We Teamed with Dodge Data & Analytics to Produce Industry Report on the Digital Transformation of the Construction Industry

As construction work becomes more complex, and as technology continues to transform the way we work, contractors are under increasing pressure to be smarter and more efficient about project delivery. Accomplishing this in a high-risk, low-margin environment means data-driven decision making becomes that much more important for contractors who hope to maintain a competitive edge. The better the business intelligence, the greater that edge, and building intelligence begins with a solid foundation of business data.

Today’s modern construction projects produce mountains of data. The challenge has been how to effectively process and analyze all the data produced. As technologies like cloud computing, integrated software platforms and mobile applications have begun to redefine how contractors operate, making more effective use of business data has taken center stage of the industry’s own digital transformation.

This transformation is at the core of Trimble Viewpoint’s own construction technology initiatives and it’s one of the key reasons we recently partnered with Dodge Data & Analytics to produce a detailed report on the state of data collection and analysis in the construction industry.

The report, Improving Performance with Project Data, produced some of the industry’s best statistics to date on the role that technology is playing and what data and KPIs modern contractors are seeking.

Technology in Construction By the Numbers

Here is a peek at five intriguing stats from that report:
76% — Commercial software has the highest average satisfaction rate (76%) as a means for contractors to gather crucial data from their projects. In fact, the report shows that commercial software excels in all categories (timeliness of data, accuracy, level of detail and ability to analyze across projects) over methods like paper forms, spreadsheets and custom-designed software.

“To optimize the use of data collected from the field for better analysis and decision-making, it is critical that the data is timely, accurate, sufficiently detailed and comprehensive enough to extrapolate across multiple projects,” the report notes.
82% — General, heavy highway and civil contractors have fully embraced the use of apps on mobile devices to capture field data, with 82 percent of firms surveyed reporting the use of these applications. Meanwhile, 72 percent of specialty trade contractors are also relying on mobile applications. Contractors are also increasingly using technologies like drones, cameras, sensors and wearables on the jobsite.

“Almost all (94%) of the general contractors are using at least one of these devices, but nearly a quarter (23%) of trades are still not using any,” the report notes.
70% and 71% — Ability to access data from the office while on the jobsite was noted by 70% of respondents as a key reason for managing their data in the cloud, while 71% of respondents noted the ability to access real-time data from the field while in the office was a key driver.

“Conversely, lower cost rates high (third) among all reasons, but next to last among the most important,” the report notes. “While almost always included in ‘check the box’ concerns, cost falls back when considering important process improvements with tangible benefits.”
78% — While moving further into automated systems, 78 percent of contractors are still using some mix of software automation and spreadsheets. The largest number of both general (34%) and specialty contractors (38%) have moved to mostly automated systems with some remaining reliance on spreadsheets, and 11% of general contractors and 6% of specialty contractors have moved to completely automated processes. Still, 13% of general contractors and 9% of specialty contractors are relying solely on spreadsheets.

“The spreadsheet is a well-established tool in global business for analyzing data and generating useful reports. It also serves as many users’ first foray into digitization,” the report notes. “But most construction companies are now transitioning to using data analysis software systems that have been developed specifically for the construction industry.”
Nearly a quarter of contractors surveyed have already had some experience with predictive analysis of data and business intelligence. That compares with just 7% for artificial intelligence and 6% for machine learning. The largest group of respondents noted they are aware of and understand the concepts of each of these emerging technologies but have not implemented them in their own organizations — 39% for predictive analysis; 47% for artificial intelligence; and 33% for machine learning.

“As technology continues to advance, these capabilities will be increasingly applied to the design and construction industry,” the report notes. “It is an exciting future, and contractors should work with their industry organizations, technology partners and collaborative team members to learn about, embrace and prosper from these coming changes.”

**A Mission to Modernize**

Viewpoint has developed a full suite of construction solutions that connect entire project teams to share and analyze data and automate workflows to maximize performance.

Far beyond developing construction accounting and project management software solutions, Trimble Viewpoint partners with contractors to help them fully modernize their operations and scale for the future, taking advantage of the next wave of benefits that new technologies and big data will bring. By both listening to clients’ needs and engaging directly with the latest cutting-edge technologies available, we’ve developed a full suite of construction solutions that connect entire project teams, deliver deep understanding of project data, automate workflows and boost productivity, and increase profit margins while cutting construction costs. Among these:

- Fully integrated, cloud-based enterprise resource planning (ERP) platforms (Vista and Spectrum) that utilize a uniform data set across construction organizations and allow users to collaborate and work in real time.
• A collaborative project and document management platform in Viewpoint Team that provides both internal and external project team members with a single source of project truth.
• Powerful solutions that extend the power of ERPs beyond contractors’ back offices to boost data capture and productivity in the field (Viewpoint Field View, Viewpoint Field Management and Viewpoint Financial Controls)
• An intuitive application — Viewpoint HR Management — to streamline contractors’ human resource management processes, enhance recruiting, onboarding and training efforts, and allow employees to self-serve their work-related needs.
• True construction business intelligence solutions, that simplify data analysis and allow contractors to look at data in ways they haven’t been able to before.

Construction data is the backbone of each of our technology solutions. And changing the way contractors look at that data and apply benchmarks can open the door to better planning and better projects.

By delivering data in real time, through integrated, cloud-based software platforms with leading-edge security measures and providing the tools and functionality within to work with that data in ways they never could before, Viewpoint is committed to helping our clients transform their entire operations and better scale them for the future.

Contact us today to learn how your organization can simplify work and expand the scope of what you can do with your project data.

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Posted By

Matt Harris

Matt is responsible for the Trimble Viewpoint division within the Trimble family of businesses. In this role, Matt leads Viewpoint’s global team in their creation and delivery of Viewpoint’s Connected Construction strategy and Viewpoint’s delivery of Trimble Construction One. The Viewpoint team is leading the delivery of Connected Construction within Trimble through solutions which deliver critical day to day value to the world’s construction
companies.

Matt has been with Viewpoint for more than 10 years. He previously served as Viewpoint’s Chief Product & Strategy Officer, where he led the creation of Viewpoint’s cloud, browser, and mobile platform strategy and product portfolio—enabling contractors to both digitally transform and consume modern data services. Prior to this role, Matt led Viewpoint’s Strategy and Mergers & Acquisitions, enabling Viewpoint to integrate and bring together valuable construction applications which formed the basis of the modern Viewpoint platform. Matt was also integral to Trimble’s acquisition of Viewpoint in 2018.

He is passionate about the application of technology to transform work being done in the construction industry and regularly speaks at industry events on the best practices for construction technology strategies and implementation.

Prior to joining Viewpoint in 2011, Matt had executive positions in Divisional Leadership, Strategy, Mergers & Acquisitions, and Product Management with FEI Company (global leader in nanotechnology solutions), Planar Systems (a leader in medical imaging technology), and Netscape Communications (an enterprise software leader). In addition, he began his career with General Electric in a technical leadership program.

Matt has engineering and psychology degrees from Cornell and his MBA from Stanford University. In his free time, he enjoys the bounties of Oregon with his wife and two sons.