dissemination priorities as well as clarifying approaches that shall be taken in order to enable efficient communication to different stakeholders (industrial community, governmental institutions, IT community, national and European stakeholders, etc.). Clear definition of

results that will be disseminated – KER: Key Exploitable Results – were also provided, ensuring overview of any collision of interest, intellectual property rights protection, privacy protection etc. FACTS4WORKERS project has been presented using different media channels: website, peer-reviewed journals, conference papers and other publications, newspapers, social media channels (Twitter, blogs, Tumblr, Facebook, LinkedIn etc.). Highlights include project presentation to the EARPA Association, and visit to the Hannover Messe, Automatika Trade Fair, Web Rule Symposium in the USA, and Mensch und Computer Conference, where the consortium hosted a dedicated workshop.

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3. Upcoming activities in 2017 and 2018

The year 2017 shall be focused on first pilot presentations to the European Commission and first outreach to the interested – first mostly national - stakeholders (industrial associations and clusters, especially ones including SMEs) in order to raise awareness on the potential of the solutions developed within FACTS4WORKERS. Outreach on European level is also planned in order to enhance the potential of implementation of the solutions after their final validation that is expected to start later in 2018.

4. FACTS4WORKERS project consortium and contact data

PROJECT PARTNERS

The FACTS4WORKERS project is composed of 15 partners from 8 different European countries:

Virtual Vehicle Research Center	Austria
Hidria TC Tehnološki center d.o.o.	Slovenia
Università degli Studi di Firenze, Department of Industrial Engineering	Italy
Technische Universität Wien	Austria
ThyssenKrupp Steel Europe AG	Germany
Hidria Rotomatika d.o.o., Industrija Rotacijskih Sistemov	Slovenia
iMinds VZW	Belgium
Sieva d.o.o.	Slovenia
University of Zurich, Department of Informatics	Switzerland
Thermolympic S.L.	Spain
EMO-Orodjarna d.o.o.	Slovenia
Evolaris Next Level GmbH	Austria
Itainnova - Istituto Tecnologico de Aragon	Spain
Schaeffler Technologies AG & Co. KG	Germany
Lappeenranta University of Technology	Finland

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