

SAP WM to EWM Migration
The Deloitte success recipe

More than a decade ago, SAP released its new warehousing solution, 'Extended Warehouse Management' (EWM), which introduced a new set of functionalities that were missing in WM that enabled the management of far more complex warehouse operations.

Although SAP announced upon EWM's release that it wouldn't replace WM, but would rather be an additional solution tailored to complex logistics execution in the supply chain, they simultaneously declared their intention to stop developing ECC WM, focusing solely on developing new features for SAP EWM.

Since then, multiple white papers have been published to aid companies in understanding the differences between WM and EWM, helping them identify the best fit solution. But what about companies already running on SAP WM getting more and more convinced of the necessity to migrate to EWM? How should they approach this migration process? How much of their initial setup can they leverage? How would the project look like? What would be the cost of such project?

The objective of this point of view is to try to bring an answer to some of those questions.

EWM represents a brand new solution from technical architecture point of view. SAP decided to go for a 'Rebuild' approach for the following reasons:

- Accommodation of high data volume requirement
- Introduction of new concepts like process management and many other new functionalities.
- Avoidance of the high risk of the architecture change of an existing mature WM solution.
- Consolidation and incorporation of the functionalities added over time (Handling Unit Management, Resource Management, TRM, Yard Management...) into a new all-containing foundation.

From a functional architecture point of view however, it is obvious that multiple core WM objects have been transposed to the new EWM core. To facilitate the migration of these objects, SAP has even foreseen a migration tool built into EWM. So what can we migrate from WM to EWM?

Warehouse structure

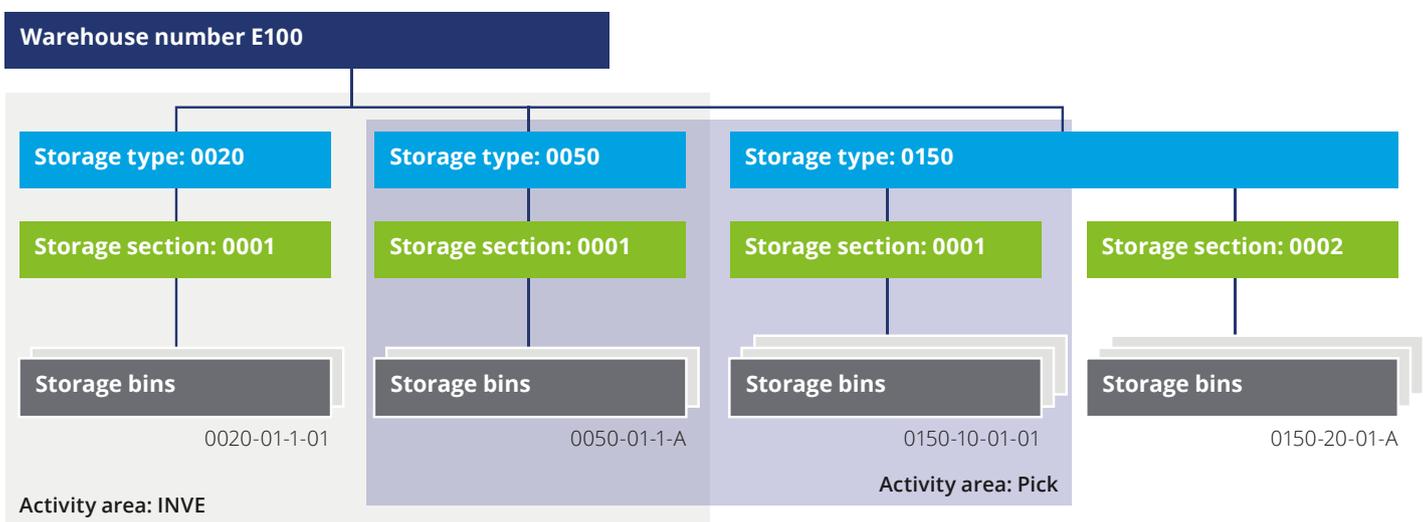
Since the warehouse structure presents significant similarities between EWM and WM, one can find the following objects on both systems:

- Warehouse
- Storage Types
- Storage Section

- Storage Bin Types
- Storage Bins
- Quant
- Picking Area (renamed to Activity Area for picking activity)
- Staging Areas
- Doors

However, some of the previous objects have been slightly enhanced. For example, the length of the storage types and storage sections has been extended from 3 digits to 4 digits. Additionally, HU management can now be managed on the storage type level. Apart from these limited enhancements in functionality, the functional concepts are still identical.

EWM Warehouse structure



Cross Processing Objects

Many of the cross processing objects find their ancestors in WM like:

- Handling Units
- Packaging Material Types
- Handling Unit Types (originally called Storage Unit Types in WM)
- Warehouse process types (originally called Movement Types)
- Queues within Resource Management

Warehouse Movement Strategies

All warehouse movements have the same functional foundations and determination techniques.

- Putaway Strategy
- Stock Removal Strategy
- Replenishment Strategy

Stock and Master Data

An important part of the ECC-WM master data could be recuperated with very few adjustments.

- Vendor Master Data
- Customer Master Data
- Bin Master Data
- Bin Sorting for picking and cross line Putaway
- Stock Data

The warehouse structure similarities is a key accelerator factor in WM to EWM migration project



Migration Project approach

Objects Migration and Basic System Setup

This phase should be considered purely IT, consisting mainly of importing all the objects that have been listed in the previous section. The settings behind these migrated objects have been previously decided and approved by business during the initial WM implementation.

SAP provides a user-friendly migration tool that covers most of the in-scope objects. This tool is available as part of the EWM module and works by reading the data, through an RFC connection, from the source WM system and downloading it into a file that could then be uploaded to the destination EWM system.

It is however highly recommended to thoroughly validate the migrations results, obtained via the execution of the migration using this tool, by verifying and testing the final configuration.

The end of this phase will therefore consist of some basic EWM-specific configuration linking the migrated objects to a process. This could consist of setting up the inbound and outbound documents and mapping them to ECC-LE documents. It could also include the creation of a standard basic process by stream. The objective would be to create a sandbox environment that reflects as closely as possible the flows that existed in the source LE-WM system. This environment would then be the starting point for the EWM specific configuration.

Considering what it would take to get to the same level of system readiness in a classic EWM implementation, there is no doubt that this phase leads to a significant time and effort reduction in the overall project.

EWM Specific Functionality Implementation

Once the WM objects are migrated to EWM and make working processes, the implementation team can start on building the EWM specific functionality such as process-oriented storage control, warehouse order creation rules, and wave management.

This phase should be conducted using the approach typically used in any SAP implementation, consisting of four main cycles:

- Blueprint
- Realization
- Testing and Final Preparation
- Go-Live and Support

WM To EWM Migration: Project approach



Benefits of the migration approach

The WM-EWM migration approach has multiple benefits and implications on the project timeline, and cost.

Project Timeline Acceleration

We can observe this timeline acceleration at the following phases:

• Blueprint phase

On a typical EWM blueprint there is significant time allocated to the explanation and demonstration of EWM core objects. Business needs to fully comprehend the concepts in order to formulate their requirements. This is clearly where the main benefit of the migration approach resides. The business' familiarity with those core concepts will highly improve their engagement in the project and their ability to think along with new possibilities within EWM. Moreover, the scope of the blueprint discussions would get focused on the EWM specific features such as process- and layout-oriented storage control, warehouse order creation rules, and wave management.

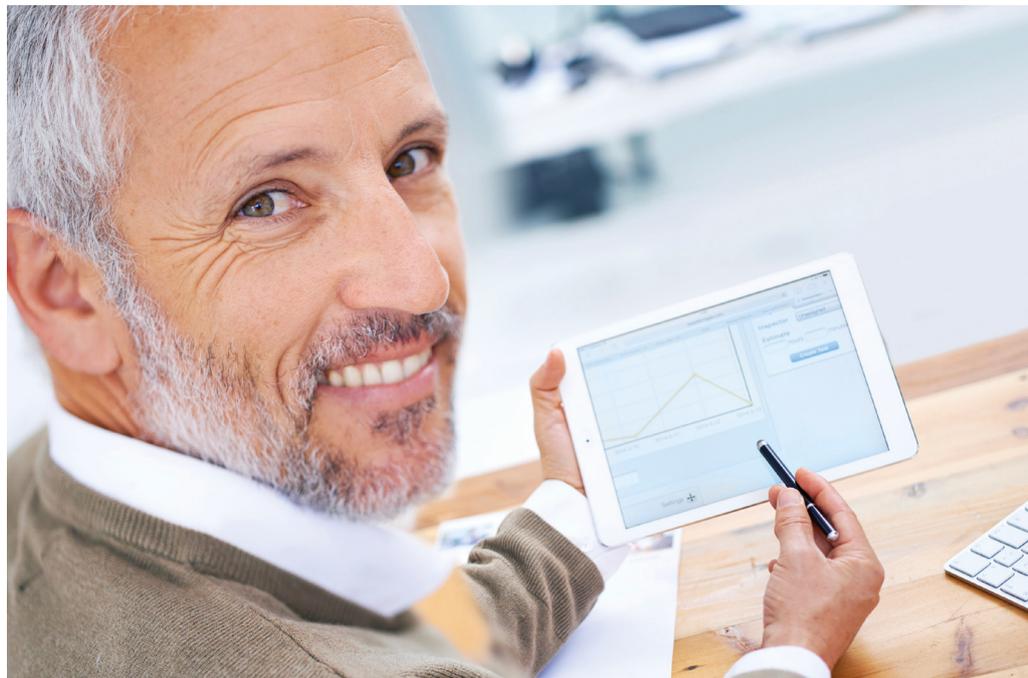
• Build phase

With the migration tool that has been made available by SAP, the configuration of the migrated objects gets reduced to simply tweaking the additional EWM-specific options. For example, a warehouse process type will be available with the settings that were in place on the WM warehouse movement type. The biggest block of the configuration will then get shifted toward setting up the EWM specific functionalities.

Service Cost Reduction

Even though there is no way around the EWM license cost today, it seems obvious that the migration approach offers a big opportunity to reduce the implementation service cost.

Because many of the building blocks of the final EWM solution will be derived from the WM source system, total implementation effort and service cost can be reduced at all stages of the project.



Risks of the Migration Approach

With a new approach come new risks and the main one is related to the developments scope.

It is common for mature WM systems to contain multiple enhancements and custom developments improving on the standard functionality. If that is the case, it is absolutely crucial to assess the scope of development in EWM.

Whereas some of the developments on WM could be covered by standard EWM functionalities, it is likely that some functionalities offered by other developments would need to be replicated in EWM. And even though SAP tried to create a certain analogy between ECC development points (User exists, BADI's BAPI's...) and the ones in EWM, the technical architectural differences between the two systems will certainly pose some challenges.

It is therefore highly recommended to conduct a thorough development scope assessment to cover this risk.

Conclusion

Migrating a client from WM to EWM offers multiple opportunities to propose a leaner implementation process with reduced scope, time, and cost. This is why it seems adequate to propose an entirely different project approach to clients that are already running on WM than we typically offer to our prospects.

The success recipe of a WM-EWM Migration would be a good mixture of WM and EWM knowledge both from functional and technical points of view.

Deloitte's long history of successful implementations of WM and EWM makes it an ideal partner for any company seeking to embark on this journey.

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