BEUMERGROUP

HOW TO FIND THE RIGHT AUTOMATION SOLUTION
FOR YOUR FULFILMENT OR DISTRIBUTION CENTRE

INTRODUCTION

Intralogistics has become increasingly intensive in recent years as fulfilment and distribution centres face the challenges posed by the surge in e-commerce, dealing with omnichannel customers and trying to find workable solutions for the management of returns. And while finding the right automated intralogistics solution has become extremely important, many logistics operators find it difficult to know where to begin.

However, by conceptualising future scenarios and mapping its particular business needs, a logistics operator can start working out a solution that meets its requirements. With this e-book, we will guide you through the best practices for finding the optimal automated intralogistics solution for making your fulfilment or distribution centre more efficient.

CONTENT

1. How to decide
when to automate?

Before a fulfilment or distribution centre decides whether to automate its intralogistics operations, it needs to revise its system processes. This means mapping out its business processes, looking at its needs, and investigating where and why problems occur in its systems. Is it an issue, e.g., of:

• Speed?
• Staffing?
• Costs?
• Storage?
• Handling returns?

Once systems are mapped, logistics operators are better equipped to decide to pick which parts of their processes should be automated by determining which aspects would add most value to their particular situations.

How a system integrator can help

After identifying the business needs, a system integrator expert in intralogistics can help with the following:

• Perform a gap analysis of the operation process to identify which processes the current technology supports, where the gaps

lie, and the steps needed to achieve future operations goals
• See which processes need to be automated, simply by asking the right questions;
• Uncover issues vital to finding the right solutions that the operator has not considered; and
• Identify the possibilities of key technologies that the fulfilment or distribution centre is using, and how to prepare for the future with open warehouse controls for integrating with future technologies.

For more about working with a system integrator, see the next chapter.

Collect data now for the future

To ensure the endurance of its automated investments, a logistics facility can start collecting data – even prior to knowing precisely how it will be used. Data is a valuable basis for performance analysis that can provide the facility with in-depth insights. If the facility doesn't have the resources, its system integrator can assist with collecting, analysing and understanding the data to drive better performance.

2. Get started with logistics automation

> **The best solution is normally one that has the highest level of operational flexibility. Even though it might not present the absolute lowest OPEX level the logistics operator wants."**

Jacob Leth Nielsen of Logio Consulting A/S

How do warehouse and distribution logistics operators determine the right automation solutions for their fulfilment and distribution centres to invest in? Changes are not easily done alongside maintaining a fully operational logistics centre, and nor should they be embarked upon without the right know-how. Here are some useful tips for getting started.

Compare solutions
A constructive way of approaching the search for the right solution to improve intralogistics efficiency is to work open-mindedly with alternative automation concepts and compare them, like for like. This involves the logistics operator taking a range of potential future operational scenarios and evaluating each concept using sensitivity analyses and simulation tools to identify opportunities and limitations.

To illustrate, a logistics operator could ask itself what would happen if its e-commerce assortment grows by 15 per cent annually while stock turnover decreases. How would its current system cope, and what adjustments does it need to make to meet that growth? How robust are the different future concepts to such changes?

Normally, the automation solution that prevails after such analyses is the one that has the highest level of operational flexibility. As Logis-

tics consultant, Jacob Leth Nielsen of Logio Consulting A/S, advises:

"Even though the solution might not present the absolute lowest OPEX level the logistics operator wants, it stays relevant over time. It will often not be a bespoke solution, completely tailored to the logistics centre's operations."

So, the best automation solution may mean that a supply chain manager, who is used to working with specific design criteria, needs to accept the highly dynamic environment he/she is now operating in.

Beware the hidden costs
While looking for the right automation solution to improve processes, a logistics operator will often overlook a budget for change in the business case. Even the best-designed system will require future changes and modifications. So, logistics operators need to be realistic about the costs involved to keep their investment running.

Call on outside help
In deciding on an automation solution, a logistics operator is well advised to form a working partnership with a system integrator. Through a long-term partnership, the facility can get the necessary know-how on how to integrate

processes and flows, and it is able to make adjustments over time, in a controlled, risk-averse environment.

When screening the market, a logistics operator should look for a system integrator that has a demonstrated ability to execute projects for comparable businesses. The best system integrators are those who are also willing to implement products and systems other than those they supply. Learn more about how to invest in your fulfilment centre.

FORM LONG-TERM PARTNERSHIPS

Look for a system integrator who:

- Knows how to integrate processes and flows at your facility
- Can make adjustments over time in a controlled environment
- Has worked successfully with comparable businesses
- Is willing to implement other suppliers' products and systems

3. Open software for fulfilment and distribution automation

A well designed open software and controls platform is a reliable solution for future-proofing the automation investments of a fulfilment or distribution centre and as such, is a solution that should be considered. Open software platforms are built on known protocols in languages understood by other systems and are a flexible and extendable solution. Importantly, it's capable of interfacing with future software developments to meet the ever-changing needs of a logistics business.

The benefits of open software for a Warehouse Control System
The benefits of open software in a logistics operator's warehouse control system (WCS) are that the software never becomes outdated and unusable; it is always relevant and young. It allows the latest and most relevant version of the software to be installed without needing to upgrade the entire WCS software because only certain services are involved in the upgrade.

Integrating older systems with modern open software WCS
Open software platforms consist of a modular, multi-layered design, making it possible for a logistics operator to update its older system, step by step and without disturbing old functionalities. It works really well if a logistics operator prefers to implement incremental changes with limited functionality that can be tested and proven before pursuing further changes.

The potential of data analytics with open software WCS
The modern open software WCS platform is also prepared for integration with today's must-have data analytics tools to collect the facility's operational data. The data can reveal the WCS's performance, condition, and efficiency, in order to optimise the fulfilment or distribution processes and make continuous improvements.

HOW OPEN SOFTWARE KEEPS
A WCS RELEVANT AND YOUNG

• **Relevant** - through its flexible and dynamic software structure that supports open integration with well-defined interfaces, the WCS can continue to stay relevant to logistics operations. Open integration allows for the future integration of new software, including software from third party suppliers – which is critical to avoid becoming dependent on the vendor.

• **Young** - open software platforms use the practice of 'continuous delivery', whereby software is developed in short cycles, released with greater speed and frequency. This allows for easy and reliable upgrades of software, new features, enhancement, and updates.
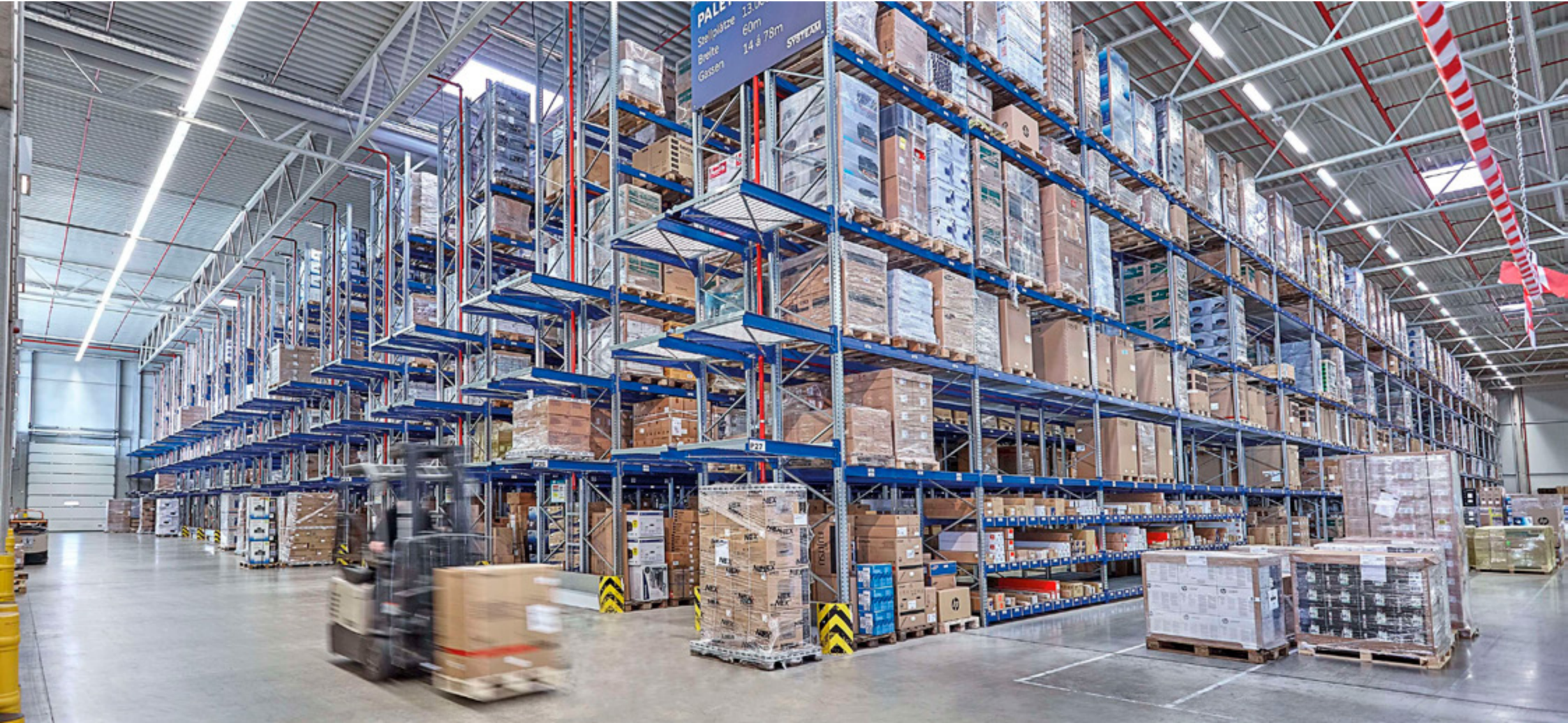
4. Automation for combined B2B and B2C operations

Shopping online has exploded in recent years and logistics operators are having to cater for not only B2B but also an ever-increasing number of B2C customers. So, how does a logistics operator find an automation solution to successfully set up an omnichannel operation to handle both sets of customers?

Omnichannel considerations
To determine how to best structure its businesses for both B2B and B2C, logistics operators can start defining some key factors by asking themselves these questions:

Existing structures - what processes are in place already?
Does your facility have the space to separate its B2B and B2C logistics operations or is a unified approach a better option? Are your customers volatile and changing? What volumes are you dealing with – because automation is not a feasible solution unless it is processing a certain volume.

Budget - how much can be spent because a fully flexible system costs money
While automation is super efficient, there is a cost if flexibility between B2B and B2C is also core to the business. But could the price of that flexibility be running costs, given the resources needed to deal with both B2B and B2C?

ROI - how soon does the ROI need to be realised?
For many operators, the quickest ROI is the most important factor. But if the desired ROI cannot be realised on the available budget, is it

possible that the project could be implemented in two or three phases? Calculations need to be based on overall investment and operational costs and what is most valued for the logistics operator.

Resources - will more operators be needed?
How easy is it to source extra resources where you are located? Finding the manpower is already difficult, let alone manpower willing to work on short-term contracts to meet the B2C demand.

Omnichannel solutions
There are many new technologies in logistics

operations that have been introduced to meet e-commerce demand. Automated guided vehicles, robots, and artificial intelligence are all potential solutions a logistics facility can explore. Even older technologies, such as the pouch sorter system, are being revived.

But it may be unwise for a facility to implement these technologies without first evaluating the above key considerations and without the experience of a system integrator. Together, these can point to the right technologies for the specific automation solution that best fits your operations.

THE POUCH SORTER: WELCOME BACK!

The pouch (or pocket) sorter has been quietly serving logistics operators for decades. This specialised technology is an overhead sortation system that relies on pockets, pouches or bags to store and convey products. It's able to transport, sort, sequence and store both outbound and returned items and has become the centrepiece and fulfilment engine for e-commerce and logistics operators.

5. The challenge
of return logistics

Returned items can represent a significant threat to logistics operator profitability, and an automation solution incorporating a well-developed reverse logistics process ought to be a priority. Fortunately, there are ways a facility can reduce the impact of returns, make reverse logistics less painful, and even profitable.

A good way to start is by increasing the speed of returns processing and reducing transportation and labour costs. The right handling system can play a big role in reducing these costs.

What automation can offer reverse logistics

An automated handling system offers dependability and efficiency to a facility and can support logistics operators to grow with the market. Here's what an automated system is capable of:

- saving space – many systems are compact and/or hang from the ceilings to save floor space and make way for driveways
- handling 10,000+ items per hour (most medium-sized retailers handle on average 10,000 items per hour)
- identifying return label information to pre-sort into returned item groups
- optimising and automating processes for control of item quality and condition

- broadening the range of item handling
- providing gentler item handling
- serving as temporary storage for the immediate re-selling and shipping of fast-moving items
- providing data analytics to refine the process

The smart logic of a high-end sortation system today can now assess an item, determine its destination within the facility and transport it there. The only labour required is at the initial item check which is not a large component of the overall labour costs.

The hidden opportunities in reverse logistics

Higher level sortation can become an untapped revenue stream by creating a value chain within the supply chain. Once a facility handles the initial receipt of returns, automation can then handle a second or third level. So, if the facility opts to on-sell its returns, it will receive a higher value due to the way they have been sorted, segmented and treated.

A system integrator can evaluate the material handling system that best fits the facility's needs and assist in realising these hidden opportunities.

Learn more about reverse logistics.

CONCLUSION

The pace of change and the volatility in a fulfilment or distribution business makes it very difficult for an operator to know how to find the right automation solution to achieve greater efficiency. By conceptualising future scenarios and mapping its particular business needs, a logistics operator can start building a solution that meets its requirements. Automation, data analytics, and open software systems for future integration may all be solutions that will help a fulfilment or distribution business to manage and optimise its intralogistics.

Ultimately, finding the right technologies for the specific automation solution that best fits the hub's operations will be achieved through forming a working partnership with a system integrator that has the right expertise and experience.

Automate your fulfilment centre
Learn more at beumergroup.com