

NEWS | FUTURE OUTLOOK

Diligent Robotics Launches Moxi 2.0 with Physical AI Learning Flywheel for Smarter Hospital Automation

Diligent Robotics is rolling out Moxi 2.0 across U.S. health systems, combining faster NVIDIA-powered perception, a robotic World Model and fleet learning to improve hospital operations.

By **Ankit Kankar** | September 13, 2026



Image Courtesy: Public Domain

Diligent Robotics, a Serve Robotics (Nasdaq: SERV) company and the team behind Moxi, one of the world's largest deployed fleet of mobile manipulation robots working alongside hospital care teams, announced it has begun rolling out Moxi 2.0 to health system customers across the U.S. The next generation platform is shaped by five years of operations from over 25 hospitals.

Its launch also marks the debut of Diligent's learning flywheel: a proprietary World Model that learns from the experience of the company's fleet and improves continually with every deployment. As part of Serve Robotics, Diligent benefits from shared investment in physical AI research, accelerating the pace of innovation across its hospital deployments.

For hospitals, the Moxi 2.0 means faster, more confident deliveries and longer robot operating hours, all without changes to existing infrastructure. Its platform was developed using NVIDIA Isaac Sim open simulation framework and aspects of the NVIDIA Cosmos open world models such as the 3D lidar tokenizer. Moxi 2.0 includes upgraded NVIDIA-powered A2000 compute that perceives and interprets its surroundings 10-15 times faster than the previous generation, enabling quicker responses in dynamic hospital environments like crowded hallways, opening elevator doors and shifting foot traffic.

The Moxi 2.0 platform architecture prioritizes modularity, with specialized packaging that facilitates seamless integration of next-generation compute systems as emerging technologies become available. In addition, Diligent's learning flywheel turns real-world deployment into smarter software updates. Designed specifically for hospital workflows, Moxi operates within existing infrastructure from day one, with no facility modifications, specialized automation systems, or lengthy IT overhauls required.

"Today we're deploying our most sophisticated physical AI platform yet," said **Andrea Thomaz, founder and CEO of Diligent Robotics**. "Hospital hallways are some of the most dynamic environments a robot can operate in, full of fast-moving people, doors, and carts, all in tight spaces. To operate safely in that world, our first-generation platform often had to move conservatively. Moxi 2.0 is built with the compute, sensors and models to reason about that complexity in real time, so Moxi can move with more confidence without compromising safety."

Moxi 2.0 is now rolling out to health systems including Endeavor Health Edward Hospital, Providence Saint John's Health Center and Children's Hospital Los Angeles, with deployments expanding across the U.S. Diligent is actively taking orders from health systems ready to bring the platform to their hospitals.

Key upgrades in the latest Moxi 2.0 platform include:

- **10x onboard compute, 10-15x faster perception:** Upgraded processing enables faster real-time decision-making and more confident navigation through dynamic hospital environments.
- **Robotic World Model:** A new physical AI architecture purpose-built for the complexity of hospital environments, designed to strengthen navigation, task completion, and adaptation over time as the learning flywheel feeds new fleet experience back into the World Model.
- **Up to 18 hours of operating time per day:** With a runtime of up to 9 hours at a time and 30% faster charging Moxi is ready for long shifts.
- **Improved autonomy and recovery:** Enhanced handling of edge cases means Moxi can resolve more situations independently, keeping deliveries moving.
- **Upgraded cameras, sensors, and storage:** Moxi 2.0 adds an expanded sensor suite and redesigned storage drawers.
- **Redesigned handles and ergonomics:** Informed by direct feedback from nurses and pharmacy teams, making it easier for care teams to interact with Moxi when they need to.

Our latest platform is designed to feed the learning flywheel faster. With upgraded sensors and enhanced edge compute, Moxi 2.0 now captures richer signals from the full complexity of working hospitals. As that experience flows into Diligent's cloud training infrastructure, each iteration of the World Model sharpens Moxi's understanding of hospital environments, edge-case recovery, and task execution, a compounding loop of better data, stronger models, and more capable robots that delivers more value to hospitals with every software update.

"We've spent years in the field learning what hospitals actually need," said Thomaz. "This is just the beginning of what a true learning flywheel makes possible."

The cloud infrastructure powering this flywheel was built in collaboration with Amazon Web Services (AWS). Diligent trained Moxi's World Model on Amazon SageMaker HyperPod enabling continuous improvement from deployment data at scale. T-Mobile for Business has collaborated with Diligent to

help ensure reliable network access across complex hospital environments and plan for private 5G hospital deployments ahead. All safety and autonomy behaviors run onboard, so Moxi completes tasks end-to-end even without Wi-Fi, with cellular fallback available when hospital networks have dead zones.

“Moxi has become an integral team member at Children’s Hospital Los Angeles,” says **Omkar Kulkarni, Chief Innovation and Transformation Officer at Children’s Hospital Los Angeles.**

“Since Moxi joined our team, it has completed more than 40,000 deliveries, representing over 16,000 hours of work that our staff didn’t have to spend transporting supplies and medications across the hospital. We expanded our Moxi fleet from two to three robots over time, and utilization continues to grow, increasing more than 10% in the second quarter alone. Our nursing leaders and pharmacy team appreciate that we’re investing in technology that allows team members to work at the top of their skill set.”

Read online: <https://worldbusinesswatch.com/news/11/112/diligent-robotics-launches-moxi-2-0-with-physical-ai-learning-flywheel-for-smarter-hospital-automation.html>

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