



Opening the Door to Productivity: Implementing 2D Barcode Technology for Inventory Visibility



1 Introduction

A premier supplier of axles, suspension, brakes, doors, venting products, trailer parts, and towing components, recently acquired and merged several companies into its distribution network, leaving them with inconsistent inventory tracking methods across locations. Some facilities were still using paper-based, manual systems, while others had partial automation. They needed a solution to provide real-time inventory visibility and data accuracy across their expanded enterprise. What began as a Warehouse Management System (WMS) implementation quickly evolved into something far more robust.

2 The Challenge

The company was contending with multiple locations using various systems to manage their inventory, which led to a severe lack of inventory visibility across the business. This presented a dire need to implement consistent procedures to manage assets and inventory. The company also needed to modernize operations to support the exponential growth of e-commerce. With so many moving pieces, they reached out to Alpine Supply Chain Solutions for guidance.

3 The Solution

Alpine started by dividing tasks into manageable action items. While this premier supplier believed they needed a WMS, Alpine knew that a strong foundation for a WMS starts with a solid facility layout and facility preparation. Location and layout schema were documented for every site, and location names were mapped to future scalable locations down to the bin level. After conducting a field survey of every site, robust Wi-Fi was installed for optimal connectivity.

Barcodes Inc. was brought in to implement a customized 2D barcode system with an optimized data structure and on-demand barcode label printing, which uses advanced mobile computers for scanning. Labels were printed on retro-reflective label material allowing for better readability in high-reach and outdoor applications. The barcode technology empowered the company to access real-time updates and gather important facility data, all in the service of network consistency and continuous improvement. More importantly, Alpine and Barcodes worked to establish real-time scanning and data transfer to the company's chosen WMS, Microsoft D365, providing the superior visibility they required.

4 The Results

With standardized and scalable barcode labeling and scanning across all facilities, the supplier had real-time inventory updates via mobile devices, increasing accuracy and visibility. The flexible WMS system is designed to scale, supporting continued growth and expansion without compromising on productivity. By collaborating with Alpine and Barcodes Inc., the company overcame their challenges and opened the door to:

- Better growth opportunities
- Improved visibility throughout branches
- Flexibility to scale with customer needs
- Ability to look into inventory from portable RF devices
- Fewer steps to get orders out the door
- Better distribution of warehouse duties as needed

