



Location Technology Is Key To Smart City Surveillance

This story's sponsor, [Here](#), asks "Can data make cities more human?" Yet, it's all about them, not citizens: "It's really a utopia or oblivion moment - it depends on us architects where we want to go." In reality, citizens don't care where Technocrats want to go. □ TN Editor

Around the world a quiet revolution is transforming the way cities deliver services to their residents.

Although cities have long used isolated Internet of Things (IoT) technologies like smart streetlights or meters, the information they collect has typically been siloed within departments, which has created inefficiencies and made services tough to coordinate.

But today's technology is changing the picture dramatically. Cities are now using location data and services as building blocks for applications that share information internally and interact with residents, nonprofits, and business partners. A dynamic new ecosystem has sprung up, improving everything from emergency response times to budgeting, traffic management, public health, and the environment.

“Location technology is bringing cities a digital canvas of reality, helping them to make better sense of operations, identify gaps in services, and create new solutions,” says Edzard Overbeek, CEO of HERE Technologies, a leader in mapping and location technology.

“In the past, urban design was top down — architects, engineers, and planners implemented their solutions,” he says. “In the 21st century, we need a new approach. A city should evolve in a natural way, by a system of trial and error, letting citizens decide which projects they want.”

Here are some of the ways location technology is transforming city services.

1. Emergency response.

In the past, emergency operators determined callers’ location by looking up the address where the phone was registered, then relaying the information to responders. Addresses were often out of date or irrelevant to the incident location. Location and sensor data have changed everything.

Now cities get GPS information from cell phones. Many have city vehicle tracking, cameras on streetlights and utility poles, and microphones that detect the location and intensity of gunshots.

Some first responders use indoor venue maps from HERE that guide them on the fastest route to someone in need and the locations of fire extinguishers, defibrillators, and medical kits. Police officers wear holster sensors that tell the department when they have drawn a gun, which can speed backup response.

Cities are also using IoT sensors to coordinate services after hurricanes or floods. Some use machine learning to predict when and where the next disaster might occur.

In the future, connected cars may automatically generate accident reports to responders when they collide. Ambulances may control traffic lights to get to the scene faster or send out robots to defuse bombs or

gather more information.

2. Utilities.

With smart meters and geolocation, cities can “see” and analyze in real time how people use energy and water consumption levels and make better decisions about managing resources. Sensors can detect a water leak and send a technician to fix it before the customer is hit with a sky-high bill.

In developing countries, clean water is especially precious, and leaky pipes are the largest source of water waste. With sensors and analytics, cities can cut those losses by up to 25%, saving up to 80 liters of water per person each day, a [McKinsey report](#) found. It’s just one way technology can improve the lives of the underserved.

“In the future, social justice and equity will be a central focus of urban planning,” says Julian Agyeman, a professor of urban and environmental policy and planning at Tufts University.

“The thing that really excites me now is seeing synergies. And the best example I know is the transformation of Medellin, Colombia, where the public utility and private companies have worked together with a philosophy of empowering people, especially in lower-income neighborhoods.”

Medellin’s mobile data portal lets citizens view and communicate information about utilities, traffic, public transit, and more, bringing in data and feedback from socioeconomic groups often ignored.

3. Environment.

Cities are using location data in a wide range of applications to improve the environment. Some are placing sensors on trash cans to make garbage collection more efficient, while Cambridge, Massachusetts is collaborating with Senseable City Lab to do much more.

Sensors mounted on the city’s garbage trucks collect and transmit

information about potholes, gas leaks, and air quality along their routes. “With only three garbage trucks you can cover the whole city at least once a week,” Carlo Ratti, director of the MIT Senseable City Lab. “It allows city officials to more accurately detect abnormalities in the environment and be more responsive.”

In Baltimore, where asthma rates are among the highest in the US, 250 pollution sensors measure temperature, relative humidity, ozone, and nitrogen dioxide throughout the city. They send real-time information to city officials, who can then address air quality on a hyper-local level.

MIT’s Open Agriculture Initiative studies how to increase food production in urban areas and make its transport more efficient, lowering carbon emissions.

Location data can also be used to spot and prevent environmental degradation on a wide scale. In Colombia, the InfoAmazonia platform uses information from satellites and crowdsourcing to track construction projects that threaten the Amazon’s sensitive ecosystem. It could help the country meet its goal of reducing forest clearing to net zero by 2030.

4. Public health.

Electronic health records and apps may be common in advanced nations, but poorer countries lack these technologies, making it hard to create accurate epidemiological profiles and suitable facility development plans.

That’s where the IoT and location data come in. In Cartagena, Colombia, where many people live far from healthcare providers, authorities are using remote patient monitoring to keep people in touch with doctors and capture more knowledge about local populations, which could lead to better disease prevention and proactive care. Developing cities that use location-based infectious disease surveillance systems can reduce premature deaths and disabilities by 5%, according to the [McKinsey report](#).

5. Civic engagement.

Cities are adopting IT platforms allowing residents to get information and engage with officials without having to attend evening meetings.

Dublin's CiviQ platform tracks opinions on public issues and planning proposals. A location-based commenting system gives officials and residents alike a sense of how political dynamics operate in different parts of the city.

Analyze Boston, the city's open-data hub, posts information about city services ranging from how long it takes to fulfill service requests to how many people use city libraries. Residents can also use an app to send information about the location of potholes or other problems directly to the city's road-repair department.

Cary, North Carolina, placed sensors in its community-center parking lot to tell officials how spaces are being used, which helps them plan smarter parking.

6. Participatory budgeting.

Participatory budgeting allows citizens to decide how certain segments of municipal money are spent. The concept originated in Brazil and has spread to cities across the US and in Canada. Participants work directly with elected officials and city administrators in deciding how to invest resources in their community.

A group in New York voted to spend \$30 million on air-conditioning for school classrooms. Oakland, California, residents voted for block grants for homeless services, legal advice for tenants, support for non-native speakers, and youth-apprenticeship programs.

By using technology to bring citizens into the heart of their operations, cities are ditching their reputation as distant and inefficient bureaucracies and becoming responsive engines of change. For many people, including Agyeman, it can't happen soon enough.

“The city is not produced — it is coproduced,” he says. “The sooner we realize that and enact the right policies, the better off we’ll be.”

Innovation in location technology and services is rapidly creating a [new reality](#) for companies and governments around the world. As the world’s leading location platform, HERE Technologies can help you unlock new opportunities to transform your business.



Rockefeller Foundation, Mastercard Team Up On Opportunity Zones

Trump signed the Opportunity Zone legislation (Tax Cuts and Jobs Act) in December 2017 and then created the House Opportunity and Revitalization Council by Executive Order in December 2018. With over 8,700 Opportunity Zones identified by state Governors, the money

tornado is accelerating. □ TN Editor

The Rockefeller Foundation [will spend \\$5.5 million](#) to help cities take advantage of the opportunity zone program created in the 2017 Tax Cuts and Jobs Act. The initiative will give six cities funding for a Chief Opportunity Zone Officer to be embedded in the city government, as well as community engagement specialists who can coordinate investments that will help the community.

Newark, NJ will be the first city in the initiative and will receive \$920,000 in funding from the Rockefeller Foundation and Prudential Financial.

Separately, the Mastercard Center for Inclusive Growth and Accelerator for America [announced](#) they will partner to help direct opportunity zone investment to distressed communities. The partnership includes an \$850,000 grant from the Mastercard Impact Fund, as well as data science work, economic development tools and research.

The opportunity zone program allows investors to get a [tax break](#) if they put money into certain businesses and properties in “distressed” areas selected by the state and federal government. More than 8,700 census tracts have been designated as “opportunity zones,” and the Rockefeller Foundation estimates there is more than \$6 trillion in unrealized capital gains that could qualify for investment there. However, there’s been concern that the benefits of the investments might only be felt by developers, or that investors might focus their money on gentrification or real estate projects rather than businesses that could foster the community.

That’s the problem the Rockefeller Foundation seeks to solve, by giving cities funding and human resources to integrate opportunity zone planning into government. The hope is that having a designated engagement team can ensure that the community gets a say in how opportunity zone funds are spent.

[Read full story here...](#)

Mastercard Press Release

The Mastercard Center for Inclusive Growth and Accelerator for America (AFA), a non-profit consortium of mayors, labor and business leaders, and urban and economic development experts, today announced a unique partnership to combine their expertise to drive inclusive investment in distressed communities across the United States. The announcement was made at the first Forbes Opportunity Zones Summit in Newark, NJ.

The partnership includes an \$850,000 philanthropic grant from the Mastercard Impact Fund to help the Accelerator realize its goal of helping 50 city leaders and their communities maximize the potential of the federal Opportunity Zone incentive. Additionally, the Mastercard Center for Inclusive Growth will provide in-kind support in the form of data science expertise, economic development tools and research to help city leaders make evidence-based decisions.

Together, the partnership will provide community leaders across the country with: Data-driven insights around the current economic activity in their Opportunity Zones; assistance in building an Investment Prospectus through the Accelerator's toolkit; consulting on how to structure and mobilize inclusive investments; analysis of unmet needs for investment potential; and ways to measure progress over time.

"We are likely to get better outcomes if we start with better inputs," said Shamina Singh, Founder and President, Mastercard Center for Inclusive Growth. "That's why we are working with Accelerator for America, to ensure city leaders can better prove the investment value of their neighborhoods and build cases to attract investments that will fulfill the long term needs of the local community. For Opportunity Zones to have the greatest chance of impacting those who need it most, we do need art but we also need a lot more science."

"This partnership with the Mastercard Center for Inclusive Growth is a powerful show of confidence in the Accelerator's mission to drive national change through local solutions — from the bottom, up. Mastercard's support and deep insights into the economic power of

people living in the Zones will provide key data to help local communities steer Opportunity Zone capital into inclusive, transformative investments,” said Accelerator for America CEO Rick Jacobs.

“To assure that Opportunity Zones will truly create opportunity, cities must take informed action. Mastercard’s partnership with Accelerator for America will connect cities with the in-depth data they need to make strategic decisions that will deliver big for their underserved communities,” said Los Angeles Mayor Eric Garcetti, who chairs the Accelerator’s Advisory Council.

Communities across the United States are beginning to mobilize around Opportunity Zones, economically-distressed communities where new investments, under certain conditions, may be eligible for preferential tax treatment. Accelerator for America is working closely with city leaders to help maximize this unique opportunity by providing expertise, training and tools to level the playing field between the public and private sectors.

As a philanthropic partner, Mastercard is bringing a new dimension to the discussion through its data science expertise, which helps city leaders identify patterns of spend, based on aggregated and anonymized transaction data, to deliver a timely view of the economic activity taking place in Opportunity Zones and understand potential unmet needs of the community. For example, Mastercard’s data driven insights can help identify neighborhoods where spend on groceries is rising but most of that spending occurs in other parts of the city because no grocery store exists nearby.

This is the first of a series of grants from Mastercard supporting inclusive economic development across the U.S.

About the Mastercard Center for Inclusive Growth

The Mastercard Center for Inclusive Growth focuses on promoting equitable and sustainable economic growth and financial inclusion around the world. As a subsidiary of Mastercard, the Center leverages the company’s data, expertise and technology, along with administering

the Mastercard Impact Fund's philanthropic investments, to empower a community of thinkers, leaders and innovators on the front lines of inclusive growth. For more information and to receive its latest insights, follow the Center on Twitter [@CNTR4growth](#), [subscribe](#) to its newsletter and visit www.mastercardcenter.org.

About Accelerator for America

Accelerator for America launches and replicates local initiatives to improve people's lives in communities across the country to create national change from the bottom up. The Accelerator developed the "Investment Prospectus" tool to help local communities partner with the private sector to steer capital toward investments that deliver a return for investors and local residents. Opportunity Zones could attract \$100 billion in capital.

The Accelerator is also working with local governments across the country to generate local infrastructure revenues instead of relying on the unmet federal infrastructure promise. An example is Los Angeles County's Measure M, which was approved in November 2016 and generates \$120 billion and 465,000 career jobs. On that same election day, which also elected Donald Trump to the White House, local governments nationwide approved \$230 billion in local infrastructure improvements.

[Read full story here...](#)

Rockefeller Foundation Press Release

The Rockefeller Foundation today announced an initiative to help U.S. cities attract responsible private investment in economically-distressed communities through Opportunity Zones created in the 2017 Tax Cuts and Jobs Act. This effort will help ensure new investment delivers sustainable benefits for more than 30 million low-income Americans living in Opportunity Zones.

Through the initiative, six cities will receive financial and human resources support for two years. Support includes funding for and designation of a Chief Opportunity Zone Officer, embedded in city

government or city economic development agencies. It also includes funding for two community engagement specialists to support and facilitate community engagement and involvement in the proposed Opportunity Zone projects and businesses.

Newark is the first city selected, and will receive \$920,000 in co-funding from Prudential Financial and The Rockefeller Foundation, working through the Newark Alliance, which has a commitment to equitable development. The other five cities will be announced over the next few months.

“The only way to make sure the ‘opportunity’ in Opportunity Zones benefits all Newark residents is to intentionally focus resources to ensure it happens,” said Mayor Ras Baraka. “I am so pleased that through the support of our longtime partner in progress, Prudential, Newark was able to be the first city in The Rockefeller Foundation initiative.”

“Prudential is committed to maximizing the potential impact of the Opportunity Zone program to spur catalytic investments in our hometown of Newark, New Jersey. By providing capital, as well as our expertise from our other Newark redevelopment and Opportunity Zone projects, we will help close the gap between inequality and opportunity as the city grows,” said Lata Reddy, senior vice president of Diversity, Inclusion & Impact, Prudential. “Our partnership with The Rockefeller Foundation is a crucial step toward ensuring that inclusive, responsible investment benefits all Newark residents and communities.”

“Opportunity Zones have the potential to unlock billions of dollars in innovative job creation and community infrastructure private investment in cities, lifting up Americans who most need this support and preventing their displacement by irresponsible development,” said Dr. Rajiv J. Shah, President of The Rockefeller Foundation. “Philanthropy has an important role to play in ensuring opportunity zones improve the lives of the residents in distressed communities. Starting with Newark, The Rockefeller Foundation will help empower communities to attract and implement investments that will provide real economic mobility to the greatest numbers of disadvantaged people.”

This initiative aims to make it easier for cities to attract and responsibly deploy some of the more than \$6 trillion of unrealized capital gains which could qualify for investment in Opportunity Zones. In addition to funding the Chief Opportunity Zone Officer position and two community engagement specialists, each city will also receive two years of support in the form of a national Opportunity Zone Technical Assistance team to compile and leverage local, state, and federal incentives, and help structure and support deals.

The initiative launched today is part of the Rockefeller Foundation's U.S. Jobs and Economic Opportunity program focused on expanding economic opportunity for low-income Americans through policy, partnership and place-based transformation.

[Read full story here...](#)



Experts: Why American Cities Need To Be 'Smarter'

Smart City apologists have a technological solution to every conceivable

problem, but few understand the web of control they are creating around all inhabitants. As Charles Dickens might have written, “The future is utopian. The future is dystopian.” □ TN Editor

Over the past decade the digital world has rapidly become connected with the physical and corporeal. Our smart watches can tell us things about our bodies or our surroundings. WiFi-connected doorbells with sensors can determine when visitors are approaching and then alert us wherever we are in the world. Our connected homes—coffee makers, sprinklers and Alexas—now automate convenience.

Though we are all too habituated in this world of IoT—the Internet of Things—it is a technological trend that is still in its early stages within other industries beyond consumer products. Connected devices work by extracting data from the physical world or in the reverse—taking data and applying it to material objects. When this concept is applied to the public realm, it becomes known as a smart city—where streets, buildings and infrastructure are integrated with sensors and the internet-enabled. As cities around the world add a layer of data and connectivity to their infrastructure, are American cities doing enough to make their metropolises smart?

Intelligent cities move beyond automating convenience to automate the government’s delivery of services. Cities that have embraced this modernization in the U.S. include the most tech-centric: New York, Boston, San Francisco and Chicago. These are some of the major global hubs that are establishing predictive analytics, monitoring air quality in congested areas, and embedding [sensor nodes](#) into light poles to create “FitBits” for the urban environment. While San Francisco pioneered a [smart parking system](#) that led the way for drivers to find parking among the 8,200 parking spots installed with sensors, Chicago’s “[Array of Things](#)“, or AoT, can record and respond to floods, traffic or safety incidents.

U.S. cities, like New York, have, indeed, been leaders in terms of using smart city technology, but global urban avant-gardes have included the cities of London, Singapore, Barcelona and Amsterdam. Of 57 mid-sized cities that the [U.S. Conference of Mayors surveyed](#) last year, only 14 percent had reported smart city projects, while for small cities that

number drops to under four percent. America's second- and third-tier cities—urban areas under one million residents—require investments as well, and what it will take may require a national urban smart plan. The last federal effort to support smart cities was in 2015 during the Obama administration, when [\\$160 million](#) was committed to initiatives. Among mayors, the largest complaint was securing funding for long-term projects

Amsterdam's aggressive smart city planning was built as a result of ecosystem and platform planning: The Netherlands' countrywide planning strategy has shifted dozens of medieval-era cities into the digital era. Each of the cities serve as "Living Labs" focused on specific urban issues like health and mobility where ideas can be tested limitedly and the replicated with success across the country. The case studies are then organized by a region's issues into an [online database](#) where city managers can understand how they can implement a solution in their own cities. These urban test beds are effective in that best practices and solutions aren't exchanged through a conference, whitepaper or academic research, but under the auspices of a government facilitator.

This countrywide, collaborative approach is detached in experimentation but unified in shared discovery. It could help avoid the pitfalls of cities like Boulder, Colorado, where an expensive pilot in 2008 for an energy saving smart grid ballooned in costs and resulted in three times the utility costs—from [\\$15 million to \\$45.5 million](#). Scaling solutions for complex implementation within larger cities can be implemented in smaller urban areas where the stakes are lower.

[Read full story here...](#)