Idaho has a healthy food processing industry — thanks to its thriving agricultural economy — and one local company has found a way to clean up in that field.

BHS Specialty Chemicals, based in Nampa, Idaho, specializes in environmentally responsible and sustainable ways to clean industrial food processing equipment. The company seeks to recover waste and cleaning products that otherwise would feed into the wastewater system and repurpose them to create new products. Where many see waste, BHS sees opportunity, and they have leveraged that opportunity through a partnership with Boise State University.

“As researchers, we often develop new technology and then look for a place for it out in the marketplace,” said Dr. Owen McDougal, chemistry professor and lead faculty on the BHS partnership. “These kinds of industry partnerships are different in that they allow us to work alongside industry to meet their specific needs and develop new products together. That's a winning formula for all of us.”

BHS is one of the university's earliest industry partners among a growing number across academic disciplines, from chemistry to engineering, biology to health care.

“Creating applied experiences for students and performing real problem-solving for industry is a win-win,” said Mary Andrews, Boise State's director for economic development. “Partnerships enrich education and the preparation of graduates, provide opportunities for joint research and project development, and engage faculty and students in local and global issues of today.”

Dr. Owen McDougal, far left, is working with BHS team members Ben Parker, Blaine Carter and Phil Johnson on a food processing project.
BHS and Boise State

BHS and Boise State began working together about six years ago after the university landed some sizeable National Science Foundation grants and acquired an $825,000 nuclear magnetic resonance spectrometer and a $677,000 mass spectrometer. The equipment opened the door for sophisticated research into the kind of chemical compounds being developed by BHS.

Currently Boise State is performing chemical analysis to help reformulate waste products to make them more compliant with new U.S. Food and Drug Administration regulations and more friendly to the environment.

“It makes sense for us to partner,” said BHS CEO Phil Johnson. “Our company has a desire to grow. Boise State University is doing fundamental research that is needed in our industry and we can do more together.”

The industry partnership has allowed Boise State to be more competitive for research funding. In addition to new equipment, both BHS and the university have hired new doctoral scientists to help further their joint work.

Jacob Smith, a junior from Stanley, Idaho, who is studying biochemistry, also is part of the team.

“It’s exciting to be working on real problems that need to be solved,” he said. “It makes learning feel like it has a purpose, and no doubt makes my university degree more valuable.”

Ben Parker, a 2009 Boise State graduate who is now BHS’s research and development manager, leads the efforts for his company.

“We are really pushing the envelope on what can be done in this field, and the chemistry and the types of things we’re doing are not really taught in schools,” Parker said.

“So we also are helping to develop a pipeline of students who could roll into our industry. We have found that Boise State really wants these kinds of relationships and it’s a great opportunity to build specialized expertise for Idaho from the ground up.”

HEALTHY PARTNERSHIPS

Partnerships are flourishing in the health sciences, where academic and health care organizations are coming together to help implement federal health care changes, among many other joint efforts.

“About 30 million new people are entering the health care system, and the students we are graduating are going to be essential in this,” said Dr. Tim Dunnagan, dean of the College of Health Sciences. “Along with our industry partners, we are looking at how we work in teams, how we become more patient-centered, how we provide better care and better experiences, and all at a lower cost. These partnerships inform our programs and set the agenda for our research.”

The college partners with Saint Alphonus Health System, St. Luke’s Health System, Healthwise and many other organizations. Their leaders serve on boards for the university, faculty have joint appointments in the college and in medical care settings, students complete nursing clinicals at the hospitals, faculty rely on doctors as advisors, outside health care organizations take advantage of the college’s state-of-the-art simulation labs, and the list goes on.

Together they tackle a number of issues of great importance to the community. Assistant professor Dave Hammons oversees the athletic training program in the Department of Kinesiology. For years, students in the program have spent time in Boise and Meridian schools, where they assist with the diagnosis and treatment of athletic-related injuries and illnesses.

“It’s easy to see the direct value to the community that this program provides,” Dr. Hammons said. “Our students devote more than 12,000 hours in a year to young athletes, university athletics and clinics. A lot of them enter this program with a dream of working in professional athletics, but they get into the high schools and that experience really opens their eyes to the kind of impact they can have on some of these kids.”

In recent years, the students have become heavily involved in protecting young athletes from concussions. In the Boise school district, they assist athletic trainers with testing middle-school athletes to develop a neurocognitive baseline for each student. This allows the trainers to accurately determine if a concussion has impacted an athlete.

“The university and the community are coming together more than ever before because we know we can be better in the future if we do these things together,” Dunnagan said. “In the College of Health Sciences, we have the potential to make a difference on one of the most important topics in our country. We are finding answers locally that apply nationally, and I believe we can be a model for other universities through our partnerships.”
Working with Boise Mayor David Bieter, history professor Dr. Todd Shallat organized the Office of the City Historian in 2004 to help the city re-establish tradition by reclaiming its history. The position was attached to the Mayor’s Office, with support from the Boise City Council.

**GOALS INCLUDED:**
1) Giving city departments the historical information they needed to make informed decisions about the future of programs and property
2) Organizing and preserving valuable records and objects
3) Promoting civic identity through historical programs and landmarks

Boise State funded a graduate assistantship for a city historian who worked under Shallat’s direction. The city matched that with its own funding for programming. The office was filled by graduate students Amber Beierle, Ann Felton, Tully Gerlach and Brandi Burns. What began as a reference and research desk, mostly answering questions about historic places and urban renewal issues, eventually branched out to include artifact preservation, archival guides, galleries, essays and public events such as the Boise City Sesquicentennial and the Fettuccine Forum.

After six years, the office merged with the Arts Commission to become the Boise City Department of Arts and History. It has won national recognition for quality programming.

**CURRENT EMPLOYEES WITH BOISE STATE CONNECTIONS INCLUDE:**
- **KAREN BUBB**, public arts manager, Master of Public Administration and Graduate Certificate, Regional and Community Planning, 2008
- **RACHEL REICHERT**, community relations coordinator, Bachelor of Fine Arts, 2007
- **BRANDI BURNS**, history programs manager, Master of Applied Historical Research, 2011
- **KACI NICKS**, Boise State University Historian Fellow
- **KARL LECLAIR**, Sesqui-Shop Assistant, Bachelor of Fine Arts, printmaking, 2013

**Future opportunities**

BHS is growing and adding high-skill, high-paying jobs in Nampa. The success of its work with Boise State holds potential for even greater payoff in Idaho and the West, where agriculture and the food processing industry are vastly important to the economy.

The BHS project also is building core competencies at the university, which are leading to more partnerships for Boise State in food processing chemistry. The long-term goal is to create a research center for excellence, according to McDougal. It would be the only one of its kind in the region.

“The BHS partnership has been a test case for the university on how we can do these things,” McDougal said. “We are working through the process together, and Phil and Ben have really been committed to fostering a relationship with us.

“We all understand the benefits – it’s food processing, it’s agriculture, it’s chemistry, it’s Idaho. There are a lot of jobs in food chemistry and it’s a niche that’s not being filled in an agricultural state.”