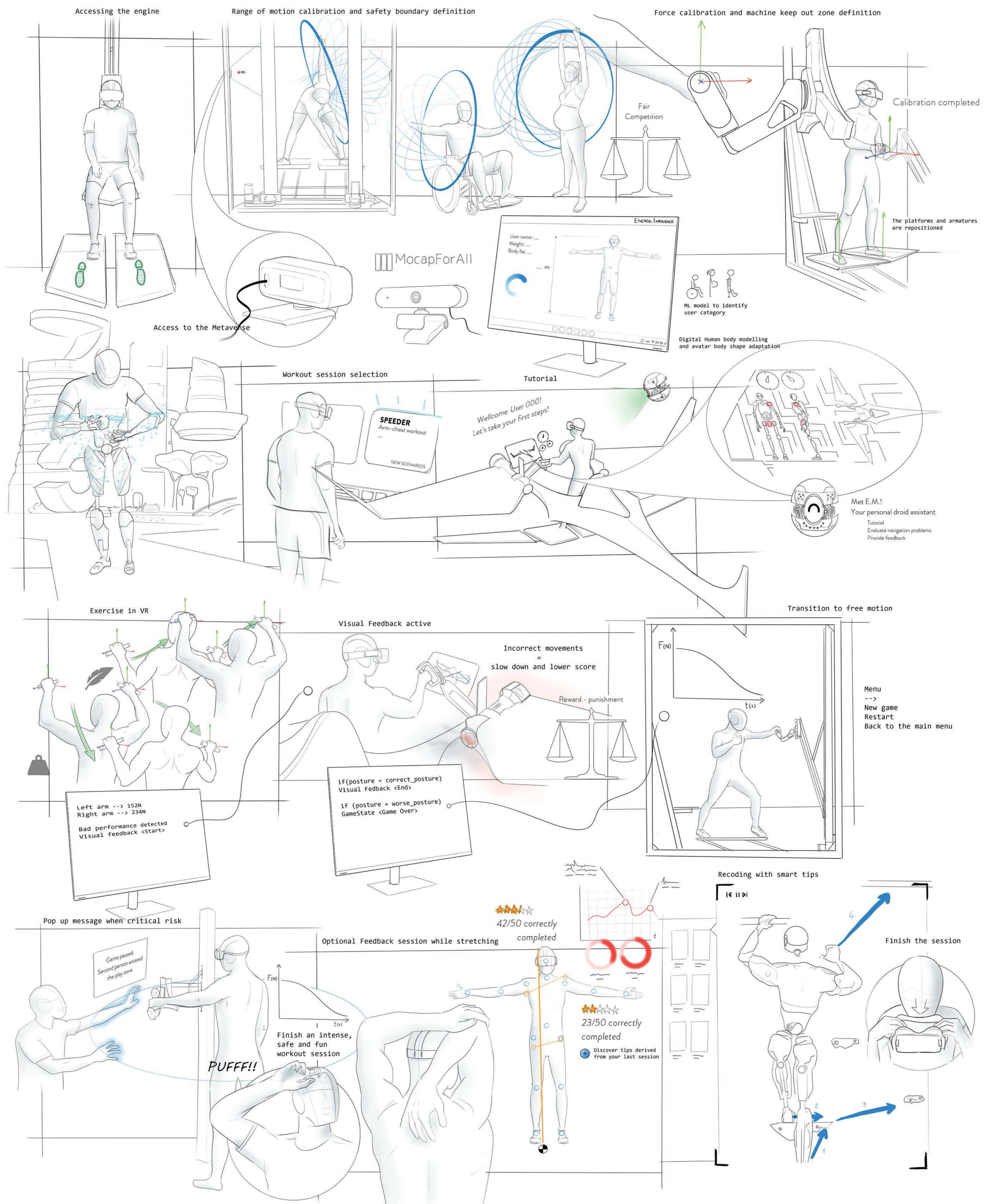


Fitness 2.0

Enabling a safe experience
in a VR based robotic platform



Context

Worldwide obesity has nearly tripled since 1975 and is still growing (WHO, 2021). Interactive fitness products, as the Ethereal Engine, try to fight this increasing problem by making workouts safer, more fun and flexible.

Problem tackled in this Graduation Project

Providing a bodily injury-free experience might be a promising opportunity for the adoption of VR and force feedback-based equipment in a gym context. Nevertheless, it is still uncertain how these systems could compromise the users' physical state.

Method

This Graduation deepens into the risks associated to the Ethereal Engine and explores current technology alternatives, resulting in a first prototype of a virtual trainer. Finally, this system is tested to obtain further knowledge on its desired tuning...

Result

... resulting in a final concept that by means of a virtual trainer including a calibration process that enables fair competitiveness, and feedback at three different levels, inspires users to self-correct their posture while exercising.