



LITHIUM COMPANY

STRIKES GOLD

WITH STUDENT CONSULT



As oil and gas markets fluctuate and the demand for electric vehicles rises, one UNC Greensboro-spinoff company is powering up for success with the help of MBA student consultants at the Bryan School of Business and Economics.

Minerva Lithium has developed an innovative filter that can extract lithium from already existing resources such as petroleum wastewater or saltwater in the ground, capturing the highly valuable material for use in electric car batteries and other renewable energy applications.

“They are working to take what’s not needed and make it into something really usable,” says Richard Rorrer, an executive mentor with the Bryan School. “Said another way, they can take waste and make it wanted.”

Mine of Information

Before the idea makes it to market, the company must move its filter out of the lab and into pilot testing as well as identify its best niche for sales. That’s where the Bryan School’s MBA Capstone Consulting Projects come in.

The course allows a team of MBA students to earn credit by working on a client’s business challenge or opportunity, and presenting their findings with a proposed solution. This spring, the Capstone team worked with Minerva Lithium to develop a business case to secure additional research funding. The company is now applying for Phase 2 funding from the National Science

Foundation, which could yield up to \$1 million in research grants necessary to begin pilot testing.

The students assisted in that process by working on in-depth market analyses, recommending the best avenues for commercialization, and developing financial models that can project profit and loss while accounting for widely varying prices of lithium.

“We have a lot of knowledge on the research side, but we needed additional business expertise,” says Dr. Sheeba Dawood, CEO and co-founder of Minerva Lithium. “The students’ presentation was really great. They have provided us with all the tools we need to apply for funding and to go before potential investors. They explained everything and were very patient in their analysis.”

Golden Opportunity

Often called “white gold,” lithium could be even more in demand locally since Toyota announced plans to locate a battery plant about 20 miles from Greensboro. Today the material sells for 257 times more than gold and 500 times more than platinum, according to the MBA students’ report. And yet, traditional mining for lithium takes an environmental toll, often scarring the land and threatening supplies of precious groundwater.

Minerva Lithium’s patented nanofilter can extract the microscopic lithium particles from petroleum wastewater in a much cleaner and greener process.

The idea has so much wide-ranging potential that it was a bit challenging to narrow down the scope of the Capstone project at first.

“I think the biggest lesson was about continuing to ask questions until you get to the real root of the problem you’re trying to solve,” says David Jackson ’22 MBA, who worked on the project. “When we looked at their data, there was so much opportunity and we had to focus in on which question to tackle to provide the most effective assistance.”

Ultimately, the students suggested a targeted market for the filter – one in which there is currently no competition. They also advised the company to hone its messaging to be especially clear to the customer. All their recommendations were firmly rooted in a careful analysis of data. Rorrer said he hopes the students gained newfound self-assurance applying classroom learnings to real-world problems. “As often happens in business, the group walked into a situation where it’s not clear at first what’s being asked or how to get started,” he said. “Through a process – and some encouragement and steering – they gained confidence not only in finding the answers but in presenting them effectively to a client. They just poured their heart and soul into this hard work.”

Dawood was impressed by the students’ commitment, curiosity and acumen as well as the value her company received from their expertise. She is looking forward to applying their work to her application for additional funding. “The right people were involved, and they were as excited about our product as I am,” she said. “They were very enthusiastic and put in 100 percent. They owned it.” ■

Written by Dawn Martin

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