



*eVolveMEP*

# Early Integration. Early Impact.

**5 Ways Integrated Materials Management Improves  
Construction Efficiency and Lowers Building Costs**

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## Let's start with the most basic concept:

Construction cannot happen without materials. Designs can be created. Sites can be prepared. But until the materials—the right materials—show up on site at the right time, nothing can actually be built. And how the procurement, manufacture, delivery and utilization of those materials is managed, from building concept to ribbon-cutting, will directly impact the bottom line of the project for the client, the engineering team and the contractor.

Integrating materials management into your overall construction management from the beginning of a building project results in reduced costs and increased productivity for every aspect of the project team. It helps to finish jobs on-time and on-budget. It optimizes your workforce. And it breaks down information silos that prevent your team from working efficiently.

## The first step in materials management

Materials management is the planning and controlling of all materials to be used on a project so that they are requested in advance, obtained at a reasonable cost, and are available when needed. Frequently, materials management in construction is understood to start when the digging begins; however, the job begins long before the first feet are on the jobsite.

As architects and engineers create the plans for a new building, they're developing their concepts based on the goals of the client. From the exterior design, to the materials used, to the selected HVAC system, to the interior layout, everything is specified based on what the client wants.



And the AEC team must have solid knowledge of the available material so they can advise the client on what meets those goals in multiple ways: cost, efficiency, esthetics and availability, among others.

By introducing a materials management platform into the project workflow as early as the design stage, the AEC team establishes an effective process through which needed materials can be specified, ordered, tracked and stored throughout the entire project timeline. This platform will be essential to people all along the workflow, from the Virtual Design and Construction manager responsible for creating the digital models of buildings and their component parts, to the purchasing agent who needs to know the materials needed, to the on-site foreman responsible for logging in deliveries. From desk to fabrication shop to job site to billing, an integrated platform eases plan design and implementation and facilitates communication among key members of the team.



# 5 benefits of integrated materials management

Advantages of a comprehensive materials management plan can be realized throughout the project, but for full benefit, a platform should be introduced early on and for the entire team: from designers to contractors to suppliers. The information shared on the platform is important to everyone, and having it can lead to significant time and cost savings for various members of the project team.

## 1 Reduce the hidden costs of “old school” materials management

Using old practices, the multitude of people on a construction project would use various methods to track materials and their associated paperwork: specs, bills of lading, change orders, cancellations, receipt verifications and the like. Some people might use spreadsheets; others could take photos with their phones to send notifications. Still others continue to use paper. Piecemeal systems create opportunities for various costly mistakes, including:

- Data entry errors
- Duplication of orders
- Outdated specs leading to the wrong parts being delivered
- Late--or early--deliveries

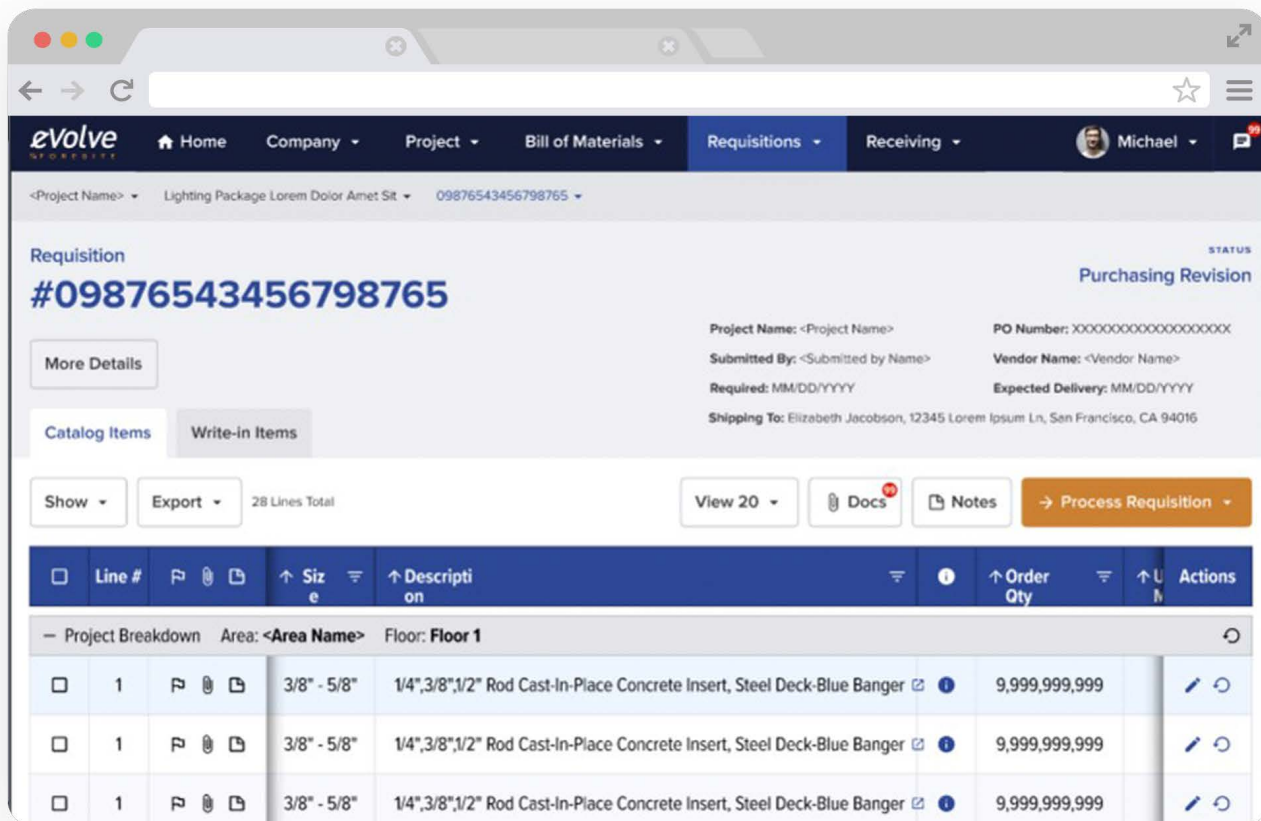
The more times someone has to re-enter data or check different systems for information, the greater the chance that the information is going to be overlooked, misread or erroneously entered. And every additional, unnecessary step equates to wasted time.

## 2 Plan based the current status of deliveries and orders

Everything from the storage space available on-site to the human capital needs from the trades are dependent upon materials being available and delivered to the jobsite. If pre-fab components are delayed from the shop, you'll incur the cost of having idle installers on the site--as well as the domino effect of having to unexpectedly postpone other subsequent tasks, putting the entire project behind schedule and incurring more costs. Staying on top of the status of your material allows you to optimize the resources you know you'll have available, avoiding additional costs.

## 3 Learn about change orders ASAP

Change orders on a job are a given. They're going to happen. But the earlier you know about a change order, the sooner you can update your materials schedules and project timetables. Instead of having to communicate changes through multiple systems--risking an incorrect transcription or a contact oversight--an integrated materials management platform that works with Revit and Autodesk can log the changes automatically, giving the earliest possible notice to your associates in the field, in the fabrication shop or in the purchasing office. Promptly learning about a change in materials specifications can make the difference between getting the right material and having to facilitate a return or improvising a re-work in the field.



#### 4 Leverage the supply chain

Today's construction supply chain is a global endeavor, with finished parts and raw materials sourced from all corners of the planet. Prefab components could come from a shop around the corner or a factory across the country. By implementing a materials management plan at the earliest opportunity—when a Bill of Materials is created rather than when the materials are ordered—your team can leverage the global marketplace to secure material at the optimum time and price. Tracking fulfillment and receipt of materials also allows you to implement a back-up plan should a supplier become suddenly unable to fulfill an order, mitigating the risk of not having an element when needed or having to use a non-spec substitute.

#### 5 Improve ongoing budget and schedule forecasting

An integrated materials platform allows all stakeholders—client, engineer, architect and contractor—to have insight into the ongoing construction project. It can let them understand how the forecasted cost of the project has changed, and what caused that change. The materials delivery schedules provide tangible information on how the project is progressing and when benchmarks will be met, including when the building will be commissioned and handed over to the client. It provides a comprehensive source for all partners to forecast for changes in the cost and schedule, in real-time and with real evidence.

## eVolve Materials: The Built-In Advantage

The new eVolve Materials management solution positions its users to effectively, efficiently and economically boost the productivity of your team. Designed by construction veterans with input from hundreds of eVolve clients in the AEC industry, eVolve Materials provides an easy and affordable Cloud-based solution that addresses the needs of everyone from the Virtual Design team to the on-site contractor.

Because we start with a Bill of Materials rather than waiting for purchase orders to be issued, eVolve Materials introduces materials management to the construction process earlier, providing you the ability to implement the processes and benefits of this powerful solution to all stakeholders and eliminating the roadblocks that other construction practices create.





more details at  
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