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Article

Specifications simplified

In recent years, advancing technology has transformed daily routines, from the way people interact with close friends to how they consume news. It's changed how employees work—and when and where they work. Even the way people shop for groceries is becoming reliant on technology. A common trend in these transformations is productivity. Technology has improved efficiencies and made people, spaces and processes more productive.

Architects, specification consultants and others in the construction industry have experienced similar technological transformations. Architects started with pencil and paper, and then came computer-aided design (CAD) software, which introduced 3D modeling. Today, Building Information Models (BIM) and software like Revit are common among industry professionals. Virtual Design Construction (VDC), big data, Internet of Things (IoT) and today's leading-edge technologies are among the big players shifting the way the industry designs, constructs and manages buildings. Embracing these can help overcome common issues, including those that arise during specification processes.

Solving today's challenges

According to Allegion's Architectural Consultant T.J. Gottwalt, AHC, CDC, FDAI, CSI, CCPR, CM-BIM, lack of information, primarily on the door schedule, is a common problem during the specification process.

"Architects may not realize that every component of an opening can affect the hardware we specify. Things like door material, frame material, door type, stile dimensions, door thickness, frame depth, door size, weight and fire label all can have a dramatic effect on what needs to be specified for the opening to ensure its proper operation."

Communication and collaboration are among the most crucial components to improving efficiencies during a building project. This is true all the way through the life cycle of a building—from design to construction to maintenance—but it starts with accurate specifications. A solution that coordinates information will help streamline processes and identify these gaps.

"All architectural projects begin with a vision of some kind," says David Fouché, AEC platform manager at Allegion. "So to get to the point where vision becomes reality, everyone needs to have accurate and up-to-date information along the way. It's really important that at the end of the day every door in the door schedule must have the right hardware on it to support that initial vision."

Another pain point for specification consultants is the revisions they receive. Gottwalt has been on projects where they receive a revised set of floor plans and a door schedule with no notes whatsoever to indicate what was changed.

"We basically have to write an entirely new hardware schedule and specification because we have to go through every door to ensure nothing changed from the previous version," he says. "Sometimes this happens half a dozen times on a project."

Communication between the specification consultant and architect can be slowed if changes like the fire-rating of an opening aren't shared and updated within the door schedule and specification. Information needs to be addressed as changes are made, big or small. This ensures the architect, engineers, contractors and owners all have the same, updated information throughout the process.

Implementing the right technology can help overcome these obstacles and unveil tremendous potential for more efficient, collaborative and productive processes.

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Big benefits of BIM

In 2012, 71 percent of architects, engineers, contractors and owners report they have engaged with BIM on their projects, according to The Business Value of BIM in North America: Multi-Year Trend Analysis and User Ratings. This reflects a 75 percent growth surge over five years.

Today, for architects specifically, the American Institute of Architects (AIA) Business of Architecture: 2016 Firm Report found that nearly all projects at large firms use BIM. In fact, the integration of BIM software has become standard for 96 percent of these firms. They are using it for design visualization, coordinated construction documents, presentations and renderings.

However, these firms are not using BIM for door hardware in most cases. It's not needed for the design visualization, presentations and renderings architects often use to communicate with owners and others about the project.

When it comes to hardware, what architects really need to know is that the product will function as desired, provide the proper level of security and meet fire and life safety codes—all while fitting into the aesthetic needs of the building. This can all be achieved without the use of BIM. But, even though 3D objects might not be useful, there is tremendous value in the information these objects contain. This data is particularly important when you get down to something as technical as door hardware, especially today as security needs are more mature and specifying grows more complex.

"For specification writers, one of the biggest benefits of BIM is that it's a database," says Fouché. "Data can be extracted from the architect's files and sent directly to the specification consultant's database. They add the hardware set, and those hardware sets can be pushed back and populate the architect's door schedule."

For the architect, a significant benefit of using BIM for door hardware is that everything is coordinated throughout the project.

> "All of the drawings are coming from one model, one single database. In the past, if an architect moved a door in the floorplan, he or she had to manually make that change everywhere that door appeared, like the door schedule, the enlarged plan, the building elevation. BIM coordinates that for them. This is also a benefit for the specification consultants. When the architect transfers the floor plan, it's the same as the door schedule."
>
> – David Fouché

In the past the door schedule and floor plans might have been out of sync. In many cases, architects would wait until the end to put the door schedule together because there were so many changes throughout the process. Now with BIM, the door schedule can be completed earlier because it's always coordinated with the floor plans.

Using a system that improves operational efficiencies like these is important for architects and specification consultants. Low productivity has been a constant drumbeat in the construction industry, raising costs and adding risk and waste across project life cycles, according to a report from the Economist Intelligence Unit, Rethinking Productivity Across the Construction Industry. Therefore, more streamlined processes are needed to minimize wasted time, rework and lost materials. Using automation

to simplify what were previously manual processes is key. Emails back and forth or slow systems delay a project. Architects need a solution that makes the entire process faster—and smarter. This is imperative since clients expect their facilities to be completed as soon as possible and within budget.

"Technology has improved the specification process, mainly in the forms of the applications that we use to write hardware sets and the ways we transfer data between architects and ourselves," says T.J. "It speeds up the processes. Take a 2,000 opening job. If you had to enter a door number, door materials, door thickness, door height, fire rating and frame type an every individual opening, it would take weeks. With our current technologies, it can take five minutes. Though the real efficiency is in the accuracy. Manual entry can lead to human error. Using technology, the flow of information is streamlined."

Introducing Overtur™

BIM has transformed the industry for the better, but the true potential is still untapped. Opportunities continue to expand, and it's clear that the information these models comprise is the big benefit. This is where greater potential lies for improved efficiencies, productivity and collaboration.

Allegion found a way to tap into this potential at the door hardware level. It developed a cloud-based portal that focuses beyond the geometric aspect of BIM to maximize the capabilities of the information the objects can contain.

Allegion's Overtur is a place where architects, engineers, opening specification consultants and other key stakeholders can collaborate on specifications and the security design of doors and openings within their projects. It makes this information available to key stakeholders to improve collaboration and overall building delivery. It simplifies the process and ensures more accurate, consistent information.

One of Overtur's features is a revision history tool that identifies changes throughout the project, solving the challenge T.J. cited earlier. According to David, as changes happen on either side, the platform records them so everything stays in sync.

From reducing errors and miscommunication to improving collaboration and savings, technology has enriched the industry. Overtur capitalizes on the latest technologies to deliver a collaborative platform for more productive projects. Learn more about the benefits of Overtur.

Allegion has a team of more than 150 specification writers located around the world who would be happy to assist on your next project. Contact an Allegion specification writer, or check out the iDig Hardware blog for information and updates on door hardware codes.

About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a $2 billion company, with products sold in almost 130 countries. For more, visit **www.allegion.com.**

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