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## A tutorial in innovation

Higher education is the key to New York's economic revival

By THOMAS GAIS

t the Rockefeller Institute, over the last two years we've closely studied the role of higher education in promoting economic development and creating jobs across the country — in places as diverse as Georgia, Michigan, North Carolina and Nebraska.

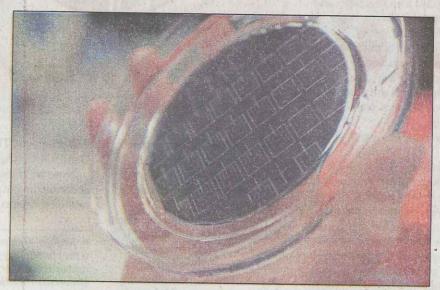
But the best success story we found is right at home: the University at Albany's College of Nanoscale Science and Engineering.

As we reported in a study published on June 1, Albany Nano "is acknowledged as perhaps the single most successful example anywhere of university-led economic development, job growth and high-tech discovery rolled into one."

The story is so familiar in the Capital Region that we almost risk taking it for granted. What began in a basement physics lab at UAlbany has since attracted some \$6 billion in private-sector investment. Albany Nano now hosts some 2,600 scientists, researchers, engineers and technicians up from 72 jobs when the first of its five buildings opened only 10 years ago. It's the linchpin of the chip-fab boom under way in Saratoga County. It has spawned spin-off research and jobs from Fishkill to Canandaigua.

But what's most interesting about UAlbany's success, our research shows, is that it represents only one part of the potential benefits that the State University's 64-campus system can deliver for economic growth all across

Traditionally, states have tried to lure new businesses and jobs by offering tax breaks, real estate deals, infrastructure and other incentives -



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THE NANOSCALE molds made at the College of Nanoscale Science and Engineering at the University at Albany help create hundreds of nanoscale devices and, with them, high-skilled jobs throughout the state.

all aimed at helping these businesses set up more quickly and at lower cost than in competing locations.

But the innovation economy the United States is developing relies for growth on things that aren't touched by those traditional strategies: on new ideas, technologies, processes and skills. Higher education institutions and systems are the key. They pack a double punch; they are the source of the new knowledge needed to produce high-paying jobs in the innovation economy - and they are the key to developing a workforce prepared to take those jobs.

Increasingly, our research has found, states are responding by putting their higher education systems, and not real estate deals, in the lead. Georgia, to use one telling example, moved its economic development office to the

Georgia Tech campus.

Across the country, higher ed is putting its research and educational power to work by developing new ideas, helping to deploy inventions for commercial use, educating potential entrepreneurs, helping businesses prepare workers for advanced tasks, and fostering a quality of life that is essential for economic growth. This is "A New Paradigm for Economic Development" - the title we gave last year to a report on this national trend.

But what about New York? To find out, the Rockefeller Institute partnered with the Regional Institute at the University at Buffalo to study the impact and the potential of the whole SUNY system. Our new report, "How SUNY Matters," captures a very promising picture.

In the first place, SUNY's economic impact in New York is quite large. It returns at least \$5 in economic impact for every \$1 of state support — \$19.8 billion (and growing) as of 2008-09.

impact was \$2.1 billion, just from the spending of SUNY institutions, students, faculty, staff and overnight visitors. (If the value of the private investment and jobs at Nano and other assets could be added up, the total would be far higher). Beyond the raw dollar figures is SUNY's contribution to the Capital Region's demographics and workforce - with students, employees and alumni accounting for 21 percent of the region's population.
That's a glimpse at SUNY's current

impact. But what matters more is higher education's potential impact on the economy we hope to have for the future. Nano could be a harbinger - a trend-setter, not an outlier.

The paradigm that Nano represents – high-level learning and technology, focused on ideas with commercial potential, and developed in a synergistic way that brings together researchers from the faculty and from business is something that SUNY is actively pursuing on campuses across the state.

Our research found business incubators at each of SUNY's university centers (and a number of four-year colleges as well) housing dozens of start-up companies. Other services, such as financial support for patent and copyright applications, are helping entrepreneurs from the faculty and from the business world bring their new ideas to fruition. Campuses build on their regional character and their special strengths - such as Buffalo's prowess in engineering and bioscience; Stony Brook's leadership role in the communications industry; Binghamton's historical role in the electronics industry; and the entrepreneurship focus of UAlbany's School of Business.

So when you hear Gov. Andrew Cuomo say that his administration's economic development efforts must be "higher-ed driven," this is what he's talking about. It's New York's future.

