



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

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Danielle O'Connell

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About the Moderator

Danielle O'Connell

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.



About the Speaker

Emmanuel Kamanzi

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).



About the Speaker

Lisa Neal

Lisa 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.

Learning Objectives

ADAPT

Adapt the workflow of implementing BIM 360 Ops to accommodate remote planning and work. Design system setup to support “the new normal.”

MAINTAIN

Learn strategies for managing preventive maintenance checklists and scheduling tasks based on a clients’ unique needs. Be open to experimentation.

STANDARDIZE

Review best practices BIM 360 Ops implementation, including portfolio setup, asset and space naming conventions, managing categories, SLAs, priorities, and notifications.

INNOVATE

Discuss winning strategies for engaging and training people virtually as well as managing unique spaces, such as parking lots, recreation centers and secure-gated entrances.



Skanska's Mike Benedetto (left) and UGHE's Emmanuel Kamanzi (right) celebrate the campus opening after a three-year partnership



Ribbon cutting ceremony with Paul Kagame, President of the Republic of Rwanda (left) and Partners in Health Co-Founder, Dr. Paul Farmer (right)

The Partnership

“With rare exceptions, all of your most important achievements on this planet will come from working with others – or, in a word, partnership.”

-UGHE Co-Founder Dr. Paul Farmer

A photograph of a modern university building at dusk. The building features large glass windows and a prominent stone tower. In the foreground, there is a paved walkway and a landscaped area with plants and a small water feature. The sky is a deep blue, and the building's lights are on, creating a warm glow.

About UGHE

UGHE is a new university based in Rwanda that is building the next generation of global health professionals—doctors, nurses, researchers, and public health and policy experts—into leaders and changemakers who strive to deliver more equitable, quality health services for all. We're reimagining health education to ensure that quality health care reaches every individual in every corner of the globe. Our vision is a world where every individual—no matter who they are or where they live— can lead a healthy and productive life.

Credit: UGHE Butaro

Facts & Numbers

100,000

SF CAMPUS

>900 ASSETS, 14 BUILDINGS

Long-term, the UGHE
Butaro campus is
expected to expand to
350,000 SF

150+

COMMUNITY
MEMBERS

Students, staff, faculty
(doctors, nurses,
researches, and public
health experts)

5

GLOBAL FOUNDING
PARTNERS

Cummings Foundation
Bill & Melinda Gates
Foundation
Republic of Rwanda
CRI Foundation
MDF Instruments

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GOAL

To radically change the
way health care is
delivered around the
world



Dirt road leading to Butaro jobsite



2014 campus sketch



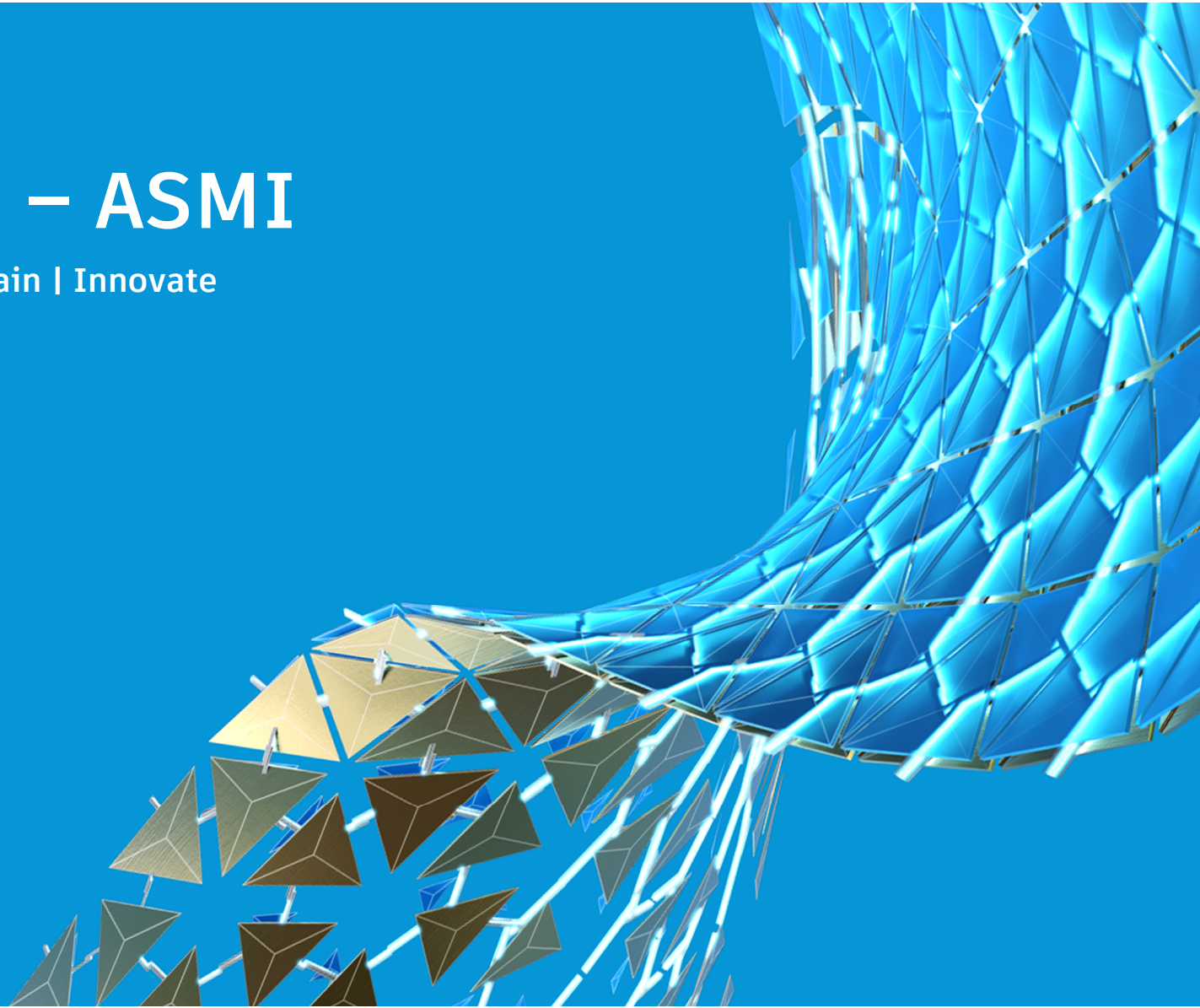
Mobilization on site in 2017

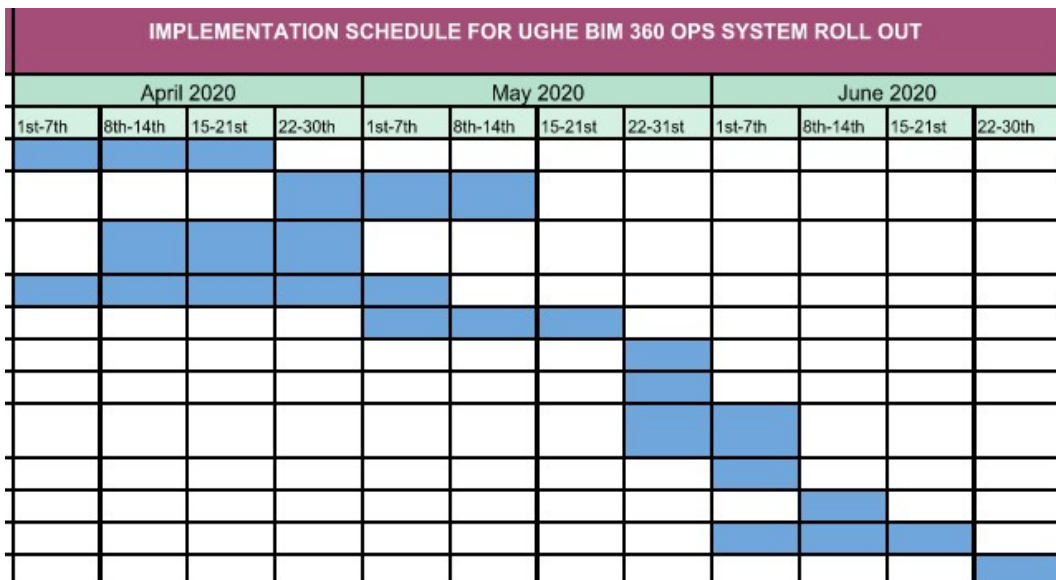
UGHE Butaro: 2014 - 2019

Prior to implementing BIM 360 Ops for facility management in 2020, communication among facilities staff was fragmented and sharing information about maintenance tasks was difficult. We experienced a loss of historical maintenance records and sometimes missed important maintenance deadlines for critical assets.

Our Process – ASMI

Adapt | Standardize | Maintain | Innovate





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.

Schedule Milestones

APR 1-MAY 14

CURRENT STATE ASSESSMENT

Take inventory of assets, locations, and corresponding preventive maintenance

APR 8-30

DOCUMENT MANAGEMENT

Collect drawings and documentation relative to each space and asset

APR 1-MAY 21

OPS OVERVIEW & SETUP

Training in BIM 360 Ops and collaborative discussions around relevant categories, SLAs, priorities, notifications, filters, and more

MAY 22-JUN 30

TRAINING & ROLLOUT

Develop custom user guides for occupants and staff as a digital leave-behind following a virtual kick-off and training webinar

B	2	-	AHU		1	A
Building	Floor		Type (Asset Abbreviation)		No.	Other
			AHU	Air Handling Unit		
			FCU	Fan Control Unit		
			CLT	Cooling Tower		
			EXC	Heat Exchanger		
			BLR	Boiler		
			VAV	Variable Air Volume Box		
			CHL	Chiller		

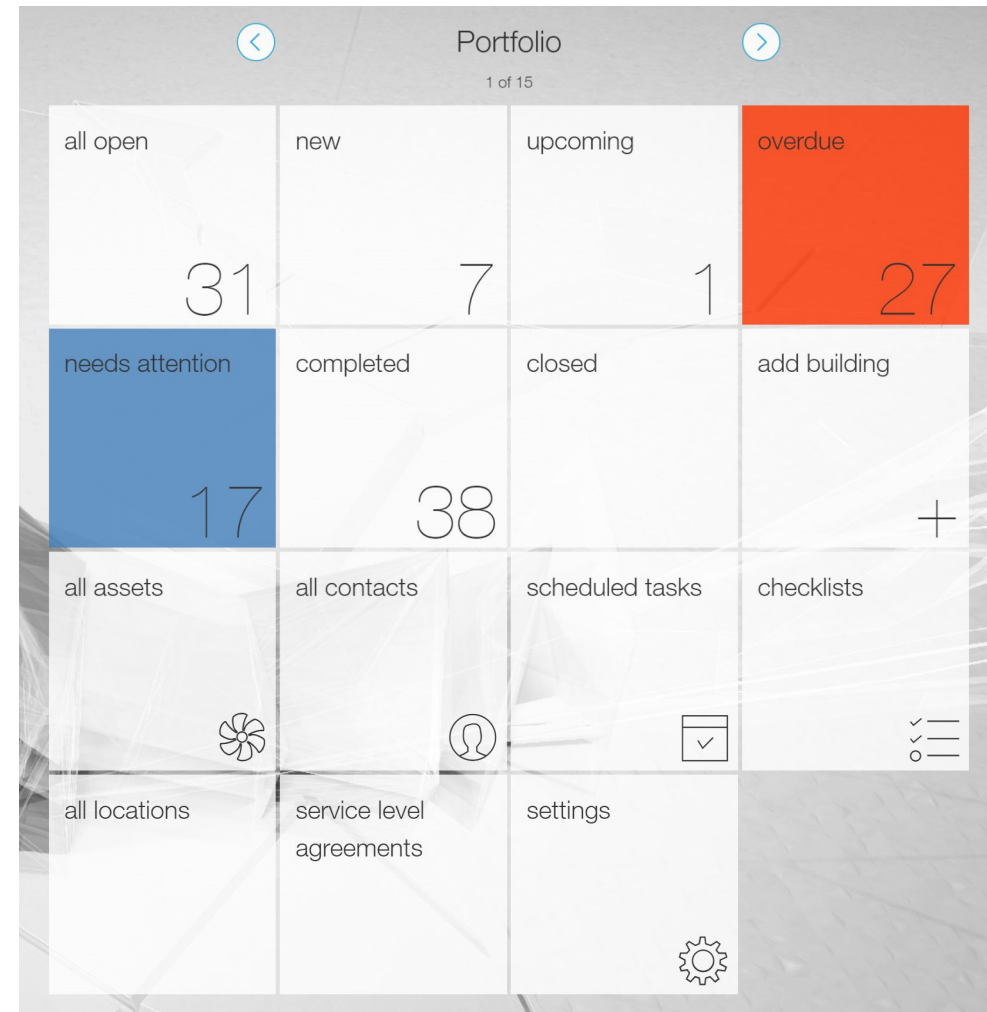
Standardize

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.

Maintain

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

- Immediately verify the quality and correctness of the imported data and documentation
- Enable notifications for managers and technicians
- Schedule tasks according to their latest dates of performed work or maintenance
- Enlist a manager to oversee ticket assignments, material/vendor requirements, communication between all parties, and ticket closeout



Send maintenance requests with BIM 360™ Ops!



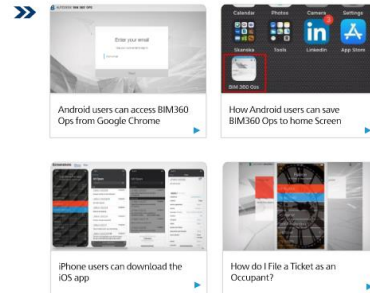
BIM 360 Ops simplifies the process of filing a ticket, making it easier than ever for occupants to submit and track work orders.

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 [redacted] as the 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.

Additional Resources

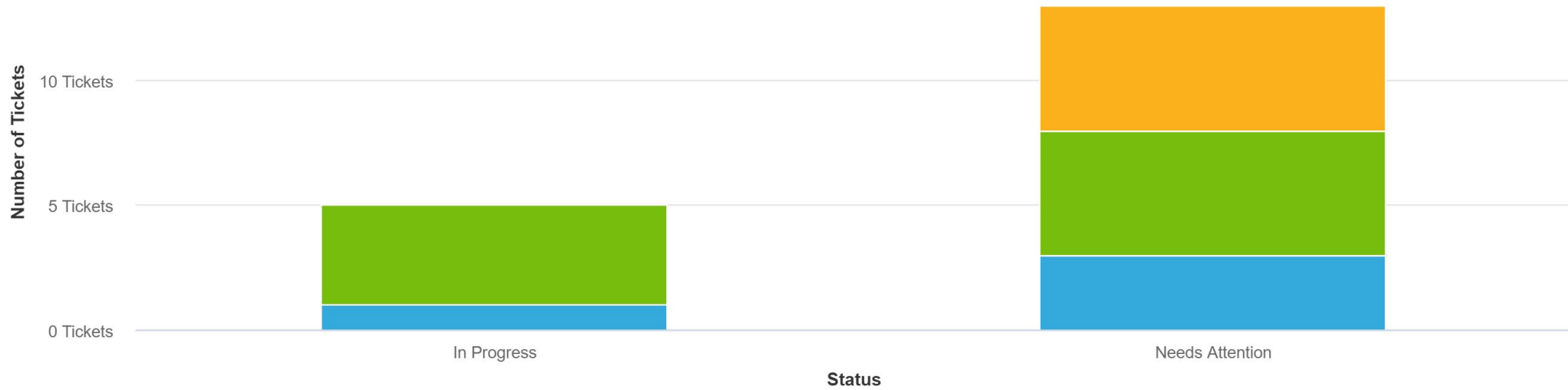


Other Spaces > Locations			Room	Floor	Building	Select	Add +
Room Name		Room Name ^					
CRT	Basketball Court	In Use >					
FFH	Fire Fighting House	In Use >					
GH-001	Gate House	In Use >					
GAZ	Gaz Tank House	In Use >					
LOT	Parking Lot	In Use >					
STP	Sewage Treatment Plant	In Use >					
GEN	Transformer & Generator House	In Use >					

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.

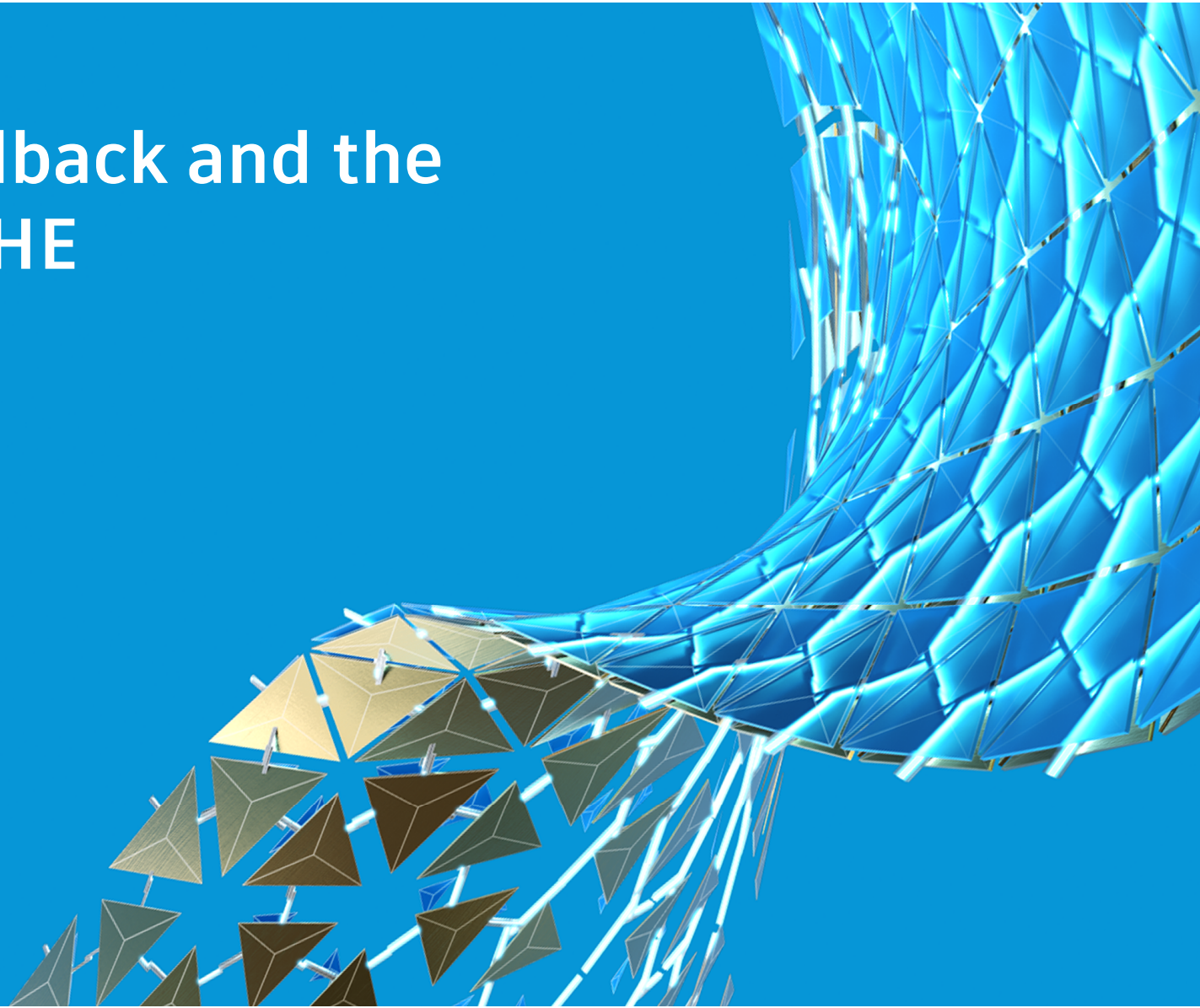
Additionally, UGHE needed a way to manage unique spaces and assets, which was accomplished by creating an “Other Spaces” building to house information pertaining to parking lots, recreational areas, security gates, etc.



The Output

A data-rich, collaborative platform that facilitates work order and preventive maintenance, document management, reporting, auditing, financial planning, and predictive analytics.

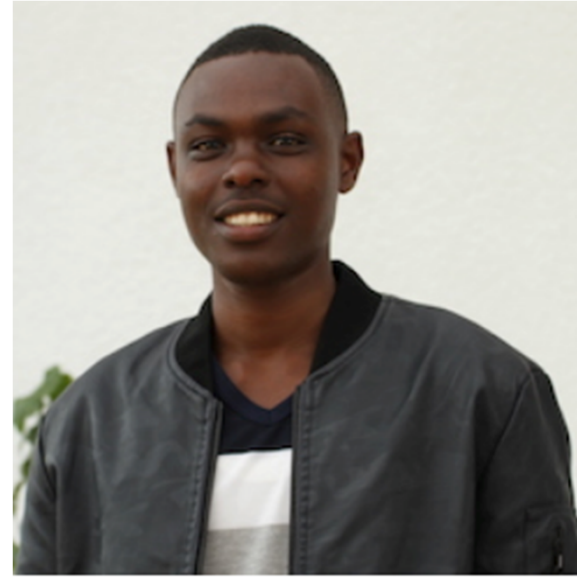
Results, Feedback and the Future of UGHE





Jonas Twizeyimana
Facilities Technician, HVAC, Bio-Med

“COVID19 Pandemic makes facilities management solutions even more needed than ever. BIM 360 Ops is the right and timely solution for us. It allows me to view my inventory, my checklists and generate clear reports from anywhere at any time. It also generates schedule and request alerts for my intervention. Big thanks to the Autodesk Team for developing such a great platform.”



Robert Niyigena
Facilities Technician, Electrician

"BIM 360 Ops solution is an easy and user-friendly facilities maintenance platform. With its capabilities of users having options to include photos and videos on issues being reported, it helps me to clearly understand the exact issue reported as if I am on the scene. I am able to track tickets, organize my work schedule and timely file reports on actions taken on each ticket reported."



Bashir Buwanyi
Facilities Technician, Plumber

“BIM 360 Solution has made my work at UGHE so simple and flexible. I receive timely information on all tickets assigned to me. I also get schedule reminders, all of which keep me focused on key priorities and deadlines.”

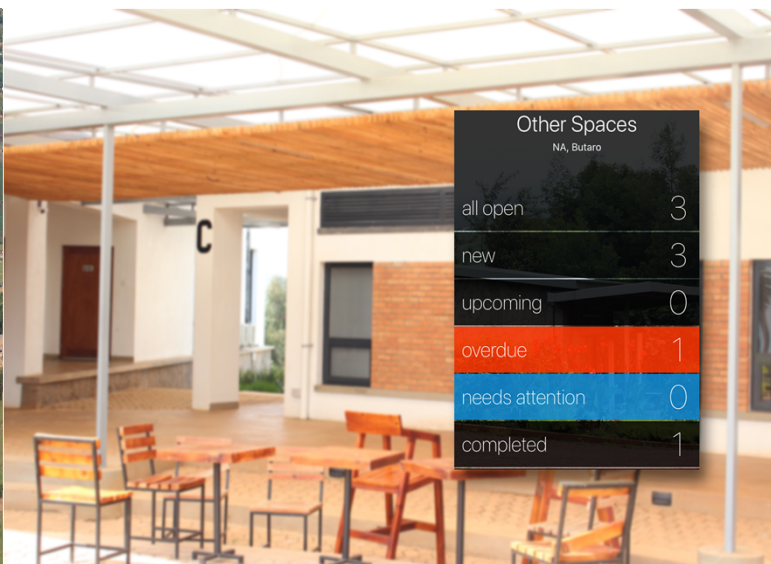


Abraham Gahenda
Facilities Manager

" I very much enjoy using BIM 360 Ops solution in managing our university facilities. It allows me to get accurate and timely information and easily communicate with users and my team in a more direct way.”



2019 finished campus



Academic buildings with Ops mobile management

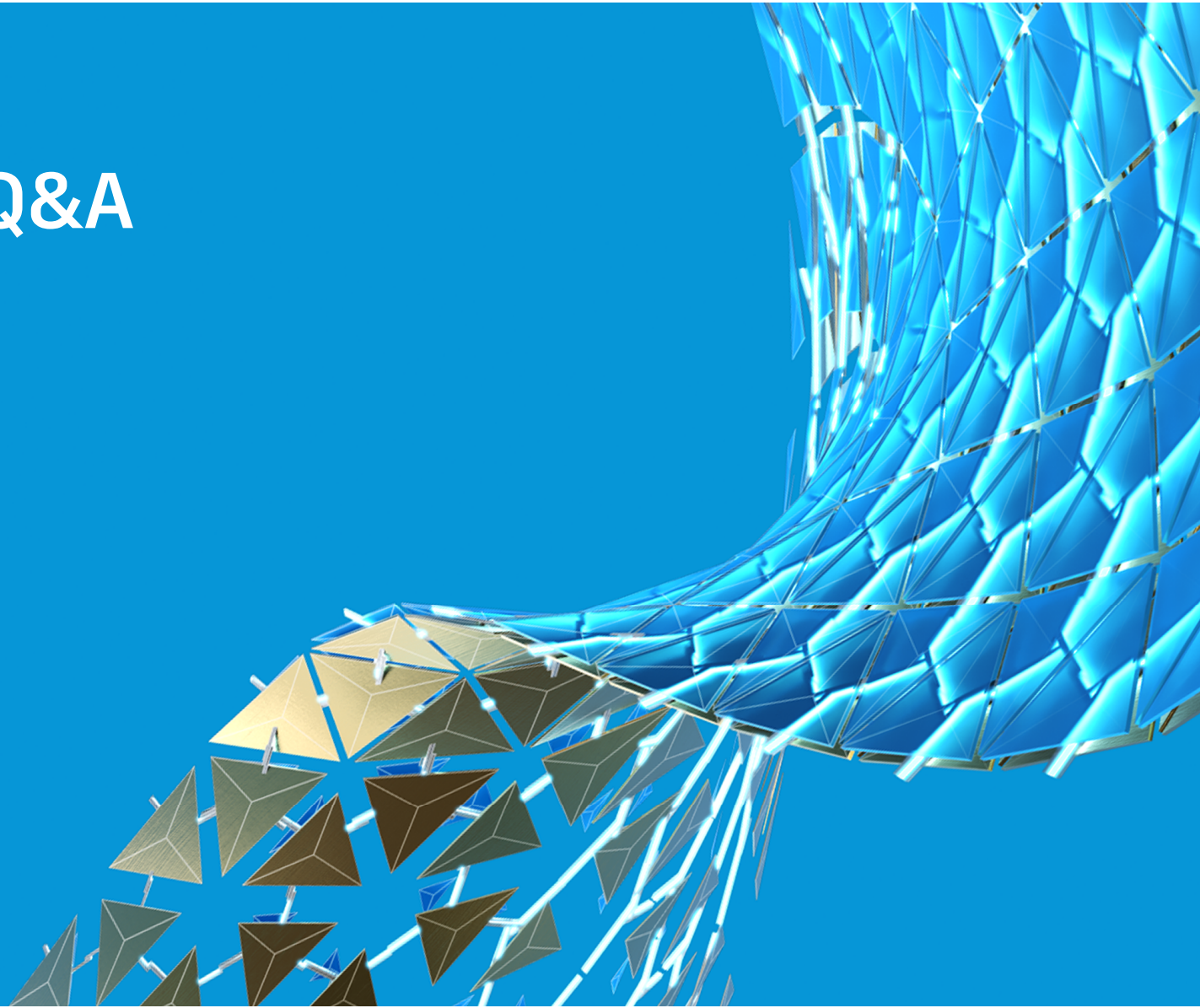


Future UGHE campus master plan

UGHE Butaro: 2020 & Beyond

In 2020, despite the challenges of the global pandemic, the UGHE Butaro campus is successfully coordinating and collaborating facilities management and preventive maintenance on our smart phones using BIM 360 Ops. We document and resolve occupant work orders efficiently and maintain critical assets effectively, reducing the amount of reactive work and allowing our community to focus on what truly matters – changing the way healthcare is delivered around the world.

Moderator Q&A





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