

Teaching with VR
Immersive Learning in Industrial Engineering and Management

AIM 2021 Conference, Novi Sad

Chair of Production and Operations Management
 ETH Zurich, Switzerland
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The Nigel Slack
 Teaching
 Innovation
 Award,
 Winner 2021



**GIANLUCA SPINA
 AWARD**

for Teaching Excellence
 and Innovation



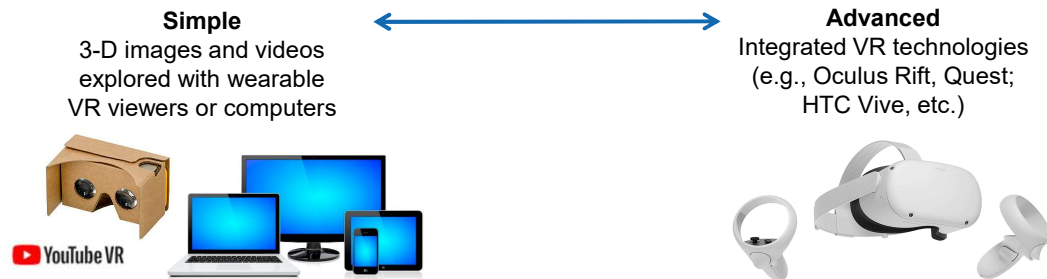
**QS REIMAGINE
 EDUCATION**

Virtual/Augmented Reality
 ETH Zurich

Bronze Award

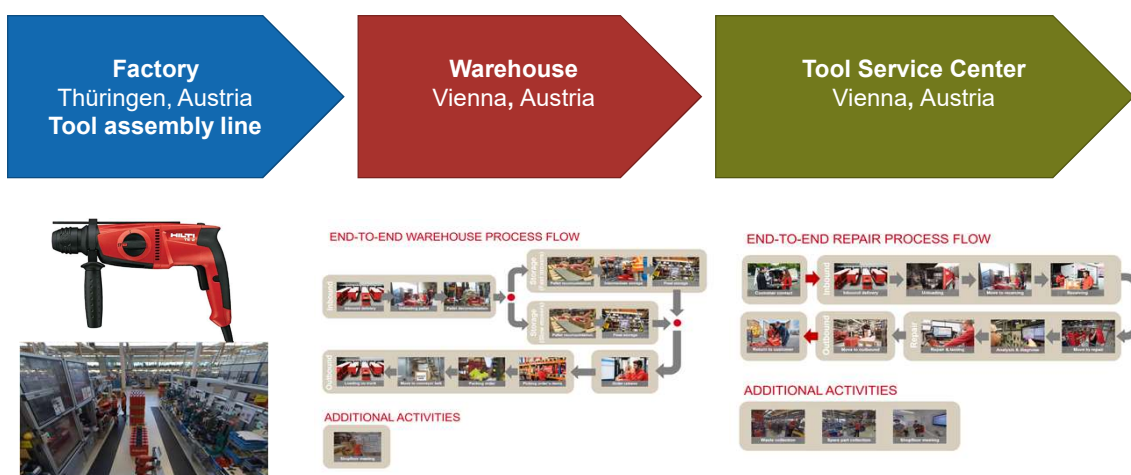
What is Virtual Reality (VR)?

VR is an artificial environment that is presented to the user in such a way that the user experiences it as a close-to-real environment.



VR is different from Augmented Reality (AR) which is a real environment augmented with digital information (e.g. Microsoft HoloLens)

Live demo



Advantages of teaching with simple VR

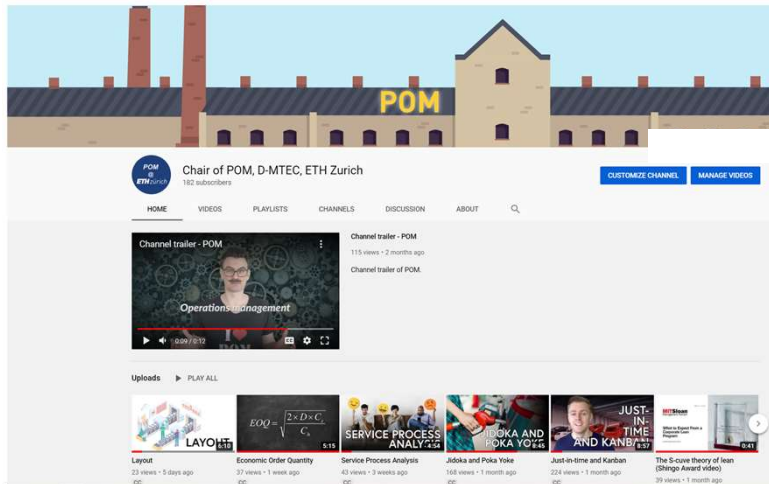
1. Enables unprecedented accessibility to **field immersion**
2. Enables **inquiry-based learning**
3. Integrates **modern technology** in teaching
4. Has **high scalability**
5. Can be implemented at **low costs**



Resources

1. Netland et al. (2020). Teaching Operations Management With Virtual Reality: Bringing the Factory to the Students. *Journal of Management Education* 44(3): 313-341. <https://doi.org/10.1177/1052562919892028>
2. Netland et al. (2020) Teaching Lean with Virtual Reality: Gemba VR. In: Rossi et al. (eds) Proceedings of the 6th European Lean Educator Conference. ELEC 2019. Lecture Notes in Networks and Systems, vol 122. Springer, Cham. https://doi.org/10.1007/978-3-030-41429-0_4
3. Netland, T.; Lorenz, R.; Kwasnitschka, D.; Senoner, J. (2019) A virtual reality app for teaching operations management, EurOMA 2021, Berlin
4. Gottini, G., Solari Bozzi, L., Kunde, M., Lorenz, R. & Netland, T. (2021). Creating VR content for teaching operations management. Whitepaper. www.pom.ethz.ch; ETH Zurich.
5. Netland, T. and Hines, P. (2021) Teaching in Virtual Reality: Experiences from a Lean Masterclass, ELEC 2021, Trondheim, Forthcoming

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