Closing the mid-market fulfillment automation gap

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How physical AI-powered infrastructure can become accessible to all

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As companies look to meet rising customer expectations, warehouse

operators are increasingly turning to physical AI systems, including AI-enabled robotics and intelligent software, to support fulfillment operations. Technology is a powerful lever for improving fulfillment consistency, visibility, and speed, but access to these advancements remains restricted to the largest entities.

The largest retailers, marketplaces, and logistics providers have the resources and capital to invest in, build, and rapidly scale advanced, physical-AI-powered fulfillment infrastructure. Yet, at the same time, roughly 80% of warehouses still operate manually without advanced automation. This is because smaller and mid-market operators are often unable to adopt advanced technologies due to high upfront costs, long deployment timelines, and lack of access to expertise, leaving these organizations at a growing disadvantage.

Closing this access gap is critical to keeping these organizations competitive, and it will require infrastructure models that make physical AI easier to deploy, scale, and operate.

The gap is not a lack of demand for automation, it is a lack of access to deployable infrastructure.

Mid-market operators are required to deliver faster, more accurate, and more flexible fulfillment as customer expectations rise. At the same time, fulfillment is becoming more complex, with more SKUs,

shifting order volumes and seasonal peaks, increasing omnichannel demand, and labor constraints. This is adding pressure on operators as they attempt to balance these expectations with the infrastructure available today.

While operators recognize the need for automation, many are challenged by solutions that are too expensive, disruptive to existing operations, or overly complex to integrate.

The alternative for these organizations is the Warehouse-as-a-Service model. Instead of building each element of an automated fulfillment operation from scratch, the model enables organizations to access shared or externally managed warehouse infrastructure, technology, and operational capabilities. This shifts automation away from a costly, time-consuming endeavor and provides easier access to advanced capabilities without capital investment, specialized expertise, or operational burden associated with building automation from the ground up. For organizations exploring this approach to automation, the path forward begins with three steps: identifying a pilot, selecting a partner who can best support that pilot, and incorporating lessons learned to guide broader adoption.

Step 1: Identify a pilot that can demonstrate value

Deploying physical AI should not require a complicated or disruptive

facility-wide overhaul. Instead, operators should begin with a pilot where automation has the clearest operational impact.

This could include fulfillment-specific capabilities like AI-enabled orchestration, intelligent sorting, automated parcel movement, or robotic picking support. The right pilot should have clear goals, such as increasing picking accuracy, improving throughput, or reducing costs, so that operators can measure outcomes to demonstrate value. A targeted pilot also limits disruption and provides an opportunity to assess a capability before incorporating it into the organization's broader operation.

Step 2: Select a partner that can support the pilot

To be successful, mid-market organizations should select a partner that can support the specific requirements of the pilot. Evaluating whether potential partners can integrate with existing warehouse management, inventory, and order systems is critical to reduce friction. Mid-market operators often cannot afford to redesign their operations around a single automated solution, so external infrastructure and technology should work within the broader technology environment and established processes.

Step 3: Learn from the pilot and scale up

Access to pre-built infrastructure can reduce the burden on mid-market operators to assemble and support automated systems themselves. A pilot should be treated as a learning opportunity as much as a technology deployment. Operators should assess whether automation delivered value, where workflows still require improvement, and where additional opportunities exist elsewhere in the operation.

These lessons can inform the next stage of growth and automation. Using the results of the pilot, organizations can expand automation across other workflows, incorporate additional capabilities, or determine whether an alternative approach is needed.

Closing the gap requires changing how automation is delivered

Mid-market operators are central to the supply chain, but the traditional model for adopting automation was not designed for these organizations. This demands significant investment, long implementation times, and the operational burden of assembling and deploying technology in-house.

Closing the mid-market automation gap will require a different model, incorporating shared, pre-built infrastructure such as Warehouse-as-a-Service that gives organizations access to advanced robotics and operational support without requiring them to build their own

enterprise-scale infrastructure. This also gives organizations a more practical way to begin, introducing automation in waves to ensure performance before expanding.

The future of fulfillment will not be defined by technology alone but by how effectively organizations put it to work.

As physical AI continues to advance, organizations that begin testing and learning today will be best positioned to understand where automation can create meaningful value within operations and identify opportunities for broader adoption. The time to start is now; as more organizations build experience with these technologies, waiting to take risks widening the competitive gap, making it even more difficult for mid-market operators to catch up.

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