



Footwear virtual learning by doing - Transition from analogue practices to digital education

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Investing in XR training for the workforce

In a previous article, we described the three main Extended Reality (XR) technologies (Virtual Reality, Augmented Reality, and the less developed Mixed Reality), and explained their potential in education and training. Now, we will analyse more deeply XR training and its potential and benefits for the upskilling and reskilling of the workforce. To conclude, we will give you a few tips on how to choose the best XR technology for the specific needs of an enterprise.

What is XR training?

The term XR training refers to training solutions that extend the reality through devices such as a headset, a mobile phone, or a tablet. As we will explain below, XR technologies allow a more immersive experience guaranteeing higher levels of safety and engagement.

Augmented and Virtual Reality (AR and VR) are both applicable for training technical skills, multi-step tasks and onboarding. However, a specific XR technology can be more recommended for a specific purpose than others. In fact, while AR is more appropriate for product knowledge, VR suits best for scenario-based learning and simulations. Mixed Reality (MR) can also offer valuable opportunities for training, but its application remains less widespread.

The possibilities of XR training are uncountable, among them:

- **Onboarding training:** AR and VR training methods are more immediate than handover notes, and increase the perception of the core products for the workforce.
- **Technical training:** AR product knowledge and VR simulations can anticipate familiarity with new machineries before their installation in the work environment, diminishing adaptation time.
- **Leadership training:** VR scenario-based learning can support the development of soft skill for an improved relation between management and workforce and among peers.

Benefits of XR training in industry manufacturing

XR training can also benefit industry manufacturing. It is possible to detail 3D models of complex machinery and visualise its components, practice troubleshooting issues and completing multi-step tasks. Another example is the simulation of an assembly line to estimate time, costs, errors and other risks.

Besides the general benefits of a more engaging and immersive training experience, XR training has the merit to minimise hazards in high-risk scenarios, as it is the case of industry manufacturing.



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XR training guarantees the development of skills while, at the same time, guaranteeing both the safety of workers, because they are then less exposed to accidents, and the better conservation of the company assets from earlier degradation. Trainees can work in a safe environment, without worrying about injuring themselves or their colleagues, or damaging machines and other equipment.

Nowadays, this type of training provides a simulated reality that feels accurate in terms of equipment, setting, and people. This means that the learners can discover not only the properties and the functioning of a given asset, but also the consequences of a wrong process that could be even lethal in the real life. In addition, thanks to the possibility to repeat operations without concerns of mistakes, and to learn from the latter, workers can acquire more confidence and be in the condition of performing multi-step tasks correctly before intervening on the real workplace.

Finally, it is important to remember that XR training facilitates **long-term knowledge retention**: Studies quoted by the e-learning provider [Maestro](#) show that learners following XR training retain more information after the training in both short and long terms. Longer retention represents an advantage for the enterprise in terms of both time and costs, as it will need to invest in less training sessions.

How to choose the right technology for your training

We have just seen how XR training represents a valuable tool to improve safety and efficiency in the workplace, and understood how an initial investment on such training can be compensated by costs reduction in the post-training phase. However, choosing the right pathway among the infinite possibilities offered by XR technologies remains challenging.

Roundtable learning suggests [5 questions](#) to support a company in the identification of the most suitable technology:

- **What are your desired business and performance outcomes?** XR technologies are quite complementary and must be chosen carefully. A well-defined outcome will allow to keep your training in line with your final goal.
- **What are your learning objectives?** Objectives should be established concretely, be relevant and verifiable
- **Who is the intended audience and in what context will they learn?** The age and the ICT literacy level of your trainees have an impact on your choice, and so does the size of the group you address the training. For example, VR requires previous knowledge that you will need to compensate before the beginning of the training.
- **What is your training budget?** The budget has also a remarkable impact on your training method. AR applications are usually more economic than VR ones, as VR requires equipment that you will need to source before the training.
- **What training content will most effectively instruct your learners?** Take into account how much time workforce will dedicate to the training and its assimilation, the type of contact you want to transfer.

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