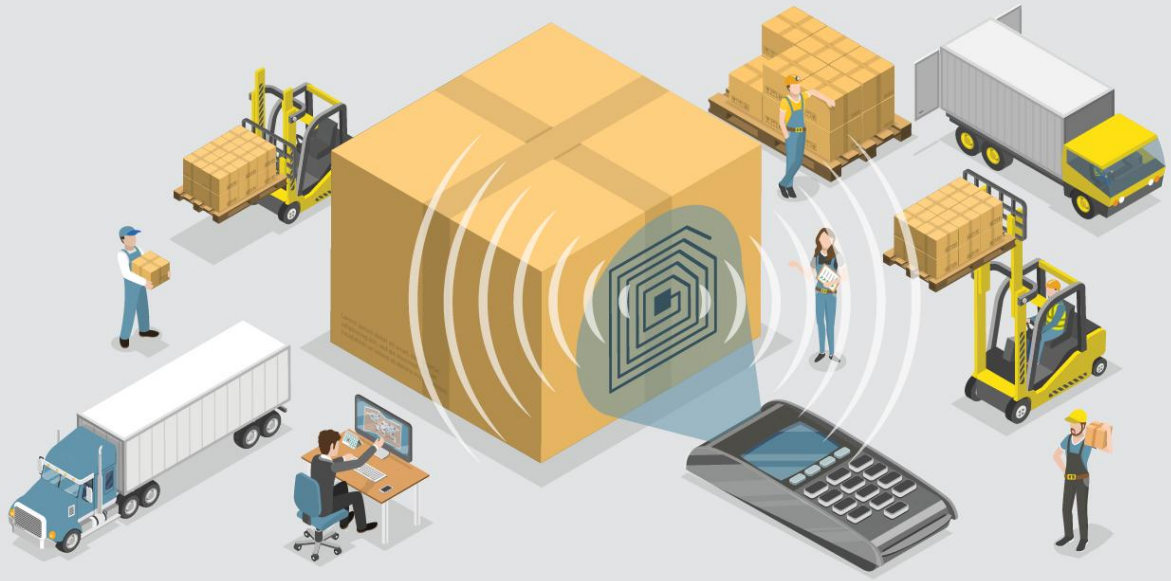


RFID Warehouse Management: Revolutionizing Inventory Control

The exponential growth of RFID and its capabilities across a whole range of industries has been one of the most exciting tech advancements of recent times. However, RFID warehouse management is arguably one of the most revolutionary applications. Used correctly, it has the ability to transform your approach to logistics and inventory management forever.

This guide to warehouse RFID inventory management will answer all of your key questions, including but not limited to;

- What is RFID warehouse management?
- How does RFID technology in warehouse management work?
- What are the benefits of RFID in inventory management?
- How can RFID tags be used in an RFID for inventory management strategy?
- Who can utilize RFID in warehousing?

Understanding RFID in Warehouse Management

RFID, short for Radio Frequency Identification, technology uses radio waves to read, capture, and store data that is commonly stored on a tag that is attached to an item. You can think of it as serving the same function as a barcode system but without the need for scanners to gain a line of sight to track the asset.

While this technology can be utilized for many applications, it is particularly useful for warehouse management where accurate real-time tracking is vital for maintaining efficient workflows.

RFID in warehouse management takes all assets into account with automated tracking while there are no limits on how many items can be added to a system. The number of warehouses in the US has seen a 50% increase since 2007 and, given increased consumer expectations in the modern era, RFID implementations are the best way to satisfy the demands.

As the RFID tech market grows at a rate of over 11% annually, now is the perfect time for business owners to embrace this technology - not least because it is suitable for ventures of all sizes.

Exploring RFID Warehouse Solutions

Warehouse RFID solutions can be used for a host of applications in this environment, such as;

- Inventory management to monitor stock levels, which can also link directly to stores or eCommerce sales facilities to avoid out-of-stock purchases.
- GPS tracking to manage where a vehicle or other asset is at any given time. This can extend to products that are out for delivery.
- Checking that stock is kept in suitable environments, such as temperature-controlled spaces, with notifications when the situations change.

In particular, though, managing inventory will improve warehouse operations. Comprehensive solutions will combine software and hardware with both asset management and inventory management to create detailed insights. Moreover, information is shared seamlessly between different working environments to deliver multi-departmental benefits.

Key Benefits of RFID in Warehouse Management

Before introducing an RFID in warehouse management system, it's imperative that you understand the benefits. Aside from helping you to determine whether the investment is worthwhile, the added insights should enable you to get more out of the technology.

The key features of RFID warehouse tracking and inventory management include but are not limited to;

Increased Accuracy

When looking for a warehouse management system, RFID stands out as a great option for inventory management because it takes accuracy to over 90%. Real-time data is shared through IoT technologies to ensure precise stock management. By eliminating discrepancies, you can avoid financial issues and the risk of upsetting customers. It also means that products efficiently move through order fulfillment.

Given that the warehouse is the heartbeat of the operation, this will transform your entire supply chain management.

Time Efficiency

RFID warehouse tracking and inventory management has the potential to streamline your entire stock management processes. Seamless integrations with existing systems ensure a smooth switch to the new technologies while centralized inventory information will optimize warehouse operations through stock allocations and more. Automation also bypasses manual scanning which saves valuable time.

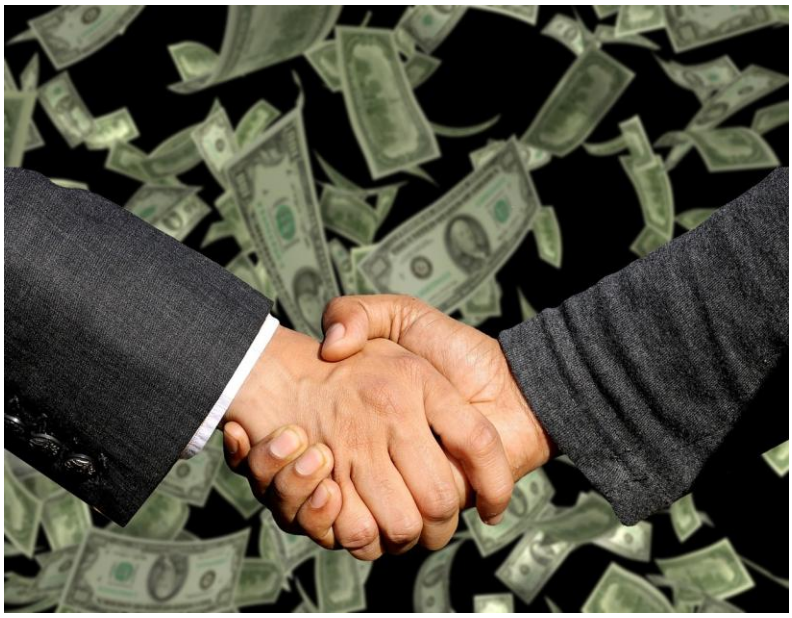
Better still, productivity is not affected by issues like worker dehydration or low morale. So, you will see guaranteed results.

Human Error Removal

As well as boosting the speed of productivity and accuracy of inventory tracking, RFID tech will remove human error from the equation. Manual data entry and inventory counting can lead to discrepancies or data losses. This can cost you dearly due to repeated assignments, low customer satisfaction, or products not being accounted for. If you can remove this problem, the

impact on your bottom line will be huge. Better still, employees will be free to use their time more efficiently while higher satisfactions lead to a lower staff turnover rate.

Financial Savings



Every business decision should be made with financial outcomes in mind. After the initial installation, RFID technology in warehouse management provides a very cost-effective solution. For starters, RFID tags are very affordable. Automated systems also reduce labor costs by reducing the volume of staff required. Given that the average factory worker earns over $40,000, large-scale implementations will pay for themselves in no time.

When combined with removed human errors, smaller operations will see the financial benefits too.

Optimized Control

Perhaps the most impressive feature of using RFID technology in warehouse management is that it gives you greater control. The real-time data allows you to make informed decisions time and time again by monitoring inventory and tracking movements. You can see every key aspect with full transparency and know exactly where things stand at any given moment. The rewards for your venture are significant.

After all, it allows you to spend more time in other areas of the business. Following a full consultation, you should feel ready for success.

RFID in Inventory Management: A Game Changer

RFID inventory management is still in its relative infancy but is helping to shape the future of warehousing, in which a shift towards automation and streamlined practices is clear.

It has the potential to provide clearer insights into the volume of stock available, the location of specific items or pallets, and how much space is available in the warehouse. Ultimately, this enables senior workers to make calculated decisions even when they're not on-site. Meanwhile, warehouse employees will have one fewer tasks to manage while clients receive a better CX.

Overall, it is a game changer that enhances the supply chain from a perspective of productivity and profitability. To see the full benefits of RFID in inventory management, you must use the following checklist;

- Confirm that the right RFID tag choices are made depending on the function, scale, and budget.
- Use the best RFID hardware like scanners to ensure that all movements and assets are tracked.
- Ensure that the RFID software can integrate with existing inventory management software for a smooth transition.
- Always confirm that tags are added correctly to items or pallets before checking the data stored on them.

The Role of RFID Technology in Warehouse Management

By now, you will know "What is RFID in warehouse management system solutions?" and understand what it sets out to achieve. However, you also need to consider its role within modern warehouse management and overall supply chain matters. Ultimately, having the right warehouse RFID solutions in place enables warehouse workers to update inventory in real-time

thanks to streamlined processes for arriving stock, departing stock, and movements within the warehouse. It can prevent issues like running out of stock, overstock, or misplacing items.

So, you can improve employee productivity and morale while simultaneously ensuring that warehouse spaces are utilized to their full potential. Furthermore, contractors and new people can step straight into action without any problems as the information is accurately presented.

It takes warehouse management to the next level, thus indirectly benefiting all departments that are influenced by inventory from sales to accounts.

How to Implement RFID in Your Warehouse

Acknowledging the capabilities of RFID systems and inventory management is one thing, but knowing how to implement RFID in warehouse environments is another altogether. As with any other significant change to the venture, you must consider the costs and convenience while also ensuring that the implementation is tailored to your requirements.

It is shown that 42% of warehouses plan to embrace automation technology and introducing an RFID system for warehouse management is one of the most popular and accessible solutions. However, many companies rush the process in fear of falling behind their competitors. Given the importance of the implementation, though, calling an expert like Get Factory Sense is the most appropriate solution by far.

Inventory management consultations allow you to unlock the full benefits of RFID warehouse management tools with a truly tailored service that covers;

- Hardware facilities including robust RFID tags, advanced readers, powerful antennas, and printers to ensure that instant inventory tracking occurs with optimal accuracy.
- Software courtesy of factorysense.io to provide real-time tracking with insightful analytics, thus allowing you to see optimized efficiency and reliability.
- Set-up services including installations and integrations to confirm that the RFID technology works across the warehouse and all other workspaces.
- Ongoing services like training and support to help all teams utilize the systems, thus allowing your business to see the full benefits of warehouse RFID for years to come.

The comprehensive approach supports your business from conception to completion, leaving you with an RFID network that is perfectly aligned with your needs and capable of evolving alongside the company's growth. If nothing else, this means you can complete the transition with minimal disruption and 100% confidence.

RFID Tags: Revolutionizing Warehouse Management

While RFID systems utilize very sophisticated technologies, simple RFID tags (also known as RFID chips) sit at the heart of the operation. The tags contain a microchip that is capable of transmitting data and communicating with scanners or other items within the RFID warehouse management system. In the case of inventory, they are connected to the product or asset in a similar way to traditional barcode product labels.

The RFID tags warehouse management use will fall into one of two categories;

- Active RFID tags, which contain a power source and transmitter to send live data. They can transmit data in just 1-2 seconds with distances of up to 100 meters. They are more expensive, but make an ideal choice for tracking vehicles and more valuable assets.
- Passive RFID tags, which have no power source and rely on the antenna of the reader or scanner to track its position via radio waves. They are an ideal choice for low-value assets as well as warehouse inventory due to their affordability, especially at scale.

Active RFID tags may be beacons that send out a signal every 1-2 seconds or transponders. Meanwhile, passive RFID tags can come as thin inlays or hard tags made from plastic and metal.

Most companies that successfully introduce RFID tags and an RFID system for warehouse management will opt for a combination of the two. However, passive RFID chips are more commonly used for inventory management. Particularly when dealing with low-value stock.

Whichever option you choose, this can instantly upgrade your inventory management and tracking processes.

The Mechanics of RFID in Warehouse Workings

The sophisticated technology relies on multiple items that must be connected at all times. However, once established, this aspect of supply chain management is under control, warehouse operations become super smooth with minimal effort.

Only 59% of warehouses use at least 90% of their available space, but the use of RFID tech can help paint a clearer image that ultimately supports improved layouts. However, efficient warehouses are only supported when the mechanics of RFID are utilized well.

While the exact process may vary slightly from one business to the next, the fundamental process of RFID inventory management is as follows;

- The shipment arrives at the warehouse and is unloaded.
- RFID tags are attached to items. This could be individual inventory or a pallet.
- RFID tags can have the stored information modified as they move through the warehouse.
- The information stored on the RFID tag is transmitted to scanners.
- Information is held in a centralized database thanks to the electromagnetic signal.
- Whenever an item moves, signals are sent to update the warehouse management system about the product's location.

Some challenges remain, including not being able to use smartphone scanners as a backup (as would be the case with barcode readers) and possible security risks as remote devices could potentially hack systems. With the right support during the installation processes, though, the threats can be minimized.

Wave goodbye to outdated or inefficient practices and say hello to a better inventory management solution by contacting FactorySense today.

FACTORYSENSE RFID