Virtual Deployment of BIM 360 Ops for a Global Health Science University

Co-Speaker: Emmanuel Kamanzi
University of Global Health Equity

Co-Speaker: Lisa Neal
Skanska USA Building, Inc.

Moderator: Danielle O'Connell
Skanska USA Building, Inc.

Learning Objectives

- Adapt the workflow of implementing BIM 360 Ops to accommodate remote planning and work.
- Review best practices BIM 360 Ops implementation, including portfolio setup, asset and space naming conventions, managing Categories, SLAs, Priorities, and Notifications.
- Learn strategies for managing preventive maintenance checklists and scheduling tasks based on a clients’ unique needs.
- Discuss winning strategies for engaging and training people virtually as well as managing unique spaces and location hierarchies.

Description

With a campus in rural Rwanda—over 100 kilometers from the capital Kigali, half of which is unpaved road—the University of Global Health Equity (UGHE) always planned to deploy BIM 360 Ops to support and sustain facility maintenance functions. A pioneering global health science university, UGHE had proactive facilities maintenance as a top priority when opening their campus in January 2019. In April 2020, our team helped to facilitate the launch of BIM 360 Ops during COVID-19. Working remotely with UGHE’s facilities maintenance team, Skanska uploaded information to support the computerized maintenance management system. Using BIM360 Ops, UGHE’s staff and outsourced service contractors share maintenance information across the 350,000-SF campus for an integrated facilities maintenance system. Attendees will learn best practices for asset and space naming, traditional and alternative strategies for managing preventative maintenance, and how to virtually deploy BIM-360 Ops during COVID-19. Click below to watch a video time lapse of construction at the UGHE Butaro campus.
Speaker(s)

Emmanuel Kamanzi is the Director of Infrastructure at the University of Global Health Equity (UGHE). Kamanzi is responsible for four different Infrastructure department sub-divisions ranging from facilities maintenance, construction management, IT and campus master planning. Kamanzi holds a master’s degree from the Business School of Netherlands and a bachelor’s degree in business administration from the University of Rwanda. He has also successfully completed global health delivery and management courses at Harvard School of Public Health and Harvard Business School and is a certified project management professional (PMP).

Lisa Neal is a CM-BIM certified Senior Innovation & VDC Engineer, focused on upgrading project turnover. She has been with Skanska for six years and has successfully delivered Enhanced Turnover Solutions to clients in healthcare, residential, K-12, and higher education. Lisa is a top-rated speaker at Autodesk University and has shared her BIM 360 Ops experience at AU 2018 and AU 2019.

Danielle O’Connell serves as Senior Manager for the emerging technology team at Skanska USA Building. She focuses on the integration of new technologies into design and construction processes, planning and implementing BIM throughout the project lifecycle, applying reality capture tools and developing BIM4FM deliverables. Prior to joining Skanska, she served as manager of the Design Technologies Integration Group at the Massachusetts Port Authority. Danielle received her Bachelor’s Degree in Architecture and Design from the University of Massachusetts, Amherst.
Learning Objectives: The ASMI Process
Adapt | Standardize | Maintain | Innovate

Adapt

“You better start swimming or you’ll sink like a stone, oh the times they are a-changing.”
-Bob Dylan

Amid a dangerous global pandemic, the traditional way of working is no longer an option. UGHE and Skanska had to adapt their BIM 360 Ops implementation workflow to be entirely virtual, from preliminary planning sessions and scheduling, to working sessions, to training and rollout. Not only was the method of collaboration affected, but the timeline was necessarily aggressive, transitioning from a paper-based process to a to a fully operational, mobile work order system in just twelve weeks.

Steps to Successfully Implement BIM 360 Ops
1. Take inventory of current assets, locations, and corresponding preventive maintenance requirements and checklists.
2. Collect drawings and documentation relative to each space and asset. Ensure that the file formats are consistent and supported by BIM 360 Ops.
3. Host working sessions to collaborate and decide on important Ops portfolio inclusions, such as categories, SLAs, priorities, notifications, filters, and more.
4. Find or create training materials for building occupants and staff. Consider additional methods of on-boarding, such as a virtual orientation, a training webinar, a digital instruction guide, etc.

<table>
<thead>
<tr>
<th>No.</th>
<th>Activities</th>
<th>April 2020</th>
<th>May 2020</th>
<th>June 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Making an asset inventory list that will be uploaded into BIM 360 Ops system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Making a list of preventive maintenance plans/schedule for all related systems and equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Collecting drawings for all phase I buildings that will be transferred to BIM 360 Ops</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Learning the BIM 360 Ops through tutorials</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>Funding all information into the BIM 360 Ops software</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>System Pilot of BIM 360 Ops on through the infrastructure department team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Machines/telephones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Create a frequently asked questions (FAQ) Questions and Answers (QA) document</td>
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<td></td>
<td></td>
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<tr>
<td>9</td>
<td>Develop a System User Guide Tool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Roll out the system to all users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Monitoring and Evaluation and feedback collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Closeout</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

UGE BIM 360 Ops Implementation Timeline
Standardize

One of the first and most important conversations between UGHE and Skanska was on the topic of best practices. Given Skanska’s prior experience with Ops, it was helpful to share tips regarding asset and space naming, formatting maintenance checklists, category inclusions/exclusions, service level agreements, priorities, notification settings, document management, and more.

Links to Standards, Best Practices, Tips & Tricks
1. 5 Tips for Assigning Tickets
2. Using Categories
3. Organizing and Filtering Service Level Agreements
4. 5 Reports That Can Help You Manage Tickets
5. Reporting with Airtable

Sample Asset Naming Convention

Sample Space Naming Convention
Maintain

UGHE never missed scheduled preventive maintenance during the transition to BIM 360 Ops. This required strict planning, organization, and commitment from campus staff.

Steps to Successfully Transition Maintenance Plans from Paper to CMMS
1. Use the Ops .csv checklist template to format and import maintenance tasks.
2. Immediately verify the quality and correctness of the data and documentation uploaded to BIM 360 Ops.
3. Schedule tasks according to their latest dates of performed work or maintenance, ensuring that there are no maintenance gaps during the transition.
4. Enable notifications for managers and technicians. Test a scheduled task to ensure it auto-generates a work order and that the associated managers/technicians are promptly notified.
5. Enlist a manager to oversee ticket assignments, material/vendor requirements, communication between all parties, and ticket closeout.

<table>
<thead>
<tr>
<th>Checklist Name</th>
<th>Checklist Category</th>
<th>Checklist Line Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-up inspection</td>
<td>mechanical</td>
<td>Verify power is off to all circuits</td>
</tr>
<tr>
<td>Start-up inspection</td>
<td>mechanical</td>
<td>Turn on power</td>
</tr>
<tr>
<td>Start-up inspection</td>
<td>mechanical</td>
<td>Verify correct voltage</td>
</tr>
<tr>
<td>Elevator inspection</td>
<td></td>
<td>Verify emergency phone works</td>
</tr>
<tr>
<td>Elevator inspection</td>
<td></td>
<td>Emergency lights and bells are operational</td>
</tr>
<tr>
<td>Elevator inspection</td>
<td></td>
<td>All buttons are working</td>
</tr>
</tbody>
</table>

BIM 360 Ops .csv Checklist Template
Innovate

UGHE and Skanska developed innovative ways of engaging with campus occupants and staff, including building a custom, interactive PDF user guide accompanied by a live-stream webinar which introduced BIM 360 Ops as the new, campus-wide work order management system. Additionally, UGHE needed a way to manage unique spaces and assets, which was accomplished by creating an “Other Spaces” building to house information pertaining to parking lots, recreational areas, security gates, etc.

Helpful Links to Include in a Digital User Guide
1. iOS: Install BIM 360 Ops Mobile App
2. Android: Access BIM 360 Ops from Google Chrome
3. Android: Create a Faux-App for Your Mobile Home Screen
4. How to Join a Portfolio
5. How to Submit a Ticket

BIM 360 Ops simplifies the process of filing a ticket, making it easier than ever for occupants to submit and track work orders.

Join a Portfolio to submit a ticket:
1. Go to https://ops.bim360ops.com/
2. Enter your UGHE email address and click to select ‘Sign Up for Free’
3. Enter your Portfolio Name
4. Verify your email address
5. Enter your mobile phone number to receive a text with an authentication code to verify your identity
6. Enter the authentication code
7. Create a ticket

Include a picture or video with tickets to give the facilities team additional context.

Custom UGHE Occupant User Guide (Interactive PDF)