George Brown College

Case Study

▲ George Brown College's 3D immersive visualization screen allows the school to offer advanced BIM capabilities, strengthening the school's partnerships with industry while enhancing the schools program and curriculum offerings.

Advanced BIM comes to George Brown College

Situated in the heart of downtown Toronto, George Brown College's Centre for Construction and Engineering Technologies (CCET) sits on the doorstep of one of Canada's most rapidly developing construction markets. Educating the next generation of construction professionals, programs at the CCET provide students with practical hands-on experience and theoretical approaches required to tackle today's most pressing trends and issues affecting the construction, architectural and engineering industries. And now, thanks in-part to a state-of-the-art 3D visualization system provided by Christie®, CCET can add advanced Building Information Modeling (BIM) capabilities to its offerings with the recently opened BIM Lab.

Building Information Modeling is a collaborative process that brings together visual renderings of all the architectural, engineering, design and construction systems together into a single, 3D immersive environment. This gives the various disciplines an opportunity to visualize, review and identify potential design issues before ground is broken. "It's a new and innovative way of doing things to increase productivity" says Clint Kissoon, Chair of the School of Architectural Studies & the Angelo Del Zotto School of Construction Management. "The idea of having visual technology that allows us to simulate the design and construction process was something that we thought was absolutely necessary."

"The help we got from Christie really put us in the position to get what we wanted."
Clint Kissoon
Chair, School of Architectural Studies & the Angelo Del Zotto School of Construction Management

Upon receiving a grant from FedDev Ontario, a governmental organization mandated with helping organizations address regional and global challenges, Kissoon and the rest of the team from George Brown College did some benchmarking to help decide the size, scope and capabilities of what would become the BIM Lab. After a visit to Pennsylvania State University (PSU) and seeing the virtual reality Christie CAVE system that is in-use there, the team had a good idea of what they wanted. "The decision to work with Christie came

Customer:
George Brown College

Location:
Toronto, ON, Canada

Industry/Market:
Higher Education

Requirements:
- 3D simulation system
- High-definition projection

Summary:
After seeing a Christie CAVE system at Pennsylvania State University, members of George Brown College's Centre for Construction and Engineering Technologies were inspired to implement their own Building Information Modeling 3D visualization system to enhance the college's learning capabilities, setting it apart from other colleges and universities.

Products:
- Christie Mirage WU7K-M WUXGA (3)
- Christie-designed and fabricated screen and frame

Results:
Through a collaborative process with Christie, George Brown College successfully installed a 3D immersive visualization system as part of the school's new Building Information Modeling (BIM) Lab. This state-of-the-art visualization system allows the school to offer advanced BIM capabilities, strengthening the school's partnerships with industry while enhancing the schools program and curriculum offerings.

▲ A representative from George Brown College demonstrates the capabilities of the Christie 3D visualization screen during the grand opening of the state-of-the-art BIM Lab.

about because of what we saw at PSU," says Kissoon, "once I gave Christie an idea of what we needed, they were able to suggest things that not only allowed me to work within my budget, but also to work with a set of documentation required to comply with our procurement processes. The help we got from Christie really put us in the position to get what we wanted."

Utilizing a Christie designed and fabricated screen and three Christie Mirage WU7K-M WUXGA DLP® projectors, the BIM Lab is a 3D capable, immersive environment that offers high-definition visualization. "We really want the BIM Lab to be a sandbox," remarks Kissoon, "it's to ensure that we can provide an incubator in our facilities so that our industry partners can come in and see how they can enhance the design and construction process through technology. We see the use of this lab as firstly, meeting our vision statement of enhancing our learning environment, and secondly, in the practice of being able to get industry partners to collaborate with us on projects."

The BIM Lab offers George Brown a competitive advantage that enhances its learning capabilities while setting it apart from other schools. "In terms of how we can deliver our programs, looking at it from a curriculum point of view, if you do an environmental survey across Canada, the extent and depth of certain programs are limited by the technology these institutions have in place," says Pietro Ferrari, Professor and Program Coordinator of the CCET Architecture Technology Program. "What we've done with this screen is put in place a significant piece of the puzzle that allows us to offer a program of BIM-related courses that's extremely deep. This depth puts us at the forefront nationwide in developing programs and delivering courses related to BIM."

Echoing this sentiment, Kissoon notes how this "small community college downtown" is now strategically equipped to compete with other colleges and universities. "Considering we have the University of Toronto and Ryerson University on our doorstep, we think we've gone ahead of them in the utilization of this kind of technology and our research capabilities suggest we are far better equipped than they are in being able to do the practical research in BIM that is purposed for the design and construction sector."

With the BIM Lab, George Brown College has established a strong foundation in BIM-related education upon which valuable partnerships are able to be built. "It certainly raised the awareness of the effectiveness of virtual simulations in design and construction projects," says Kissoon, adding: "We're really able to ensure that the faculty and students are working with industry to realize the full potential of the BIM Lab."

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