



Clients for Life: How Warfel used Newmetrix to improve safety and demonstrate COVID-19 compliance to keep jobsites open

Construction was already a dangerous industry before the spectre of COVID-19 required everyone to change the way they work. More than 20% of all on-the-job deaths in the United States took place in the construction industry.¹ These deaths are not only devastating for friends, family and co-workers, but they're also financially disastrous, with the average workplace fatality costing \$1.42 million.²

And then, in March 2020, the pandemic hit the United States, forcing most construction sites to shut down for weeks, along with most other businesses. The country and its construction sites have opened back up to a degree, but general contractors are under heavy pressure from state and local governments to demonstrate that their workers are following strict social distancing and masking requirements. Failure

to comply could result in a work stoppage or, even worse, the spread of a potentially deadly virus among subcontractors and employees.

Leveraging existing site photos to improve safety

For more than a century, Warfel Construction has built a wide array of commercial facilities throughout the mid-Atlantic region, with particular expertise in the senior care, education and healthcare industries. The company's slogan, "Clients for Life," reflects the firm's business strategy: do such a good job that, when a client's next project comes up, they don't even think about using another firm. In this spirit, Warfel's executive team is always looking for ways to continuously improve, and technology is a big part of that push.

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– Phil Weaver, Senior Director of IT, Warfel

1. OSHA. "Commonly Used Statistics." <https://www.osha.gov/oshstats/commonstats.html>.

2. Morrison, Kyle. "The ROI of safety." Safety+Health. 23 May 2014. <https://www.safetyandhealthmagazine.com/articles/10414-the-roi-of-safety>

About a year before Warfel began working with Newmetrix, for example, the company had decided to standardize construction management on Procore, a move that consolidated five disjointed applications into one platform. It streamlined operations and made information far easier to access and track. Additionally, Warfel adopted StructionSite, a platform that automates the process of taking 360 degree site photos.

Warfel started down the path that would lead them to Newmetrix on a Friday night at 5:20 P.M. Matthew Hartzler, Warfel's president, had been looking through project photos that had been uploaded into Procore when he saw a retaining wall that gave him pause. The cut behind it didn't look safe, so he contacted Conlan Swope, VP of Operations, to inform him and to ask whether there was a better way to use these kinds of photos to improve safety. After all, it's not very efficient for the president of the company to manually identify safety hazards in site photos.

Easy integration with Procore, StructionSite and other key technologies

Swope had previously met with Newmetrix, but at the time, Warfel was about to engage in its Procore deployment and didn't want to take on another IT project. But the firm had now standardized construction management on Procore and was ready for another project. After discussions with Newmetrix and demonstrations of how the company's artificial intelligence engine, "Vinnie," could rapidly identify safety hazards in site photos, Warfel was sold.

As it turned out, though, deploying Newmetrix and integrating it with Procore could not have been easier.

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With the Newmetrix Safety Monitoring solution that Warfel deployed, Vinnie works like a "virtual safety manager" that automatically detects safety hazards in photos. In this case, Vinnie analyzes photos from StructionSite which are stored in Procore, but it's simple to connect Newmetrix to any repository, including Box, Egnyte, Oxblue and many others.

At Warfel, the data Vinnie generates is aggregated in Microsoft Power BI to create dashboards and a safety risk assessment report that provides the firm with cross-project benchmarking for leading risk indicators, such as workers at height, ladders by type, and slip, trip and fall hazards. Additionally, Vinnie identifies context, which adds important nuance to the hazards it detects. For instance, it's probably not a big deal if workers aren't wearing PPE while doing interior work, but it's a very big deal during demolition.

Keeping jobsites open with Newmetrix during COVID-19

Like the rest of the world, Vinnie has also adapted to the coronavirus, identifying COVID-19 safety hazards such as "people in group" (people standing less than six feet apart or congregating in groups of 10 or more) and "no face mask." These capabilities were vital to Warfel's ability to continue working during the pandemic. To keep its jobsites open, Warfel had to present county authorities with its COVID-19 safety procedures and demonstrate that workers were complying. Even better, Warfel is able to monitor how well each jobsite is complying without adding any additional personnel on-site to observe, which would increase both costs and viral transmission risk.

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- Conlan Swope, VP of Operations, Warfel

“We were the only job allowed to operate in one of Pennsylvania’s largest counties because we could validate our adherence to COVID-19 safety guidelines with Vinnie’s analytics,” Swope said. “That kept a lot of people working, both our own employees and a large number of subcontractors. We took great pride in that.”

Reducing risk by identifying trends and underlying causes, not nailing individuals

Newmetrix also proved its value in helping Warfel reduce traditional safety risk. It’s important to note, however, that Warfel doesn’t use Newmetrix to identify individuals who are violating safety policy so managers can nail them. In fact, Newmetrix doesn’t use any kind of facial recognition technology and never will to prevent its platform from being used in this way. The reason is simple: using the platform in this manner won’t do much, if anything, to actually reduce risk.

Instead, Warfel is using Newmetrix to identify jobsites and subcontracting organizations that are at higher risk of an incident. Its dashboard compares the safety trends for every jobsite, and Warfel can

drill down in just a few clicks, all the way to the underlying photographic data.

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For example, Warfel saw that when Vinnie identified a foreman present on site — foremen wear a different color of hardhat — the safety risk of that site was eight times less than those without a foreman.

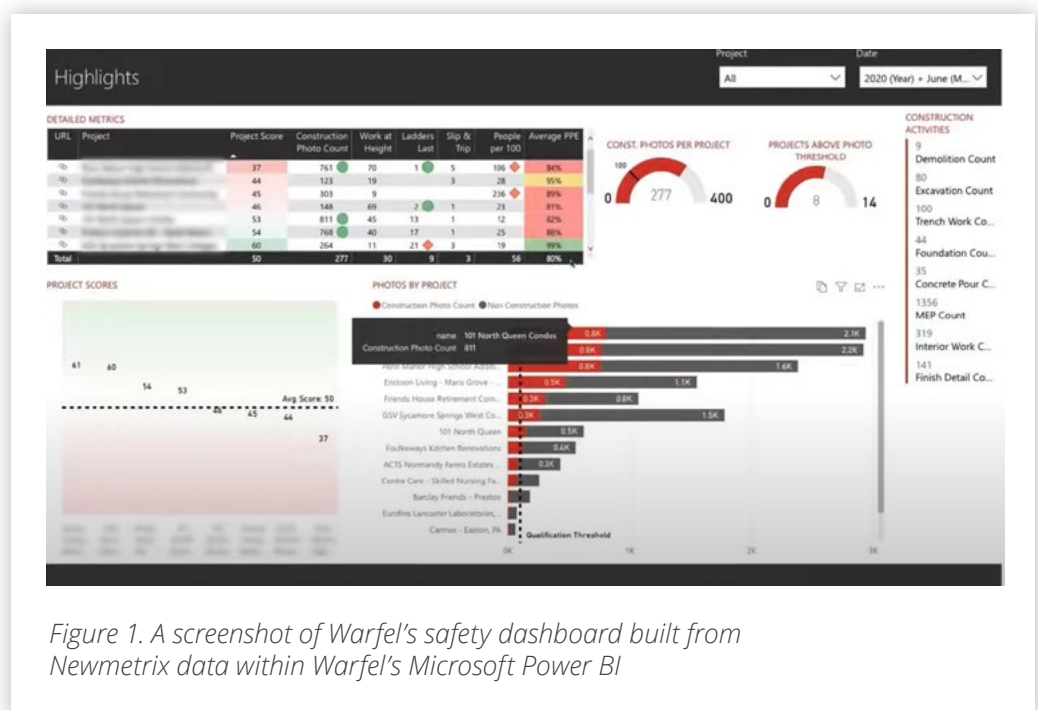


Figure 1. A screenshot of Warfel's safety dashboard built from Newmetrix data within Warfel's Microsoft Power BI

“That’s a huge reduction in risk, and we wanted to extend it to all of our sites,” Swope said. “So we worked with our underperforming subcontractors to find a way to get a foreman there, and, as a result, we saw multiple of our highest risk subcontractors move into the medium-risk category over the last two months. That’s a big big change that makes a big difference, and we would have never noticed it without Newmetrix.

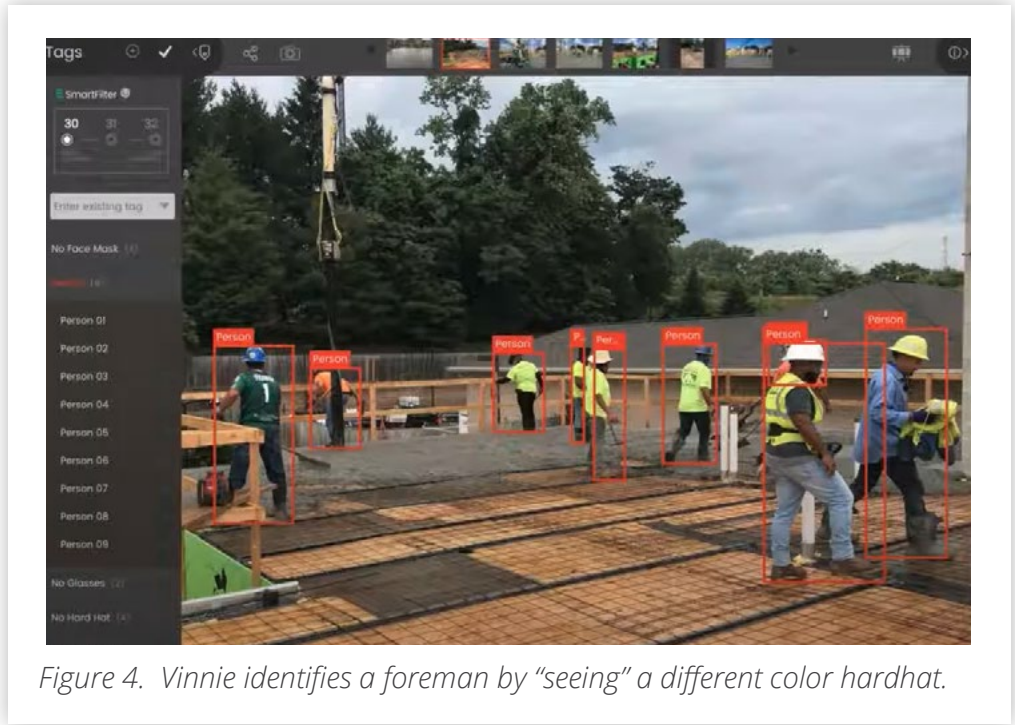


Figure 4. Vinnie identifies a foreman by “seeing” a different color hardhat.

WARFEL CONSTRUCTION

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Established in 1911, Warfel Construction Company provides strategic construction solutions to clients throughout the mid-Atlantic states. Warfel is an innovative and dynamic company that specializes in building for educational, senior care, health care, corporate and hospitality clients.

NEWMETRIX

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Newmetrix enables Predictive-Based Safety, helping companies identify projects at highest risk for an incident and act upon them to prevent incidents from occurring.