CompTIA
Public Technology Institute

2023 State of City and County IT National Survey

EXECUTIVE SUMMARY

This is the 10th year that the CompTIA Public Technology Institute (PTI) has conducted the State of City and County IT National Survey. Every year, including 2023, cybersecurity/ data loss prevention has ranked as the number one priority for local government IT executives. This is no surprise because of the number of disparate IT systems in cities, counties, towns and villages and the fact that hostile actors perceive government IT systems as more vulnerable. While a record amount of federal funding has been made available, and more officials within all levels of government are refocusing their efforts on local cyber resiliency, much more needs to be done to secure our IT infrastructure.

Following cybersecurity on the list of IT executive priorities are modernizing outdated IT systems and applications, and innovation/applying technology in new ways to help solve problems. Fourth on the list is IT workforce retention/attraction. Questions about IT workforce issues were added to or amended on this year's survey.

Due to the impact of the COVID pandemic and the shift of how work is, or can be, done (remote versus at a facility), competition with the private sector for IT talent, in combination with an increase in retirements and resignations, means many local governments are struggling to retain current staff and fill vacant positions.

Relating to the IT workforce: When asked to identify the top priorities in terms of boosting the skills of existing staff and/or addressing skills gaps via hiring, cybersecurity was cited as the top priority, followed by soft skills/professional skills (up from the number four priority in 2022). Infrastructure skills and data skills rounded out the top four.

When it comes to budgeting for IT, 53% of IT executives expect an increase of 5% or more with their next fiscal budget. This is a significant increase from the 2022 (33%) and 2021 (17%) survey results.

The relationship between the local government IT executive and the state CIO has the need (and hopefully, priority) for continued improvement, with only 12% of local government executives stating that their jurisdiction's relationship with the state CIO is excellent, while 27% share that the relationship is good but limited. However, 52% of local government IT executives share that their relationship is non-existent.

Foreword

It is difficult to believe that this is the 10th year that CompTIA Public Technology Institute (PTI) has conducted the State of City and County IT National Survey. We created the survey to provide a snapshot of the IT management and operational priorities of America's cities and counties. For readers of past survey reports, you will see that we refreshed the 2023 survey, eliminating some questions while adding or refreshing questions around topics that we are witnessing as growing in importance to the local government IT community.

As the leadership and membership of CompTIA PTI constantly advocate, we have a need, indeed a duty, to raise the profile of the IT "function" with our elected leaders and management and move from the concept of IT as service provider to IT as a strategic business partner.

The role of IT executives has evolved over the years from a traditional managerial position to one of applied leadership where the focus has shifted to citizen satisfaction and user experience, while playing a more proactive role in government operations across all departmental functions.

I often refer to the IT executive as a firefighter, constantly on call, responding to emergencies that have a direct impact on how we serve the public. In addition to putting out fires, IT executives are managing increasingly expanding and complex portfolios, a changing IT workforce and expectations of elected leaders, management and the community.

As you review the following survey analysis, I hope you will note how the findings compare with your IT organization's priorities and needs.

Dr. Alan Shark
Vice President Public Sector and Executive Director,
CompTIA Public Technology Institute (PTI)

Did you know?

LOCAL GOVERNMENT IT EXECUTIVE PRIORITIES

- Cybersecurity
- Modernizing outdated IT systems, applications, etc.
- Innovation/applying technology in new ways to help solve problems
- IT workforce retention/attraction
- Launching or updating digital services for citizens (e.g. mobile apps, web services, etc.)

DEVELOPING A ROBUST CYBERSECURITY POSTURE: HIGHEST PRIORITIES

- Technology: Modernizing defenses
- People aspect: Further establishing a mindset that underpins all facets of city/county government
- Process Aspect: Data backup, integrity and restoration

EMERGING/FUTURE TECH ON THE RADAR OF IT EXECUTIVES

- Automating technologies
- Artificial intelligence
- Internet of Things (IoT)

Introduction

This survey report is designed to provide an overview of the technology landscape in local government, highlighting current priority issues and needs and shining the spotlight on future opportunities.

Topics this survey explores include:
- IT executive priorities
- Budgeting
- IT ROI and analytics
- The cloud
- Delivering digital services
- Managed services
- Cybersecurity
- IT workforce skills
- Emerging/future tech
- Broadband
- Relationship with state CIO

The survey was conducted in February and March 2023. The survey instrument was provided to CompTIA PTI member IT executives and executives participating in the CompTIA PTI/Rutgers University Certified Government CIO (CGCIO) program. A sample of 61 local government IT executives participated in this survey representing all types and sizes of local government.

IT EXECUTIVE PRIORITIES

We began the survey by asking IT executives to "think big picture." We provided a list of nine topics and requested participants to identify up to four topics they view as key priorities their IT department will focus on over the next two years.

Cybersecurity was identified by nearly all participants (97%) as a key priority. This was followed by modernizing outdated IT systems and applications (62%), innovation/applying technology in new ways to help solve problems (52%) and IT workforce retention/attraction (50%).

As stated in this report's introduction, cybersecurity has been identified as the top priority in the previous nine surveys. New to the list of priorities that respondents could choose from this year was IT workforce retention/attraction.

To help set the stage, thinking big picture, among the following what do you see as the key priorities for your IT department to focus on over the next 2 years?

Priority	Percentage
Streamlining procurement processes for the purchase / implementation of technology	17%
Cybersecurity	97%
Innovation / applying technology in new ways to help solve problems	52%
Migrating systems / applications to the cloud	26%
Addressing data silos / making data more real-time and actionable	24%
Addressing interoperability / integrating disparate systems, applications, etc.	24%
Launching or updating digital services for citizens (e.g. mobile apps, web services, etc.)	40%
Modernizing outdated IT systems, applications, etc.	62%
IT workforce retention/attraction	50%

Continuing the technology thread, we asked survey participants to rate where their local government currently stands with its overall utilization, management and performance of its IT systems, applications, data and related technology versus where they would like to be. Sixty percent responded that they are about 75% of where they want to be, 16% are about 90% of where they want to be and 16% of respondents are 50% of where they want to be.

While the percentages changed from last year, these ratings are in the same order as 2022.

BUDGETING

IT budgeting is always a major focus of IT executives and government leadership. We asked participants to share their expectations for their jurisdiction's IT budget in the next fiscal year. Fifty-three percent of respondents expect an increase of 5% or more. This is a significant increase from the 2022 survey, with 33% expecting a large increase and 2021 (17%).

For the next fiscal year, 32% of respondents expect an increase of between 1% and 4%. Twelve percent of respondents expect that their IT budgets will remain flat, with no change, while 4% expect a decrease of 5% or more.

What is your expectation for your jurisdiction's IT budget in the next fiscal year?
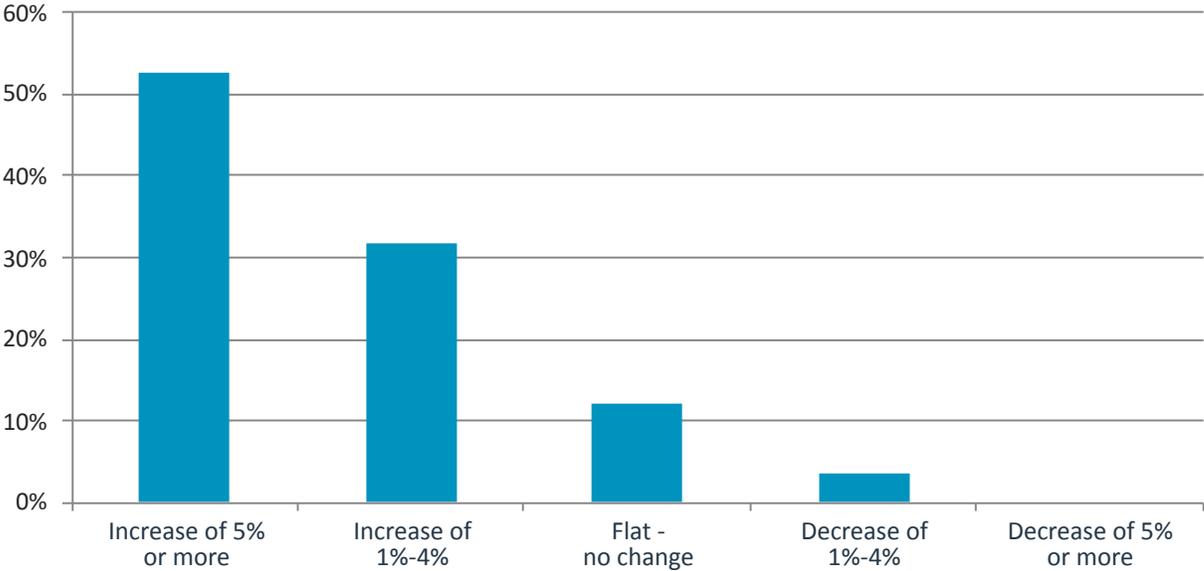
IT ROI AND ANALYTICS

When asked how they would rate their overall level of satisfaction or dissatisfaction with the return on investment (ROI) of IT expenditures (inclusive of products and services), 63% of respondents stated that they are mostly satisfied with the ROI of their IT expenditures, while 33% expressed about equal parts satisfaction and dissatisfaction.

These results are similar to the 2022 survey findings.

Provided with a list of factors that may contribute to feelings of IT expenditures not delivering the desired level of ROI, the top three (as identified by IT executives) are staff time requirements to operate and maintain systems and tools (61%); ongoing maintenance costs, support fees and upgrades (57%) and upfront cost/too expensive for return (48%).

Thirteen percent of IT departments utilize outcome-based analytics to drive investment in IT product or service offerings. Thirty-two percent occasionally utilize analytics while 48% rarely use analytics to drive IT investment.

To what degree is your agency/department utilizing outcome based analytics to drive investment in IT product or service offerings?
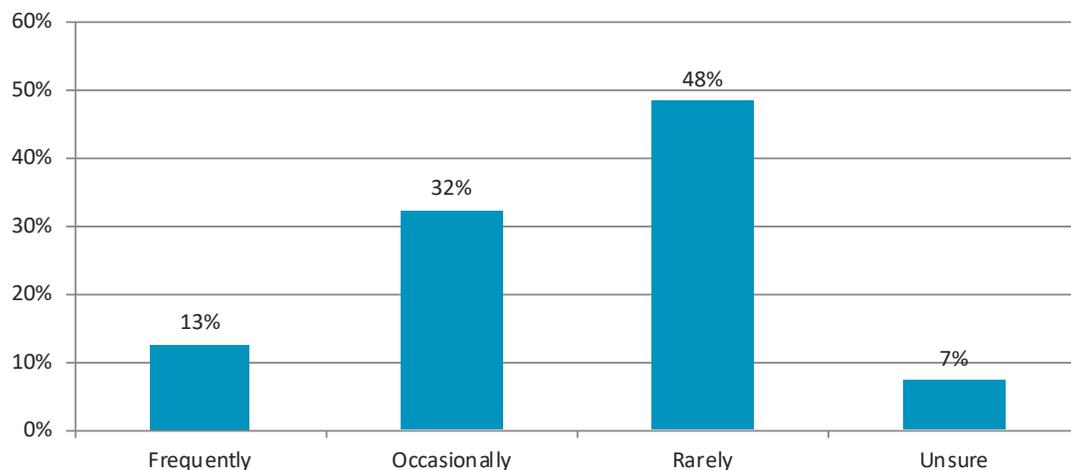
THE CLOUD

Forty-six percent of respondents have moved on-premises infrastructure (storage, virtual machines, etc.) to a private cloud, while 43% of respondents have moved on-premises infrastructure to a public cloud.

Related to cloud implementation, we asked survey participants to select from a list of activities, if any, that their local government has engaged in during the past two years. Seventy-five percent stated they have shifted from using a local version of an application to a cloud application (SaaS). This is up 6% from the 2021 survey. Sixty-eight percent began using a new cloud application (SaaS) – down from 80% last year; while 52% integrated a cloud application (SaaS) with an on-premises application via APIs, etc., and 38% integrated two or more cloud applications (SaaS) via APIs, etc.

It should be noted that many IT executives have complained that they felt they had little choice to move to a cloud-based application. This is because their service provider/vendor left little choice as more applications are being offered in cloud-only versions where on premises is being phased out or will no longer be supported.

DELIVERING DIGITAL SERVICES

When asked to share their approach to delivering digital government services, 20% of IT executives shared that their approach is via an internal digital services organization. Forty percent stated that their approach is ad-hoc, but moving towards an internal digital services organization, while 27% shared that their approach is ad-hoc, and that they are unsure of their future course. Thirteen percent of respondents shared that digital services are the responsibility of individual agencies/departments.

What is your approach to delivering digital government services?

Category	Percentage
Responsibility of individual agencies/departments	13%
Ad-hoc, and unsure of future course	27%
Ad-hoc, but moving towards an internal digital services organization	40%
Via an internal digital services organization	20%
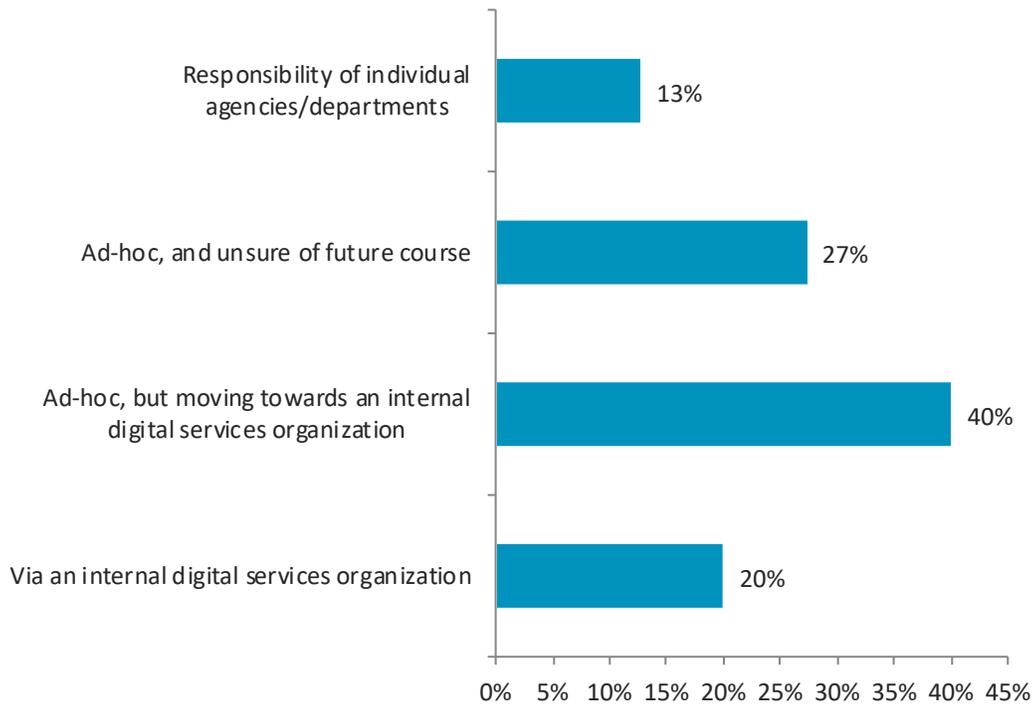
MANAGED SERVICES

When it comes to the degree that local governments use managed services (remote IT services provided by a managed services provider (MSP) typically through an annual contract), 36% of local governments are using MSPs, 20% are considering using MSPs and 44% of respondents say they are not currently using nor considering using MSPs.

For local governments that are currently, or considering using managed services, we provided a list of areas in which they expect to utilize providers. Cybersecurity/data loss prevention ranked first, IT support/desktop management ranked second and network/broadband infrastructure management ranked third. (Respondents were allowed to select all areas that applied to them.)

These are the same rankings that were reported in the 2022 survey analysis.

You indicated your local government is either using or may consider managed services. In which of the following areas do you expect to utilize providers?
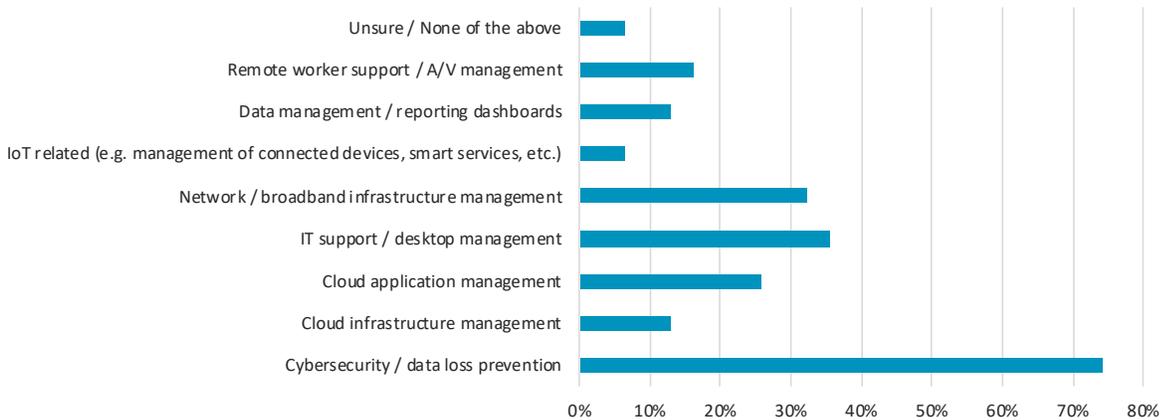
CYBERSECURITY

We invited survey participants to think about the technology of developing a robust cybersecurity posture in three areas, and then rate each area as a priority for improvement in terms of the technology aspect, the people aspect and the process aspect.

Regarding cybersecurity: Thinking about the *technology* of developing a robust cybersecurity posture, among the following, how do you rate each in terms of a priority for improvement? [1=Lower Priority, 2=Secondary Priority, 3=Highest Priority]

Modernizing defenses, e.g. cloud security, SIEM, IAM, etc.
- 3%
- 45%
- 52%

Deploying proactive measures, e.g. penetration testing
- 26%
- 35%
- 39%

Deploying next-gen security measures, e.g. AI-enabled analytics, APT countermeasures, etc.
- 29%
- 35%
- 35%

■ Lower Priority ■ Secondary Priority ■ Highest Priority
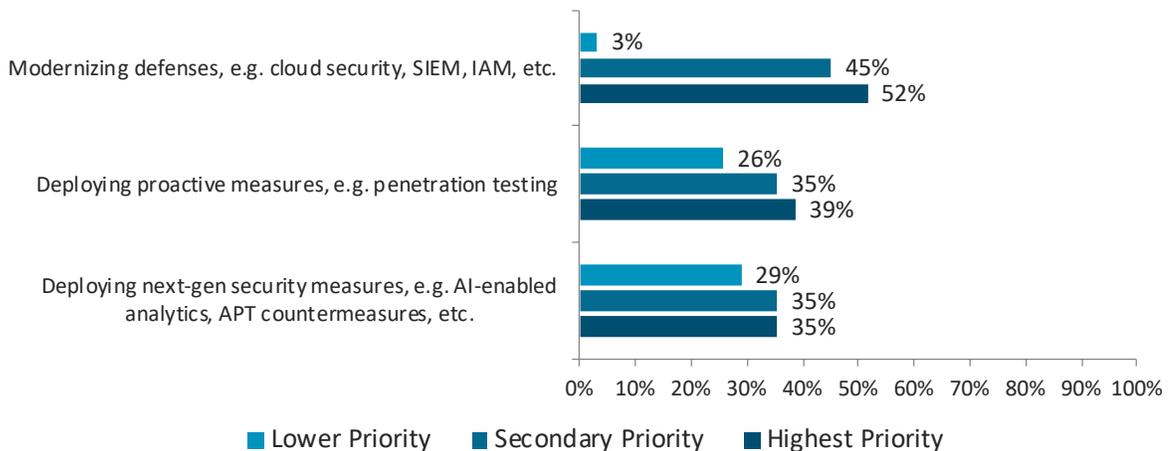
Thinking about the *people* aspect of developing a robust cybersecurity posture, among the following, how do you rate each in terms of a priority for improvement? [1=Lower Priority, 2=Secondary Priority, 3=Highest Priority]

Training for existing IT staff, e.g. technical training
- 27%
- 36%
- 36%

Training for general staff, e.g. security-awareness training
- 4%
- 45%
- 51%

Further establishing a security mindset that underpins all facets of city/county government
- 13%
- 29%
- 58%

■ Lower Priority ■ Secondary Priority ■ Highest Priority
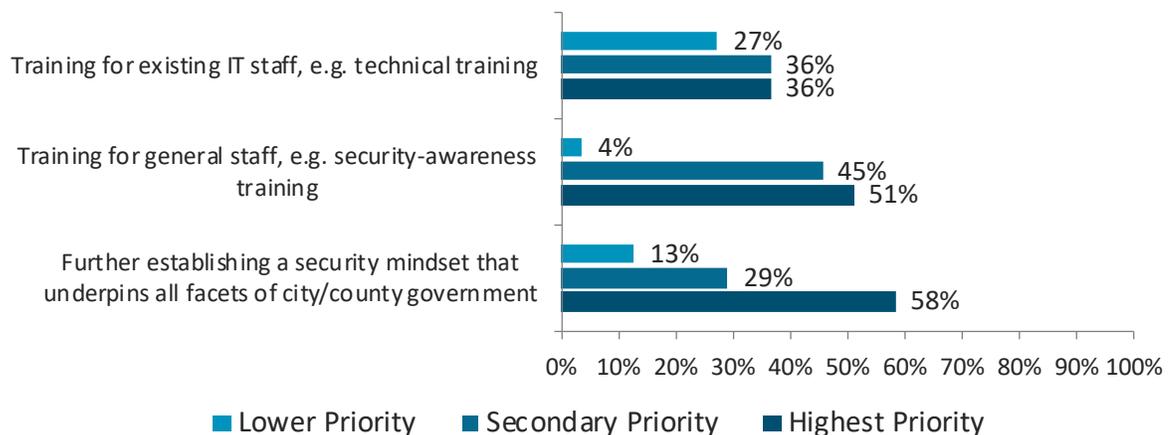
Thinking about the *process* aspect of developing a robust cybersecurity posture, among the following, how do you rate each in terms of a priority for improvement? [1=Lower Priority, 2=Secondary Priority, 3=Highest Priority]

Updating polices to reflect changing threat landscape, e.g. ransomware
- 19%
- 46%
- 35%

Developing or testing cybersecurity incident response plans
- 6%
- 48%
- 46%

Further establishing a security mindset that underpins all facets of city/county government
- 10%
- 44%
- 46%

Adopting a cybersecurity framework based on national standards or guidelines, e.g. NIST
- 12%
- 35%
- 54%

Data backup, integrity and restoration
- 4%
- 25%
- 72%

■ Lower Priority   ■ Secondary Priority   ■ Highest Priority
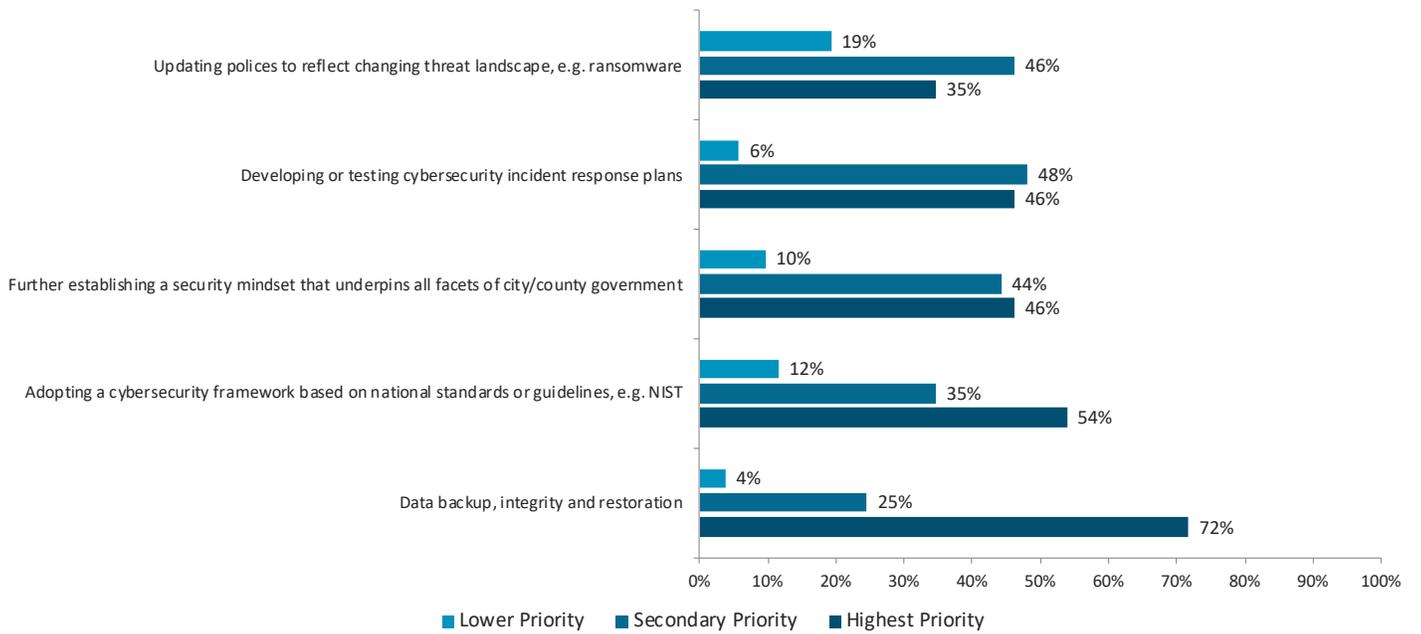
IT WORKFORCE SKILLS

Regarding the local government IT workforce, IT executives were requested to share their "top level" of assessment of where they are with their IT team in terms of capabilities, skill level and performance versus where they ideally want to be. Twenty-one percent share that they are about 90% of where they want to be, 64% are about 75% of where they want to be and 15% are about 50% of where they want to be.

We provided survey participants with a list of skills areas and asked that they identify their top priorities in terms of boosting the skills of existing staff and/or addressing skills gaps via hiring. Participants were asked to select all areas that applied to their IT workforce.

Cybersecurity was identified as a top priority by 74% of respondents. This was followed by soft skills/professional skills (improvements to communications, collaboration, team IQ) which was selected by 55% of respondents. Rounding out the top four are infrastructure (improvements to network/systems reliability, performance) selected by 45% and data (management, analytics, big data) skills selected by 43% of respondents.

Moving up the top priorities list this year is soft skills (second in 2023, fourth in 2022).

Among the following skill areas, what are your top priorities in terms of boosting the skills of existing staff and/or addressing skills gaps via hiring? Please select all that apply.

Skill Area	Percent
Crisis management, e.g. readiness, response, recovery	42%
Soft skills/professional skills, e.g. improvements to communications, collaboration, team IQ	55%
Software, e.g. application or mobile app development expertise	23%
Infrastructure, e.g. improvements to network/systems reliability, performance	49%
Emerging tech, e.g. internet of things (IoT), artificial intelligence (AI), automation	34%
Digital transformation, i.e. modernizing systems, applications, data streams	45%
Integration, e.g. disparate systems, applications, data streams	30%
Cybersecurity	74%
Cloud, e.g. infrastructure migration, application or platform deployment	42%
Data, e.g. management, analytics, 'big data'	43%

EMERGING/FUTURE TECH

When it comes to the emerging technologies that are on the radar for local government and/or in some phase of adoption by their local government, we provided a list of areas and asked participants to select all that applied to their organization. Automating technologies were identified by 78%. Artificial intelligence was identified by 65% of respondents and an equal number, 65% selected Internet of Things.

What other emerging technologies are on your radar and/or in some phase of adoption by your local government? Check all that apply.

Technology	Percentage
Other (please specify)	2%
3-D printing	13%
Internet of Things (IoT)	65%
Autonomous vehicles/Self-driving vehicles	4%
Robotics	9%
Augmented or virtual reality	9%
Artificial intelligence (AI)	65%
Automating technologies	78%
Blockchain/Distributed ledger technology (DLT)	4%
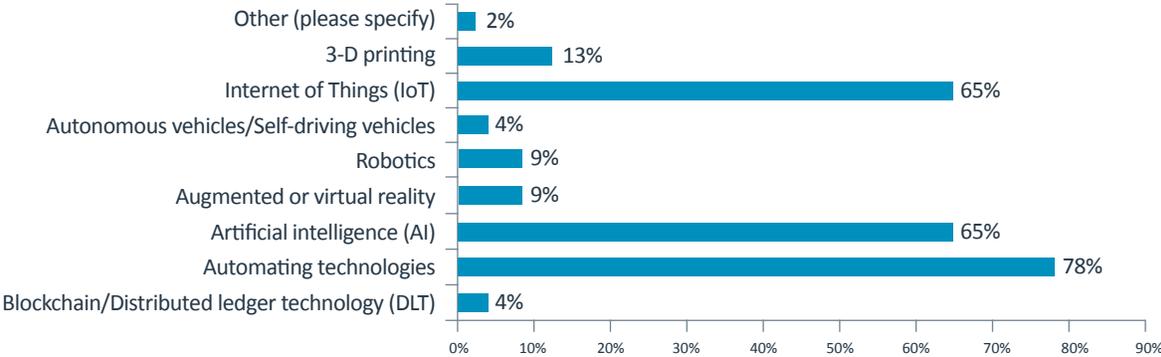
BROADBAND

Given the pressure (partly due to lessons learned from the pandemic) and opportunities (due to grant funding) to build-out broadband infrastructure in many communities, we asked survey participants for their assessment of where they are in terms of broadband infrastructure. Fifteen percent stated that they are exactly where they want to be.

What is your assessment of where you are in terms of broadband infrastructure?

Category	Percentage
Unsure	8%
About 50% of where we want to be	33%
About 75% of where we want to be	19%
About 90% of where we want to be	25%
Exactly where we want to be	15%
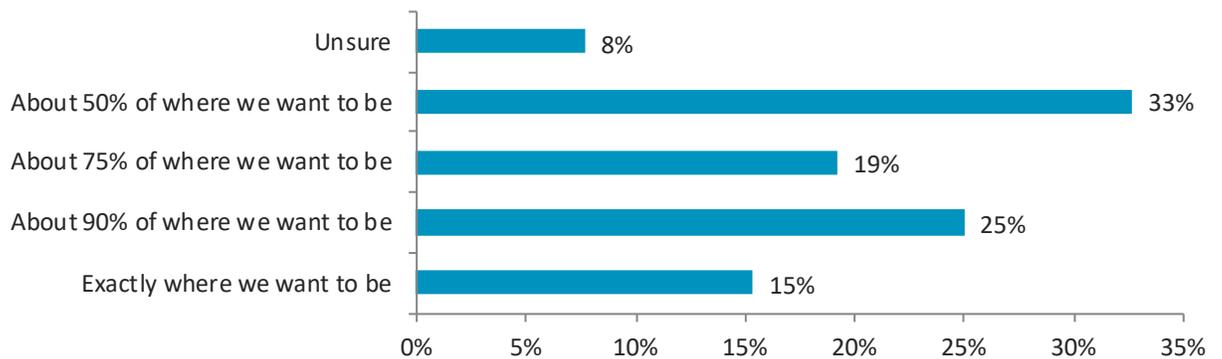
RELATIONSHIP WITH THE STATE CIO

The final survey question asked IT executives: What best describes your jurisdiction's relationship with the state CIO? Fifty-two percent of local government IT executives share that their relationship is non-existent. Twenty-seven percent share that their relationship is good but limited, and 12% share that the relationship with the state CIO is excellent.

These numbers are similar to the 2022 survey, where 54% of respondents stated their relationship as non-existent.

What best describes your jurisdiction's relationship with the state CIO?

Category	Percentage
Non existent	52%
Just ok or poor	10%
Good, but limited	27%
Excellent, and on-going	12%
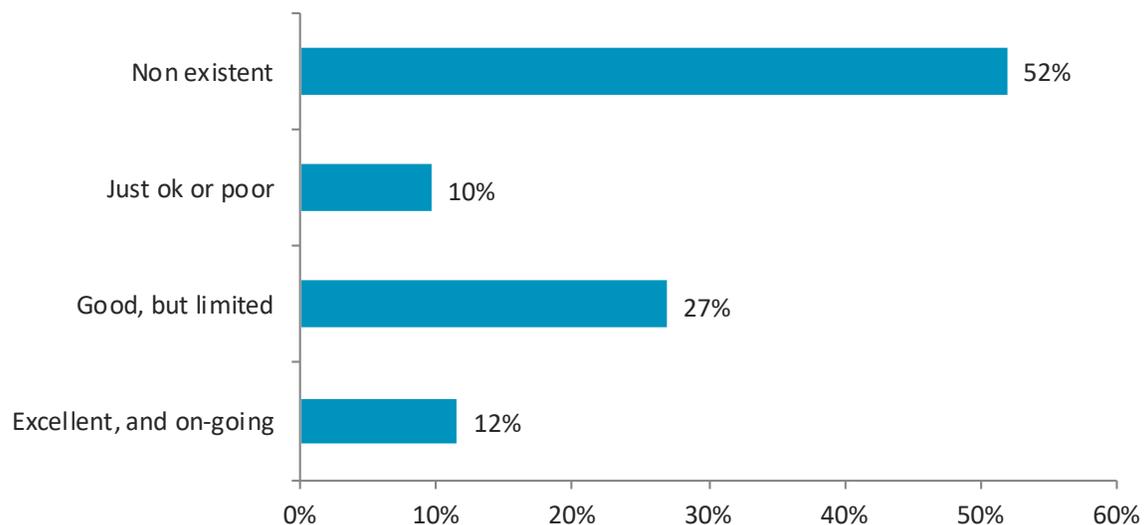
While the outcome was not surprising, it was disappointing, and it is a problem we have been aware of for the past decade. Simply put, state CIOs generally do not have formal local government interaction as one of their main responsibilities. Secondly, many state CIOs have stated how difficult it is to find meaningful two-way communication outside of critical emergencies. It is fair to say that a number of states have developed successful programs. Others are developing governance and communication models to help create some form of network that will bring state and local officials together.

Conclusion

This survey report provides a view of the state of city and county IT. While there are many challenges facing IT executives there are also opportunities. Consider how you can:

• Implement innovation and emerging and future tech to improve government services

• Tackle the challenge of retaining and attracting qualified IT professionals to your organization by highlighting the importance of public service and having an impact on the community

• Develop better relationships with your elected leaders, management, partner organizations/agencies and your vendor partners to provide a stronger organization-wide IT environment

Perhaps some of the survey findings resonate with you and your organization. For IT executives, and indeed anyone with an interest in local government IT, it is important to take advantage of resources like this report, organizations like CompTIA PTI, regional networks, state-based groups and national organizations to stay on top of the constantly changing environment of city and county IT.

We are the local government IT community.

About CompTIA Public Technology Institute (PTI)

Established in 1971 by several major national associations representing state and local governments, CompTIA Public Technology Institute has been viewed as the focal point for thought leaders who have a passion for the furtherance and wise deployment of technology. CompTIA Public Technology Institute actively supports local government officials through research, leadership certification, and the sharing of leading practices.

For more information visit:
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