

## Clearpath moves ahead with robotic precision



**rec-clearpath-03** Matt Rendall (third from left), chief executive officer of Clearpath Robotics, leads a staff meeting in the workroom area of the company's offices. One of the firm's robots sits on the floor.

*Record staff*

KITCHENER — It's almost like a prayer meeting or some kind of spiritual gathering around a campfire.

Twelve young men and one woman stand in a circle in an office in the Tannery Building in downtown Kitchener.

On the hardwood floor in the middle of the circle sits a small yellow robot that looks like a toy truck. The participants aren't bowing in worship or chanting some kind of mantra to the curious-looking machine, but they might as well be.

This is their meal ticket, their flagship offering, the product they've been working on night and day for the past 18 months.

The 13 people are employees of Clearpath Robotics, a technology startup that makes robots for teaching, environmental and industrial applications.

This is their "daily standup meeting," held at 11 a.m., where staff members talk about red flags to be aware of, "systems that suck" and need fixing, jobs done and jobs needing to be done in the coming days.

It's all about communication, which chief executive officer Matt Rendall calls "the single most important thing" in running a company like Clearpath. Timing is so important, every little step is so critical, that issues must be identified immediately. "A week's worth of not paying attention to a problem is hugely damaging," he says.

Five months ago, Clearpath couldn't have held a meeting like this. Its office in the Accelerator Centre, a business incubator in the University of Waterloo Research and Technology Park, was so small and so cluttered with equipment, desks and computer terminals that employees could barely walk let alone stand in a circle.

In May, the company moved to much larger quarters in the renovated Tannery Building and it's made an enormous difference, says Rendall. At 3,400 square feet, its office is a broom closet by Research In Motion standards, but the extra space, clad in hardwood floors and exposed-brick walls, has made everybody more comfortable — and comfort breeds productivity, he says.

With three rows of desks on one side of the office devoted to electrical, mechanical and software functions, and robots taking shape on the other, a glass-walled meeting room in one corner and black leather furniture to relax in, it feels like a real office and Clearpath is starting to feel like a real company.

There's good news on the sales front as well. From a client list of six Canadian universities in the spring, the spunky startup has cracked the market south of the border. Two American schools, the University of California at Berkeley and the University of Minnesota, have inked deals to purchase a Clearpath teaching robot, created by the company to fill a void in the market.

Dubbed the Chameleon and costing \$5,000 to \$10,000 depending on extras, it moves around the classroom collecting data and gives the professor an actual tool to demonstrate the core elements of robotics.

The Chameleon is one of three robots made by the company and its bestseller thus far. A second robot, the Kingfisher, collects and tests water resources, while a third, the Husky, is geared more for hardware and industrial purposes.

Tapping into the American market is part of what Rendall calls the company's "hub and spoke" strategy. Its first customer, the University of Waterloo, became the hub that Clearpath leveraged into landing more Canadian universities that became the spokes.

Berkeley, one of the top engineering schools in the U.S., has now become the hub for Clearpath's American expansion.

All this wouldn't have been possible without some much needed cash that Clearpath raised from angel investors in the area and government sources — such as the Ontario Centres of Excellence and the Industrial Research Assistance Program.

The financing has paid for Clearpath's move to the larger office and three more full-time employees to assist the four founders — Rendall and fellow UW mechatronics engineering grads Ryan Garipey, Bryan Webb and Patrick Martinson.

With four co-op students and three part-time workers, Clearpath now has a staff of 14. Only one is over the age of 30.

Rendall won't say exactly how much Clearpath raised. "It was a lot. We got good money." He says it wouldn't have happened without key contacts at the Accelerator Centre and UW who placed the business in front of the right people.

As important as the capital was the expertise that Clearpath gained by bringing on these new investors. Among them are some "very experienced entrepreneurs" and business people who have put Clearpath "leaps and bounds" ahead of where it was in the spring, Rendall says.

The company could have signed up more customers by now, but it devoted a lot of time and energy during the summer to securing the financing. That has created a gap in the product pipeline, Rendell says.

But that was part of the strategy all along. The goal was to roll the product out gradually, making improvements along the way, rather than spend two years in the lab trying to come up with the perfect robot before unveiling it to the market.

Rendall calls it the “agile startup” model. The strategy is “sell a little, make a little, learn a lot, repeat.”

The company has sold more than a dozen robots so far, but doesn’t plan to rely totally on sales of new unmanned vehicles. It is hoping up to 30 per cent of revenues will come from the service side of the business.

Clearpath is not profitable yet. “We’re getting there,” Rendell says.

He points out that Clearpath’s business plan maps out a gradual journey from cash-flow-negative status to break-even to profitability.

In the meantime, the company is still very much a lean operation. It stocks little or no inventory. Robots are designed, assembled, tested and marketed by Clearpath, but parts are manufactured at John G. Wilson Machine in Princeton, west of Brantford. Rendall calls the machine shop “an integral part” of the team.

Farming out parts production cuts into profit margins, but puts that part of the business in the hands of people who know what they’re doing, Rendall says.

To drum up more business, Rendall and a few other Clearpath employees have been making the rounds at trade shows. Already this year, they’ve visited shows in Alaska, Denver, Ottawa, Toronto and Texas. Next week, they’re headed to Boston and in November they will be in Montreal.

But the 80 to 100-hour work weeks, which they’ve put in at the most frenetic times, are mostly history. The workload ebbs and flows, says Rendall, and the company is more concerned with results than hours put in.

“Nobody gets a badge for working a 60-hour week.”

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This is the second part in an occasional series tracking the trials and tribulations of an early-stage technology company in Waterloo Region