Powering next-generation analytics

Deriving insights that
power progress for state
and local governments

As state and local governments strive to improve services for residents and manage risk in times of unprecedented change, analytics and big data are playing an increasingly important role across multiple agencies and divisions. And these teams are finding ways to break down traditional silos to share information and derive insights in real time.

According to the National Association of State CIOs' 2020 Top 10 Priorities list, **data management and analytics** ranked #8 for state IT leaders.[1]

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Analytics applications are expanding

Analytics are being used by state and local departments across the country to solve an expanding array of challenges.

Departments of health and human services

COVID response
Data is being leveraged to make critical lifesaving decisions when dealing with the COVID pandemic. Having real-time access to stats on hotspots, hospital capacities, and ventilator availability is helping governments allocate resources more effectively. Big data is also helping governments proactively plan their budgets based on revenue lost during the pandemic.[2]

Population health
The Oregon Health Authority recently established the Social Determinants of Health (SDOH) Measurement Workgroup to develop analytics-based recommendations for public health screening initiatives for consideration by Oregon's Metrics and Scoring Committee and the Health Plan Quality Metrics Committee.[3]

Departments of transportation

Infrastructure
Analytics play a critical role in the engineering and construction of major infrastructure projects in areas such as design, development, review, approval, and management of outcomes.

Public transit
At the city level, governments are using analytics to optimize public transportation service and costs. By combining data from buses, trains, parking lots, and tolling systems, analysts can gain more accurate views of traffic flows and commuter needs. They can also model proposed changes to identify potential impacts through predictive analysis.[4]

Traffic safety
A startup company near Washington, D.C. is using machine learning to help governments predict the probability of car accidents on any given stretch of roadway.[5]

Public safety/first responders

Response times
Improvements in GIS mapping technology and analytics mean police, fire, and EMS teams can improve response times and adapt to changing traffic conditions as they emerge.

Performance improvement
Analytics and data sharing are also improving the flow of critical information to and from active scenes, which can highlight training opportunities and other areas for continuous improvement.

Public works

Flood control
In Cary, North Carolina, city engineers are launching a new flood monitoring system that leverages analytic modeling to predict near-term flooding. The data is then shared with neighboring communities, warning officials that downstream flooding could be heading their way.

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Finding ROI faster

One of the biggest areas where state and local governments are seeing near-term ROI with analytics is through streamlining processes and eliminating waste, fraud, and abuse. Estimates show that these efforts can have returns as high as 10 to 15 times their cost.[6] Some recent examples:

Louisville, Kentucky
The Louisville Metro Government calculated a 5:1 return for every dollar spent on the city's innovation, data, analytics, and performance management efforts.[6]

Cincinnati, Ohio
In Cincinnati, the Office of Performance and Data Analytics is using advanced geospatial analytics to dive process improvement. In the first two years, the city achieved $6.1 million in value at a cost of ~$700,000, for an ROI of nearly 9x.[6]

Texas
The State of Texas uncovered and prevented ~$90 million in fraud in its unemployment programs using advanced analytics.[6]

Time to insight makes a difference

To leverage the benefits of big data analytics, state and local government agencies have made big investments in data scientists. Like the data they mine for insights, their time is valuable, which means the tools they utilize every day need to be as efficient as possible.

When considered against the cost of humans' time operating computers over the course of a year, an investment in computing hardware that delivers even a slight productivity increase will definitely pay off down the line.

Certified for success

One of the most important things a government agency needs to check before investing in a workstation solution is whether or not the device is certified by the ISV (independent software vendor) that created the applications the agency data scientists/engineers are going to use.

These high-powered applications — whether they're for analytics, modeling, engineering, or CAD — require higher levels of performance from virtually every subsystem (CPU, graphics processing, etc.) within the computer. ISVs publish lists of devices they've tested to ensure they meet the performance requirements necessary to support their particular application.

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Power, compatibility, and reliability

Lenovo is a trusted partner to state and local governments in providing powerful workstation solutions that deliver on the promise of today's advanced analytics. From workhorse tower and desktop designs to the most advanced workstation laptops to support an increasingly mobile workforce, Lenovo has a wide range of workstation solutions, powered by the latest-generation Intel® processors, to meet government needs.

Lenovo's workstations are also ISV-certified for all leading analytics and engineering applications, ensuring seamless performance for the most demanding tasks.

Plus, all Lenovo workstations feature the legendary reliability that has helped make Lenovo the #1 PC manufacturer worldwide. According to a recent TBR report, Lenovo workstations have an average of 20.3% fewer repairs in the first three years of life when compared to the competition.[7]

And, as a partner to more than 700 state and local government agencies, Lenovo understands how to serve those who serve their citizens with pride and distinction.

For more information about Lenovo's complete line of workstation solutions, visit TechToday.lenovo.com

For more information on government solutions from Lenovo, visit LenovoForGovernment.com

Sources

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