

## Member Communication Experience

# Do You See What I See? Accurately Communicating Drawings From Office to Jobsite

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Excellent communication truly is the linchpin for all successful projects in the dynamic world of construction and infrastructure development. The penalty for ineffective communication in general can be costly errors, delays, and even safety hazards.

Drawings, often called the blueprints of a project, are a crucial aspect of effective communication. Why? Because they visually represent what the final structure should look like and guide the onsite construction team's efforts. Therefore, ensuring these drawings are accurately transmitted from the office to the jobsite is paramount.

It follows that a seamless drawings transfer from office personnel to jobsite supervision teams can make or break a project's success. This discussion will delve into the strategies and technologies that can revolutionize how drawings are communicated to the benefit of all stakeholders.

### The Challenges Of Drawing Communication

Before jumping right into solutions, let's first understand some of the more familiar challenges associated with drawing communication.

» **Version Control.** With multiple revisions and updates to drawings, keeping track of the latest version can be challenging. Using outdated drawings can lead to errors and rework.



- » **Complexity.** Construction drawings are often very deep, with various layers and fine detail. Ensuring field personnel can interpret and implement these correctly is essential.
- » **Time Sensitivity.** Delays in transmitting drawings can hinder the project timeline. Timely access to drawings is critical for efficient construction planning.
- » **Human Error.** Manual data entry and interpretation can lead to errors. Even a seemingly small mistake on a drawing can result in significant problems down the line.
- » **Accessibility.** Supervisors need quick and easy access to drawings on the construction site. Traditional paper-based systems, therefore, can be cumbersome.

Now, let's explore strategies to address these challenges and improve the communication of drawings.

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## Digitalization For Effective Drawing Communication

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Embracing digital technology can revolutionize the way drawings are communicated within construction projects. There are several effective strategies and solutions that can be employed to enhance drawing communication:

First, Building Information Modeling (BIM) is a collaborative approach that involves creating and managing digital representations of a construction project. It allows for 3D-visualization, simplifying the interpretation of complex drawings for field personnel. BIM software also ensures that all stakeholders work from the same digital model, reducing the risk of version control issues.

Storing drawings and project documents on cloud-based platforms ensures real-time accessibility for all team members, regardless of location. This technology eliminates the need for physical copies and minimizes the risk of losing essential documents.

In addition, supervisors can be equipped with mobile apps that provide instant access to drawings and project information. These apps facilitate clear and accurate communication between the office and the jobsite, allowing quick, reliable updates and clarifications.

Then there is the implementation of collaboration tools that enable real-time discussion and annotations on drawings. This ability fosters better communication between office personnel and supervisors, reducing the likelihood of misinterpretation.

Then there is something known as a Digital Twin which is a virtual replica of a physical asset or system. In construction, it can be used to visualize the project's progress. Field supervisors can also compare the Digital Twin to the physical construction project, ensuring alignment with the original drawings.

Finally, you can attach QR codes to physical drawings. When scanned with a smartphone or tablet, these codes can provide access to digital versions and additional information through augmented reality overlays. As 3D content that's overlaid onto a physical object in the real world, ARs can help personnel visualize the finished project, for instance, pipes running under

a street, while working onsite.

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## Ensuring Benefits For All Stakeholders

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Adopting certain proven digital strategies and technologies offers numerous benefits to all stakeholders involved in a construction project.

- » **Precise and accurate digital drawings** reduce the likelihood of errors and costly rework. Supervisors can easily verify that the work aligns with the original design.
- » **Streamlined communication and access to up-to-date** drawings reduces project delays and associated costs. Faster decision-making leads to greater efficiency.
- » **Digital tools** can facilitate collaboration between office personnel and jobsite supervisors, fostering a more robust team dynamic. Communication is more efficient, leading to quicker problem-solving.
- » **Accurate drawings** help ensure that construction adheres to safety standards. Field personnel can identify potential safety issues early and respond most appropriately.

Reducing the need for physical copies of drawings also contributes to environmental sustainability as digital solutions align more and more with the industry's growing focus on green construction practices.


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## Strategies to Ensure Data Integrity

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Effective communication is the cornerstone of successful projects. Ensuring that drawings are accurately and promptly communicated from office personnel to jobsite supervision is pivotal to achieving this success.

By embracing digital transformation through technologies like BIM, cloud-based document management, mobile apps, and collaboration tools, the construction industry can not only mitigate shared risks, but unlock a future where projects are completed more efficiently, safely, and sustainably.

The benefits of enhanced drawing communication extend to all stakeholders involved, from project owners and designers to contractors and jobsite supervisors. As we navigate the complexities of modern construction, the path to success lies in our ability to bridge the gap between the office and field through innovative digital solutions and a commitment to clear, accurate, and efficient communication. 



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### About the Author

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Andre Paden is InEight's Advanced Work Packaging (AWP) subject matter expert. He works with a team of engineers and product owners who develop solutions to help solve customers' greatest project challenges while increasing their profitability and agility.

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### About the Article

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