

SINGAPORE DELEGATION VISITS SAN FRANCISCO

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There are approximately 18,000 people per square mile in San Francisco and 20,000 people per square mile in Singapore. Both are internationally-recognized examples of compact cities that are “green” with climate-friendly design and resource-efficient policies, but are they “green” with nature? How does San Francisco share its 7- by 7-mile square grid with the natural world? How has Singapore shifted from a “Garden City” to a “City in a Garden”?

During the week of May 9, 2016, Khee Poh Lam, the Dean of the School of Design and Environment at the National University of Singapore, and members of the Carnegie Mellon University–Building and Construction Authority Executive Program—a partnership aimed at supporting sustainability leaders in Singapore—visited the U.S. from Singapore for a one-week tour to study biophilic design and big data analytics.

Singapore is already an international leader in urban sustainability and was

one of the first members of the Biophilic Cities Network. The island city-state’s [Skyrise Greenery Incentive Scheme](#), in which the National Parks Board will fund 50 percent of installation costs of green roofs, rooftop gardens, and green walls, exemplifies the possibilities of biophilic policies.

The Executive Program’s week began at Carnegie Mellon University and ended with a two-day field trip to the San Francisco Bay area. The week was mostly focused on biophilic design at the building scale, but for the last day’s events, Khee Poh Lam invited Scott Edmondson of the San Francisco Planning Department—another early member of the Biophilic Cities Network—to add the “city” scale to the week’s events. Edmondson along with Kirstin Weeks of Arup, led the Executive Program on a tour of some of the greenery impressively integrated into San Francisco’s dense Financial District and then hosted a series of presentations on current biophilic strategies and research in the city.

The Financial District tour began at the Nature Conservancy's San Francisco headquarters, featuring a remarkable example of occupant-centric biophilic design that has resulted in approximately \$270,000 worth of savings per year from increased employee productivity! The tour continued to the garage roof-top garden of 100 First Street, which is chock-full of impressive water features. Then, the group visited the lobby of Foundry Square III featuring two adjoining living walls and two floor-to-ceiling glass walls, allowing passersby to gaze through to the 12,500 plants inhabiting the space.

After the tour, Timothy Beatley of the University of Virginia called in remotely and kicked off the series of presentations with an introduction on biophilia and the Biophilic Cities Network. David Winslow of the Planning Department then presented on the City's [Living Alleys Program](#), which empowers community members to "humanize" alley street space in their neighborhoods with community-led design, financing, and building of multi-

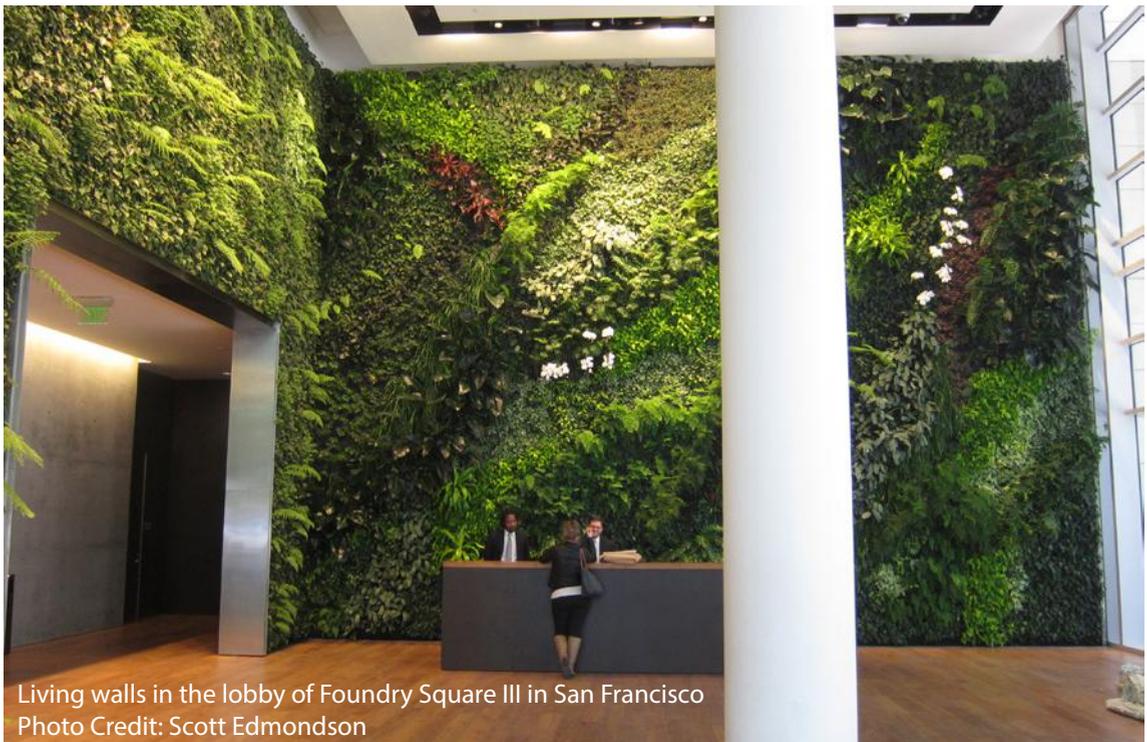
purpose public spaces. Peter Brastow, the City's Biodiversity Coordinator, discussed the thriving wildness all around us—there are 56 species of native bees in one of the parks within the city!

Rosey Jencks discussed the San Francisco Public Utilities Commission's low-impact design program, which utilizes biophilic rain harvesting and constructed wetlands to reduce stormwater load—an important cause as the City's stormwater system is combined with the City's sewer system and can overflow into the streets in flood events. Lastly, Alexej Goehring from Arup presented findings from their study of the potential benefits of vertical green walls in different cities around the globe to reduce urban heat island effect.

All in all, this one-day visit was just a snapshot of the rich array of strategies and new ideas that Singapore and San Francisco, both members of the Biophilic Cities Network, have to share with each other and cities around the world on integrating nature and cities.



Green rooftop of the garage at 100 First Street
Photo Credit: Scott Edmondson



Living walls in the lobby of Foundry Square III in San Francisco
Photo Credit: Scott Edmondson

References:

National Parks Board. Skyrise Greenery. Singapore. <https://www.nparks.gov.sg/skyrisegreenery>.

Planning Department. Market Octavia Living Alleys Program. City and County of San Francisco, CA. Retrieved from <http://sf-planning.org/market-octavia-living-alleys-program.ion>



View of Wellington from City Peak
Photo Credit: Tim Beatley