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Your supply chain solution

Choosing the right SAP EWM deployment

A practical guide

SAP Partner

Introduction

SAP Extended Warehouse Management (EWM) is a powerful solution designed to optimize warehouse operations. Choosing the right deployment approach is crucial for maximizing efficiency and meeting business needs. This ebook will guide you through the criteria for selecting the correct deployment approach and highlight the advantages and disadvantages of each deployment option.

Deployment options for SAP EWM

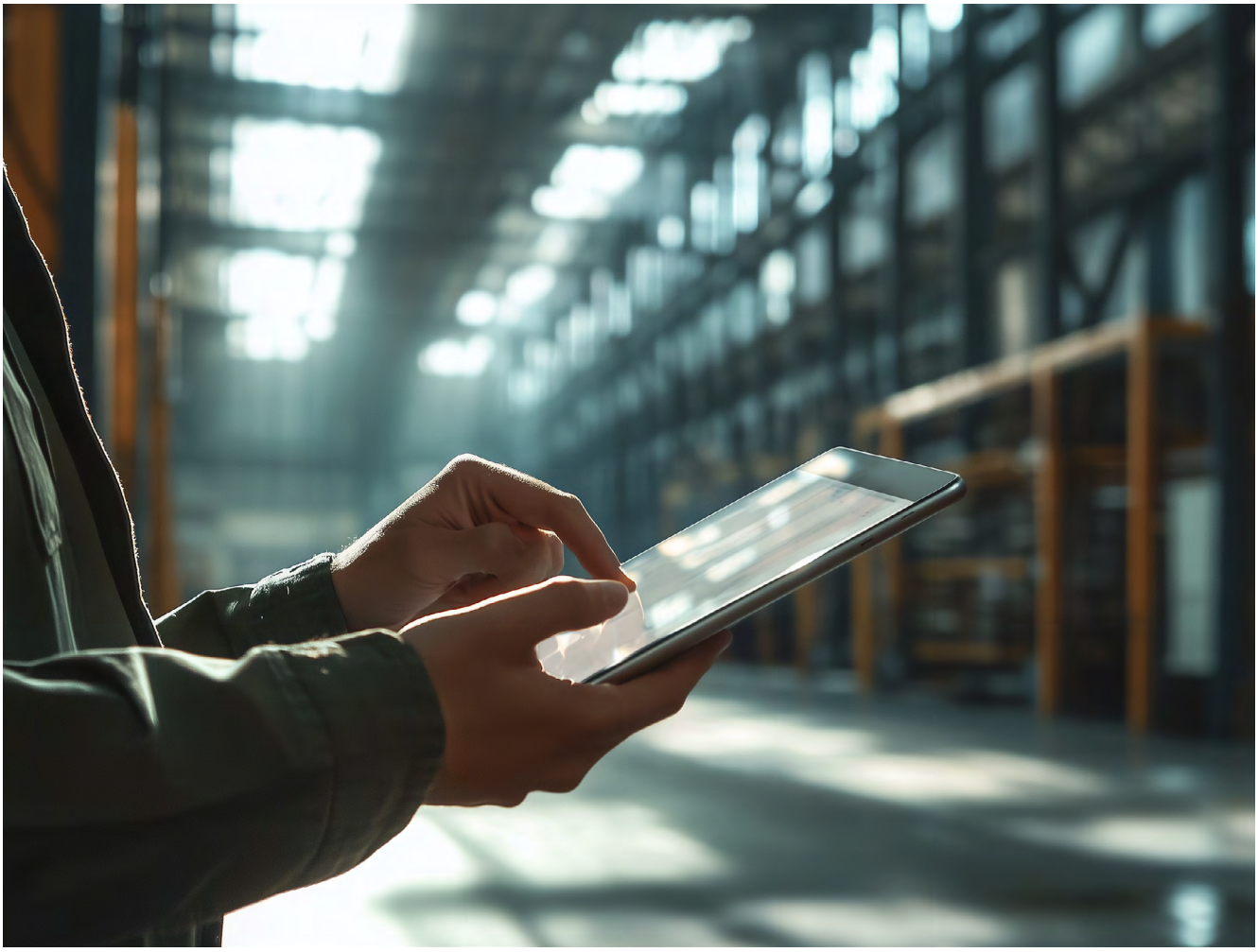
SAP Extended Warehouse Management (EWM) can be deployed either as an **embedded EWM** within the SAP S/4HANA system, integrating directly with local ERP storage locations, or as a **decentralized EWM** on a separate server, connecting to SAP S/4HANA or SAP ECC.

SAP EWM can be deployed in two main ways:

Embedded EWM on SAP S/4HANA
Integrated within the SAP S/4HANA system, sharing the same database and server infrastructure.

Decentralized EWM on SAP S/4HANA
Operates as an independent system, requiring separate database and server infrastructure.

The choice between these options depends on factors like system landscape, warehouse size, and integration needs. Let's take a look at the advantages and disadvantages of each deployment approach.



Embedded EWM on SAP S/4HANA

Embedded SAP Extended Warehouse Management (EWM) is integrated directly within the SAP S/4HANA environment, offering streamlined warehouse management capabilities. It comes in two versions: SAP EWM Basic and SAP EWM Advanced. The Basic version provides essential warehouse management functions, while the Advanced version includes additional features such as labor management, slotting, and advanced production integration.

Advantages of embedded deployment

Reduced data replication: Business Partner data, Material Master Data, and Batch Master Data do not need to be replicated, as they can be directly accessed from SAP S/4HANA.

Simplified transactions: Transactional data like Purchase Orders and Production Orders can be read directly, eliminating the need for additional documents like outbound deliveries.

Lower total cost: The license for basic EWM functionality is included in the SAP S/4HANA ERP license, reducing overall costs.

Disadvantages of embedded deployment

Integration limitations: Cannot integrate with storage locations in other SAP ERP systems.

Operational dependency: Cannot operate independently if the ERP system is down.

Limited adaptability: Less adaptable for multiple warehouses or large Material Flow Systems (MFS) traffic.

Decentralized EWM on SAP S/4HANA

Decentralized SAP Extended Warehouse Management (EWM) is a robust solution designed to manage complex warehouse operations independently from the core ERP system. It allows for seamless integration with multiple SAP ERP or SAP S/4HANA systems, providing flexibility and scalability for large-scale warehouse environments.

Advantages of decentral deployment

Independent operation: Can operate independently of the ERP system, providing greater resilience.

Advanced functionalities: Supports advanced functionalities such as complex warehouse automation, high-volume processing, and integration with multiple backend systems.

Future-proof: Offers better scalability and flexibility for future growth and integration scenarios.

Disadvantages of decentral deployment

Higher cost: Involves higher implementation and maintenance costs due to the need for separate infrastructure.

Complex IT landscape: Requires a more complex IT landscape, including separate servers and databases.

Criteria to consider for selecting the correct deployment approach

When deciding on the deployment approach, consider the following criteria:

Business requirements and complexity

Assess the complexity of your warehouse operations and business processes. Embedded EWM is suitable for simpler, less complex operations, while decentralized EWM is better for complex and high-volume warehouses.

Integration with existing systems

Determine the need for integration with other ERP systems or third-party applications. Decentralized EWM offers greater flexibility for integration.

Warehouse size and volume

Evaluate the size and volume of your warehouse operations. Larger and more complex warehouses may benefit from decentralized EWM.

Automation and technology requirements

Consider the level of automation and technology integration required. Decentralized EWM supports more advanced features and automation.

Future scalability and flexibility

Plan for future growth and scalability needs. Decentralized EWM provides more flexibility for future expansion.

Comparison table: Embedded EWM vs. Decentralized EWM

This comparison table can help to guide you towards the right deployment type for your business:

Guiding questions	Consideration
What are your integration requirements? Do you have multiple ERPs linked to one warehouse location?	Embedded SAP EWM with SAP S/4HANA system is not released to integrate with storage locations coming from another ERP system & client, other than the local client which is used for SAP EWM.
What is the volume and complexity of your warehouse operations?	Embedded SAP EWM with SAP S/4HANA system is considered in case of small and midsize warehouses (non-high throughput warehouses) within a geographical region which is near to the data center where the SAP S/4HANA system is hosted. This is a general guideline, however in specific customer situation, this can vary as well.
Do you have highly automated and integrated warehouses? (e.g., ASRS/ MFS, pick by light, conveying systems, pick by voice, etc.)	If SAP EWM upgrade cycles are expected to be independent of ERP, then a decentral SAP EWM on SAP S/4HANA would facilitate and assure the independent upgrade capability of the SAP EWM system.
Do you have the same release cycles with ERP system?	Decentral SAP EWM with SAP EWM MFS (Material Flow System) is recommended if the warehouses have high automation with high volumes and throughput.
Do you have advanced warehouse management capabilities, such as Wave Management, Value Added Services (VAS), Cross Docking, MFS, Kitting, Yard Management, TM integration, etc.?	If advanced warehouse functionality and connectivity are required, decentral SAP EWM on SAP S/4HANA (separate SAP system instance) is recommended

What are your future scalability needs?	Do we anticipate significant growth or changes in our warehouse operations? Decentral EWM offers better scalability and flexibility for future expansions
What are your cost considerations?	What is the total cost of ownership (TCO) for each deployment option? This includes implementation, maintenance, and potential upgrade costs

If you answer yes to the above questions,
then SAP Embedded (Advanced) EWM with SAP S/4HANA system or decentral SAP EWM on SAP S/4HANA (separate SAP system instance) is recommended if advanced warehouse management capabilities are in use.

If you answer no to the above questions,
then SAP Embedded (Basic) EWM with SAP S/4HANA system may be sufficient to meet your needs.

Conclusion

Selecting the right deployment approach for SAP EWM depends on your specific business needs, warehouse complexity, and future growth plans. Carefully evaluate the criteria and weigh the advantages and disadvantages to make an informed decision.

From warehouse design / redesign and determining the right automation to be used in a warehouse through to the actual implementation of the SAP EWM solution, 4flow provides comprehensive supply chain end-to-end SAP consulting services. Our holistic approach ensures that every aspect of the warehouse operation is optimized, from layout, automation and process design to SAP EWM deployment approach, configuration and go-live support.

About 4flow

4flow is a global leader in supply chain consulting, software, and fourth-party logistics (4PL) services. 4flow specializes in optimizing supply chains through innovative solutions. With over 1,300 team members and more than 20 offices worldwide, 4flow delivers end-to-end services that enhance efficiency, transparency, and agility for businesses across various industries. Our commitment to excellence and a customer-centric approach ensures that we provide tailored strategies to meet the unique needs of each client, helping them achieve sustainable competitive advantages in their supply chains.

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