



CIO Review 20 MOST PROMISING ROBOTICS SOLUTION PROVIDERS 2015

Robotics is at the cusp of revolutionizing several industries, especially with the advent of internet connectivity. Modern industrial robots that are being created to assist man in labor are nothing short of engineering marvels. Operations like material handling, metal machining, plastic moulding, assembly operations including fixing and press-fitting, inserting, disassembling machineries are all experiencing radical makeover under the adept hands of robotic automation solutions.

The evolution in this arena makes it a win-win situation where both the consumer and the provider benefits: the provider enjoys an efficiency gain through the reduced dependence on administrative staff and the consumer benefits from greater flexibility of service.

Robots free valuable human labor which can be redirected for other areas and boost the overall productivity. Other advantages being cost-effectiveness, safety, and efficient solution for multiple industries where manufacturing needs to

produce a high volume of high-quality products. Technology is getting more sophisticated and the machine man is getting more and more human with capability to perform advanced skills.

The robotics industry is thriving with cutting edge solutions and services. It is becoming widely deployed and trusted technology. This makes it extremely challenging for CIO to navigate complex and fragmented Robotics Automation landscape when looking for services providers to help with consulting, implementation, and support.

To simplify & help CIOs navigate the Robotics Automation solutions landscape, we present the 20 Most Promising Robotics Solution providers.

A distinguished panel comprising of CEOs, CIOs, VCs, analysts including CIO Review editorial board will decide the "20 Most Promising Robotics Solution Providers 2015" in the U.S., listing the best vendors and consultants who provide key technology solutions and services related to Robotics Automation products.

Company	Management	Description
5D Robotics Carlsbad, CA 5drobotics.com	David Bruemmer, CEO & Co-founder	Leveraging a cross-platform, and a plug-and-play solution for responsive robotic behaviors and intuitive human interaction.
Adept Technology Pleasanton, CA adept.com	Rob Cain, President & CEO	Delivers solutions that give clients economic value throughout the production lifecycle, enabling customers to achieve precision, quality, and productivity in their assembly, handling, and packaging processes.
Aethon Pittsburgh, PA aethon.com	Aldo Zini, President & CEO	Aethon manages internal logistics using an autonomous mobile robot to deliver and transport materials through a variety of organizations including hospitals, manufacturing environments and distribution environments.
Applied Manufacturing Technologies Kay Industrial Drive Orion, MI appliedmfg.com	Michael P. Jacobs, Founder & President	Delivers automation robotics technologies with a depth of knowledge and experience that exists solely to add value to customers' performance.
Autonomous Solutions W Petersboro, UT asirobots.com	Mel Torrie, President & CEO	Designs and manufactures unmanned vehicle systems, software, and components for a variety of industrial, agricultural, automotive proving ground, and military customers.
Enterprise Integration Jacksonville, FL entint.com	Michael E. Locher, CEO	Revolutionizing the technique of augmenting digital robotics standards with robust, user-friendly solutions, and products.
FANUC America Corporation Huntington Beach, CA fanuamerica.com	Rick Schneider, President & CEO	Offers a wide range of industry-leading products and services for robotics, CNC systems, and factory automation solutions.

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Gallop Solutions Philadelphia, PA gallop.net	Kalyana Rao Konda, President	A firm that provides specialized collocated software testing services to businesses in North America.
iRobot Bedford, MA irobot.com	Colin Angle, Chairman of the Board, CEO & Co-Founder	iRobot's home robots are revolutionizing the way people clean – inside and out.
Robotmaster (Jabez Technologies) Montreal, Canada robotmaster.com	Chahe Bakmazjian, Founder & President	Provides robot programming technologies that enable versatile and profitable robotic solutions for industrial manufacturing applications.
Kepware Technologies Portland, ME kepware.com	Corky Ellis, Chairman & Founder	Provides software solutions to aid businesses connect diverse automation devices and software applications. The firm serves a wide range of customers in a variety of international vertical markets including Manufacturing, Oil & Gas, Building Automation, Power Distribution, and more.
Liquid Robotics Inc. Sunnyvale, CA liquidr.com	Gary Gysin, President & CEO	The firm deploys fleets of networked, wave-powered ocean robots, solving critical problems for its defense, oil & gas, commercial, and science customers.
MTAB USA Bellevue, WA mtabusa.com	Arthi Sairaman, CEO	Provides simulation solutions in the areas of skill development and special machine solution.
NewBotic Thompson, CT newbotic.com	Craig Doherty, President & CEO	A firm that helps develop new manufacturing process automation, industrial application, and robotic operations throughout the Northeast U.S.
Penguin Automated Systems Inc. Sudbury, Ontario penguinasi.com	Greg Baiden, CEO	Providing professional and comprehensive robotic and automation solutions for underground, underwater, in-space and on-surface applications.
Qbotix Menlo Park, CA qbotix.com	Mike Miskovsky CEO	Providing professional and comprehensive robotic and automation solutions for underground, underwater, in-space and on-surface applications.
Quanergy Sunnyvale, CA quanergy.com	Dr. Louay Eldada, CEO	Delivers robust and intelligent real-time 3D mapping and object detection, tracking, identification, and classification.
R&E Automated Macomb, MI reautomated.com	Dan Jaraczewski, Founder; Ken DeYonker, Founder	The company is an internationally recognized leader in the automation, engineering, and prototype build industry. R&E is able to accommodate specific challenges by designing and programming turnkey automation systems for a variety of manufacturing applications.
Rethink Robotics Boston, MA rethinkrobotics.com	Rodney Brooks, Founder, Chairman, & CTO	The firm introduces robotics into processes that manufacturers have never been able to cost-effectively automate before.
Robotic Vision Technologies, LLC Bloomfield Hills, MI roboticvisiontech.com	Rick Weidinger, Founder & CEO	Develops best-in-class vision guided robotic software that allow robots to "see, think, and do."

Aethon

Automating Internal Logistics through Robotics

Robotics is revolutionizing the material handling and internal logistics of a variety of industries. In healthcare, for example, robots are being used for a wide range of applications including drug delivery, meal delivery, and moving inventory to nursing units. In manufacturing environments, they can be used to replenish supplies to manufacturing lines, or move finished goods to the warehouse. Organizations are recognizing the tasks associated with internal logistics are draining their organizational productivity and employee satisfaction.

Headquartered in Pittsburgh, PA, “Aethon was founded with a goal to develop an affordable, safe, and reliable autonomous mobile robot to automate all the delivery functions within an organization,” says Aldo Zini, President and CEO, Aethon. Though many universities and research groups attempted to develop autonomous robots in the past, Aethon was able to not only build but commercialize the product. “Technologically the company was little ahead of its time, for instance instead of

“TUG is designed to automate the repetitive and non-value added delivery and transportation tasks making employees more productive and allowing them to focus on more meaningful tasks

using expensive laser scanner, we used a combination of sensors and motors,” he adds. From the business perspective, the company first targeted the logistics problem in hospitals by working with the clinicians, nurses and pharmacists. “It took a few years for the company to get the technology solid but thereafter Aethon grew over years through disrupting robotic innovations,” says Zini.

Aethon’s flagship product, TUG, is a versatile autonomous mobile robot used to transport materials. “TUGs use existing carts with their bases modified to fit onto the TUGs exchange platform. For example, carts in the hospital are used to deliver meals, clean linen, waste, and soiled linen— up to 1000 lbs. In addition, secured carts are available to deliver medications, specimens or other sensitive supplies,” says Zini. These secured carts even have secured biometric access. In other industries, large carts carrying components can be easily retrofit to be compatible with the TUG’s base.

Aethon has discovered that their success is as much about the enabling technology they have developed as it

has been about the robot itself. Yes, the TUG can work in places where there are unexpected obstacles to navigate around, yet still stay on task. But, the ability to control elevators, respond to safety alarms, open doors, and provide a continuous connection to a command support center were all innovations necessary for success. With the command center, all robots installed at customers can be remotely controlled from a central command center over a secure internet connection. This allows Aethon to resolve 97 percent of all support incidents with no customer interaction.

They stay close to their hospital customers but are moving into new markets such as manufacturing and distribution companies. Keeping ears open to the customers and market demand has helped Aethon reach its current leadership position. “At Aethon, we foster creative and entrepreneurial environment with freedom, which acts as the driving force behind making robots viable, cost effective and reliable,” says Zini.

In its ten years of existence, Aethon has the experience of deploying more than 450 autonomous mobile robots in 140 hospitals throughout the U.S. “Nothing speaks louder than happy customers, and we are able to deliver solutions according to customer’s expectations,” claims Zini. “Further, a catalogue of good partners and investors like Bosch and Mitsui, adds credibility and stability to Aethon,” he adds.

The company is making way to move its robots to industries like manufacturing and warehousing. “In coming years, we would like to partner with companies with similar vision to automate delivery, tracking and logistics functions through robotics.” concludes Zini. **CR**



Aldo Zini