



# Rethinking Warehouse Storage Design and Inventory Handling

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*Modernising the conventional warehouse*

**Still undecided as to whether the design of your warehouse should be altered?**

**Are you unsure if it will meet your needs in the coming two to five years and beyond?**

**As business grows, the demand for your warehouse increases; at some point, you need to either redesign or move.**

Given the intensifying competition and constant pursuit of cost reductions by businesses, it is natural to query the efficiency of your operations and your existing warehouse layout. Such thoughts pose the question, when should I alter or upgrade the layout of my warehouse? It is often a better solution than an entire relocation.

Most conventional warehouses have been fitted with a standard style of racking that limits the available space and often increases the number of stock movements required each day. Where racking systems are ten years or older, they are most likely fitted with a conventional design. The design causes a number of challenges you have become accustomed to juggling every day.



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## Rethinking Warehouse Storage Design

But what type of challenges make it unworkable? The following would be considered operation challenges that need to be addressed:

- Your company foresees an increase in activity and, as such, an increase in your need to store material.
- You are planning to expand to an off-site storage space to accommodate overflow.
- You experience stockouts.
- There are stock changes with changes in the types of goods or a new line of goods to be stored at the facility.
- Your aisles are overcrowded with pallets that really should not be there.
- You are constantly at 90% or even 95% racking capacity.
- Your operational safety practices are not what they should be.
- The human cost of stock movement is ever-increasing as you find workarounds for excessive stock.



## Rethinking Warehouse Storage Design

One or all of these are red flags that you have outgrown your current layout and are potentially incurring unnecessary costs. You may have made some changes in the past, adding a few more bays here and there and a mezzanine area in another part of the warehouse, but these are quickly outgrown, too.

Rethinking warehouse storage means starting with a clean slate. It is not about looking at how you are laid out now and finding add-on opportunities. A common approach for conventional warehouses. It is taking a fresh look and seeing the full potential of your warehouse. It is about analysing your storage requirements and stock movement with a view to the future.

The first step is to engage expert guidance in the analysis phase. You must answer questions like how many pallets you need to store, the number of stock-keeping units (SKUs), and how many slots your storage system assigns. You will also need to answer information about your stocks' rotations. The answers provide a clear understanding of your physical needs regarding storage.

Once this analysis is done, you can compare the results to your objectives. What will your requirements be in the coming 1-2-5 years? Depending on the stock changes, this will also impact how the storage system is designed.



## What is the impact of human cost on your warehouse's design?

With the pressure on cost reduction, one area is now under the microscope: the human cost.

Conventional warehouse design principles pose several operational efficiency risks in human cost and safety. A modern warehouse must be thoughtfully designed to reduce the distances that require transportation and the human labour requirement. This is because travel time accounts for approximately 60% of warehouse personnel expenses in conventional settings.

With the integration of some automation, this cost can be lowered as you no longer require human labour to cover the same distances. The transportation is performed by automation. This directly reduces costs associated with warehouse and personnel safety and increases efficiency in picking, movement, and operating time.

Warehouses not considering new innovative racking layouts and integration of some automation will quickly become uncompetitive with the rising costs and be faced with upgrading further down the line.



## A new way of thinking

Conventional warehouses are characterised by lift trucks for pallet movement, floor, rack and shelf storage, manual picking, and minimal automation. Companies are comfortable with the conventional environment as they have operated in them for decades.

Rethinking the conventional warehouse to one that incorporates innovation and new design parameters opens the door to increased warehouse capacity and efficiencies not available in the conventional warehouse.

The advantage of this newer approach is the removal of inefficient operator routes, put-away distances, pick paths, distances to packaging and despatch areas, and so forth. These are among the largest hidden costs of warehouse operation.

The reduction of travel activity is frequently the most significant area for warehousing efficiency advantages. Given that travel expenses comprise approximately 60% of the operational costs of a conventional warehouse, any chance to curtail this expenditure is substantial. Personnel reduction can be up to 50% due to reduced travel distance and time with the integration of fundamental automation.



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Rethinking warehouse storage also shifts the design to developing vertically rather than horizontally and designing volumetrically (in cubic metres instead of square metres), providing a proficient and cost-effective approach as travel distances are drastically reduced.

To contemplate updating your warehouse's design can be an overwhelming task. You may consider it to be too expensive or complicated to implement. You may be concerned that you have not explored all the temporary options rather than rethinking the complete warehouse. There is only so long you can keep repairing an old car! There comes a time when they are too outdated, and no matter how many repairs you make, they just do not do the job required efficiently and effectively. Warehouses, particularly conventional warehouses, are the same.

This investment is often imperative and represents huge advantages for the company. You can achieve:

- Increases in available storage space and accessibility of that storage space.
- Optimisation of goods flows, reducing traffic.
- Increase in productivity in your personnel.
- Reduction in the time spent caused by inefficiently stored goods.
- Optimisation of operational methods through some automation.
- Increased safety with the removal of blocked aisles and reduction of wasted time.

The benefits of a new warehouse design and layout far outweigh the conventional warehouse and the struggles with adjusting your operation to fit into your warehouse. The warehouse must suit your requirements. The return on investment or ROI will be redeemed in a shorter period than the cost of remaining inefficient and struggling to manage the daily challenges or a misfitted warehouse layout. Companies must shift from a conventional warehouse to an integrated warehouse design and layout to remain competitive in the years ahead.

Bowen Storage has the knowledge, expertise, and experience to deliver pre-development design work. This ensures any facility designed today will provide long-term value to customers, employees, and the operating business.

To discuss your warehouse design and layout options for improving your conventional warehouse, please call **1300 780 654**.



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