Mention Building Information Modelling (BIM) to Clint Kissoon, and he’ll be quick to tell you about how it’s changed his industry for good. The Chair of the School of Architectural Studies and the Angelo Del Zotto School of Construction Management at George Brown College, Kissoon speaks enthusiastically about the 3D modelling technology, which allows architects and contractors to visualize construction scenarios on a screen before having to make any physical interventions.

As it happens, George Brown is the only postsecondary institution in Ontario with an undergraduate degree in construction management, and the first in Canada. “We’ve kind of set the pace,” he says. At the moment the program has an annual intake of 120 students, and training in BIM technology has been integrated for all students. BIM training has been given its own yearlong graduate program as well.

It hasn’t taken long since the BIM lab’s inception for George Brown students to get real-world experience in a major construction project, incorporating the 3D imaging technology in the process. In September 2014, the construction management company Gillam Group was contracted to do major renovations for the Toronto Centre for the Arts. The project involved turning an existing, underutilized 1,800-seat Broadway-scale theatre into two smaller theatres that would be easier to operate, and be fully utilized. Working directly with the City of Toronto, the Gillam Group brought George Brown into the fold in December 2014.

“We discovered that there’d be a challenge installing three massive catwalks that hang over audience,” says Gillam Group’s Benjamin Valliquette Kissell, a George Brown graduate himself. “We were looking at having to make almost 100 penetrations while somehow navigating new structural hangers up into the ceiling to tie to the structural beam or column. It was basically like finding a needle in a haystack.”

As the renovation’s project manager, Valliquette Kissell made the suggestion to get in touch with George Brown and have the school’s students do BIM modelling of the building. “That way we could design and build it in the theoretical world before I spent a lot of money trying to troubleshoot it on the site,” he says.

The partnership ultimately saved the City of Toronto hundreds of thousands of dollars in costs. “It would have been a costly fix if we had not engaged the George Brown students,” says Pim Schotanus, General Manager Toronto Centre for the Arts. “It’s one thing if you start from scratch and build the building. You can have all the planning in the world to make sure you don’t run into interferences.”

Schotanus credits Valliquette Kissell for bringing George Brown to the process early on. “I only met the students once, but they were very professional,” he says. “Given the complex nature of the project, the interferences highlighted by the BIM modelling would not have been known until catwalks had been installed, so it was excellent to get a heads up on what the issues would be. It prevented time delays from occurring. It’s a success story from our point of view.”

After the modelling process was completed, George Brown invited their partners to see the BIM lab in person. “It was really interesting to see the responses of a world-class architect, Diamond Schmitt, and seeing their eyes expand and jaws drop at where technology is at today,” muses Valliquette Kissell.

“They’re very involved with industry,” he adds. “I would say that our Canadian culture of having collaboration with educational institutions is a big part of that, but also just George Brown College’s efforts to go out and get involved.”