WSP tracks and manages critical Jerusalem Light Rail projects with a digital construction platform

The project

Project type: Construction of Jerusalem Light Rail JNET (Green Line + Red line extensions)

Location: Israel

Results

- Time savings
- Enhanced visibility and quality control
- Improved collaboration

Added value

- Accuracy and visibility into a complex transportation project of more than 30km
- Streamlined communication across multiple stakeholders
- Customized, professional reports built for purpose to meet unique challenges in the field

Background

WSP Global is a world leading Engineering and Professional Services firm, with the goal of supporting communities in planning, designing, managing and engineering complex projects across verticals such as transportation and infrastructure, property, earth and environment, and more.

As part of a Public Private Partnership (PPP) project to extend the existing red line of the Jerusalem Light Rail, WSP Global's local subsidiary, WSP Israel, was hired as the monitoring company by the state. There are many stakeholders involved in this long-term project, which is headed up by the Accountant General of the Ministry of Finance WSP is an integral part of the operation, with a wide role that includes reviewing the designs, monitoring quality and progress on behalf of the State, and ensuring the project is completed to specification. They are on hand to consult on special cases or challenges using their wide experience and expert knowledge.

Based on the prototype of this project, additional transportation projects in Israel will be monitored using a digital platform, both in Jerusalem and Tel Aviv.

WSP needed a solution that could solve discrepancies between stakeholders

From the start, WSP realized that this project required a new way of thinking. "In many ways, the Light Rail project was unchartered territory" said Asaf Yaffe, Control Manager at WSP Israel. "It's a long-term project over a wide area, and there are multiple stakeholders to consider and include. We have the project company, which is responsible for the build, project managers on the state side, the municipality, the Bursar's offices of the State, many designers from every side. I could go on."

WSP wanted a solution that could help solve or even prevent discrepancies between parties — a platform that would future-proof against clashes or claims by showing a consistent view of what was happening on the ground. "We also wanted something to help us cooperate with one another," continued Asaf. "Many people sit in the office and they hardly go on site. We wanted to be able to bridge that gap."

WSP approached Datumate with these goals in mind, with the requirement of documenting accurate imagery, and providing stakeholders in the field and in the office with a centralized place to store accurate information and collaborate.

So much more than document storage: WSP adds intelligence and accuracy to work processes

After a successful pilot on a small but complex project over a period of 8-9 weeks, WSP realized that there was a lot more value from a digital construction platform than originally thought. "During the trial, we were able to pass information to the project company and fix things on the go, even in a condensed city full of traffic" said Asaf. "For example, we could see where construction activities were still required and where poles and utilities were being impacted, and send exact pictures and coordinates so that teams knew what to fix in granular detail. It made a huge difference."

After a year of using DatuBIM, WSP now considers the tool to be integral to collaboration and control in the long-term Jerusalem Light Rail expansion project.

By using their design documentation and layering it on the drone imagery from regular flights, stakeholders can immediately see where there are discrepancies or issues to fix — before costly rework or errors occur. "We have four or five layers of design, and we can incorporate each and every one in a vertical structure and see how each is doing," said Asaf. "As the imagery is updated continually, we can be certain of the accuracy — which is significant when you're working on such a dynamic project."

Flights are scheduled flexibly, with the frequency varying from once a week to once a month, depending on the circumstances and project needs.

Customized reporting — WSP enjoys a collaborative process with a trusted partner

Throughout this project, Datumate has worked with WSP on boosting and augmenting its reporting capabilities. As well as out-of-the-box engineering reports, Datumate engages in a collaborative process with WSP to build customized reports related to specific challenges encountered in the field.

"Working with Datumate has been a great experience. It's an open conversation between us and the company. If I have questions, it's a very thin wall and I can share ideas or concerns and in one minute I have answers. We're looking forward to using DatuBIM more across our next projects, and introducing it to our wider team across Israel, continuing to spread the gospel! "

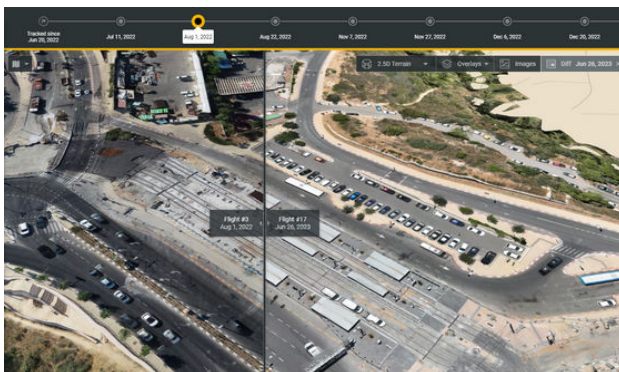**Asaf Yaffe,** Control Manager at WSP Israel

The benefits for WSP: accurate monitoring and robust quality control

More than 30 users are currently utilizing DatuBIM, many of whom are external stakeholders, such as all the project managers on the state side, and significant users from the government side. Being able to provide different levels of access, such as viewer access and admin access, means that WSP can function as the back office, and allow stakeholders on the ground to get on with their work, with that essential visibility in place.

- **Quality control.** WSP, as well as other stakeholders, now logs on and looks at plans, and can see at a glance what's happened up until now, compared with what should have happened. This makes quality control seamless.

- **Full visibility.** Anyone can see what's happening onsite, even those in the office who would usually not have that vantage point. Stakeholders can see up-to-date reports, and visualize progress with ease.

- **Better collaboration.** WSP uses the customized reports in team and status meetings, easily showing overlaps against design imagery for instant value.

- **Time savings.** Historically, to take measurements, stakeholders would need to go onsite multiple times and manually complete the work. With DatuBIM, the process is automated.

- **Intuitive interface.** Without hours of training, WSP can set stakeholders up with access to imagery and reporting, on a platform that is simple to use from day one.

Next steps

WSP plans to increase the number of users, and to start using additional functionality in the DatuBIM platform. The next stage of the Light Rail project involves starting a new line from the ground up, and DatuBIM has been highlighted as a tool that could be used by designers to ensure accuracy at the earliest possible stages.

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