Seven considerations for building a successful warehouse

1. **Handling frequent deliveries and online sales**
   - Automated systems can deliver higher volume, smaller and higher frequency orders than manual systems. A good example is an internet retailer made up of 4 warehouses, each with their own unique SKUs. This retailer can maintain single SKUs on each shelf, using automated picking systems. This not only increases customer satisfaction but also supports high volume, small size order picking, which is becoming increasingly popular due to the rise in e-commerce. In addition, automated picking systems can reduce picking errors compared to manual picking error rates of 3%, automated systems only have an error rate of 0.1%. Automated systems also improve the speed of order picking, which can reduce the lead time for customers. In addition, automated systems can also replace manual carton picking with automated storage and retrieval systems (AS/RS).

2. **Inventory planning and forecasting**
   - Most retailers are in a constant game of trying to strike the correct balance between out-of-stock and over-stocked levels. This can be aided by the use of inventory planning and forecasting systems. In-house calculations can be made to determine the correct inventory levels, but these can be improved with the use of automated systems. An example of this is a large UK retailer, which has an automated distribution centre that is able to plan and forecast inventory levels in real-time. This is achieved by using sophisticated algorithms to determine the correct inventory levels, which is then used to build optimised pallets. This not only reduces the risk of out-of-stock situations but also improves the efficiency of the operation. In addition, automated systems can also provide real-time information on inventory levels and lead times, which can help retailers to make more informed decisions on order quantities.

3. **Location, location, location**
   - Location is an essential consideration when building a warehouse. A location that is too far away from the customer can lead to increased lead times, which can adversely affect customer satisfaction. In addition, a location that is too close to the customer can lead to increased costs, such as high real estate costs and labour costs. A good example of this is a large US retailer, which has a distribution centre close to an urban area. This location has allowed the retailer to reduce fuel and transport costs, which has resulted in significant cost savings. In addition, this location has also allowed the retailer to increase sales, which has been achieved by providing faster delivery times.

4. **Track and trace capabilities**
   - Track and trace capabilities are becoming increasingly important to retailers, particularly in industries such as fashion and e-commerce. This is due to the high demand for high-quality products and excellent service. Automated systems can provide track and trace capabilities, which can be achieved by pooling data from software systems to increase handling efficiency. This not only increases handling speeds but also reduces handling errors. In addition, automated systems can also provide real-time information on inventory levels and lead times, which can help retailers to make more informed decisions on order quantities.

5. **Store-friendly deliveries**
   - Store-friendly deliveries are becoming increasingly important to retailers, particularly in industries such as fashion and e-commerce. This is due to the high demand for high-quality products and excellent service. Automated systems can provide store-friendly deliveries, which can be achieved by automating the picking and packing process. This not only increases handling speeds but also reduces handling errors. In addition, automated systems can also provide real-time information on inventory levels and lead times, which can help retailers to make more informed decisions on order quantities.

6. **Ongoing challenges facing operations**
   - Ongoing challenges facing operations are hard to ignore. In fact, these challenges are faced by warehousing and distribution centres on a daily basis. Some of these challenges include: high real estate costs, high labour costs, increased track and trace capabilities, and e-commerce orders. These challenges must be seriously considered. As consumer demand increases and new technologies are introduced, retailers must be able to adapt and meet these challenges. In addition, retailers must also be able to increase efficiency, which can be achieved by automating the picking and packing process. This not only increases handling speeds but also reduces handling errors. In addition, automated systems can also provide real-time information on inventory levels and lead times, which can help retailers to make more informed decisions on order quantities.