The Importance of Modularity, Scalability, And Interoperability In Today's Construction

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Lately, the topic of project controls software arises whenever I attend a conference, trade show, or interactive webinar with stakeholders from the construction sector. One question is consistent: How quickly can they can be live in the platform?

Stakeholders feel urgency to have a new solution in place, and are keenly aware of the importance that this solution connects to other software and can expand with them as they grow, so typically they are intimidated that they will not have any tools in place in the short term. There is a feeling that years could pass before any value is recognized from the new software. Their anxiousness about potential failure causes delays and cancellations in their search for new project controls software, and the inevitable return to the outdated and disconnected systems they are trying to leave.

The combination of urgency and reluctance that I see in construction stakeholders has led me to notice three key trends in requirement during procurement for project controls solutions:

» **Modularity**

» **Scalability**

» **Interoperability**

These three trends align with three needs: The ability to implement specific modules or bundles that do not require an entire platform and therefore will get to value more quickly, the option for project controls modules to grow into the rest of the organization as their situation permits, and the requirement that certain existing tools must remain in place.

While meeting these three needs does seem like a utopia, this is not a dream. Solutions like this exist.

Modularity: Value, Fast, and Phased

Let's start with modularity. In seeking this characteristic, organizations are challenging the notion that a strong project controls platform requires you to develop, customize, and implement the entire platform before any of the features or business processes can be used. Typically, an implementation like that can take two to three years, which discourages the investment in time and energy to make a transition. In a commercial-off-the-shelf solution, modularity means that customization is not required, only configuration, and that some business processes can be implemented and put into production before others.

Then as a second phase, later processes can be implemented

as needed, with phased implementation depending on the specific project or business demands. The great benefit here is that faster value is delivered to the stakeholders through the new software, especially on capital programs that need certain processes quickly.

Scalability: Value That Expands

Scalability is an extension of modularity. Just as most projects or companies wish to phase in their processes via modules, they also often wish to start with a pilot project or specific business unit, prove its value and success, and then expand the software's use across additional projects or business units or an entire program or company. Buyers demand that software be priced to support this scaling and that it deliver the capability of easily replicating the configuration and training new users to follow the established processes.

Done successfully, the scalability approach also alleviates the challenge of driving organizational change among users who are reluctant to change their software or process. Pilot projects can engage users who are tasked with working towards the new solution and are eager for the benefits. Other users are more likely to accept the new requirements and adapt to the change if they can see the benefits of the solution.

Interoperability: Value Through Connection

Finally, let's discuss interoperability. Some software is considered a standard for certain business processes and thus is typically used or even required on projects. Many companies also use enterprise solutions that support non-operation business processes and are not part of the project controls evaluation, but that must be connected. An effective project controls solution must be able to exchange information to and from other design authoring, scheduling, and ERP solutions.

Given the growing importance and value of real-time reporting and analytics, the desire to eliminate errors and redundancies with data duplication, and the importance of ensuring the same information is used across all the processes, interoperability is a key part of the success in the project controls world.

Modularity, scalability, and interoperability are important individually, but they become exponentially more valuable when combined into one solution. By seeking project controls software that is modular, scalable, and interoperable, stakeholders can expect:

- » A configuration to fit an exact need

- » Quicker time to value

- » Lower initial cost

- » Smoother change management

- » Proven solutions success before full scale implementation

- » Standardized use of the same tools for small projects and large projects and across different business units

- » Control over the time to transition into the new software

- » Connections to existing software

- » Better availability of real time information

- » A reduction in errors due to faster and more accurate project details

There is a lot of talk today about new technology (such as artificial intelligence), end-to-end connected platforms, and predicative analytics. But those technologies are often the wrong reason to start looking for new project controls software. The market is starting to recognize the truly foundational needs for project controls: Getting started with specific solutions quickly, rolling them out as is convenient, and ensuring a connection to other systems. Keep your eyes on the real indicators of what solution is best for your needs.

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