

Fixed and Flexible Automation

Automation has become a buzzword in the warehousing world, with many companies implementing automated solutions to improve efficiency, productivity, and accuracy. However, when it comes to automation, there are two main approaches: fixed and flexible. In this blog post, we will explore the differences between these two approaches and which option could be best for your warehousing needs.

Fixed automation is a type of automation that is designed for a specific task or process. It is often used for tasks that are repetitive, standardized, and require little to no variation. Fixed automation is generally implemented using specialized equipment and machinery that is purpose-built for a particular task. Examples of fixed automation in warehouses include conveyor belts, automated storage and retrieval systems (ASRS), and robotic arms.

The advantage of fixed automation is that it is highly efficient and reliable, with the ability to perform tasks constantly without human intervention. However, fixed automation is also inflexible, as it cannot be easily reprogrammed or reconfigured for different tasks or processes. This makes it less suitable for warehouses that require frequent changes to their operations or have a high level of variability in their products or orders.

Flexible automation, on the other hand, is designed to be adaptable and versatile. It uses advanced technologies such as machine learning, artificial intelligence, and robotics to enable automation systems to adapt to changing requirements and conditions. Flexible automation is often used for tasks that require more variability and customization, such as pick-and-pack operations, inventory management, and order fulfillment.

The advantage of flexible automation is that it can be easily reprogrammed and reconfigured to accommodate changing tasks and processes. It can also handle a higher level of variability in products and orders, making it more suitable for warehouses that deal with a wide range of products and order types.

The choice between fixed and flexible automation ultimately depends on a warehouse's specific needs and requirements. **Jordan Frank described this choice as, "what it really comes down to is are you designing it for a certain order profile, certain size product, or unit. Are you looking for it to serve for the next three to five years, and are you looking to open up a new facility down the pipeline? Those are the kinds of questions that I ask to give my recommendation on the decision on if it's a fixed or flexible solution."**

In some cases, a combination of fixed and flexible automation may be the best solution. For example, a warehouse may use fixed automation for tasks such as receiving and shipping while using flexible automation for tasks such as picking and packing. This hybrid approach can provide the benefits of both fixed and flexible automation while minimizing their respective drawbacks.

In conclusion, when it comes to automation for warehouse solutions, there is no one-size-fits-all approach. Jordan furthers this point in [The Zion Experience Podcast](#) by discussing how you can turn almost any fixed automation into a flexible system if set up appropriately. Zion has several partners that they use to guide intelligent change for our customers, using some partners that solve these problems, like Addverb, Hai, Hytrol, and Covariant. Jim and Jordan talk more about how there are technologies that are more flexible than others at the surface level.

If you want to learn more about fixed and flexible automation, listen to our podcast TZE - Episode 1 on [YouTube](#), [Spotify](#), and Apple Music! Interested in working with Zion Solutions Group? Visit [our website](#) or contact us at contact@thezsg.com.