Finding the value
in integrated ERP
and WMS by Thomas R. Cutler

Integrated ERP and WMS solutions produce numerous benefits for the user.

There are certain features that a warehouse management system (WMS) typically includes and an enterprise resource planning (ERP) system lacks.

• Work flow management—schedule employee activity based on needed activity and employee location

• Worker optimization—system knows worker capacity as well as the pick of each item and where the item is located. Optimizes work route for highest volume in shortest period of time

• RF task queue—automatically send next task to employee using a radio frequency device

• Bin locators—most ERP stops at a location. Bins are locations within bins and allow for greater warehouse mapping

• Cart picking—this allows an employee to pick multiple small package orders at once and greatly increases productivity

• 3PL support—third party logistics management

• Yard management—for managing trailers in yard, where they are located; what is in them, when they are coming and going

• Slotting optimization

• Transportation management system—this will include items such as route optimization, freight shopping, load consolidations

• Various pick methods (including wave picking or zone picking)--a typical ERP system picks by order only, this ruins warehouse productivity

• Full recall management

• QC quarantines.

Rebecca Gill, vice-president of marketing for Technology Group International (an ERP vendor) says: "A good ERP package that includes its own WMS system will offer all of these features."

Benefits of integrating WMS into ERP

There are numerous stand-alone WMS systems; however there are numerous benefits when the WMS is integrated with the ERP system. These include:

• Warehouse is not a separate entity

• Manufacturing, customer service, and purchasing all quickly pull real-time data from WMS and make better decisions

• Manufacturing schedules can be better optimized due to correct real-time raw material and quality data >>

Figure 1: Typical high-level process flow diagram for integration with ERP systems.
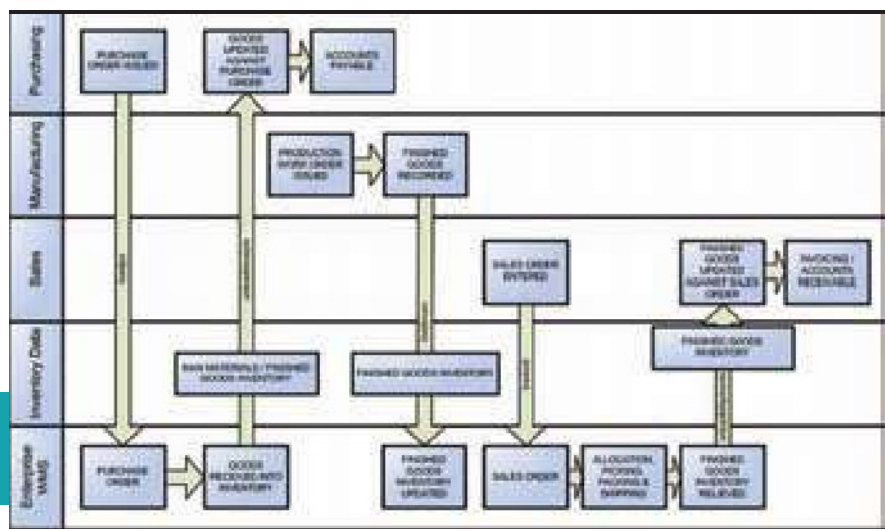
- Customer service provides better customer response due to accurate inventory data and quick response time

- Warehouse activities immediately feed electronic notifications to purchasing or customer service or short shipments or short receipts from vendors

- Complete and tight integration from freight manifest systems, scales, and small package carriers into sales order entry

- Real-time and accurate data linked to e-commerce modules or 24/7 feedback to online customers

- RF and bar code activities move outside warehouse and into manufacturing plant floor. Reductions in errors; more efficient

- Produces a "single version of the truth" for inventory, availability, and costing since there is a single system

- Reduced purchase costs and reduced implementation costs

- Faster project ROI when WMS is part of ERP and not third party add on

- Allows for true paperless environment.

Gill says: "Any effective integrated WMS/ERP system must demonstrate functionality including receiving, put away, locating, order pool management, picking, replenishment, and shipping. In addition, physical and cycle counts as well as vendor returns, licence plating, warehouse labour allocation, and product specific multiple storage types provide the tools necessary to effectively manage inventory in various types of industries.

Different ERP vendors utilize WMS integration in a variety of ways. The best ERP software allows the warehousing functions to integrate seamlessly with manufacturing activities. The WMS package should track both work-in-process (WIP) and finished goods inventory, forging a link between the warehouse and manufacturing assembly areas, achieving accurate real-time links to higher level systems. ●

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Configured
for success

How much simpler the days when you could limit choice according to supply for mass produced goods, along the lines of Henry Ford's infamous quote, "you can have any colour, as long as it's black." Individual configuration and customization remained the traditional preserve of large and complex manufactured items, or unique/very low volume specialist items with the correspondingly long lean times that were associated with such Make to Order (MTO) manufacturing. Today however, consumers demand nothing less than almost infinite choice and variety from already hard pressed manufacturers, even in the realm of Fast Moving Consumer Goods (FMCG). To make matters worse, consumers want their more personalized and customized products quicker than ever. Early attempts to offer a

"For a Product Configurator to truly deliver its full potential, it has to be fully integrated with the system that controls all the other manufacturing processes within a business." Mike Spragg, Infor Global Solutions.

wider range of pre-configured options were short lived as option ranges increased ever upwards, and with them, consumer expectations. Has the answer finally been found in the recent arrival of the latest generation of Product Configurators?

Steve Whitehouse, Marketing Manager at SSL WinMan, explains why the answer may be yes, for now. "Product Configurators have been around for some time now, but all too often failed because they simply dealt with the sales order side of things. They represented an intuitive, order entry mechanism for a customer and certainly gave the impression that you were going to get exactly what you ordered. What they weren't too good at was integrating with the actual manufacturing side of the business. Consequently, they couldn't provide the accuracy required in terms of cost and delivery time. At best, they provided a level of educated guesswork."

Mike Spragg of Infor Global Solutions agrees. "For a Product Configurator to truly deliver its full potential, it has to be fully integrated with the system that controls all the other manufacturing processes within a business. For instance, to generate an accurate quote in terms of cost, the Configurator needs to have access not just to the more obvious costs associated with a product, for example raw materials etc, >>

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