EMERGING ENTERPRISE WAREHOUSE MANAGEMENT SOLUTIONS
MEETING THE COMPLEX NEEDS OF TODAY’S GLOBAL BUSINESSES
Overview

If you are seriously considering an upgrade of your warehouse management software – or need to implement a new system – investigate the strengths and weaknesses of this type of solution relative to new equivalents now available from enterprise software vendors such as SAP. This paper explores how these enterprise warehouse management solutions can deliver the powerful functionality provided by niche vendors while enabling deeper integration with enterprise software. As a result, you gain support for a much broader set of supply chain processes: those that extend beyond the borders of your own company to your supplier’s supplier and to your customer’s customer.
NEW DEMANDS REQUIRE ENTERPRISE-CLASS SOLUTIONS
ARE YOU READY?

For years, companies with warehousing facilities have gravitated to niche or “point” solutions that are focused on the activities within the four walls of their warehouse. But as companies face new pressures to increase efficiency, differentiate through service offerings, and accelerate business processes, many are finding that their status quo software for managing warehouse activities falls short.

Whether you are a warehouse manager or vice president of operations, supply chain, or distribution, you’re not alone in asking the following questions:

- How can we cut costs further – for example, by optimizing our warehouse assets and resources while still meeting our customers’ expectations?
- How can we increase flexibility for offering the right services and adjust our warehouse systems to meet the individual requirements of different customers?
- How can we implement efficient, customer-specific put-away and retrieval strategies?

Why Niche Solutions Are No Longer Adequate

By their very nature, today’s niche solutions have significant weaknesses that prohibit you from addressing these types of issues and challenges. For example, point solutions can’t provide full integration with enterprise resource planning (ERP) software, limiting your ability to maximize its full functionality.

As a result, you can’t synchronize warehouse activities with order management and finance. That means there’s no way to synchronize supply with demand – for instance, by creating a balanced push-and-pull network and aligning warehouse activity with replenishment on the basis of demand. Nor can point solutions support networkwide visibility, collaboration, and analytics across the extended supply chain – at least not without custom integration with other vendors’ enterprise software. And custom integration is difficult to build and costly to maintain over time.

These interfaces are notoriously the weakest point in the IT supporting the supply chain. For example, if you or a partner simply upgrades software or changes data formats, then the integration must be rebuilt – and your processes will come to a halt until the work is done.

In addition, niche warehouse management applications can’t provide “one version of the truth” from a data perspective. Using these stand-alone or bolted-on systems typically requires heavy process monitoring with lots of layers; consequently, data updates can’t be made in real time. Workers on the warehouse floor have to wait for data updates, and they are often forced to make decisions – and service customers – based on incorrect information. The implications can be significant. For example, a customer order may go unfilled because inventory records aren’t current.

That’s not all. Additional restrictions encompass the following:

- Little or no use of automation – for example, event-triggered process automation that supports alerts, follow-on actions, and exception handling to streamline processes and increase efficiency
- No upgrade or consolidation path, or upgrades that are costly and time-consuming
- Limited support for recalls at a granular level of detail
- Little or no support for multiple languages
- A user interface that deviates from that of familiar enterprise software and requires a separate sign-on

As envisioned by SAP, enterprise-class warehouse management solutions can evolve your warehouse into a performance distribution center that supports high-performance operations, event-triggered process automation, and flexible and adaptable processes that meet unique customer needs.
In short, what’s needed are warehouse management solutions that deliver more integrated and comprehensive functionality that leverages the existing enterprise software that supports core operations.

As envisioned by SAP, enterprise-class warehouse management solutions can evolve your warehouse into a performance distribution center that supports high-performance operations, event-triggered process automation, and flexible and adaptable processes that meet unique customer needs. These solutions can do this by providing much deeper integration with their other enterprise software, as integration scenarios are not dependent on hard-coded integration. Instead, integration is native with your core enterprise software and immediately available. In addition, this native integration can support a wider range of end-to-end process scenarios spanning the warehouse and beyond.

As a result, your warehouse can operate as part of a single enterprise platform, along with finance, sales, and manufacturing – not as a separate island of functionality that requires costly integration bridges or data extracts. And because of this deeper integration, you realize:

- Access to sophisticated functionality that niche vendors can’t offer, such as event-driven process automation even in areas that extend beyond warehousing
- Support for integrated material flow systems (MFS) for automated storage and retrieval
- Increased visibility across all supply chain operations impacting all warehouses across the enterprise
- Faster time to action when responding to warehouse, customer, and other business events
- Less uncertainty around buffer inventory requirements, buffer times, and more
- Process automation that enables management by exception, which increases efficiency and reduces staff requirements

In contrast with the basic functionality that’s traditionally available through enterprise-class supply chain management software, these new solutions can offer the sophisticated functionality you’d expect from the best task-specific warehouse management software.
SAP is the world’s leading provider of business software, comprising ERP, business intelligence, and related applications such as supply chain management, customer relationship management, product lifecycle management, and supplier relationship management. As such, SAP is well positioned to provide enterprise-class warehouse management solutions because we can provide:

- Best-of-breed functionality as part of an enterprise-class solution
- Globally delivered solutions that enable centralized visibility and control of all warehouses
- Long-term vendor and product viability

Best-of-Breed Functionality in an Enterprise Solution

In contrast with the basic functionality that’s traditionally available through enterprise-class supply chain management software, these new solutions can offer the sophisticated functionality you’d expect from the best task-specific warehouse management software. For example, the SAP® Extended Warehouse Management application offers everything from slotting and rearrangement, labor management, mult.customer support, and MFS integration to cross-docking and even catch weight management. So there’s no longer any need to sacrifice integration with your IT landscape in order to access very advanced functionality.

Native Integration with Enterprise Applications

SAP can also offer broader, deeper integration with other enterprise systems – such as SAP Business Suite software that encompasses ERP, global trade, manufacturing, merchandising, analytics, and supply chain management. Why is this so critical today? Because departments such as finance, manufacturing, sales, customer service, and warehousing typically work as a network that’s connected by shared data and processes. To be efficient and cost-effective, warehouse processes must be integrated across these departments – and the extended supply chain – to enable real-time order management, more consistent “perfect order” fulfillment, data sharing with partners, and more.

Native integration enables a much smoother interface between enterprise applications and the processes they support. It enables extended processes across departments, more agile and responsive operations, and greater visibility across all nodes and processes throughout your extended network. For example, automatic alerts notify you about issues so you can address them quickly and keep processes moving. As a result, you can anticipate supply chain disruptions and respond to them in a proactive, timely, and profitable manner across your global logistics network. You also benefit from:

- **Lower integration costs** – Native integration eliminates the need for costly manual integration.
- **Reduced maintenance and risk** – SAP is responsible for maintaining integration with your other enterprise applications, even as our applications are upgraded.

Stand-alone warehouse management applications are becoming obsolete. They’re dependent upon public interfaces provided by enterprise resource planning vendors that support only a limited range of end-to-end warehouse management scenarios. So you lose out on opportunities to reduce costs; increase efficiency, visibility, and control; and much more.
A Global Solution Enabling Centralized Visibility and Control
Most niche solutions are designed to operate in a certain country, forcing global companies to deploy multiple, disparate applications that fragment data, limit visibility and control, and prohibit supply chain collaboration and analysis. Even access to an accurate inventory report across global warehouses is impossible.

In contrast, enterprise-class solutions are designed to work globally and enable companies to centrally manage warehouses and data—regardless of their location. SAP has a global partner network of certified system integrators that can deploy software worldwide, and thus can offer a centralized, global warehouse management solution.

Long-Term Vendor and Product Viability
When evaluating software providers, it’s more important than ever to assess whether your preferred vendor will be independent and available for continuous service and support over the long term. Given the ongoing consolidation in the software industry, a large ERP vendor with a global customer base in diverse industries offers greater viability. Ideally, your ERP vendor will have a clear commitment to enhancing and maintaining the software over the long term. SAP exemplifies both qualities.
The SAP Extended Warehouse Management (SAP EWM) application is the next generation of software in this new solution class. SAP EWM provides flexible, automated support for processing goods movements and managing stock in your distribution facilities, both locally and as a single, integrated entity. It’s a native, built-in warehouse control application that integrates with other enterprise software used to centrally manage your business, such as the SAP ERP application. You no longer need multiple warehouse control systems to manage geographically distributed warehouses.

Designed to work in high-volume warehouses that require support for complex processes, SAP EWM delivers functionality that’s comparable to sophisticated niche solutions – but in a way that’s fully integrated with SAP Business Suite software. By combining the functionality of SAP EWM with the SAP Supply Chain Management (SAP SCM) and SAP ERP applications, the software gives you an entirely new level of visibility and control. For example, SAP EWM brings planning and execution functionality closer together, as it is completely integrated into inventory management and delivery processing. Business processes, which you trigger in other application components, lead to physical goods movements in your warehouse.

SAP EWM offers the flexibility to implement even the most complex warehouse operations and automation scenarios.

You can centrally organize, control, and monitor these goods movements using SAP EWM.

At the same time, this highly flexible application is designed to accommodate new business models, multichannel options, and mergers and acquisitions with ease. You can adapt it to meet evolving needs and achieve new efficiencies.

Combining the Best of Niche and Enterprise Solutions

At a high level, SAP EWM is a comprehensive solution for any business in any industry with a complex warehousing operation. You have the option of mapping all your facilities in detail, down to the storage-bin level. This not only gives you an overview of the entire quantity of material in the warehouse but also lets you determine in exactly which bin a certain material is located. You can define these storage bins according to your own requirements. Every storage bin in your warehouse is mapped in the application, allowing you to constantly track all stock movements in detail. You can also use SAP EWM to optimize storage-bin management with slotting and rearrangement functionalities that help ensure that products are assigned to the correct storage bin, depending on their size and frequency of access.

To further orchestrate planning and execution activities, SAP EWM includes goods-receipt optimization functionality. Expected goods receipts based on purchase orders and production orders from SAP ERP are written over to SAP EWM. Planned inbound deliveries in SAP EWM are then directly created from the expected goods receipt, allowing deliveries to be processed in the warehouse and even assigned to transport units before delivery creation in SAP ERP. SAP EWM enables you to connect to an external application via a technology known as service-oriented architecture (SOA). With SOA, you can set up integrated yard and storage management services that, for example, graphically display trucks and trailers in the yard and at warehouse doors, as well as execute processes such as check-in and appointment maintenance. SOA also enables you to give workers instant access to yard and warehouse information for real-time visibility of stock and assets.

All warehouses, regardless of industry or product line, operate more effectively when you connect applications, since you gain greater visibility and opportunities to optimize yard processes. For instance, by integrating SAP EWM with the SAP Auto-ID Infrastructure offering, you can optimize your warehouse processes by using RFID technology. RFID in SAP EWM enables contact-free identification, control, and tracking of packaged products and handling units by using RFID labels with integrated RFID tags in goods receipt, goods issue, task confirmation, packing, loading, and unloading processes.
For automated warehouses, enhancements in MFS functionality enable customers to control automatic storage-retrieval systems in automated warehouses without the use of a third-party MFS solution. This enhanced functionality serves to further optimize processing within an automated environment by offering:

- Deployment of stacker cranes with interleaving and warehouse task prioritizations
- Support for traversing vehicles
- Status management for various objects and their connection to exception handling
- Enhanced log functions
- The ability to send telegrams actively to the programmable logic controller (PLC)
- New objects in the easy graphics framework functionality
- Enhanced functions in the warehouse management monitor

**A Flexible Cross-Industry Solution**

SAP EWM is preconfigured to support key industries heavily dependent upon their warehouse operations, such as wholesale, retail, and third-party logistics firms. Let’s consider what this means for a typical wholesaler.

Because SAP EWM provides comprehensive support for warehouse management and integration with SAP ERP, you can synchronize warehouse management with order management and finance. This allows you to synchronize supply with demand by creating a balanced push-and-pull network and aligning warehouse activity with replenishment on the basis of customer demand. In addition, you can integrate warehouse management functionality with other technical components, such as RFID scanners and mobile devices. You’ll fine-tune management of warehouses so to optimize all the supply chain activities central to running a wholesale distribution business, including:

- Workforce management, including task interweaving for each individual worker
- On-demand and planned cross-docking
- Customer-specific modeling of warehouses and processes
- Stock and process reporting and transparency
- Space utilization and product slotting
- Inventory tracking

Because SAP EWM is a part of SAP SCM, wholesalers also gain support for networkwide visibility, collaboration, and analytics across the extended supply chain. For example, you have up-to-the-minute cost and inventory visibility into individual warehouse work centers – including the dock and the yard – for each of your branch locations. In addition, the software can bring together all of the data points from across your organization to give you instant access to your perfect-order metric.

Logistics service providers (LSPs) also require sophisticated functionality. LSPs need solutions to support the entire value chain, from order entry and fulfillment to the billing of services. With a special focus on contract logistics, SAP EWM enables LSPs to create a multichannel order management environment with a central service for coordinating the fulfillment process; this process can span different sites and partners, including order promising, transportation coordination, value-added service management, and cost and document management. In this context, SAP EWM offers the flexibility to implement even the most complex warehouse operations and automation scenarios. At the same time, you can grow and adapt it to meet new business needs while supporting the following core competencies:

- Core and best-of-breed functionality that enables LSPs to proactively and efficiently manage everyday activities and issues
- Support for multiechelon supply chains and different collaboration and diversification scenarios for contract logistics
- Multi-client warehousing – including customer-specific put-away and retrieval strategies and process modeling
- Customer system connectivity that enables different deployment options
- Preconfiguration that supports rapid and flexible onboarding and integration
- Tools for effective cost cutting and utilization of warehouse resources and assets
- Stock and inventory transparency across the entire supply chain – including reporting and monitoring for strategic decision support
EXPLORING BUSINESS DRIVERS AND BENEFITS WITH SAP CUSTOMERS
WHY BUSINESSES ARE MAKING THE MOVE

To better understand why businesses are choosing to move from point solutions to truly enterprise-class extended warehouse management solutions, let’s take a look at why selected SAP customers made the move.

**Driver 1: Standardizing on an SAP Software Landscape**

Many customer IT organizations are pushing very hard to get to a pure SAP software landscape because it simplifies their infrastructure, streamlines integration, and lowers overall total cost of ownership. But until now, the only way they could access the sophisticated and industry-specific warehouse management functionality they needed was through bolted-on, non-SAP point solutions.

SAP EWM breaks down this barrier to standardization. According to Steve Banker, a leading analyst in warehouse management software at ARC Advisory Group: “SAP EWM is gaining traction in the market, offers the features and functions you would expect in a robust solution, and offers distinctive value propositions not offered by other leading suppliers.”

This means that businesses can invest and gain comparable functionality while realizing the benefits of a fully integrated SAP software landscape.

This is why Ferrero International S.A., a multinational consumer products company, chose to invest in SAP EWM. “We wanted software that could integrate with our other SAP and non-SAP systems and extend our logistics and fulfillment processes throughout our supply chain,” says Martin Flegenheimer, IT director for Ferrero Germany. “The SAP software became an important ingredient in our IT strategy.” Adds Enzo Bertolini, group CIO for Ferrero. “SAP EWM is the first global solution to cover extended warehouse management processes with integration to other business applications. The standardized integration and automation it provides are a real revolution — one that will help us sustain Ferrero’s growth well into the future.”

Companies like Ferrero are moving from point solutions to enterprise-class solutions and realizing greater return on investment in a variety of areas, including:
- **IT training**, because they can leverage their existing in-house SAP skill sets for development, configuration, security, and more
- **Integration**, because the application integrates natively with other SAP applications; and as any SAP application changes or is upgraded, SAP assumes responsibility for addressing integration issues before releasing changes
- **User training**, as SAP EWM and all other SAP applications have a consistent user interface and behavior, allowing IT to reduce support and training costs

**Driver 2: Integrated Scenarios That Drive Innovation**

SAP provides standard interfaces that enable faster, lower-cost integration to a wider range of SAP ERp and SAP SCM functionality than any third-party vendor can offer. As a result, SAP EWM can support greater visibility across warehouses, as well as support complex, sophisticated process automation that drives better service, faster order picking, cost reductions, and more.

Examples of process integration made possible with SAP EWM include master-data sharing, planning and slotting integration, and integration with the SAP BusinessObjects™ Global Trade Services application.

Native integration is one of the key reasons that European Salt Company GmbH & Co. KG, known as esco, chose to move to SAP EWM. “We’ve combined the technology in SAP Extended Warehouse Management with proven ERp functions, creating a future-oriented IT landscape. We can respond flexibly to customer needs and implement new functions quickly and cost-effectively,” states Manfred Eberl, head of production and logistics for esco.
Driver 3: High Performance

For other businesses, what’s critical is ensuring that their warehouse management software can handle their mass transaction volumes and guarantee high performance – even if they have hundreds or thousands of pickers. SAP has customers with tens of thousands of articles housed at globally distributed warehouses, some with well over 100,000 lines and significant demand peaks (for example, 30,000 lines within one hour). They report that SAP EWM meets these demands with ease.

Driver 4: Clear Upgrade Path, Access to Ongoing Innovation

SAP EWM enables companies to meet new needs and adapt to change without the hassles of a full upgrade. And it’s a key reason that many businesses are switching from a traditional niche solution. For example, WM-Logistik GmbH & Co. KG chose to invest in SAP EWM. In this case, the existing technology prohibited the company from adopting new technology such as RFID because of the expense involved. Changes disrupted custom integration required to drive key processes. As a result, the company fell behind the innovation curve, and costs went up as productivity went down relative to industry benchmarks.

With SAP, WM-Logistik could adopt functionality on its own terms and schedule using a switch framework. As SAP develops new functionality, the customer can “turn on” that new functionality as needed without a costly upgrade. These enhancement packs are free and do not disrupt integration with other SAP applications. In addition, SAP provides detailed notes on what processes are impacted by each enhancement pack, making it easier to focus regression testing in these areas. States Dirk Meyer, managing director at Logata GmbH (WM-Logistik’s IT division), “Our warehouse processes are significantly more effective – flexible and secure across multiple locations.”

Many customer IT organizations are pushing very hard to get to a pure SAP software landscape because it simplifies their infrastructure, streamlines integration, and lowers overall total cost of ownership. But until now, the only way they could access the sophisticated and industry-specific warehouse management functionality they needed was through bolted-on, non-SAP point solutions.

If so, join the many businesses that are moving to a truly enterprise-class extended warehouse management solution that offers the ideal combination of best-of-breed functionality and deep integration with their enterprise software. SAP EWM is the answer to customer demands for tightly integrated extended warehouse management software that delivers more powerful automation of extended business processes – and doesn’t force compromises in terms of functionality. It’s the first product of a new class of enterprise warehouse management solutions.

Learn More

Are you contemplating an upgrade of legacy warehouse management software? Do you need to implement a new warehouse management system? Are you running into limitations with your current point solution that hurt your ability to adapt quickly, increase efficiency, or service customers more cost-effectively?

To learn more, please visit www.sap.com/ewm.