



> STRATIX WHITE PAPER

MOVING IN THE RIGHT DIRECTION:

# Leveraging Mobile Technology

to Transform Your  
Manufacturing and Supply  
Chain Operations



If one thinks of today's  
Amazon-era supply  
chain as a sports car,  
warehouses would most  
definitely be the engine  
that makes it "go".

## INTRODUCTION

---

# Getting ahead of competitive pressures with smarter mobile technology choices

If one thinks of today's Amazon-era supply chain as a sports car, warehouses would most definitely be the engine that makes it "go". If you're a manager or warehouse operator, however, you know that there is a single all-important element that fuels that engine, and it makes all of the difference between smooth, supercharged performance or a lagging lemon that requires frequent – and costly – trips to the mechanic: efficiency.

The dilemma that warehouse and supply chain operators and decision makers face, however, is how to drive that efficiency with competitive pressures such as:

- Fewer and less experienced workers
- Rising operating costs
- Unsupported legacy equipment

The larger the scale of warehouse and supply chain operations, the greater the vulnerability to disruptions. This is especially true in the United States, which accounts for \$101.1 billion or 21.1% of the global warehousing and storage market.<sup>1</sup> In this competitive and sizable market, space availability is at an all-time low while competitive pressures have never been higher in the Amazon.com era. That makes tools like Android-powered mobile

devices, scanners, printers and more from leading manufacturers like Zebra absolutely essential in achieving more with less – whether it's field mobility, warehouse and inventory management or achieving optimum traceability throughout your supply chain.



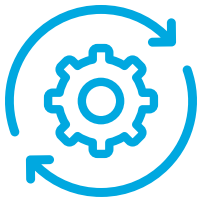
In this paper, we'll identify practical steps you can take to ensure maximum productivity for your supply chain and warehouse personnel and to extract optimal return on investment on your ruggedized warehouse mobile technology expenditures.



## THE STATE OF THE WAREHOUSE/MANUFACTURING INDUSTRY

---

# Warehouse/Manufacturing technology deployments – by the numbers



**At 30.5%, the rate of Innovators among manufacturing organizations is well below the overall average of 37.7%**

VDC Research, a leading provider of in-depth insights to technology vendors and end users, surveyed a wide-range of North America-based IT stakeholders about market trends and their impact on their individual business outlooks. These stakeholders were classified into discrete categories reflecting their decision-making outlook (e.g. Innovators, Early Adopters, Mainstream Adopters, etc.).

In their surveys on the Warehouse and Manufacturing sectors, some important data points were revealed:

At 30.5%, the rate of Innovators among warehouse/manufacturing organizations is well below the overall average of 37.7%.<sup>2</sup> They lag behind other industries in their technology deployments and have a lower-than-average optimization of those solutions. The primary barriers to their technological adaptability are:

- A lack of executive support at 40.2% (the only industry to indicate this as their top barrier)
- Organizational decision making (35.4%)

This particular sector prioritizes their top implemented technologies a little differently than other industries in that 'mobile solutions for frontline workers' is deployed proportionally more frequently. Typically, much of their tech stack involves handheld scanners, handheld computers, tablets and forklift-mounted units used by shop floor workers and logistics employees.

Not surprisingly, the role of robotics is more important in manufacturing and warehouse operations than any other industry. While only 23.2% of these decision makers actively use robots to replace repetitive tasks today, by 2030 the rate of manufacturers and warehouse operators believing robotics to be the single most impactful tech jumps from 1.7% to 14.3%. Furthermore, although robotics will not replace human labor on the floor entirely, almost 50% of these decision makers do believe factory floor workforces will shrink by over 10% in the next 5 to 10 years due to automation.

Consequently, the mobile solutions used by frontline workers will shift in purpose and in form, migrating from repetitive tasks and more heavily into workflows such as inspections, maintenance and technically demanding tasks; manufacturers and warehouse operators would do well to seek external help to guide and manage such a significant transition.

## Not surprisingly, the role of robotics is more important in manufacturing and warehouse operations than any other industry.

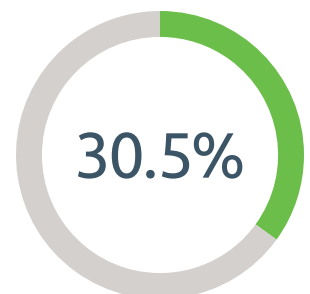
The rate of Innovators in this sector lags compared to the overall average - 30.5% to 37.7% - placing them far behind in mobile maturity. Still, only 17.1% of manufacturing and warehouse organizations feel at high risk of tech-led disruption, which is lower than the overall average of 20.9% and lower than any other single industry segment. This suggests a level of comfort among manufacturing operations regarding the capabilities of their tech stacks despite their lack of innovation.

40.2% of manufacturing/warehouse organizations selected 'lack of executive support' as the leading barrier to adapting to change. This is followed by 'organizational decision making' at 35.4%. Just 19.5 % believe they are extremely agile in adapting to change, well below the overall average of 23.1%.

Looking forward, 30.5% will partner with technology innovators and startups to achieve disruption, and their top strategy to build new skills and capabilities will be to upskill/train existing workforces.



**30.5% of manufacturing/warehouse organizations will partner with technology innovators and startups to achieve disruption.**



## THE PILLARS OF SUPERIOR SUPPLY CHAIN OPERATIONS

# How modernization of your supply chain technology makes all the difference



warehouse. Nothing is more impactful, however, to your employees' daily tasks than mobile technology such as rugged devices and scanners. Whether you're a warehouse, operations or IT leader, the options are endless and deciding exactly which aspects of mobile technology you should concentrate your limited budget on in order to get, and stay ahead, takes up a lot of time.

There are three distinct areas of mobile technology as a platform, that will help take warehouse/supply chain operations to the next level:

### Faster. Cheaper. More.

You can essentially boil down the modern consumer's mindset to these three words. The continued dominance of Amazon and other e-commerce giants has kicked off an arms race, of sorts, wherein every supply chain must be as efficient and optimized as possible to satisfy consumer expectations for a 24x7x365 online-centric retail environment with immediate delivery options galore.

In short, it is a time of profound digital transformation wherein technologies such as automation and real-time data analytics are reshaping the hub of the supply chain as we know it, that bustling distribution center that is your

### MOBILE DEVICE MANAGEMENT: Keep Your Devices Updated

Once your mobile devices are deployed and in use, nothing is as important as an effective Mobile Device Management (MDM) solution to ensure that they run seamlessly. The right dedicated MDM platform allows you to easily manage and update your devices and their applications remotely, without the need for physical intervention. One of the most important decisions regarding MDM, however, is whether to do it with your in-house team or via third-party providers. It's tempting to task your existing IT support team with this responsibility, but your best bet may be to engage a third-party provider or managed mobility specialist with the bandwidth and specialized knowledge to handle enterprise-grade MDM.

### Three mobile technology platforms to take warehouse/supply chain operations to the next level:

1. Mobile Device Management
2. Mobile Device Security
3. Migration to Modern Platforms

**MOBILE DEVICE SECURITY:****Protect Your Data**

One of the most perilous areas of liability for businesses now is in protecting at-risk data. Sensitive company and customer data constantly move across your mobile device ecosystem – both on the physical devices and when transmitted – and each of those touchpoints represents a danger zone where hacking and breaches can cause problems. Modern enterprise-grade operating systems such as Android paired with trusted enterprise hardware partners such as Zebra provide a powerful, frequently-updated platform to enable critical security features such as:

- On-device application sandboxing
- Strong data encryption
- Granular resource access permissions

**MIGRATION TO MODERN PLATFORMS:****Modernize**

As a warehouse and operations manager/director or an operational IT manager/director, there's a very good chance that you're still using legacy hardware and platforms like Windows CE for your daily operations. The conventional wisdom guiding technology budgets says "if it ain't broke, why fix it?"

There are actually quite a few good reasons for fixing this situation by leaving behind legacy platforms. Remember those security liabilities we just talked about? Legacy systems are either completely EOL (End of Life) or nearing it, thereby not receiving patches to address new and emerging digital threats. Additionally, these legacy platforms will become increasingly incompatible with new devices and associated apps.

This compounds the already suboptimal functionality – impacting employees' productivity and creating a poor user experience, which dramatically increases time to train on the task. Migrating to a modern enterprise-grade ecosystem such as Android makes all of the difference. It's not a small task, so be sure to start with a smart mobile blueprint that takes into account all aspects from infrastructure to training to deployment and Day-2 support.

Modernizing these aspects of mobile warehouse technology offers exciting opportunities to increase your supply chain efficiency, productivity and profitability. It's exactly what you need to retain a competitive edge in an uncertain and fast-moving environment of widespread digital transformation.



**Nothing is more impactful, however, to your employees' daily tasks than mobile technology such as rugged devices and scanners.**



## ENABLING EFFICIENCY

---

# Transforming warehouse logistics with smarter operational tactics

### Four efficiency opportunities:

1. **Devices to optimize your business outcomes**
2. **Streamline and secure the flow of data**
3. **Centralize management**
4. **Don't go it alone**

Inventory and materials management is at the heart of all warehouse operations. We've already touched upon the need for optimal warehouse efficiency – you simply can't compete when struggling with long cycle times and a lack of visibility and control over your daily operations.

Opportunities for significant improvements in efficiency abound, however, if you know where to look. Let's dive deeper into a few:

### Devices to optimize your business outcomes

Tough industrial environments were in the past handcuffed to ruggedized solutions. The chasm that used to separate rugged enterprise-grade mobile devices and laptops and intuitive consumer-grade smart devices no longer has to present you with binary choices when deploying your mobility solutions. Transitioning to professional handhelds such as the Zebra TC77 ultra-rugged provides warehouse personnel with the straightforward and familiar operating systems they use every day, but with the additional benefits of multiple mount/base/charger enclosure



supports. A single device can be used in a variety of configurations powered by the very latest in warehouse logistics software – now your choices are vast, so you need to think about the use case and how you want to deploy and be outcome-focused.

### **Streamline and secure the flow of data**

The only thing that is larger than the shipments moving through your organization is the data that is transacted. Streamlining the way data flows and how it's accessed provides many tangible benefits, however, a great deal is sensitive enterprise and customer data flowing through mobile devices. This means that you need to constantly apply security and configuration updates, all while managing access to sensitive functions in order to ensure the integrity and security of this data. Overhaul your security infrastructure with a defense-grade security platform that lets you not only quickly apply updates, but also set specific profiles on the same device, even for different types of users.

### **Centralize management**

When you operate multiple facilities across widespread geographical areas, it can be tricky to deploy, support and maintain a single mobile ecosystem of primary and spare pool devices for your warehouse employees. For many organizations keeping up with mobile is a real issue, and they fall into the trap of

disparate on-site device pools and local management. That's when support costs start to escalate – broken devices aren't repaired on-time or at all, spare pool inventory is much higher than it needs to be, and non-specialized staff waste time and effort handling devices. The truth is that a central support team is far more efficient at supporting your mobile fleet at scale. It frees up on-site staff to focus on more profitable and operational duties, while reducing the resources and total cost of ownership needed to keep your devices up and running.

### **Don't go it alone**

Transitioning from legacy devices, software and processes is the digital imperative. It's pretty rare to find a dedicated warehouse operation that's also well-positioned to enact digital transformation and futureproof their operations. That's why it's critical to engage partners who have specific expertise in planning, deployment and Day-2 support who can help you craft a sensible blueprint for leveraging technology to boost efficiency for years to come. Take your time to find proven service providers with experience in warehouse operations you can trust. Digital transformation isn't easy, but it can be simple and straightforward with the right hand guiding you.



**Digital transformation isn't easy, but it can be simple and straightforward with the right hand guiding you.**

## MODERN WAREHOUSE OPERATIONS NEED A MODERN OPERATING SYSTEM

# Leveraging the power of Android to achieve mobile maturity



Two key areas to concentrate on in order to make it a seamless transition:

1. Focus on the end-user experience
2. Leverage mobility partners

There are a number of challenges that decision makers must grapple with to stay current and successful in the modern enterprise environment. While problems such as struggling to recruit and retain skilled professionals or deploying new technology securely may have considerable impact, perhaps no challenge is as difficult to master as the unyielding pace of constant, rapid change. Future-proofing your business simply isn't an option in this landscape – especially when it comes to modern mobile technology like Google's Android ecosystem of devices, apps and services.

Android is the world's most popular mobile operating system, so the largest range of enterprise devices built for Android are familiar and intuitive to use right out of the box, reducing training time and improving efficiency. For leading manufacturers such as Zebra, there's also an extra layer of security - unique to their device range - to make Android secure for the enterprise environment. In addition, there's a whole suite of Mobility DNA applications built for warehouse use – to accelerate every aspect of the process, from goods in to ship out. Goods can be

received faster when whole forms can be populated in one scan. It takes less time to send a quick group message when your keypad adapts to you wearing gloves.

There are a couple of key areas to concentrate on in order to make it a seamless transition:

### Focus on the end-user experience

No technology rollout can be successful without true end-user adoption. That adoption isn't possible unless your rollout is defined by how easy and intuitive it is to use from Day One.

Pivot to a more agile and specialized support solution – The sheer scale of devices, apps and users in the field is often overwhelming for a typical desktop IT support team to handle. Comprehensive Day-2 support requires specialized skills that can keep devices in the field longer without disruptions to productivity.

## Future-proofing your business simply isn't an option in this landscape

### Leverage mobility partners

Transitioning to Android requires partners well-versed in the latest technologies and well-equipped to help you manage every aspect of your mobile program and transform your business through a single platform across the enterprise. Look for partners within the Android Enterprise Recommended ecosystem for optimal managed mobility.



## THE BIGGER PICTURE

---

# It's all about your mobile technology programs

In the preceding pages, we've identified a number of areas for significant strategic and tactical enhancement of your warehouse operations. While this sector can be resistant to change, the rapid evolution of this sector means that change is no longer optional. It's clear that your mobile blueprint will absolutely be a difference maker going forward. The question is how do you truly get ahead of your competitors and lead the way to digital transformation?

This is where Stratix managed mobile services (MMS) come in. We create smart technology partnerships that give you the operational speed, agility and profitability you need to thrive – from rugged mobile device ecosystem providers like Zebra to modern enterprise-grade operating

systems such as Android. It's all in service of boosting productivity and efficiency, while offering 24x7x365 operational support for your full scope of warehouse and supply chain operations.

As a Premier Solution Partner, Stratix provides robust end-to-end managed mobility for the full Zebra suite of handhelds, scanners and more, including lifecycle services and industry-leading Day-2 support to keep devices running and your employees productive.

We're ready to modernize your operations for both the rapidly evolving factory environments of today and the years to come.

***Let's get started.***



## About Stratix

As the largest pure-play enterprise mobility specialist in the U.S., Stratix is dedicated to guaranteeing nonstop mobility. The company leverages 35+ years of expertise and experience to accelerate and inspire business mobility transformation for some of the world's most iconic brands. Their SmartMobile programs ensure each client has the right technology, tools and support programs in place to stay ahead. For additional information, visit [www.stratixcorp.com](http://www.stratixcorp.com)

## About Zebra

Zebra (NASDAQ: ZBRA) empowers the front line in retail/ecommerce, manufacturing, transportation and logistics, healthcare, public sector and other industries to achieve a performance edge. With more than 10,000 partners across 100 countries, we deliver industry-tailored, end-to-end solutions to enable every asset and worker to be visible, connected and fully optimized. Our market-leading solutions elevate the shopping experience, track and manage inventory as well as improve supply chain efficiency and patient care. In 2020, Zebra made Forbes Global 2000 list for the second consecutive year and was listed among Fast Company's Best Companies for Innovators. For more information, visit [www.zebra.com](http://www.zebra.com)

### Sources:

1. *Warehousing and Storage Global Market Report 2018*, CISION PR Newswire, February 12, 2018
2. *Manufacturing Enterprise Mobility Outlook Snapshot*, Stratix, November 2019



Let's get  
started.

**Contact Us**

**800-917-4574**

[stratixcorp.com](http://stratixcorp.com)

[StratixCorp.com/contact](http://StratixCorp.com/contact)

