

HIGH-TECH COWBOYS

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-Paul Gladen, director,
UM Blackstone LaunchPad



UM Student’s Technology Helps Make Ranching More Profitable

by Shannon Furniss



Walker Milhoan,
UM student entrepreneur

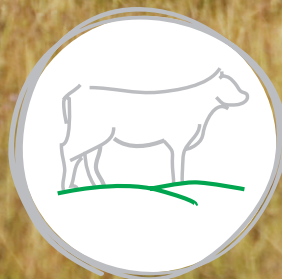
Running a ranch with vast landscapes and numerous livestock can be complicated, but UM student Walker Milhoan has a technology that he thinks will make ranching more sustainable and profitable. And his business venture is promising enough that he was selected as a finalist at Blackstone LaunchPad’s recent Demo Day in New York City.

Milhoan’s business venture, Ranchlogs, was one of 20 selected to attend the event where students competed to win prizes ranging from \$10,000 to \$25,000 to be used to further their business development. Paul Gladen, UM’s Blackstone LaunchPad director, nominated Milhoan to attend the competition, where he progressed to the final rounds with the top six. The LaunchPad, an experiential campus program designed to introduce entrepreneurship as a viable career path, began on the UM campus in February 2014, and it has advised more than 100 ventures, including Ranchlogs.

Ranchlogs is an interactive, Web-based software platform that serves as a livestock inventory and range management tool that can be used to create custom ranch maps, track key performance indicators, and perform analysis within any ranching operation.



Financial Metrics
and Key Performance
Indicators



Livestock Inventory
and Tracking



Grazing Management
and Monitoring



Custom Ranch and
Resource Mapping

From the Classroom to the Boardroom

UM Provides Students with a Pathway to Success

In the pitch video that Milhoan produced for Demo Day, he emphasizes that “healthy, sustainable rangelands are the backbone of a ranch’s profitability.” As the camera pans across an immense landscape with cowboys on horseback herding cattle, he narrates that managing rangeland takes “grit, passion, and an astute mind.” As the video zooms in to show cowboys wrangling with a calf and sprawling pastures being irrigated, it is apparent that while grit is helpful, there is a lot to managing these lands.

Software that could help ranchers track cattle and improve pasture conditions would provide ranchers with valuable information and allow them to make better decisions, said Milhoan. “It would improve their businesses for a more profitable bottom line.”

And according to UM’s Blackstone LaunchPad director, Milhoan’s business venture has great potential. The fact that he made it to the final rounds at the competition is “confirmation that we have ideas in Montana that have national and international relevance,” said Gladen. “Even though it’s an idea that sounds kind of Montana-centric, actually it isn’t because ranching is an activity that exists across the world. We have ideas here in Montana that can be world-class businesses.”

Learning Ranch Management

When Milhoan talks about Ranchlogs, he points out that it is software “built by ranchers for ranchers.” And he knows a bit about ranches. He spent his childhood visiting his grandfather’s ranch in Colorado, riding horses, working cattle, and jumping into piles of hay. From 2010-11, he attended Texas Christian University’s Ranch Management Program, which he jokingly calls the Harvard of ranching. One of his school projects involved building a ranch management plan on a working ranch. First, he had to learn all of the intricate

Some of the most successful entrepreneurs of all time have been students and people in their early 20s.

Perhaps one of the most well-known, Mark Zuckerberg, CEO of Facebook, co-founded the social networking website from his Harvard dorm room when he was 20. And Bill Gates, former CEO and chairman of Microsoft, spent hours in the computer lab at Harvard and started the world’s largest PC software company when he was 20. Larry Page and Sergey Brin developed Google, a corporation with the mission of organizing the world’s information, as part of a research project when they were Ph.D. students at Stanford.

Of course, Zuckerberg and Gates went on to develop their businesses without finishing their degrees, but being in a college environment helped them build upon their ideas and create hugely successful enterprises.

These high-profile success stories may be part of the reason that student entrepreneurship is becoming increasingly popular in universities. At any rate, the potential of students as innovators and entrepreneurs is being widely recognized, and business schools are doing their best to inspire them.

At the University of Montana, the School of Business Administration has a number of classes and programs in place to help students pursue entrepreneurship as a career path and to take their ideas from the classroom to the boardroom. One of the classes is taught by Professor Cameron Lawrence on management information systems. It was in this class that UM student Walker Milhoan began to figure out a technological solution to digitizing ranch data and making his business venture – Ranchlogs – become reality.

When Milhoan enrolled in the class, he already had the idea of Ranchlogs, but wasn’t sure about how to go about it, Lawrence said. “We just started talking, and I really encouraged him to pursue the idea. I did an independent study with him to give him time to work on his concept.”

As part of Lawrence’s class, students have to create something new and build prototypes using technology. Then they have to pitch them before a diverse group of technology experts, investors, and members of the business community to get feedback on their ideas. “This is where Walker really took off with it,” he said. “I think those sorts of things are really making a difference.”

What has emerged over the past several years in UM’s business school is an “innovation infrastructure,” Lawrence said. Students can

gain entrepreneurial experience through a series of programs so they can “cook their ideas.” Some of the programs include:

Montana Academy of Distinguished Entrepreneurs (MADE). Comprised of Montana entrepreneurs, business school faculty, angel investors, investment bankers, and venture capitalists, MADE implements a year-long educational platform that guides aspiring entrepreneurs as they develop their business ideas, identify the knowledge and tools needed to build viable businesses, and network with successful entrepreneurs.

Entrepreneurship Seminar Series. Focused on management, legal, and financing issues that are relevant for most start-up businesses, these seminars provide students the opportunity to learn entrepreneurship concepts and skills directly from successful entrepreneurs who teach class sessions and discuss topics in their areas of expertise.

Business Plan Competition. Designed to encourage Montana students to develop their business ideas and learn about entrepreneurship, the business plan competition is judged and coached by venture capitalists, angel investors, bankers, and successful entrepreneurs who share their expertise with students. In 2014, students competed for more than \$30,000 in prize money.

UM’s Blackstone LaunchPad. Created to help students turn their ideas, skills, and passions into real-world businesses and nonprofit organizations, the LaunchPad offers individualized coaching, ideation, and venture creation support to students, alumni, faculty, and staff.

Montana Technology Enterprise Center (MonTec). Established as a central hub where entrepreneurs and start-up companies can access the resources they need to become successful, MonTec offers students opportunities and internships with a community of high-growth enterprises. New this year, MonTec will provide the business plan competition winner with a six-month affiliate membership.

In addition, UM’s business school offers a wide range of internships and certificate programs for students.

These programs and opportunities create a “really cool path for students who want to create their own companies,” said Lawrence. And the programs are not only for business students – all UM students can participate. “It’s basically bringing the best of what a liberal arts university has and providing a path for all of the students who have an interest in creating businesses to essentially support them.”

Walker Milhoan is one of many students who have benefited from these programs.

functions of Excel spreadsheets and file management systems. Then he compiled and analyzed data about costs, marketing, health protocol, genetics, market outlets, and long-range business plans.

“It was amazingly beneficial for ranchers but extremely hard to put together,” Milhoan said. “Typical ranchers wouldn’t do this level of detail. It’s really time-consuming and inefficient. It took four months to do it.” It was then that he started thinking about a way to customize this process and make it easier.

Teaming Up with a Big Sandy Ranch

Over the years, Milhoan spent some time as a helicopter ski guide based out of Cordova, Alaska. He also spent a year at Montana State University studying snow science and skiing the rugged backcountry, all the while keeping up with the ranching community.

An active member of the Montana Stockgrowers Association, Milhoan always has enjoyed talking with ranchers. At an association meeting, he met Rich Roth, the vice president of the IX Ranch Company in Big Sandy, and they struck up a conversation about the future of ranching and how mobile technology could increase productivity. Interestingly, the Big Sandy ranch had been using software that a family member and MIT graduate had developed in 1984. Over the 30 years, the ranch has reported a 30 percent increase in native grasses and an 8 percent decrease in cow costs by using the software.

Milhoan started to see the possibilities. What if he could take the underlying logic and workflow that’s in the original software and move it into an environment that uses modern programming and software as a service environment?

In cooperation with the IX Ranch Company, Milhoan formed Ranchlogs (www.ranchlogs.com), and he hopes to build on the technology and make it accessible to ranches of all sizes.

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- Walker Milhoan

A movement that is occurring to improve Internet capabilities in rural areas also will be helpful. While some ranchers have limited cell-phone service and Internet access, accessibility is getting better across the country, said Gladen.

There is always the question of whether ranchers in a traditional industry will choose to adopt technology. According to Milhoan, many ranchers already are tech-savvy and understand the benefits. And the younger generation, who will be taking over their parents’ ranches, have grown up on technology. In fact, the modern rancher is more likely to have an iPhone than a notebook in his shirt pocket for keeping records.

Sustainability and Profitability

Another aspect that bodes well for Ranchlogs is the corporate push toward sustainability, said Milhoan. For example, corporations like, say, Walmart and McDonald’s, may soon require that cattle producers provide documentation that their ranch is sustainable. Corporations are concerned about the ecological health of a ranch and will want to know about grazing rotations, fencing, genetics, and more. Milhoan believes his technology will make that information easier to track and more efficient. Ranches that adopt technology will be more attractive as suppliers and, ultimately, more profitable.

“The first part of sustainability is profitability,” he said. “If you don’t have profits to reinvest in your ranch, you’re not going to be sustainable.”

Ranching has a historical profit margin of 1 to 4 percent, said Milhoan. “If you can get your average profit margin up, then you’re going to stay in business. And your ranch isn’t going to get sold, or subdivided, or turned into a golf course.”

Future Plans

The experience at the New York City competition gave Milhoan the boost to further develop his venture. “It was really great because it shifted my thinking about the concept and what this could be,” Milhoan said. “What are the numbers? How’s it going to save people money? How’s it going to make people money? It opened up a lot of doors and a lot of thinking.” □

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Shale Energy Revolution Benefits Manufacturers

by Paul E. Polzin

Manufacturing has helped lift the U.S. economy out of the Great Recession and is experiencing a resurgence throughout the nation. In Montana, there are about 3,400 manufacturing firms accounting for about 18 percent of the state’s economic base. The new shale energy revolution has been an economic boon to manufacturers, with lower energy costs having a major impact on the industry. And worldwide trends that caused manufacturers to move their operations offshore – low wages in developing countries and lower energy costs – are beginning to trend the other way. What impact will the energy revolution and changing worldwide trends have on U.S. manufacturers?

The Energy Revolution’s Impact on Manufacturing

The latest advances in geophysics, nanotechnology, engineering, and production management have led to the shale energy revolution and a dramatic increase in the country’s energy production. There have been significant increases in the supplies of natural gas and crude oil from locations as varied as the mid-Atlantic states, the Montana-North Dakota border, and traditional supply areas such as Texas. In Montana and North Dakota, the Bakken oil fields have brought hundreds of oil companies, workers, and investors – and economic prosperity to Montana, particularly the eastern part.

Finding Inspiration at the UM Business School

While contemplating a technological solution that would digitize ranch data, Milhoan met his wife, Whitney, a native Montanan, and moved to Missoula in 2011. He found his way to the University of Montana School of Business Administration, where he discussed his ideas with Professor Cameron Lawrence (see sidebar, pages 12-13). The professor inspired him to enroll in the business school’s Management Information Systems program to find out if he could come up with a solution. How could he take this 5 ½-inch thick ranch management binder and 30-year-old software from the Big Sandy ranch and use technology to modernize the system? Professor Lawrence provided him with some direction, and then Milhoan discovered UM’s Blackstone LaunchPad, which would help him further develop his ideas.

Technology is Reshaping Ranching

Technology is changing the way ranchers do business, and the timing on Milhoan’s business venture may be perfect, according to UM’s Gladen. “An important set of trends is coming together at a good time to be doing what he’s doing.”

First is the ability to use mobile technology like smartphones to access data over the Internet – people do not necessarily have to be sitting at computers in their offices. They can be out in the field or out on a ranch, said Gladen. Then, there’s the ability to have a platform in the Cloud where users can rent software over the Web. Next is the new wave of remote-sensing technology where people can gather data from a distance and observe the environment.

“These technologies will generate a whole new set of opportunities in a remote, sparsely populated place like Montana,” said Gladen.

