



Virtual Reality Construction Design and Review Engineering Technology

FUNDER:

Ontario Centres of
Excellence

INDUSTRY PARTNER:

Walters Inc.

TIMELINE:

October 2017 to July
2018

RESEARCH TEAM:

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KEY STATS:

46.4% of surveyed
construction companies
spent less than 1% of
annual sales on IT - *JB*
Knowledge 2017

Nearly 62% of
construction companies
are experimenting with
emerging technology - *JB*
Knowledge 2017

Context: Although VR is becoming more common, much of this technology is just entering the construction industry. Due to the lack of knowledge regarding processes, best practices, and implementation techniques, this technology is intimidating for industry to adopt.

Industry Challenge: The industry partner wants to integrate VR into review of connection design and detailing. They flat-screen model their connection models for feedback from the design team; this process is often hard to manage. Instead, they want the ability to model and review connections using VR devices.

Solution: Mohawk developed and implemented a logical workflow to bring a design from conceptualization into VR. Working closely with the Engineering team, Mohawk ensured that their design process integrated seamlessly into the VR/AR devices. They compared current methodology to proposed methodology and documented the cost effectiveness of using AR/VR approaches.

Impact of the project: Mohawk determined approximate costs and recommendations for optimal devices, software, and training. Mohawk provided the industry partner a streamlined step-by-step process so that they can integrate this directly into their workflow, and produce these reviews in house.

Mohawk's role: Mohawk College is the leading post-secondary institution for the adoption of VR and recently introduced VR technology within the Building and Construction Sciences programs. As the first college in Ontario to be using VR devices in curriculum, Mohawk supports companies as they integrate VR devices into their business models.