



# Tech revolution

*Cities reimagine industrial corridors as technology hubs*

by Howard Kozloff and Emma Loos

“In the new world, it is not the big fish which eats the small fish; it’s the fast fish which eats the slow fish.” So said Klaus Schwab, founder and executive chairman of the World Economic Forum, in reference to the rapid changes caused by technological advancements in the digital revolution within which we are all currently living. The beginning of the Industrial Revolution in the 18th century ushered in change on a global scale. Today, such large-scale change to the built environment can be attributed to the worldwide tech revolution.

Cities large and small are embarking on economic development and urban planning initiatives related to infrastructure, employment-center locations, housing choices and amenities that specifically target recruiting, expanding and sustaining

the tech workforce. Similarly, private-sector tech powerhouses are taking it upon themselves to tackle large-scale city-building initiatives through “entrepreneurial planning,” addressing broad community needs related to transportation, workforce housing and public spaces.

Flexibility, nimbleness and fast-paced changeability characterize startup and tech companies today but also apply to the cities in which these companies thrive. The successful “fast fish” lives in both public and private waters, highlighting an implicit truth: Private enterprise and public policy must work in parallel to engender a healthy tech ecosystem.

The emergence, or identification, of an entirely new classification of work environment — the creative office — has reinvented

neighborhoods throughout the country, from Silicon Beach in Los Angeles to Silicon Alley in New York City, and from Silicon Hills in Austin to a Silicon Prairie across the Midwest. The telecommuting wave that was supposed to render office districts obsolete instead has empowered the growth of large and small cities on the back of the tech boom. Creative offices emerging both from adaptive reuse of obsolete buildings and from ground-up class A office developments in prime urban cores employ the same moniker to delineate a certain creative environment — collaborative, social and interactive. As work styles evolve with the tech startup culture, flexible office spaces attract an ever-widening spectrum of tenants — from food-preparation kitchens to white-shoe law firms.



Brooklyn Navy Yard in New York City

In what is a modern-day reboot of the Industrial Revolution, industrial corridors are becoming hotbeds for tech innovation due, in part, to large, open floor plates that foster the kind of interactive and flexible workplaces endemic to creative office. Offering a comparative advantage over prime urban markets, industrial neighborhoods are less expensive than urban cores and offer a built environment already equipped with the industrial design features architects and designers try to replicate in class A creative office spaces. Yet these are not ready-made innovation hubs. Rather, success emerges from strategic entrepreneurial planning by both private and public sectors and builds upon the foundation of the city's needs, context and existing resources.

## New York City

The Brooklyn Navy Yard, on the banks of the East River in rapidly gentrifying Brooklyn, maintains a century-old industrial environment while providing a home to 21st-century manufacturing, creative office and factories. In many ways ahead of the trend toward reimagining industrial corridors, the Brooklyn Navy Yard emerged as a modern industrial park in 1987, when the large spaces were reconfigured into small spaces for entrepreneurial endeavors, and again in the early 2000s, culminating in the opening of the 310,000-square-foot Steiner Studios in 2004.

Progress and reinvention has continued. Building 128, New Lab's 84,000-square-foot manufacturing space, coalesces technology entrepreneurs into a workspace that was once home to the leading innovation of its day — shipbuilding. Maintaining the bones of the steel truss work — a nod to its manufacturing history — the space was transformed into the Green Manufacturing Center, a multi-tenant class A office space.

New York City's exorbitant real estate market lent a hand to entrepreneurs uncovering less-expensive, underutilized industrial sites with enough space for manufacturing work. Brooklyn Navy Yard's existing environment and space enabled the Maker Movement — the reintroduction of local manufacturing and independent inventors — to develop and refine their ideas in a cultivated space with a like-minded community.

Promoting the innovation culture, Brooklyn Navy Yard Development Corp., a nonprofit overseeing the district's city-owned property, made a concerted effort to bring in 21st-century manufacturing and tech companies that provide jobs for middle-class New Yorkers. Implementing the BLDG 92 program, housed in the Brooklyn Navy Yard Center, weds the Navy Yard's history to a sustainable urban industrial district serving as a catalyst for job growth through educational workshops, workforce development services, and exhibitions of locals' work.

Building off New York City's established identity as a fashion capital, Manufacture New York houses a fashion incubator with a factory and research facility in the former U.S. Navy Fleet Supply Base. With Wearable Technology R&D Center, fashion designers and inventors have space and equipment for development and production in-house and the fashion market right outside their door.

Public- and private-sector physical and programmatic developments leveraged existing assets

to successfully transition an underutilized industrial district into a stable manufacturing office market by employing New York's cluster of resources — leading universities; established industries of fashion, tech and media; and nearby innovation hubs within Brooklyn's Tech Triangle.

### Chicago

As Chicago's tech employment base grew over the past few years, developers made a bet that Goose Island, an underutilized and landlocked area, could become a prime office market. Planned industrial zoning, large-footprint warehouses, and surrounding neighborhoods made up of a strong millennial workforce contingent — Bucktown, Wicker Park, Lincoln Park, Old Town and River North — offered an opportunity to drive revitalization and economic development in a declining area.

Although the physical water boundary was potentially a risk, developer South Street Capital saw the potential of an innovation hub to drive the tech-based creative office market. Through an entrepreneurial-planning lens, incoming private enterprises thought beyond their physical site to consider approaches to foster campus environments, create connections to other commercial corridors and residential neighborhoods — with the inclusion of seemingly simple “amenities” such as sidewalks — and turn the river from a detriment into a positive recreational anchor. The private sector took it upon itself to create a design and vision for a connected network. Working through a public-private partnership with the City of Chicago, there are plans to create the necessary infrastructure to accommodate transportation, including a bicycle bridge to connect the nearby Blue and Red Line stations.

Goose Island is becoming Silicon Island, a thriving innovation hub with key companies, educational institutions and venture-backed startups. It is now home to a wide spectrum of tenants — Digital Manufacturing and Design Innovation Institute, UI Labs, Wm. Wrigley Jr. Co. (a Mars Inc. subsidiary), Kendall College School of Culinary Arts, Boelter Cos., Trunk Club Inc., Amazon Inc., and Sprig Inc. South Street Capital and R2 Cos. are redeveloping former warehouses abutting the river into North River Branch Campus, which will include 950,000 square feet of multi-tenant loft offices and modern manufacturing. Through a combination of adaptive reuse and new development, Goose Island is emerging as an in-town tech hub.

### Los Angeles

While the organically formed Silicon Beach on the Westside of Los Angeles continues to attract tech firms and employees, the Eastside seized on opportunities-at-hand to preemptively identify an underutilized industrial corridor as a future biotech hub.

Despite the fact major universities in Los Angeles generate the most college graduates with bio-related degrees among comparison regions — Boston, Philadelphia, San Francisco, Washington, D.C. — the city lacks resources and opportunities to retain locally educated talent, resulting in many leaving for other California science and tech communities. The resulting “brain drain” creates a significant economic development opportunity for Los Angeles to create jobs and repurpose underutilized industrial real estate.

A 2014 study by Battelle estimated the Los Angeles region's untapped demand for life science could absorb approximately 150,000 square

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Top 10 regions for technology degree completions (2014)			
Rank	Metro area	Tech degree completions	Growth (2010–2014)
1	New York City <sup>1</sup>	15,032	68.1%
2	Washington, D.C. <sup>2</sup>	14,775	87.6%
3	Los Angeles <sup>3</sup>	12,679	84.6%
4	Chicago <sup>4</sup>	10,454	89.2%
5	Phoenix	8,954	51.7%
6	Boston	7,410	83.3%
7	San Francisco <sup>5</sup>	7,280	71.0%
8	Atlanta	6,198	74.1%
9	Columbus <sup>6</sup>	5,190	66.6%
10	Detroit	5,025	50.9%

<sup>1</sup>Includes Long Island, N.Y., and Newark, N.J.

<sup>2</sup>Includes Baltimore

<sup>3</sup>Includes Orange County, Calif.

<sup>4</sup>Includes Milwaukee

<sup>5</sup>Includes Silicon Valley, San Francisco Peninsula and Oakland, Calif.

<sup>6</sup>Includes Cleveland and Cincinnati

Sources: CBRE Scoring Tech Talent 2016, The National Center for Education Statistics (Region), July 2015

feet of new life-science space annually. Recognizing the failure to sustain the biotech workforce, the City of Los Angeles established the nonprofit Los Angeles Bioscience Corridor to cultivate a life science and biotech innovation hub.

The Los Angeles Bioscience Corridor weaves together incubators and companies with key anchor institutions — L.A. County–USC Medical Center, California State University – Los Angeles — within a four-mile stretch directly northeast of Downtown Los Angeles. The corridor entrepreneurially reimagined the “right” use for obsolete industrial properties scattered amongst existing manufacturing uses that are bisected by a rail yard and adjacent to

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workforce residential neighborhoods.

Industrial sites in Los Angeles largely have succumbed to waves of gentrification that converted large flat sites to residential development. Those that remain and have preserved their industrial zoning are prime, not for repositioning to residential but, rather, to multi-tenant biotech office spaces. Key to success is these spaces can be leased at a substantially lower cost than Silicon Beach, where office rents go for nearly \$4.50 per square foot, as reported by Savills Studley. The existing manufacturing zoning, which permits bioscience-related research and development, is a key asset for the Corridor.

Life science stakeholders — private enterprises, nonprofits and public officials — foresee this opportunity as a community and economic driver to sustain and grow a bioscience workforce, foster innovative ideas, and leverage existing bioscience-related institutions and ongoing investments. The reality of a “hub” does not exist, however, without an actual cluster of resources and a network of companies and organizations.

In its very early stages, the Corridor and its environs are home to an increasing number of bioscience-related incubators, yet until recently, no space attracted early-stage companies to stay in Los Angeles. Currently, HATCH @ LA

Bioscience Corridor is the first bioscience redevelopment, converting a former furniture warehouse into a multi-tenant biotech office space providing a mix of wet and dry labs. The willingness of the present bioscience community, as well as city officials, to work in concert with private enterprises, such as HATCH, to promote developments and programs will serve as a catalyst for LA’s first biotech innovation hub.

### **Adapting to the modern world**

The success of “fast fish” innovation districts relies on nimbleness to adapt to changes in the fast-paced tech market. Reimagining the potential of once-forgotten manufacturing neighborhoods brings forth an opportunity to meet the tech revolution’s demands by using underdeveloped space and catalyzing economic development.

As tech evolves, work styles and office spaces adapt. By entrepreneurially planning new developments within the context of an established neighborhood, neighborhoods and industries can build off what already exists — in this case, obsolete industrial spaces.

The tech revolution continues to affect office spaces’ evolving work styles and cities’ built environments pushing into more neighborhoods. But it is also shaping the environment outside of the office. A sense of place matters. Tech companies thrive in communities with a ready-made mix of live, work and play environments. This clustering of energy and resources — and the resulting disposable incomes that come with it — spills into those neighborhoods, providing opportunities for some and burdens for others.

The isolation tech can sometimes bring — such as staring at screens at work, home and in between — also has brought a greater desire for socialization. And here is where the cityscape, including the spaces between buildings, matters. While real estate provides the shelter inside of which the tech economy can grow and thrive, it also provides the framework for the life and activity that happen at the front door and along the streetscapes. Tech real estate is not only about private communal workspaces and amenitized dining areas, but it is also, or should be, about the public communal neighborhoods winding between, amongst and around that real estate. ❖

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**Howard Kozloff** is managing partner of **Agora Partners**, a Los Angeles-based development, investment and advisory firm. **Emma Loos** is development associate of **Symphony Development**, a Los Angeles-based commercial development firm.

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