How EEI Uses OpenSpace to Improve Quality Control and Safety on Job Sites

Philippines–based Construction and Engineering Company Is Using Technology to Create Accountability Across Initiatives

Goal: Give Senior Management Greater Access to Project Sites

As one of the leading construction and engineering companies in the Philippines executing large–scale industrial and commercial projects as well as public infrastructure projects all over the world, EEI Corporation has a team dedicated to creating greater efficiency by implementing new technologies.

Even before the pandemic began in 2020, this team was seeking ways to give leadership better information about day–to–day happenings on job sites. With improved visibility, business unit heads would be able to monitor and guide projects from afar, a major asset for a globally distributed team.

The team also anticipated that 360 photo documentation technology would help improve project execution on all fronts—from quality control to safety. During this time, they partnered with Digiscript Philippines Inc. – a local technology provider to integrate advanced reality capture solutions into their operations. They also introduced OpenSpace to the Philippines with EEI being the country's leading adopter.

Strategy: Use OpenSpace for Documentation and Rapid Communication

EEI Corporation demoed several 360 photo documentation solutions before settling on OpenSpace. What made OpenSpace stand out was the speedy transfer of information from a project site to the end user. "Stakeholders often want to see the site in real time," said Jet Reyes, Assistant Vice President for Corporate Development. "It was incredible that we could share captures from a site walk with them in less than 30 minutes."

While speed was an asset, ease of use made OpenSpace exceptional for implementation. "The biggest challenge for a corporation of our size when it comes to new

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>
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> Safety Manager

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technology is adoption," Reyes said. "It has to be user-friendly."

OpenSpace was first implemented at Torre Lorenzo Loyola, a 42-story residential condominium in Quezon City, Metro Manila, where site planners began to capture the site twice weekly. All they had to do was strap a 360° camera to their hard hats and walk; from there, imagery was automatically pinned to the project plan and stored in the cloud.

Other use cases for the robust catalog of imagery captured by OpenSpace quickly became apparent to teams across EEI, especially when the COVID-19 pandemic created new challenges.

For Wilfredo Sison, Safety Manager at EEI since 1998, it was crucial to maintain visibility on construction sites in the face of lockdowns and work-from-home orders. "Due to restrictions, I was often barred from visits to my projects," he said. "Before OpenSpace, I would often spend hours in traffic or even fly to sites to assess them. It was of the utmost importance to be there physically, since site managers might not send photos of areas with potential safety issues."

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And even in person, obfuscation could occur. If his visit was anticipated, the field team might steer him toward a curated view of the site's conditions. "Now that we use OpenSpace, I'm digitally touring more sites than ever, and I know I'm getting a comprehensive look at them," Sison said.

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were recorded based on initial data monitoring and comparison within Sison's Project Safety Portfolio.

He continued, "with documentation from OpenSpace, I can quickly make safety recommendations and share them as best practices with other teams." These recommendations and associated OpenSpace imagery are now being integrated into company-wide training.

In addition to a better flow of information between safety officers and sites, OpenSpace offers a single source of truth that is useful for navigating disagreements with clients and subcontractors, as well as addressing punch list items. "These things can be resolved quickly because it's so much easier now for everyone in quality control at our headquarters to collaborate with everyone on the ground," said Stephen Baterina, Assistant Vice President of Project Planning.

Results: Greater Visibility on All Fronts

"The use cases for OpenSpace are only bound by our personnel's imagination," said Glenn Villaseñor, Senior Vice President of Business Transformation. "It has been invaluable for team members, subcontractors, leadership, and clients."

"OpenSpace gives us visibility to our sites that make it easy to see the status and progress of the work, which is key in determining the next steps and potential risks of the projects"," Villaseñor continued. OpenSpace is now used on 30 different projects located across the Philippines. So far, EEI has seen impact in the following areas:

- **Improved communication:** OpenSpace has been incredibly useful for keeping project stakeholders aligned, especially during disruptions created by COVID-19. With the ability to go on virtual walkthroughs of sites multiple times a week, senior management can track progress and flag any issues rapidly, while RFIs, punch lists, and reporting to clients has become more accurate and robust. "OpenSpace has allowed us to chart a course forward despite the uncertainty of the pandemic and even improve our results during this time," Villaseñor said.

- **Safer working conditions:** Safety officers are able to frequently check in on sites digitally and obtain an accurate view of conditions, creating safer working environments. For example, Sison was able to spot an unsafe temporary platform used to install lighting on one project through OpenSpace captures. The picture was immediately shared with the site's Project Manager, who took action to resolve the issue. It was also later shared with PMs on all projects as an example of a common practice that could potentially lead to a serious accident.

- **Cost and time savings:** OpenSpace has helped EEI reduce team members' travel time, accommodation expenses, and hours touring sites in person by unlocking digital access. Additionally, the company has been able to avoid costly rework through expansive photo documentation, allowing them to look inside walls after they're closed to pinpoint areas for repairs rather than blindly open up walls. "When issues arise, we often have to know precisely what transpired during the time something was built," Villaseñor explained. "With OpenSpace, we can go back in time."

- **Issue resolution:** Baterina pointed out many examples on how OpenSpace has been useful for resolving issues with both subcontractors and clients. Photo captures can be used to resolve conflicts on non-conformities and delaying events. It can also be used for documentation and justification on presenting time extension claims.

- **Future proofing:** "Since the pandemic, our industry has experienced a lot of uncertainty," Villaseñor said. "Our incorporation of new technologies has been our greatest strength during this time, and it will be going forward." Software like OpenSpace has allowed the company to continue to optimize, even during difficult times. EEI's clients attest to this. "The construction schedule of our Analog Devices Building 3 South Manufacturing Facility here in the Philippines was under a very tight and aggressive timeline. As such, our senior management team based locally and overseas wanted to closely monitor work progress to ensure that things were going smoothly and as planned. The use of Openspace has enabled them to virtually walk around the job site anytime they wish and easily compare the progress of work across various points in time. We are very pleased with how EEI enables clients like us with an unparalleled level of transparency to the job site conditions." says Mon Aranes, the Facilities Engineering Department Manager at Analog Devices, an EEI Client. "Use of technology like OpenSpace is a necessity that allows us to travel at the Jobsites virtually and to serve our clients and stakeholders meaningfully," he said. "It's bringing us closer in understanding our projects better and doing our work faster."