

How to Leverage Quality and Safety Data for Better Margins: **6 Reasons to Utilize a Single Mobile Solution**

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hen international construction giant Mace calls the sprawling Birmingham New Street Station and Grand Central Shopping Mall “one of the biggest refurbishments in Europe,” it isn’t exaggerating. The train station — the central hub of the British Railways system — sees more than 30 million passengers annually and the adjoining mall covers 500,000 square feet.

The \$935-million, five-year project could have easily gotten bogged down in the kinds of cost overruns that had plagued redevelopment of the site since 2002, when one plan ballooned from about \$250 million to more than \$1.3 billion before it was scrapped.

But Mace had an ace in the hole many other large construction firms have yet to discover: a single mobile technology solution that allowed it to seamlessly collaborate with teams and contractors, thereby reducing costs — and leveraging quality and safety data for better margins and efficiency.

Mace used Viewpoint for Field View™ to create a defect database of more than 15,000 items along with handling trade-to-trade handovers, benchmarks, and quality reviews. Previously, those items would have been siloed into different

PHOTO: “Gordon Tracy” at Birmingham New Street station, Flickr user Ben Coulson, changes have been made to original photo, https://www.flickr.com/photos/ben_coulson/3272968064/.





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Paul Dalton, senior project manager, Mace

systems, many of them hand-written. Having a central electronic repository for the data that's easily accessible made a huge difference.

"We actually closed out 12,000 of our defects during the project, which I don't believe we could have done without the use of Field View," says Paul Dalton, senior project manager at Mace. "It just made things so much more efficient."

Workers apparently agreed. After starting with five Field View-equipped tablets, the company increased to 20 due to high demand. "The workers know they can get results from Field View," Dalton says.

And now, so does Mace, which plans to use the systems on future projects to improve efficiency and meet increasingly narrow margins. Research suggests other large contractors would do well to take similar actions, and new regulations make cohesive electronic data collection more important than ever.

A Mobile Technology Solution Saves Money and Addresses Regulations

The first place a mobile technology solution can help is reducing costs, especially those related to rework and call backs. Currently, rework accounts for up to 20% of a project's contract amount — costs that are rarely budgeted — according to the Construction Industry Institute. Even if rework is just 5% of total construction industry expenditures, that's a whopping \$62 billion in unnecessary costs. And with average gross profit margins at just 2.1%, reducing rework can add significantly to the bottom line.

"There's not a lot of companies out there right now that are managing quality and safety to the degree they could be," says Derek Wielkopolski, technical sales engineer at Viewpoint Construction Software. Which points to the second place a cohesive technology solution can be beneficial: safety.

Construction currently accounts for 20% of all fatalities in the American work force and a majority of the injuries, according



to OSHA. In fact, one in 10 construction workers are injured every year. The average cost per case of a nonfatal injury is \$27,000 for construction — nearly double the per-case cost for all other injury accidents, according to a study from the *Accident Analysis & Prevention Journal*. That study estimates the total cost of fatal and nonfatal injuries in the construction industry at an eye-popping \$11.5 billion.

At the same time, OSHA is stepping up accident reporting regulations with new requirements that companies submit electronic injury and illness records. That means any paper files will need to be converted to digital and electronic files will need to be directly uploaded to OSHA. These new digital reports also require more detail and careful reporting with increased fines for noncompliance.

“This is something that’s very new right now,” says Mark Weldon, senior sales engineer at Viewpoint Construction Software. “We have built-in forms that are compliant with the new OSHA regulations.”

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Derek Wielkopolski, technical sales engineer, Viewpoint Construction Software

Along with better quality and safety checks, a technology solution addresses another key construction cost driver: the low productivity that results from workers spending too much time in the field performing non-value added tasks such as trying to track down paperwork or information.

“It’s really helpful, not just for me, but for the contractors as well,” says Freddie Maxwell-Hart, construction manager at Mace. “Instead of having to read my handwriting and not be able to line up photos with items,” it’s all in the system.

Hurdles to Leveraging Technology Solutions

So why aren't more large construction companies embracing this technology? Here are some possible answers:

- Many still think the old method of using spreadsheets in Excel is good enough.
- Some are collecting information electronically, but using a handful of apps to do so, which silos the data and makes it difficult to optimize.
- Many simply do not understand the ripple effect that inaccurate or out-of-date data can have on a project.

A single, robust technology solution offers a better way, but many contractors are reluctant to fully embrace new methods:

- Only half of contractors are tracking information at all, according to an *Information Mobility SmartMarket* report from McGraw Hill.
- Only 37% of onsite workers can access information outside the construction trailer, the McGraw Hill study shows.
- 53% of contractors don't use any kind of safety mobile apps, according to a *JBKnowledge Construction Technology* report.

In today's world where site engineers, superintendents, and other field workers are constantly transferring information, drawings, and observations between the site and the office, mobile tools can boost productivity by massively cutting down the time they spend:

- Searching or waiting for the latest drawings, photos, statuses of issues, etc.
- Walking back to the office to get information or tools they forgot.
- Copying information in the office, which was recorded on paper in the field.
- Reporting and sending site observations to the wider team for follow up.

Failure to properly manage quality and safety results in reputational loss, expensive litigation, schedule delays and more. Conversely, capturing, sharing, and reporting all field

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data with a single mobile solution helps improve quality, control safety, and mitigate risk. Additionally, a technology solution can handle the following in a secure, cloud-based online and offline system:

- Daily logs
- Punch lists
- Safety observations
- Quality inspections
- Defect management
- Commissioning





6 Reasons to Utilize a Single Mobile Solution

1. Instant access to data. A technology solution provides the latest construction drawings or issue statements while eliminating “information bottlenecks” and reducing wait times. It also gets rid of non-value adding tasks, optimizes end-to-end workflows, and shortens the overall time needed for critical path activities such as:

- Inspections and rectification of quality issues.
- Punch lists.
- Project commissioning and handover.

2. Standardize reporting processes across the enterprise.

Contractors who aren't using a single technology solution don't have standardized reporting methods, which means project managers are using disparate apps or reporting methods from project to project. Standardized reporting yields:

- Safety and quality managers speaking the same language across the enterprise.
- Data no longer being siloed in apps or reports that must be manually concatenated to make sense.

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- Managers spending less time interpreting reports and more time acting on them.
- Reports such as OSHA illness and injury are automated to ensure compliance.

3. Analyze data to measure subcontractor quality and timeliness. Not all subs are created equal. Having access into data across projects (rather than just a single project) means contractors can:

- See which subs deliver better quality control.
- Evaluate which subs best meet timelines.
- Schedule subs in stages for more efficient, quality-controlled construction.
- Hire subs with the best quality and timeliness records for improved efficiency and cost savings.

4. Analyze defect data to identify poorly performing suppliers. On projects with tight margins, choosing the right supplier can make all the difference. Having access and insight to data across the enterprise means companies can:



- See which suppliers have had problems with either delivery or quality.
- Look across multiple projects to identify poor-quality products that suffer high rates of defects.
- Perform trend analysis to see which suppliers are top performers.
- Avoid small mistakes turning into massive costs as they get duplicated hundreds if not thousands of times throughout a project, or even enterprise-wide.

5. Archive and distribute safety and quality data to project stakeholders. Once unsafe contractors or poorly performing suppliers are identified, all the necessary stakeholders need to be alerted to avoid using them in other projects. Archiving those reports means stakeholders can also take a more proactive approach because:

- Mobile technology solutions mean reports are available to anyone with access to the cloud.
- The technology allows reports to automatically be sent to key stakeholders.
- The reports can be run enterprise-wide to give stakeholders greater visibility and insight rather than project-by-project.

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6. User incident forms document accidents or injuries in the field where they occur. A big part of proper safety tracking is having the correct forms available to supervisors on the tablet that's in their hands right when they need them. A mobile technology solution gives companies insight into incidents and injuries and protects against costly liability and fraudulent worker's comp claims in the following ways:

- Allows contractors to fill out a safety incident form on the spot.
- Requires sign off from a project manager before further work can continue.
- Documents the incident with photos and eyewitness statements.
- Automatically updates any changes to forms enterprise wide.
- Performs detailed analysis report and exports rich data for company wide totals when its time to submit OSHA form 300A.

The Decisive Advantage of a **Single Mobile Technology Solution**

Ultimately, embracing a single technology solution allows contractors and owners to properly manage quality and safety across the enterprise, rather than project-by-project. It also standardizes reporting, which helps avoid expensive litigation, worker's comp claims, and rework delays. With insight into enterprise-wide data for all stakeholders, projects can be managed proactively, leading to improved quality, safety, risk management — and higher overall profit margins.

“The key difference for companies today is being able to provide some kind of analytics or metrics to optimize their data,” Wielkopolski says. “Those that are accurately optimizing have an ease-of-access to it electronically. Those that say, ‘Let me go to my file cabinet and get that data’ are not optimizing it. This is about being able to implement a technology that makes you bigger, faster, stronger. It’s about being able to deliver a project with higher quality and lower cost.”





Viewpoint provides innovative construction-specific software solutions to the global construction and capital project industries. Viewpoint provides the tools these industries need to improve project profitability through better visibility, risk management, and real-time team collaboration. Viewpoint solutions address the full construction life-cycle from planning/bidding to construction and facilities maintenance. Viewpoint's solutions are offered on a variety of platforms, including Cloud, Mobile, SaaS, and On Premise. Headquartered in Portland, Oregon, USA, and with offices in the UK and Australia, Viewpoint has become the technology partner of choice, with customers located across the globe in more than 28 countries. These customers include more than 40 percent of the ENR 400, and over 20 percent of the ENR 600. For more information, please visit www.viewpoint.com.

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