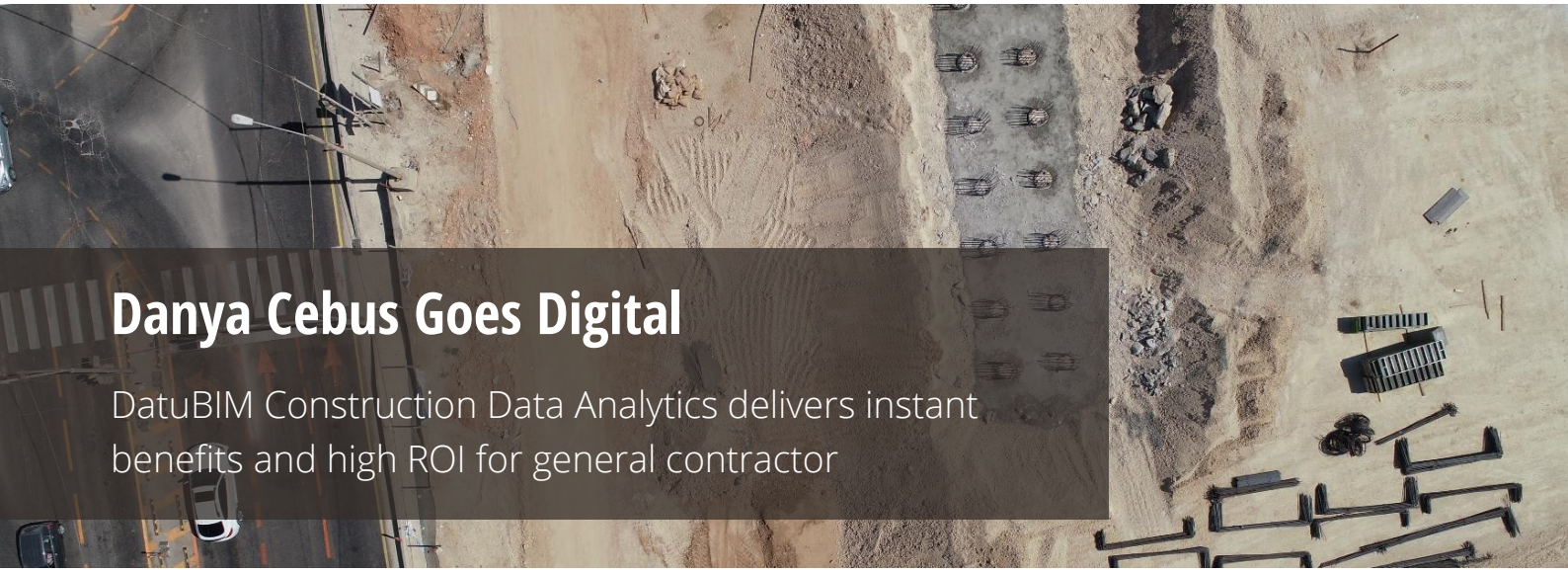
Datumate
Construction Data Analytics

CASE STUDY: DANYA CEBUS



Danya Cebus Goes Digital

DatuBIM Construction Data Analytics delivers instant benefits and high ROI for general contractor

Digital Transformation without Business Disruption

As a general contractor that is all too familiar with the inherent challenges of complex infrastructure projects, Danya Cebus was seeking an end-to-end digitalization solution that would seamlessly plug into its projects and processes and extract meaningful project execution metrics from field data.

Besides improving visibility and monitoring constantly changing construction sites, the company required up-to-date, relevant insights that they could easily share among all stakeholders.

DatuBIM and Managed Services Deliver Actionable Insights in Record Time

Danya Cebus found its partner in Datumate. DatuBIM construction data analytics platform, along with Datumate managed services, guaranteed quick implementation and outstanding results.

DatuBIM delivered huge time savings for Danya Cebus' highway intersection construction project, through fast turnaround of the initial digital twin of the "ground zero" site, consecutive digital twins, and automatic analyses and reports.

Field Data Acquisition and Analytics

	Conventional	DatuBIM
First digital twin for "ground zero" (First survey & model generation)	6 weeks	1 day
Consecutive digital twin (Follow-up surveys & model generation)	2 weeks	1 day
Analytics & reports, e.g. comparison to design and previous as-built	Up to 3 days to report delivery	Instant, automatic reports

Datumate's team of professional engineers verified that the DatuBIM-generated digital twin met survey-grade accuracy standards. With continuously updated as-built digital twins of their construction site, Danya Cebus was set to leverage digital monitoring to improve project management and quality assurance.

Danya Cebus
SMART CONSTRUCTION

ABOUT DANYA CEBUS - General Contractor

Danya Cebus specializes in executing large complex infrastructure projects for public customers, including paving roads, building railway infrastructure, bridge construction and related infrastructure development.

THE PROJECT

Monitoring buildup progress of highway intersection with bridge:

- Area: 0.65 km²
- Duration: 24 months
- Data Acquisition Frequency: Monthly
- Images / Flight: 2600

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The Project Case:
Monitoring Buildup Progress of a Highway Intersection with Bridge

Road 6 is the only toll highway in Israel and one the largest and most complex infrastructure projects in the country to date. Danya Cebus was awarded the project of building the new Meitar intersection, complete with a bridge, on the southern part of the highway.

The new intersection stretches over an area of 0.65 km^2. With a building plan spanning 24 months, Danya Cebus chose to update the data set in DatuBIM on a monthly base, via drone flights which each captured roughly 2600 images.

Using DatuBIM, Danya Cebus easily ran automated reports and analytics with just a few clicks of a mouse.
Reports including:

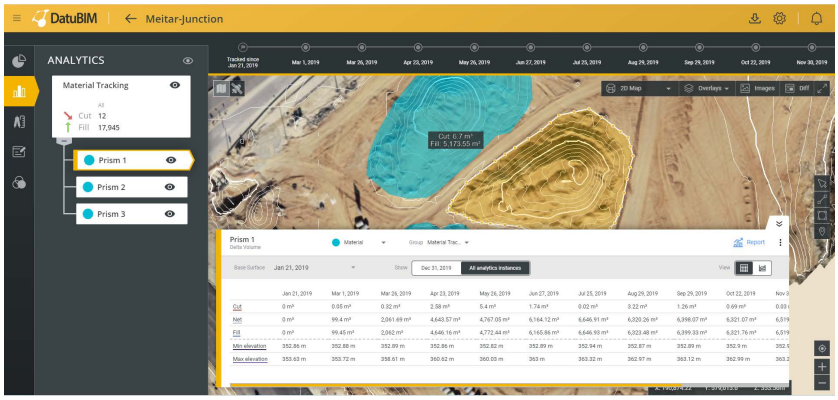
- Monitoring layer construction progress
- Ensuring work is limited solely to permitted areas
- Comparison of progress and milestone completion to design and schedules
- Cross-section analyses
- Earthwork tracking based on material quantity calculations
- Volume calculations to enable precise payment for earthwork execution



"The diversity of the analytics delivered by DatuBIM, the fact that you can zoom-in to high resolution images, can take measurements with ease, count materials delivered or extracted - all without the need to be on site – is not only impressive, but a clear time and money saver."

Tanya Velichko, Project Manager at Danya Cebus

Take the Headache Out of Earthwork Tracking



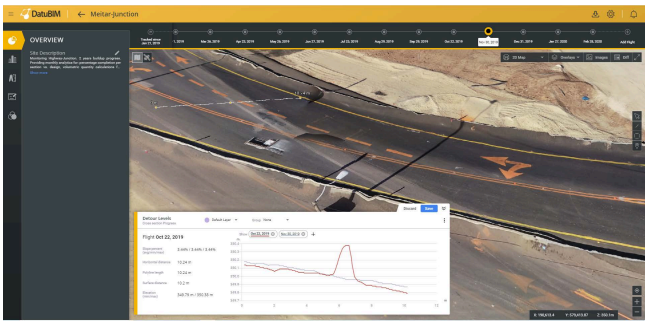
Material tracking was core execution metric for Danya Cebus project progress monitoring. DatuBIM enables automatic volume calculations and change tracing based on new sets of data from each drone flight.

Cut-and-fills can be easily tracked over time and in different formats.

Datumate
Construction Data Analytics

DatuBIM Prevents a 2-Week Project Delay

The outstanding value delivered by DatuBIM is amply demonstrated by the way it enables faster and better decision-making, especially when a project heads into a delay. In the course of the project, a traffic detour was needed in order to proceed to the next phase. Traffic administration approval was granted and an inspection date was set for just a few days away. As it turned out, however, the connecting roads were at different levels from those planned in the design, preventing the detour from opening.



Traditionally, Danya Cebus would have sent out surveyors to gather data that the engineer needed to create a new detour design. In addition to causing disruptive traffic closures, this would have put the project on hold for about 2 weeks, generating additional costs exceeding $80,000.

When this problem arose, Danya Cebus turned to DatuBIM to retrieve the necessary data and receive a new plan in record time.

"This was an eye-opening experience. DatuBIM instantly gave our design engineer all he needed to provide a new plan in a single day! Thanks to DatuBIM, the inspection and the project moved forward without any costly interruption.**"**

Tanya Velichko, Project Manager at Danya Cebus

DatuBIM Managed Services

Danya Cebus teams expected to receive reports in the familiar formats they'd seen for countless years. So DatuBIM Managed Services created customized reports that were signed off on by a certified surveyor and seamlessly aligned with company business processes, including Road Layer Buildup Reports and Delta Elevation Analyses.



DatuBIM: At the Project Core and Beyond

Delivered as a secure cloud solution, DatuBIM enabled Danya Cebus project managers to access as-built digital twins of the construction site anytime, anywhere. In addition, the solution made it easy to share insights, and drive alignment, accountability and awareness across all teams and stakeholders.

With DatuBIM, Danya Cebus enjoyed direct labor savings across all teams, including land surveyors, construction supervisors, budget controllers, quality controllers, execution engineers, schedule managers and project managers.

Yet, the benefits of a digitalized site reach far beyond the execution phase. Availability of project history, including continuous and full digital project documentation, is highly valuable for settling disputes such as exception work claims. This documentation is also a highly sought-after part of the final handover, as it proves valuable information for the operation and maintenance phase.

Based on its clear organizational value, benefits and ROI, Danya Cebus has chosen to implement DatuBIM in many more of its construction projects.