Technology Executives Say New York is a Thriving Digital City; Layout Challenges Ahead

The Boston Consulting Group interviewed 54 leading technology executives in New York City or San Francisco to understand the factors that make specific cities attractive to tech firms and to highlight the steps that governments can take to create hospitable tech environments. The following report details our key findings.

The technology industry has fundamentally changed the industrial makeup of urban economies throughout the U.S. According to a study conducted for the Bloomberg Tech Summit, in New York City, the tech/info sector alone has created 26,000 jobs during the past six years, representing 11 percent growth in the sector. Annual tech/info sector wages have correspondingly increased by a cumulative $5.8 billion, accounting for nearly two-thirds of New York City's private-sector wage growth during the 2007-12 time period. The city's tech/info industry now has 262,000 workers, who contribute almost $30 billion annually in wages to the local economy.[1] San Francisco has seen similar growth; more than 1,800 technology firms are now based in the city.

Conditions Required for Tech Ecosystem
The tech executives we interviewed highlighted five conditions that created the foundation necessary for building the tech industry in New York City and San Francisco:

A Strong Talent Pipeline. Engineers make up approximately 80 percent of the expense structure for startups and are a critical resource to enable larger companies to scale. For example, Facebook's New York City office alone has hired 80 engineers since the beginning of 2012. San Francisco, with more than 50,000 engineers, has one of the largest concentrations of engineering talent globally.

A Vibrant Tech Community. A strong tech community creates a virtuous circle, driving the attraction, development, and retention of talent. Interviewees emphasized four distinct elements that create a strong community:

- **Mentorship.** Technology mentorship consists of formal and informal channels. Formal channels include New York City's incubators, which graduate more than 100 companies per year, as well as the New York Mayor's Office programs, such as Take the H.E.L.M. and NYC Venture Fellows, which connect senior tech leaders with entrepreneurs.

- **Networks.** Interviewees indicated that a large, integrated network enables a strong sense of cultural identity. The NY Tech Meetup community, with more than 34,000 members, plays an integral role in formalizing this network there. Also important are New York City's 30-plus shared workspace communities that house countless startups.

- **Magnet Companies.** New York City and San Francisco are home to many of the largest technology companies in the world. Google and Facebook have recently opened offices in New York City, and Twitter and Salesforce.com have established a presence in San Francisco. These companies provide credibility to the industry, a recruiting pool for

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existing startups, and a fertile group of future entrepreneurs to any city.

- **Visibility.** New York City's Made in NY campaign made more than 150 million impressions in the city. Similarly, Mayor Edwin Lee of San Francisco has raised the profile of local tech companies by hosting joint press conferences with startups' leaders at startups' offices. Tech executives indicated that visible support from the mayor's office lends recruiting and commercial credibility to the industry.

Local, Early-Stage Capital. New York City has doubled its share of venture capital deals since 2003. Interviewees indicated that the increased capital is most important in the early stages because it benefits company formation. Moreover, early-stage capital tends to be invested close to home. For example, early-stage VC companies based in New York City are five times more likely to invest in startups in the city than their early-stage VC peers.

A Robust and Affordable Infrastructure. Interviewees stated that cities must develop a portfolio of infrastructure solutions that cater to tech firms at different maturity stages. For example, Paperless Post, an invitation website, has grown from 2 people to a space that can accommodate 120 people in four years. Over that time, it has required three different real estate footprints: an apartment, a small office in the Flatiron District, and a large 12,500-square-foot downtown space. Along with a variety of real estate and flexibility of leasing terms, cities must ensure broad access to public transportation and high-speed broadband; both play critical roles in enabling startups.

Strong Industry Clusters. New York City benefits from strong endemic industries, such as fashion, finance, and media; San Francisco benefits from a strong local tech industry. These clusters create natural advantages in product testing, access to industry talent, and proximity to supplier networks. Gilt Groupe, an online fashion firm, is a prime example of a company that has leveraged existing supplier networks in its home city of New York City (such as photographers, merchandisers, and showrooms) to scale its successful business.

Challenges Ahead
Although New York City and San Francisco have prospered as a result of these five conditions, the tech executives we interviewed highlighted areas where challenges still exist (note that New York City and San Francisco have begun to roll out new ideas and programs that address the following three areas):

Sufficient Engineering Talent. Interviewees advocated for an increased focus on science, technology, engineering, and math education in secondary schools, greater alignment of industry and tertiary education, and a reformed immigration process. A perceived talent gap was the most frequently mentioned concern, cited by 95 percent of interviewees.

The Affordability of Urban Living. Concerns about the future affordability of cities for young entrepreneurs were voiced by 81 percent of interviewees. Broad public-transportation and affordable-housing measures enable entrepreneurs to make tradeoffs to increase capital "runway." In addition, most startups are staffed by employees in their twenties and thirties, an age-group that is highly sensitive to living expenses.

Access to High-Speed Broadband. Going forward, 40 percent of interviewees said, broadband access is a concern. High-speed broadband is perceived as an essential utility. Interviewees indicated that cities should benchmark speed, breadth of access, and transparency of service offering against those in other cities with which they compete.

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About This Research

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[1] Dr. Michael Mandel, "Building a Digital City: The Growth and Impact of New York City's Tech/Information Sector," prepared for the Bloomberg Technology Summit on September 30, 2013.