FARO®

Build Better: How Digital Jobsites Enhance Team Collaboration

Discover how innovations like digital reality platforms help improve collaboration, communication, and coordination between teams. Find out how to implement effective digital workflows that deliver precision and quality on every build.

With insights from Kyle Tarr

Product Manager
FARO® Technologies, Inc.

Introduction: Using Digital Jobsites for Cross-Functional Efficiency

You've got your company's 360° camera, a willing colleague or, in some cases, an enthusiastic intern claiming to know how to operate the device, and a printout of your floor plan. It might appear you're ready and equipped to make the leap toward digitization, yes? Well, not quite.

Relying on single-purpose and proprietary tools as the silver bullet to modernize your workflow – without attempts to unify these data sets – rarely leads to elusive productivity and efficiency gains. These turnkey solutions, usually served with a generous portion of marketing jargon, often fail to deliver the desired heights of workflow digitalization promised in the brochures. So, what's missing?

In short, unification. Storing terabytes of project data within never-ending almanacs of folders on your computer might seem like the easiest option but is far from the most efficient workflow. To overcome this, an excellent place to start are digital jobsites. Digital jobsite platforms, like FARO Sphere® XG, offer a solution to consolidate multiple data sets into a unified ecosystem while enhancing synergy between teams through seamless democratization of data.

In this eBook, we explore the gains from leveraging digital jobsites while debunking myths about the supposed drawbacks of digitization in the AECO industry. Discover how these digital toolkits leverage different data sets that pave the way toward seamless project execution, coordination, and collaboration between internal and external teams.

FARO®

Three Essentials: Communication, Coordination, and Collaboration

These three essential elements form the backbone of successful project execution. Streamlining these elements from planning to handover enables efficient interactions with various stakeholders and clients.

Key to this is initiating a system that meets each project partner's different needs. And what does having a digital jobsite have to do with it? Let's dive in.
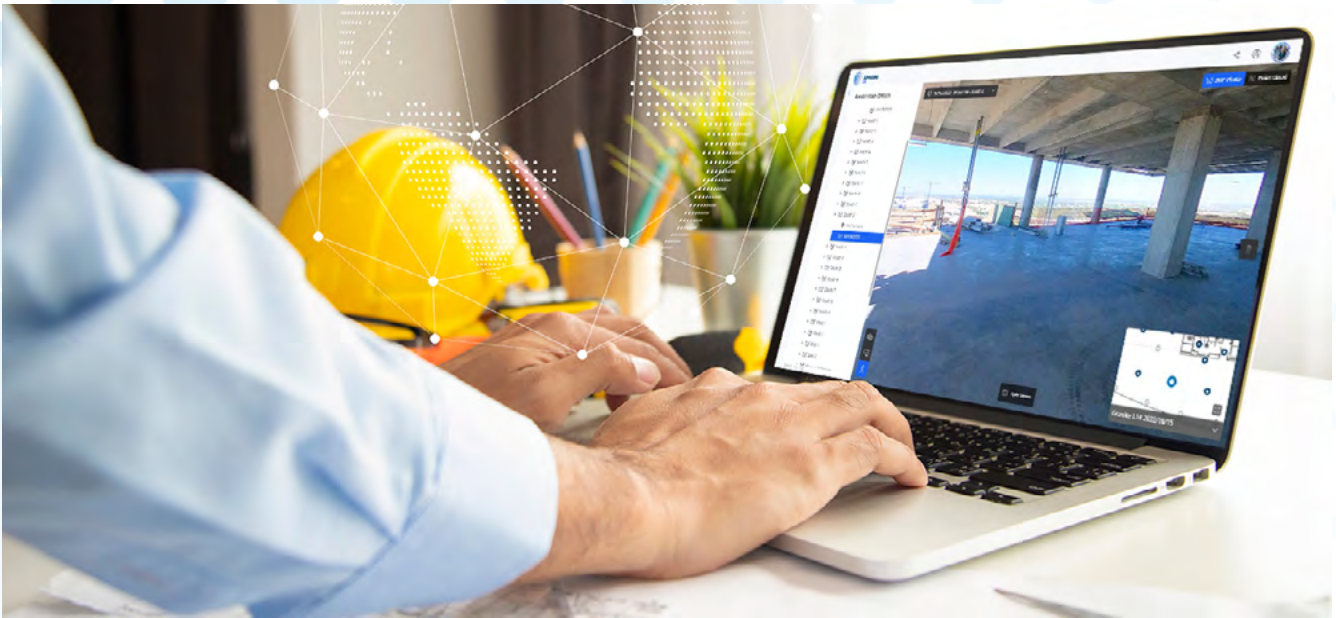
Communication

Communication is pivotal to every successful venture, regardless of industry. Many traditional methods are digitized, however numerous firms still believe hand-drawn sketches, printed site photos, and floor plans are the way forward.

> "Several firms we spoke to are still using these manual workflows and have yet to adopt a digital platform that can unify and simplify their work. For most of them, it's a notion that moving toward digital jobsites means having to do more work, which is far from the truth."
>
> —Kyle Tarr, Product Manager, FARO Technologies

Of course, there is nothing wrong with relying on hard copies of documentation, but there are more efficient ways. Leveraging digital jobsites as your primary tool for communication eliminates the hassle of manually ensuring appropriate information reaches the right stakeholder.

A cloud-based digital jobsite democratizes your project data while simplifying workflows in one swift move. Whether your team handles 360° or 2D photos, 3D point clouds or 3D models, floor plans or markups, digital jobsites unify these data sets and ensure correct information reaches the right people. Meanwhile, user-friendly dashboards make navigating these platforms straightforward for those less fluent with digital applications.

FARO

Coordination

Disjointed weekly site updates that raise more issues than they solve, inaccurate material dimensions delivered, and limited visibility into actual jobsite progress—sounds familiar? As these issues pile up, delays and poor construction quality become inevitable.

As part of the digital jobsite ecosystem, platforms like Sphere XG can transform ineffective weekly meetings into immersive virtual site tours with 360° photos. Provide everyone in the room with a visual representation of your project, address and resolve open RFIs collaboratively, and ensure everyone is on the same page through high-definition 360° imagery.

Procurement teams and vendors bidding on projects will gain a clear idea of the scope of work required through 360° photos, which fully document existing conditions. Architects and designers are satiated with actionable site photos or accurate 3D point clouds to ensure precision on execution. Superintendents and project managers benefit from a comprehensive view of progress, jobsite status, and potential bottlenecks.

Proper alignment between stakeholders and accurate information fed to the right people results in well-coordinated project execution.

Collaboration

It might be overused jargon, but effective collaboration adds to project precision and timeliness. Without the right solutions in your digital toolkit, collaboration often regresses into staggered communication threads. Digital jobsites enable smooth communication that eliminates information gaps and avoids subpar work, delays, and reputational damage.

Compatible tools connected to digital jobsites make it easier to meet the high standards that come with every project. Integrations with popular platforms such as Procore or Autodesk enable you to manage all aspects of your project with ease and accuracy throughout all phases.

FARO®

Communication Challenges and Solutions for Separated Teams

Despite advancements in technology and the broad availability of collaborative toolkits, many firms still face challenges coordinating geographically separated teams. A digital jobsite helps you overcome these barriers to eliminate gaps between functions. But how is this achieved?

Challenge

Delayed Responses
When team members are spread out across the country, getting a quick answer can become difficult. Unanswered calls, texts, and emails lead to delays and misalignment. Over time, this can result in significant administrative and construction issues.

Conveying Urgency
Staggered and infrequent communication often leads to teams misunderstanding the urgency and importance of the task. Without a consolidated source of truth, scattered team members find it challenging to stay on top of progress and distinguish onsite priorities.

Scattered Documentation
Aligning project documentation across different teams often leads to incomplete folders and archives. Firms sticking by these conventional methods are bound to face challenges developing accurate as-built documentation, potentially exposing them to legal and reputational repercussions.

Solution

Quick Replies Across Borders
Digital jobsites speed up this interaction. Notifications that provide the right person with context from the field lead to quicker responses to RFIs. A cloud-based digital jobsite also facilitates seamless and immediate onsite approvals.

Virtual Site Tours
Forget about 2D images or PDFs to bolster team alignment at OAC meetings. Digital jobsites provide virtual tours with high-definition 360° photos or 3D point clouds, enabling remote site inspections for faster progress updates and approvals.

Complete, Detailed Documentation
Digital jobsites offer firms a smart solution that stores your projects documentation systematically. With digital as-built documentation all the required data — 2D and 360° photos, 3D point clouds, 3D models, PDFs — is sorted chronologically within a single location. This allows quick retrieval of data for various purposes like payment requests or legal obligations.
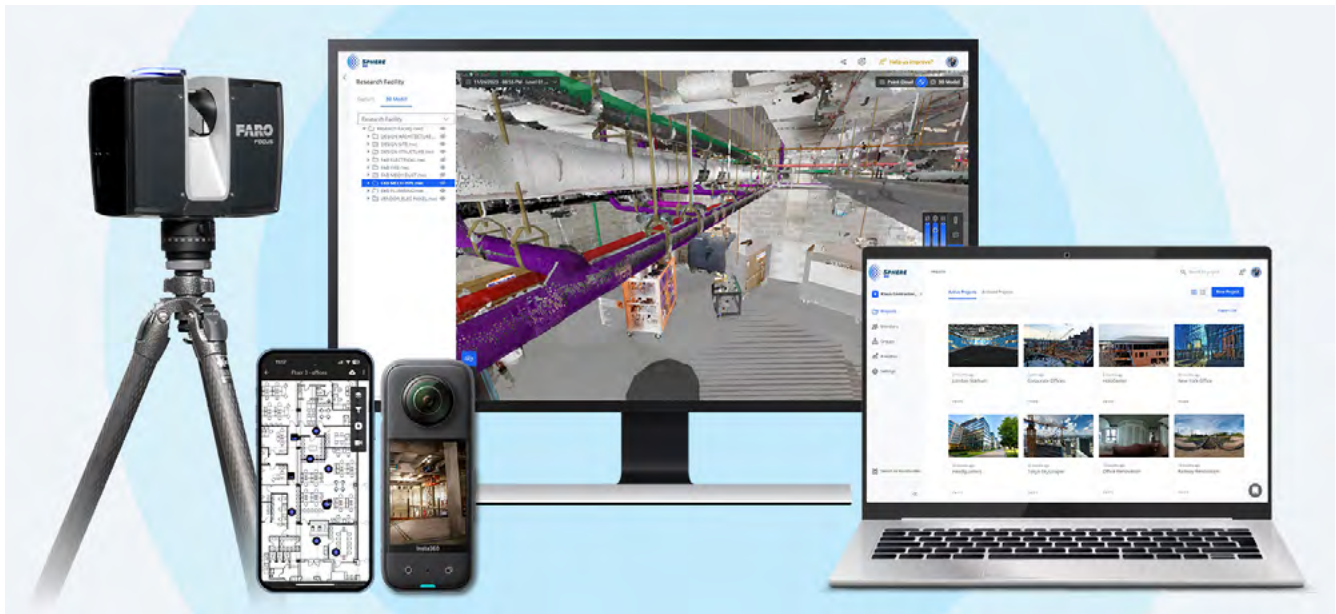
FARO

Effective Data Democratization

A common misconception among several industry players is that digital jobsites generally require more legwork to produce and share data types obtainable manually. However, pivoting toward digital jobsites is a guaranteed time saver without the additional work.

This next section reviews the top three essential elements you need for implementing effective communication and data-sharing workflows. Discover how starting on the right foot with the right tools can significantly impact your project.

Use the Right Tools for the Job

Whether you're handling 3D modeling data from Autodesk® Revit® or AutoCAD, markups with the popular Bluebeam, or 360° and 2D photos with Sphere XG, the first step in creating efficient workflows is leveraging the right tools for the proper function. Mismatching these toolkits while expecting them to deliver results beyond their capabilities sets you back even before you begin. Given the common practice of engaging multiple trade partners and firms on projects, it is pivotal that everyone agrees which digital tools will be used throughout construction. This helps streamline data sharing and communications while eliminating knowledge gaps and cross-compatibility issues.

Mandating a Single Management Platform

This is easier said than done, as most firms and project owners today will know the struggle of getting everyone to hop on the same platform. As big of a challenge as it might appear, it's justified by the results of ensuring everyone leverages the same platform to access, upload, and retrieve project data. Using digital jobsites to consolidate your team's data uploads improves alignment between stakeholders and partners as communication remains within a unified virtual ecosystem. Assuming you found the right tool for the right job, leveraging a cutting-edge digital

FARO®

jobsite to manage the various data formats simplifies and optimizes how you maintain a bird's eye view of onsite progress. Conversely, expecting smooth collaboration with your stakeholders while tolerating multiple digital jobsites would be doing the same thing repeatedly and expecting different results, or, as Albert Einstein calls it, insanity. As projects increase in complexity, trying to remain aligned with stakeholders and partners operating on different software only translates to repetitive work and increased likeliness of miscommunication and delays.

Consistency is Key

As in most cases, reaping the benefits from these workflow optimizations hinges on them being practiced consistently. A common mistake by firms – likely fueling misconceptions that digitization needs more work – is the inconsistent use of digital jobsites and toolkits. Firms that treat digital jobsites as a stopgap or temporary solution often have issues like scattered datasets compounded by unsystematic and arbitrary workflows. These ultimately lead to reputational issues and weak bottom-line performance. Implementing a systematic way to manage and share your data from day one creates chronological continuity of project data from estimations up to when as-builts are needed.

Stakeholder Engagement Done Right

When consistently practiced, the aspects mentioned culminate into streamlined and efficient workflows by all teams. At this stage, efforts should shift toward sustaining these processes for continued smooth project management, communications, and information transfer.

However, compliance with these workflows for maximum productivity requires enforcing rules and policies. They can range from preferring user-friendly tools like Sphere XG, to ensuring weekly capture of 360° photos and 3D point clouds. Several good policies that help sustain efficient management include:

FARO

Choosing a Foolprof, Reliable, and Updatable Platform

Deciding on the right digital jobsite tool entails several key factors: foolproof operation for users of varying digital competency levels, function reliability, and regular software updates.

Digital jobsites that have easily navigable interfaces, simplify data accessing, viewing, and retrieval. This empowers project teams and stakeholders to independently review developments without much guidance or hand-holding.

With reliability and upgradeability intertwined, choosing a digital jobsite that can be frequently updated ensures data protection against potential cyber threats. These tools' security benchmarks include attestations for SOC 1 and SOC 2. Conversely, insisting on obsolete digital platforms often disrupts workflows and threatens your reputation among existing and prospective clients.

Setting Up User Access Rights

Maintaining streamlined collaboration requires properly defined access limitations and permission sets within your digital jobsite. Defining these rights is essential for ensuring privacy and contractual confidentiality. Permissions ensure the right person accesses the correct information on your digital jobsite when needed.

Striking the right balance of permission definitions helps to ensure team leaders, project managers, owners, and stakeholders, including external vendors and trade partners have the information needed to carry out or delegate work. If you enable unrestricted access to all stakeholders, you may risk sensitive information ending up in the wrong place or hands. On the other hand, if you are too rigid, you may experience delayed construction, miscommunication, and collaborative gaps.

"With different trade partners and stakeholders working on one project, permissions can mean the difference between someone being able to find something you don't really want them to see, or not. It also helps you to not give too much information away to those who might not need it; you could be overwhelming them."

—Kyle Tarr, Product Manager, FARO Technologies

Establishing Top-Down Workflow Cascades

Proper hierarchical access and permission definitions enable smoother democratization of responsibilities and information upstream or downstream. Digital jobsites enable visibility for field teams of incoming RFIs from stakeholders. Having such information easily accessible allows for quick, data-backed decisions based on pressing needs.

Owners and stakeholders benefit from streamlined workflows by monitoring projects remotely through virtual site tours, saving travel cost and time. Using a digital repository ensures everyone is on the same page, boosting productivity and confidence in your firm.

FARO

Effective cascades also lead to better resource management, ensuring contractors are commissioned to active jobsites only when needed. Proper delegation also helps to avoid overcrowding onsite, which can cause safety hazards.

The Long-Term Benefits of Improved Coordination and Collaboration

As with most things in life, hard work often results in its due rewards. In the case of digital jobsite adoption, the value it brings always outweighs the risks involved. In the long-term, early adopters and forward-thinking firms can look forward to benefits such as:

Improved Efficiency

By constantly implementing digital toolkits into your project workflow, learning curves are eventually flattened, leading to smoother renovations and construction standards while eliminating the need for rework. Construction is done correctly the first time.

Improved Productivity

Leveraging these efficient and innovative tools will over time result in high-quality, contractually precise, and on-time work. Resource management becomes smoother as productivity benchmarks are established and plotted digitally, ensuring the correct materials are installed at the right time.

Improved Reputation

Most hate to admit it, but word travels fast in the AECO industry. The more successful projects in your portfolio, the quicker the word gets around that your firm is the one for the job. Building such a reputation pays off when it comes to winning the project. Owners are more likely to cooperate with firms that remain on the law's good side and comply with as-built documentation and record-keeping regulations.

FARO

> "Reputation is very important; it tends to come first over the price when dealing with project owners. Owners in the private sector are going to pick a contractor that they want to do the project with, and then they are going to try to negotiate the price. They're picking their contractor first, then focusing on the price. So yes, reputation is very important."
>
> —Kyle Tarr, Product Manager, FARO Technologies

Improved Profitability

Over time, the constant execution of top-notch work paired with seamless communication and collaboration makes dollars and sense. Besides enjoying prompt payments and compensation through a good reputation with clients, reality capture and virtual site tours that enable remote verifications and inspections lead to frictionless monetary requests and transactions.

Conclusion

In an environment where peer pressure exists, it's easy to be swayed and influenced into adopting tools that are mismatched with your requirements. Proverbially speaking, getting on board a digital jobsite is beyond the point of 'getting your toes wet' and could be more closely associated with approaching the 'deep end.'

However, when executed correctly using the appropriate tools, your firm will swim and thrive in the sea of data as you leverage the actual value from these datasets through a unified digital jobsite. From estimation, pre-planning, and construction, to handover, having a digital jobsite with its suite of complementary tools equips you, contractors, stakeholders, and owners with the information they need when needed. This ensures that work on every project is done precisely, on time, and to the required standards.

To learn more about about Reality Capture solutions for AECO, visit our content library.

Read more

FARO®