

VIVIDCLOUD CASE STUDY

Dematic iQ Optimize – Warehouse Execution System

Executive Summary

VividCloud partnered with Dematic to accelerate deployment of Dematic iQ Optimize, a next-generation Warehouse Execution System (WES). By introducing throughput-based forecasting, eliminating low-value scope, and leveraging automated simulations, the program not only stabilized operations but also achieved production cutover six months ahead of plan. The result: an optimized, resilient distribution center powered by Dematic iQ's advanced orchestration of labor, automation, and real-time decision making.

Customer Challenge

Dematic's client faced mounting pressures:

- Tighter cycle times driven by customer expectations for faster, cheaper, more accurate delivery.
- Rising labor costs and fragmented system management across WMS, WCS, and manual processes.
- A late, over-budget WCS rollout threatening distribution operations.

The organization needed a flexible, scalable software platform to unify management and control functions, while regaining confidence in its deployment roadmap.

VividCloud Solution

VividCloud collaborated with Dematic to implement Dematic iQ Optimize, applying turnaround strategies focused on execution discipline and operational outcomes:

DEMATIC

Dematic is an American supplier of materials handling systems, software, and services.

As part of the KION Group, which generated approximately \$12.4 billion in revenue in 2024, Dematic continues to expand its global footprint and innovation leadership. With over 10,000 employees worldwide and engineering and manufacturing centers across more than 26 countries.

They design, build, and support intelligent automated solutions for manufacturing, food & beverage, warehouse logistics, and retail order fulfillment.

Industry: Robotics and Warehouse Automation

Location: Atlanta, GA

Website: [Dematic.com](https://www.dematic.com)

Right-Sized Estimation & Planning

- Adopted throughput-based forecasting (historical cycle times + WIP limits) instead of effort-only sizing
- Broke delivery into installable slices (area/shift level) with explicit Definition of Ready/Done across WMS/WCS touchpoints
- Used feature flags and capacity-based planning to prevent overcommit

Scope Reduction for Maximum Value

- Audited the backlog and cut redundant or unused features (unused reports, code churn, duplicative config)
- Reframed change control around measurable operator outcomes (misroutes, touches, recirculation) instead of “nice-to-haves”
- Introduced “kill switch” timeboxing for low-benefit tasks

Automated Testing & Simulation

- Built high-fidelity emulators for conveyor sensor events and third-party services to test routing at scale
- Implemented CI gates: unit tests for routing logic, contract tests for integrations, and black-box simulations for latency
- Instrumented telemetry (decision logs, p95/p99 latency, fallback rates)

Outcomes

- Schedule Recovery: Achieved production cutover six months ahead of the revised plan
- Operational Stability: No major incidents during go-live or 6 months of subsequent operations
- Quality: Only minor/non-blocking defects post-deployment; uninterrupted material flow to surface defects before floor deployment
- Performance Gains (from iQ Optimize):
 - Faster cycle times via real-time orchestration of labor & automation.
 - Lower operating costs through smarter resource utilization
 - Improved customer satisfaction with accurate, on-time, priority-aware fulfillment

Conclusion

Unlike many system integrators that emphasize only controls implementation, VividCloud applied the rigor of modern software engineering practices to the Dematic iQ Optimize rollout. By grounding every decision in operational outcomes, the team ensured that scope was aligned to measurable business value. The use of throughput-based forecasting, Definition of Ready/Done criteria, and capacity-driven planning gave stakeholders predictable delivery flow while reducing wasted effort. Automated testing and simulation created a safety net that surfaced defects before they reached the warehouse floor, dramatically lowering risk during deployment. These practices transformed what began as a late and over-budget WCS program into a disciplined, forward-looking WES implementation.

Equally important, VividCloud partnered with Dematic in a strategic, consultative capacity that extended beyond technical execution. By reframing change control around operator experience, empowering continuous improvement through real-time telemetry, and fostering collaboration across engineering, operations, and business teams, VividCloud helped Dematic's client realize the full potential of the Dematic iQ Optimize platform. The result was not only a successful cutover and stable operations, but also a foundation for ongoing optimization, scalability, and resilience. This approach underscores VividCloud's role as more than an implementation partner – we are a catalyst for turning complex warehouse technology programs into long-term business advantage.

About VividCloud

VividCloud is a software development company focused on cloud and IoT. AWS is our cloud platform of choice, and we are an Advanced Tier APN Services Partner.

We bring fully managed teams that free our clients from day to day oversight responsibilities.

VividCloud is based in Brunswick Maine.

[Contact Us](#)



VIVID
cloud