



Clean sweep

From sci-fi to reality, iRobot is on a mission to change how we clean

by ERIN SILVER



COSTCO CONNECTION

Find the iRobot Roomba j8+ (Item 8877550, shown above) in Costco warehouses and at Costco.com. The iRobot Braava Jet m6CB (Item 4555275) is available at Costco.com only.

Colin Angle loves having a clean home, but there's a caveat. "I have a great appreciation for cleanliness, but I'd rather design a solution than do it myself," says the chairman, CEO and co-founder of iRobot, the Bedford, Massachusetts, company that's been making robot vacuums for household use since 2002. "Perhaps it's inevitable I'd use my fascination with robots and my coding skills to make it easier for millions of people to clean their homes."

A man with a vision

His journey from tech savant to CEO began after a summer internship at NASA's Jet Propulsion Lab. Angle helped design the behavior-controlled rovers for NASA that would eventually become Sojourner, NASA's first miniature space exploration rover that actually probed Mars.

Equipped with this knowledge, in 1990, Angle left his doctorate program at MIT to establish iRobot, along with co-founders Helen Greiner and Rodney Brooks.

In addition to sending robots into space, they developed a robot that helped assist with search-and-rescue missions after 9/11. Another roving robot enabled the U.S. military to search and dispose of explosive devices in Iraq and Afghanistan. iRobot also had robots on the ground in 2011 to help avert a complete nuclear meltdown in Japan after the earthquake and nuclear accident.

Making a daily difference

Having developed the technology to make a difference in the world, Angle and his team looked ahead to what was next.

"We really wanted to build a robot that would touch peoples' lives on a daily basis," Angle says. "We realized



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that many of the algorithms used by our mine-sweeping robots to cover a certain area could also be used by a robot vacuum to search for dirt, so we continued on a 12-year journey to simplify peoples' home lives before we got to Roomba [robots that vacuum and mop]."

During that period, the team had to overcome many challenges before could bring a mass-market, robotic vacuum into households. "We had to solve effective cleaning," says Angle. "We had to solve floor coverage and navigation. We had to get the price point right. We accomplished this through our partnerships and research and development."

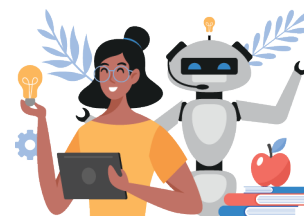
The future is robot-friendly

Now, the company has produced about 10 generations of Roomba robot vacuums at different price points that can effectively and efficiently clean floors. The addition of smart-home technology has enabled users to decide when, where and how their home should be cleaned by talking to a device or pressing a button on a phone.

With six active robots in his house, Angle tests all the prototypes himself. His goal is to create robots that are less of a high-tech tool and more of a partner, so people can interact with them the way they would interact with other members in the household to convey what they want to happen.

Robots that can vacuum are just the beginning, says Angle. "It's exciting that after so many decades of promise we can start pointing to robots in our lives as being valuable additions and not science fiction." ■

Erin Silver is an award-winning children's author and freelance writer in Toronto.



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A PASSION FOR EDUCATION

iRobot helped establish National Robotics Week, which takes place starting the first Saturday in April every year. Since 2010, this celebration has been sharing innovations and inspiration with children.

The company also created a museum at its headquarters that hosts more than 300 tours a year, giving students from elementary school to master's programs the potential to be excited about robots.

"Over the years it became clear that nothing we could do would have as powerful an impact as sharing robots with children," says Colin Angle, chairman, CEO and co-founder of iRobot.

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The mission ahead

iRobot has had to solve many challenges, like making sure their robots didn't accidentally mop a customer's carpet.

Their work paid off. So far,

iRobot has sold more than 40 million Roombas worldwide, and more innovation is ahead. "Going forward, it's about the intelligence of the robot, ensuring you don't have to tidy your home before

Roomba cleans," says Colin Angle, chairman, CEO and co-founder of iRobot. "We want our robots to know what to clean and to adjust how it cleans based on what it's learned about your home."—ES