

OUTPUT FACT SHEET

Tools

Version 2

Project index number and acronym	CE1492, 4Steps
Output number and title	Pilot actions of testing innovative ICT application
Responsible partner (PP name and number)	Virtual Dimension Center Fellbach
Project website	https://www.interreg-central.eu/Content.Node/4STEPS.html
Delivery date	03/2022

Summary description of the key features of the tool (developed and/or implemented) and of its transnational added value

As part of the Interreg Central Europe project 4Steps "Towards the application of Industry 4.0 in SMEs, CE1492", project partner no. 8: The Virtual Dimension Center Fellbach supported the project with various activities. The pilot included the evaluation of the operator 4.0 approach. There are already plenty of studies about the future vision of the operator 4.0, therefore the focus was placed on the feasibility of all or individual aspects of it for today's useful implementation. Parallel to this, demonstrations of portable devices for use in an industrial context were created and try-out possibilities were made possible. Three events were held to impart the acquired knowledge. Different event approaches were also tested to see with which the new technologies can be communicated and shown in the best possible way. These Events were directed at specialists from certain application fields and industrial sectors with the main topics augmented reality, virtual reality, 3D simulation and their use cases and examples from the industry.

NUTS region(s) where the tool has been developed and/or implemented (relevant NUTS level)

Due to its online character of some activities (mainly events) the pilots reached all regions in Germany. The demonstrators on the other side only reached region DE11 and DE12.

Expected impact and benefits of the tool for the concerned territories and target groups

Our hub is designed as a tool to connect the different actors from business and industry and to support them in their efforts to digitalize their work processes. In this way, they find a contact person and partners with whom they can discuss and test new trends, technologies and innovations as well as challenges. Now also extended by the Operator 4.0 approach and with demonstrators for various use cases. In the HUB the actors can jointly develop and exchange know-how, experience, best practices and use cases. The Hub also networks with other international Hubs to integrate and transfer knowledge and know-how. It is expected that the Hub can contribute to a faster development in the field of production processes and operations within the region and beyond with the new topics of the Operator 4.0 approach. Additional effects are the cooperation with technology service providers, users, research institutions and multipliers from science and universities together with a continuous exchange and discussion about new trends and challenges.

Sustainability of the tool and its transferability to other territories and stakeholders

As a hub and with our services, we help companies to save resources and invest in a targeted and sustainable manner. Especially with the demonstrators and the events on the Operator 4.0 approach and the new XR technologies. The companies can be supported in the selection and their way to digitization of workplaces and processes. Investments made are not replaced after a short time by mistakes or identified unsuitability, instead they can be used in the long term. Because information about new technologies is accessible, it can be carried out in a targeted manner for proven technologies. The companies also benefit from the experience of the network. Either directly from the companies that have already made a certain experience or investment, or indirectly through our consulting based on that knowledge/their results. This avoids the same tasks and projects being carried out which then lead to the same result. The possibility of consultation keeps the companies and their employees up to date. Through networking and participation in events and congresses, knowledge is also acquired outside of the region and are communicated to other territories as well. With the knowledge and experience of proven technologies and investments within the hub, this experience can be passed on to the industry. The industry's ability to make targeted investments and avoid correction loops is increased. This allows the industry to have an advantage in implementing useful solutions while increasing their competitiveness. Bad investments can be avoided and lessons learned can be taken into account and implemented in advance. This also accelerates technology development, adoption and adoption in an industry.

References to relevant deliverables and web-links
If applicable, pictures or images to be provided as annex

Output is linked to:

- D.T3.6.1 - Operator 4.0 approach - [D.T3.6.1 Operator 4.0_EN](#)
- D.T3.6.2 - Events for innovation application - [D.T3.6.2_Event_01.pdf](#)
- D.T3.6.2 - Events for innovation application - [D.T3.6.2_Event_02.pdf](#)
- D.T3.6.2 - Events for innovation application - [D.T3.6.2_Event_03.pdf](#)
- D.T3.6.2 - Pilot Report - [D.T3.6.3 Pilot_Report.pdf](#)

Media:



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European Regional
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4STEPS 

Figure 01: Operator 4.0 Typology according to Romero (Source: Romero)

2. Operator 4.0 approach

The following section identifies and describes the types of Operator 4.0 (see Figure 01) approach considered in this report [1]. These approaches of the "intelligent operator" consider different functions and technologies that could be used individually or in combination with each other. All of the types described are extensions of the worker's capabilities and possibilities for action with the aim of achieving improved performance, cost savings or more efficient work processes and thus further optimising them. In addition to use in production, production-related areas and interfaces are also taken into account.

Figure 1: Operator 4.0 Approach



Figure 2: Pictures from Event 1/01

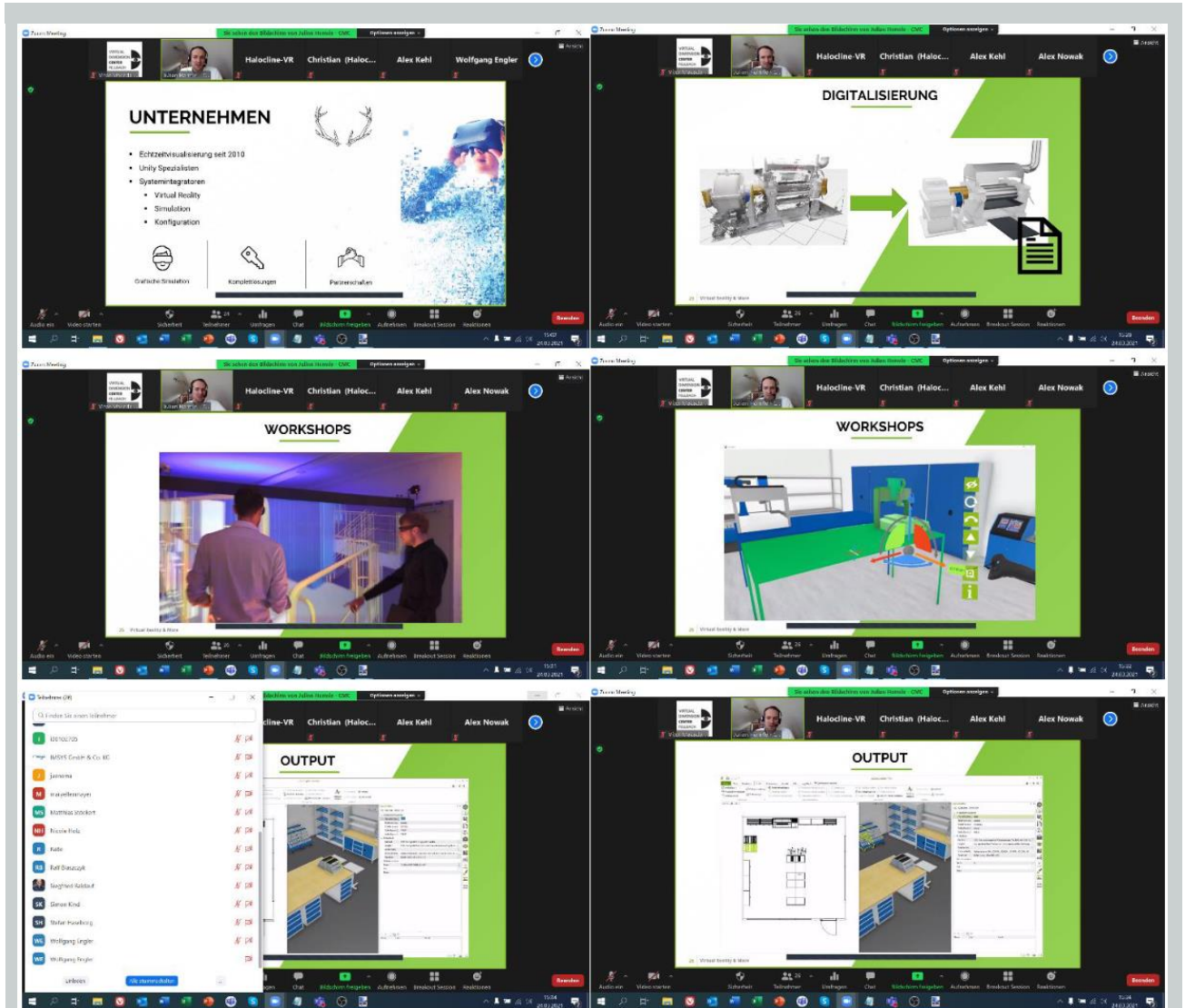


Figure 3: Pictures from Event 1/02

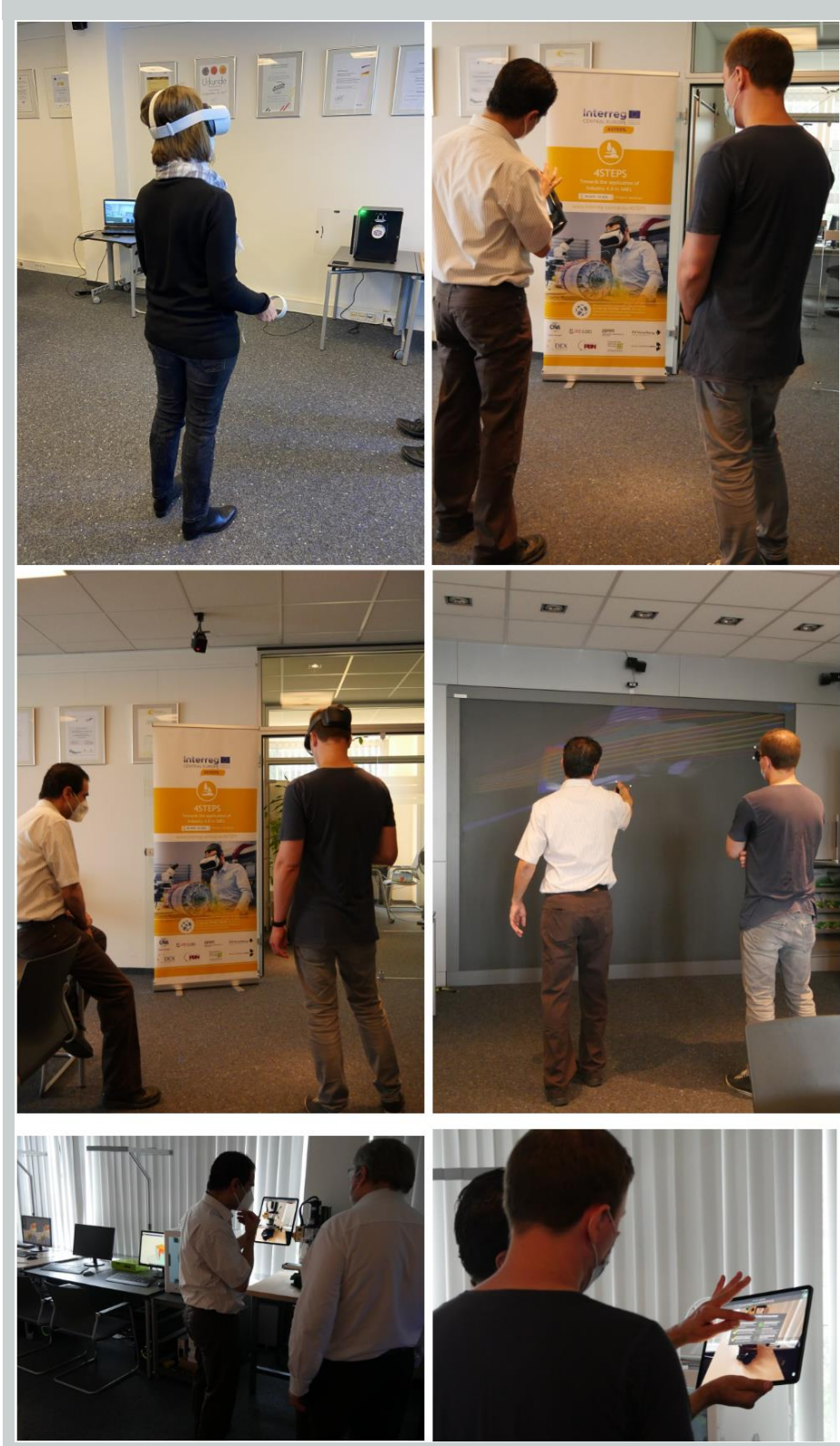


Figure 4: Pictures from Event 2

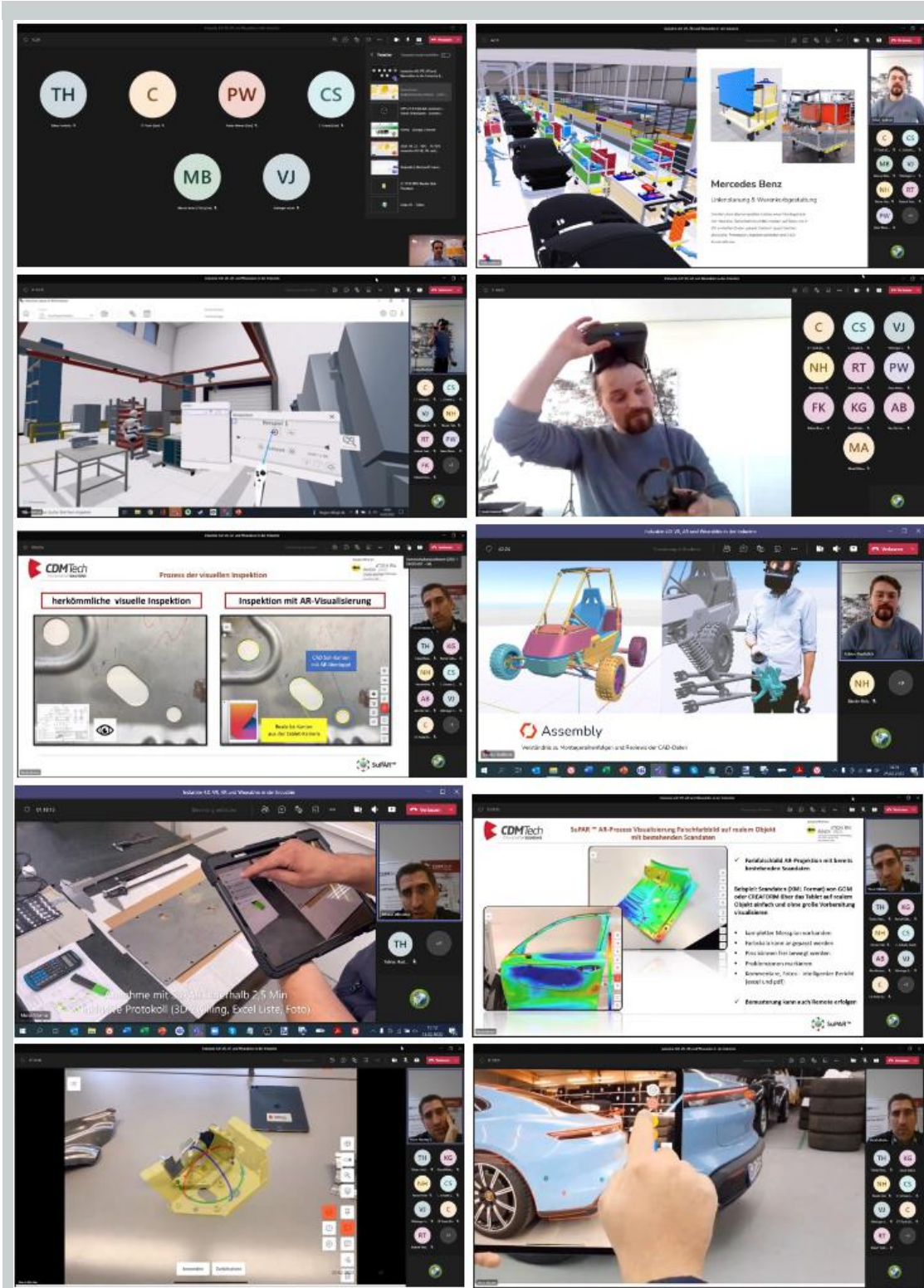


Figure 5: Pictures from Event 3