The Urban Tech Revolution

By [Richard Florida](#)

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Tech startups—and the venture capital on which they thrive—are breaking out of their suburban mold.

Ever since their nearly simultaneous births roughly half a century ago, the high-tech industry and venture capital have been clustered in suburbs: in the low-rise office parks spread across California's vaunted Silicon Valley, where Intel, Apple, Google, and Facebook have their headquarters; along the Route 128 tech corridor near Boston; in Redmond, Washington, outside Seattle, where Microsoft's vast headquarters is located; in the suburbs surrounding Austin, Texas; and in the North Carolina Research Triangle of Raleigh, Durham, and Chapel Hill, to give a few notable examples. They are not so much suburbs as "nerdistans," specifically developed to attract high-tech industry and high-tech workers. Think of San Narciso in Thomas Pynchon's *The Crying of Lot 49*, "less an identifiable city than a grouping of concepts—census tracts, special purpose bond-issue districts, shopping nuclei, all overlaid with access roads to its own freeway." Looking at its expanse through the windows of her rental car, one of the book's characters "thought of the time she'd opened a transistor radio to replace a battery and seen her first printed circuit. The ordered swirl of houses and streets, from this high angle, sprang at her now with the same unexpected, astonishing clarity."

In our studies of the geography of venture capital–financed high technology back in the late 1980s, Martin Kenney and I identified two dominant complexes: Silicon Valley and Route 128. While New York City possessed a lot of venture capital, the great majority of it was exported to those two areas. We did not identify a single urban center as a home to a significant cluster of high-tech innovation and venture capital–backed startup activity.

Many, including myself, have noted the emerging back-to-the-city movement of talent and jobs, which Alan Ehrenhalt has dubbed the "great inversion." But two things missing from the urban revival have been startups and the high-tech industry, which paralleled the rise of the suburbs in both the arc of its development and its geography. This suburban geography of high technology has long posed something of a conundrum for urbanists. If cities, as Jane Jacobs so memorably argued, are nonpareil engines of innovation, how is it that high tech—the most innovative of industries—has mostly thrived outside them?

But that question has been rendered moot as tech investment has taken an unmistakably urban turn. In the last several years, urban neighborhoods in San Francisco, New York, London, and other large cities have become leading centers for venture capital and startup activity.

Bruce Katz, director of the Brookings Institution's Metropolitan Policy Program and coauthor of the book *The Metropolitan Revolution* ([related article](#)), believes that Silicon Valley's hegemony is actually fading. Here is Derek Thompson, [reporting in the Atlantic on Katz's recent talk](#) at the Aspen Ideas Festival: "What's happening now is workers want to be in Oakland and San Francisco," [Katz] told Walter Isaacson. Young workers want to live in a city—somewhere they can ride bikes, shop locally, walk to their favorite restaurants and bars, and live in a dense urban or urban-light environment with nearby amenities. But Silicon Valley isn't like a city. It's like a suburb. "Silicon Valley is going to have to urbanize," Katz said. "[There is a] migration out of Silicon Valley to places where people really want to live."

Perhaps venture capital icon Paul Graham put it best. For all its advantages and power, he wrote back in 2006, Silicon Valley has a great weakness. The high-tech "paradise" created during the 1950s and 1960s "is now one giant parking lot. San Francisco and Berkeley are great, but they're 40 miles away. Silicon Valley proper is soul-crushing suburban sprawl. It has fabulous weather, which makes it significantly better than the soul-crushing sprawl of most other American cities. But a competitor that managed to avoid sprawl would have real leverage."

Venture capital investment—in which investors trade equity capital for an ownership stake in startups and take a hands-on approach in overseeing and guiding them to a sale or public offering—is the preferred mode of funding for enterprises that engage in the kind of disruptive innovation that shapes whole new industries. Companies like Intel, Apple, Genentech, Google, and Facebook were all financed through venture capital. Where venture capital is invested says much about the geography of high-technology innovation.

Until now, the alleged urban turn in venture capital and startup activity has been mostly conjecture, based on anecdotal evidence or case studies of individual cities. But, using data made available especially to me by the National Venture Capital Association, my Martin Prosperity Institute (MPI) research team and I have been able to chart the locations of venture capital investment and startup activity with a great deal of precision, by metro, area code, and zip code and thus in urban areas as well as suburbs in the United States. (The metro data from Thompson Reuters cover 134 U.S. metropolitan areas receiving venture capital and are for 2012. The city-specific zip code data from Dow Jones cover the 12 largest metro areas for venture capital and are for 2011.)

Several key trends stand out from our analysis. Silicon Valley and the broader Bay Area continue to lead among U.S. metro areas, but venture capital investment has become more distributed across the United States. Silicon Valley is less dominant than it was in the late 1980s. The Valley proper—that is, the San Jose metro area—attracted slightly less than $4 billion in 2012. It has been eclipsed by the San Francisco metro area, which had very little venture capital back in the 1980s when Kenney and I did our original studies, which attracted nearly $7 billion—almost 60 percent more. With $3 billion in venture capital, Greater Boston is third, and Greater New York,

with $2.2 billion, is fourth. Los Angeles ($1.7 billion) and San Diego ($1.1 billion) rank fifth and sixth, while Seattle, Austin, Chicago, and Washington, D.C., round out the top ten.

The urban trend is pronounced. Predominantly urban zip codes account for just over half of venture capital investment in San Francisco and Chicago; more than 60 percent in Dallas and D.C.; roughly three quarters of investment in Boston, New York, and Los Angeles; and more than 80 percent of venture investments in San Diego, Seattle, and Austin.

The smaller towns and cities that are attracting investment tend to have urban attributes like walkability, density, and an abundance of transit. Cambridge, Massachusetts, home to the Massachusetts Institute of Technology and Harvard, attracted more than $1 billion in investment in 2011—substantially more than nearby Boston or the Route 128 suburbs. Santa Monica, California, attracted roughly $400 million, just slightly less than the city of Los Angeles. And within Silicon Valley, the relatively dense, walkable city of Palo Alto—home to Stanford University—attracted $1.3 billion, the most venture capital of any single city in the region.

College towns are emerging as startup and venture capital hubs, with their great research universities functioning as innovation and talent hubs. This becomes even clearer when one calculates venture capital dollars on a per-capita basis. When my team and I ran the numbers, the city of Boulder, Colorado, rose to third place ($86.9 million per 100,000 people), after Silicon Valley ($216.9 million) and San Francisco ($159.1 million). Boston is fourth. The college towns of Santa Barbara, California; Lawrence, Kansas; Austin, Texas; Ann Arbor, Michigan; Raleigh/Cary, North Carolina; Fort Collins, Colorado; and Madison, Wisconsin all number among the top 20.

Global cities are also emerging as venture capital centers. My MPI team tracked startups worldwide using data from TechCrunch's CrunchBase, which we organized and mapped by metro region. Silicon Valley and the San Francisco Bay area did very well, of course, as did New York City, Boston/Cambridge, Los Angeles, Seattle, San Diego, D.C., Chicago, and Austin. But London now ranks in the very top tier of startup cities, while Toronto and Vancouver in Canada; Berlin, Paris, Amsterdam, Dublin, Madrid, and Barcelona in Europe; Bangalore, New Delhi, and Mumbai in India; Singapore and Sydney in the Asia Pacific region; and Buenos Aires and Rio de Janeiro in South America each have significant clusters of startup activity. Startup activity at the global level is spiky, clustered, and concentrated in and around the world's largest and most economically important cities and metro areas.

This urban shift in venture capital, startup activity, and high tech is the result of several trends.

First and foremost is access to talent. More and more techies are choosing to live in denser, livelier, and less car-dependent urban locations, where there are more amenities. Many of the most promising young tech companies coming out of the Bay Area, like Pinterest, Zynga, Yelp, Square, and Salesforce, have chosen to locate in San Francisco or, like Twitter, have moved from Silicon Valley to the city. "I love the idea of an urban corporate campus with all the energy and variety that provides," Twitter cofounder Jack Dorsey tweeted last February, after opening his company's new headquarters in a newly renovated art deco building in San Francisco's Mid-Market neighborhood.

Established tech giants like Apple, Google, and Facebook require large corporate campuses, which are easier to accommodate in suburban areas, though Google has opened enormous offices in cities as well. For example, its Manhattan location in the old Port Authority Building in Chelsea is 2.9 million square feet (270,000 sq m), the city's third-largest building.

Older buildings in urban locations are more affordable for small startups—a major reason for the explosion of startups in Brooklyn neighborhoods like DUMBO (which stands for "Down Under the Manhattan Bridge Overpass") and the Navy Yard, which were filled with disused warehouses and loft spaces. As Jacobs famously wrote in *The Death and Life of Great American Cities*: "New ideas must use old buildings."

The changing nature of technology itself also plays a role in this urban shift. In the past, many of the most successful startups—like Apple, Intel, and Dell, to name just a few—were focused on hardware. But today's most successful startups tend to be in fields like social media, multimedia games, and picture or music applications. Cities have deeper pools of designers, composers, scenarists, musicians, marketers, and copywriters, who are just as important to those newer enterprises as engineers. According to Maria Teresa Cometto and Alessandro Piol's [Tech and the City](#), Tumblr has located and remained in New York City because its founder David Karp "is convinced that New York City, the capital of media and advertising, is the right city."

Zappos CEO and venture capitalist Tony Hsieh recently moved his entire operation into downtown Las Vegas; Quicken Loans' Dan Gilbert is buying millions of square feet of office space in downtown Detroit at fire sale prices and moving thousands of jobs there. Center cities are filled with investment opportunities for smart developers; the action is no longer in look-alike suburban office parks, but in cities, which supply the density, infrastructure, and transit connections that enable innovation.

And this is happening not just in the United States, but around the world. London has also flourished as a startup center because of its size, diversity of industry and talent, and uniquely urban attributes. East London is home now to 3,200 high-tech firms generating 48,500 jobs, according to a 2012 report by the Centre for London. That report identified East London's key attributes as a startup hub as its "amenities and 'vibe' "; the presence of "similar/complementary firms"; "branding and messaging"; "cheap space"; "proximity to central London"; and "connectivity—to the rest of London and the U.K." It noted that one startup relocated to the gritty Shoreditch district in London's East End in response to pressure from the firm's software developers, who wanted to move to a "better" place—"and by better . . . they mean somewhere which has lots of bars and lots of places you can eat."

Berlin also has risen as an urban tech center, putting to rest any argument that the city is a lagging bohemian center with hardly any tech or entrepreneurial future. Berlin has prospered in high tech precisely because of those attributes. Its tech economy and startup ecology are such that Twitter recently selected it as the site for its German headquarters over Frankfurt (the country's industrial and financial hub), Hamburg (home to Facebook and Google), and Munich (where Apple, Amazon, and Microsoft are located). "[Entrepreneurship is rampant in this city](#)," tech writer Om Malik says in a post on [GigaOm.com](#). Geographer Melanie Fasche, who hails

from Berlin and is now a postdoctoral fellow at the MPI, told me: "Berlin has become a frontier for micro- and small entrepreneurs who really want to make it."

Startups and venture capital are shifting toward urban areas because of what they have offered all along—the economic advantages of agglomeration, clustering, and human interaction, combination, and recombination. Cities have the diversity of talent and industry, the density and interactive streetscapes, and the openness to new ideas and fast-paced urban metabolisms that enable innovation and new enterprises to thrive. Suburbs like Silicon Valley and other nerdistans have to replicate and mimic these functions—cities have them intrinsically. Great cities are wide open places, filled with creative and entrepreneurial activity, and are cauldrons of free expression, discovery, and innovation—places where, as author Matt Ridley famously put it, "ideas come to have sex." The results of those couplings have long been books, paintings, music, and other creative pursuits, but they are also new technologies, new products, new businesses, and whole new industries. As New York City venture capitalist Fred Wilson puts it in his foreword to Tech and the City, "the story of NYC is a story of entrepreneurship, evolution, and energy."

Much remains to be done, of course. Between the rise of high tech and startup activity and cities' desirability as locations not just for the young, ambitious, and talented but for the global super-rich, cities are becoming less affordable. Rising rents threaten to cannibalize the very attributes that made these locations centers for innovation in the first place, pricing out innovative talent and enterprises. The more homogeneous cities become, the less creative—and ultimately, the less productive—they become. As Jacobs once told me, "When a place gets boring, even the rich people leave."

A recent report from the office of Scott Stringer, the borough president of Manhattan, offers a host of intriguing policy proposals to help urban neighborhoods maintain their technological and innovative edge while extending their benefits to less-advantaged groups by streamlining red tape, creating more affordable co-work spaces, upgrading science and technology education in schools (especially to prepare disadvantaged youth for tech employment), improving infrastructure and transportation to connect disadvantaged people and neighborhoods to high-tech corridors, and spurring high-tech development around transit nodes in less-advantaged areas outside of the current high-tech clusters.

The urban shift in venture capital and high-tech startups has implications that go way beyond jobs and economic development. By their very presence, they will enhance cities' already considerable prowess at problem solving, helping them function as laboratories for solutions to the most pressing social and environmental problems of the day—from energy and pollution to affordable housing, better schooling, and reduced crime.

Cities aren't just the location of innovative enterprises—they are innovation machines in their own right, uniquely equipped to generate solutions to the problems that they create, a virtuous circle if ever there were one.