



# NEW YORK CITY DIGITAL INITIATIVES

Assessing Impact and Applicability to the Swiss Context

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A report prepared by  
swissnex Boston – New York Outpost  
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# Executive Summary

The following report is meant as an overview of some of the salient digital as well as other innovative initiatives with high impact potential – both physical and programmatic – that exist in New York City. It will come as no surprise that given the size and complexity of the city's economy, the number of initiatives is large: over 40 – and that doesn't even count the major real estate developments like Brooklyn's Industry City or Roosevelt Island's new Cornell NYC Tech Campus.

The first part of this report will give a snapshot of **New York's growing tech ecosystem**. We will then turn to an examination of some of the major infrastructure developments in Brooklyn (**Navy Yards, Industry City**) and on Roosevelt Island (**Cornell NYC Tech**). The second half of the report will examine the many public-private initiatives and programs – many of them coordinated by the New York City Economic Development Corporation, **NYCEDC** – designed to encourage the growth of the tech economy. Wherever possible we will assess their relative success and potential for adaptation to the existing context of Switzerland's digital economy, and in particular of the developments in and around Zurich.

An early conclusion was that there are a number of parallel elements in the pro-digital approaches favored by New York City and Zurich. While differing in size by a significant factor, both cities share certain economic specializations (finance, a manufacturing past, a vibrant intellectual scene), and prospects for innovation-driven growth. Both cities have a strong university system – and in the case of New York, a desire to catch up what it sees as a slight deficit in its engineering and tech programs compared with, say, Stanford and Berkeley on the West Coast, or ETH in Zurich.

The strong push for the creation of a tech campus on Roosevelt Island led the previous mayoral administration of Michael Bloomberg remains a model of efficient and ambitious public-private partnership. The Mayor launched an international competition whereby universities fielded proposals to create and manage the new campus. Among the bidding institutions was Switzerland's Federal Institute of Technology in Lausanne, EPFL. The winning bid came from Cornell University in collaboration with Israel's Technion. **Cornell NYC Tech** inaugurated its first class of 30 in 2013. They graduated at the end of this spring and most of the graduates are resolutely committed to growing the local tech ecosystem.

The creation of new innovation clusters in Roosevelt Island, Brooklyn, and elsewhere comes at the right moment and participates in a virtuous cycle of dynamic private sector value creation (through the digital economy) and good public policy. In effect, New York City is capitalizing on opportunities made *obvious* by the influx of innovative and successful entrepreneurs on the one hand (New York is now ranked as the **world's number 2 startup ecosystem**), and on the other hand opportunities made *available* by the City's decision to take substantial real estate ownership of former private industrial sites since the 1970s.

Alongside the infrastructure projects, the City's numerous programs and initiatives have seen mixed success. But given the sheer volume of those that were launched during former Mayor Bloomberg's administration, it is likely that his background as an entrepreneur himself would lend some comfort with the notion that only some of the City's initiatives would be destined to succeed, while the less effective



programs would come to a natural demise. In the latter category, we can easily place at least half of **the eight programs** that were recommended in the much-touted 2009 initiative **Media.NYC.2020**.

The initiatives that we find most convincing (and in some cases readily replicable to Switzerland) can be grouped in the following thematic categories:

#### **Infrastructure Development Projects:**

- **Brooklyn Navy Yards**
- **Industry City**, Brooklyn
- **Cornell NYC Tech**, Roosevelt Island

#### **Financial Instruments/Funds:**

- **NYC Early-Stage Life Sciences Funding Initiative:** administered by the NYCEDC. It is interesting both for what it does and for how it was put together.
- **NYC Capital Access Loan Guaranty Program**
- **Empire State Development's Innovate NY Fund**

#### **Attracting and keeping startups in New York:**

- **New York Venture Fellow Program**, which seems to have a knack for recognizing the best talent and hottest startups every year, and ensuring an *esprit de corps* among them. This focus on growth and scaling of existing startups remains a bit of a gap in Switzerland, and such an initiative could be taken up at national level.
- **Start-Up NY**, a New York State-run initiative to cut taxes for an extended period of companies' early life-cycle.

#### **City Competitions:**

- **NYC BigApps:** a civic-minded apps competition that uses ample datasets from the city to create solutions for everyday life of its inhabitants. It could easily be replicable in Swiss cantons and cities.
- **Pilot Health Tech NYC** is run by NYCEDC and the healthcare tech consulting firm Health 2.0. The program provides funding of \$1 million to 10 or more innovative pilot projects to take place in New York City.

#### **Promotion, Visibility:**

- **Digital.NYC:** the new portal for New York's startup economy, which features a wealth of content, and an interactive map of startup ecosystem activity. Think of it as a more exhaustive and user-friendly combination of such Swiss websites as Swiss Startupticker and the Swiss Startup Monitor.

#### **Acceleration, Incubation:**

- **Incubators & co-working spaces:** As demonstrated by the city's early partnership in such locations as the Hive at 55 and the Harlem Biospace, this is a true business model for the new economy. A private co-working space company founded in NYC in 2010, WeWork, now has 49 locations around the world and a \$10 billion valuation.

#### **Creative entrepreneurship:**

- The **'We Are Made In New York'** label/mark that is ubiquitous in advertisements around the city and recognizes digital and film productions made locally.



In the end, the success of New York's digital economy will come essentially from the innovation and strategic vision of new entrepreneurs and accomplished business leaders. At the same time, their ability to flourish will also depend on the broader context the City provided them – the very conditions (setting, training, programs, initiatives) that allowed them to think, design, work, and produce.

In other words, some of these favorable contextual conditions are deliberate initiatives from City actors; while others stem from the very preferences that participants in the digital economy have today for living and working in more densely populated urban clusters. New York, like Zurich is seeing an influx of a newer generation that loves living in a city with rapid public transport, an active urban renewal movement, and tighter-knit communities. All attributes that New York City can offer – unlike, say, Silicon Valley.

Figure 1: Made in NY – One of Many City-Led Initiatives



Source: <http://wearemadeinny.com/about/#jp-carousel-587>



# Introduction: NYC Is Now the World's Number Two Startup Ecosystem

New York City catapulted to the number two spot in an authoritative global ranking of the world's top startup ecosystems. On July 27, startup data benchmarking firm Compass released the second edition of a comprehensive benchmark study examining startup ecosystems based on company performance, funding, talent, market reach, and experience. Since Compass's first *Startup Genome Project* report in 2012, New York has jumped from fifth to second place, ahead of Los Angeles, Boston, and Tel-Aviv – but still well short of Silicon Valley (which includes the broader San Francisco Bay Area).<sup>1</sup>

The *Startup Genome Project* is the result of a five-month collaboration between San Francisco-based Compass and partners Deloitte, Crunchbase, Orb Intelligence, Global Entrepreneurship Week, Dealroom, and 60 local partners. The authors conducted 200 interviews with startup founders and local experts, and analyzed 11,000 surveys completed by entrepreneurs, investors, and other stakeholders.

The picture depicted is one of urbanization of the startup ecosystem, whereby city centers become rich hubs for creative tech entrepreneurship. This is broadly the case in other geographies, with for instance San Francisco growing vis-à-vis Silicon Valley, and Cambridge gaining in weight versus Massachusetts's Route 128 corridor. "Startups appear to be gravitating to more energized urban centers, and away from their traditional locations in suburban office parks," according to journalist Richard Florida.

New York's so-called "Silicon Alley" has seen the rapid development of downtown Manhattan as a cluster for tech workers, and new firms, built

on the foundations of the preeminent traditional industries of the city: media, design, fashion, retail, and finance – among others. As such New York City offers a model for the future growth of the digital economy, one that integrates insights from the digital economy with the existing talent base and offers incentives to attract new ventures.

Figure 2: The World's Top Startup Ecosystems in 2015

Silicon Valley	1	1	1	4	1	1	2.1
New York City	2	2	2	1	9	4	1.8
Los Angeles	3	4	4	2	10	5	1.8
Boston	4	3	3	7	12	7	2.7
Tel Aviv	5	6	5	13	3	6	2.9
London	6	5	10	3	7	13	3.3
Chicago	7	8	12	5	11	14	2.8
Seattle	8	12	11	12	4	3	2.1
Berlin	9	7	8	19	8	8	10
Singapore	10	11	9	9	20	9	1.9
Paris	11	13	13	6	16	15	1.3
Sao Paulo	12	9	7	11	19	19	2.2
Moscow	13	17	15	8	2	20	1.0
Austin	14	16	14	18	5	2	1.9
Bangalore	15	10	6	20	17	12	4.9
Sydney	16	20	16	17	6	10	1.1
Toronto	17	14	18	14	15	18	1.3
Vancouver	18	18	19	15	14	11	1.2
Amsterdam	19	15	20	10	18	16	3.0
Montreal	20	19	17	16	13	17	1.5

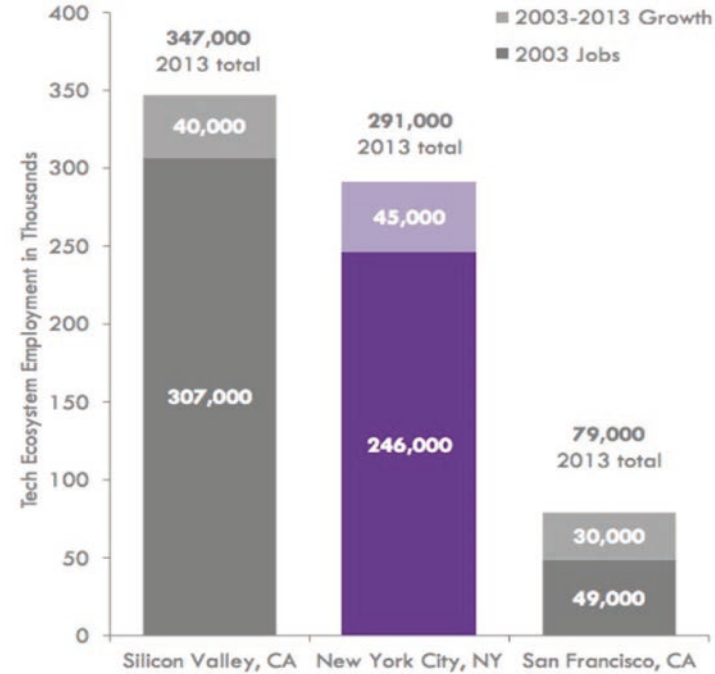
Source: Startup Genome Project, July 27, 2015

And the results are impressive. Among the more startling evolutions that New York has seen is a tremendous growth in tech sector jobs



and venture capitalist dollars spent on local startups – in a city that only two decades ago had no meaningful part in the US’s digital economy. In a comprehensive study of tech employment in NYC conducted on behalf of the Association for a Better New York (and widely promoted by New York Economic Development Corporation), consulting firm HR&A Advisors estimated that New York City has added over 45,000 tech jobs to its economy between 2003 and 2013 – to reach close to 300,000 jobs in the sector (an 18% increase).

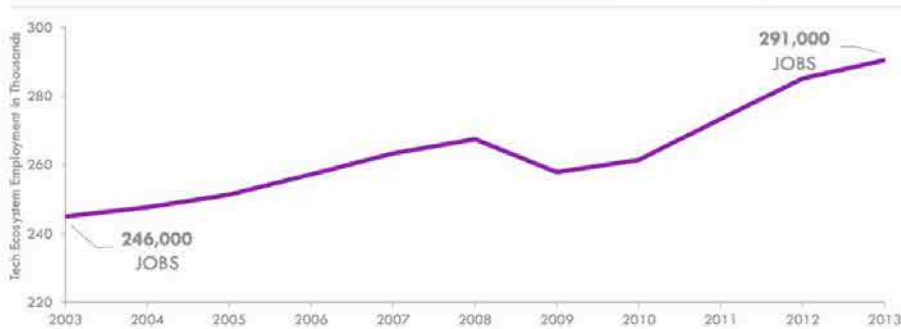
In sheer numbers, this outpaces the number of jobs added to Silicon Valley (30,000, an increase of 13%) and San Francisco (30,000, although this represents an impressive 61% increase) during the same time.<sup>2</sup> The city’s economy supports 4.3 million workers and tech employs 7% of these, versus San Francisco 667,000 workforce of which 14% are employed in tech. Silicon Valley, for its part, employs 1.41 people, 25% of which work in tech.<sup>3</sup>



Source: HR&A, The New York City Tech Ecosystem, 2014.

Figures 3 and 4: NYC added more tech jobs from 2003 in 2013

From 2003 to 2013, the NYC tech ecosystem added 45,000 jobs.



Source: HR&A, The New York City Tech Ecosystem, 2014.

NYC’s growth has been spurred by homegrown startups in industries the city traditionally dominates, such as:

- Advertising (**AppNexus**, **Right Media**, and most notably **DoubleClick**, which Google acquired in 2008 for \$3.1 billion)
- Financial tech (**FX Alliance**, **Venmo**, and **Betterment**).
- Marketing (**Buddy Media**, **Yext**, **Yodle**),
- Media (**Huffington Post**, **Mashable**, **Buzzfeed**),
- Real estate (**StreetEasy**, **Urban Compass**)
- Fashion (**Gilt Groupe**, **Bonobos**, **Warby Parker**, and **RentTheRunway**)



In addition, New York has seen the creation of companies at the intersection of two or more of the above verticals (**Tumblr, Etsy, Fancy, Birchbox, Foursquare, Venmo**), as well as in completely new verticals like medical booking service **ZocDoc**, or health insurance **Oscar**. Finally New York is now able to compete effectively on more traditionally West Coast grounds of expertise, such as enterprise software (**MongoDB**), financing platforms (**Kickstarter**), programmer education (**Codecademy**), and collaborative workspaces (**WeWork**).

### The Google Effect

Large tech firms have taken notice over the years, opening large offices in Manhattan. In the wake of its DoubleClick acquisition, Google now employs over 5,000 in New York and occupies upwards of 40,000 square-meters in a sprawling 270,000 square-meter building it acquired in 2010 for \$2 billion – not a surprising NYC anchoring, when one considers that \$59 billion (nearly 90%) of Google’s total revenue

comes from advertising sales.<sup>4</sup> Unable to dislodge other tenants fast enough, Google has overflow office space in neighboring buildings and will become the main tenant in Chelsea’s new Super Pier, occupying 24,000 square meters in the new development that was originally destined to house start-ups and other, non-Google-sized tech firms.<sup>5</sup>

If this sounds familiar to a Swiss audience, it is no doubt because of the looming presence of Google’s large facility in the Zurich tech ecosystem, which while a fantastic booster of the city’s digital profile also tends to drain a significant portion of the local talent pool.

Google’s massive presence in both New York in Zurich is not the only common feature of both cities. More broadly, and wherever possible, this report will attempt to assess the applicability of some of NYC’s tech evolutions to the context of Switzerland and the Zurich region in particular – one that presents similar opportunities for city-led initiatives combining innovation and urban redevelopment.

Figure 5: (from Left to Right) Google New York City Offices in Chelsea; its Future Expansion nearby, the SuperPier; Google Offices in Zurich



Sources: Crain’s, Curbed NY, and Inspiringinterns.com.





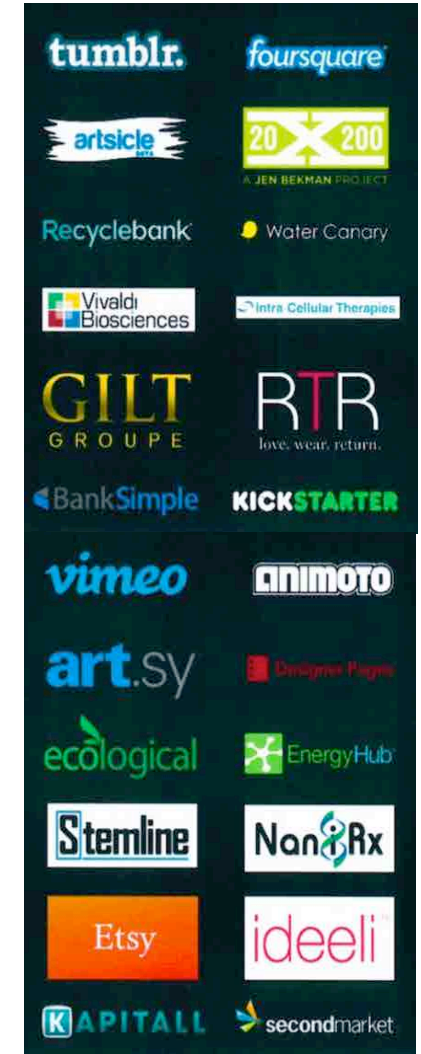
# Key Facts and Figures about the New York Tech Ecosystem

- New York's tech sector employs upwards of **291,000** people – about **7%** of all the people working in the City.
- **661** Internet companies operate in New York City as of May 27, 2015.
- The tech industry is the fastest growing sector of the City with an **18%** increase in job creation between 2003 and 2013.
- The tech sector generates **\$50.6 billion** in annual compensation and an output of **\$124.7 billion**
- Venture Capital deals in New York doubled between 2009 and 2013, catching up to Massachusetts.
- Looking at the growth in venture investment New York saw a **51%** rise in venture dollars from 2012 to 2013, outpacing California, Massachusetts, and the United States as a whole.
- Google, Amazon, and Yelp were **the top three tech hirers** in the New York area in 2013; notable smaller firms with robust headcount gains included Warby Parker, Etsy, and BuzzFeed.

Figure 7: Non-NYC tech firms with large presence in the City:



Figure 6: Homegrown tech firms:





# Zurich Meets New York / Dübendorf Meets Brooklyn

*“New York City’s tech sector is a much better role model for other cities. . . . By looking at its own strengths, New York City has overcome the constraints facing post-industrial cities worldwide to accumulate the talent and capital at the core of its thriving urban tech sector.”*

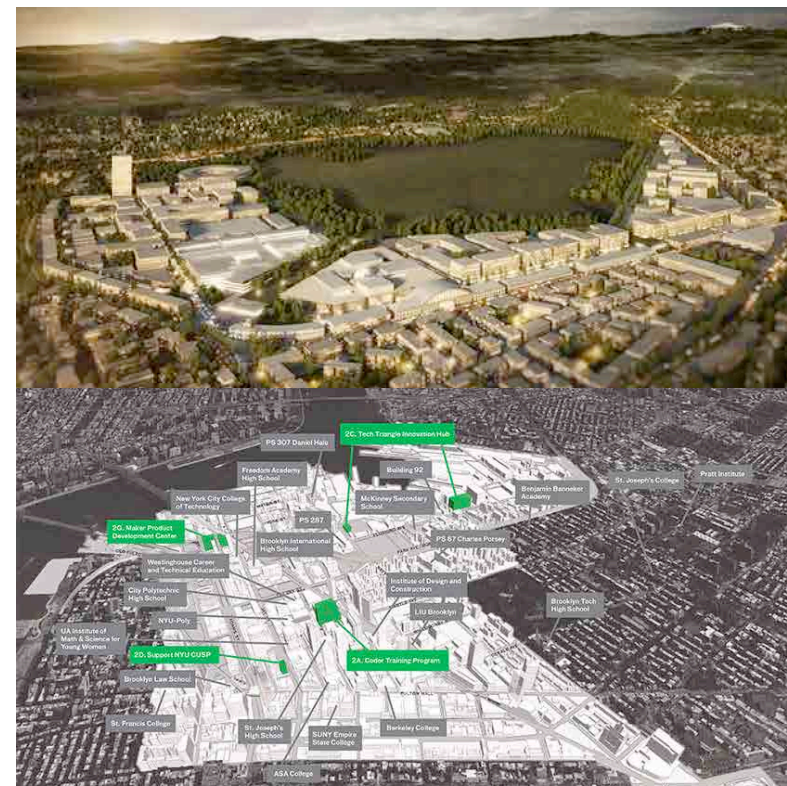
– Michael Goodwin, et al, *The Power of Entrepreneur Networks*<sup>6</sup>

Several aspects of New York’s economic history and future mirror those of Switzerland. With early nineteenth century wealth created through manufacturing and textile production, both economies eventually developed expertise in the financial sector in the latter half of the century – and then most notably after 1900. As the twentieth century wound down, a necessity for diversification loomed over both regions. While the dot-com bubble of 2000–2001 wiped out a young crop of New York startups, it nonetheless demonstrated the appetite for allowing the digital economy to take hold in a city with an otherwise other sources of jobs and wealth creation.

At the same time, the urban landscape of New York, like that of Switzerland’s largest city, Zurich, would allow for redevelopment after the departure of large manufacturing and other purpose-built areas. To wit, the extensive piers and naval yards of Manhattan and Brooklyn, large warehouses and transport infrastructure, and the rebuilding of parts of lower Manhattan after the attacks of 9/11 – all provided opportunities for newer, new. Likewise, Zurich area’s former military airport site of Dübendorf is slated to become a National Innovation Park, one at the close periphery of Zurich proper – not unlike the farther-afeld location of Brooklyn’s Navy Yards or Industry City. While Silicon Alley remains anchored in Lower Manhattan (from the Flatiron

District all the way south to Wall Street), NYC authorities are not shy about incentivizing the creation of these new clusters.

**Figure 8: Swiss National Innovation Park at Dübendorf (above) and Brooklyn’s Tech Triangle (below)**



Source: Hosoya Schaeffer Architects (above) and NYCEDC (below).



# Brooklyn's Navy Yards, Industry City, and Army Terminal

Brooklyn's Tech triangle is now the city's second largest innovation cluster after southern Manhattan's Silicon Alley. It includes DUMBO, large swaths of residential real estate, as well as one of two important industrial sites in Brooklyn that are poised to become major centers of digital innovation in the coming years: the Brooklyn Navy Yards – the other one is Industry City in the Sunset Park neighborhood.

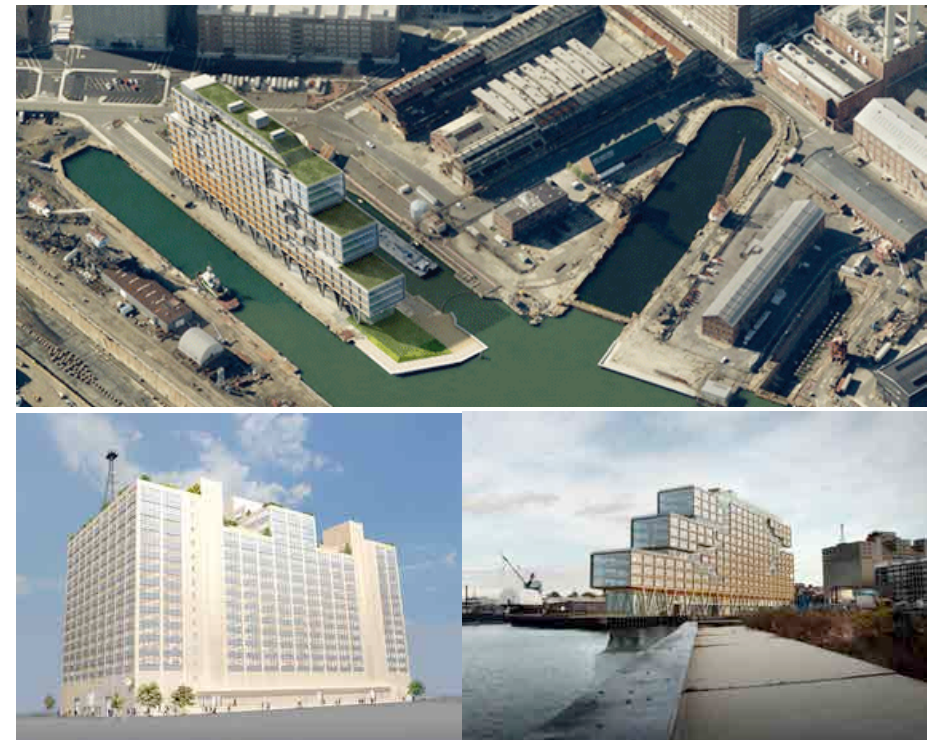
At its peak during World War II, the Navy Yards employed 70,000 people 24 hours a day in the construction and maintenance of naval warships. With the US Navy's decommissioning of the 1.2-square-kilometer site in 1966 and sale to the City of New York, the fortunes of the Navy Yards waned until the turn of the century. By that point the nonprofit corporation in charge of managing the site, the Brooklyn Navy Yards Development Corporation (BNYDC), had made major strides to diversify the site's tenancy, achieving a 98% occupancy rate.

The City took notice and began investing in major upgrades, taking advantage of Federal tax credits for historical projects, and putting a strong emphasis on sustainable development (LEED certification) for new builds and retrofits. The site is now home to over 330 tenants employing more than 6,400 people, up from 3,600 in 2001.

Its future will be resolutely turned toward innovation: in retail, manufacture, the digital economy, and media. In 2004 Steiner Studios opened, and are set for expansion over the next decade, right alongside the projected Media Campus that will reportedly feature the country's first underwater stage and a graduate school of cinema. Significant retail space and the opening of the supermarket Wegman's (a favorite among the hipster crowd) will attract local consumers, while the adaptive reuse conversion of the behemoth Building 77 (90,000 square-meters) has received \$140 million from city funds to become a

"collaboration hub" office space with a large restaurant food court. At the same time, NYC-based **WeWork**, the fast-growing co-working space company (which houses the swissnex Outpost in New York), is planning its first purpose-built facility at the Yards' Dock 72: a 14-story, 63,000 square-meter building for startups and small businesses.

Figure 9: (Clockwise) WeWork at Brooklyn Navy Yard; Building 77



Source: BNYDC; Crain's.



## The Same Template Applied to Industry City – and the Brooklyn Army Terminal May be Next

Concurrently, the City has high hopes for Industry City, a reconverted industrial site farther south in Brooklyn's Sunset Park neighborhood. Here, we have a better comparative test-case with the near-peripheral situation of Dübendorf's outside of central Zurich: Sunset Park is about a 30-minute subway ride from Midtown Manhattan. Owned by a private sector consortium that has committed \$1 billion to its rehabilitation, the site offers rents per square foot that are typically 30-50% cheaper than in more central Manhattan or even trendy Brooklyn locations.

Encouraged by the success of the Navy Yards, Industry City snagged BNYDC's former CEO Andrew Kimball to head the redevelopment of the site. In March 2015, Kimball unveiled details of the plan to transform the 16-building, 550,000-square-meter waterfront complex into "one of the country's premier centers for today's rapidly emerging 'innovation economy.'"<sup>7</sup> Successful implementation of the plan involves rezoning and public review.

A visit arranged by swissnex with Mr. Kimball allowed Deputy Director of the Gebert RUF Foundation Pascale Vonmont to assess first-hand the emergence of a lively community of different clusters at Industry City. More than almost any other site, Industry City's innovative concept mixes local manufactures (going through something of a renaissance in Brooklyn), creative art and design projects, tech startups (like 3D printer **MakerBot** now leasing 23,000 square meters), food and beverage services, events and community space, and co-working spaces. Indeed, Milk Studios will soon use 5,500 square meters for such a collaborative space. And while assessing the impact of the overall project is difficult at this early stage, we are encouraged by signs that the site is now able to attract known corporates entities: the hip furniture retailer **Design Within Reach** opened its flagship

outlet there in May; and on July 9, **Time Inc.** announced that it would be leasing 5,000 square meters to house 300 employees from the company's Technology, Content Solutions and Editorial Innovation departments.<sup>8</sup>

Figure 10: Industry City in Sunset Park



Source: Industry City website.

Upon completion, two-thirds of the site will house digital economy jobholders, with the remainder used for more traditional academic, community, hospitality, retail, and warehousing purposes. Optimistic projections target an annual economic impact of \$6 billion, and annual



City revenues of \$97 million. Ultimately, the site could be home to 20,000 jobs, according to Mr. Kimball. “Within the foreseeable future Industry City will become a national template for urban innovation economy transformation,” he concludes.<sup>9</sup>

Another site in Brooklyn worthy of mention is the former **Army Terminal**, a sprawling and architecturally striking warehousing facility built in 1919 and purchased by the City in 1987. It sits just a thirty blocks south of Industry City. Currently, a plan is in place to create a

bioscience incubator that offers space for research laboratories and “bio-manufacturing” uses.

Phase one of the conversion would concern 5,000 square meters. The remaining 370,000 square meters of the facility could be redeveloped in future phases. Current tenants include clinical testing laboratories, the Guggenheim Museum, the Museum of Natural History, a famous New York chocolatier, some startups, and an artist studio program. At present the site does not have a public master redevelopment plan.

Figure 11: Brooklyn Army Terminal Building



Source: *Uncommongood.com*



# NYC Tech: Cornell-Technion's New Campus on Roosevelt Island

The Cornell Tech NYC campus is the crown jewel among initiatives launched to spearhead long-term growth of the digital economy in New York City. A pet project of former Mayor Michael Bloomberg, its inception included an international competition to bid for the privilege of creating and running a brand new engineering school on Roosevelt Island, a narrow island in New York City's East River between midtown Manhattan and Queens. The project's overall goal is to develop a first-tier institute of technology that can compete with Stanford or MIT in the training of engineering and developers, and to feed the local tech industry with new talent. This comes from the observation that a strong university is a key component of a successful innovation ecosystem. According to school dean Dan Huttenlocher, this will be a "graduate school for the digital age."<sup>10</sup>

Cornell University won the bid for this new tech campus and will open the campus's first purpose-built facilities in 2017, in collaboration with the Technion Israel Institute of Technology. Cornell Tech NYC has already launched a few teaching and research programs in NYC (they are currently renting the Google office space in Manhattan). The City of New York is committing \$300 million to build the new \$2 billion campus. Having left office, Bloomberg's philanthropic foundation has pledged an additional \$100 million to Cornell Tech – a building will be named in honor of the former mayor's parents.

One of the first impactful phases of the project is the creation of the **Bridge**, a "corporate co-location building," where "established tech companies and fledgling startups are located side-by-side academic researchers with the goal of bringing tech to market faster," according to Huttenlocher. The design of the building will encourage chance

encounters among people from various functions and backgrounds, taking cues from similar approaches at MIT's famed Building 20 and Pixar's campus in California.

Figure 12: Cornell's future NYC Tech Campus; The Bridge Building



Source: Cornell NYC Tech website.

CORNELL  
NYC  
TECH





The intention is to make such “chance encounters” happen on an urban scale. Dean Dan Huttenlocher thinks that “students coming out of Cornell Tech should know how to code, yes, but so too should they be able to talk to a media manager or collaborate with environmental scientists.” The architects of the building, Marion Weiss and Michael Manfredi, believe this its design and central location will provide “a collision point” between academia and industry to foster “catalytic connections between different disciplines,” Manfredi says.”<sup>11</sup>

Cornell’s main campus is a four-hour drive upstate, in Ithaca; however the university currently offers a number of academic programs in New York City, which one senior researcher we talked to believe will gradually come under the Cornell Tech umbrella, with strong leadership coming from the existing Business School faculty from Cornell’s Samuel Curtis Johnson Graduate School of Management.

At present NYC Tech offers a master’s in computer science; a tech-oriented MBA; a two-year program in connective media; and a data-centric program titled “Healthier Life.” NYCEDC president Kyle Kimball believes that such a broad approach is necessary: “We try to be very disciplined in not thinking about technology as a sector. If you think of NYC econ as a set of verticals of traditional industry, we don’t think of tech as just another vertical but rather something that transcends all industries in the city.”

The full completion of the 200,000-square-meter campus is slated for 2037 at the earliest. Together with other applied science educational initiatives, the City hopes to double the number of engineering students by mid-century, generating a \$33.2 billion economic impact.

Figure 13: Cornell Tech’s co-working space is currently at Google’s offices in Chelsea, before moving to Roosevelt Island in 2017



Source: Cornell NYC Tech website.



### **Assessing Cornell NYC Tech's Early Impact and Applicability**

*The full effect of the NYC Tech campus will be measured over the course of decades, and therefore it is simply too early to tell whether such massive infrastructure investments will have the desired effect of accelerating the transformation of New York's economic fabric toward technology. But signs are positive.*

*At the micro level, Cornell 2015 graduates (the 'beta' class was about 30-strong) seem resolute in their desire to remain in New York post-graduation. One has gone on to work at the Huffington Post, one will work for a predictive analytics healthcare startup in SoHo, another for eBay NYC, and many others are taking advantage of Cornell Tech's co-working facilities to start their own tech companies. Five startups founded by students have each received \$40,000 in seed funding as part of an inaugural "Startup Awards program at Cornell Tech." The five companies will receive office space in the New York Times Building. Funding for the awards comes from a \$200,000 grant from the Blackstone Foundation.*

*A smart move in the school's early existence was establishing links to the existing business school and offer cross-registration programs. The risk of cannibalization of NYC Tech by an established business school is mitigated by the benefits of reputation and the flexibility built into the new program. More broadly, we see the decision of the Bloomberg administration to tie the Roosevelt Island school's future to an existing prestigious institution as a key driver of success.*

*Such a move can find a parallel in Switzerland with the strong stake that ETHZ and the Federal Institutes of Technology system have taken in the development of the Dübendorf National Innovation Park. We see such university involvement as a prerequisite for success. Another example to follow: Cornell Tech's strong commitment to the empowerment of local urban communities in Roosevelt Island and nearby Queens. Likewise, one of the objectives at Dübendorf is to re-create an urban fabric that ties in innovation with work, academia, and city living.*



**Figure 14: Cornell and the midtown Manhattan skyline.**

Source: Cornell NYC Tech website.





# NYCEDC, the Bloomberg Factor, and New York's Digital Initiatives

The New York City Economic Development Corporation (NYCEDC) is a quasi-governmental nonprofit organization “that serves as the City’s primary entity for promoting and implementing economic development by leveraging the City’s assets to drive growth, create jobs, and improve quality of life.” NYCEDC acts as New York’s official economic development arm, although it does so through annual contracts with the City.

One of the key early successes of the NYCEDC, which has allowed it to play such a driving role in growing the city’s digital profile, comes from the substantial financial and real estate resources it manages. These are largely the result of a shrewd decision to purchase large swaths of real estate in the 1970s and 80s, when the city was close to financial ruin, explains NYCEDC senior project manager Center for Economic Transformation Matthew Weinberg.

More recently under the impulse of former Mayor Bloomberg (whose background as a financier led him to start his news company in 1981), the NYCEDC has launched and coordinated a series of programs, competitions, and funds to support the local innovation ecosystem and foster startup creation in New York. These initiatives run in parallel to the long-term capital and infrastructure programs (nearly 2 million square meters under management) the NYCEDC has in Manhattan, Roosevelt Island, Brooklyn, and elsewhere in New York.

During our [Oliver Haugen, Pascale Vonmont] July meeting at the NYCEDC, Mr. Weinberg detailed how the organization, whose staff is around 400, operates under contract with the City to oversee capital construction via a \$2 billion capital program, and works to strengthen the city’s competitive position.



## ***Assessing Impact of the NYCEDC’s “Ecosystem” of Initiatives***

*The sheer number (at least 40) of entrepreneurship initiatives launched, run, or supported by the NYCEDC can be cause for pause. Many of these are bound to be more effective and prominent, while others run the risk of irrelevance or high costs. In addition, most of the initiatives have not been around for long enough to generate a track record of success.*

*Still, in the flowing pages we offer insights into the more promising initiatives to grow the digital economy, starting with some of the public-private funding programs launched by the City and the State of New York, including the NY Venture Fellow Program, the NYC Media Lab, and other incentives available to resourceful entrepreneurs.*

*NYCEDC refers to the myriad initiatives available to entrepreneurs as an “ecosystem.” In effect, when it comes to assessing the impact of its initiatives, the City seems to embrace the startup ethos that posits that the best will rise to the top and endure, while the least effective will eventually go into the sunset.*



# Public-Private Funding and Loan Programs

## New York City Entrepreneurial Fund



The NYC Entrepreneurial Fund was created by the City of New York in 2010 and totals \$22.5 million. The fund is managed by the local venture capital firm FirstMark Capital and aims at providing promising NYC

technology start-up companies with early-stage capital. NYCEDC has invested \$3 million to start the fund and FirstMark Capital contributed an additional \$19.5 million. This fund is the first of its kind outside of Silicon Valley, and invests up to \$750,000 in first-round funding in companies on the condition that they be headquartered in New York and tax residents of the City.

<http://www.nycedc.com/>

### → IMPACT: TOO SOON TO TELL

*In 2014, the fund invested in five start-ups ranging from e-commerce to crowd-sourced delivery solutions. While little data is provided about the success of its NYC Entrepreneurial Fund investments, FirstMark Capital is known as a private equity player with a track record of wise picks, including Pinterest, SecondMarket, Lumosity, Netgear, and StubHub. In 2013, FirstMark's management team welcomed Matt Turck, an entrepreneur and community leader with strong links to the NYC digital ecosystem, and who founded one of the City's largest tech Meetup groups.*

## NYC Capital Access Loan Guaranty Program (NYCEDC)

This NYCEDC program provides up to a 40 percent guarantee on loans for qualified micro (under 20 employees) and small (20 to 100 employees) businesses having trouble accessing loans. Loans created through this program are up to \$250,000 and can be used for working capital, equipment purchases, and refinancing of existing loans. The lenders consider start-up loan applications.

<http://www.nycedc.com/program/nyc-capital-access-loan-guaranty-program>

### IMPACT: SUCCESSFUL AND ONGOING

*A popular initiative among small business owners, the NYC Capital Access Loan Guaranty is alive and well. Mayor de Blasio has maintained its prominent place in the panoply of tools available to the City's Department Small Business Services, which maintains a list of six approved lenders.*

*This type of loan is similar to micro-lending. According to a 2014 survey of small business owners by the Federal Reserve Bank of New York, "most small firms reported needing micro loans of \$100,000."<sup>12</sup>*



## NYC Early-Stage Life Sciences Funding Initiative



The NYC Life Sciences Fund was initiated by NYCEDC in the fall of 2013 and launched in April 2015 by Mayor De Blasio. Its goal is to support the development of new technologies and products for patients and researchers with a focus on therapeutics, medical devices, diagnostics, research and development instrumentation, and digital life sciences technologies. The fund is a public-private partnership between NYCEDC and leading venture capital and corporate partners active in the life sciences industry, such as Eli Lilly, GE Ventures, and Celgene Corporation. Funding partners agreed to co-invest \$50 million each in seed and Series A funding in new life sciences ventures alongside select top-tier investment partners with VC and venture creation expertise into a structure that incentivizes the creation of new life sciences companies. NYCEDC contributed \$10 million to the fund. Originally aiming to reach \$100 million, the partnership will now deploy a minimum of \$150 million. It seeks to launch 15 to 20 breakthrough ventures by 2020. <http://www.nycedc.com/program/nyc-early-stage-life-sciences-funding-initiative>

### → IMPACT: ENGOURAGING

*In addition to growing by 50%, the fund secured the by-in from two leading VC partners: Flagship Ventures, who reportedly will manage a \$90 million piece of the fund earmarked towards therapeutics companies; and ARCH Venture Partners, which will oversee the remaining \$60 million, investing in other areas of life sciences, such as research tools or diagnostics. The fund aims to make its first investments within a year.*

*One of the objectives of the fund is to incentivize startups to grow in New York rather than heading off to Boston, San Francisco, or elsewhere. This is achieved through certain provisions built into the initial investment deal.*

*The NYCEDC notably conducted a VC pitch competition to find the right VC firms to raise the fund's size from \$100 to \$150 million. The NYCEDC raised the scope of the fund "citing excitement about some of the untapped commercial prospects at the city's research centers."<sup>13</sup>*



## Pilot Health Tech NYC



Pilot Health Tech NYC is run by NYCEDC and the healthcare tech consulting firm Health 2.0. The program provides funding of \$1 million to 10 or more innovative pilot projects to take place in New York City. The goal of the program is to match early-stage health and healthcare technology startups with key NYC healthcare service organizations and stakeholders (such as hospitals, clinics, pharmaceutical companies, and community health centers) that could host promising projects. Each selected pilot project should address needs of the healthcare industry. The prototype project can be tested for a period of approximately 4-12 months.  
<http://www.pilothealthtechnyc.com/>

### → IMPACT: ENCOURAGING

*Stats for the first edition in 2013 were encouraging: 200+ matchmaking sessions; 300 people attended 'Pilot Day'; \$4.5 million raised by winning innovators; 1000 patients enrolled. Perhaps the most impressive metric of the program is that 2013 winners raised more than \$150 million in private investments within a year of the prize. In 2014, 11 projects were funded from 65 applications. 2015 plans were not yet known as of writing.<sup>14</sup>*

*An interesting feature of the initiative is both how the City went about selecting a service provider and who it ended up choosing: Health 2.0. In effect, the EDC sought out an innovative external provider to implement a key provision of the America COMPETES Act of 2007, a law that calls for investments “in innovation through research and development, and to improve the competitiveness of the United States.”<sup>15</sup> The law provides the framework for tech related prize competitions, whereby a city or regional government will “express a problem, and people get to solve it,” as explained to us by Health 2.0 Challenge Manager Graeme Ossey.<sup>16</sup> The company has built up a*

*track record of running such competitions – 90 to date around the world.*

*The NYCEDC “tends to be very innovative when it comes to city government. Wanted to see if this type of competitive,” says Ossey. At every stage, the NYCEDC asked prospective service providers to bid for the right to run the initiative. The first mandate was a one-year engagement with the successful bidder, Health 2.0, which was then renewed in 2014. The mandate going forward will be a three-year engagement.*

*In effect, Health 2.0 runs a marketplace that matches small health tech startups with larger companies. Among some of the most successful ventures picked up in the last two years: **Fit4D**, a company focused on disease management, which provides text and email alerts to diabetes patients, along with very comprehensive medical data analytics. Another startup, **Smart Vision Labs**, has created a device that affixes to an iPhone’s camera in order to examine a patient’s eye and detect up to seven type of vision aberrations.*



## H.E.L.M (Hire + Expand in Lower Manhattan)



The Take the H.E.L.M competition awards four grant prizes of \$250,000 and four grant prizes of \$50,000 to selected companies looking to move or expand in Lower Manhattan. The competition aims at bringing start-ups and international

creative/technology companies to the Financial District in order to encourage growth and diversify the economy of Lower Manhattan. The competition was launched by NYCEDC, is run by HR&A Advisors, and sponsored by the Lower Manhattan Development Corporation. It is open to any organization with plans to open a new office or expand an existing office on or south of Chambers Street (Financial District). Prizes are awarded in each of four categories of organizations: technology, Creative, International, and Domestic.

<http://www.takethehelmnyc.com/>

### → IMPACT: SUCCESSFUL, BUT DISCONTINUED

*Twenty finalists were selected for the second annual competition interviewed with the Take the H.E.L.M. Selection Committee in 2013, and participated in exclusive business development programs in Lower Manhattan. At least one \$250,000 prize was reserved for startup applicants and one was prioritized for a company new to New York. All relocated to Lower Manhattan. According to NYCEDC's annual investment report: "In FY14, these projects generated about \$24.7 million in total revenues (before assistance). Of these tax revenues, about 84.7 percent were Company Direct taxes. The present value of City Costs net of recapture and penalties is estimated to be \$0. The present value of gross City Benefits is estimated to be \$41.8 million."<sup>17</sup>*



### The Empire State Development's Innovate NY Fund



New York State's economic development agency (Empire State Development) also created a public-private venture capital fund to support innovation, job creation, and high-growth entrepreneurship throughout New York State.

The Innovate NY Fund is a \$45 million seed-stage business equity fund supported with \$35 million in State Small Business Credit initiative funds and \$10 million from Goldman Sachs. The fund is expected to leverage over \$450 million in additional private investment for early-stage promising businesses.

<http://www.esd.ny.gov/InnovateNY.html>

#### → IMPACT: ENCOURAGING

*Eight investment entities were selected to invest in technology companies and other high-growth firms throughout New York State. Innovate NY funding does not exceed \$500,000 per investment (\$750,000 for biotechnology-related companies). The contracted investment funds are required to secure at least a 2-to-1 match from private investors on its aggregate portfolio at the time of investment.*

*"Since program inception through the end of March 2015, \$23.5 million of Innovate NY Funds has been invested into 64 companies across the State. This amount leveraged \$124.7 million of private capital investment, of which 34 of the 64 companies have received one or more follow-on investments. The average initial investment amount is \$246,000."<sup>18</sup>*

### We Are Made In New York



An economic development initiative that supports New York's tech community by highlighting job opportunities in the sector, especially in the sectors of digital, film, theater, broadcasting, and – soon – fashion. *We Are Made In New York* provides access to resources and programs that help tech companies grow and become part of the innovation ecosystem. Digital companies that base at least 75% of their development in New York City and have at least 10,000 users or monthly visitors are eligible for the Made in NY distinction and list, as well as use of the Made in NY logo/mark.

<http://wearemadeinny.com/>

#### → IMPACT: ENCOURAGING

*The Made in NY collection represents more than 1000 tech and digital companies in New York City. The logo is ubiquitous and appears in New York subway to advertise productions and media-related businesses that are based in New York City.*



# NYC Venture Fellows



Launched in 2010 by NYCEDC in collaboration with Fordham University, NYC Venture Fellow is an international year-long program that provides successful international

entrepreneurs with opportunities to grow their ventures globally by connecting them with mentors from leading NYC companies and providing exclusive CEO-level networking and educational opportunities. The program is operated in partnership with the 92nd Street Y and is designed for entrepreneurs whose businesses are at a critical stage in development, when the companies have the potential to substantially increase headcount and make a significant impact on New York City's economy. Each year, the program select a class of 30 entrepreneurs based in NYC or who plan to expand their business to New York. Fellows will be paired with individual mentors and benefit from being part of an exclusive peer network of fellow leaders of fast-growing companies.<sup>19</sup> <http://nycventurefellows.org/>

## → IMPACT: ENCOURAGING

- Number of fellows: 138 at **134 companies***
- Number of rounds of funding: **296***
- Number of Forbes "30 Under 30" recipients: 26*
- Number of Fortune's "40 Under 40" recipients: 11*
- Number of Crain's 40 Under 40 recipients: 9*
- Number of Fast Company's "Most Innovative Cos." recipients: 8*
- Number of Acquisitions by Fellow owned companies: 17*
- Number of Acquisitions of Fellow owned companies: 11*
- Total amount funding: over **\$2 billion***
- Amount investors spent to acquire 11 Fellows' cos.: **\$556.7 million***  
*(N.B.: amount not disclosed for five of the acquired companies)*

### **Some of the acquired companies:**

- MakerBot ('11) acquired by Stratasys: **\$403 million***
- Hunch ('11) acquired by eBay: \$80 million*
- Niche ('15) acquired by Twitter: \$50 million*
- Songza ('13) acquired by Google: undisclosed*
- comiXology ('13) acquired by Amazon: undisclosed*
- Learnvest ('12) acquired by Northwestern Mutual: undisclosed*
- Grand St. ('14) acquired by Etsy: undisclosed*
- Poptip ('14) acquired by Palantir: undisclosed*

### **Some of the top funded companies:**

- CommonBond ('15): \$253 million*
- Harry's ('14): \$211.5 million*
- Foursquare ('11): \$162.4 million*
- Rent the Runway ('12): \$114.4 million*
- Etsy ('11): \$97.3 million (publicly traded as of April)*
- Warby Parker ('12): \$74 million*
- LearnVest ('12): \$69 million*
- Conductor ('11): \$58 million*
- FiftyThree ('14): \$45.1 million*

### **Applicability to Switzerland**

*An obvious difficulty in replicability of this initiative in Switzerland would be attracting international startups to a much smaller startup market. But the lesson learned here is one of process rather than object: by selecting best-in-class entrepreneurs and giving them access to privileged networks and avenue for funding in exchange for a durable commitment to staying in NYC, the initiative posts some impressive numbers. The overall approach is similar to that of the Swiss Commission on Technology and Innovation (CTI).*



# NYC Media Lab

A public-private partnership initiated by NYU, Columbia, and NYCEDC, the NYC Media Lab has now added additional university partners, including the New School, Pratt, and CUNY City University of New York). The Lab's goal is to generate research and development, knowledge transfer, and talent development across all of the City's campuses by facilitating collaboration between local universities and companies active in media and communication technologies. The lab is supported by corporate including Verizon, Hearst, AT&T, Time Warner Cable, NBC Universal, ESPN, and HBO.

## → IMPACT: MIXED

*Since its inception in 2010, the NYC Media Lab has been slow at delivering tangible projects and new startup ventures. Currently it boasts of nine partnerships between corporations and universities to generate projects. These range from creating the next generation of social media games to developing open-source data visualization tools. Two new projects are currently in "open challenge" mode, with corporate sponsors already committed (Bloomberg and Time Warner Cable), and awaiting engagements from experts and innovators.*

*One startup has emerged from the Media Lab so far – a rather modest result after five years: **Glossy.io**. Announced in September 2014, the company's ambition was to give consumers comprehensive access to treasure troves of content from large media organization. At present, Gloss bare-bones website advertises Glossy as "an enterprise platform for brands that matter. . . . We aggregate, optimize and connect content across publisher portfolios to help brands stand out on social media."*

*On the plus side, the NYC Media Lab is not a cost center for the City. In addition to influential events and annual summit (priced on a sliding scale from \$500 for "Benefactors" to students' \$15 ticket), the Lab is supported by a paying membership. So far, 12 companies have committed to a "corporate" level of membership, at \$50,000 (of which half in seed money), with another four companies at the "affiliate" membership level paying half as much. Another "Strategic Partner" level exists at \$300,000, which would include \$200,000 of seed capital – but no organization has signed up at that level yet.*

## **Can this work outside of New York?**

*In the final analysis, the success of the Media Lab concept rests in creating an active forum for engagement on the top issues related to media and technology. It does so by placing the locus of thought leadership to New York, the capital of the US media industry – and not elsewhere – with the desired intent of delivering true innovation rather than wait idle until a media-related "disrupter" technology comes from the West Coast. In other words, transform from the inside rather than from outside.*

*But this is a geographic-specific strategy predicated on the sheer size of the media industry's presence in New York. Replicability to Switzerland is somewhat constrained by the narrower scope of the media landscape there. Yes, the model of partnerships between, say, Swiss media organizations and local universities could yield innovation and business ventures. But these prospects may not warrant a stand-alone initiative. Instead, we recommend using an existing Swiss innovation park staff to administer such a program.*





# Other Media-Related Initiatives

Beginning in 2009 with the Media.NYC.2020 initiative New York City authorities took a hard look at the future of the City as the world’s preeminent media hub in the age of digital. Leveraging the expertise of many of the world’s media leaders, Media.NYC.2020 provided a launch pad for eight further initiatives “aimed at strengthening and growing the media and technology sectors in New York City” and fostering and promoting entrepreneurship and innovation.”

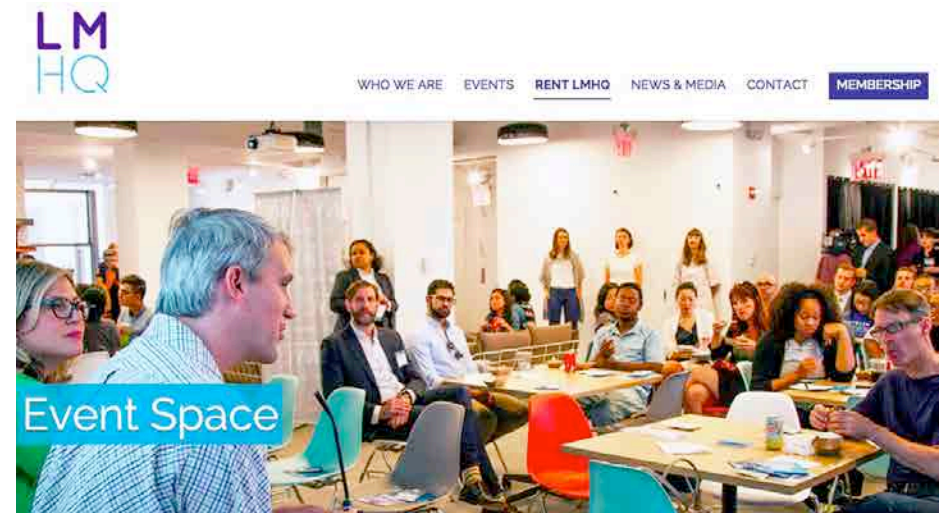
Most of these initiatives have had mixed results in terms of generating new ventures, and less than half seem to have continued beyond two years. As discussed above, the NYC Media Lab offers some good insights into ideas generation and thought leadership around media, but we may have to wait another few years (perhaps until 2020) to assess accurately the effects it has had on the media industry. Some of the other initiatives created are listed below:

## Incubators & Co-Working Spaces

High-quality, ready-to-use office space that includes basic business services. The first incubator was launched at 160 Varick Street in July 2009 as a partnership with Trinity Real Estate and Polytechnic Institute of NYU. Another related space is the **Hive at 55**, a co-working facility in Lower Manhattan initially for 40 media freelancer, which has moved, grown (to 140 spaces), and been renamed **LMHQ**. Annual rate is a reasonable \$1,800.

**→ IMPACT: POSITIVE.**  
*Since the creation of the Hive at 55, co-working spaces have flourished all over the City and the US. Case in point: WeWork, Inc. was founded in NYC in 2010 and now has 49 locations in 16 US cities, and 4 abroad, and a \$10 billion valuation.*

Figure 15: LMHQ co-working space has outgrown the Hive at 55



Source: LMHQ website.

## Jump Start New Media

A was a training program to assist displaced or entrepreneurial junior to mid-level employees explore opportunities in new and digital media, administered in partnership with the SUNY Levin Institute.

**→ IMPACT: MIXED**  
*In its first year, 350 participants completed the JumpStart program, “with approximately 18 percent of participants staying on with their JumpStart company (full-time or part-time) or starting their own company. Nearly 15 percent of participants found jobs during the program or one month after program completion, and over 500 companies have expressed interest in taking on a JumpStart consultant.”*



**Startup Procurement and Prepare for Success:** NYC works to encourage local startups and established firms to team up on bidding for city IT contracts and promote other city contracting opportunities. Workshops take place to address challenges faced by startups in NYC.

**→ IMPACT: MODEST**

*75 companies participated in the inaugural set of workshops, including the Gov 2.0 Forum (a one-day forum to educate startups and tech small tech companies), and other workshops administered by the Department of Small Business Services. No indication this initiative was continued.*

**Media and Tech Bond Program**

A program to help startups and small companies purchase manufacturing, research, or production facilities, retrofit existing buildings to accommodate high-tech servers, or make large IT purchases. It offers tax-exempt financing for projects from \$1 to \$10 million.

**→ IMPACT: NEGLIGIBLE**

*To date there is no useful data on the success of this small initiative.*



# NYC BigApps and DIGITAL.NYC



Probably the most successful program to come out of the Media.NYC.2020 initiative **NYC BigApps** is an annual “civic-tech” competition that encourages New Yorkers to develop online and mobile apps to address everyday city problems. The City give developers access to its numerous databases, and has partnerships with Microsoft, Cisco, Aol., and Facebook, among others. Prizes total \$125,000 in 2015, up from previous years.

## IMPACT: SUCCESSFUL

*Over the past five years, NYC BigApps has attracted **400 technology submissions**, opened **1,200 datasets** from over **60 City agencies**, attracted almost **700,000 site visitors**, and the program “has been as a leading global standard for civic innovation competitions.”<sup>20</sup> This initiative presents replicable features (popularity, freedom-of-information, democratic accountability), which could work well in the Swiss context, for example at the cantonal or city level.*



A new portal launched by Mayor Bill de Blasio in 2014, **Digital.NYC** is “the official online hub of the New York City startup and technology ecosystem, bringing together every company, startup, investor, event, job, class, blog, video, workspace, accelerator, incubator, resource, and organization in the five boroughs.” A public-private partnership between the Mayor’s office, the NYCEDC, IBM, Gust, and over a dozen leading NYC-based technology and media companies, Digital.NYC offers valuable resources and content to startup founders, VC, jobseekers, journalists, and the general public.

A key feature of the portal is an interactive database and map with up-to-date information about existing startups and talent around the city. This feature is one that has gained popularity in various ecosystems. For instance, MappedinIsrael and IsrealiMappedinNY have tracked Israeli startups and related information at home and in New York since 2012-3. To wit: “Swiss Startup Monitor” and “Startup Ticker” each offer some features found on Digital.NYC.

Figure 16: Digital.NYC, the City's New Digital Portal



## IMPACT: ENCOURAGING

*The initiative is still new, but the portal is user-friendly and offers a wealth of content and the interactive map is a valuable resource for talents, angel investors, and tech junkies alike. From its launch and up to May 27, 2015, 78,096 websites have registered with a “.nyc” top-level domain.<sup>21</sup>*



# A NY State Tax Incentive: Start-Up NY



The main initiative at the New York State level to cut tax for promising tech business. It was launched by Governor

Cuomo in 2013 to revitalize upstate New York and make it an attractive place for domestic and foreign investment, especially in innovative industries, and to foster collaboration between the private sector and the public higher education system. The program aims at positioning the SUNY (State University of New York, the state's public university system) as magnets for entrepreneurs and businesses from around the globe by creating completely tax-free zone on eligible campuses and space for 10 years. In exchange, businesses that benefit from the tax-free zones will partner with the higher education institutions in the SUNY system as well as other universities and be able to access industry experts and advanced research laboratories.

Are eligible for the tax-free program: new companies created in New York State, companies relocating to New York State, and companies expanding to New York State active in innovation-driven industries (biotechnology, IT, material sciences, smart grids, electronics, engineering, media production, food sciences, etc.).

<http://startup.ny.gov/>

## → IMPACT: MIXED

*Start-Up NY has come under recent criticism in the press, with one report mentioning “the program created 76 jobs last year.”<sup>22</sup> To which Start-Up NY executive Leslie Whatley responded in an opinion piece that the criticism was “hard to understand” and that “expectations are unrealistic.”<sup>23</sup> According to the Whatley, the program saw 110 companies join in less than a year since its inception – 60 of which since January 1, 2015. “They have already committed to creating more than 3,100 jobs while investing more than \$186 million across the state. That is a remarkable achievement by any standard,” she continued.*

*During her visit with Start-Up NY, Ms. Pascale Vonmont noted some additional salient points of the initiative:*

- *It zeroes in on innovative, knowledge-based businesses*
- *Goal of 10,000 jobs and huge investments by the companies.*
- *The list of conditions that have to be fulfilled to participate is long, which is not unusual with governmental initiatives.*

*Ms. Vonmont concluded that the “impact can't yet be really measured but the numbers communicated by government,” as these are under challenge. And taxes are always an issue for start-ups.*



# If You're Going To San Francisco...

The closest city to the center of the tech revolution, San Francisco has also benefited from an influx of startups and is undergoing a digital boom. Several local initiatives are contributing to this phenomenon.

## Public Initiatives

The **San Francisco Entrepreneurship-in-Residence** program aims to use disruptive startup technologies to improve delivery of City services. The program brings together government and startups to explore ways they can use technology to make government more accountable, efficient, and responsive.

### → IMPACT: PROMISING

*Interesting Approach for cooperation between startups and government, innovative approach with direct impact for government and no direct involvement of investors at this stage. Can be compared with NYC BigApps.*

**DataSF** aims to enable the use of the City's data. Their core product is SF OpenData, their official open data portal. Launched in 2009, the data portal contains hundreds of city datasets for use by developers, analysts, residents, and more. They believe open data has the potential to support a range of outcomes from increased quality of life, more efficient government services, better decisions, and new businesses and services.

- The **Data Academy** is part of DataSF. Its goal is to help analysts citywide explore, refine, and enhance their skills in data analysis and visualization.

### → IMPACT: PROMISING

*This might be interesting regarding open government data but it is not clear what the concrete impact up to now is and there is no specific focus on startups.*

## A Private Initiative... To Launch in New York

Google (now Alphabet) is launching **Sidewalk Labs** to help build smarter cities. This will be an independent company funded by Google, and headed by Dan Doctoroff, former deputy Mayor of New York under Michael Bloomberg, and former CEO of Bloomberg LP. Founders have described it as an "urban innovation company" that will "pursue technologies to cut pollution, curb energy use, streamline transportation and reduce the cost of city living. To achieve that goal, Mr. Doctoroff said Sidewalk Labs planned to build technology itself, buy it and invest in partnerships."<sup>24</sup>

### → IMPACT: PROMISING

*Google has a track record of scaling projects and of offering technological solutions to problems we didn't necessarily know existed. Instead of a "top-down approach" typical of big conglomerates, Sidewalk Labs aims to "embed themselves in a city's infrastructure," according to Mr. Doctoroff, and develop "technology platforms that people can plug into" for everyday things "like managing energy use or altering commuting habits."<sup>25</sup>*



# Recommendations and Applicability to Zurich

What are the key takeaways from New York City's recent efforts to actively engage its digital economy?

Most importantly, New York City managed to **identify early-on the gaps and opportunities for growth** in the digital sector, in part thanks to its well-funded and well-staffed economic development arm, the NYCEDC. This took place around the turn of the century, and following some of the excesses of the dot-com bubble. With the arrival of the new administration of Mayor Michael Bloomberg, himself a successful entrepreneur and financier, the City took **bold and rapid steps to create and test-run a large number of innovative public-private initiatives** (over 40, by our count), alongside some of the emerging private sector and community-led projects that were developing, such as the ever-growing Tech Meetups, and the growth of powerful angel investor networks. Many of these have shown encouraging results.

In this report, we highlighted some of the most successful initiatives, including large infrastructure projects at Roosevelt Island (**Cornell NYC Tech**), and Brooklyn's Navy Yards and Industry City sites. Other dynamic programmatic initiatives include **NYC Venture Fellows**, and **Pilot Health Tech NYC**. Media, which is one of the leading historical economic sectors in New York, presents a number of challenges, which initiatives have attempted to address and anticipate. While the convening power of the **NYC Media Lab** has ensured thought-leadership on the most salient questions of how the sector can ride the tech wave, the initiative per se may not have produced direct (or assessable) results if measured by the number of companies and jobs created. On the other hand, one of the prescient ideas that came out of the earlier industry consultation process known as **Media.NYC.2020**, was the coming emergence of the incubator and co-working space

revolution. In a city with plentiful and adaptable real estate in the form of former industrial and office sites, this was bound to be led by private sector actors (**WeWork**), with some City and university leadership as well (**Hive at 55, Harlem Biospace**, Columbia and NYU startup labs) .

Overall, we see New York City and Zurich as presenting a number of striking parallels regarding economic history, challenges, and potential. No doubt, there is momentum in Switzerland to act now and launch bold programs that will accompany the growth of the digital economy. Some of these include the creation of a dedicated **National Innovation Park at Dübendorf**, which would anchor the tech economy to an adaptive reuse conversion of a former military site – not unlike Brooklyn's Navy Yards and former Army Terminal.

As such, we encourage public and private organizations in Switzerland to take a closer look at some of the initiatives highlighted in this report, in order to transfer and adapt the acquired know-how to Switzerland. But time is of the essence: cooperation among public and private actors should happen now rather than later. This will help ensure that digital hubs emerge in Switzerland rather than, say, Berlin or London – which would otherwise hold the potential for being happy recipients of a Swiss entrepreneurial brain drain.

In their reflection and efforts, local actors in Switzerland can rely on the assistance of swissnex, an initiative of the State Secretariat on Innovation, Research, and Innovation (SERI). We are happy to provide additional insights on any of the matters and programs discussed in this report.



# Appendix: City Accelerators and Co-Working Spaces

*Through NYCEDC, the City of New York has supported the creation of many incubators and accelerator programs. More than 600 startups have benefitted from City-sponsored incubators for a total of \$130 million raised in venture funding. Similarly, local universities have launched new initiatives to help their students with promising research projects, focusing on their first steps towards commercialization and their integration in the local ecosystem. In this section, we will present the main incubator programs supported by either the City or local State universities, in addition to those mentioned elsewhere in the report:*

## **Columbia Start-up Lab**

Founded in the spring of 2014, Columbia Start-up Lab is an initiative of Columbia Entrepreneurship, an organization affiliated with the Office of the President of Columbia University, with the goal of (1) cultivating a multidisciplinary approach to entrepreneurship, (2) to facilitate the formation of talented new start-ups, and (3) to contribute to growing the local tech ecosystem. The Lab is a co-working space available for young alumni (not more than five years after graduation) from Columbia Business School or Columbia School of Engineering. Selected teams of alumni can use the co-working space for up to 12 months. They will be charged for rent but in return can access a network of mentors who will closely follow them through their milestones.

<http://entrepreneurship.columbia.edu/startup-lab/>

## **Dumbo Incubator and Varick Street Incubator (City of New York and NYU)**

The Dumbo Incubator and Varick Incubator are two programs sponsored by the City of New York and run by NYU Polytechnic School of Engineering. The concept is to leverage the technology knowhow of NYU with local entrepreneurs. NYU Polytechnic School of Engineering manages and runs the day-to-day operations of the facilities, providing access to capital, markets, and R&D through their network of NYU faculty and researchers. The incubator is part of a larger set of technology entrepreneurship initiatives with a specific focus on global information technology, health and wellness, and urban sustainability.

Dumbo Incubator was launched in Brooklyn in 2004 by the Polytechnic School of Engineering of New York University (NYU) and the City of New York. Varick Street Incubator was launched in 2009 as part of Mayor Bloomberg's Five Borough Economic Opportunity Plan. The incubation space is open to NYU-affiliated companies (with an IP from NYU Poly) and to non-NYU companies, with a different pricing but starts at \$400 a month for a period of six months.

<http://engineering.nyu.edu/business/incubators>



### **New York City Accelerator for a Clean and Renewable Economy (NYC ACRE)**

NYC ACRE helps clean technology and renewable energy companies in New York City grow, advancing the City as a role model for environmental sustainability and smart growth. NYC ACRE was seeded with a \$1.5 million grant from the New York State Energy and Research Development Authority (NYSERDA) over four years, awarded to the NYU School of Engineering. The program aims at growing an ecosystem of entrepreneurs, international companies, and innovative local businesses that are providing solutions to climate and energy issues while growing the cleantech and renewable energy sector in NYC. In addition to physical space, tenants receive strategic guidance and business assistance.

<http://www.nycacre.com/>

### **NYU's Leslie eLab**

Similarly to the Columbia Start-up Lab, NYU's Leslie eLab is an initiative of New York University to help students, faculty, and researchers build their ideas into businesses. The 5,900 square-foot incubator set to open in the autumn of 2014 will be a space for researchers, students, and faculty from across NYU's schools. The facility will be the new headquarters of the NYU Entrepreneurial Institute, the organization that supports entrepreneurial programs, resources, and events on the NYU campus.

<http://www.nyu.edu/about/university-initiatives/entrepreneurship-at-nyu/leslie-elab.html>

### **Harlem Biospace**

New York's first biotech incubator, the Harlem Biospace is an initiative of NYCEDC to provide up to 24 competitively-selected early-stage life-science companies access to affordable wet-lab, microbench space, specialized laboratory equipment, mentorship, business support, and programming. The mission of the Biospace is to create a thriving biotech community in New York City that will help turn revolutionary biotech ideas into products that solve real health problems. Participating companies pay a monthly rent for a package that includes lab space and equipment, as well as mentorship and networking events with investors. The projects is supported by the City and supervised by Columbia University faculty member Sam Sia, PhD. <http://harlembiospace.com/>

The City of New York has supported many affiliated industry-specific co-working spaces and incubators in the vein of the Harlem Biospace. Worthy of note are: (1) the BMW iVentures incubator ([http://www.bmw.com/com/en/insights/corporation/bmwi\\_ventures/index.html](http://www.bmw.com/com/en/insights/corporation/bmwi_ventures/index.html)), a co-working space sponsored by BMW with the support of NYCEDC, dedicated to innovators focused on future mobility and cleantech; and (2) the Made In NY Media Center (<http://nymediacenter.com/>), a co-working space in DUMBO that offers desks and exhibition venues designed to connect the next generation of artists, innovators and entrepreneurs in the film and media industry.





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*All views expressed herein are the opinions of the authors, informed by their research and first-hand experience in the New York tech ecosystem.*



# Endnotes

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