Build the foundation for a data-enriched city.

Microsoft CityNext and data platform

Cities. They’re magnets for jobs. Education. Culture. Community. Today, we’re in the midst of an urban renaissance: Increasing numbers of people are moving to cities to improve their quality of life. A trend that’s projected to continue: More than 65 percent of us will live in cities by the year 2050.¹ This migration isn’t limited to bustling metropolises. Smaller cities and municipalities also serve as hubs for higher education and innovation in healthcare, science, and energy—the engines of new ideas and businesses that can spur breakthroughs and economic growth.

The march toward urbanization translates into new opportunities: Denser populations that can enable more efficient service delivery. Growing populations that can attract more entrepreneurs, who, in turn, generate more economic opportunity—and that can attract more global investments, create more jobs, and increase the tax base. Aging populations—and improvements in policing—that can make cities increasingly safer.

Not surprisingly, urbanization also ushers in a new wave of challenges: Antiquated infrastructure. Public health and safety hazards. Economic instability. As a city leader, you’re tasked with addressing emerging demands and even greater citizen expectations—within constrained budgets and while working across siloed agencies.

Microsoft CityNext for Smaller Cities and Municipalities can help you unlock the most important resource of any city—people. How? By delivering innovative, digital citizen-centric services that can help create healthier, safer, and more sustainable communities. Smarter technologies in cloud, mobility, and analytics—the heart of Microsoft CityNext—can offer insights and new approaches to help improve efficiencies and reduce costs. Empowering public services, businesses, and citizens to work collaboratively, Microsoft CityNext can provide a springboard for city innovation and economic prosperity.
Uncover insights to make more informed decisions.

Across departments, and for cities as a whole, managing operations represents a series of complex decisions. As a savvy civic leader, you can combine everyday tools with robust analytics to empower city workers with real-time insights—helping them reach confident conclusions faster. Proactively engage citizens and facilitate input on community issues, initiatives, and plans. Monitor and analyze community sentiment and key influencers. Measure the effectiveness of campaigns. Improve adoption. And mitigate issues. Ultimately, you’ll find new ways to help create efficiencies, lower costs, and spearhead innovation.

Microsoft CityNext data platform solutions, custom reports, alerts, and tracking systems can help your organization speed response times.

- Using familiar Microsoft Office and Office 365 tools, help enable staff at all skill levels—not just your IT team or analysts—to glean insight quickly from multiple data types through highly intuitive, interactive data exploration, visualization, and presentation.¹ ² ³

- Connect timely, relevant information. By fusing structured data (ex., electronic health records) with unstructured data (ex., handwritten case notes), you can uncover previously hidden intelligence and forecast new trends.

- Use key performance indicators and dashboards to track operational response times and back-office administrative functions, capturing financial, administrative, and operational measurements.

As a city leader, you can use the unprecedented opportunity provided by Microsoft CityNext data platform solutions to shape how your city delivers services, engages with citizens, and plans for growth. You can give your IT teams, city workers—and even citizens—the tools to access relevant data, visualize and interpret information, and conduct city business more efficiently.

A model for future cities: Openness leads to prosperity.

Bold. Innovative. The Glasgow City Council’s approach to transformation began with a request to citizens, businesses, and government agencies: Make non-sensitive and non-personal information accessible to everyone. The promise? To create smart streams of data that could be more easily analyzed, providing insights to aid city planning, coordinate operations, and speed the delivery of citizen services.

Glasgow city leaders adopted a Microsoft Azure cloud platform to store, sort, search, and analyze city data from participating organizations. They built a city data dashboard. Power BI tools in Excel helped the city produce meaningful visualizations of diverse data sets—cyclist and pedestrian counts, current public transit status, daily school attendance, air quality readings, and hundreds more. Citizens readily found value—which, in turn, eased public apprehension and increased people’s willingness to share data.

Today, Glasgow’s cloud-based data platform solution collects information from more than 60 participating organizations and real-time data from smart sensors around the city. The dashboard enables the city to share economic, traffic, weather, and other operational data to help businesses thrive. Delivers services more effectively. Enables city managers to identify needs and allocate resources more efficiently. And offers robust information forums to deepen citizen engagement.

Read the whole story.
Extend BI to field workers.

Field inspectors. Case workers. Administrators. Analysts. Microsoft CityNext data platform solutions enable you to **deliver real-time business intelligence (BI) to more members of your team, virtually anytime, from nearly any location**. Stay connected with mobile access to your favorite live and interactive reports. Then share analyses with authorized staff—tailored to their roles and accessible wherever city business takes them.

Microsoft Power BI goes beyond self-service analytics to give your staff sophisticated tools to find, connect to, explore, and compile data easily from various sources. An online service, Power BI enables analysts and data workers to quickly create dashboards, author and publish reports, and build intuitive datasets of all the information that’s important to city operations. With a rich set of connectors for third-party data sources, Power BI works with local data via tools like Excel and with remote sources.

Visualize greater operational efficiency.

City staff across departments increasingly act as data stewards. With Microsoft CityNext data platform solutions, they can **find, explore, report on, and better manage data** relevant to the tasks at hand, and collaborate on shared projects more productively. Your managers can monitor streaming and real-time data from multiple sources to speed decision making.

Similarly, connecting and working together has never been easier with Microsoft Excel 2016 real-time sharing and co-editing capabilities. In-office staff and field workers alike can post analyses to social networks, present findings online, or send workbooks via instant message. Robust, self-service analytics capabilities—built directly into Excel—package the data discovery, analysis, and visualization process into a single solution. Enabling your teams to apply newly discovered insights to improve **quality of services** and **efficiency of management**.

Power BI Desktop provides a dedicated report authoring tool to help transform data, create powerful reports and visualizations, and easily publish to Power BI. The new experience extends to virtually all your staff’s mobile devices, too.

Through Power BI mobile solutions (with mobile access and HTML5 support), field workers from across your organization can navigate and explore reports or quickly find key files—without having to return to office locations.
Ease access while maintaining security.

IT teams have to balance city workers’ needs to access stored data against the risks of exposing databases to network attacks—especially when staff use their own devices.2 Built-in controls in Microsoft CityNext data platform solutions allow your IT specialists to build safer, policy-managed connections to limit access to internal data sources.

- **Extend access to sensitive data**—**without sacrificing control.** With managed, self-service business intelligence, your city workers and care teams can freely model and explore data as your IT team monitors and manages user-generated content with required security and compliance controls.

- **Support security, governance, and regulatory compliance mandates.** Set user-level analytics permissions that allow staff with appropriate credentials to see some, but not all, data—a critical component of maintaining regulatory compliance.

Deliver more meaningful services.

Fire, emergency medical services (EMS), law enforcement, and public safety personnel are among the most critical city workers. They protect lives, property, and ultimately the sense of shared security that defines a community. As a city leader, you’re responsible for ensuring that the appropriate departments are fully equipped to deliver services at the highest standards, on time—every time. That requires foresight. Careful planning. And visibility into, and across, departments that function separately but often coordinate operations to tackle crises.

With Microsoft CityNext data platform, you can help transform operations and extract value from complex streams of information. **Enable swifter emergency response.** And **help better prevent and combat crime.** Your data platform, supported by Microsoft Azure, can be hosted in the cloud, so agencies can consolidate data streams—across disparate systems and various data formats—to deploy services faster and enable access to real-time data.

Give your first responders a common operational picture through dashboards, unifying several streams of data in a single console for analysis. Comprehensive, eyes-on knowledge of a scene—for example, through live-streaming video—lets fire, EMS, and law enforcement personnel gain situational awareness before arriving on scene. Confirm critical gear. And take necessary personal safety precautions before springing into action.

When it's a full-blown crisis—a natural disaster or public disturbance like a flood, wildfire, heat wave, chemical spill, or riot—use data analytics to **combine and analyze data from different social media sources.** Assess the potential impact. And gain insights to help manage preparedness, response, and recovery.

Ease access while maintaining security.

Give data-driven innovations a green light.

The data-driven city moves more fluidly. The transit system automatically reconfigures routes so buses avoid traffic congestion—and arrive at scheduled stops on time. Sensors analyze intersection routines to predict interactions and then keep cars, bikes, and pedestrians safely separated. Traffic lights turn green for ambulances and then quickly retime signals to resume normal traffic flow.

The future? Today’s reality with intelligent data analytics—even in smaller cities.

With Microsoft CityNext data platform solutions, emergency personnel can get on scene faster by using dynamic mapping apps that help them avoid delays.2 4 A water main break at a major intersection. A commuter-rail train blocking a through street. Or thousands of music fans exiting a festival. Your city can even crowdsourcetraffic flow, using data from drivers and cyclists in real time. Analyze turns. Stops. Driving time. Then adjust signal timing and activate crosswalk signals, so people get around the city efficiently, with fewer accidents.
Unmask data trends to protect public health.

Cities of all sizes, regions, and entire nations are increasingly confronted with public health and safety emergencies that require epidemic and pandemic management and global monitoring. Making it imperative for city leaders, heads of hospitals, and other decision makers to take advantage of solutions that help track, classify, group, analyze, visualize, and manage potentially suspicious incidents.

By providing field staff with analytics tools—apps they can access reliably through mobile devices—your team can accurately track disease incidents and record real-time data. And help your city better handle emergency situations, save lives, and control costs.

With the Microsoft CityNext data platform, you have the tools to improve how your city identifies potential public health and safety threats, communicates and executes response plans, and manages crises over time.

- Assess potential emergencies, damage, and loss impact, then **develop informed incident action plans** by integrating location, tracking, sensor, video, traffic, hospital status, weather, and other dynamic data with geographic information systems (GIS) data (ex., imagery, elevations, streets, critical infrastructure).

- **Discover new insights** with highly interactive data exploration, visualization, and presentation for staff at varying skill levels. Embed geography as a variable in disease analysis and environmental health determinants by viewing geospatial patterns on a 3D map.

- Population solutions—based on cloud computing, business intelligence, and visualization technologies—can **help your city identify trends** that affect the health of certain citizens; **make evidence-driven decisions** to provide targeted resources and services; and help **cut costs** at city, provider, and systemic levels.

- Connect, capture, and transform data from sensors and devices, translating it into **new insights that can improve citizen and patient interactions**.

What’s next?

Through robust analytics capabilities, Microsoft CityNext data platform solutions—including Microsoft Office 365 and Microsoft Power BI—can empower city workers. Facilitate self-service to save time and reduce demands on IT. Help improve operational efficiency and contain costs. And enable real-time insights that help city staff make better informed decisions faster.

Microsoft CityNext can create a bridge that spans where your city is today and where you want to take it tomorrow. Through a broad portfolio of familiar, security-enhanced software, next-generation devices, and cloud services, Microsoft and its vast, global network of deeply experienced Microsoft Partners are uniquely equipped to enable a people-first approach to city innovations. Through Microsoft CityNext, we’re helping cities like yours to build on existing investments and to incorporate new innovations at their own pace—all to help increase efficiencies, reduce costs, and foster a more prosperous life for all.

**Realize what’s next for your city.**

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2 Microsoft solutions may not support all devices at the same level of features, functions, capabilities, and security.
3 For Office resources and requirements, see office.com/information.
4 An appropriate device, Internet connection, and supported browser and/or carrier network connectivity are required. Data charges may apply.