

THE NEW REALITIES OF MANUFACTURING



Use this document to better grasp the dilemmas of manufacturers, why modern mobile technology is pivotal to their future and how Zebra is uniquely positioned to help.



TRENDS

LEAN MASS CUSTOMIZATION

It has become harder to remain lean when consumers are dictating what is produced. Nowadays, manufacturers must customize their products and do so under shorter deadlines. This forces them to switch parameters more often, adding complexity to already tight schedules, expenses to slim margins and risk to quality and compliance. With consumers' tastes in constant flux, it's also difficult to plan in advance. This further challenges them to remain efficient and cost-effective. If they're going to thrive, they must recoup time and money – all while keeping quality and compliance high.



PAIN POINTS

- **LACKLUSTER TECHNOLOGY ADOPTION**

Employees expect enterprise technology to be as intuitive as their personal smartphones, tablets and laptops. Yet, outdated technology is unfriendly. It slows down training and frustrates workers in their everyday tasks. This dims their view of the job and contributes to high turnover, which means more training time, setbacks, and costs. It also contributes to sluggish productivity and response time that undermines tight deadlines associated with consumer-centric lean manufacturing.

- **SLOW AND ERROR-PRONE PROCESSES: MORE CHANGES, MORE ROOM FOR ERRORS.**

Those manufacturers that still use paper processes misallocate precious resources to input and manage the information. Along the way, mistakes happen, which adds to operational inefficiency and expense. Legacy barcoding is not fail-proof. It might not have the capability to capture dirty or damaged labels, causing employees to resort to manually inputting the information. Either way, manufacturers pay dearly in delays, redundancy and inefficiency that make customized batch production a real challenge.

- **LACK OF REAL-TIME VISIBILITY:**

- 1. Quality & Compliance**

Manufacturers have to rely on their programmable logic controller (PLC) to assess key metrics of their assembly lines. Without automation, the PLC doesn't offer real-time visibility into parameters that ensure high quality, compliance and production goals. Reports are available the next day – much too slow for today's demands. Nor does it enable mobility. If manufacturers want to gauge metrics, they have to stand next to the PLC to monitor them. Again, this causes a lag in productivity that is too slow to keep up with timelines of manufacturing customized batches.

- 2. Machine Performance**

Without live visibility into a machine's performance, manufacturers can't anticipate and preempt problems. Instead, they find out about issues only at the point that they disrupt production. This downtime hinders their ability to be lean and fast in and satisfy demand for customization.

3. Asset Tracking

Accurately locating inventory, equipment and personnel is often guesswork. Imagine a plant needing a widget to produce a product. If that widget isn't digitized, the manufacturer has no means of determining in real time if their supply is perilously low. Instead, they find out after the fact. Downtime ensues, causing disruptions in their ability to customize products, meet delivery deadlines and satisfy customer expectations. The same goes for equipment and staff. Anything that saps time is a hindrance in this age where the ultra-efficient wins.

- **COMMUNICATION BARRIERS**

Communicating between people's different devices and networks takes effort and time. Noisy environments make paging difficult to hear. All this contributes to poor communication that causes delays and downtime.



MISCONCEPTIONS ABOUT A MODERN MOBILE PLATFORM

- They can leverage their current system for a few more years.
- Migrating is cost-and-time-prohibitive.
- They assume a modern platform means Android and feel it's not secure enough for enterprise, given its open source platform.



OPPORTUNITIES FOR A MODERN MOBILE PLATFORM & SUPPORTING POINTS

- **REDUCE TRAINING TIME AND INCREASE EMPLOYEE RETENTION.**

Modern mobile platforms give workers the **modern, intuitive UX they already know, use and like**. From day one, they will be ready to work and can accomplish tasks with greater ease and satisfaction, promoting uptime and retention.

- **SPEED UP TASKS**

1. Modern mobile platforms can **increase productivity 15%** with all-touch screens.
[Source: Based on research conducted by Zebra Laboratories, 2014]
2. Modern mobile platforms allow you to **run data-rich applications and process more information faster**. Having the right data - at the right time - leads to sharper decision-making and a proactive stance.
3. Modern mobile platforms use multi-modal speech-directed apps to **enable employees to complete tasks quicker and with less effort**. Employees can work hands-free, while listening to instructions.
4. Modern mobile platforms give workers a single device to **simultaneously capture multiple text, images, graphics, signatures and barcodes with a single scan** and automatically populate fields. This eliminates the cost and need for multiple devices.

- **ACCURATELY CAPTURE INFORMATION AND ELIMINATE ERRORS**

Modern mobile computers offer better imaging. Capture barcodes in any condition the first time, every time. This eliminates the need for manual entry, thereby reducing the risk of human error.

- **MODERN MOBILE PLATFORMS UNLEASH THE FULL POTENTIAL OF IOT/RFID SENSORS, WHICH ARE ESSENTIAL FOR REAL-TIME VISIBILITY.**

1. The quicker processing speeds of modern mobile platforms are designed to handle the flood of IoT data. Plus, their intuitive interfaces minimize steps to accessing Big Data.
2. Modern mobile platforms also give you visibility into the location of your employees within the four walls. Simply install Bluetooth® beacons and they will pick up the integrated Bluetooth® signal of modern mobile devices.

- **COMBINE RFID SENSORS WITH NEW APPLICATIONS AND MODERN SOFTWARE FROM MODERN MOBILE PLATFORMS TO GAIN INSTANT VISIBILITY INTO CRUCIAL PROCESSES.**
 1. **Track and trace raw material to finished goods** for better quality and compliance.
 2. **Untether line managers from the PLC with our Human-to-Machine Interface.** Give them access to PLC information from anywhere on the plant floor. By mobilizing your workforce, you increase productivity essential to the rapid pace of customized batch production.
 3. **Move from reactive to proactive. Receive real-time push notifications on your modern mobile devices** about key metrics, machinery performance and critical assets.
 4. **Minimize downtime by digitizing business critical assets.** Instantly locate material, manpower and machines.
 5. **Preempt interruptions with real-time insight into the battery health of your mobile computers and beacons.** Should you need to replace your batteries, modern mobile devices will save your place on the computer, so you can get back to work faster.
- **MODERN MOBILE PLATFORMS EXPEDITE DECISION-MAKING AND COLLABORATION**
 1. **Unify communication across all device and networks** with Workforce Connect's push-to-talk and text messaging.
 2. **Quicken decision-making with videos and images** that are captured from a modern mobile computer's camera and easy to share.



WHY ZEBRA

As a manufacturer, you're pressed to recoup the extra time and money spent in order to produce customized batches. Our full range of modern mobility solutions and services can help you mitigate delays, downtime, and errors that drain resources.

With our modern mobile devices, your employees will be ready from day one and more satisfied for days to come – saving you the expense of lengthy training and high turnover. Using our cutting-edge platforms, you'll streamline their tasks, so they're done faster, more accurately and with less effort and cost. Downtime that played havoc with your timelines and budget will be a thing of the past, thanks to

real-time location technology, modern RFID and best-in-class barcoding. This trifecta will give you the ability to preempt issues and optimize the use of your manpower, machines and materials to be truly nimble.

No need to be overwhelmed by migrating. Our turnkey services and partnerships can get you up and running quickly and smoothly, reducing expense and risk. Innovation is a cornerstone of our culture and the reason we invest over 10% of our sales to R&D. It's little wonder then that we've garnered the trust of 95% of global Fortune 500 companies and thousands more which we serve through our ecosystem of 11,000 partnerships.

