

Benefits Of A Systems Integrator

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I Can Integrate This System Myself....Or Can I?

Why a Systems Integrator Is A Critical Component of Your Next Material Handling Project

Let's say I am starting to plan my next material handling project, which looks as if it will have some conveyor, scanners, a pick to light area, a couple of label printers and other miscellaneous equipment. The system also must interface with our existing WMS, ERP or DRP system (generically known as the host).

The integration can be done in one of three ways: I can do it myself, I can tell the hardware supplier that has the most content that they are the systems integrator, or I can hire a company that specializes in systems integration. Which way should I go?

This is never an easy question to answer. It's always tempting to do your own integration. After all, how hard can it be? You already know what the system should do - it's just a matter of getting everything installed in the right order. And if you don't have the time to do it, the hardware manufacturer will have a project manager that can take care of it.

However, there is much more to consider here than just installing everything in the correct order.

At the very start of a project, you need to determine that the system you're installing will in fact be capable of producing the results you require. This is a very important step (and one that is often overlooked). A systems integrator will work closely with you to make sure your new system meets your requirements.

Next, you need to be sure that your data is being examined correctly. What is the velocity of each SKU? What is the cube of each SKU? What are the special handling requirements for each SKU

by unit of measure (pallet, case, inner pack, and each)? What does the order profile look like for each unit of measure? These are just a few of the questions that need to be asked and a systems integrator will review all of this data with you to make sure you have the information you need.

Once the SKU data is known, the mechanical portion of the material handling system is designed. Remember when you determined that you would have some conveyor, a pick to light area, and so on? This is where the value of having a systems integrator involved really becomes noticeable. The integrator becomes responsible for ensuring that the mechanical portion of the system functions correctly with the material you are trying to move in the facility.

You now need to determine the business rules that affect the system. For example, do orders have to ship complete? Do orders have to maintain line item integrity when they are loaded on the trucks/pallets? What are the transactions that need to be sent to the host? Are there lot requirements? Are there QC requirements?

The list of business rules can be quite long and may take many interviews to complete. But again, if you have a systems integrator, it is up to them to make sure all of the correct questions are asked. The integrator then takes one last look at the mechanical design of the material handling system to ensure that it still functions correctly in accordance with these rules.

The system is now designed and all that is left to do is issue purchase orders, right?

Not quite. There is still work to be done to determine how to make each component of the system function as part of an integrated material handling system (hence the name systems integrator).

The integrator works with all of the different controls and software groups that are involved and ensures that each party clearly understands their scope and responsibilities in the project. The integrator also has the final say in which system or systems a given function resides (for example, whether it should be done in the WMS, WES, or PLC).

From this point until the very end of the project, the integrator provides traditional project management functions and coordinates the installation and commissioning of all of the equipment. Finally, the integrator tests all aspects of the system to make sure it meets the requirements and business rules that were outlined at the beginning of the project.

To recap, a systems integrator will:

- Analyze your data to determine the SKU characteristics
- Design the mechanical material handling system
- Determine the business rules that affect the material handling system
- Validate that the mechanical design of the material handling system can support the business rules
- Procure the material handling equipment
- Ensure that the software for each component (WMS, WES, PLC, etc.) all function together
- Coordinate the installation and commissioning of the material handling systems
- Perform the integration testing to ensure that all of the components work correctly and meet the business rules and requirements

As you can see, there are many things to consider when taking on a material handling project and making certain it's a success. It's in your best interest to have a systems integrator on board that can take responsibility for delivering an integrated material handling system that meets all of your expectations and goals.

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