



DARVIS Digital Shelves

A Solution For Periodic Automatic Replenishment (PAR)
and Procedure Room Core Locations

Unlock Operational Excellence in Healthcare Supply Chains

Drive down costs with AI-powered zero-touch inventory automation.

DARVIS Digital Shelves® is an AI-driven computer vision solution designed to provide real-time, 24/7 visibility into physical inventory operations for PAR and Procedure Room Core locations, specifically designed for healthcare systems.

Challenges

Managing inventory presents several challenges, primarily stemming from: lack of real-time visibility, manual processes, maintaining accurate levels, labor shortages, capital tied up in excess inventory, vendor managed inventory, and chargeable inaccuracies.

By automating supply tracking and transforming manual processes into data-driven operations, this solution helps organizations optimize staff utilization, cut waste, improve operational efficiency, and ensure compliance, ultimately freeing clinical staff to prioritize patient care.

External spend for supplies, pharmacy, and purchased services makes up 30 to 40 percent of a typical health system's total cost base, and optimizing clinical supplies spend is a critical method to consider for reducing total costs.

— McKinsey & Company

The Solution

DARVIS Digital Shelves

The DARVIS solution, a cloud-based SaaS platform, uses high-precision cameras to capture shelf images. It leverages AI-driven computer vision to automatically process these images to identify, track and monitor objects and their fill levels. This data is then converted into real-time insights, delivered to a user-friendly dashboard and integrated into existing management systems. The solution includes:

Visual Core & AI:

- AI-Driven Computer Vision: State-of-the-art computer vision installation proactively manages stock visibility.
- Dynamic PTZ Camera Systems: High-precision PTZ (pan-tilt-zoom) cameras ensure comprehensive coverage of all SKUs, boxes, and shelf locations.
- 24/7 Real-Time Monitoring: Guarantees continuous monitoring of inventory fill-levels, providing instant, actionable insights.

Seamless Barcode & QR Code Automation:

- Autonomous Scanning: Cameras automatically identify, zoom in on, and scan barcodes and QR codes throughout the environment.
- System Integration: Automatically syncs consumption data into your existing ERP and DARVIS platforms.

Predictive Analysis & Proactive Alerts:

- Automated PAR-Level Management: AI engine compares current inventory data against your custom pre-set PAR levels.
- Detailed, Category-Specific Analysis: Delivers refined data analysis organized by SKU, room, shelf, and location, matching your ERP configuration.

Operational Impact

Our solution drives cost savings and efficiencies in the following areas:

- Process accuracy improvement 7%
- Manual labor reduction 33%
- CAP baseline reduction 50%
- Reduced expired product 50%
- Vendor managed inventory reductions 10-15%
- Reduced inventory 50%

Yes, we were able to decrease stockouts as automation helped us catch 30% more orders than our manual approach while reducing headcount and increasing inventory turns from 6.5 to 12.

— Executive Director
Materials Management Systems & Support
Large Southwestern U.S.
Academic Medical Center

Features & Benefits

Implementing an AI-driven inventory system enhances cost efficiency by preventing stockouts, minimizing waste, and improving billing accuracy, while boosting operational efficiency through workflow automation, real-time visibility, ensuring a lean responsive supply chain.

Feature	Benefit
24/7 Inventory Monitoring: Continuous, real-time tracking of inventory fill-levels using AI-smart cameras.	Gain complete visibility. Immediate, real-time insights into stock levels and movements across all locations enable more informed on-the-fly decisions.
Zero-Touch Scanning: Automated barcode and QR code scanning via computer vision, removing the need for manual staff intervention.	Frees up clinical staff. Removal of manual scanning and data entry ensures a consistent process for inventory management, allowing staff to focus high-value patient care.
AI-Driven Analytics & Reporting: Comprehensive dashboard providing actionable insights into consumption trends, location-based availability, and predictive forecasting.	Enables smarter decision-making. Data-driven insights help you align inventory with demand to minimize excess stock and free up working capital, ensuring the right supplies are always available.
Seamless ERP Integration: Plug-and-play connectivity with existing Enterprise Resource Planning (ERP) and Point-of-Sale (POS) systems for a smooth transition and unified data flow.	Provides a unified source of truth. Ensures smooth adoption and eliminates data silos, making implementation easy while maintaining consistency across all management platforms.
Automated Reorders: Capability for setting up auto-replenishment to prevent stockouts and manage optimal stock levels.	Guarantees optimal stock levels. Predictive analytics and real-time monitoring help maintain optimal inventory levels, eliminating costly-last minute orders and expedited shipping.
Expiration Alerts: Real-time notifications for expiring products to help reduce waste.	Significantly reduces waste and costs. Automated tracking of expiration dates and product lots improves compliance and enhances the management of recalls.
Scalable & Privacy-Compliant: A flexible, scalable SaaS platform built with privacy standards in mind.	Grows with your business securely. A solution that scales effortlessly across multiple locations while strictly adhering to data privacy regulations.

DARVIS: Committed to Data Security & Global Compliance

DARVIS maintains compliance across the following critical areas: AICPA & SOC 2 standards, CCPA (California Consumer Privacy Act), and EU GDPR (General Data Protection Regulation). To comply with FTE Tracking requirements, people in view will be rendered unrecognizable through blurring or blacking-out methods. Mandatory badge scanning is required in some instances for positive identification.



Get Started

Ready to achieve operational excellence in your supply chain? Contact us to request a demo at contact@darvis.com.

About DARVIS

DARVIS uses AI-powered computer vision for 24/7 automated inventory management for healthcare systems, providing real-time visibility that boosts operational efficiency and reduces costs. Seamless system integration ensures compliance and patient safety by preventing stockouts and managing expiration dates, freeing clinical staff to focus solely on patient care. Learn more www.darvis.com.

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