

# COLLABORATION



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IN 2004, FORMER NEW JERSEY GOVERNOR JAMES McGreevey issued Executive Order 128 establishing Newark, New Brunswick and Camden as “Innovation Zones” so that “New Jersey should capitalize on its competitive advantage through economic development initiatives that support the State’s world-class academic research universities and science and technology industries.”

NJIT has a bold plan for Newark that leverages over fifteen years of experience in technology-business incubation as well as more than a decade of developing a commercial technology park, and which draws on its unique culture of applied scholarship. The plan recognizes that success combines large corporations with mid- and small-size companies in a delicate but essential business ecosystem. Each sector has unique needs reflecting new business models driven by globalization, technological change and fierce competition — and all can benefit from strong public-private partnerships that lay the foundation for competitiveness through innovation.

To sustain the economic stature and quality of life that our state has achieved, incremental growth simply will not do. New Jersey needs measures that leap-frog the competition and not merely play catch-up. A vigorous, technology-based economy requires a new dynamic among business, government and academe which addresses the wholesale changes that have altered fundamental concepts of operation in all of these sectors.

Most critical, perhaps, is the need to replace the large-scale corporate research and development entities now all but squeezed out of the American business model. Research solidly grounded in the needs of the marketplace and yet freed from having to meet the short-term demands of an operating division is vital for innovation in products and processes. But few companies, if any, can afford to support activities that have the breadth and depth

essential for creating next-generation platforms that elevate an entire industry. Universities like NJIT, whose research and instructional programs have an applications focus, are perfect for hosting a new type of applied research and development center — an entity with the practical attributes of corporate R&D but also dedicated to activity spanning an entire industrial sector and able to freely exchange physical and human resources with the traditional academic enterprise.

## **Innovation in University Heights**

If there is one location where the Innovation Zone concept can quickly become a reality that helps New Jersey reassert economic leadership, it is the University Heights section of Newark. All the ingredients are there waiting to coalesce in a major research and economic development effort centered on the 60-acre University Heights Science Park. A decade-long initiative sustained largely by institutional support, Science Park is primed for further seed funding that can make the area a premier destination for high-technology firms.

Science Park is bounded by the campuses of NJIT and the University of Medicine and Dentistry of New Jersey (UMDNJ), with Rutgers-Newark and Essex County College nearby. It is home to two of NJIT’s three business incubators as well as two research and development facilities — the CHEN building housing biomedical research activities shared by all three research universities and the International Center for Public Health, home to the Public Health Research Institute and UMDNJ laboratories.

While these are very important elements in the composition of Science Park, certain attributes necessary to drive completion of the Park as a key component of a successful Innovation Zone are still lacking. Even with half of New Jersey’s incuba-

# FOR INNOVATION: A NEW MODEL

tion capacity in the area, the outflow of incubator graduates is too small to stimulate construction of commercial space, and the resident research and development is not the type that generates co-location of a “supply chain.” Without a critical mass of firms and employees, it is difficult to attract the storefront services and justify the residential construction that would complete Science Park and deliver the full promise of economic development for the region.

## Building the Zone

To accelerate Science Park toward full-grown status, the state needs to prioritize its investments to attract all of the business elements that must co-exist in such a commercial development. Maximizing success will depend on several key factors — attracting large corporations, supporting mid-size companies and facilitating start-ups.

Large corporations would give the park a focus and identity while providing commercial opportunities for the mid- and small-size companies that complete the business ecosystem. NJIT complements traditional university assets for this sector with industry-focused research and development centers and allied research companies in areas that include communications, microelectronics and materials.

A particular attraction is the New Jersey Homeland Security Technology Systems Center, a central resource for assessing and integrating the diverse technologies needed to protect against terrorism. This center should be a magnet for all companies looking to leverage the state as a real-world test bed for developing security solutions. In addition, NJIT is home to the state’s leading continuing professional education enterprise, which provides customized classroom and online instruction for many thousands of New Jersey workers each year.

Also essential is supporting the mid-size compa-

nies that tend to be part of industrial supply chains and which benefit from proximity to trading partners. Access to specialized technical facilities, laboratory equipment and trained personnel all facilitate their growth. The state’s emerging biotechnology companies and stem cell research initiative will gain from access to shared production facilities planned for Science Park. NJIT’s advanced instrumentation, Class-10 micro-fabrication center, prototype manufacturing center and various pilot-scale facilities are in place to assist such companies. Assistance with technical and business issues is available through the New Jersey Manufacturing Extension Program, Defense Procurement Center and other divisions of the university.

Resources to support technology-based startups are in place as well. NJIT’s Enterprise Development Center offers more than 150,000 square feet of space for business incubation, and has successfully launched over 50 companies. Business planning, outsourced services and access to capital combine with flexibly configured office and lab space to accelerate business creation and growth. Our novel program that teams new starts with interdisciplinary, cross-university groups to develop federal grant funding and private investment is also accelerating business creation.

High technology leading to products with high added value and to new, advanced production methods will create a robust local economy with wide-ranging career opportunities and a stable industrial base — all of which will help New Jersey measure up to global competition. If you are in the technology sector, Newark is the place to be. ■

**For more information about R&D opportunities in the University Heights Innovation Zone, contact Donald Sebastian at 973-596-8449 or [sebastian@njit.edu](mailto:sebastian@njit.edu).**

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● CAMDEN