



Tech & the City

New York's Latest Mega-Project Is a Campus for Home-Growing Technologists. But Can a City Really Engineer an Innovation Economy?

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It's a rainy Wednesday in May on the fourth floor of a building on Broadway in New York City's Flatiron District. On a giant monitor, Adam Pritzker, a slight 27-year-old with a tousled shock of dark hair, is showing me his midterm exam from his Columbia undergraduate days as a student of Dutch-American sociologist Saskia Sassen, who argued against the popular 1980s idea that technological innovation would come to be coupled with a sense of placelessness. Around us is a living experiment on the matter, all part of a global network called General Assembly.

In its common rooms, classrooms and desk-filled spaces, General Assembly houses a swarm of coders, flannel, designers, Converse sneakers, start-ups and Macs covering chaise lounges and couches. A display near the entrance lists classes for the taking: “Creating Infographics from Scratch,” “The Dos and Don'ts of App Marketing.” In the shared kitchen, coffee from Brooklyn's subscription-based Craft Coffee brews.

Opening its doors in January 2011 with a \$200,000 grant from the New York City Economic Development Corporation, the 20,000-square-foot General Assembly blends tech education — offering sessions on everything from HTML to start-up law to information architecture — with shared working space.

Much of what makes General Assembly special happens because of the connectedness of the amassed community, says Pritzker. We move over to a pod made up of a pair of high-backed couches. Waving his hand around the blond-wood-and-glass space, Pritzker, one of the assembly's founders, gives the example of one start-up's chief technology officer leaning over to ask his counterpart at another company a question on coding.

“There's a reason why we call this a campus,” he says. “We have a communal space. That's like a quad. We have a library.” Community-fostered innovation is the secret to its success, and it's a success that's spreading both across the street and to London. “You would think that the Internet is such a force for decentralization that where you are doesn't matter,” says Pritzker, twisting a forelock. “But what Sassen talked about, and what we're finding, is that that just isn't true.”

Increasingly, what's also being found out is that New York City is one of the prime places where people want to cluster together to create technology. Now, Mayor Michael Bloomberg has a vision for what is in many ways a scaled-up General Assembly for the whole city, what he's promising to be “a beehive of innovation and discovery, attracting and nurturing the kind of technical talent that will spawn new companies, create new jobs and propel our city's economy to new frontiers.” What he has in mind is a 2 million-square-foot tech campus on Roosevelt Island.

GETTING TO CLUSTER

On Roosevelt Island, the city is relying upon an intellectual framework decades in the making. In his 1990 book *The Competitive Advantage of Nations*, Harvard Business School's Michael Porter put a name on a long-standing economic understanding that industries seem to work best when their component parts physically bump up against one another. "Interconnections within the cluster, often unanticipated, lead to the perception of new ways of competing and entirely new opportunities," wrote Porter. "People and ideas combine in new ways."

In the decades since Porter wrote, there has been a wave of varied urban experimentation in the deliberate application of his clustering principle to high tech: The gathering of technology companies on Detroit's so-called "**Webward Avenue**;" the Spanish city of Zaragoza's highly-wired *Milla Digital* business district; Seoul's state-of-the-art and sprawling **Digital Media City**.

"In a time of limited budgets," says Mark Muro, director of policy for the Brookings Institution's **Metropolitan Policy Program**, "focusing on key clusters can be a very effective strategy. Critical mass becomes a gravitational force." But in New York, it's no mere theory. You can feel it at ground level. Look at midtown Manhattan's Garment District, where an interlocking mass of designers, suppliers, cutters, factories and showroom specialists goes back more than a hundred years. The area's "outsourced infrastructure," to borrow a phrase from the **Design Trust for Public Space**, has helped spawn a fashion capital that has long told the world how to dress.

So what's new here isn't the notion that a clustered industry can bring more investment, more jobs and more innovation to an urban landscape. What's new is New York City's plan to erect a school with the intention of pushing its tech industry to full-cluster — and getting there soon.

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SILICON ALLEY ON WELFARE ISLAND

Charged with pulling all this off is Seth Pinsky, president of the **New York City Economic Development Corporation** (NYCEDC), the city's semi-governmental growth wing. In a blue striped French-cuffed shirt and yellow polka-dotted tie, the brush-haired Pinsky has the looks and low-boil intensity of a bookish Manning brother who forewent football and opted for student government instead. We sit in a conference room on the sixth floor of 110 William St. in the Financial District. "The origins of this is the mayor's realization when he came into office in 2002 that New York needed to diversify its economy," Pinsky explains.

At first, they turned to the city's traditional secondary industries: Tourism, film, television. That worked out fine. But then, in 2008, Lehman Brothers collapsed. It quickly became clear that not enough had been done to make sure that weaknesses on Wall Street wouldn't bring down the city's whole economic system.

Fortunately, by the late 2000s, the tech sector was on an upswing. Venture capitalists were nosing around the city. Talk of a "Silicon Alley 2.0" was in the air. Start-ups were starting up in DUMBO. But, says Pinsky, when the city held hundreds of conversations on economic development with everyone from academics to business leaders to community groups, they came to the realization that while there was, in raw terms, a good amount of applied science activity afoot, New York City's economy is a huge one. There simply wasn't the critical mass needed to create the sort of idea sharing and hopping from company to company that helped spread innovation in Silicon Valley.

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"Interconnections within the cluster, often unanticipated, lead to the perception of new ways of competing and entirely new opportunities..."
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They concluded that there was a dearth of trained technologists able to do the heavy lifting.

Some hopes had been placed in the merger of New York University with downtown Brooklyn's Polytechnic University, a move that, as the Center for an Urban Future put it in a report, some saw as "a critical spark to the city's long-standing, and largely

frustrated, efforts to establish itself as a vibrant center for technological innovation." But as the decade wrapped, it became clear that the process of re-engineering two institutions with a combined two centuries of history — and baggage — into one new whole, in the middle of New York City, wouldn't move at such a fast pace.

In December 2010, the city rolled out its response, calling the project **Applied Sciences NYC**. The deal: The city would handover some \$100 million and a piece of real estate to someone willing to create a graduate engineering school from scratch. Eighteen proposals came in from 27 different schools, narrowed down to seven applications from 17 schools in the second round. For a while, it looked like Stanford University, with its joint application with the City College of New York, would emerge victorious.

This winter, though, the proposal by Cornell University and **Technion-Israel Institute of Technology** was announced as the chosen application. City leaders



Seth Pinsky, president of the NYCEDC, is tasked with figuring out how to turn Roosevelt Island into a beehive where techies can mingle and make magic.

describe the Cornell-Technion plan as ambitious. (They won't release the application itself, on the grounds that Applied Sciences NYC is still an open project.) The school has pledged to educate some 2,500 graduate students each year. Other details made their application particularly appealing. Cornell had on hand a commitment for \$350 million to go to the tech campus from a philanthropic alum who made his fortune in duty-free shopping. There was also the promise of creating a green campus heated and cooled by thermal wells and of engaging with 200 public school teachers and 10,000 New York City public school students each year.

What made the city's offer such a hot ticket? In part, it was simply a question of real estate. One shock was how many initial bidders were drawn to Roosevelt Island, says Pinsky of the slightly dowdy, somewhat odd quarter-square-mile residential strip nestled in the East River. (Other choices offered up included the Brooklyn Navy Yard and Governor's Island.) But the skinny strip of an island, sometimes described as a "hinge" between Manhattan and Queens, has a lot arguing for it. Outsiders intuitively saw something locals didn't. "Because of the really strong transit links," says Pinsky in retrospect, "what Roosevelt Island offers you is the chance to, one the one hand, create

a real campus, which was very important to these schools, but on the other hand, have that campus be easily accessible.” Isolation within reach was one reason a small pox hospital serving New York City residents was built on the island’s remote southern tip in the mid-1800s. Close enough, but not too close.

It’s a second hospital that provides the 10-acre site for what will be known, somewhat awkwardly, as **CornellNYC Tech**. Opened in 1939 when it was still called Welfare Island, Coler-Goldwater Memorial Hospital’s Goldwater Campus is a forgotten-looking brick complex, much of it resembling an Eastern Bloc institution. “It has infrastructure that’s appropriate for a 70-year-old hospital,” says Pinsky. Goldwater’s patients were already slated to be moved to Harlem by the end of next year. The city’s \$100 million will be put to tearing down its buildings and putting in a telecommunications infrastructure, ending up with a wired greenfield.

Just south of the Queensboro Bridge, the site has sweeping views of Manhattan, a tranquil oasis surrounded by air and separated, just barely, from the big city by a bit of water. Standing amidst the quiet of the hospital campus, it’s tempting to think that, with a little effort, you could hurl a rock right into the noisy churn of Manhattan’s FDR Drive. The space is reinforced by Four Freedoms Park, designed decades ago by architect Louis I. Kahn and now being built on the far southern tip of the island in honor of the president for whom the island was renamed in 1973. “We’ll deliver the site with approvals and vacant to Cornell and the Technion before the mayor leaves office at the end of 2013,” promises Pinsky. Construction on the site is scheduled to begin by 2015.

Squint, and the well-treed grounds with its winding paths already look like a campus. But the idea of retrofitting the Big Apple with an engineering school there has its doubters.

Margaret Pugh O’Mara is an associate professor of history at the University of Washington in Seattle and the author of the 2004 book *Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley*, which focuses the struggles of the University of Pennsylvania and Georgia Tech in the 1960s and ‘70s to mimic the growth of Stanford and the Massachusetts Institute of Technology. O’Mara is bullish on the prospect of New York City emerging as the next Silicon Valley. She’s just bearish on the idea that a ready-made tech institution on Roosevelt Island will have anything to do with it.

New York City has a lot of the right factors in place. High-tech tends to develop where people want to live. Silicon Valley, while beautiful, flourished during mass suburbanization. These days, says O’Mara, her students say they want to be in cities.

One thing cities can do, she says, is to make themselves generally more livable, a front on which New York City has made great progress.

So what worries her? It's the way government is getting involved. Along with Stanford, Silicon Valley had a mess of government contracts in the 1950s, particularly in the fields of naval research and aerospace. "Silicon Valley was never a purpose-built science city," says O'Mara. "Dwight Eisenhower didn't say 'We're going to build a tech capital on the west coast.'" Sure, there was a ton of money injected into the region. But there were few strings attached. It was pure profit that went to building out iconic tech companies like Hewlett-Packard and Xerox PARC. "In a way, it was a happy accident," says O'Mara. "Part of my skepticism about this whole enterprise is a belief that government can have this great market impact. In the case of technology, it's just a little more slippery and unpredictable."

Moreover, governments have a bias toward measuring in numbers and a tendency to count the wrong things, says O'Mara. She argues that New York City might be mistaking the raw production of more engineers with the growth of applied science activity. "Certainly investing in that campus will produce more people with engineering degrees. Will that really provide a return on investment above and beyond what might have happened naturally?" She goes on, "I think there's an expectation that it's going to be a magic bullet." O'Mara sees echoes of the United States getting worked up about Russia's generation of scientists during the space race, and, today, the production of engineers and software developers in China and India. "But let me tell you, they're technical schools," she says of the latter. "They're giving people a very narrow skill set. It's not very high-quality. The numbers game is something that politicians at all levels get worked up about." Businesses don't need warm bodies, though. "They don't want any old developer. They want someone who has a high-end skill set."

I put O'Mara's criticisms to Pinsky. "That's exactly why we did this the way we did this," he says. New York City studied tech schools in the Middle East and Far East, and found lessons in what not to do. "What happens in almost everyone one of those cases is that the local government builds the campus for the school and pays the operating costs for the school," says Pinsky. "That is not what we're doing."

Instead, they're aiming to write themselves out of the plan. They will create conditions, dictate scale and scope, and spell out the mission at "the highest, broadest possible level" — to increase economic activity and tax revenue through technology. But they have otherwise let the schools figure out how to best meet those goals. "We're an investor here," pledges Pinsky.

And as far as warm bodies go, the vision here isn't one of just churning one engineer after another. The ambition is to support the full life cycle of technology. At full-power, the CornellNYC Tech campus will educate 2,500 graduate students and be home to hundreds of faculty members. There will also be incubator space, R&D labs, a \$150 million fund for local start-ups. The city predicts the creation of some 600 spin-off companies and \$23 billion in economic activity over the next 30 years.

Those are numbers big enough to make a difference, even in New York.

THE TRADE-OFF

New York City invested \$100 million and 10 acres of land into the NYC Cornell Tech Campus. In return it expects \$23 billion in new economic activity over the next 30 years.

\$100 MILLION
+ 10 ACRES

=

\$23 BILLION
OVER 30 YEARS

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HUB GEOGRAPHY

Figuring out the geography of that ecosystem is the job of Cathy Dove, associate dean at Cornell's College of Engineering and recently named the campus's vice president.

Looking inward, Cornell is looking to make the campus the sort of place that fosters innovation. As Dove tells it, she takes inspiration from her new island home. Once desolate, Roosevelt Island has been something of an experiment in utopianism since Mayor John Lindsay undertook a plan in the 1960s to rejuvenate the island; its gadgets include a tram connecting the island to Manhattan and an island-wide pneumatic vacuum garbage system. For the next five years, while designing and constructing the first academic building under the design of Thomas Mayne of the firm Morphosis, Cornell will set up shop in donated office space at Google's Chelsea headquarters. (Dove is hopeful that some housing will accompany the opening of the campus' first academic building in 2017; a second academic building is planned for 2024.) "It's a much more open concept than you'll find in any of our buildings in Ithaca," says Dove about Google. She points to the breakout rooms for conversation, brainstorming and group projects called "huddles." Everything in the space is meant

to encourage creativity. “That’s definitely the kind of campus we want,” she says. “I’m almost thinking of furniture-on-wheels kinds of things.”

But, critically, they’re also looking outward, beyond Roosevelt Island. The vision is one where spillover from the tech campus flows east and west. The logical place for early start-ups to go is Long Island City, a growing artistic hub with relatively cheap space known for PS1, the Museum of Modern Art’s experimental outpost, and Silvercup Studios, the old bakery space where Manhattan has been recreated on the cheap for the likes of *Sex and the City*, *30 Rock* and *Girls*. Right across the river, it is one subway stop or a quick bike ride away. Just slightly farther afield, campus planners also expect to see a reinforcing of the clustering of tech companies already happening west along the F train line that runs up Sixth Avenue in lower Manhattan and through DUMBO and elsewhere in Brooklyn. The school is working on creating landing pads.

Right now, clustered around Long Island City’s subway stop now are auto body shops, abandoned warehouses and public housing. Dove describes talking to community leaders in Queens about setting up a “one-stop shop” for shared resources like offices space and administrative support.

That sort of thinking is reflected in the school’s planned academics. Dove talks about “the ability to break down and move people as the research, teaching and other programmatic needs require — very open with very flexible clustering of people and ideas.” Instead of traditional academic focuses, the campus will have “hubs” in their place, which at the moment are planned to focus on media, health and the built environment. Degrees will still be granted at both the masters and Ph.D. levels in specializations like computer science, engineering and information, but the hub is the organizing unit of the program. The idea is that they can be broken down and rearranged over time, if not with the ease of furniture, then far faster than you can reshuffle departments in a typical university. “You don’t want your traditional set of walls and spaces and organizing people by their traditional department,” says Dove. “You want people to be able to move as their focus changes and their interactivity with people changes.”

Carl Skelton has watched the changes at NYU-Poly as director of its **Experimental Media Center** in Brooklyn, and he’s both encouraged by and skeptical of the idea of starting from scratch. He wasn’t surprised that the mayor didn’t want to wait for the NYU-Poly blending to work, and he sees a useful doing away with of inertia and the conservationist tendencies of specialized academics that comes with doing this sort of thing on an island away from both school’s core campuses. But he warns that NYU and Technion will only have the flexibility of newness for so long.

“One of the mistakes that a lot of would-be Silicon Valleys have made through the decades is that they’ve equated having a university or a research university with having an empowered or particularly entrepreneurial university.”

“Every one of those faculty hires is a 40-year bet on a subfield,” he says. “Whatever commitment they are making to a particular institutional skill mix and level now, they have to be betting will still be relevant in 25 years, and that the people they hire now will still be thinking and working ahead of their fields and sub-fields when they are looking to hire the next generation.” Moreover, Skelton cautions that it can be difficult for schools to keep up interdisciplinary programs (read: hubs) when there’s competition for resources.

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But Dove says she’s not worried, in part because CornellNYC Tech keeps the benefits of traditional academic specialization. Faculty will still be tenured in their home departments at Cornell, like computer science or electrical engineering. “It’s the focus of how they’re organized on campus that’s different,” explains Dove. It’s both brand-new and same-old at the same time.

One elephant in the room is that New York City is, even beyond NYU-Poly, already home to a number of engineering schools, including those at Columbia and Cooper Union. Skelton thinks that the success of the tech campus might light a competitive fire under NYU-Poly, at least.

“There’s a theory that more campuses means more,” says O’Mara. “But it’s a misperception of how this stuff works.” She adds, “One of the mistakes that a lot of would-be Silicon Valleys have made through the decades is that they’ve equated having a university or a research university with having an empowered or particularly entrepreneurial university.” Stanford, where O’Mara worked from 2002 to 2007, might be unhealthily obsessed with technology, she says. But “Cornell doesn’t have the long-term industrial cooperative model that Stanford has — quite honestly, for good or ill — perfected.”

For that, we go to Israel.

IMPORTING INDUSTRIALIZATION

So why the two schools? It's freeing, say observers. The city and its advisors didn't have an interest in replicating another branch of Cornell, just 230 miles southeast. "Something that we found to be very interesting was the fact that these two schools were looking to create something entirely new," says Pinsky. "They're not just co-locating." A separate institution gets you silos, but if you're looking for something revolutionary, says Pinsky, "it requires people to come together who have never worked together to create something that had never been created before."

Here, it's one old school, one newer. Cornell has been a leading institution since its founding in 1865; the Technion really gained traction in the last two decades. One is a U.S. school, with a local presence in the Weill Cornell Medical College on the Upper East Side. One is based more than 5,500 miles away. "The combination of all those factors made it highly desirable to us," says Pinsky. In other words, picture Roosevelt Island as one big huddle. The idea is to put Cornell and the Technion inside it and see what they create.

Founded in 1912, but only opening its doors in 1924 with the deep involvement of Albert Einstein, the Technion was Israel's first university, intended to help lead the development of that country's infrastructure and economy. Technion's particular appeal is that it has what Cornell lacks: Experience being a pipeline to industry. Pinsky says the Technion "has almost single-handedly turned Israel into one of the leaders in the technology center." Cornell will build and run the campus, and in truth the Technion's role is more limited than has been suggested. But it represents a distillation of the project's mission in its purest form. They'll be starting something called the Technion-Cornell Innovation Institute, or TCII.

On the phone from Haifa, in northern Israel, is Craig Gotsman, a computer science professor who will come to New York to head up the TCII. "We're establishing this university for a very specific reason," says Gotsman, "and the specific reason is to grow the high-tech industry." But what's in it for the Technion, I ask. He responds by asking if I've ever been to Israel. Not yet, I say. That's your answer, he says with a chuckle. "We have an excellent academic record. We have Nobel Prizes. We have all the different things that make a university good. We have one problem, and that's that we're on the other side of the world from where much of the action is going on."

The institute will be seeded with students from Israel for the first handful of years, but that will give way to the mix of nationalities any U.S. engineering school might have. The ambition is to be among the world's premier engineering schools. Cornell gives them a way in, and what they bring to the table is a hard-won knowledge of



The Goldwater Campus at the Coler-Goldwater Memorial Hospital will have its desolate buildings torn down to make way for a \$100 million wired greenfield.

commercialization. “A hundred years ago we weren’t that successful,” says Gotsman. “Even 50 years ago we weren’t *that* successful.” Haifa was once a sleepy little working-class port town. Today, it’s a high-tech jewel, where Google, Intel and IBM have offices. Haifa, and high-tech, grew up around the Technion. But it took a while. “We don’t want it to take 20 to 25 years” in New York, says Gotsman. “We want it to take 10 years.”

Building everything from scratch is an enormous advantage, says Gotsman, who says they’re excited to break the barrier between the ivory tower and the commercial world “properly” from the start. “We don’t have to wait and go through all sorts of convoluted evolutionary experiences to get it right,” he says.

Gotsman explains that getting it right means grafting the university onto industry from the start. “If you really want to do what we want to do,” says Gotsman, “you need to have the entire tech ecosystem involved. It’s not just professors teaching students and then sending them off on their merry way. It’s having companies involved in what’s happening on campus. It’s having entrepreneurs, VCs [venture capitalists], all sorts of people who are active in doing these things and who typically would not

set foot on a campus because typically either they're not welcome or they don't feel comfortable there." Things will be different on Roosevelt Island, he says. "They are going to be very welcomed."

Indeed, the tech campus' hubs are designed to instantly slot in as an off-the-shelf academic backend to the city's existing business life. "The reason we're going to be concentrating on these three applications is because those are three industries that really exist in New York City," says the professor. "And if we're active in that, we can immediately impact it. We're not trying to invent new industries which might take years to evolve and to establish roots and so on."

The main offering of the TCII will be a two-year dual master's degree in applied science, where students will be admitted to and graduate from both Cornell and the Technion. Students will dedicate one of their four semesters to an "industrial project," the idea for which, says Gotsman, will come from "a real company with a real business plan with a real proposal for a real piece of a product." The point is for the engineer-in-training to learn the business — all of it, as in not just hardware or software but commercial viability. "We want the students to know why they're doing what they're doing," says Gotsman. "It's not just a theoretical exercise."

Core to the mission of creating entrepreneurial engineers is Greg Pass, former chief technology officer at Twitter, after the social networking site acquired his Virginia-based firm Summize in 2008. As the school's "founding entrepreneurial officer," Pass is headed from the Bay Area to New York and is charged with figuring out how to bake entrepreneurialism into the school-as-start-up, linking coursework to work of local companies. "We're really at a stage where we're challenging all assumptions and figuring out what the DNA of this new type of school should be," says Pass. But he has a vision guiding him.

It comes from his time hiring hundreds of technologists at Twitter, an experience that Pass says made him want to head to Roosevelt Island. His exposure to those engineers who were able to make an "asymmetric impact" on the company was inspiring, impressive and rare. It wasn't a lack of smarts, he says, but cultivation. The most exciting engineers, says Pass, were the ones who had gone through **Y Combinator**, a three-month in-residence program that began in Silicon Valley in 2005, where several dozen start-ups get an average of \$18,000 and the chance at weekly dinners with the likes of Al Gore, Facebook's Mark Zuckerberg and Twitter's Jack Dorsey, as well as end-of-term pitches to venture capitalists. Out of every hundred start-ups that apply to Y Combinator, about four are said to get in. That's an acceptance rate tougher than the Ivy League. Pass doesn't see why the model

can't scale. "I think we can lower the threshold even more towards young engineers to have that type of entrepreneurial experience and gain that kind of confidence and connections."

But all the celebration of the entrepreneurial engineer that is baked into the Applied Sciences NYC project raises a question: Can every engineer really be a CEO? Bloomberg, himself a former entrepreneur, often comes across as fixated on the rebel start-up. "While I don't know who's going to create the next big thing in technology," the mayor said at a recent [TechCrunch Disrupt](#) conference in Manhattan, "we do know where Bloomberg LP or the next Twitter needs to be headquartered, and that is here." But with New York City's economy still dominated by finance, insurance, real estate and other traditional industries, does the city not need, well, worker bees?

It's a fair question, says Pass. The idea of an "entrepreneurial engineer" he says, doesn't mean that all want to want to start companies. "But I do think engineers ought to be increasingly entrepreneur-*ial*, which means innovative and impactful technologists," even if that's in service of a small forward-looking unit in a big company. It's a mindset, he says, that's common today among young engineers, whether they aspire to be Zuckerberg or the PHP developer at Facebook whose name whose name you don't know, but whose code shapes your every day. "There's a certain personality that wants to start a company from scratch," says Pass. "And that's great. We should cultivate that. But I think there's actually a much larger fraction of engineers that don't necessarily want to start something from scratch but they want to be part of something that's growing and exciting and making a difference." There will be room for both on Roosevelt Island, he insists.

And what of more traditional knowledge-for-knowledge's-sake academic pursuits? I ask Dove if she worries at all that CornellNYC Tech becomes simply the city's start-up factory, even an industrial trade school? Take a look at Ezra Cornell's founding vision, she says: "Any Person, Any Study." That's not going to change. The tech campus on Roosevelt Island is a chance at a laboratory for focusing on one aspect at which a competitive university of the future is going to need to be good. "But in no way," says Dove, "does that dilute all the strong activities that are going on in Ithaca."

In making the case for the Technion, NYCEDC's Pinsky says that that school's blend of academic rigor and leadership in the application of study to real-world companies and problems is "almost unique in the world." *Almost*. There's Stanford, which was involved in the application process until quite late in the game — until either, as Ken Auletta tells it in [a recent piece on the school](#) in the *New Yorker*, the city's hardball turned them off or, as Pinsky tells it, it emerged as a poor match for what the city was aiming to do.

“Yeah, no, they’re a great university,” says Pinsky when I raise Stanford, “and we would be extraordinarily happy to have them located in New York as well.” They made the decision based on the applications they had on hand, says Pinsky, and “we firmly believe that the proposal we chose was the strongest proposal that was made to us, and we are partnered now on this Roosevelt Island campus with the team that we think is best placed to achieve the goals that we had set out.” It wasn’t about coming to terms, he says. It was simply that Cornell and the Technion offered a more compelling vision. “That didn’t make the Stanford proposal weak,” says Pinsky. “It just made the other one stronger.”

Plus, there’s still hope for Stanford in New York City. Contra the University of Washington’s O’Mara, the city has embraced the idea that more is, more or less, more. Under the Applied Sciences banner, the city recently announced a \$15 million award for the development of a [Center for Urban Science and Progress](#) in Brooklyn, a joint project of NYU, NYU-Poly, Carnegie Mellon, the Indian Institute of Technology-Bombay and other institutions. And in July, the city announced that as part of Applied Sciences NYC initiative, a new institute for data sciences and engineering is planned to open at Columbia University.

“It’s not an either-or choice for us. It’s an ‘and’ proposition for us,” says Pinsky. “It’s all about the critical mass.”

MUSE OF THE CROWD

New York City’s tech sector might not yet be at critical mass. But it’s booming by nearly every measure. By some, it has transformed itself into a tech city second only to Silicon Valley. Research from the [Center for an Urban Future](#) found that some 486 New York City start-ups created since 2007 have gotten some form of private investment, including from angel investors or venture capitalists. The [New York Tech Meetup](#), a monthly geek revival, regularly fills NYU’s 870-seat Skirball Center theater, with additional \$10 tickets sold to watch the demos and presentations from an overflow venue. Half of the nearly 300 start-ups on a “[Made in New York City](#)” list maintained by the Meetup recently reported that they were hiring.

Cornell’s long-standing academic reputation and Technion’s proven industry expertise were no doubt appealing, says Pinsky, but what was otherwise so attractive about the bid was the schools’ embrace of what’s already taking place in New York City. “Cornell and the Technion basically asked the question the same way” as the city saw it, says Pinsky. “What they asked was, ‘What are the issues we should be tackling given the competitive advantages of the city?’” That the schools were talking about

“hubs” and “connective media,” not “majors” and “computer science,” told officials that they were willing to tinker with their academic models, with New York City itself as their muse.

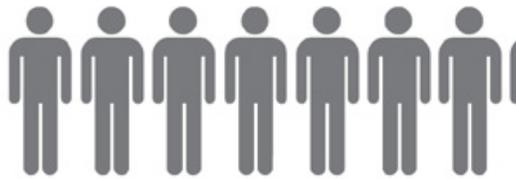
In some ways, the New York City tech boom is a little surprising. Figuring prominently in the origin stories of technologies in the U.S. are unconstrained, often lush spaces. In his *New Yorker* piece on Stanford, Auletta talked about a campus “so startlingly paradisiacal, so fragrant and sunny, it’s as if you could eat from the trees and live happily forever.” The history of Silicon Valley wouldn’t be what it is without the iconic rent-free suburban garage, nor Boston’s high-tech scene without cheap office park space. Is it crazy to think that New York City, a place where people move for its variety of delightful restaurants, not its edible foliage, might simply be too dense for all this? Does all the clawing for space leave any room to dream big technological dreams?

CREATIVE DENSITY

Theorists say the density breeds the innovation and creativity tech thrives on.

On a person per square-mile basis, Roosevelt Island pummels Silicon Valley’s San Jose in the density game.

 = 5,000 people



Roosevelt Island - 41,391 per /sq mi



San Jose - 5,400 per/sq mi

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Here, O’Mara and nearly everyone else involved in the tech campus are in agreement. The idea that creativity requires open space has come and gone. In fact, says O’Mara, it was New York City that inspired the pastoral ideal that has dominated American education — or, at least, a reaction against it.

The notion that in order to think deep thoughts, scholars needed to be away from the hustle and bustle of the city took real root with Thomas Jefferson’s hatred of the Federalists and the cities in which they made their homes, particularly Alexander Hamilton’s New York City. Never mind the corruption of Europe, what with its people “piled upon one another in large cities.” Agrarianism was central to the American character, thought Jefferson, and for his beloved University of Virginia he crafted a model of the “academical village,” at the center of which was an “open square of grass

and trees” that ended up replicated time and time again as the quad at the center of U.S. universities. Back in the days of Jefferson, the pastoral academic ideal wasn’t so crazy, says O’Mara. “If you think of the 18th-century city, there were a lot of reasons you’d want to get away to get your thoughts together. It’s stinky, it’s crowded. It’s full of disease. You want to stay alive to be able to think great thoughts.”

But with cities no longer the pools of pestilence they once were, and social tech the next great wave in technology as many think it to be, then perhaps New Yorkers’ natural state of being “piled upon one another” might be a good thing. Joshua Miller, a young entrepreneur working on a group communications platform called Branch, caused a stir recently when he blogged that he was [moving his nascent company to New York City](#), where it will take up space in the Chelsea incubator company Betaworks, on the grounds that San Francisco is just “too nice.” Wrote Miller, “I miss the grit and grime of New York. It is real and raw, and the commotion of the city is contagious.”

Cities have, of course, made a comeback in recent decades, and much modern thinking — O’Mara points to Steven Johnson’s *Where Good Ideas Come From* — “really emphasizes the urbanity of innovation,” with the accidental encounters and collision of ideas that are the product of density seen as creative fodder.

The Boston area’s high-tech corridor that grew along Route 128 pioneered what became known as the East Coast model: Giant firms that did everything in-house. But in New York, real estate costs alone might encourage that tech firms stay small, says O’Mara, in keeping with “the other industries that have been in New York for so long that have a similar small-scale communitarian [culture] — the creative industries, fashion, media...” In that way, even a tiny start-up can be part of something bigger: An industry, an economy, a city.

Maybe it’s no coincidence that so many of the technological innovations that New York City has become known for of late are social ones. There’s the craft site Etsy, the geography-based social network Foursquare, the viral microblogging platform Tumblr, the link-sharing service Bitly, the crowd-funding hub Kickstarter, the networked food-delivery application Seamless and the group fashion shopping experience called Gilt Groupe. Social might simply be in the water there. (Though it probably doesn’t hurt that much social media makes its money through that most New York of industries: advertising.) [Union Square Ventures](#), perhaps the city’s iconic technology funder, only invests in ideas driven by “large networks of engaged users, differentiated through user experience, and defensible through network effects.”

Translated into human, that means lots of people doing lots of different things, but connected and at impactful scale. It’s a label that fits both New York and the technologies being built within its borders.

THE SCHOOL AS LEGACY

As much as O'Mara gets the desire to produce more engineers, "is that the way to make New York the home of the next Twitter? Probably not," she says. "But there are a lot of other things going on in New York City that could make it the home of the next Twitter." Bloomberg wants to turn "could" to "will." I ask Gotsman how much the city's engagement was part of the Technion's attraction to New York City. The mayor, Pinsky and others are involved on a near-constant basis, he says. They're part of the team. Of course, the \$100 million and chunk of city real estate were huge. "But we're getting much more than that." The city is functioning as a connector, he says, like its hookup with Google for a temporary mini-campus. "They're constantly giving us a wind that is helping to propel us forward," says Gotsman.

Certainly, a look around country suggests why Bloomberg, Pinsky and others might be eager to limit themselves to such an elemental role. Major U.S. cities have found that getting more intimately involved in the mechanics of their own tech sectors can be problematic. In Washington, D.C., there's debate over a **custom \$32 million tax break** for LivingSocial, a Groupon competitor. Some in the city are wondering if the governmental maneuvering on behalf of a single company is worth the bother, especially given the odds that (a) the company would stay put and hire local anyway and, (b) the daily-deal site will be around in 10 years.

And going big doesn't necessarily help. The "**BioDistrict**," a 1,500-acre area in New Orleans' downtown and Mid-City areas, created as a job-creation experiment by a 2005 act of the Louisiana legislature, has stalled; Louisiana State University has started work on a research hospital in the zone, but no one seems to have come up with the money to fund the hoped-for clustering of health and life science companies.

In Baltimore, the "New East Side" public-private partnership meant to revitalize the area north of Johns Hopkins has **run into strong opposition**. The 88-acre project includes a 31-acre Science and Technology Park. Located near Hopkins' Bloomberg (yep) School of Public Health, the vision was one of constant exchanges between academia and firms at every stage of their growth. But members of some of the more than 700 displaced East Baltimore families are objecting to the slow pace of redevelopment, and there have been complaints of poor planning and a lack of transparency about the project. Local officials have threatened to withhold permits needed to let construction move ahead.

New York City has chosen a different route — though that's not to say that other cities aren't watching what happens on and around Roosevelt Island, with a thought to what might work back at home. "What I've seen so far is a winner," says James

McNamara, president and CEO of New Orleans' BioDistrict, calling New York City a model for the next wave of experiments in urban clustering. "I'm a bit jealous." Adds Brookings' Muro, "New York is an intensification of all the general dynamics that cities embody. It's only the tallest, the most dense, the most intensified version of what urban life and clustering is in the first place." It might be singular, in other words, but it isn't unique. "Anything New York does," says Muro, "becomes a national and even global case study."

For Bloomberg's part, he's clearly eyeing what's being built on Roosevelt Island as part of his ultimate legacy, much as Jefferson saw what he built on Charlottesville. "It is the last act of usefulness I can render," wrote Jefferson in an 1821 letter to fellow Virginia politician Spencer Roane, "and could I see it open I would not ask an hour more of life." New York City's tech campus on Roosevelt Island is scheduled to reach its full scale and scope by 2037. Michael Bloomberg will be 95 years old. >



ABOUT THE AUTHOR

Nancy Scola is a journalist and writer whose work on the intersections of technology and politics has been published by *The American Prospect*, *Capital*, *Columbia Journalism Review*, *New York*, Reuters, Salon, *Science Progress*, *Seed*, and other publications. She is a correspondent on technology and politics for The Atlantic.

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ABOUT THE PHOTOGRAPHER

Adi Talwar is an award-winning photographer based in New York city. He shoots for various publications, corporate and non-profit clients. He is passionate about photographing people and capturing their emotions.