Driven by a commitment to continuous improvement, the AugmentX team members aim to increase the standard of living of workers exposed to high physical stress.

AugmentX provides a unique ecosystem for augmentation technologies.” says coordinator Tom Turcksin. “In collaboration with academics, we help to develop the next generation of sensors and methodologies that enable better biomechanical analysis.” “This enables analysis and optimization of physical augmentation solutions.” explains developer, prof. Ilias El Makrini.

Two facilities focussing on human augmentation

In 2021 Flanders Make VUB and Ugent set the stage for the establishment of two state-of-the-art facilities, dedicated to explore and enhance human-robot interactions, providing a robust platform for contemporary and future research, the AugmentX Research Lab in Brussels and the AugmentX Validation and Demonstration Lab in Kortrijk. “Both sites have similar infrastructure. In Brussels, we focus on smaller weights but high precision. In Kortrijk we showcase technology in a more industrial environment.”

© Thierry Geenen - Illustrates the measurement of ground reaction forces and posture

Industrial services and applications

AugmentX offers a suite of industrial services designed to meet the needs of enterprises seeking to enhance their operations with human augmentation technologies. This includes multi-modal human tracking, ergonomics assessment, biomechanical analysis, exoskeletons evaluation and cobot demonstrators.

The initiative provides in advanced motion capture, physiological and force

measurement techniques. The team developed software to bundle data from different sensors over the network into one synchronized data stream, resulting in a simple and modular approach.

Development and testing of custom hard and software components can be performed making use of our infrastructure and academic network. In this way, investments in equipment and specialized knowledge can be mitigated, reducing risks when introducing augmentation technologies.

Through a range of exoskeleton related services including rental, workshops, pilot projects and acceptance studies, companies can get unfiltered taste and knowledge of these technologies.

R&D partnerships

AugmentX actively engages in research and development partnerships with enterprises. Through Flanders Make, they have access to a large number of Belgian companies. Collaborations are aimed at solutions that address specific industry challenges. By partnering with AugmentX, enterprises gain access to cutting-edge research, state-of-the-art facilities, and a network of robotic and biomechanical experts.

International collaboration

The initiative and its activities are deeply embedded in the research systems of VUB (Vrije Universiteit Brussel) and UGent (Ghent University), fostering a rich environment for collaboration and innovation. The AugmentX initiative is actively involved in international partnerships – such as the European H2020-ICT10 project Sophia – enhancing the initiative’s impact and facilitating the exchange of knowledge and expertise on an international level.

Setting new standards

The Flanders Make AugmentX initiative represents a convergence of innovation, research, and industrial application. Through state of the art biomechanical analysis, the initiative is setting new standards. AugmentX offers unparalleled expertise and state-of-the-art solutions.

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