Digital Transformation of Municipal Government with MicroStrategy 10
The challenge
With 54% of the world’s population living in urban locations, city and local governments face the massive challenge of delivering top-notch public services while working within the constraints of their annual budgets.

Municipalities need to coordinate and deliver the services expected by citizens and businesses such as public water and power access, roadways and public transportation, public education, health oversight, public safety and emergency services, sanitation services, and road maintenance. In addition, local and city governments need to maintain the massive amount of infrastructure that underpins all these public services, including public buildings, schools, airports, vehicle fleets, bridges, roadways, dams and more.

The solution
MicroStrategy 10 is an integrated platform that enables city and local governments to make smarter budgeting decisions, operate public infrastructure and utilities more efficiently, foster education and economic growth, uncover potential issues with tax compliance, and enhance the delivery of vital emergency services.

It provides the highly performant analytics, advanced mobile capabilities, and multi-factor security features that municipal governments need to deliver essential services and conveniences to their constituents.

MICROSTRATEGY 10 lets municipal governments digitally transform their interactions with constituents.
APPLICATIONS FOR MUNICIPAL GOVERNMENT

- MUNICIPAL TRANSPORTATION
- FLEET MANAGEMENT
- INFRASTRUCTURE OPTIMIZATION
- CONSTITUENTS (citizens or businesses)
- STAFF DIGITAL BADGE
- ECONOMIC DEVELOPMENT
- CITY OPERATIONS
- TAX AND COMPLIANCE ANALYSIS

- CITY ADMINISTRATION
- AGENCIES/DEPARTMENTS
- FACILITIES/INFRASTRUCTURE
- PUBLIC SAFETY
- LICENSING AND INSPECTION
- EDUCATION PLANNING
- PUBLIC HEALTH MANAGEMENT
- AGENT PERFORMANCE
- eGOVERNMENT SERVICES BADGE
ECONOMIC DEVELOPMENT AND URBAN PLANNING is a big data application that enables officials to monitor traffic and public transportation patterns to help mitigate peak-hour bottlenecks.

The challenge
As cities continue to grow, residents find themselves sitting in never-ending traffic or waiting for a less-crowded train. Municipal transportation authorities need a way to aggregate data on highway and transit systems to make informed decisions that help optimize resource usage and avoid the frustration and productivity losses associated with congestion.

The solution
The future of municipal transportation depends on the analysis of big data. This information has the power to revolutionize the way people live and move within cities.

Highways have traffic cameras and sensors that record license plate information and car counts. With MicroStrategy analytics, transportation analysts can use this data to create real-time density maps that help them explore traffic density and patterns. They can then develop solutions to help reduce highway congestion, such as extending HOV lane times by an additional hour, creating fastlanes, or introducing incentives for carpooling programs.

MicroStrategy makes it easy to make sense of public transit farecard data. Transit officials can recognize real-time rider patterns and behaviors by station and time by incorporating view filters and thresholds. This type of analysis enables data-driven decision making that improves the commuter experience by optimizing the number of trains and providing more staff for lines that are in higher demand.

*Source: IHL Group. “We Lost Australia! Retail’s $1.1 Trillion Inventory Distortion Problem”*
The challenge
Many metropolitan police departments have experienced budget cuts and force reductions, so they need powerful analytical tools to help them apply their limited resources in the most effective manner.

The solution
The MicroStrategy platform allows public safety departments to apply sophisticated analytics and predictive modeling tools to correlate current and historical data with information from other public data sources. Departments can assess the likelihood of increased offenses based on sector, seasonality, public events, or other factors, and then dynamically adjust the way they police.

This particular dashboard highlights offense rates that don’t align with historical averages from the past 5 years. Leadership can drill into those incidents by sector and by time to help determine more proactive responses.
The challenge
Municipal agencies and departments operate under tight budgetary constraints, oversee dispersed workforces, and are subject to constant public scrutiny. Leaders need real-time access to information to ensure that agency goals are achieved on time and on budget.

The solution
MicroStrategy mobile apps give agency and departmental leaders real-time insight into all aspects of their organizations’ activities. With instant access to detailed budget breakdowns and cash flow analysis, real-time KPIs covering the performance of every department, and historical benchmarks, officials can identify potential problems and take immediate action to improve operations.

AGENCY PERFORMANCE is an application that gives agency and departmental leaders instant access to KPIs on expenses, productivity, and citizen satisfaction so they can ensure quality service delivery.
MOBILE APPLICATION:
LICENSING AND INSPECTION

The challenge
In many municipalities, progress on construction projects, facility openings, and other initiatives is hampered by inefficient inspection and permitting procedures. These delays have a negative impact on local business revenues and overall citizen satisfaction.

The solution
With MicroStrategy mobile apps, auditors and inspectors can increase efficiency, eliminate paperwork, and reduce bureaucratic delays. These apps put analytics and real-time transactional capabilities directly into the hands of inspectors, so they can take immediate action from the field. While visiting construction sites, businesses, restaurants, and other facilities, inspectors can complete on-site surveys, submit photos, and grant licenses and permits on the spot — streamlining the permitting process. Inspectors can also review and manage their own performance versus departmental benchmarks by reporting on metrics like customer wait times, permits issued, and pending inspections.

LICENSING AND INSPECTION is an application that empowers auditors and inspectors to work more efficiently by using transactional mobile apps that get them out of the office and into the field.

Personalized dashboards let inspectors review their historical performance against departmental averages.

Embedded transactions enable inspectors to complete surveys and upload photos while on site.

Additional dashboard tabs provide KPIs on customer wait times, customer assist times, and number of visits.

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ANALYTICS APPLICATION:
EDUCATION PLANNING

The challenge
A survey of 50 mid-to-large-sized US cities found that one in four students doesn’t graduate from high school in four years. School systems must ensure that students are properly prepared to succeed.

The solution
Quality education is a top priority for every community. MicroStrategy solutions give education leaders deep visibility into student and teacher performance at the grade, school, and district levels. By analyzing student performance data against historical norms and municipal benchmarks, educators can identify geographic areas or individual schools that need attention and then take appropriate corrective action, such as adjusting student-teacher ratios. This particular example dashboard highlights MicroStrategy’s ability to embed analytics in web content to create branded, interactive web pages that anyone can explore — greatly improving governmental transparency.

EDUCATION PLANNING is an application that lets education leaders and citizens assess performance at the district and individual school levels to ensure that students are getting a quality experience.
The challenge
From 1970 to 2010, the number of hospitals across 52 major US cities dropped by 46%. Municipalities need analytical tools that can help them assess population health and uncover underserved geographies.

The solution
MicroStrategy helps local leaders monitor and analyze population health trends within their jurisdictions by providing access to accurate and up-to-date repositories of public health data. Health officials can analyze chronic health conditions and proactively respond to negative trends within specific areas, ensuring that quality care is delivered across all geographies.

PUBLIC HEALTH MANAGEMENT applications let health officials analyze chronic health conditions and proactively respond to trends within specific geographic areas — ensuring quality care across all jurisdictions.

*Source: http://newsinteractive.post-gazette.com/longform/stories/poorhealth/1/
The challenge
Many municipalities have airports, rail systems, seaports, or other transportation systems under their jurisdiction. Municipal leaders need to manage the operational aspects of these large-scale, public-facing installations efficiently and profitably, while also providing an exceptional experience to travelers.

The solution
MicroStrategy’s advanced mobile capabilities can put real-time KPIs and benchmarks on facility operations, budgeting, profitability, customer satisfaction, and more directly into the hands of facility managers. Using intuitive visualizations, native controls, and transactional capabilities, managers can quickly assess performance and then take informed actions.

This particular dashboard examines the performance of consumer-related services in an airport. It delivers an at-a-glance performance summary of consumer services compared to historical benchmarks. Managers can quickly uncover underperforming areas or assets, drill into specific categories to identify the root cause, and make the necessary adjustments on the fly.
The challenge
Municipal agencies and departments that depend on large vehicle fleets need to maximize the use and longevity of their depreciating assets. These agencies need analytical tools that help them maximize vehicle usage, minimize maintenance costs, and avoid downtime.

The solution
MicroStrategy’s analytical solutions help municipal governments manage their vehicle fleets (squad cars, buses, trucks, utility vehicles, etc.) more efficiently and cost-effectively. Agencies can leverage analytics to optimize routes and make better scheduling decisions by examining fuel costs, traffic patterns, and seasonal factors.

To maintain healthy operations, fleet assets need to be tracked, maintained, repaired, and replaced with minimal waste or downtime. MicroStrategy’s advanced predictive models let managers examine metrics on usage and maintenance history to identify assets with increased risk of failure so that they can proactively take corrective measures.

This particular example examines fuel usage and costs, enabling managers to uncover trends and uncover potential abuses.
The challenge
Local governments are striving to be more open and transparent about the status and progress of municipal infrastructure and services initiatives.

The solution
With MicroStrategy, it is possible to embed dashboards directly into public websites, so citizens can have direct access and visibility into data on the initiatives and projects undertaken by their local or city government.

This example includes multiple dashboards that help citizens understand how the local government is progressing on a variety of topics. Each tab reveals information on different initiatives such as public safety, water management, transportation, and human services.

The dashboard displayed on this tab shows the latest information around infrastructure to manage water resources. It compares monthly rainfall trends to water consumption, which helps government officials adequately plan and implement measures to maintain reservoir levels.

CITIZEN ENGAGEMENT-INFRASTRUCTURE OPTIMIZATION is a public-facing discovery application that allows citizens and government officials to explore the status and progress of initiatives related to municipal systems and services.

- The dashboard displayed on this tab shows the latest information around infrastructure to manage water resources. It compares monthly rainfall trends to water consumption, which helps government officials adequately plan and implement measures to maintain reservoir levels.
- Multiple dashboards on multiple tabs - each around a different municipal goal - covering areas including public safety, transportation, resource management, and more.
- Performance dashboard made publicly available on a website
- Reporting on reservoir levels based on historic rainfall and water consumption
- Apply predictive analytics to forecast future reservoir levels
The challenge
Government employee and contractor ID badges can not typically be easily integrated into existing systems and applications. This leads to the use of insecure passwords and multiple badges, increasing security vulnerabilities and management complexity.

The solution
Usher delivers a digital identity and privilege enforcement layer for government employees and contractors. This revolves around a strong credential that reflects an individual’s identity and enforces organizational rules and business processes via secure, digital identity badges on personal mobile devices. It enables users to access digital systems and physical entryways based on the privileges assigned to them by existing ID card programs. Usher makes it easy for government employees and contractors to seamlessly interact with existing infrastructure, resulting in a more secure and personalized user experience.

STAFF DIGITAL BADGES can be issued to government staff to lock down municipal buildings, restrict access to sensitive information systems, and more effectively monitor onsite activity.
The challenge
Municipal agencies are eager to give citizens and business people more convenient, self-service access to government services, but they don’t want to compromise security or complicate the validation process.

The solution
Usher enables government agencies to issue digital government services badges to citizens and businesses that provide convenient, secure access to a range of government services. Leveraging secure, digital identity badges on personal mobile devices, Usher delivers a strong credential that reflects an individual’s identity and enforces organizational rules and business processes.

Using a sophisticated, multi-factor authentication process across a broad set of systems and applications, Usher can be used to verify identity, provide secure online or mobile access to systems, and validate transactions, resulting in fewer manual processes, greater efficiency, less fraud, reduced costs, and increased citizen satisfaction.

eGOVERNMENT SERVICES BADGES deployed to local governments can empower citizens and businesses with convenient, secure self-service access to municipal services.
In 2012, the City of Austin’s Financial Services Department received national recognition for an integrated financial portal that gave citizens and staff access to summary and detailed information about the city’s financial operations. Although the portal provided consolidated vendor information and unprecedented levels of information accessibility, internal users were still having trouble accessing the data they needed. Despite the efforts of the IT department, every departmental group was attempting to do BI on their own. This was extremely costly from both a maintenance and service perspective. The City of Austin decided it was necessary to look into purchasing an existing off-the-shelf analytics platform.

With MicroStrategy, the City of Austin has a standard reporting platform providing citywide data integrity as all reports are created accessing the same data sets and definitions. Through the use of MicroStrategy’s visual data discovery tool, Visual Insight, the organization has been able to push ad hoc reporting down into the workforce. Empowered to quickly and easily satisfy their own reporting needs, users are happier and the IT department is free to focus on more value-added work as well. Business users are able to start looking at ways to connect their data to quickly respond to citizen and city council requests. Furthermore, different departments can now have richer conversations with each other and focus on more global issues.

The City of Austin has many MicroStrategy projects underway to improve a wide variety of processes throughout the city that will lower costs and improve services. The organization is building an HR application that will use dashboards to increase employee visibility amongst executive users. Another part of the organization that is implementing a MicroStrategy application is Permits and Planning. Additionally, the City of Austin is experimenting with MicroStrategy Mobile functionality in the field to collect code compliance infraction data on properties.