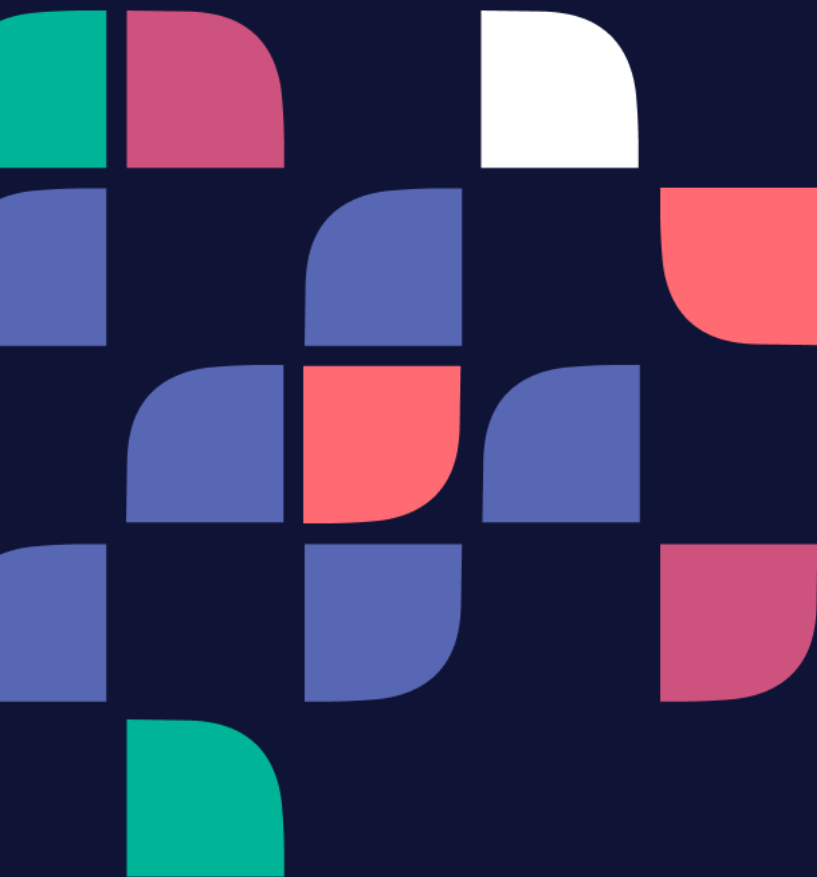


Designing SAP EWM storage that actually works

A practitioner's guide to storage types, sections
and activity areas





Introduction

Storage design is one of the most underestimated aspects of SAP Extended Warehouse Management (EWM). It is often treated as a technical configuration step, a matter of defining storage types, bins, and sections, rather than a fundamental operational design decision.

In reality, storage configuration determines:

- How far people and equipment travel
- How quickly stock becomes available
- How reliably replenishment runs
- How well exceptions are handled under pressure

This whitepaper provides a practitioner's view of SAP EWM storage design, rooted in real warehouse delivery experience. It explains why technically correct storage models often underperform, and how practical, experience-led design leads to simpler, more resilient warehouse operations.

Why storage design fails so often

Many SAP EWM implementations struggle not because the system is mis-configured, but because the storage model does not reflect how the warehouse actually behaves.

Common causes include:

Over-engineering storage types to mirror org charts rather than physical flow

Treating racking, floor space, and work centres as interchangeable

Designing bins without understanding handling units, weight, or access constraints

Assuming slotting and strategies will compensate for poor foundational design

When storage design misses the mark, every downstream process suffers.

Storage types are behavioural contracts

In SAP EWM, a storage type is not just a location it defines how stock behaves. Each storage type implicitly answers questions such as:

Is stock handled by handling unit or by quantity?

Can multiple items co-exist in a bin?

Is movement direct, staged, or controlled?

Are capacity and weight enforced?

Effective designs define storage types based on behaviour, not labels. For example:

Fixed bins behave very differently from reserve racking

Bulk floor storage behaves differently again

Work centres should never behave like long-term storage

Treating these as equivalent introduces friction that no strategy can fully resolve.

Fixed bins vs reserve storage: A practical distinction

One of the most common design mistakes is under-differentiating fixed pick locations from reserve storage.

Fixed bin areas are:

Demand-driven

Latency-sensitive

Frequently replenished

Highly visible to operations

Reserve storage is:

Capacity-oriented

Optimised for putaway logic

Less sensitive to pick urgency

Designed for density rather than speed

When these behaviours are blurred, for example by using the same storage type, replenishment logic becomes brittle and execution becomes unpredictable.

Bulk storage is not just “big racking”

Bulk floor storage introduces challenges that racking does not:

Irregular capacity

Mixed handling unit sizes

Variable accessibility

Strong interaction with sequencing and flow

Practitioner-led designs:

Explicitly model bulk storage behaviour

Use HU types and bin types to enforce discipline

Accept partial utilisation as normal

Prevent “last empty bin” logic from creating congestion

This avoids the false neatness that looks good on diagrams and fails on the floor.

Storage sections exist for a reason Storage sections are often underused or used mechanically.

In practice, they are best used to:

Segregate heavy or awkward items

Group commodities with similar handling needs

Control putaway behaviour within large storage types

Support human navigation in complex spaces

Overuse of sections leads to complexity. Underuse forces operational judgement back onto operators. The right balance comes from understanding why people choose certain locations in reality.

Activity areas: Simplicity beats granularity

Activity areas define how warehouse orders are created and grouped. A common failure pattern is creating:

- Too many activity areas

- Over-specific mappings

- Fragile groupings that break as volumes change

Experienced designs:

- Favour simplicity

- Align broadly with physical zones

- Allow flexibility for peak and off-peak operation

Reduce the need for constant re-tuning

Activity areas should support flow, not constrain it. Work centres deserve their own storage logic. Work centres are not neutral places where stock pauses briefly. They are processing stages.

Treating work centres as normal storage leads to:

- Lost visibility

- Uncontrolled dwell time

- Manual tracking outside the system

Well-designed work centre storage:

- Uses dedicated storage types

- Clearly distinguishes “waiting”, “in progress”, and “complete”

- Integrates directly with succeeding tasks

- Prevents stock from silently becoming stuck



This is particularly important where inspection, repacking, or deconsolidation occurs. Capacity rules are operational guardrails Capacity checks are often switched off to keep things moving.

That decision typically surfaces later as:

Congested aisles

Unsafe stacking

Rework prompted by mis-placed stock

Manual reshuffling during picking

Practitioner-led designs use capacity strategically:

Enforced where safety or density matters

Flexible where flow matters more

Based on actual handling units and equipment

Capacity is not about control, it's about predictability.

Storage design must anticipate exceptions

Overflow, quarantine and temporary holding locations are not design failures. Ignoring them is. Real warehouses need:

Somewhere safe to put stock that cannot proceed

Clear system states for “temporarily unresolved” stock

Predictable recovery paths back into normal flow

Designing these locations intentionally keeps exceptions controlled instead of contagious.

Why this level of detail separates specialists from generalists

Large programmes often treat storage design as a setup activity, constrained by templates and timelines. Specialist teams understand that:

Storage decisions lock in daily operational behaviour

Poor choices are expensive to undo post-go-live

No optimisation layer replaces good fundamentals



Getting storage right requires:

Time on site

Engagement with operators

Comfort with physical constraints

Willingness to make judgement calls

This is where experience matters most. The payoff of good storage design Warehouses with well-designed storage models experience:

Shorter travel distances

More reliable replenishment

Faster exception recovery

Lower operator frustration

Reduced need for intervention and firefighting

Most importantly, the system behaves the way the warehouse expects it to.

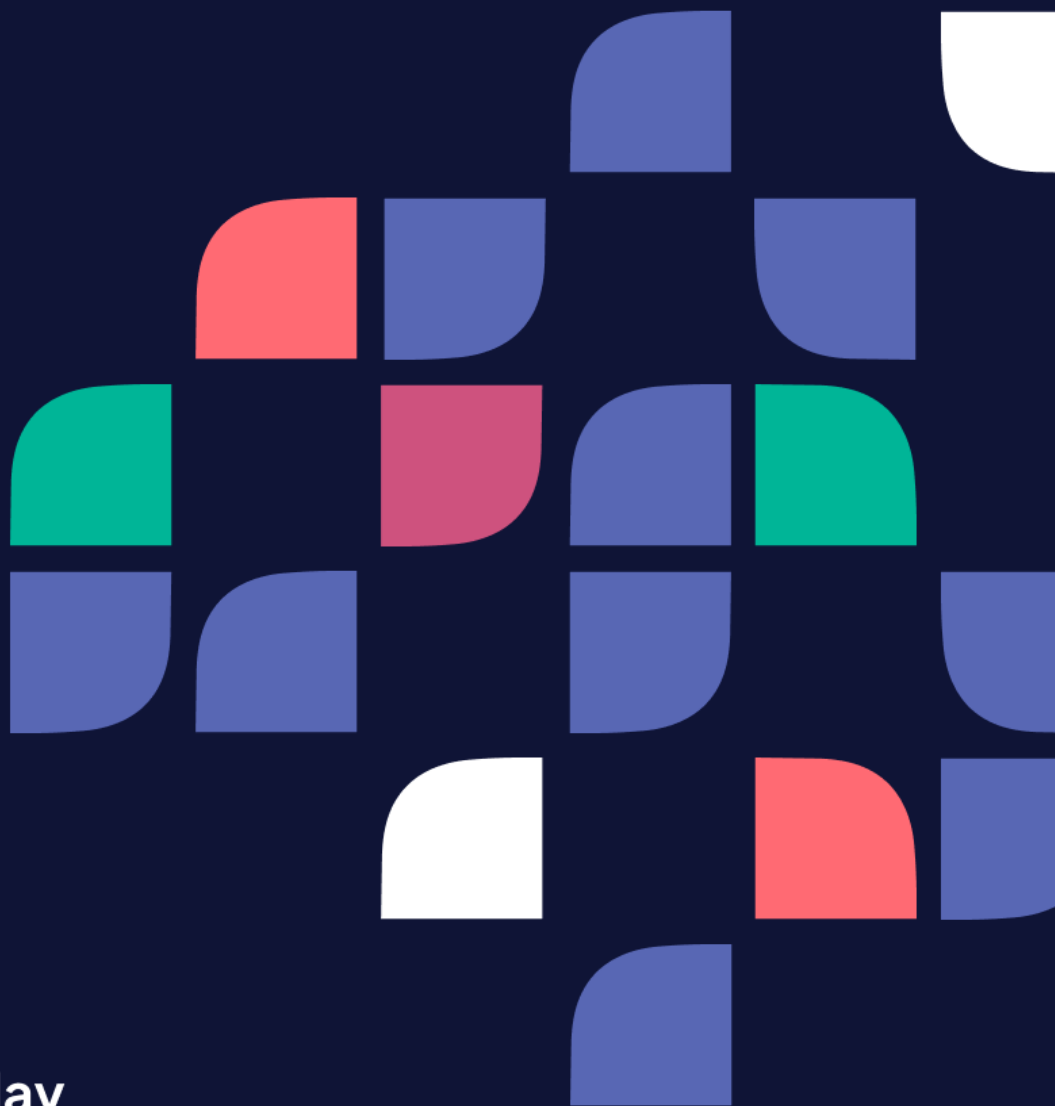
Conclusion: Storage design is where SAP EWM becomes real

Storage configuration is not a technical afterthought. It is the physical embodiment of your warehouse strategy inside SAP EWM. Designs that respect real movement, real constraints and real behaviour deliver systems that feel intuitive rather than imposed.

“If your storage model only makes sense on a diagram, it will struggle on the warehouse floor.”

Adam Wilson,
Digital Supply Chain Logistics Lead, TCT

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