



The Mobile Robot Company

Knowledge Center — Our Approach to Automation · 2026-08-04

<https://info.mobilerobot.com/company/about/our-approach-to-automation>

Our Approach to Automation

The Mobile Robot Company builds automation that adapts to people rather than the other way around. This page explains the design principles that shape the [J1600](https://info.mobilerobot.com/products/j1600/overview/) and the company's view of where automation delivers the most value.

A new tier between manual and fully automated

[Most pallet transport today is manual](https://info.mobilerobot.com/documentation/concepts/pallet-automation-fundamentals/): flexible, but full of [repetitive walking](https://info.mobilerobot.com/applications/results/reduction-in-manual-walking/) and travel time. Full automation removes the labor but often requires expert configuration, [systems integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/), infrastructure, and stable processes. The company's [dual-mode](https://info.mobilerobot.com/products/j1600/dual-mode/) approach occupies the space between the two — manual control is preserved, the travel portion is automated, and the target is up to 80% of the [productivity benefit](https://info.mobilerobot.com/applications/results/productivity-improvements/) at a fraction of the cost and complexity of full automation.

Model	Setup	Flexibility	Labor saving
Manual pallet jack	None	Full manual flexibility	None
J1600 dual mode	Hours	Manual control plus saved autonomous delivery	Up to 80% of operator time on target travel
Fully automated system	Weeks or a longer project	Preprogrammed, expert-configured	Up to 100% of task labor, if fully automated

Design principles

1. **Operator authority.** [A person initiates work and decides when the machine may enter autonomous mode](https://info.mobilerobot.com/safety-compliance/safe-deployment/operator-responsibilities/).

2. **Automate the walking.** Repetitive transport, rather than every nuance of pallet handling, is the principal target.
3. **Familiar tool.** The tiller and manual behavior should feel like a conventional electric pallet jack.
4. **Low threshold.** [Training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>) takes about 30 minutes; standard use requires neither mandatory Wi-Fi nor a systems project.
5. **Flexible change.** Operators add locations by driving and saving them rather than calling an automation expert.
6. **Progressive scale.** [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), [VDA 5050](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>), APIs, automatic charging, and [fleet management](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>) remain available when needed.
7. **Economics for smaller operations.** The company explicitly targets [single-shift SMEs with one to five pallet-jack operators](https://info.mobilerobot.com/company/about/markets-we-serve/) (<https://info.mobilerobot.com/company/about/markets-we-serve/>).

Why 80% and not 100%

The final part of pallet work — checking a pallet, placing forks, judging an unstable load, choosing an improvised drop point, reprioritizing a production need — is disproportionately difficult to automate. Removing the operator entirely can require warehouse-management-system and fleet integration, infrastructure, expert configuration, and tightly controlled processes. By leaving those decisions to a person and automating the long travel, dual mode delivers most of the gain with greater flexibility and a lower entry cost. The full argument is in the [Human-in-the-Loop Philosophy](https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/) (<https://info.mobilerobot.com/company/about/human-in-the-loop-philosophy/>).

Lessons from highly automated facilities

[A company visit to a major e-commerce cross-docking facility](https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/) (<https://info.mobilerobot.com/newsroom/stories/behind-the-scenes/>) reinforced this approach. Even at a site with major robotics adoption, not every process was automated, some robotic systems were being phased out in favor of reliable conveyors and sorters, minor mechanical downtime of under 10 minutes could occur several times per day, and layout, flow, buffer, and SKU-mix changes could occur several times per week. The conclusion: [flexibility and robustness](https://info.mobilerobot.com/applications/results/operational-flexibility) (<https://info.mobilerobot.com/applications/results/operational-flexibility>).

y/l are business necessities even in highly automated operations — autonomy for repetitive travel, with immediate manual control when conditions change.