

PROGLOVE

MANUFACTURING

Innovating
human-centered
productivity



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Manufacturing's success relies on the warehouse

Manufacturing warehouses are both blessed and besieged. Customer demand, driven by omni-channel marketing, is accelerating. Once predictable variables, such as the array of products and parts, supply chains, and ship-to's are now off the charts.

Customer demand requires customer satisfaction to turn this all into profitability. The only option is for warehouses to become significantly more productivity, which is measured in both speed and accuracy.

We believe that the best opportunity to drive serious increases in productivity is on the shop floor - the individual worker and the tools and technology for barcode scanning, the one operation that is integral to every process. Workers need next-generation tools and technology - tools that are ergonomic, faster, and more accurate; technology that eases the burden on IT and provides new insights on how to optimize processes and workflows.

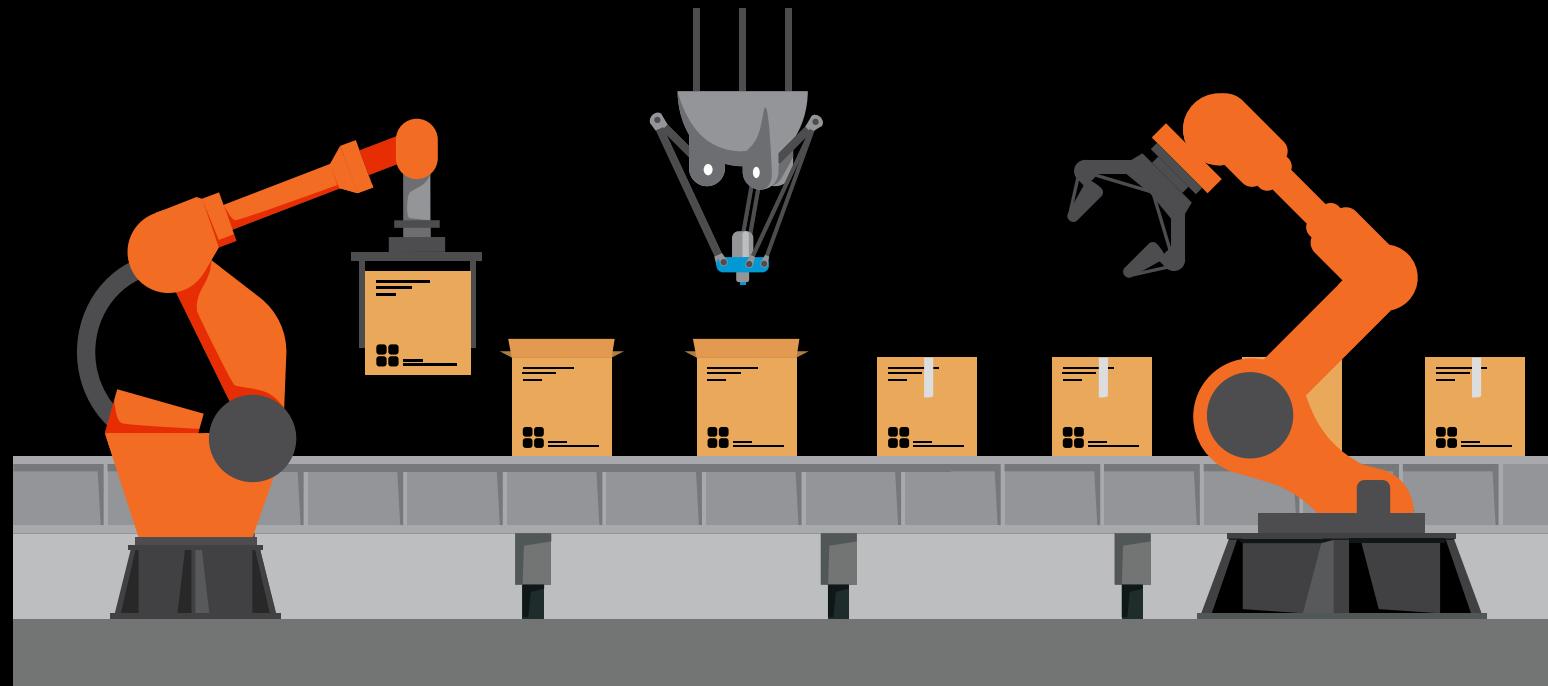
Customer satisfaction depends on the warehouse meeting all its OTIF obligations, all the time, over all obstacles. Growth and profitability depend on it. ProGlove's vision and innovation are the keys that unlock the vision and make it real.



3 challenges that are driving the need for warehouse productivity

1. The incredible range of products. As the makes and types of vehicles so does the volume and range of the component parts, posing a significant challenge to automakers and suppliers alike. Managing an extensive range of options requires substantial resources, increased production complexity, and a delicate balance between meeting consumer demands and maintaining cost-efficiency. Forecasting and managing the global supply chain can be a nightmare.

2. The aftermarket is exploding, evolving from single independent locations, to national chains of stand-alone outlets, to eCommerce-only parts. Retailers must offer tens of thousands of SKUs. Delivering the right item to the right place at the right time is essential. As demand, complexity, and competition increase, so do the challenges.



3. An unprecedented labor shortage.

This includes both skilled workers and professionals. The shortage of labor is not only limited to the warehouse and assembly line, but also affects engineers, designers, and other technical roles. Both retention and recruitment are suffering. This shortage leads to delays in production, increased labor costs, and a decrease in overall productivity.



Productivity starts with ProGlove

ProGlove's innovation solves today's productivity problems today delivering immediate and significant improvements to processes and overall warehouse performance.

Adoption of ProGlove's lightweight, ergonomic barcode scanners is almost instantaneous - it is almost instinctual. Notably, our devices enjoy a 90+% worker satisfaction rating.



CUSTOMERS REPORT

6 seconds
saved per scan

33%
reduction in
errors

27%
increase in
productivity

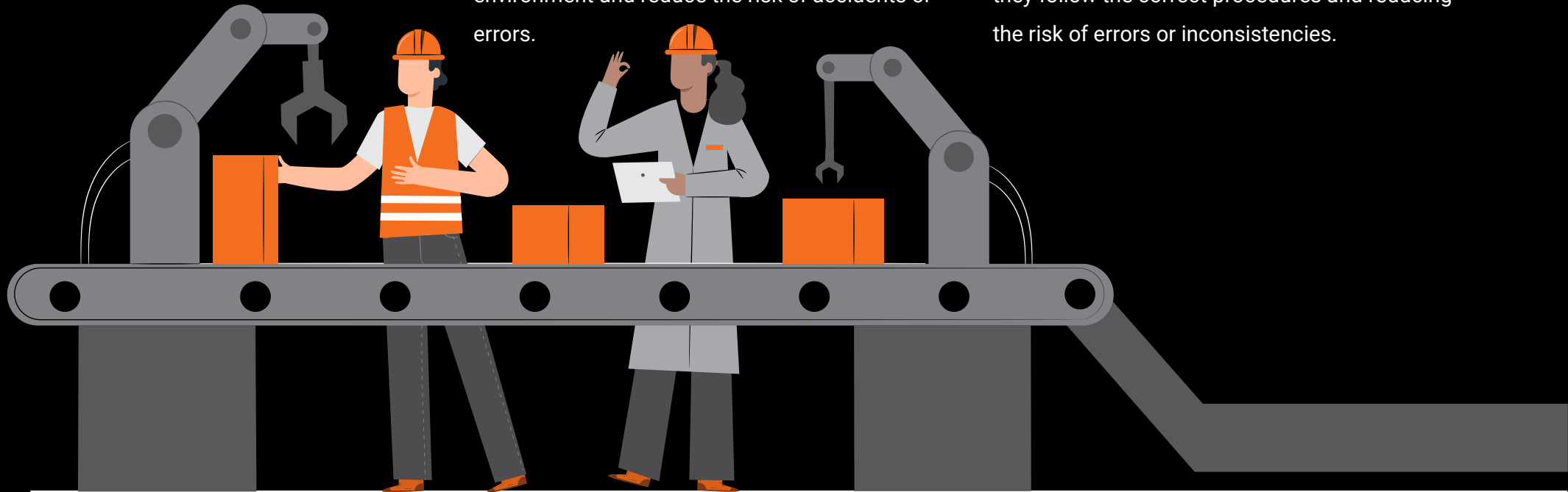


Safer, less stressful, more productive work environment

ProGlove scanners are lightweight, ergonomically designed, and wearable. Which means that workers always have both hands free, all the time. The repetitive motion required for handheld scanners is gone, as is the weight. Whether on the floor, a ladder or a forklift, workers are safer and less stressed.

ProGlove's clear ergonomic value translates into reduced physical strain and improved worker comfort, ultimately enhancing productivity and satisfaction. Moreover, hands-free documentation minimizes distractions and allows workers to fully concentrate. Our wearable scanners create a safer working environment and reduce the risk of accidents or errors.

ProGlove wearable scanners facilitate continuous workflows, leading to improved process quality and simpler documentation. By seamlessly integrating with existing systems, our scanners streamline the documentation process. The devices provides real-time guidance and feedback to workers, ensuring they follow the correct procedures and reducing the risk of errors or inconsistencies.



Enhanced mobility

With our wearable scanners, workers can stay on the move and accomplish more in less time, ultimately boosting the productivity and effectiveness of the entire workforce.

Our wearable scanners are designed to optimize mobility by allowing workers to move freely between stations and throughout the plant. By eliminating the constraints of traditional scanning methods or stationary workstations, our devices enable workers to carry out their tasks with greater flexibility and adaptability, and transition between different job sites or workstations without wasting time on unnecessary walks or delays.

Additionally, new data from the shop floor, available with ProGlove scanners, provides information to streamline all processes and layout.



ProGlove optimizes manufacturing processes

1 Assembly line

2 Staging

3 Incoming goods/Outgoing goods

4 Picking

5 Clarification Cases

1

Assembly line



Benefits

4 seconds faster per scan

Adopted by

ewe
... und nicht irgendeine Küche

BOSCH
Technik fürs Leben

Challenge

Assembly lines are meant to move fast, which means that the parts and kits must be there, ready and accurate, exactly when needed. Not a moment after. It is essential that all the processes that come before are optimized. Errors and bottlenecks will stop the line, with repercussions throughout the organization.

Solution

Introducing ProGlove's hands-free, lightweight, ergonomic barcode scanners dramatically increases the speed and accuracy of all processes feeding the assembly line. No need to pick up and replace heavy, hand-held scanners. Operations can be assured of faster throughput, no matter the size, number, or complexity of component parts.

2

Staging



Benefits

15 seconds saved on tucker train per stop

Adopted by

FESTO KUKA MAHLE

Challenge

The success of staging depends on maintaining inventory visibility, optimizing layout, and thus minimizing handling time, effort, and cost. Errors have a cascading effect.

Solution

Shop floor information, captured by ProGlove scanners, provides the information necessary to optimize layout to shifting customer demands, enabling a more efficient warehouse. Our wearable scanners ensure that workers are mobile, and have the most important information at hand, at all times.

3

Picking



Benefits

100% efficiency increase for picking teams resulting in 15% efficiency increase for overall warehouse operations

Adopted by

KUKA HORSCH 

Challenge

Storing, finding, and retrieving components from high racks with a forklift is a reality of warehouse operations. Workers often struggle with hand-held scanners while maneuvering the forklift, which can lead to errors, decreased productivity, damaged products, and safety concerns.

Solution

ProGlove is designed to allow operators to wear the scanner and effortlessly scan barcodes while keeping their hands free to operate the forklift and pick parts. This mobile, hands-free approach enhances accuracy, improves efficiency, and enhances worker safety.

4



Incoming goods/outgoing goods

Benefits

8 seconds faster per item

Adopted by



Challenge

Storing, finding, and retrieving components from high racks with a forklift is a reality of warehouse operations. Workers often struggle with handheld scanners while maneuvering the forklift, which can lead to errors, decreased productivity, damaged products, and safety concerns.

Solution

Workers using ProGlove scan barcodes on incoming and outgoing goods without the need for additional intervention or devices, ensuring real-time inventory updates, and seamless integration with production schedules. Additional quality documentation is accomplished by taking a photo with the same device, cutting process time.

5

Clarification Cases



Benefits

4% time savings (operator and process leader)

Challenge

Documenting and communicating clarification cases has become a time-consuming task. Currently, employees need to manually document the problem, and communicate it to relevant stakeholders. This approach often leads to inefficiencies, misunderstandings, and delays. Moreover, the lack of visual representation makes it difficult to accurately convey the exact nature of the problem, resulting in prolonged communication cycles and potential errors in understanding.

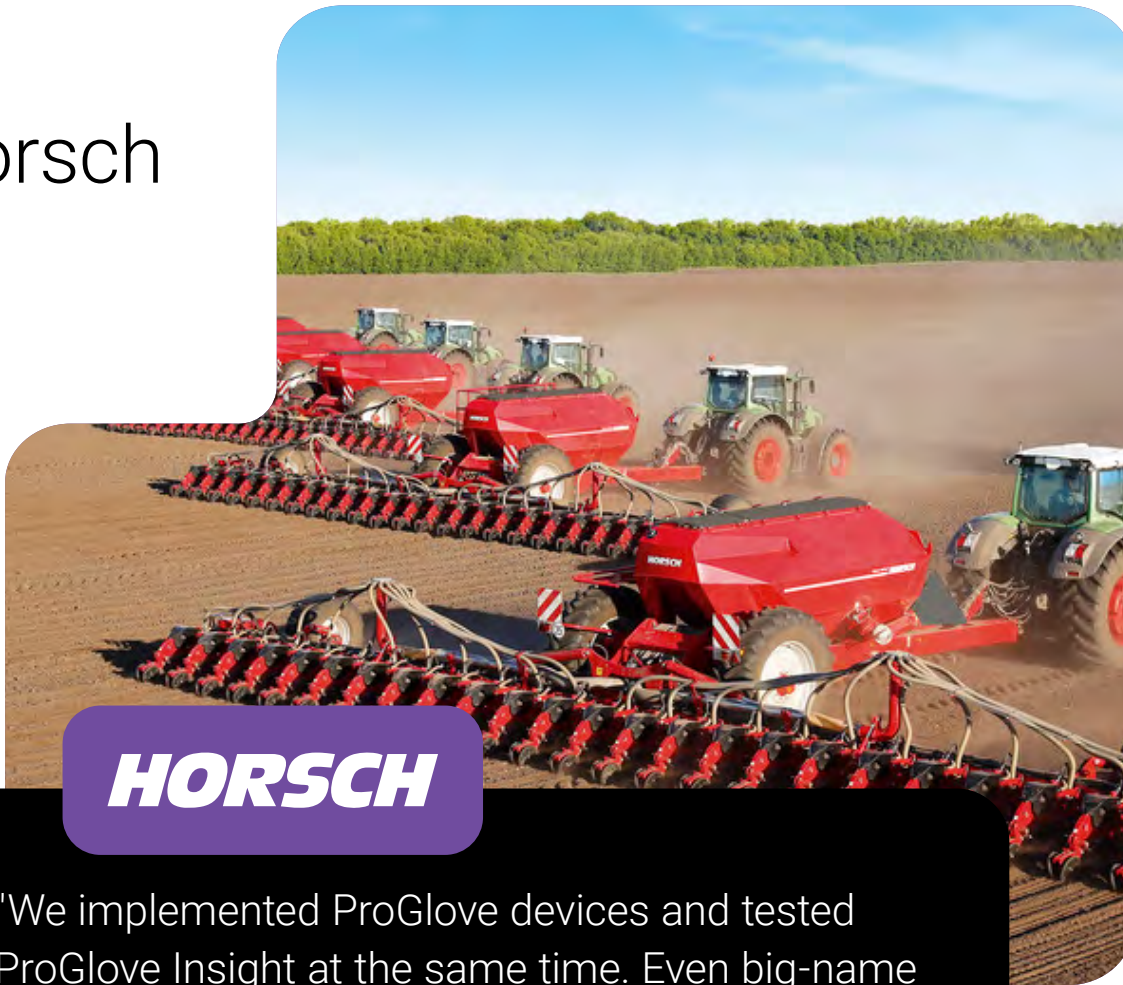
Solution

ProGlove scanners are more efficient at scanning barcodes and are able to take a picture of any situation that requires clarification. These images can then be sent, and stakeholders can react to the case asynchronously to better understand the context and specifics of the problem, leading to faster and more accurate resolutions.

ProGlove Success Story



Horsch



HORSCH

"We implemented ProGlove devices and tested ProGlove Insight at the same time. Even big-name technology companies, which have been in the market for a long time, cannot match ProGlove's performance"

CHRISTIAN JUST
Logistics Team Lead, Horsch

Challenge

Horsch is a leading manufacturer of agricultural machines worldwide. Their product portfolio ranges from tillage, seeding and crop care to hybrid agriculture. Their goal was to digitize operations - to eliminate paper (about 500 pages were required per shift), increase accuracy, minimize worker walk times, and identify outliers in picking to create a streamlined workflow.

Solution

ProGlove barcode scanners, with INSIGHT software, provide Horsch with new efficiency and process transparency. Workers have both hands free, and have all necessary information at all times. The efforts of different picking stations can be compared and optimized. Digital imaging makes it possible to track these projects over time and evaluate whether the initiatives are paying off.

Result

By equipping all warehouse workers with ProGlove's ergonomic, wearable scanners Horsch experienced an immediate increase in efficiency. Paper was no longer necessary. Workers always have the guidance they need, and both hands free for the task. Documentation became seamless. With all scanners connected to INSIGHT, operations can identify cluster picking patterns and identify best walking routes.

Biesse



"Thanks to the collaboration with ProGlove we have achieved our goal, we have made the daily lives of our workers simpler and easier, achieving maximum efficiency, and moving towards Industry 4.0"

MATTIA MORRI
Software Product Manager, Biesse

Challenge

Biesse is a world-class manufacturer of machines to process materials such as wood, glass, stone, metal, etc. To maintain its level of innovation and customer satisfaction, Biesse committed to evolving warehouse, and all operations, to Industry 4.0. The goals were to simplify, control, and optimize all production steps and processes while decreasing the stress and physical demands on workers.

Solution

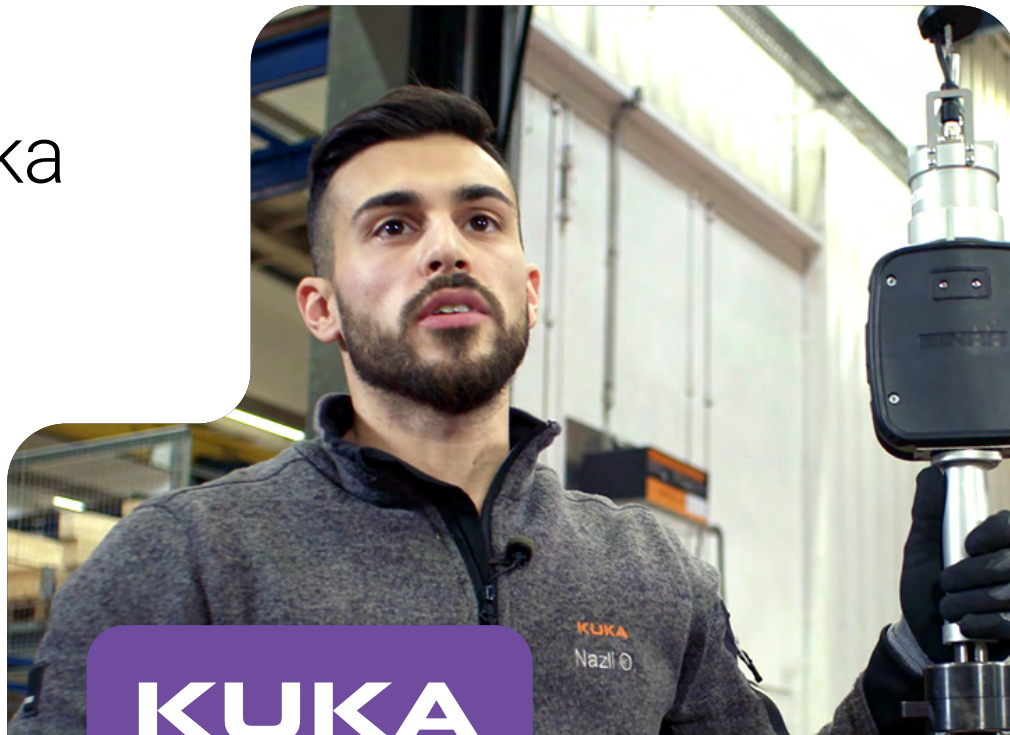
Implementing ProGlove's lightweight, ergonomic, wearable devices immediately improved the speed and accuracy of barcode scanning, which is central to all processes. Each worker has become more productive, safer, and more satisfied.

Result

With ProGlove, Biesse has been able to:

- Optimize operations and processes, improving efficiency
- Create a safer less physically demanding work environment
- Achieve a 33% reduction in errors
- Expand these benefits throughout international operations

Kuka



KUKA

"For us, the factory of the future is a smart factory - in other words, the human remains the focal point of operations and is supported by the robot. The cooperation between ProGlove and KUKA is an important step for us toward this factory of the future."

MARKUS HIRSCHMANN

Head of Logistics Operations, KUKA

Challenge

Speed and accuracy are the warehouse goals in satisfying OTIF requirements. However, working with conventional hand-held scanners was limiting workers' ability to complete their tasks in a limited amount of time, causing undesirable delays in receiving, shipping, and throughout all shop floor processes.

Solution

The introduction of ProGlove's lightweight, ergonomic, hands-free scanners immediately eliminated these delays, increasing both speed and accuracy, optimizing workflows and facilitating their Kanban processes. Scanning has become intuitive, documentation is easy and transmittable, and the shop floor has become safer. These devices have measurably moved Kuka towards their future vision of the factory.

Result

Warehouse operations is making strides towards zero: zero time wasted; zero errors; and zero complexity. Workers are able to achieve 4 seconds per scan, every step being hands-free. The correct materials are transferred in time while quality and accuracy have increased.

Ewe Kitchen



ewe[®]
... und nicht irgendeine Küche

"Acceptance among the employees was excellent from day one. There was a real struggle between employees over which workstation would be equipped with the new scanners next."

MICHAEL STERRER
Head of Engineering

Challenge

Responding to customer demand, Ewe Kitchens offers an amazing array of cabinets, finishes, heights, sizes, surfaces and more. To ensure the proper sequence for final assembly, each component is scanned as it enters the system. The required cycle time, 15 seconds, is very tight. Conventional hand-held scanners required about 4 seconds to pick up the device and put it down again, leaving little time to spare. Workers were also unhappy with the weight, size, and awkward movements required.

Solution

ProGlove scanners were introduced and were quickly up and running at the first workstations. Because of their "plug and play" design, little adjustment of processes or data structures was required, and these devices are now used throughout the entire process, from picking, to the staging of components, to final assembly. Worker acceptance is driven by their light weight, wearability and ergonomics, and simplification of workflows.

Result

Cycle times, accuracy, and process reliability are much improved. Configurations can be guaranteed - all components are delivered to the assembly lines in sequence and just-in-time. ProGlove scanners have brought them closer to their goal of zero defects. ProGlove technology, recently introduced, holds the promise of new advances with the combination of workers and data.

Kickstart your productivity

Take the ProGlove Challenge

Let us show you, in your environment, the kind of productivity ProGlove delivers. 30 minutes, on your shop floor with your workers, our scanners vs yours. We call it the ProGlove Challenge. There's very little to lose and a lot of productivity to gain.

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