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10 Cities Taking a Nature-Driven Approach to Innovation

Smart Cities Guru founder Anil Ahuja has compiled a list of the top U.S. cities — from Washington, D.C., to Los Angeles — that have found a way to combine technology and nature.

BY SKIP DESCANT ([HTTP://WWW.GOVTECH.COM/AUTHORS/SKIP-DESCANT.HTML](http://www.govtech.com/authors/skip-descant.html)) / AUGUST 4, 2017



Morning rays on Portland, Ore.'s Pearl District

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It's not enough for the country's most advanced and sophisticated cities to be at the forefront of technological innovation with "smart" parking meters or informational kiosks. They also need to be sustainable and show an ability to preserve natural areas, according to Anil Ahuja, an engineering professional regarded as the "Smart Cities Guru" and author of the 2016 book *Integration of Nature and Technology for Smart Cities*.

Ahuja has compiled the Top Ten U.S. Cities Integrating Nature & Technology (<http://www.smartcitiesguru.com/top-cities-report/>) report to highlight which cities are leaders at balancing new technology with good nature policies.

“A smart city doesn’t just provide technology or economic solutions,” he said in a statement. “The smartest cities in the world are integrating nature to create a truly sustainable city. I have identified a number of cities in the United States that are excellent examples for other smart cities to model themselves after.”

The cities were selected based on four factors key to a thriving, vibrant city, according to a press release:

1. **Social – quality of life.** Does the city implement technology to optimize opportunity, such as green roofs, green facades, bike lanes, healthy food markets, efficient health-care facilities and biophilic design?
2. **Economic – quality jobs.** Does the city attract and retain top tier talent and attract high-tech industries and investments?
3. **Environmental – quality air and water.** Does the city have adequate amounts of green space to improve air quality and the right green infrastructure to manage storm water runoff? How does the city utilize technology for more efficient water and energy usage?
4. **Technology – ease of communication.** Does the city utilize technology to speed up the flow of information?

Ahuja's list includes Boston, which aims to reduce greenhouse gas emissions by 25 percent by 2020, and to be carbon-neutral by 2050. The city also uses its residents as sensors; apps such as Street Bump allow motorists to collect road conditions while they drive, while the Citizens Connect app allows Boston residents to report public issues directly from their smartphones into the city’s work order management system, which routes it immediately to the right person in City Hall to fix the problem.

And in Seattle, which was called out for being a pioneer and leader in establishing and increasing the adoption of green standards, the city has numerous programs to improve energy efficiency, largely through green development policies and building standards.

The Green Building Sustainable Communities Program, for example, creates projects that meet sustainable outcomes. The city also provides tax breaks, loans and other incentives to businesses and residences that utilize green practices.

In 2016, Seattle eliminated departmental silos and consolidated technology professionals from 15 departments into one, which has led to better collaboration and improved efficiencies. The city developed its Next Generation Data Center, which in part, brought together servers from disparate locations.

“Through IT consolidation we focused on how we could share infrastructure to reduce costs and operate more efficiently,” Seattle Chief Technology Officer Michael Mattmiller told *Government Technology*. “As a result, the project came in more than \$2 million under budget and we were able to effectively introduce new technologies like hyper-converged infrastructure and cloud solutions that help our staff deploy solutions more quickly.”

And Orlando, Fla., was recognized for its approach to smart operation of transportation, security and emergency management, and energy waste reduction programs. More specifically, it has retrofitted 28 public buildings to enable real-time energy consumption tracking which has led to an average 31 percent reduction in annual utility costs.

“Many of the retrofits included advanced controls that enable facility managers to track energy consumption in real time and to receive notifications when large systems like chillers or condensing units are using abnormal amounts of energy, allowing facility staff to quickly address problems,” according to the report.

Portland, Ore., promotes energy efficiency through a number of residential, commercial and government initiatives. It was the first city to create a local action plan to reduce carbon emissions. Portland aims to reduce emissions by 40 percent by 2030 and 80 percent by 2050.

Ahuja's top cities for integrating nature and technology listed alphabetically are:

- **Boston** – Engaging its citizens through crowdsourced mobile technology to enable smart government.
- **Chicago** – Leveraging data to make cities healthier, more efficient and more livable.

- **Los Angeles** – Leveraging big data, mobile and cloud based technologies to save energy and improve efficiency.
- **New York** – Maximizing real-time traffic information to reduce congestion, improve the flow of traffic and decrease carbon emissions.
- **Orlando** – Recognized for its approach to smart operation of transportation, security and emergency management and energy waste reduction programs.
- **Portland, Ore.** – Investing in IoT sensor networks and leveraging smart agriculture applications and big data to benefit the local region.
- **San Diego** – Adopting the Climate Action Plan, which will improve public health and air quality, conserve water, and use current resources more efficiently.
- **San Francisco** – Multiple initiatives including waste reduction, electric car charging and building performance optimization.
- **Seattle** – A pioneer and leader for establishing and increasing the adoption of green standards.
- **Washington, D.C.** – A leader in smart mobility and for its ratio of park acres to citizens.

Ahuja did not respond to *Government Technology's* interview requests.



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