

ARCHIBUS Success Story



Largest Singapore University Deploys BIM with ARCHIBUS to Manage Space, Assets, and Maintenance at Expansive Campus

Singapore's Nanyang Technological University (NTU) is yet another example of Singapore's unrelenting search for excellence in education as well as in commerce.

The university placed 1st among the world's best young universities and ranked 13th globally in the 2015 QS World University Rankings.

Needless to say, its 33,000-student enrollment and extensive campus has only grown with its reputation. NTU currently comprises a 200 hectare garden campus and houses that country's largest on-campus residence infrastructure.

NTU's extensive portfolio of planted grounds, 16 residence halls, and numerous academic buildings meant that the school finally recognized that its leading-edge academics also required the introduction of a leading-edge, BIM-based solution to address NTU's facilities management challenges.

Central to that effort was the creation of NTU BIM models integrated with ARCHIBUS facilities management data to produce both 2D and 3D visualizations of its properties for more precise, proactive space, asset, and maintenance management.

First University to Adopt BIM in Singapore

NTU was the first university in Singapore to adopt BIM technology for facility operation in response to a call by the Building Construction Authority (BCA) of Singapore to use BIM for building lifecycle management.

In 2013, ARCHIBUS was chosen to help meet the BIM adoption objective because of its Enterprise Information Modelling (EIM) capability. BIM-enabled space planning was then implemented in the first-phase of the project to better optimize space as a first step in achieving a range of project goals.



**NANYANG
TECHNOLOGICAL
UNIVERSITY**

Vital Statistics

Organization:

Nanyang Technological University

Location:

Singapore

Facilities Facts:

33,000-student enrollment and extensive campus. NTU currently comprises a 200 hectare garden campus and houses that country's largest on-campus residence infrastructure with 16 residence halls and numerous academic buildings.

ARCHIBUS Applications:

Space Inventory & Performance; Space Chargeback; Personnel & Occupancy; Smart Client for AutoCAD and Revit

Reasons for Implementing:

Eliminate manual facilities management processes; increase efficiency for processing reports and room inventories, and track and monitor leasing space chargeback internally and externally. The university also wanted to ensure efficient use of space and reduce paper use.

Benefits Gained:

More automated facilities management processes and efficiency. Space and asset utilization has also been optimized through automated real-time property and asset management analysis

Business Partner:

ARCHIBUS Solution Centers - Singapore

Web Site:

www.ntu.edu.sg/

Those goals also included the elimination of manual FM processes; more efficient generation of reports and room inventories; and improved leased space chargeback processes.

To accomplish these tasks the university had to first import its log forms, Excel spreadsheets, and CAD drawings into its BIM models. The BIM information was then integrated with its ARCHIBUS database information. This resulting system, implemented in approximately 4 months, allowed users to access both 2D and 3D views of university room or floor configurations and entire exterior building representations.

All that information, in turn, will ultimately be linked to lease, maintenance, asset and other information required by the university for accounting and reporting purposes.

Accelerated Implementation...and Acceptance

“Everyone loves to play with the BIM models,” says Japri Maming, CEO of ARCHIBUS Solution Center – Singapore. “This was an accelerated implementation that we completed in 4 months with the help of two teams that were needed to clean up and verify data in addition to the integration work and training.

“For older buildings that didn’t even have CAD drawings, we used 3D scanners to generate drawings and 3D room views using Revit. Since you sometimes can’t scan behind a wall, we also had to develop formulas to account for infrastructure. Materials information that couldn’t be captured in the 3D scans – like flooring, carpeting, manufacturers, etc. – had to be entered into the model manually.”

To the extent possible, NTU used ARCHIBUS out-of-the-box but a request for more customized user interfaces for laptop, desktop, and mobile users were also developed.

“Designing for human factors and ease of use was also important to accelerate adoption and user satisfaction,” says CEO Maming. “The overall implementation has everyone at NTU excited as well as more productive. So much so that the university is now extending the BIM model to incorporate asset management and building operations in the near future.”

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CEO
ARCHIBUS Solution
Center-Singapore

