

WHITEPAPER

Big tech for small businesses

How SMBs can utilize voice
and AMR technologies

Introduction

Distribution centers (DCs) are no longer exclusively large enterprises. Small-to-medium sized business (SMBs) play an increasing role, but still need to compete on a level playing field.

The key lies in process automation. Yet it is not enough just to automate. DCs need dynamic intelligence that adapts to them—not the other way around. And SMBs need technology that is non-discriminatory, helping them compete equally with larger businesses despite budgetary constraints.

Providing productivity, accuracy and safety benefits, technologies such as voice picking and autonomous mobile robots (AMRs) tick all the right boxes for SMBs.

Challenges for SMBs

Operational constraints

SMBs face some distinct challenges compared to their larger competitors. Budgetary constraints restrict their ability to invest capital expenditure (CAPEX) in emerging technologies. They may also have space constraints within their physical operations, while at the same time having to maintain a similar throughput compared with the bigger companies. And in an industry where labor is becoming scarcer, finding the right people for the job is a growing challenge.

Maintaining quality

In any organization, quality is a significant factor. For SMBs, with higher customer acquisition costs, losing just one client could be catastrophic. Every single customer interaction needs to be executed perfectly.

Cost per error

The cost per error is equal for a larger enterprise or an SMB—around \$20–30 for an ecommerce shipment. But the difference is that an SMB would find it more difficult to accommodate such costs over a prolonged period. If you are only maintaining around 95% accuracy, these costs could amount to as much as \$200,000 every year.



“Our software-as-a-service (SaaS) models have an OPEX rather than CAPEX approach. Deploying these technologies doesn’t need to be cost prohibitive.”

Peter LaGow

Senior Business Consultant, Infios



Voice and AMR summarized

Voice is the most current state-of-the-art technology for DC picking processes. It works by sending verbal instructions to the operative, fed through a headset which is connected to a mobile device on their belt. They are able to confirm each step through a microphone in real time, before moving onto the next task. Through voice, they can work hands free and eyes free, and without spending time recording data onto a clipboard or handheld device. In turn, this boosts productivity, accuracy and safety.



AMRs are the latest innovation in warehouse autonomous intelligence, taking on many manual movement activities such as intricate product picking, fulfillment and pallet moving. By taking a digital map of their environment through sensors, cameras and embedded safety mechanisms, they move without the need for guidance by rails or tracks. This also provides more utilization space within the warehouse. They can detect and move around objects or take alternative routes with no instruction.



Benefits for SMBs

Immediate tangible benefits

With the rise of ecommerce, SMBs, along with their larger competitors, have needed to accommodate big increases to overall volume—particularly with the onset of COVID-19. To address this, voice technology is proven to have low overall impact on the business, compared to complex software applications or additional automated physical infrastructure. At the same time, voice produces an almost immediate 20–25% productivity increase, helping you maintain productivity levels with reduced labor resource. This means you get more out of your existing labor force. It is also extremely easy to use. So, for DCs that are growing their business, it would be hard to find a better “phase one” technology than voice. Certain AMR solutions also have minimal impact on the business, delivering immediate tangible value when deployed within the existing environment.

Overcoming operational constraints

AMRs enable SMBs to operate at the same scale as larger enterprises but on a smaller budget. They can overcome the constraints of their operating environment—whether they are labor availability, space utilization or budget, in a way that is affordable and easy to use.

Increased accuracy

Both voice and AMRs can direct workers on what they need to do and keep them focused on the task. Both reduce training times, decrease reliance on temporary labor and greatly reduce errors. Voice and robots show you the item you need to pick, its location, whether you have scanned it correctly and where to place it. Throughout the process, the worker remains hands free with no need for scanners or other hand-held devices.

Scalability

For SMBs looking for growth, both voice and AMR solutions are completely scalable to every step of your journey. Both are technologies that a DC can deploy early on and that can grow simply by adding more AMRs, or more devices within your already-established voice picking processes. You also significantly decrease your training time, making it even easier to scale. You can increase your capacity simply by adding more robots, without increasing your headcount.



No need for large CAPEX

The robotics-as-a-service model is financially tailor-made for SMBs to take advantage of AMR. Through monthly leasing they have the flexibility to scale up or down when needed.

Critical success factors

When considering the implementation of a voice picking and/or AMR solution, there are some crucial considerations to get right:

- There are no typical timelines for design and deployment—it depends to a large extent on the system and degree of integration. Your provider should be able to advise you on this. Still, while voice and AMR technologies can both be designed quickly, the best results still take time to achieve. Allowing your provider to conduct proper due diligence delivers the best outcome. Your employees will also need time to get used to the system.
- It is vitally important to educate your workforce on the solution you are implementing and why. Change management is one of the most crucial aspects in deploying modern technology, particularly with AMRs. It is critical to conduct information sessions and communicate to your employees what is going to change and how. This is even more essential for SMBs.
- It is also important to understand that while AMRs automate tasks, they are not explicitly designed to replace everything that people do. AMRs are best used to redesign workflows and improve your existing operations. When considered in this way, they provide the best value.



“There is a misconception that AMRs may be complex to use. On the contrary, they have straightforward usability and simplify a DC’s operations.”

John Santagate
Vice President Robotics



Android: a game-changer

Android is a universal business platform that doesn’t incur heavy costs. It can pull together technologies such as RFID or Bluetooth and integrate with almost any other system. If you chose to, you could run your entire DC on Android using just one device to connect to your voice, AMR and other warehouse processes.



Why Infios?

With two decades of dedicated voice experience, Infios has grown to be the world's largest industrial voice integrator, with over 1,300 voice customers worldwide. And with the world's most robust AMR capabilities, we implement the best-fit robotics solution tailored to your needs. Our strengths lie in:

- Our global presence with local support wherever you are located
- Our expert knowledge in Android integrations
- Our process knowledge in integrating voice and AMR solutions
- Our technology leadership, with solutions tailored for every company size, sector and use-case
- Our software compatibility which integrates with your key host systems
- Our solutions scalability, allowing you to keep aligned with the changing needs of the business

We understand that each customer has a different set of circumstances, and pride ourselves on the thorough due diligence we conduct before designing and deploying any solution. Our main aim is to be a long-term partner for our clients.

We work with you during implementation to ensure every detail of your system works with optimal functionality, and on an ongoing basis once the system is operational to make sure it is delivering maximum performance. As your business dynamics change, Infios is on hand to support your emerging needs.

CONCLUSION

All said, it is important to put into perspective the benefits you will receive from your best-fit solution. For example, it is estimated that the picking process comprises around 70% of a DC's labor costs. Within this percentage, you can easily gain 20% productivity improvements through voice. Looking through that lens, one can see the significant productivity gains you can yield within your overall operation.

When considering a voice or AMR implementation, look at where your labor spend is highest. If material handling time is your main pain point, AMRs may be a best first-phase solution. If, on the other hand, most of your labor is concentrated on picking, then voice may be your best starting point.

The uses for both voice and AMRs continue to proliferate, particularly when integrated. We are already seeing examples of voice-directed robots. And as SMBs become an increasing and important aspect of DCs, the possibilities will continue to expand.

Should you consider migrating to a voice picking system, AMR solution, or upgrading your existing systems, please visit our website for more details:

Find out more

Learn more about our AMR solutions:

[READ MORE](#)

Learn more about our Voice solutions:

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