

Implementation of smart assistive Augmented Reality work and training stations

Organisation:

Lichtwerk – Hooglede, Belgium

Year of initiation:

2017

Funding:

Lichtwerk's own funds and government subsidies

Link to UNCRPD:

Article 27 - Work and Employment

Description of practice:

Lichtwerk's goal is to create an inclusive labour market so that people with disabilities, and other individuals with a certain distance to the labour market have access to paid employment. To achieve this, Lichtwerk provides smart assistive Augmented Reality work and training stations, powered by LightGuide AR software. This solution has so far been installed in social enterprises, manufacturing companies, schools, and training centres.

Problem Targeted:

Work integration social enterprises (WISEs) must continuously adapt to a changing global industry. The orders they receive from their industrial customers are more diverse than before, and the requirement for high-quality products is only increasing. Moreover, students in special needs secondary education face increased difficulties in finding a job in WISEs compared to before. Implementation of LightGuide technology can help these target groups find a job by providing a more specialised training that is easier to adapt to differing job requirements, and hence more efficient to cater for a changing labour market.



Solution offered:

Lichtwerk's smart assistive Augmented Reality work and training stations guide operators with cognitive, developmental, intellectual, or mental impairments, but also non-native speakers or people resuming their job after severe illness to perform new tasks in a simple manner. The solution offers 'cognitive support' through the projection of digital work instructions on any work surface, providing operators with visual guidance, feedback, and confirmation. This helps them to better learn new complex processes. The solution replaces written and oral work instructions with an intuitive and intelligent guidance programme that complies with the highest quality standards and makes the workspace safer and more inclusive. The assistive technologies provided by Lichtwerk can be used as permanent support, but also for (re) training and educational purposes.

Impact and Sustainability of practice:

The assistive technology has a positive impact on the operator's well-being, minimising the stress experienced when learning or executing complex tasks. It also encourages them to be more autonomous in their work. The technology contributes to a more inclusive labour market, as more people with a disability (for whom the distance to paid work would be too big without assistive technology) can find employment in the social or regular economy. The implementation of LightGuide in educational settings contributes to this inclusiveness since it makes the transition to the labour market easier.

Besides selling smart assistive AR work and training stations, Lichtwerk assists companies and vocational education training centres in the digital transformation process as well as in the setting up of digital work instructions. The instructions and training stations can be adapted to new tasks and new employees, making it a modular, future-proof system. Lichtwerk is now looking to expand its activities by working with international partners to reach more customers and push for more diversity across the economy.

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