



For love of R&D

Success in engineering services leads to product development

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When University of Maine mechanical engineering graduate Ryan Beaumont was ready to enter the workforce, he wanted to pursue opportunities that fit his wide-ranging interests in engineering and computing, as well as research and development.

Using the connections, education and experience gained at UMaine, Beaumont started his own engineering services provider company.

Beaumont, who received his bachelor's in mechanical engineering in 2004 and master's in 2007, worked in the paper industry for three years. In 2009, he started R.M. Beaumont Corp. (RBC) to support the growing renewable energy industry in Maine. Within four years, RBC had seven employees.

Today, the Brunswick-based company hires mechanical and systems engineers, providing engineering services to firms around the state. And it recently started offering commercialization support.

What fascinates Beaumont most is R&D work.

"That's where I personally like investing my time. I like the challenge," he says. "R&D presents fun problems for engineers to tackle, starting from nothing. It keeps me from being bored, which is probably the same reason I would avoid taking a job at a desk somewhere."

Beaumont's interest in engineering started at a young age; his father was a mechanical engineer in the paper industry. Following in his footsteps, Beaumont attended UMaine on a pulp and paper scholarship.

RBC's first focus was a three-year project in the paper industry supporting mills in Maine and North America. When the contract was completed, Beaumont was introduced to an opportunity in renewable energy by Dr. Michael Peterson, one of his former mechanical engineering professors.

Peterson was approached by an engineer

from Ocean Renewable Power Co. (ORPC) in Portland who was looking for someone with the right skill set to develop the company's technology, including its experimental turbines, Beaumont says.

Peterson thought Beaumont would be an ideal candidate.

"I met with ORPC and it led to a four-year relationship that grew my business from just a company of me to seven employees," Beaumont says.

"We've always been able to hire, and the university has been a big part of that equation," he says, "providing access to some of the best students, and the ones that want to do cutting-edge, innovative work. We're able to find them and say, 'Hey, come work for us.'"

From 2010 to 2014, RBC worked in tidal and offshore wind energy in Maine, again providing engineering services supporting those two developing sectors, he says.

Beaumont estimates RBC has worked with about 50 Maine-based companies in a variety of sectors. In the paper industry, the firm has worked with mills in Old Town, Jay, Bucksport and Baileyville. On the manufacturing side, RBC has worked with companies that include General Electric in Bangor, Kenway Corp. in Augusta and Lyman Morse in Thomaston.

For research and development, the company has worked with research institutions, including UMaine and Maine Maritime Academy.

Beaumont credits word of mouth as being RBC's strongest means of making connections with other local Maine businesses.

"You see that in Maine more than other places. Maine businesses really want to do business with other Maine businesses. I think we try to take advantage of that to the greatest extent possible. That's one of our strengths," he says.

About two years ago, Beaumont was contacted by Dr. Vince Caccese, who also was one of his former mechanical

engineering professors. He introduced Beaumont to an opportunity that has led to an RBC-spin-off to commercialize mobility products.

That opportunity involved becoming a commercialization partner for the AfariTM, a stylized aid designed to aid upright mobility and enable people who seek balance, stability and/or weight-bearing assistance to participate in outdoor jogging, running and distance walking.

Afari was conceptualized by UMaine professors Stephen Gilson and Liz DePoy, and engineered by Caccese. Drs. Gilson and DePoy began the project with two seed grants from the Maine Technology Institute, and then sought collaboration with Caccese and Beaumont to form Mobility Technologies and develop the product.

As the chief operating officer of Mobility Technologies, Beaumont directs the vice president of sales and vice president of operations, and also is responsible for compliance with codes and standards.

Afari was the first consumer products venture for RBC. Since then, the firm has engaged in other ventures, including being involved with a product in the paper industry.

RBC worked closely with a fabrication partner to help with the redesign of a piece of heavy equipment workers are required to lift many times a day. The new design, which is patented by the fabrication partner, is lighter and reduces the risk of injury, Beaumont says.

As his business evolves, Beaumont has been working closely with the Maine Center for Entrepreneurial Development (MCED).

"We're a services company, but we have to build this team around a products company," he says. "It's not completely in our wheelhouse right now, but there are resources out there to make that happen; MCED has been very helpful so far."

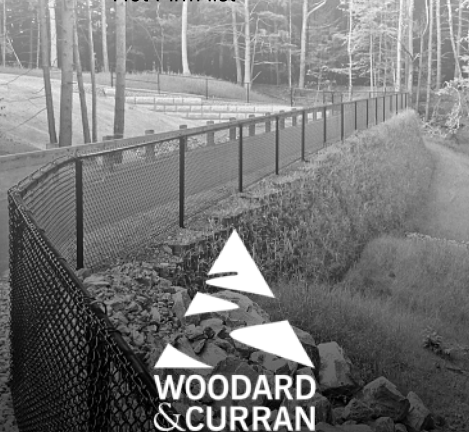
Other UMaine R&D projects Beaumont

has been involved with include VoltturnUS 1:8, the nation's first grid-connected offshore wind turbine built by UMaine and industry partners. RBC was the instrumentation team leader and worked with employees at UMaine's Advanced Structures and Composites Center, as well as external contractors.

RBC also has worked with Peterson to help establish his Racing Surfaces Testing Laboratory. The firm helped to prove test protocols at a small scale for horse racing tracks, and when the lab was ready to upgrade, it hired staff and moved to its permanent location, Beaumont says.

Even though Beaumont has 15 years of technical experience that has grown throughout his career, he says he would like to develop more business skills.

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