



The Applied Sciences NYC Initiative: An Important Step in Diversifying Our Economy

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The Applied Sciences NYC Initiative is a bold strategy to foster economic growth by building on the city's extensive academic assets and potential to spur the commercialization of applied scientific research. In a conscious effort to move the city beyond its reliance on the finance sector, this initiative has borne considerable fruit in just three years. The centerpiece project leverages \$100 million in city capital funds and city-owned land to attract a \$2 billion investment from Cornell and Technion Universities to establish a new engineering campus on Roosevelt Island. The main objective of this project is to commercialize technological breakthroughs and spin out new businesses, emulating the success of Silicon Valley where many tech start-ups spun off of Stanford, other universities and government labs, and the success of the Boston area where tech start-ups spun off of M.I.T., other universities and government labs.

A second agreement involves a consortium of universities led by New York University and NYU-Polytechnic Institute in partnership with IBM and Cisco that will establish the Center for Urban Science and Progress in downtown Brooklyn. This center will focus on research and development to address a range of infrastructure and environmental challenges facing cities.

A third major agreement with Columbia University will lead to the creation of a new institute for data sciences and engineering in Morningside Heights and Washington Heights. This new center will train personnel and pursue research in five areas within data sciences: new media, smart cities, healthcare information, cyber security, and finance.

The city's investment in the NYU and Columbia projects is reported to be \$15 million in each case. The city estimates that, over the next three decades, these three projects will generate billions in economic activity and several thousand permanent and construction jobs, and will lead to the establishment of over 900 spin-off companies.

For a city that typically subsidizes individual companies and provides costly tax breaks for large commercial real estate projects, and that has provided enormous subsidies to build sports stadia and arenas, the Applied Sciences Initiative is a major breakthrough. It represents an investment in the city's academic base and in its intellectual potential. It is a broad investment in New York City as a place that supports innovation and encourages and enables the transformation of ideas into start-up companies. It also says we should use new technology to solve urban challenges.

This is a welcome new direction that changes the way we think about how the city promotes economic growth. It is an important first step in what should be a singular focus on investing in people, in ideas and human capital, and in expanding opportunities for all New Yorkers.

Whether the ambitious projections for the long-term economic benefits are borne out depends on how the city implements these projects over time and whether the universities live up to their commitments regarding the investments they have promised. The city and the universities together need to deliver on the keystone to the Applied Sciences Initiative—creating an environment that fosters the commercialization of new technology in a way that leads to the formation of spin-off firms in New York City.

It's a lot harder to do than it sounds. It's one thing to support scientific and technological research and development. It's another thing to make sure that those investments pay off for New York City in start-ups taking root here, expanding and employing New York City residents. The success of this strategy requires the city to foster a virtuous cycle of new ideas, highly educated residents with greatly expanded opportunities, and new business ventures that flourish here and generate forward-looking employment opportunities for New Yorkers.

The benefits—economic as well as social and political—to the city will be greater to the extent that the Initiative creates opportunities for talented residents from across the city's many neighborhoods. Meaningful partnerships should be established with schools serving less-advantaged populations and neighborhoods. A focus on science and technology can help unlock some of the tremendous potential we know exists in poorer neighborhoods.

Appropriately, the city is supporting various projects that are complementary with the Applied Sciences Initiative, such as the plan announced earlier this month involving the construction of a new cancer care facility at Memorial Sloan-Kettering and a new building for the Hunter College Nursing School. The city is also supporting various incubator facilities that are often critical to the formation of start-up companies.

Support for the development and commercialization of new technologies, and for the formation of start-up companies is sound and fundamental economic development. One way to make these investments more sustainable given the tight constraints on the city budget, is for the city to explore how it can more directly share in the success of start-up companies that benefit from city support. For example, the city might receive a small equity share in start-up companies that benefit from city investments in technology or incubator space.

Finally, one more general advantage to the Applied Sciences Initiative is that for this strategy to be successful, the city has no choice but to also focus on and commit resources to making the city a highly desirable place to live and to start a business. This puts the focus on the quality of life, the quality of our school system, the livability of our neighborhoods and maintaining a broader cohesion across our economic, cultural, ethnic and racial diversity. Expanding opportunities for all New Yorkers in all our neighborhoods is the linchpin to this strategy.

New York City is already an incredibly vibrant and dynamic city. Our diversity is an important ingredient in that vibrancy and dynamism. A city of more livable neighborhoods and greater economic and social cohesiveness would offer greater opportunities, and thus would be even more attractive to innovators and better able to create that virtuous cycle of development.