

Smarter
technology
for all

Lenovo

YOU DON'T NEED TO HEAR IT AGAIN.

Our reliance on data is big
and getting bigger.

You've seen the stats, read the predictions, watched the trendlines climb. We've moved from an era of mostly hype to a point of most definitely happening. If the World Economic Forum is correct, we're approaching the point where we'll have 40X more digital data than stars in the observable universe.

The problem with numbers this big is that they become an abstraction. But government organizations are working hard to turn information into action. This means that the real power of data to government doesn't lie in big, but rather the ability to make a difference in the *small yet critical* details that mean a world of difference to the communities they serve.

- Faster response times in a time of emergency
- Optimized delivery of services by resource-restrained teams
- Granular fine-tuning of roadway traffic and other transportation flows
- Dramatic insights in the battle against the opioid epidemic and climate crises
- Streamlining coordination between state, local, and federal agencies

Unlocking these benefits demands a strategy that looks past merely collecting additional data. Organizations will need to pair emerging technologies like AI with new tools on the ground to create dynamic, dependable supply chains that turn datapoints into insights that are useful and actionable by agencies and communities.

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INFORMATION IN ACTION: SUCCESS STORIES

Pick nearly any service or community challenge, and chances are government organizations are deploying big data to open up new opportunities. It might be getting to an answer faster or delivering a service with greater efficiency. The common link is always the innovative use of information.



PUBLIC SAFETY

The rise of NextGen 911 offers us a nearly perfect picture of agency coordination and cooperation. It's also an excellent narrative of how a foundational service can be fundamentally transformed by technology.

- Better GIS tools enable more accurate location mapping, enabling first responders to reach the scene faster.
- Those responders arrive with more information on both the location and the incident, sometimes including building plans. This enables better real-time decision-making.
- The same responders also bring new technology to the scene, including body cameras and mobile devices. This enables incident information to be quickly shared to improve response as well as being stored in the interests of transparency and accountability.



PUBLIC HEALTH

As communities cope with multifaceted challenges like the opiate epidemic, information technology can help unify a collaborative approach to creating long-term solutions.

- Powerful analytics can combine historical data with demographic inputs to help decision-makers better predict at-risk populations.
- Broad information sharing between public safety and public health agencies can help ensure affected individuals receive the appropriate intervention that address root causes.
- These two functions combined can help agencies develop community strategies for educating the public about both the challenge and efforts to solve it. State agencies in **Kentucky are using an ESRI tool** to do exactly that.



PUBLIC LIFE

The emergence of 'smart cities' gives government organizations an opportunity to partner with business leaders to create public spaces that inspire confidence, delight, and private investment. These aren't just smart communities, but adaptive laboratories for creating new ways of living, working, and how we move between the two.

Projects like **Google Sidewalks are helping cities like Toronto** collect more data about how people leverage city services and resources. This information is then used as an input on everything from traffic planning to scheduling public works.

Similar data-driven approaches are also used to help speed business-facing services like permitting, letting developers bring new projects to market faster and with greater transparency.

A subset of this information can be aligned to open standards and made available to the public, inspiring innovative, citizen-led efforts like **LA's GeoHub**.

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STEP BY STEP: THE BIG DATA SUPPLY CHAIN

Moving from terabytes of data to a single task is hard work. Along the way, it requires organizations to invest heavily in new systems and skills, as well as continued efforts to maximize the efficacy of existing infrastructure.

COLLECT

Whether it's a web-form or sensor, data has to start somewhere. These inputs are gathered and stored, awaiting the next step.

- IoT sensors
- Agency forms/users
- Citizen self-service

COLLATE

Data hygiene is often an agency's biggest obstacle. How do you turn raw information into a usable asset?

- Network/cloud storage
- Relational databases/data lakes
- Data hygiene applications

CRUNCH

Once a datapoint is properly formatted, it can be analyzed by an application. Sometimes these are machine-based AI, but just as frequently an agency expert does the work

- Cloud compute resources
- Local workstations

CREATE

At the end of the process, those datapoints are now actionable. This is where service development and delivery steps in. You started with information, and created insight and opportunity

- Agency experts
- Cross-agency collaborations
- Community partnerships

THE CRITICAL LINK: WORKSTATION POWER

Many of the listed examples (and countless more) are centered around GIS data as both input and output. It's a powerful data layer that might not seem exceptionally exciting, but plays an outsized role in service delivery. Simply put — if an agency can't find a location, it makes nearly everything else impossible.

Along with GIS applications, agencies increasingly rely on other compute-heavy, ISV-validated software. From designing roads to rendering digital media, these high-profile workloads demand high-powered compute solutions. This means workstations.

But as agency missions and workspaces evolve, traditional workstation choices can't always keep up. Decision-makers need to understand new features and form factors and ensure they're precisely matching the right tool to the task. Getting this wrong can impact the entire information supply chain, and further complicate the already-complex challenges of turning data into decision.

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HOW TO CHOOSE

BY THE NUMBERS: PERFORMANCE SPECS

DECODING ISV-CERTIFICATION

Application developers will provide the essential baseline for workstation choice. Without that certification, a tool won't run reliably once deployed. These certifications are typically driven by CPU/GPU performance, but are not completely processor-dependent. The speed at which the processor communicates with other components is also essential.

HARD DRIVE SPACE

While big data processing increasingly happens in the cloud, back down on earth users are typically wrestling with large files. Whether they're CAD diagrams or media files, adequate hard drive space ensures they can work quickly and without worry.

BEYOND THE NUMBERS: PORTS AND PORTABILITY

Traditional tower workstations are great for deskbound engineers and experts. But putting more power in the hands of users in the field can reduce cycles and produce better results. Why shouldn't an engineer be able to adjust thinking on the spot? Why wouldn't you want analysts working as close as possible to the problem they're trying to understand?

Mobile workstations aren't new, but the performance gap between traditional and portable form factors has been close as of late. This means delivering productivity exactly where and when it's needed, reducing cycle time and getting to solutions faster.

THE SECRET WORKSTATION WEAPON: DURABILITY

When agencies invest in endpoint hardware, they typically don't buy for 'edge cases'. They look for a solution that meets the needs of a 'typical user' however that gets defined. And while this serves most agency workloads well, workstation needs stand apart and distinct. With the focus on working with a big data supply chain in the field and 'at the edge', use case needs get even more specialized.

This is because beyond the applications being run, workstation workloads are typically fundamental to a particular service. This means high-profile work, often done by high-profile talent, often working outside the agency. When their endpoint fails, the dollar and productivity costs can soar. So, while reliability is always important for hardware, it's exponentially truer for workstations.

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THE RIGHT TOOL FOR THE TASK: THE THINKSTATION DIFFERENCE

No matter the high-profile workload, the Lenovo ThinkStation portfolio offers a full range of powerful ISV-certified workstation options. From traditional towers to ultraportable ThinkPad mobile workhorses, Lenovo devices enable you to bring unprecedented Intel® performance to your most important missions. Collect, collate, crunch, create – Lenovo makes it all easier.



Superior Choice

A full range of workstation options ensures you can customize a solution that fits your strategy, not the other way around. Each and every ThinkPad and ThinkStation workstation brings ISV-certified performance to the mission.



Proven Durability

We continue to lead the industry in our commitment to robust, MIL-SPEC durability. This means our workstations let your users do hard work in the toughest of environments.



Robust Security

Lenovo Secured-core workstations running Windows 10 Pro offer a full suite of advanced security safeguards. Plus, you get ThinkShield protection — hardware, software, services, and processes for end-to-end defense.



Government Expertise

We've been trusted technology partners to state, local, and federal agencies for a long time. Along the way, we've learned a lot about what it takes to turn the best technology into a transformational advantage.



Complete Service Options

Protect your investment with a full portfolio of service options, from onsite repair to accidental damage protection. We can help you design a plan that keeps your most critical assets fully operational.

From big data to infinite possibility: Let's get started.

Big data brings big opportunities — if you get the details right. We can help you better understand both and plot a sure path forward.

For more information on Lenovo products for State and Local Government, visit www.lenovo.com/government.



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