PERSPECTIVE

From the VDC Office to the Jobsite: Closing the Last Mile

Model intelligence earns its value when the person planning or installing the work can use it without rebuilding the context.

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Start with the person doing the work

When I look at construction software, I try to start with the question the person in front of it is trying to answer. A VDC specialist may need to inspect model structure or isolate systems. A superintendent may need to know whether a room is ready for the next trade. A foreman may need the current detail and the constraints on a particular installation.

Those users are working on the same project, but they should not have to navigate it in exactly the same way. Closing the last mile means translating coordinated information into the field's working context while preserving the connection to its source.

A mobile viewer is useful. Simply putting a desktop model on a smaller screen, however, does not complete that translation.

Organize around recognizable work

The field understands floors, rooms, areas, systems, and installation packages. Those should be dependable entry points into project information. An object tree organized by authoring conventions may be technically accurate yet still make a foreman work too hard to find the thing in front of them.

Consider a team preparing to install overhead piping in a defined zone. They need to see the current arrangement, the relevant details, unresolved issues, and the work that must precede theirs. They also need to know where their package begins and ends. A model can support that conversation when it is connected to a clear location and scope.

The same approach should work when the project relies heavily on PDFs. I do not believe field participation should depend on the availability of a complete model. A drawing can provide the visual starting point, with the same work records connected behind it.

Build a usable installation package

I would define a field package by the decisions it supports. What is being installed? Where? Which information governs? What material is approved? What conditions must be verified before starting? How will the team record completion and exceptions?

Those questions create a useful package even before we discuss software. Once the process is clear, technology can assemble the relevant information and reduce repeated searching. The package should link to controlled sources rather than create another collection of unmanaged copies.

It should also make uncertainty visible. If an approval is missing, a detail is under review, or a location mapping is incomplete, the package should say so. A clean presentation must not imply that all underlying questions have been resolved.

Give observations a route back

The last mile runs in both directions. Field teams see whether the planned arrangement fits actual conditions and whether the installation sequence is workable. Their observations should improve the project's shared understanding.

Suppose a foreman finds that the available access differs from the coordinated assumption. The observation should identify the location and affected work, include supporting evidence, and reach a person authorized to resolve it. The resulting decision should return to the package and, when appropriate, the model or drawing.

If the only route back is a phone call to the one VDC specialist who knows the issue, the system remains dependent on individual memory. That may work on a good day. It is fragile when assignments change or several areas require attention at once.

Respect field time

Every additional field entry has a cost. People will work around a process that asks for information already known elsewhere or requires too many steps during active work. That is not necessarily resistance to technology. It can be a reasonable response to poor workflow design.

I would reuse known location, object, trade, and package information. Ask the user to record what they observed, not to reconstruct the project database. Make it easy to distinguish completed work, blocked work, and work that requires review.

We should also design for the conditions in which the tool will be used, including connectivity limitations and the need to confirm whether information is current. A field user deserves to know when they are looking at an earlier available copy.

Judge the handoff where it is used

The right evaluation is not whether the VDC team successfully published a package. It is whether the receiving team can find it, understand it, and act on it. I would test that with real field tasks before expanding the workflow across the project.

Can a foreman locate the applicable detail? Can a superintendent identify the open constraint? Can an inspector retrieve the requirement and attach the result to the correct work? Those are concrete

measures of usability.

This is the connection I want construction intelligence to strengthen. The expertise invested in coordination should reach the people executing the work, and their observations should remain part of the project record. When that loop works, VDC becomes a continuing participant in construction rather than a separate office activity.

What’s Next

The next post examines what geometric coordination can miss, including the space, access, and sequence required to install and maintain an assembly.

Read online: inertiasystems.com/resources/blog/from-the-vdc-office-to-the-jobsite-closing-the-last-mile

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