# Administration

**Wake County Property Valuation** - Wake County needed to use technology to perform property reappraisals easier, faster, more accurately, and less subjectively.  Using machine learning algorithms from SAS, Wake County uses a model that runs the information for every residential property that has sold, every day, for 40 factors.    Clear graphics and reports provide easy interpretation of the information, and Wake County has a higher level of confidence in its appraisals as it now relies on objective information.

**Get It Done Expansion** - The City of San Diego has expanded its 311 "Get It Done" system to better engage with customers and employees.  Get It Done launched a new mobile app, streamlined web interface, and an internal system for employees to process incoming reports using SalesForce's CRM software platform and Deloitte Digital as the systems implementer. The mobile app has been downloaded over 55,000 times and we have received over 390,000 reports.

**California Secretary of State Eureka Chatbot** - The CA Secretary of State is the first state-level Agency to use Artificial Intelligence using the Microsoft Bot Framework to modernize services to customers.  The Eureka Chatbot answers frequently asked business entity and trademark questions for 400,000 customers who contact the agency and allows access to website resources 24/7.    Eureka's automated responses shortens time-to-information for the public, redirects staff time to more complex queries, and reduces the time to roll out new digital tools.

# Civic Engagement

**Baton Rouge: Open Data BR** - Open Data BR is an initiative that exists as part of a broader commitment to the residents of Baton Rouge focused on creating a more efficient, effective and responsive City-Parish government while developing Baton Rouge into a hub for digital growth and technological innovation. Open Data BR consists of open data, open checkbook, and open budget websites bringing a wealth of information and data on the parish to citizens.

**Chicago, IL: Smart Living in the Windy City** - The portal contains data sets including city employee salary, business licenses, crime, food inspection, water quality, etc. It's free and provides user-friendly dashboards and downloadable, machine-readable data. Moving data between systems and the Data Portal is done through integration tools, automatically updating on a daily, hourly, or minute basis. It provides administrators with email alerts and it features an interface to allow technical and non-technical users to automatically publish data.

**Chicago, IL: 311 Modernization** - The new CHI 311 website and mobile app (the City's first!) was launched in December 2018. The easy-to-use system works on nearly any smartphone, tablet or computer, and allows residents to create new service requests, upload pictures, track requests and the time it will take to resolve them, see a map of service requests in their community and across the city, provide feedback, and find helpful articles about city services.

# Digital Equity

**NYC: NYCx Co-Labs in Brownsville** - NYCx Co-Labs are "neighborhood innovation labs" located in underserved neighborhoods to accelerate the deployment of smart city technologies with the New Yorkers whose employment, transportation, health and environmental circumstances are most affected by the rapidly evolving urban and civic technology landscape. The Co-Lab works to support The Brownsville Plan – a result of community-driven processes to identify neighborhood goals, form strategies to address local needs, and create more new affordable homes.

**San Antonio, TX: IKE Smart City Deployment** - Needing a widespread communications platform to drive discovery of area business and improve wayfinding and mobility in order to further growth and development, the project installed digital community kiosks throughout the city to increase engagement among residents and visitors in a new and innovative way. This drives discovery of area restaurants, shops, hotels, activities, attractions, points of interest, services, and resources. Listings are geo-located and updated in real time.

**Birmingham, AL: Public Safety Technology Initiative** - To provide effective safety and security for citizens, Birmingham's Public Safety Committee approved a program that will put cameras in high crime areas. Cameras include license plate recognition technology providing the police with data and pan-tilt-zoom functionality to get the best view of the street when incidents occur. The cameras will be deployed alongside a corresponding video management system that provides real-time updates for emergency responders, officials and employees.

# Economic Development

**Canton, OH: Canton Police Department's Integrated Surveillance & Smart City Program** - In order to maximize reductions in crime through integrated technology, Canton is implementing a platform that supports a variety of audio/video analytics and recognition via camera and microphone; use cases include gun-shot, accident detection, traffic analysis, pedestrian counts, crowd counts, environmental services, and software driven recognition including: LPR, facial, vehicle and object detection.  These capabilities will supplement law enforcement officer's presence, offering tactical and strategic advantages and ensuring added safety.

**Chula Vista, CA: Innovation Station** - The Innovation Station provides 6th grade students with opportunities to engage in hands-on STEAM projects and career exploration, connecting students with the skills required in various jobs and encouraging the creative problem-solving that is central to success in California's innovation-based economy. Students have an opportunity to explore their strengths, interests, and values and connect them with careers that they may be interested in pursuing in the future.

**Las Vegas, NV: Economic, Mobility and Safety through Data Driven Operations Management** - Innovating by taking data-driven approaches to managing public services and operations in order to create a community that makes life better by improving the customer/resident experience, increasing public safety and driving operational and organizational efficiency. With Hitachi Smart Spaces and Video Intelligence, officials have smart cameras, tools for data analysis, visualization and dashboards that enable real-time views of events taking place on the streets, and historical patterns that enhance planning.

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# Education

**Neighborhood Arts Profile** - A smart city should have a smart cultural strategy, but neighborhood-level knowledge of arts and cultural service is a challenge. The Los Angeles Department of Cultural Affairs created its Neighborhood Arts Profile (NAP) data platform to identify opportunities to improve arts and cultural services. Using mapping tools such as ESRI ArcGIS Online and ArcGIS Web Apps, NAP aggregated more than 371,000 data points. The City, County, private sector partners, foundations and universities created "Arts Datathons" to raise awareness about arts and cultural access.

**ASU Mobile App** - Today, students communicate via mobile devices and texting, not web-based portals and email. ASU Mobile App was designed to deepen digital engagement with students by providing personalized, timely and actionable content. The app was built on AWS for both Android and iOS devices. Students were engaged to create the app that provides real-time shuttle information, personalized class schedules, event tickets, etc. The app has 68,000 users who average two sessions per day.

**Chattanooga Smart Community Collaborative (CSCC)** - The CSCC brings together City and County government, public hospital, University of Tennessee; and the municipal utility/fiber provider to coordinate initiatives that require a partnership ecosystem.    The CSCC launched a Smart City Testbed initially to focus on data-driven approaches to pedestrian safety, test commercially available technologies, such as new traffic signal controllers, and research future innovations such as experimental vision processing algorithms that allow the detection of near miss events.

**New Orleans Real Time Crime Center (RTCC)** - Created in 2017, and part of a $40 million city-wide public safety improvement plan, the Real-time Crime Center uses cameras, license plate readers and software to integrate information from a variety of sources. Critical information is provided to first responders in the field to help assist with investigations of criminal activity or quality of life concerns. The situational awareness the RTCC provides is invaluable to coordinate responses to events.

**Project VIC** - Law enforcement's challenges in the fight against child exploitation remain numerous and difficult. Project VIC's technology and partner ecosystems rescue children by crowdsourcing image identification in a secure, open platform. The system flags each viewed image or video as being identified, so that any other investigator using the Project VIC workflow and network does not view the photo, increasing efficiencies across multiple jurisdictions and reducing examiner exposure to repeat images. This has led to huge gains child-rescues, as well as predator apprehension rates around the world.

**Citigraf - Genetec Decision Support System (DSS)** - Genetec's 'Citigraf' DSS delivers a common operating picture for all city agencies. Using a unified, tactical operations system with analytic tools, agencies can integrate multiple data sources to quickly gather intelligence, gain a big picture understanding of situations, and make better decisions. Using Citigraf, Chicago's response times from dispatch to on-scene arrival have been reduced by 39% and 24% in two of their most at-risk districts.

**South Sound 311** – Pierce County, WA - South Sound 911 consolidated five dispatch centers. Now responders receive detailed information from dispatch en route to a call. Using laptops, tablets, and smartphones connected to the CAD system, police from different jurisdictions see neighboring incidents and share data. "When we share the data, the infrastructure, and the people, it's more efficient for all involved agencies. Having all the agencies under one CAD — it's the best thing that's ever happened."

# Smart Buildings

**Smart Neighborhood – Hoover Alabama** - Smart Neighborhood is a community of 62 high-performance homes, built with enhanced energy efficiency measures that go beyond industry standards. Homes include programmable thermostats, improved insulation and high-efficiency heat pumps, water heaters and appliances. These homes are 35% more energy efficient than comparable newly built homes. Smart Neighborhood uses leading-edge microgrid technology to support the community's energy needs.

**Houston Smart Buildings** - In partnership with Microsoft, Houston is implementing a first-of-its-kind comprehensive smart city initiative, which takes the approach that the entirety of the city is a smart entity. With a focus on the city's key priorities of disaster recovery and response, building and school safety, and more efficient, capable transportation, the initiative currently includes 22 planned engagements. Together, these 22 engagements make up the base of the broader smart city initiative, which will be expanded over time as new projects are added to leverage IoT solutions that create a connected foundation for Houston.

**Alameda County: Building 393 Modern Office Initiative** - In November 2018, Alameda County opened a model modern government workplace for its Information Technology Department (ITD), featuring the latest collaboration technologies, which can be viewed here: https://www.youtube.com/watch?v=Nu-wvuOInHWg. All county users were upgraded to the latest click-to-run version of Office Pro Plus and Windows 10 for a truly modern work experience. The technology helps county employees increase productivity, attend meetings remotely, save travel time and enhance collaboration. The mobilization of the workforce has modernized services that the county provides its citizens.

# Smart Water

**Smart Utilities Vision and Broadband Ready Buildings** - The Smart Utilities Vision, overseen by the Boston Planning & Development Agency, is a multi-departmental steering committee integrating future-looking broadband practices into enabling an environment of competition that results in all residents and businesses having a choice of 2 or more high-speed Internet providers; a built environment that is responsive to new and emerging connectivity technologies, and; minimizing disruption to public right of way during/ after construction.

**Beaver Creek CSO Abatement and Flood Mitigation Program: Creating Smart Infrastructure for the Management of Wet Weather Flows** - Urban stormwater management represents one of the most pervasive, significant environmental issues in the U.S. To address these issues, Beaver Creek implemented a smart infrastructure network that uses a continuous monitoring and adaptive control (CMAC) platform to proactively predict and manage wet weather flows. The program's flow management practices serve to re-establish natural floodplain storage to address challenges within the urban CSO environment reconnecting communities on the water.

## Sustainable Infrastructure

**City of South Bend Combined Sewer Overflow Real-time Decision Support System** - Prior to the implementation of a real-time decision support system, the City of South Bend sewer system would overflow polluted water into the St. Joseph River. EmNet and the City developed a unified data platform and visualization dashboard, and the City has reduced overflow volumes by more than 70 percent (1 billion gallons annually). E.coli concentrations are down by more than 50 percent. People can enjoy rafting and sport fishing in the river again.

**ShakeAlertLA Mobile Application** - The ShakeAlertLA app provides an earthquake early warning system to residents so they can get to safety. The mobile app characterizes an earthquake, calculates the intensity of ground shaking, and delivers warnings to people and infrastructure in harm's way. The app allows the City to understand how the public responds when notified about an earthquake. Since its launch, the app has been downloaded over 400,00 times.

**Fleet Tracking – AVL/GPS Solution** - The City of Brampton, Canada has developed a single system for its City fleets enabling both the city workers and citizens to track vehicles. The city measures vehicle use as they act as IoT sensors providing real-time information such as location, direction, speed, temperatures, plow position, etc.   The system provides information to citizens and is used by contact center staff to dispatch by-law enforcement officers more quickly.

# Transportation
## Connected & Autonomous Vehicles

**Houston, TX:  Houston Connected Buses** - Houston is implementing a comprehensive smart city initiative. One of its key efforts is a connected transit solution to provide internet access to bus and rail riders and increase onboard safety. In addition to Wi-Fi, the solution will provide fleet management services to provide information about the location, operation and efficiency of each bus and train. Buses will also be equipped with cameras to allow authorities real-time insights when disturbances are reported.

**Quincy, MA:  Changing Traffic - Adaptive Signalization** - To better manage increasing traffic congestion in Quincy, MA, the city implemented an adaptive traffic signalization platform that adjusts dynamically to traffic patterns and congestion levels instead of relying on pre-determined timing patterns. The project upgraded communications and detection at 24 intersections and the system includes a traffic platform that uses algorithms with data sourced from cameras, radar, and video.

**Accelerating Response for Safer Communities-- A Novel Spatially-Aware Approach to Emergency Vehicle Pre-emption for First Responders** - The City of San Jose, CA has implemented a centralized Emergency Vehicle Pre-emption program. The system uses vehicle location technology to communicate with the city's traffic control center to clear intersections of traffic and provide emergency vehicles with a green signal.  This centralized approach provides faster response times, is significantly cheaper than installing equipment at each signalized intersection, and allows for a system-wide view and control.

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# Transportation
## Infrastructure

**Louisville, KY:  Open Government Coalition – Waze WARP** - The city built the Waze Waze Analytics Relational-database Platform ("Waze WARP") using traffic data from Waze and other data to build a traffic analysis module. Louisville then founded the Open Government Coalition, a network of government agencies working on open source projects. Waze WARP now gives 600+ government entities access to data to improve mobility, pedestrian and bike safety, road conditions, and emergency response. OGC has now embarked on additional projects to foster innovation.

**Atlanta, GA:  Delta Air Lines Launches First Curb-to-Gate Biometric Terminal in the U.S. at ATL** - At Terminal F in Atlanta, Delta Air Lines launched the first curb-to-gate biometric terminal in the U.S.. For international flights, Delta uses facial recognition a 46 check-in kiosks, 54 bag drop counters, 6 TSA checkpoints, and 12 departure gates. Nearly all 25,000 passengers who travel through ATL Terminal F each week are choosing this optional process to check-in to flights. Faster throughput of passengers mitigates the need for larger terminal infrastructure and space.

**Savannah, GA:  Data-Driven Pavement Management using AI-based Road Assessments** - To assess roadway conditions on a frequent, accurate, and cost-effective basis, the city is using artificial intelligence provided by RoadBotics which uses a smartphone to take images of city streets from a windshield every 10 feet. The images are analyzed or distresses such as potholes, cracks, and patching, then assigned a rating based on the type, severity, and extent of the distresses. The data helps prioritize maintenance and spending needs.

# Urban Planning
## and Land Use

**Boston, MA:  StreetCaster** - In Boston, 311 users are not a representative sample of the city's residents. By focusing on requests, the city has inadvertently underspent in some neighborhoods for sidewalk maintenance. StreetCaster transforms how Boston makes capital investments in infrastructure by pairing 311 requests with measures of equity, usage, and asset condition. Boston is starting with sidewalks, traffic safety and roadway markings, but ultimately, StreetCaster is a toolkit for decision-making across all infrastructure investments.

**Raleigh, NC: Emergency Operations Situational Analysis Smart Dashboard** - The City of Raleigh developed a Situational Analysis Smart Dashboard for their Emergency Operations Center and refined it in real time as new types of data, such as current wind speed, were identified as critical to the safety of the public and city workers during an emergency. The dashboard is cross-departmental, with real-time progress tracking, covering a range of emergency management issues from debris in streets, flood monitoring, 911 call data, and resource management.