



## White Paper

# Keeping Pace with a Mobile Workforce: How Companies are Incorporating Mobile Workforce Solutions

**ADVANTECH**

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# Content

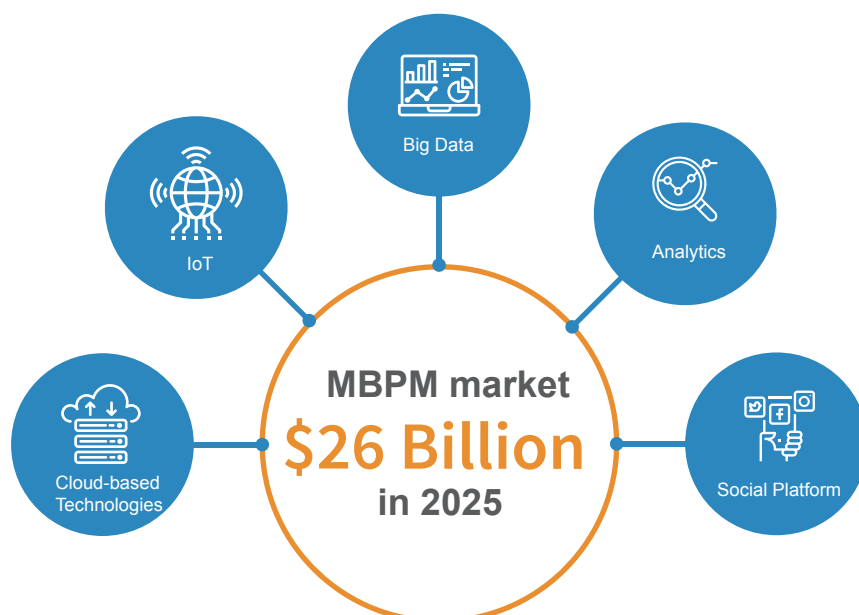
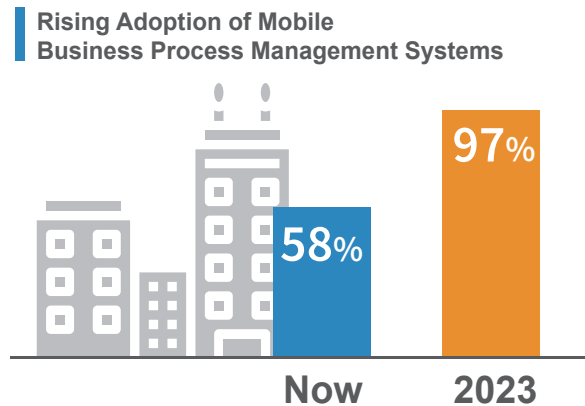
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<b>Keeping Pace with a Mobile Workforce: How Companies are Incorporating Mobile Workforce Solutions</b>	<b>3</b>
<b>Current Challenges Affecting Workforces</b>	<b>4</b>
<b>Streamlining Your Workforce with Mobile Business Process Management Systems</b>	<b>7</b>
<b>What Role Does Mobile Technology Solutions Play in Your Industry?</b>	<b>10</b>
<b>Mobile Technology Corrects Real-Time Communication Errors with Healthcare</b>	<b>11</b>
<b>Restaurant Chain Reduces Long Queues for Ordering and Payments</b>	<b>12</b>
<b>Production Line Enables Real-Time Monitoring for Prompt Error Identification and Correction</b>	<b>13</b>
<b>Conclusion</b>	<b>14</b>
<b>References</b>	<b>15</b>

# Keeping Pace with a Mobile Workforce: How Companies are Incorporating Mobile Workforce Solutions

By 2022 the global mobile workforce is expected to reach 1.87 billion workers. Workforces have evolved tremendously in the last decade to include a mix of telecommuting, remote work, field service and contract workers along with its in-office operations. Improvements to technology have made connected devices and the use of cloud storage a necessity in today's modern workplace.

The use of devices such as smartphones and tablets has increased dramatically in recent years and helped change the way business is conducted both inside and outside the office. The use of Mobile Business Process Management Systems (MBPM) have made it possible for business professionals to stay updated with real-time data even while working from a remote location. Currently, 58% of all companies are now expanding their use of mobile technology to enterprise-wide use. It is predicted that this number will reach as much as 97% by the year 2030. A rise in the adoption of cloud-based technologies, IoT, big data and analytics platforms is expected to further drive the mobile business process management (MBPM) market and reach \$26 billion in 2025. With the use of cloud-based technologies, workforce management systems, and analytics, more businesses have improved their overall mobile workforce strategy. Thus, creating an efficient operational workflow, reducing labor costs, improving customer satisfaction and ultimately increasing revenue.

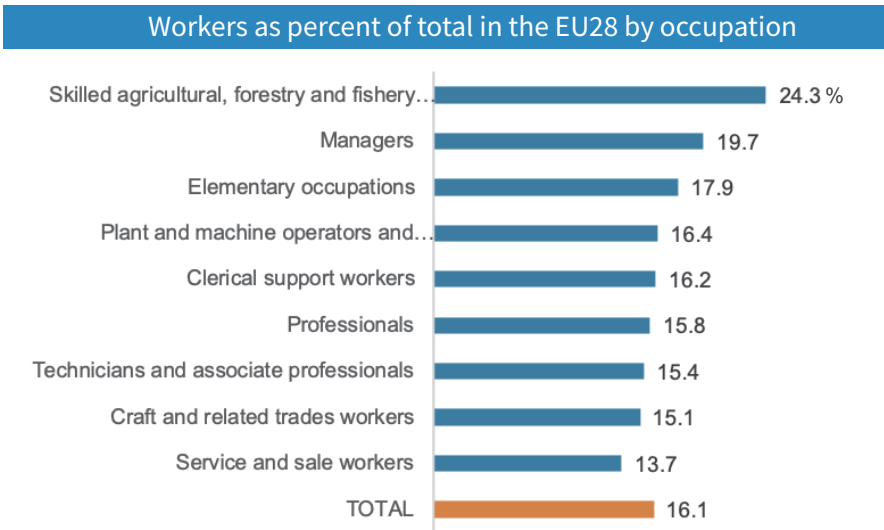


In this piece we will examine the current challenges impacting the mobile workforce such as the aging population, high labor costs, field management, technology, and how mobile business process management systems are streamlining these workforces.

## Current Challenges Affecting Workforces

### Aging Population

The U.S. population over the age of 65 will reach 75 million by 2031, almost double the amount in 2008. That still leaves a lot of time for technology to advance. And that means a lot of experienced professionals will need training on how to do their jobs in an entirely new way than they had in the past.



Source: Eurostat, European Labour Force Survey

Based on data from the European Labor Force Survey, workers who are age 55 and up are currently at 16% of the total workers in the EU. This percentage is expected to rise in the coming years. There are several countries where the number of aging workers is close to being one out of five. These countries include Germany, Sweden and Finland. These countries are also known to have more managers who are currently approaching retirement age.

With many professionals choosing to retire between the ages of 61 and 65, this has left some industries struggling to prepare for the major shift in their workforce in the years to come. Companies still using traditional methods will soon hire workers who are used to the high-tech and fast-paced mobile workforce. This means we need technology that is simple enough for everyone to use. But we also need advanced options available to those who have the knowledge and skills to use them accurately.

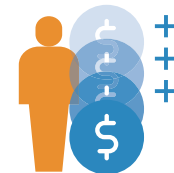
Businesses are adding more modern tools with basic features. This makes it easier for older professionals to transition to a digital workplace. At the same time, they also meet the digital needs of the younger generation of professionals who are now entering the workforce. Doing so helps cut down on training time while making sure clients and customers have the highest level of quality service.

## High Labor Costs

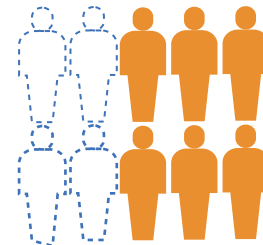
On average Fortune 500 companies are overspending by \$30 million dollars each year on labor costs according to a recent study by Deloitte. The study also found that on average, labor costs accounted for 60% of their overall operating expenses. In order for companies to ensure long-term sustainability it is vital for them to productively manage labor costs.

Inefficient labor scheduling contributes greatly to increased labor costs. In the event of overscheduling the number of employees or under scheduling, both can lead to a financial loss in the long run.

**\$30 million**  
Labor Costs Overspending



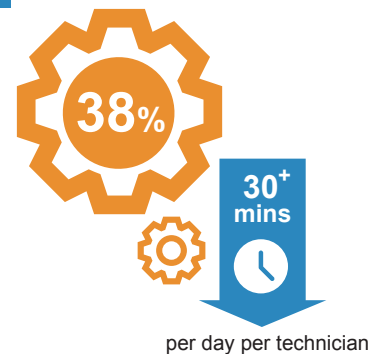
**60% Labor Costs**  
of Overall Operating Expenses



## Field Service Management Capabilities

Whether a field service workforce is made up of 10 employees or 100's deployed across multiple regions, managing each individual raises challenges for businesses. Real-time data visibility is crucial for workflow efficiency and customer satisfaction. According to The Service Council, 38% of organizations stated they can save 30 minutes or more per day per technician with slight changes in their workflow process. Most importantly, these basic changes could lead to average savings annually upwards of half a million.

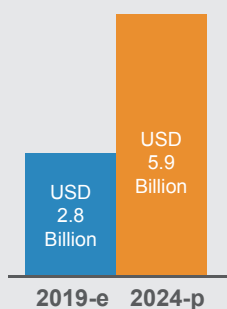
**Slight Changes in  
Workflow Process**



## Technology Investments

Companies face various difficulties when selecting and investing in new technology. There are a multitude of factors to consider when selecting the right devices and solutions for a mobile workforce. Some of these obstacles include their current IT infrastructure and hardware, compatibility with vendors, and the integration with the customer facing solutions. It is predicted that the field service management market will grow from \$2.8 billion USD in 2019 up to \$5.9 billion USD by 2024. The primary growth factor is the increase in demand for mobile solutions in the field. These tools will help to improve real-time visibility and increase the use of cloud-based field service management solutions across the board. Without formulating a strategy to tackle all aspects to create a streamlined workflow, companies will continue to struggle with implementing or scaling their mobile workforce.

**CAGR 16.2%**



- ▶ The global field service management market is estimated to grow from USD 2.8 billion in 2019 and is projected to reach USD 5.9 billion by 2024, at a CAGR of 16.2% during the forecast period
- ▶ The market growth can be attributed to the growing demand for mobility solutions to gain real-time visibility into field operations
- ▶ By industry vertical, the transportation and logistics industry is expected to grow at the highest rate during the forecast period, as increasing need to enable managers to schedule shifts, plan capacity, and track the location of people or goods in transit



## Streamlining Your Workforce with Mobile Business Process Management Systems

Workforce management systems help businesses optimize the productivity of their workers and improve profits. A workforce management system assists companies with managing end-to-end activities for resources deployed off company property. These systems can help configure the labor requirements for each worker to help you meet your goals for each day, week, or month. It allows you to keep up with scheduling for your staff and set a goal for tasks to be completed on a day to day basis. Overall, workforce management systems aim to improve productivity and deliverability of your mobile workforce.



## Benefits of Workforce Management Systems and Mobile Devices

### Eliminate the Frequency of Human Error

Human error is one of the biggest wastes of time and money for businesses. By using paperless methods such as field service devices and tablets and having the ability to double check documents before submitting them, businesses can improve production and their bottom line.

## Scheduling and Dispatch Optimization

Workforce management systems help accurately share and receive location information that allows workers to maintain service level compliance by minimizing drive time and selecting the optimal field worker for the job based on service needs.

## Data Sharing and Collection

These systems can also provide pertinent information workers would need for their dispatched job including service history, tools required and contractual information. Access to external resources such as service manuals, guides, and training videos. Along with the capability to record service notes, results, images, parts utilized, diagnostics and more.

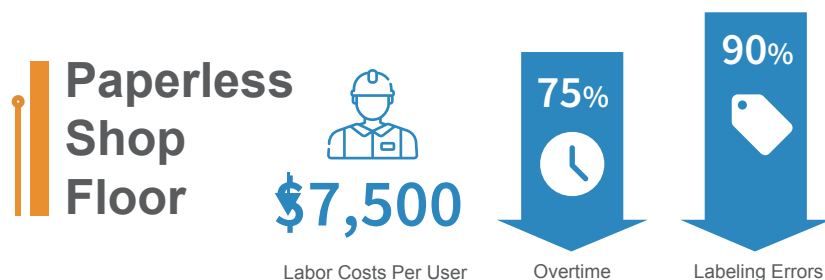
## Real-Time Analytics and Data

Streamlining your workforce means taking advantage of all the technology you have access to. Mobile devices along with management systems allow for real-time, two-way communication for dynamic circumstances they may encounter. Teams can easily respond, reorganize priorities, and handle unforeseen challenges in the field. Data analytics features can improve time management and keep track of inventory by using software programs that offer real time data and analytics.

## Paperless Operations

Advancements in technology make it possible to streamline workflow management. This allows employers to have better control of all aspects of their company. Dealing with piles of paperwork and sorting through file folders can be very time-consuming. Especially when you need to find that one file about a specific employee from two years ago. By transferring all your paperwork to computers, it is possible to find exactly what you need, when you need it.

Recent statistics have shown that companies who have already switched to paperless operations have seen up to a 75% reduction in overtime. They have also noticed a 90% reduction in their labeling errors. This has saved companies thousands of dollars in labor costs.



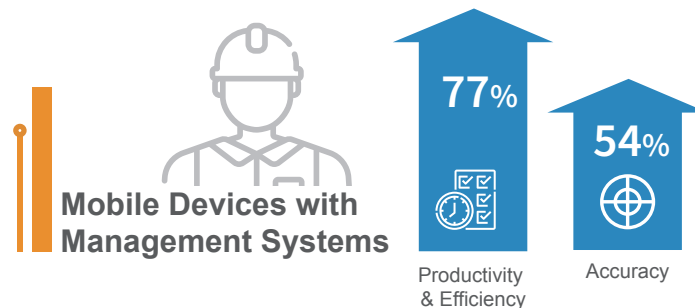


## Backoffice Integrations

Many of the daily tasks that were once only performed manually can now be digitized. This makes completing tasks like inventory or inspections much faster and more efficient. Mobile management solutions allow you to easily integrate with back-office systems including Enterprise resource planning ERP and Customer Relationship Management CRM systems to connect and align with field operations.

## Mobility with Hardware and Devices

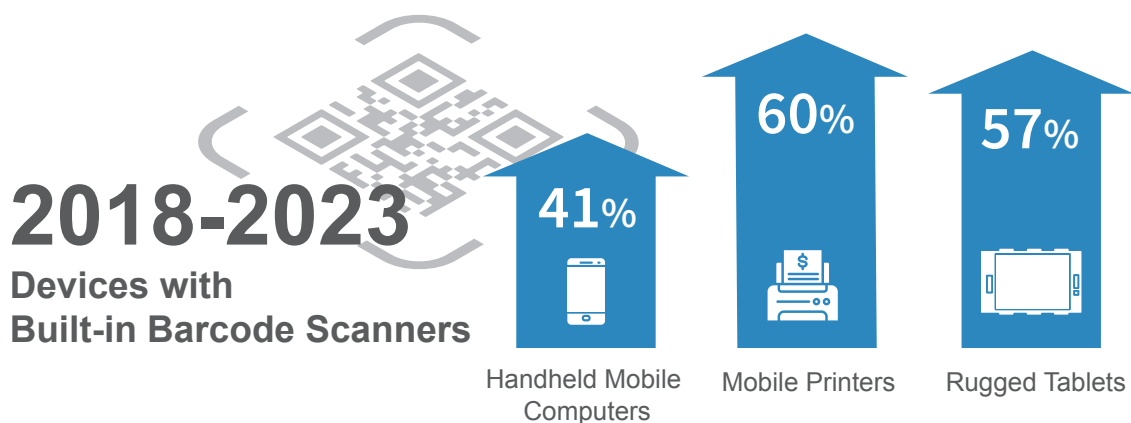
With a streamlined workflow process comes higher productivity. Field service devices, such as industrial-tablets, in-vehicle computers, and wireless scanners, offer flexible mobility from any location. Smartphones alone are not efficient enough to support the full functionality of management systems. These devices offer ruggedized protection from outside elements and constant use along with 4G and 5G LTE accessibility. Mobile devices along with management systems are known to improve employee productivity and efficiency by 77% with 54% accuracy fulfillment.



## Solution for the Aging Workforce

One of the biggest struggles that companies face with an aging workforce is, what will the impact on their company be if specific groups retire within the next few years? Will the company still have the strong industrial knowledge that it had in the past? Or will it be more dependent on the modern digital side of the business? To prepare for this massive change, company owners must begin to make the necessary adjustments to safeguard their industrial knowledge and ensure that it is passed on to the younger generation of workers. Workforce management systems offer a space for vital resources and industrial knowledge to be stored and accessed by employees for training and development purposes.

## What Role Does Mobile Technology Solutions Play in Your Industry?



Mobile technology has made it easier for businesses to address the needs of their customers in a fast and efficient manner. Between the years of 2018 and 2023, the use of handheld mobile computers that featured built-in barcode scanners is believed to increase by as much as 41% while the use of mobile printers are expected to increase by 60% and industrial tablets by 57%. As companies investment in technology upgrades, many have prioritize in mobile focused technologies versus traditional solutions that is easier to scale with operations.

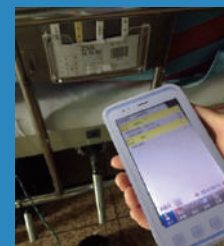
Mobile technology and IoT devices have empowered smart factories, hospitals, and retailers with devices such as handheld pc's, rugged tablets, barcode scanners, wearables, and printers.

Here are some more details on how mobile technology has changed the way things work in these popular industries.

## Mobile Technology Corrects Real-Time Communication Errors with Healthcare

One of the healthcare industry's biggest challenges is having mistakes on patient records due to human error. Today, healthcare has benefited from mobile technology advancements that help correct this issue.

The HUZHOU Central Hospital in China supports 1200 beds, 38 patient areas and 1.3 million outpatient appointments which also serves as a teaching school for more than 20 universities. The hospital looking to optimize their workflows with the latest technology sought mobile solutions as care-takers spend most of their time traveling from one patient to the next. With the MICA-51 handheld tablet nurses and doctors can now access hundreds of files for patients in a medical-grade tablet and update files instantaneously while the information is still fresh in their heads. They are able to administer care faster thanks to having all the details at their fingertips. The streamlined workflow management with handheld tablets help the HUZHOU hospital operate much smoother in order to provide the best care services to its patients.



## Restaurant Chain Reduces Long Queues for Ordering and Payments

Customer service and support in the restaurant industry is crucial for business success. Thanks to advancements in mobile technology, many retail companies can now provide their customers with fast and efficient service.

A well-known Thai restaurant chain with more than 138 restaurants throughout Taiwan was experiencing operational bottlenecks as customers were facing long waiting times for orders and payments. Because of the chain's increasing popularity, they were unable to continue their order processing in the same manner as before as it could not support the influx of customers. In an effort to improve the service quality, the restaurant adopted Advantech's AIM-35 tablet to enable tableside ordering. This solution not only reduced customer wait times by streamlining the ordering as they can send order quickly to the kitchen but also make checkout process easier at the table with tablet payment processing. This solution improved the restaurant's operational efficiency for increased profitability and customer service satisfaction.

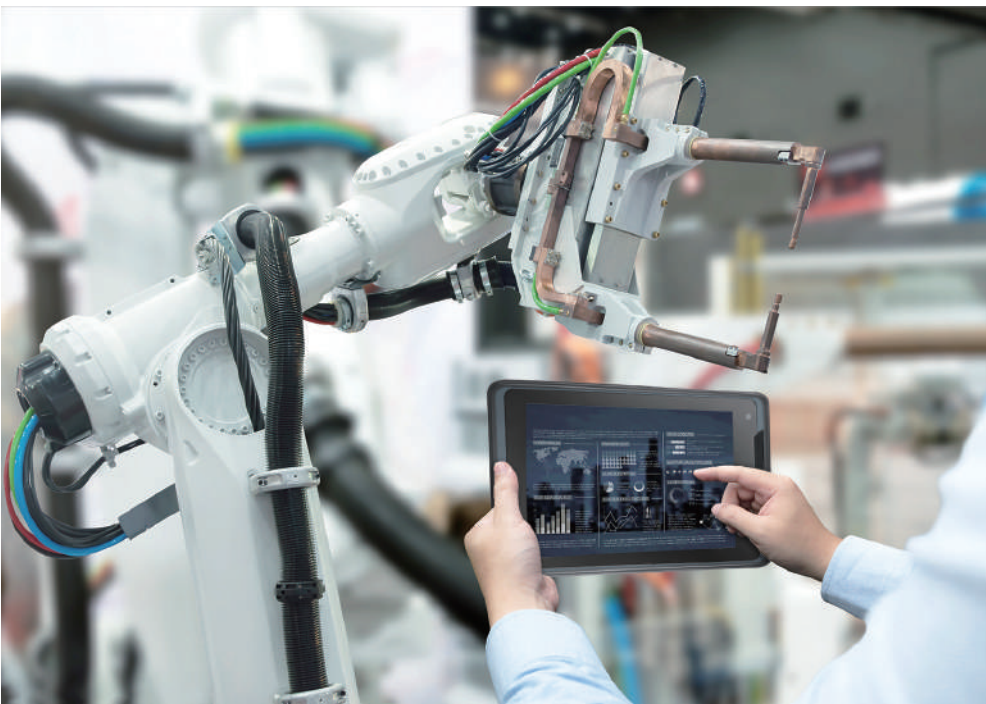




## Production Line Enables Real-Time Monitoring for Prompt Error Identification and Correction

A well-known washing machine supplier implemented a mobile tablet solution for their workforce to monitor their washer machine production line to enable real-time monitoring and prompt error identification and correction via the Internet.

As parts and components enter the assembly line, Advantech's AIM-65 industrial-grade tablets are used to scan product serial numbers to capture data of components as they pass through every station. This data is then recorded and transmitted to the back-end database for storage. Pictures of the assembled components are also taken to enable error correction if necessary. Throughout the entire assembly and data collection process, Advantech's AIM-65 industrial tablets are connected to the factory network for real-time data transmissions. The real-time data transmissions allow managers to monitor all production and assembly processes remotely in order to control error rates and promptly resolve any issues. The AIM-65 mobile tablet serves as a hub that connects all components with back-end systems, minimizing time wastage and improving operational efficiency.



## Conclusion

In order for businesses to keep pace with the increase in mobile workforce trends, it is crucial to invest in the proper workforce management solutions. Mobile workforce solutions make it easier for field workers to complete tasks from any location while making it simple for business to track and manage all the components that occur in field operations. This helps increase productivity and ensures companies meet their goals while increasing customer satisfaction. Ultimately, streamlining your business for future scalability.

With successful workforce management solutions businesses can easily:

- **Maintain a consistent operational workflow** that allows you to see better results. This is true when it comes to profits and customer satisfaction. With a consistent workflow for your company, you can have better insight and control over your processes. This gives your staff members clear direction and reduces errors. It can help improve the level of communication and collaboration between workers and reduce employee training time.
- **Improve customer focus** as consumers take notice when companies take the time to provide consistent and fast responses to their questions. Customers appreciate when a brand takes time to show interest in their concerns, and make the necessary adjustments. By using workflow optimization, employees have the tools they need to address customers with confidence and provide them with the answers they need.
- **Improve employee satisfaction** with reliable two-way communication and empower with quick access to training information, guides and resources needed to complete a job.
- **Resolve labor obstacles** such as the aging population dilemma and high labor costs by providing a system to manage all industrial knowledge resources for developing employees. As well as improving workflow efficiency with accurate labor forecast scheduling based on historical data and analytics optimization.

Implementing a mobile business process system for your workforce can help reduce operating costs by achieving high operational efficiency. Thus, saving you time and money.

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## About Advantech Mobile Computing

Advantech, a leading global manufacturer of industrial PCs, has extensive experience and experts, specializing in design and manufacture of high quality industrial mobile computing hardware and tailored software that fulfill exact needs for sectors such as gaming, healthcare, portable devices, retail, logistics and embedded systems.

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- **Contact:** [AIM@advantech.com](mailto:AIM@advantech.com)
- **Website:** <https://www.advantech.com/campaign/mobile-computing-solution>