Autodesk BIM 360 Field

"Why does a delivery driver have an integrated mobile device to deliver a $50 package while a construction manager uses a pen and pad to deliver a $500 000 000 project?"

The introduction of BIM 360 Field to Autodesk's portfolio of cloud-based solutions extends BIM to the construction site. While it's a new name amongst Autodesk's expanding range of construction solutions, BIM 360 Field is by no means an untested proposition.

Previously known as Vela Field Management, it has an established and proven reputation amongst construction professionals across North America, Europe and Australia. Having been a partner of Vela Systems, the original developer of BIM 360 Field, we are pleased to extend our involvement with this solution as an Autodesk product. Over the last few months a number of AEC Systems' staff have completed rigorous technical training to achieve our current status as the only certified BIM 360 Field partner in Australia and New Zealand.

Historically, data has been accessed and managed on the construction site via many disconnected systems, and thousands of paper drawings. Tracking and obtaining useful metrics from these multiple and incongruous data sources is often impossible. Now BIM 360 Field combines mobile technologies and BIM at the point of construction. Data can be easily accessed and captured in the field, and then used for management and reporting via a web interface.

Does a Field Management Solution apply to you?

It's not only general contractors who can increase profitability, reduce risk, and assure quality using Autodesk's construction field management solutions. BIM 360 Field is a scalable and adaptable solution, with tools designed specifically for all project partners, including sub-contractors, architects, engineers, and even developers and facility owners.

In addition to accommodating a wide range of users, BIM 360 Field is suited to and proven on construction projects of all types, including commercial and multi residential, infrastructure and land development, industrial, and plant and process. The ability to synchronise anywhere with 3g/4g connectivity means BIM 360 Field is also capable of handling smaller projects across multiple sites, such as project home construction.

It is also important to note that the utility of BIM 360 Field is not necessarily reliant on the existence of detailed and extensive BIM data. Originally designed to integrate traditional 2d documentation, BIM 360 Field maintains this functionality and supports both document-based and BIM deliverables.

Mobile:

The key to BIM 360 Field is its mobility. The iPad-based mobile component allows issues to be identified and managed where they occur; in the field. Three core programs; Quality Assurance and Control, Safety, and Commissioning, are managed via an extensive toolset available within the BIM 360 Field iPad app. Following is a brief explanation of the functionality these tools bring to the building site.

Library: The library is a fully customisable repository giving all team members access to a range of documents, from installation guides to complete drawing sets, and 3D Building Information Models, wherever they are; in the office or the field.

Issues and Punchlists: Identify and record issues using either custom descriptions or by choosing from a library of customisable issue templates. Instantly attach photos directly from the iPad camera or photo roll, and documents from the library such as PDF specifications and drawings. Attached images and documents can also be marked-up onsite with easy-to-use editing tools. In addition to capturing information such as the type, responsible party, priority, and root cause, issues can be physically located by placing pushpins on drawings and models.

Checklists: Safety programs, commissioning procedures and QA/QC checks can be implemented and enforced using an expansive range of predefined and customisable checklists. Any non-conformance automatically generates an issue which can have additional detailed information added.

Tasks: Using this feature, activities such as inspection requests or quality inspections can be assigned to specific team members and companies using a calendar. When an issue is identified, a follow up task can be assigned and its completion documented.

Equipment: All equipment, regardless of whether it exists in a BIM, can be tracked and managed. Commissioning and start-up procedure checklists can be associated with equipment, and documents such as operation and installation guides can be attached for easy access in the field. As-installed data, such as serial numbers or bar codes captured using the inbuilt scanner, can be logged to create handover documentation as a digital asset or for synchronisation back to a BIM.

Models: The Models tool is an enhanced viewer specifically designed for easily accessing and navigating models from Navisworks or Revit. Issues can be spatially referenced within the model using pushpins, and equipment can be highlighted and easily located.

The rapidly growing adoption of Autodesk BIM 360 Field can be partly attributed to its ease of Many people are already familiar with the use. simplicity of the iPad as a personal consumer device, and this experience also translates into its use as a professional tool on site. One of the key requirements of a field management tool is that it can work in all locations, and in all conditions. With this in mind, BIM 360 Field is specifically designed to work offline, meaning it is equally effective in a deep basement carpark where a wireless connection is not viable, or on a remote mine site where a 3g/4g signal is not available. An internet connection is only required at the time of synchronisation, which typically takes place in the site office.

Web:
Once data has been captured and created in the field, it is stored, managed and reported in the cloud via the BIM 360 Field web interface.

Accessible via the internet on any device, this management interface includes a range of tools and templates to create and maintain projects.

Most importantly, the web interface features powerful reporting functionality, allowing full interrogation of the information generated in the field. Project-based reporting tools facilitate the creation of work-to-complete lists for subcontractors and can be automatically distributed. Quality, safety, and commissioning results for specific trades, work areas, and time periods can also be easily compiled.

Having a live and rich data source is also beneficial for comparing multiple projects. Companies can reduce their risk by accessing operations information from multiple concurrent projects in real time. Subcontractor and team performance can also be measured across multiple projects or business units while historical comparison of projects, analysing data such as root causes, facilitates an accurate review process.

Being a cloud-based solution, information can be accessed from anywhere, anytime, without the overhead of maintaining a complicated data management solution. BIM 360 Field offers a complete solution that can operate in isolation, however for those wishing to integrate it into existing business systems, an extensive API (Application Programming Interface) can be harnessed. Custom programming can extend project data from the off-the-shelf web interface into enterprise data management solutions such as Microsoft Sharepoint.

Interested in learning more about Autodesk BIM 360 Field? Visit A2K Technologies today

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