In an avian influenza outbreak, time is valuable. Anything that can push the recognition point up has huge value.

J. Craig Wyvill, division chief, GTRI Food Processing Technology Division

According to the U.S. Department of Agriculture, uncontrolled avian influenza in the United States could paralyze the industry and compromise the nation’s position as the leading exporter of poultry in the world.

Researchers and industry leaders working to make food processing safer and more efficient got a boost recently with the opening of a new building designed for collaborative technology development at the Georgia Institute of Technology.

Eight years in the making, the 36,000-square-foot first phase of Georgia Tech’s $9.4 million Food Processing Technology Building opened its doors on March 1. Georgia Governor Sonny Perdue and other officials dedicated the new facility — built with public and private funds — in an official opening ceremony on May 19.

The facility houses offices and research laboratories for automation, information, and environmental technology development, a 4,300-square-foot, high-bay prototyping area, a 48-seat auditorium and a large conference room for industrial and organizational meetings and events. Also, an interactive lower lobby exhibit area is being designed to entertain and inform visiting K-12 student groups and others about the growing role technology is

The USDA’s Southeast Poultry Research Laboratory (SEPRL) in Athens, Ga., conducts extensive research on avian influenza and is collaborating with the Georgia Tech Research Institute on its development of an interferometric optical waveguide sensor to detect the disease in poultry. For more information on SEPRL research, see seprl.ars.usda.gov/default.htm.
The new building serves as headquarters for the Food Processing Technology Division of the Georgia Tech Research Institute (GTRI), the non-profit applied research arm of Georgia Tech. Through the division, GTRI conducts significant industrial research under two major programs: the Agricultural Technology Research Program (ATRP) and Georgia’s Traditional Industries Program for Food Processing, which is managed through the Food Processing Advisory Council (FoodPAC).

Ranked as one of the top programs of its kind in the country, ATRP works closely with Georgia agribusiness, especially the poultry industry, to develop new technologies and adapt existing ones for specialized industrial needs. Researchers focus efforts on both immediate and long-term industrial needs, ranging from advanced robotic systems to improved wastewater treatment technologies to machine-vision grading and rapid microbial detection. FoodPAC is committed to enhancing the competitiveness of Georgia’s food industry, and through the Traditional Industries Program, has helped GTRI to commercialize some of its developments while also adapting them to the needs of such industries as bakeries and fruit processors.

“The completion of the Food Processing Technology Building marks the start of a new era for Georgia Tech’s food processing research activities,” says J. Craig Wyvill, division chief. “The facility, with its many state-of-the-art laboratories, small prototype fabrication shop, and high-bay test and construction area, provides an environment that will help facilitate collaborative food processing technology development.”

Food and poultry companies, as well as equipment and supply companies, will be able to collaborate with researchers in the early stages of new technology development without placing undue pressure on either party to deliver or purchase a commercial system, Wyvill explains. This type of collaboration gives both sides an opportunity to jointly assess the potential of an emerging or new technology away from the stress of having to make a buying or selling decision. The building’s high-bay prototyping area provides new space to set up test cells to evaluate and enhance new products unproven in commercial plant settings.

“We want this facility to be a focal point also for joint university collaboration and for collaboration with technology companies that do not have an existing focus on the food industry,” Wyvill adds.

A Phase II addition to the building will add 10,000 square feet for offices and laboratories for human factors, food safety and bioprocessing research. A campaign is under way to raise the $2.1 million needed for this addition.

Fundraising for the $7.3 million Phase I building was coordinated through FoodPAC and the Georgia Poultry Federation. State bonds provided $4.73 million with the balance provided by private sources that included pledges and donations from 17 companies—all with facilities in Georgia—that manufacture food products or offer equipment and technological support to the industry.

They are: Air Products and Chemicals; American Proteins; Cagle’s; Claxton Poultry Farms; ConAgra Foods; Crider Poultry; Cryovac-Sealed Air Corporation; FMC Technologies; Gold Kist; Mar-Jac Poultry; Meyn Poultry Processing; Seaboard Farms (now part of Pilgrim’s Pride); Stork Gamco; The BOC Group; Thinkage; Tyson Foods; and Wayne Farms.

Avian influenza outbreaks typically occur along the flight path of migratory birds, including the East Coast of the United States, particularly in Pennsylvania, Delaware, Maryland and Virginia near the Chesapeake Basin. The disease has also occurred among poultry flocks in Texas and California. When an outbreak is detected, the only way to control an epidemic — because there is no vaccine yet — is to destroy millions of poultry farm birds, causing a dramatic economic impact on the industry and ultimately consumers. One outbreak in Virginia in 2002 caused more than $130 million in losses.

— U.S. Department of Agriculture