Co-funded by the
Erasmus+ Programme
of the European Union
2022-1-RO01-KA220-HED-000086424

Teaching Ergonomics within 3D scenes thanks to motion capture and VR

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21st January 2025
Bucharest

Context and benefits of using 3D and VR for teaching ergonomics

Necessity to hybrid traditional learning contexts of ergonomics with new solutions

- Using 3D and VR give new insights to the practitioners and students: the interactivity of 3D and VR technologies boosts student engagement, making learning more captivating than traditional methods.
- **Full immersion:** VR recreates complex work environments with high realism, allowing practitioners to interact with their surroundings as they would in real life

Scenario adaptability thanks to parametric 3D models

Context and benefits of using 3D and VR for teaching ergonomics

Gamification elements in VR motivate stakeholders while assessing their skills in simulated situations.

Visualization and understanding of abstract concepts and environments

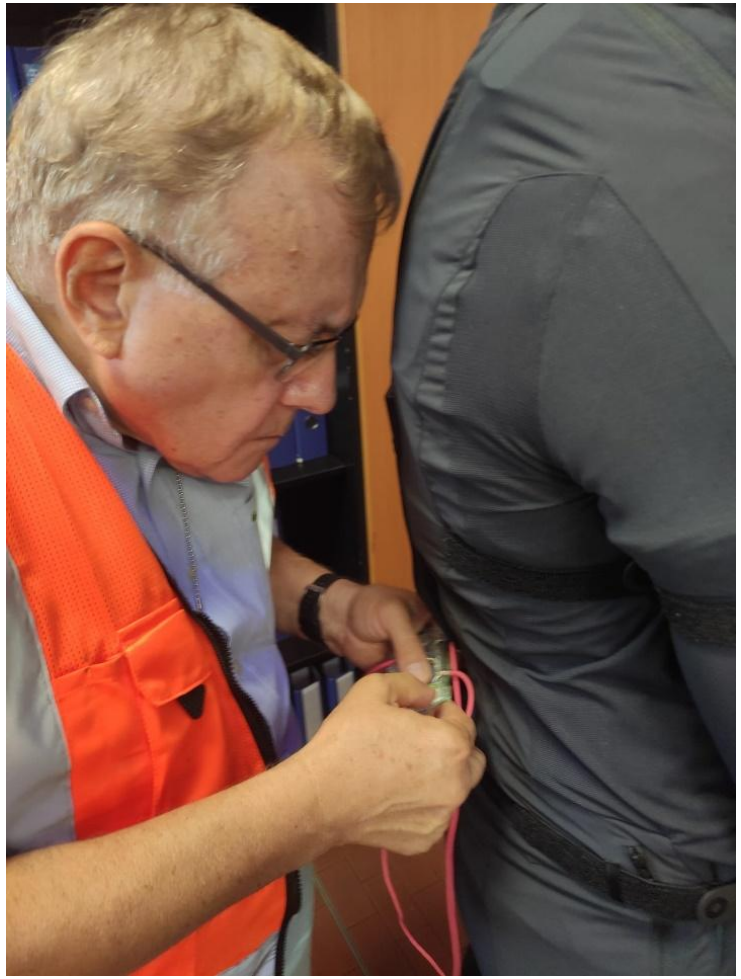
Decision-Making Skills Development with immersive context: to choose the right solution for the right context.

Context and benefits of using 3D and VR for teaching ergonomics

Real life scenarios captured thank to motion capture suit in July 2024 in Bucharest at Henri-Coandă international airport.

- -> special thanks to Christian and his team for the warm welcome!

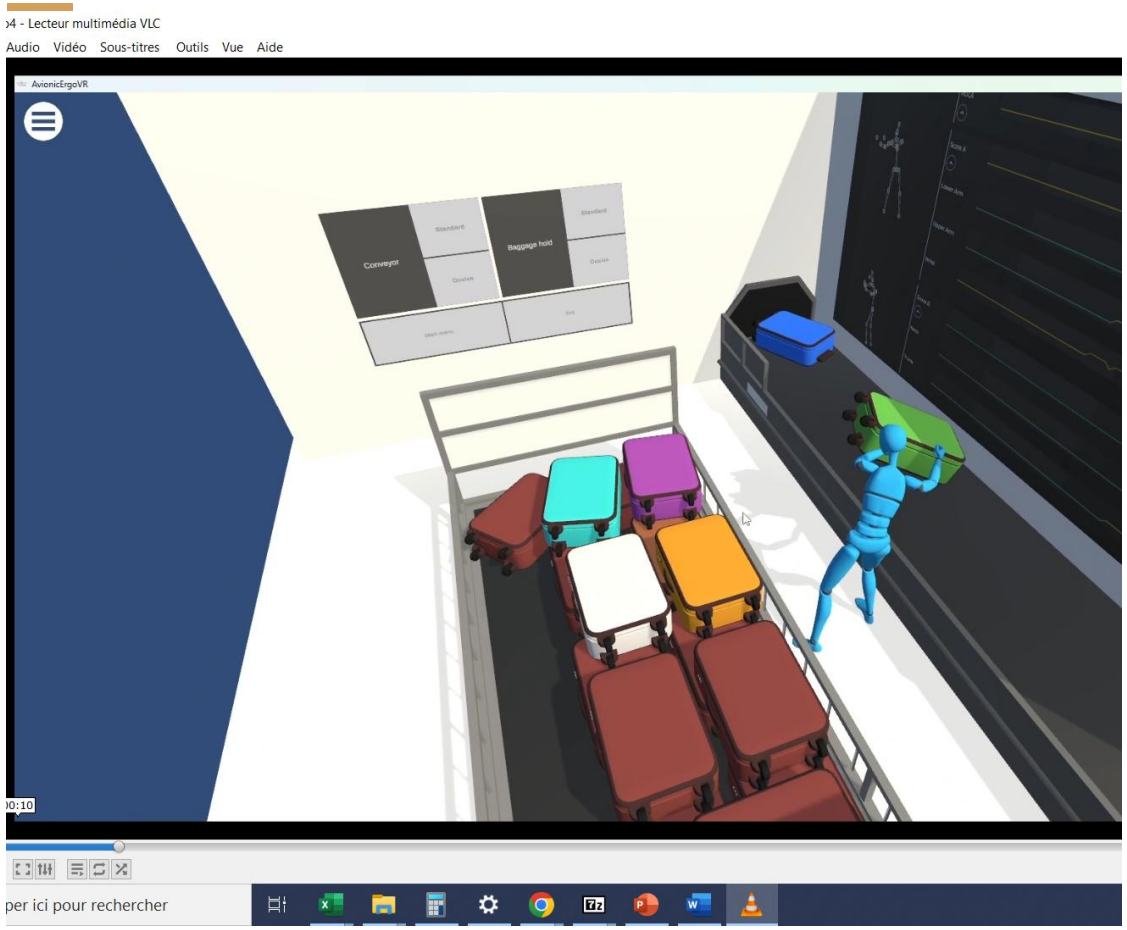
Motion capture: suit calibration

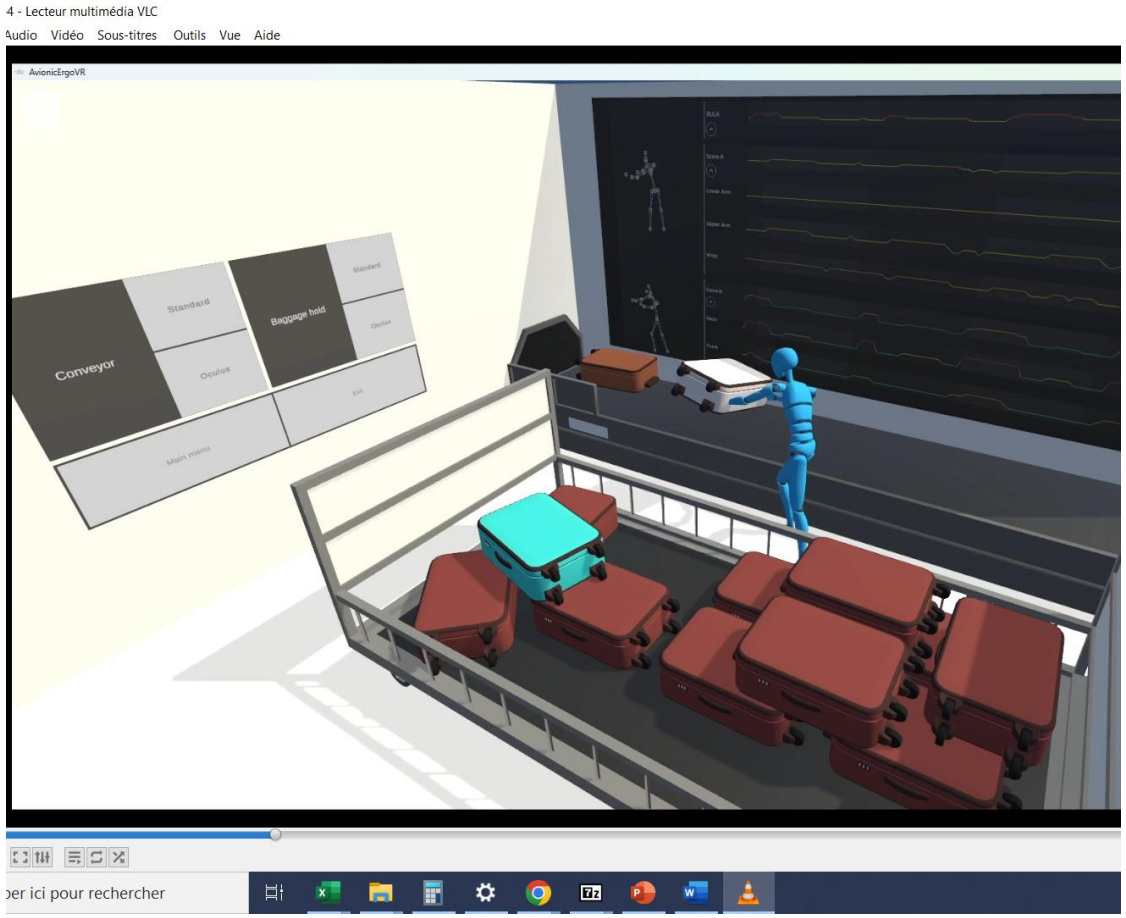


Motion capture: in the aircraft

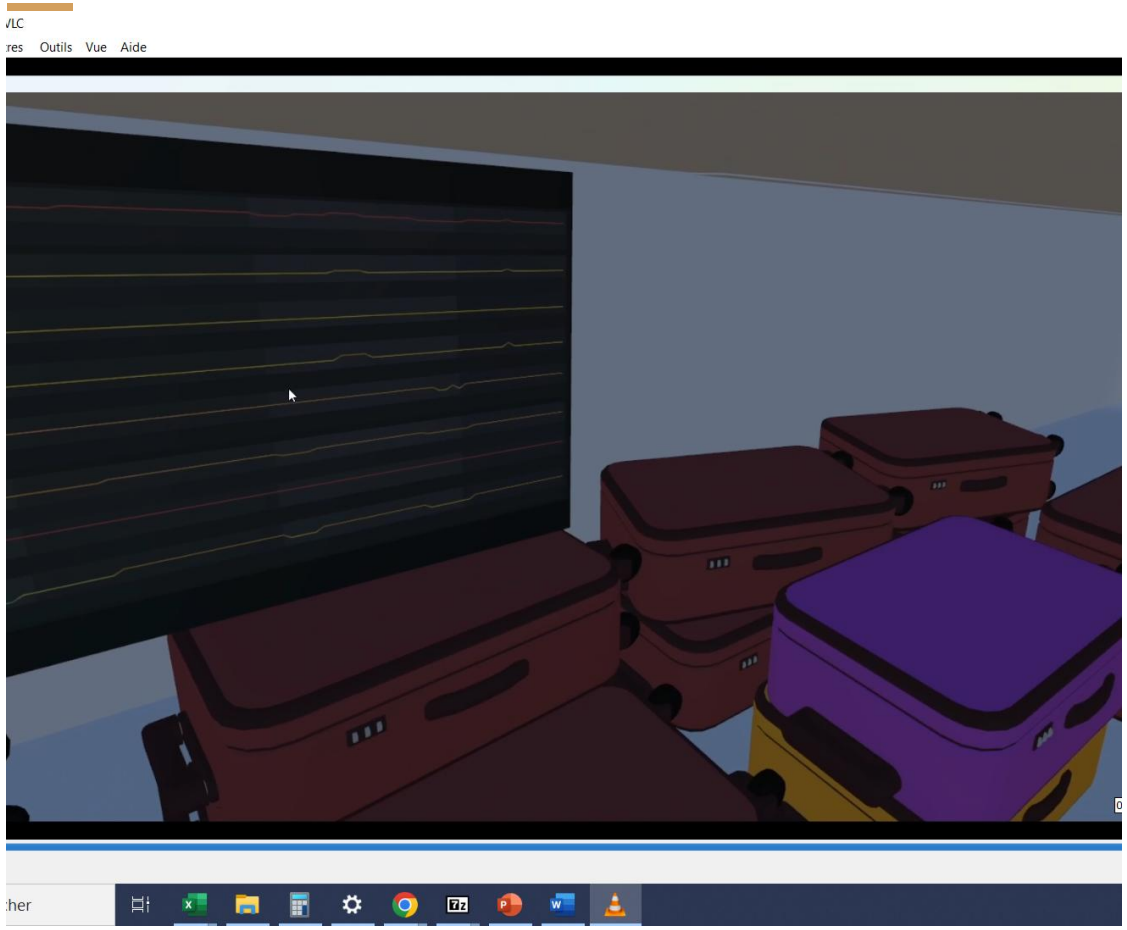
Motion capture: at the baggage handling underground facilities

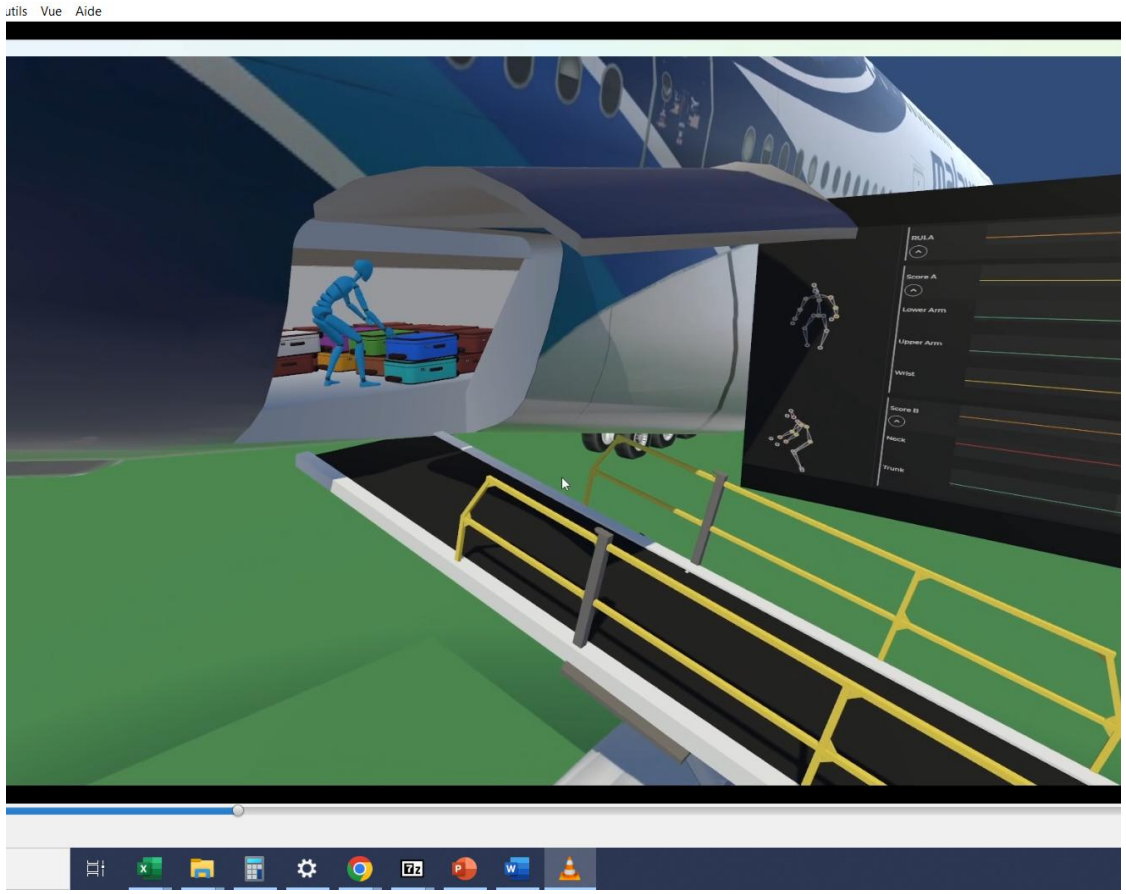
VR rendering

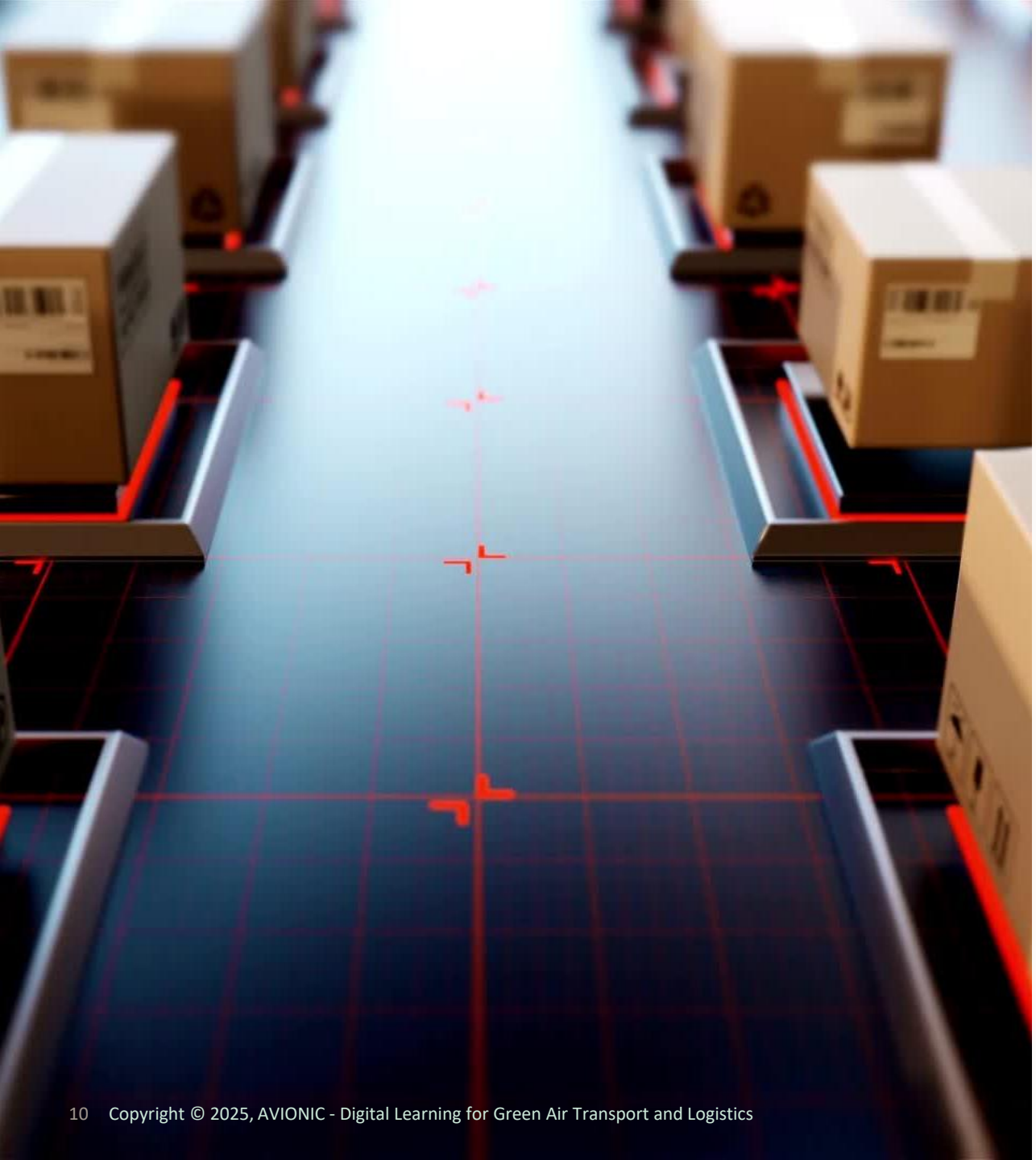




VR rendering with joints scores live visualization (VR headset)







3D scenes and experiential immersive environments delivered

Ergonomics analysis thanks to the technological brick ergonom.io developed by University of Strasbourg and ICube Lab.

Deliverables:

1 immersive scene with VR rendering within the aircraft (gameable with a headset + PC) – bundle available

1 immersive scene with VR rendering with the technical rooms for baggage handling

1 immersive scene with VR rendering for baggage handling within the hold of the aircraft

1 MCQ with

Example

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Thank you!

This publication is a result of the “Creative Digital Teaching and Learning for Green Air Transport and Logistics (AVIONIC)” Project 2022-1-RO01-KA220-HED-000086424.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

