

MARGARET O'MARA

## Silicon Valleys

*Here, there, and everywhere*

In June 2010, Russian President Dmitry Medvedev came to the United States with two big priorities in mind: meeting with President Obama and touring Silicon Valley. Earlier in the spring, Medvedev's government unveiled plans to build its own version of California's high-tech capital in a woody area outside Moscow. The announcement made a splash, with slick presentations of buildings designed by celebrity architects and an appearance by Hollywood actor and prolific Twitter user Ashton Kutcher. For a Russia whose economy remained heavily dependent on oil-and-gas extraction, and who had lost its brainiest engineers to the more entrepreneur-friendly tech regions of the US and Europe, coming to Silicon Valley to learn its secrets became a first, essential step towards economic transformation.

Fifty years before, another foreign leader made the same kind of Silicon Valley pilgrimage. Visiting the United States in 1960, French President Charles de Gaulle asked to tour the research parks emerging amid the farms and orchards south of San Francisco. As his motorcade rolled through the California sunshine, de Gaulle noted the area's distinctive combination of science-based industry, university research activity, and quiet suburban neighborhoods that formed a self-contained innovation ecosystem. By the last year of de Gaulle's presidency, France had established its own high-tech city, Sophia Antipolis, along the Côte d'Azur.

From de Gaulle to Medvedev, California's Silicon Valley has been a place to which the world has looked for inspiration. The runaway economic success of a region that venture capitalist John Doerr once called "the largest legal creation of wealth in the history of the planet" has spawned countless imitators. Many have tried to reproduce the look and feel of the low-rise, lushly landscaped world of Silicon Valley in unlikely places. The globe has become dotted with nouveau Silicon Valleys, Forests, Hills, Orchards, Seaboard, and Fens. In the process, the Valley joined Hollywood as a powerfully alluring symbol of California, becoming global shorthand for innovation, entrepreneurship, and striking it rich.

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Stanford officials display model of the university's research park to a potential tenant, c. 1951.

Some of these overseas efforts to recreate a little piece of the Golden State became successful, although success came slowly. Many others did not. And despite a half century of attempts to build the next Silicon Valley, no other region has managed to dislodge the original Valley from its place atop the high-tech food chain.

Silicon Valley's preeminence springs from its origins in a very particular time (the early Cold War) and place (northern California), where a combination of national military spending and suburban infrastructure investment brought huge new flows of money and people to what had been a sleepy landscape of orchards and commuter towns. Add into this mix the presence of powerful research institutions—most notably Stanford University—and an unusually risk-tolerant business culture that welcomed and nurtured iconoclasts and dreamers, and a high-tech capital was born.

Others, not fully recognizing the importance of these cultural and historical frameworks, have assumed at their starting point that all they had to do was “build a research park, and they will come.” Yet no government or individual consciously set out to build a science city in Silicon Valley; it was the result of national economic transformations, local capacities, and a few lucky accidents. It's little wonder that its magic has been so difficult to replicate.

What the quixotic global quest to build the next Silicon Valley *has* managed to do, however, is to export a distinctive architectural aesthetic and business culture to other parts of the world. In doing so, the process has underscored the degree to which the Valley's success was not only an American phenomenon, but a *Californian* one—rooted in this state's history, its politics, and its culture.

Take all those research parks, for example. The reflex-



Global headquarters of Chinese networking giant Hua Wei, outside Shenzhen, China

ive first step in building any would-be high-tech capital has been to develop self-contained and verdant industrial real estate, preferably adjacent to or affiliated with a research university. Research parks are not a California creation, but the idea of creating a university-connected park certainly is. It sprang from the minds of Stanford University administrators in the early 1950s, who concocted the idea in large part because the university owned a *ranchero*-size parcel of adjacent land that it was unable to sell.

The architecture in the Stanford research park echoed both the Mission Revival campus buildings and the sun-drenched, Eichler-style modernism of adjacent residential neighborhoods. The manicured grounds and their ample parking channeled the automotive golden age of mid-century California. The park's success as an early incubator of technology firms led other regions and nations to adapt this

particular design aesthetic, often with few alterations. Red-tile roofs and palm trees dot the global technology landscape today, from Southern England to Southern China, evocative visual cues that these are places where innovation happens.

Global Silicon Valleys have encouraged the adaptation of a Californian aesthetic beyond the research park as well. Taking note of the Valley's location amid an affluent residential suburb, many imitators of the past six decades have incorporated similarly deluxe residential developments of single-family villas and ranch houses into their plans. Today, subdivisions catering to high-tech workers, like Bangalore's Palm Meadows and Shenzhen's Mission Hills, not only evoke California in their nomenclature but also in the appearance of their houses, the layout of their streets, and the amenities offered their residents. Upstart Silicon



Palm Meadows residential subdivision, outside Bangalore, India

Valleys are hardly the only places worldwide that feature these landscapes of wealth, but they often functioned as the leading edge of this type of development, and they reinforced the powerful cultural connection between the affluent California suburb and the technology economy.

Another California export is the laid-back, egalitarian, and highly networked business culture for which the Valley is famous. This, too, has deep roots. From the San Francisco Gold Rush on, the Bay Area has been a magnet for the brilliant and the odd. By the time commercial opportunities for technology began to open up in the late 1960s, it was home to a cohort of investors who were unusually tolerant of risk and willing to bet on untested talent. No other place in the country or the world has been able to reproduce this entrepreneurial ecosystem on the same scale. Top-down, government-fueled efforts to build silicon cities proved

notoriously bad at doing so. Instead, the fluid, rapidly moving, technophile ethos of the Valley spread through the movement of people and the globalization of firms.

Again, characteristics unique to the Golden State played a role here. California's significant Asian and South Asian populations, a large number of whom came here as foreign students, played a major role in the blossoming of the original Valley and in exporting its products and its culture elsewhere. As India and China liberalized their economies after the 1980s, immigrant entrepreneurs increasingly moved back and forth across the Pacific, playing instrumental roles in "new Silicon Valleys" from Shanghai to Chennai. Ultimately, the regions that have been among the more successful in creating high-tech clusters of their own are ones with a little bit of California—and quite a few Californians—in them.





Mission Hills, a residential golf resort in Guangdong Province, China

They also are places that entered the high-tech race with a set of regional advantages much like the Bay Area's. Take Bangalore, for example. Long before it became known as "India's Silicon Valley," Bangalore already had a reputation as a low-rise garden city with a pleasant climate, strong technical universities, and a concentration of public- and private-sector research activity—the result of two generations of concerted government effort to make the Bangalore region a hub of scientific activity. Bangalore isn't alone. Other high-tech success stories have urban histories with strikingly similar characteristics. In California and beyond, new-economy triumphs usually have old-economy roots.

The bad news for those who would like to become "the next Silicon Valley" is that the Valley has proven remarkably resilient. Ultimately, the secret of Silicon Valley is that it *wasn't* a consciously planned silicon city. It exists because

of big things—like Cold War spending patterns, sustained GDP growth, and large-scale migration and immigration. It also exists because of unique local characteristics like risk-tolerant capital, entrepreneurial leadership, and good weather. It grew organically. It had room for happy accidents and lucky breaks.

The good news is that it is no longer the 1950s. Technologies that came out of the Valley allow global communication and collaboration on an unprecedented scale. There is no longer a lone high-tech capital where all stages of production occur. Silicon Valley is a network. It is a global supply chain in which many different cities play a critical role—from Bangalore to Bucharest, São Paulo to Stockholm.

These cities also happen to be doing some exciting things to reinvent the silicon city model. For Silicon Valley may be a unique ecosystem for technology creation, but it falls short



University Town, Shenzhen, China



Microsoft campus, Redmond, Washington

on many fronts in terms of functioning well as an urban place. It is haphazardly planned and economically polarized. It is crowded and car-dependent to a degree that lowers its quality of life and degrades the natural beauty that lured people there in the first place. Effectively, Silicon Valley succeeded because it created a bubble of high-tech prosperity that kept other uses and other people at a safe distance. It also succeeded because it was good at disguising the less attractive and more polluting aspects of its business.

The exciting thing about the globalization of technology is that it is opening up space for new kinds of urban models—ones that are in turn shaping the original Silicon Valley's urban future. Denser, walkable high-tech corridors

in Singapore and Seoul are providing design inspiration for policymakers and planners in Palo Alto and San Jose. Architects are joining techies and CEOs in moving back and forth between California and the rest of the high-tech world, and redefining the technology workplace in the process.

So while other countries should not give up on the quest to become the next Silicon Valley, they should take its history seriously. And they might want to look to places other than the Valley for design inspiration. High-tech innovation doesn't need a sleek suburban office building, and the knowledge worker might not want to live in a California-style subdivision. True high-tech magic comes from other things. **B**