

**NOTE: This transcript has been minorly edited for clarity. The transcript timestamps may vary from the video recording.**

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**Alan Shark:** Alright! Hi! There, everyone! This is Alan Shark and Doug Robinson, and this is our annual state and local government tech forecast what lies ahead. This is probably our eleventh or twelfth year. I'm losing touch on which it is, but we've been doing this for quite a while. It's become known favorably as the Doug and Alan show, and we share our insights based on research and things that we hear in the field.

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So, we're very excited to join you starting a New Year 2023, although I I'm sure many of you feel that this year is well established. It doesn't feel as new anymore, even though we're not even halfway into the first month. But many of you know that Doug Robinson and I started at the same time in our respective organizations. Doug, with NASCIO, myself with PTI, which since has come under the flag of Comptia, so we're both going to share our insights today, as we normally have done for the last dozen years. And then we're going to hopefully leave enough time for questions and answers the session is being recorded.

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We are happy to make our slide decks available, and the recording available for those who have registered.

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I'm excited to say that we have well, over 500 people that have pre-registered. So there really is interest in all of this, and much is happening, so I'm really excited to share these insights. And I'm going to turn it over to Doug and let you take it from there.

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**Doug Robinson:** Alan, thank you. Thank you very much. And let me go ahead and jump right in here and share my screen, and we'll talk about the state of the States.

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So, I'm going to take you through a quick journey of what's going on in a state it, and of course going to start with, most importantly, the State CIO top 10.

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So let me go ahead and move quickly through that to give you some updates. This is something that NASCIO has been doing since 2006. We do a force choice ballot among the State CIOs. Late in the calendar year. In this case, December release, this top 10 for 2023, and you'll see some for those of you familiar with this, this is probably our most important kind of one page message to the to the marketplace, public sector, or private sector colleagues and partners.

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As to what the State CIOs see as their top parties and their strategies for the upcoming year. So, kind of this is their prognostication. We take all the individual data and the scores put it in the NASCIO blender and give you the aggregate view of the world for the next year or so.

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Again, this is their individual forecast. Number one. Not surprisingly cybersecurity and risk management. Number one, tenth, consecutive year. That has been number one. So, it's been on the list since the inception of our top 10. However, this again remains as the top priority for the state CIOs. Digital services again, stays in the same location and number 2, some couple of the of the more surprising moves. Workforce moves up dramatically up to the number 3 Slot.

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We'll talk a lot today about the state IT workforce, some of the challenges as I prepare the rest of my remarks for you. All cloud services remains again top, consolidation optimization again has been on the list for many, many years. It was number one for several years, I think, with that and cloud. I think both represents the maturity and the movement, and the adoption going on across the State CIO community state IT community. So that's important to note broadband and wireless have dropped a little bit.

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We can certainly talk about that. And the rationale, but with 65 billion dollars on the table. There's a lot of activity going on. But the Federal funding and broadband expansion, particularly covering those rural areas, digital divide issues and digital equity.

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Those are big topics with the State CIOs! What is conspicuous by its absence again, this year, in 2023 is but in budgeting and cost control. So, I think that reflects the physical condition of the States all but one state.

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It really projecting revenue above projections, or in a record revenue projection area for most of the States for this fiscal year there are also showing high spend in most states. So that's going to occur, even with the prospects of potential recession for 2023 through the end of June.

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For most States fiscal year. There's still showing above a project in revenue. So that's good. And many, many states showing record surpluses that they'll be moving to their rainy-day funds. So, you've got to look at the overall landscape real quick, this is the to come in the general themes that we're seeing across the States, and we'll talk about that in a minute. A little bit more focus on digital services. Citizen centric using human centric design.

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Identity management is a big component of that. You saw identity and access management up there in the top 10. All that is getting a lot more attention in 2023 we'll talk a little bit about cyber threats, and particularly around whole state.

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Cyber, resiliency, cooperating with local governments with higher education, with utilities, with health care.

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Those are all the major components of a whole of State resiliency moving on from simply the focus on the executive branch of State government to a whole of government or whole of state, a model or certainly that's promoted in a number of the Grant programs as well. As I mentioned 2023 year of workforce. You see, the 5 Rs. In there that will be continue to be a focus I'm particularly acute in the IT space. Rescaling and retraining is going to be kind of a focus, because states are finding it.

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Increasingly problematic to hire new candidates into those positions under number of States, have reported 50 to 60% reductions in the actual candidate pools for their for state positions across the board.

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We mentioned in our abstract for this event the cybersecurity, improvement wrap program, the state and local from CISA being administered by FEMA. That's a 1 billion dollar four-year grant program. We are in year one of that which is 200 million minus overhead administrators, about 180 million dollars to be distributed to the States. The notice of funding opportunity came out in September. Applications from the States for due mid-November. Those applications are in, the States are now kind of storming and forming and doing their organizing. They will have to submit a plan. About 10 States have done that.

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Then we'll be prepared to provide 80% of those funds that each State gets to local governments in one way or another, and some of that may be through enterprise shared services rather than direct grants to the locals. Investments and broadband as I mentioned 65 billion a loan in

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Federal dollars and other States that are putting in tens of millions of their own funds into broadband, and again trying to look at certainly better, better data around that, and more consistent mapping across the States.

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And I know what all of you are interested in is the transition. So, 36 gubernatorial elections in 2022 resulted in 9 new governors, as of yesterday. All of them have been inaugurated. We also have 1,500 new legislators, so what are we going to expect?

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Let me do. A quick review of where we stand in terms of state CIO transitions. This is the end of 2022. So, it's at the end of the calendar year. You can see all those States where we had a State CIO transition 13, which is about typical around 10 to 11 transitions each year in a non-gubernatorial election year. And so we had a couple of folks that left early but again you can see where we stand in terms of the States that have new CIOs. At the end of 2022. A number of these were asked or interim. CIOs, almost note. So we're still dealing with the fall out of that.

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And then, of course, when you look at the new state CIOs that have come in since 2023, you see the 5 States that are highlighted, and we've got just actually last Friday notifications of permanent

CIOs being named in Vermont and Maryland with a new administration in Maryland a new one in Massachusetts, we'll see some change.

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We've had a few party flips, and so this may shake out more. But right now, this is where we stand in terms of this day in January, for the new CIOs, I would fully expect to see some additional changes, even within States that have not had an election where the incumbent was reelected, that often happens you see that situation here depicted in both Illinois and Kansas, where we have incumbent. CIOs that prevailed. But the State CIOs decided to step down early in January and pursue other interests.

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So again, we'll continue to monitor this, and you'll see some changes there and then let's quickly run through some of the comments from our state CIO survey in 2022 about kind of looking at the future over the next couple of years, and you can see the data that we've collected longitudinally since 2020 about the impact of the pandemic and some of the adjustments that have taken place. In 2020, there was a high focus on expanded work, remote work, use of collaboration platforms.

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They were number one, or number 2, and then you can see the shift that has occurred over time, and I think that's a reflection of some of the challenges that States had during the pandemic around digital services delivery the challenges around citizens using some of the online services finding them clunky, finding that streamline find that not really advantageous from a consumer perspective, and so high focus on improving the citizen experience.

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That's a major bone that this the whole CX experience was poor and a lot of states are focused on improving that And that's clearly top of mind for the State CIOs, along with increased investments in some of the legacy platforms that were exposed for their challenges during the pandemics.

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You see, it has moved up from Number 5 to Number 2, for the current forecast for the next couple of years. The same, we could look at the same thing around the CIO organizations and what they're doing. We've seen these evolving trends for several years. The movement from the standard kind of owner operator models.

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We described it too much more CIO or broker, and what CIOs are going to do. More consolidation of infrastructure and more use of software as a service, more use of cloud, more use of centralization of the project and portfolio management so this will continue see over half the States are focused on a number of those things, and I think a key part of this is application, modernization and just kind of rationalizing.

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The current application, portfolio that states have. That's particularly, I think, acute in some of the legacy modernization efforts is having a good inventory. Every application across the board having the CIO having visibility, and the agency applications that I'm making investment decisions based

on what they can triage really focused on that and so that's an important consideration for many states.

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You look at their application portfolio, and over half the States would describe that as legacy needing modernization. That's there, I think their aspiration is, they need to invest in those, and I mentioned workforce being the theme for 2023.

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Great quote from one of our state, CIOs, and our 2020 CIO survey that survey was actually titled.

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It is titled the People imperative on using the old kind of monitor, build people, not systems.

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Many CIOs have seen this as a critical component of their digital transmission is, they're going to have to focus on talent and getting the workforce component right and that kind of a huge issue.

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We've got a couple of examples here from the data around our number of questions in our survey around workforce.

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We've talked about compensation is always being a challenge.

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But if we, if we hold for compensation and basically ask the question, what actions could the States take?

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You can see that most of the CIOs want to focus on rescaling, and they want to talk about modernizing job titles and job descriptions that more closely aligned to the marketplace.

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Data Processing Specialist, one information technology specialist 2. These are common titles that are used in state government. They don't really mean anything to the marketplace. It's very difficult to attract, you know kind of young talent into that. With those types of titles increasing the road options came into the into the mix and courtly. That was an even discussed in 2019. So that's going to be a component of this and again, that's a challenge for many States is promoting the remote work from home and also working from other states.

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So, the borderless hiring is certainly a preference for some state CIOs, but it's very difficult to do that. Some of the things that the State CIOs are going to be targeting. And next couple of years, particularly around improving the process, but also trying to get some legislative relief on some of these constraints that don't allow them to have a flexible and modern workforce.

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And I just as one example of that when we cleared our State CIOs and asked about the major challenges and needing to demand for digital services, as you can see, that was a number 2 priority.

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That's something that they all aspire to do, in terms of improving the citizen experience.

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You can see two-thirds of them talked about the workforce skills and the capability concerns that they have to deliver.

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So, they don't have the requisite skills, capabilities, and disciplines within their state IT workforce to meet again that the vision they have for improving citizens experience.

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So that's something to keep in mind is that the states look at this. There's a number of things that they have to overcome, and certainly the primary one, as we see, is the capabilities of the of the workforce let's look a little bit at.

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That. Take a quick pivot here to cyber something obviously, that NASCIO talks about a lot, and that is the current cybersecurity posture as well as the adoption of cybersecurity frameworks and disciplines within the States and controls and everything the states are doing to try to constantly minimize the impact of adverse cybersecurity events.

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And what you'll see here, of course, in 2022, if you look at the comparison, over 2020.

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This is our biennial a survey of State Chief Information Security Officers 53 of those responded, remarkable response rates.

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It's a very long survey. Lots of data. So, I provided you just a couple of snapshots.

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You can see what are the major constraints, again around the legacy environment, but you know 3 of these have to do with inadequate availability of professional. Their staffing. They're concerned about the competencies of their own staff, but they're obviously concerned about the numbers. So, we have seen increases in funding our survey.

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Looked at that data and we have seen states that have actually been able to move the ball since 2020 and seen increases in a percentage available to cyber.

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So that's a very positive sign. And we've seen certainly a continuation of stronger governance models and articulating that, you know, cybersecurity is a business risk to state government, and that's they're getting more traction kind of explaining that to executive level of folks and the executive branch as well

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As legislators. Few changes here in terms of what are the cyber threats?

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Again. We've certainly seen a lot in the last couple of years around ransomware in the impact of ransomware.

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Or you see a little bit of an update there about the CISOs concern, but it remains again top of the list in terms of their cyber threats, and then phishing and farming, and all those other activities that are targeted to individuals who employees and contractors I think there's been a substantial effort on part of the States and their contractors to really work on the employee training and to do anti-phishing campaigns, and really focus on that, because that's a major gateway to the to the threat landscape is a phishing direct that at state employees and contractors. So, seeing a lot of emphasis on that among the State Chief Information Security officers and again, the other threats that you can see here have been pretty prominent for the last 5 or 6 years.

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It's just a constant movement up and down from the threat actors, both of domestic and foreign.

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We've seen a lot of increase, particularly in those foreign threat actors and they have they're constantly pushing out the disinformation campaigns around the public sector, that's something we have to have the village in about and then finally, in terms of what states are doing foundationally.

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You can see the 3 major buckets in terms of what they're focused on, and that is really their overarching cybersecurity strategy having an enterprise strategy for the executive branch, for cybersecurity, promoting again, I'm more consolidated and centralized organizational model for cyber multi-factor on multi-factor authentication.

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We have a number of states that have deployed multifactor solutions across the entire executive branch of State government, providing that to tens of thousands of employees, and they're also doing a risk assessments, and all of these will be supported by the cybersecurity program for the next several years a number of these elements are requirements in that particularly multi-factor and risk assessments.

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The cybersecurity strategy in the plan needs to be submitted to CISA for review.

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So, all 3 of these are prominent requirements in the Cybersecurity Grant program over the next 4 years so that States will be focused on these.

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You see some of the trends again, not surprisingly, cybersecurity, talent, crisis with recruitment, retention keeping those keeping that talent inside the state, getting to become more whole of state models, more organizational changes always monitoring remote work cause you've

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Increased the attack surface dramatically. The States can't do too much about the software supply chain risk at the moment that's a very complex area, but they're working with their providers, obviously, to make sure they have better forensics about their software supply chain.

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And then finally supporting local governments. This is something that Alan I've talked about for years, or what States are doing. What can they do? What should they do? A lot of conversation.

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That is a major component of the Cyber Security Grant program is the pastor grants to local governments and then working collaborative with them, having them part of the governance model and the planning committee, and getting inputs from them. So, in in that vein we did ask our CIOs in 2022 in our survey. What are the current services that are offered to local governments?

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And you can see the table here. The matrix of the wire variety of services, and then of course, the ones that were represented at the top with network services and data center hosting kind of the traditional infrastructure activities that you would expect these have been offered for many years by states.

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Cybersecurity services, assessments, those of all moved up of the list in recent years in terms of what States are offering to local governments.

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I think you see across the board in 2022, somewhat of a decline of those services that are being offered to local governments that represents probably less attractive take rates by some of the locals, and some of these areas that they invest in their own, their own services, their own infrastructure, including going to third parties and moving to that model where local governments are using more managed services, more outsource services and certainly Alan can speak to that. And then finally, what are the challenges? And you can see a lot of this has to do with just, you know, organizational understanding I think there continues to be less of an effort on marketing and education from theState side. That's something that we've really advocated for is the States need to take more of a role in getting the word out to the locals.

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But many states also say we don't have the authority.

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We don't have the requisite statutory authority to work closely with our local governments and provide these services, and we don't have enough funding to do that.

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So as some of the challenges that have to be overcome, we may see some more progress and collaboration with this grant program on how to do that more effectively, and any my final comments are just a wrap up of some of the major topics to watch for in 2023 I mentioned the cybersecurity grant. Still a lot of work to be done before the notice.

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The next guidance comes out for fiscal year 2023 and 2024 States will be focused on activities around the future workforce.

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We are working on a set of recommendations for the cyber workforce. A report that will come out probably in the next couple of months and looking at some of the things that States are doing, CIOs will be continually focused on reducing that diversity and complexity of their environment because they know that they're not going to get dramatically more funding.

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They may have more funding than they've had in the past with the current fiscal conditions, but that will always change.

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We're in a kind of a bright area right now, but States know that they always have to be prepared for the next downturn.

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And so with the operating model. What state CIOs they are always cautious about their major investments and being a little bit more conservative and I think one of those things is really focusing on how to rationalize their current environment is they look to capital expenses or capital dollars for additional expansion.

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So, one of the topics that came out of the pandemic was program integrity, benefits fraud, application fraud.

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So that's something that CIOs are hearing from legislative bodies, and State auditors is they got to work with their business partners in the agencies to improve program integrity.

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Perhaps rollout, identity, verification, enterprise-wide identity and access management solutions, and really promote anti-fraud, sharing data analytics, data, sharing around what's going on.

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And last point I'll make is we've seen a lot of interest in the last couple of years with privacy.

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We have states that are introduced new privacy legislation, a lot of that being volunteered after California's privacy legislation.

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So, we have that as being a hot legislative topic in the in the information technology area for 2023, we host the community of practice for the State chief privacy officers and get we're seeing a growth in that position as well, either reporting to the CIO or reporting to independently in some other unit in the executive branch.

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All of the data that I talked about in more depth and more details available on a NASCIO site on a resource page. All of this is available free to you. There are no pay walls. You could download this and look through this at your heart's content and put any other question that you might have in the chat. And so, Alan, that's a quick run by for me on the State side. So, to you to cover the local government landscape.

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**Alan Shark:** Right. Thanks, Doug. Let me get my slide deck back.

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I think what always amazes me or not is the fact that the issues that Doug is identified and things that we've identified really aligned, maybe, and a number 4 to 7 may very somewhat, but they are very much similar.

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So, for those of you, not as familiar with PTI, you know.

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We've been around for some 50 some odd years, I think 56.

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Formed a 1971, and our mission has always been to assist the cities and counties and townships in the country.

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And there are many of us, and it's very hard to necessarily say this represents a pure trend because of the pure variety of size of different organizations.

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So, I've tried my best with staff help and many of our members our executive committee, to kind of look at our digital crystal ball and look ahead.

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So, we do 2 studies a year. One is our State and County IT National survey.

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the other is our cyber survey.

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So, because they coincide at different times of the year.

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I'm going to share with you a little bit of both, and then share some overall results based on some focus groups that we've had when we did our last national study, the next one will come out probably in April.

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The Top City County, CIO technology priorities for the next 2 years, because there is a horizon here.

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It's more limited than a year.

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Obviously between NASCIO and PTI cybersecurity is number one.

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I suspect it'll be number one for years and years to come, but all the years we've been doing it it's always number one.

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But there's greater pressure, and it's related. All these issues are related is modernizing outdated IT systems.

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Much of this was exposed during the pandemic.

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There seems to be a renewal to look back at innovation.

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What it means to do things different. Look at process improvement, number 4 was launching or updating digital services for citizens. Again, hastened by the experience of the pandemic, and then migrating systems applications to the cloud.

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There are many reasons for it, and between this and the cyber study I think there is a trend that emerges that kind of trumps over that.

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That's very, very important, especially for those of you in the vendor community.

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Addressing integrating different systems, addressing data silos and streamlining procurement processes, and then still covid specific initiatives remain in terms of health care, knowing more about our citizens and more citizen facing tech technologies.

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So going back to December every year, I do a piece every month I do a piece from every city county magazine, and I did the 10 predictions.

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Now last year I did 12, and I did a recap, and most of the ones we identified last year basically came true this year.

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There's more uncertainty. So, the first one in terms of this year, and what we see cybersecurity is number one, cyber insurance in security is number 2.

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So, these 10 predictions are couched in an area of insecurity with some bits of hope and opportunity.

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But cyber insurance was something that has been looked upon over the years.

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Do we have to have it? Should we have it? We must have it? And now it's can we afford it? Can we even qualify? We're hearing many small local governments having to fill out forms it.

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2 years ago it might be 8 pages then it became 11 pages, one county executive told me.

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It's now something like 22 pages and filling out the form does not necessarily mean you're going to get cyber insurance.

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The other thing that's happened is now that the insurance companies have more of a track record of what they pay outs are then they naturally have to adjust to the market, and I'm not faulting them.

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And so, what they have done is they increased premiums.

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They've made it more difficult to qualify, and they decrease coverage, and that puts a tremendous burden back on local governments.

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So, there's a lot of cyber insurance insecurity forcing many to either forego it or to self-insure, or a combination of the two.

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Here's where they muni pools, where many states have these municipal pools can really help.

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Number 3, tech staffing and security continues. This has continued to move up the list 6 years ago.

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I don't believe, Doug, this was on your list, not at least in the top 10.

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About 6 years ago, 5 years ago, it started to emerge at the bottom.

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It's worked its way up this to some people at the local government level.

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Say, this is their number 2 problem, either cybersecurity being number one but related, is getting the staff, keeping the staff, providing the right incentives in little things like giving them the appropriate titles to give them something that is marketable, something that makes them feel better about what they're doing

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I'm always amazed how people continue to hold back and say, well, those are our civil service rules, and I say there's a difference between salary classifications and what the public sees.

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The enlightened organizations recognize that and are giving some flexibility.

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So not everything costs more but tech staffing and security continue, and that links us to Number 4. Manage service provider and security two fronts here on one hand, you're going to see that cloud computing continues to grow in local governments for a whole host of reasons.

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But that's kind of coupled with this MSP dilemma in that local governments who are unable to attract the and train the staff that they need are going to be turning more and more.

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This year and for years to come to MSPs. So, from an MSPs standpoint, that's good news. The bad news. There's a certain amount of reluctance. Who do we turn to? How do we know that they're going to do a better job that we could do? And what kind of cybersecurity protections can they offer?

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We've heard of a number of cases, one somewhat recently, where there was a supply, another supply chain issue where the local entity had no idea that their service provider was providing an update that had infected data and therefore their system was compromised.

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So, the good news is, we have organizations like StateRAMP, which I am a strong supporter of that is now going to be certifying a place to look for if you are StateRAMP approved certified, and there's different levels that gives someone a tool.

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I didn't have before, and then dialing back to Comptia, they're creating a trust mark, and there's something like 400 MSPs. Are on the waiting list.

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They are so excited to go through this and all these things map back to CSI controls.

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So, there is some help on the way. Number 5 is zero trust id management, insecurity.

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We still don't know where all our equipment is, and when we talk about asset management, people say boring.

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But this is important. We cannot manage what we don't know, and we don't know where it is, so we've got to move back to a zero-trust mentality not necessarily absolute, because that locks out some of the better features of our Internet today.

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And id management insecurity has to do with tightening up who has access to what access control is critical. And that's why zero-trust ID management go together. More needs to be done there. Customer facing technologies. Of course, the demand came from the pandemic that continues, and there's a people like it.

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They don't want that to go away, so they'll be more pressure to provide more services that are 24/7 and online. Augmented AI, and robotics, people say, oh, that's not really here, it is here.

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Our citizens are talking to Chatbots, and they are saving local governments money, filling in and augmenting deficiencies, or providing service on off hours, peak loads and on week weekends.

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This stuff is getting highly intelligent all the time. It's a little scary, but at this time in 2023 humans are still in charge.

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But we're relying more and more on office process automation helping us get rid of some of the more tedious tasks, maybe even dangerous tasks and assigning them to the machines.

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And so far, the machines have not complained so we'll see more of that.

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Blockchain for trust, you know, this is something that's been bobbling around for a while.

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I think Cook County was one of the first jurisdictions to actually develop blockchain on their own. In fact, it was homegrown, and they did it for their records and deeds office now, people are experimenting with databases, and possibly even elections, because people are distrustful and here is a way to make databases less alterable. I hate to use the word inalterable, but less alterable, in other words, safer, more secure. Blockchain as a matter of record, is here to stay, and I think it will be perfected.

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Broadband Access continues to grow, because when it comes to localities, we are the first in line to end interface with the public.

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I think the pandemic just highlighted what already existed, but it amplified it 10 times 100 times more.

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For students. It had to, you know, go to a parking lot. Maybe a library is if they were lucky to get broadband to help them complete their homework.

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So, broadband will continue, I think. Pew study about a year and a half ago, pulled a good sampling of Americans, saying, should broadband even be a utility and something like 75% said, yes, it is so important to our ability to communicate with our citizens and residents.

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And then number 10, data analytics will explode. We are expected to do more, and this couples with this smart city movement, which I've been part of in the early days.

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I know many people have traveled to Barcelona, and many people just came back from another such event, where smart cities really got its global name.

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I was there from one of the first ones. Data drives smart, intelligent applications.

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We're going to need to break down these data silos.

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We need more data governance, better data management. So, these are really the 10 predictions of where the focus of many of our CIOs will be.

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So, we held a focus group and they said, wait, there are 4 more.

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So, I said, okay, we will add them. System modernization, there is still a lot of old systems out there that need to be modernized and the need to be able to talk to each other.

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In some cases, this will force people to make a decision, are we near the end of life of our system?

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And if so, should we now move to the cloud? And the answer is probably.

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I think we're going to see much more cloud migration.

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And again, I repeat, many more people are going to have to turn to MSPs.

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Number 12, continuous business process improvement. It really is about process people and systems. We need to do a better job.

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Number 13 is digital transformation. Taking all those analog records, taking all these and outdated systems and turning them to something that makes more sense to the end. User including colleagues and other governments.

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Number 14, greater reliance and outside services. They just stress this over and over again. We no longer can do it alone. Many organizations lack the political will.

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Now this is the political part of local government to put more money into these things, and so they're going to have to figure out ways to reach out to others who might be able to offer the services at a higher level and possibly at a cost that is more sustainable.

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That takes us to our cybersecurity national study that just completed at the end of the year.

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So, this is more current than when I began this little presentation.

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Of course, the big question is your cyber security budget?

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How is it changed compared to last year? Well, most of it has increased, which is 70%. That is good news, in only 20% stayed the same. But 3% decrease. So, I guess we should be happy, for the higher numbers, and feel sorry for the 3%. But here we ask, is your cybersecurity budget adequate to support security and cloud initiatives? 63% said no. So, while spending has increased overall, there still is not enough based on the experts in the field to accomplish what they have mapped out.

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Then we asked an important question, because political support at the local level is very important.

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How engaged are your elected officials with regards to organizations, cybersecurity, efforts, in particular? The good news is 61% were very engaged. The bad news is that 19% were somewhat engaged, but 20% were not engaged at all.

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So, this is kind of a telling graph in the sense that gives you a sense.

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Of what CIO at the local level, is facing the kind of pressures to kind of argue for things when those the top is not involved, and perhaps don't realize the magnitude of the seriousness and the magnitude of not funding. What can happen in terms of information sharing and training you know is this working? And the answer is, 39% said excellent, 49% said fair, and 11% said, or so this gets back to, we have a problem.

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I think, with resource, sharing, and we have to do a better job of figuring out.

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How do we work more closely together with all these other units, including state government.

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That's one thing that Doug mentioned, and there's no disagreement here.

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We have advocated for closer cooperation, but it takes more than just desire.

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It takes a mandate. Many State CIOs have, you know, they're supporting the executive branch they don't have the staff, and I have talked to many, many state CIOs over the years, and it's not for lack

of not wanting to and there have been a number of cases at least in the cyber field where people have just done amazing work. They did it because, quote unquote, it was the right thing to do.

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So, I'm hoping that this 1 billion dollar grant, although I've been very critical, very critical because of the fact that there are four numbers that drive me nuts. There's a 4, a 7, and a 15. There are 4 core areas and 7 sub areas. And you have to touch 15 other areas from which to make sure your applications touch all the boxes to me.

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The shortcoming of the current round. Is that while what we see in the current rules, soon to be updated, is more of a focus on checking off the boxes, it is an example of best practices at its very best, and it is totally on the other hand, divorced from how local governments actually operate. So, there's a big delta here an enormous gap between how you have to go through the hoops.

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And how do you get what you really need? And so, this is something that I think is going to plague us for a while. My hope is, as Doug alluded to, at least the planning process is the right direction.

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The idea of the Federal Government is becoming more involved. Yes, but the focus has got to be whole of government.

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And a statewide hold of government effort that includes local governments I've proposed many times that every State should be broken into regions.

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There should be a regional coordination office under the CIO, CISO, and every State they can be put together differently, because every State operates somewhat differently, but at least set up a mechanism of governance that does not formally exist today unless we have those structures we're going to be going back, asking for more money, and I'm afraid too many are going to be totally left out.

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So, if we look at cyber security priorities for the next 2 years, it is cybersecurity, prevention loss.

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These dovetailed nicely with the earlier projections.

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Modernizing, innovating, updating digital services, migrating systems in applications to the cloud, addressing, integrating desperate systems, addressing the data, silos, streamlining procurement processes where they can and kind of dealing with the remaining covid type initiatives so with that we want to open this up to questions for those of you who are

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academics. I'm really proud that my latest textbook just came out this week, but it's a textbook.

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This is not a read, but if you have trouble sleeping at night, this might be for you.

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They available at Amazon, and then for those who want more, including this broadcast shark bytes is the podcast that I do that comes out every other week.

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So, at this point, if you dial into, come to your podcast you'll get to hear them in terms of lessons of tech leaders.

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So, with that we would love to entertain questions. We've left the bit of time. So, with that, let me stop sharing my screen. And here are the kind of questions that you might have. And if you could just put him in the chat area that would be most helpful.

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**Doug Robinson:** Alan, looks like you've got a question in the chat about the cloud migration.

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**Alan Shark:** There is a relationship. I guess I wasn't as clear.

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Yeah, thanks for that. Yeah. More people are moving to the cloud because of the economics. There are forces. One is economic, one is they're not feeling good about the replacement that's available. In many cases they don't have a choice. The kinds of applications are looking for are now only being offered on a subscription basis, and usually Cloud related.

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The second driving force is the idea of trying to find the right staff to maintain things on premise. And that's becoming a Challenge. So, you have that. So, these forces are forcing people into cloud migration. And hopefully, this will be a remedy for some of the legacy systems that can possibly be better addressed through more modern systems that reside elsewhere.

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**Doug Robinson:** Question, Chris on zero-trust. I can address that, at least from the State side. We're in the in early implementation. A couple of years ago, I think some States started down that journey a high degree of interest.

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Looking at what's going on zero- trust had a number of conversations with Federal Government, with the Federal CISO around the monitoring of zero-trust option. I think it is much more challenging at the State level, the Federal level, the requirements are adoption of the zero-trust framework within your domain.

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Within the Department of the Interior, within the Department of Agriculture, with State Government zero-Trust is going to begin enterprise across the executive branch of all the diversity of the stove pipes that you have so little bit more complex we do have a number of States that have embarked on a on a zero-trust framework adoption.

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Again, not a technology, but an approach. I think the key thing here for most States. If you look at the any of the persistent models, and some have more than 5, some have 7 or 8 kind of pillars, but the critical pillar is identity is identity and identity management. That's something the states are going to have to really wrestle with to get zero-trust across, you know all their different agencies is, how do we roll out a really robust, relying on identity and access management solution? So, we can be trusted, at least on at least on the individual side, for applications and data.

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**Alan Shark:** I see a question that kind of comes back to one of the things I mentioned about automation and automation first, for CIOs. Yeah, I think they are clearly looking at that, just like, you know, off the shelf software I think they're looking for ways in which to automate as much as they can.

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But you can say that, and I know many people, you know whether you call it digital transformation automation first, it still requires people, and it requires a very close relationship with the vendor community.

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I think the biggest shift that has occurred since the pandemic is the cooperation high level of cooperation between local governments. I am going to say State governments, too, and the vendor community.

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It has never been better. We have just been amazed and hardened by the amazing outpouring of cooperation during the pandemic from March 2020, it was just unbelievable where people were donating equipment training and the like that continues to this day up to a point. I mean, obviously, companies have to make a living.

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But it's going to require some partnerships. It's going to require educating. Many of the elected leaders, because we are very much dependent on people at the local level who very much in some cases do want to do more. But they say, quote either their hands are tied politically, or their hands are tied economically.

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It is a very difficult dilemma, and that's why I'm heartened on one hand about the cyber funding, because it is a first step into channeling money, 80% supposed to be designated for local governments, and a chunk of that 20% for rural areas. That's amazing. Is a step in the right direction.

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I think they're off to a bad start, in some ways, but you got to start somewhere, and you have to start with a planning process that to me is probably the strongest part in it, and just outlining all the things that people should be striving for. But if you focus on just checking off boxes you got to try.

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We have to be checking off people. We have to have a human network of the willing that's constantly in touch, which happens in some states, but not systematic organized manners. That's why I'm a strong advocate for cyber governance at the state level that includes local governments.

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**Doug Robinson:** Question on state government and local tracking successes.

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We have actually written a number of reports on state and local collaboration, and overcoming, as he's already mentioned, one of the most problematic areas is the governance and the other one is the funding and I think the funding simple because of the CEO business models. Overwhelmingly across the States, CIOs operated in a charge back feed of services to their agency customers, and in most cases more than two-thirds of the states that's 100% charged back. So, they don't have any additional supplemental funding. They don't have any. A general fund appropriation to provide for some flexibility to be able to do that so that's a constraint again back to Alan made the point about, they may desire to have that with the local governments, but they don't have the capability to do it financially or within their statutory authority.

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They be able to spend those dollars. But I think we've seen some really good examples in the cybersecurity space. A couple of years ago released a report called Stronger together with the National Governor Association and that outlines a series of steps that's states should take to collaborate better in the side of security space, and also highlights, with some use cases. States like Texas and Wisconsin, and others that have done a really good job of building that collaboration with their local communities. North Carolina is another good example. They have a standing group with their local governments around cybersecurity. So, they really embrace the whole of state model.

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So, there's lots of, I think lots of examples around there around the states that what they can do to assist with their with their local government counterparts, and have them as part of a collaborative effort and with that all of these things were done before. There was even an announcement of a Federal Grant program. So, these were being done in collaboration with the State, the local jurisdictions, without any additional funding from the from the Federal Government

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**Alan Shark:** Okay. I see, there's a question about office automation. I have a take on that.

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But do you want to take that one too.

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**Doug Robinson:** Yeah, I think the probably in terms of emerging technologies got a couple of the things going on in the states that are then driven by a pandemic experience. One is a much higher adoption and regard of robotic process automation, using bots using scripts. So, there's more of that going on. We have several states that have back to created centers of excellence for process automation.

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So, I see that becoming a core part of the CIO portfolio. So, I agree. I think that's an important component low code no code continues to get lots of attention in the States as a kind of an element of that.

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But I think you know, in terms of pure artificial intelligence. No, you know States, aren't there yet, but certainly in terms of routine process automation. I see that being a big part of that at discussion and again the question on the table for a lot of CIOs is, Are we the driving force for the agencies behind that? And some cases it's mixed where the agencies are actually bringing those to the to the State and CIO organization that's going to require more partnership. As you mentioned Alan with our private sector providers.

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**Alan Shark:** Yeah, you know, it's interesting. I hear often I did not know this existed or I did not know what to ask. And so when you look at the local government landscape, our guess is at 35% of most jurisdictions have 5 or less people operating all of IT, and many of them, it's a 2 person operation in some jurisdictions. It's totally outsourced with a county manager, a township manager, and that is probably more typical than not, and people don't realize that they just don't have the expertise.

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We did a survey a while back, and we asked how much time do you have to plan? And you know a simple little question like that. And the answers were all over the map, but mostly it was like 10%, 8%, a shockingly low number. The reason is, understand, they're doing everything they're wearing all these different hats being called upon, everything is an emergency, and that's why, in our certification courses we've added time management as a as an assist. But it's hard. And so, this is where organizations like NASCIO and PTI can help by at least showing demonstration projects, bringing new applications to the attention of our technology minded members. That's where associations can shine because others are so afraid to open the doors to vendors it's like, well, how do I know if I have this person in that I'm closing door on somebody else. No one's going to sell somebody else's product.

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So, they need to have an unbiased view of what's available in any area. What is possible. This is a huge leadership dilemma that faces local government, and that's why I'm hoping that if we have these regional kind of structures where people are talking together on a more routine basis with cyber is kind of the unified factor that brings everyone together that these discussions will happen,

and we can talk about scale. We can talk about maybe utilizing a state data center or using a larger county data center when you have a small town, it's already happening. But it's not happening enough.

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**Doug Robinson:** Yeah. Good. Good. Good. Points. Got a question here from Rock, about which I've actually had questions from some folks already in the media about the respect the government's attracting laid off tech workers. Anecdotally, not a lot.

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My kind of prognostication is, I don't see it happening simple because of the couple of things. One is the dramatic gaps in compensation between those workers, even though they're laid off. I think they're going to hang around and wait for something to rebound rather than go to the private public sector.

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We've certainly seen that happen in the past during turn 2008 and 2009, we had states that were flipping contractors, but they were already working for the states that are moving him into civil service position. So that's happened. Happened back in 2001 and 2002, with a lot of states, but then those are very small numbers. I think the other part of that, and it gets to the point of the difficulty of states trying to attract candidates, is that these folks are used to what I would consider to be a much more flexible work environment, both in terms of location as well as a scheduling.

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And that's something. As I say. You know you rarely find state government and flexibility in the same sentence, and so I think that's something that's really has to be impressed upon state leaders. I know the state HR and personnel executives, they understand that, but they're often their hands are tied often by their policies and administrative rules about what they can do. But if you look at the marketplace, the number one thing that most IT candidates want is that flexible work environment, scheduling and location, those are two things that our own data shows less than a quarter of the states are able to allow that in one way or a meaningful way or another.

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So that's the real rub. I don't. I don't see those folks being interested in the state government at this point.

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**Alan Shark:** And I think the same would be true for local government. Although I was at a Comptia meeting earlier today, and it was said that despite all these corporate layoffs that we're hearing about, which you know, certainly get a lot of attention most tech jobs today are in these smaller firms, and they are crying for people.

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So, my guess is that those who have been displaced are going to gravitate to the private sector. They may go to a smaller company, maybe get some stock options, get the flexibility they're looking for, because some of these smaller companies are geared to do that, and their last resort would be going to a local or state government as a result.

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**Doug Robinson:** Quick question here. When do you expect cyber grants will actually be available? I like that phrase, Steve, actually be available.

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Well, I mean you've got so the CISA has to review and approve the plans for the States that have been submitted. Number of States have already submitted their plans, so once they're approved, then they'll be obviously a cycle of disbursement for each of those states, and then each State administrative agency, the SAA, for each group which is not the client organization is not the CIO or State CISO. They will be responsible for making the determination. The State Committee will be the ones that determine how that process goes the states may determine that they are in fact, going to use funds to deliver enterprise, shared services in lieu of doing discrete past app they may be a mix of that.

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So, states are really working through that some states have determined that they are simply going to have an application process for the locals to apply for those dollars. Other States have said no, we're actually going to look at the opportunities here to deliver things like, we already have a cybersecurity training platform. We're going to make that available to our locals as part of this part of this grant program.

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So, they do have that option in lieu of option in the, in the bill, in the act that gives them the opportunity to so all those things will be determined. So, we're months away from real dollars, I think, being on the streets to the local governments in terms of their subrecipient status. So, it still be determined in every State, may approach it differently, but I think for the most part I see a hybrid for a lot of states where they will do a mix of. We're going to deliver, you know. X, and you know again, to my commentary, which is not a national policy position, my commentary is that the states and the locals really need to focus on assessing their environment before they start buying you know, bright shiny objects so that's my concern of the grant is that the local there needs to be an assessment program to assess the risk, do that risk assessment rather than simply having locals by technology. I think there's a lot there's a there's pretty big gap there. So, we'll help see how the States I work that out in in the political process.

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**Alan Shark:** And each State Committee is different. My great fear also, and I totally agree with Doug is that more money may go for local government, but not to local government. So, you know, for those looking to local governments to say, hey, I'm looking for this, as it may not happen, it may actually reside at the state, at this committee, whatever group they're forming, and my fear is that very little money will go to the locals, and maybe that's good.

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If they can't justify it. But my hope is I'm an optimist. I think they could do a very good job; you know they had a year to plan. We've been telling them thing. Plan ahead. What is your wish list and rational why and then prioritize. Shame on any local government that didn't take advantage of that

year, which is a very long wait but now we're going to see how this all shakes out and it's going to be very interesting.

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So, I think we're at a time, Doug.

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**Doug Robinson:** I think we are, sir. We had a little more time this year in this cycle to get to questions I know a lot of questions on broadband, and so certainly look at the NASCIO State CIO Survey, where we talk about the role of the CIO and broadband and funding, and some of the most important choices facing the States in that area. That is something that has really changed over the last 15 to 20 years in terms of the CIO role.

So, it's diminished pretty dramatically across the States.

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**Alan Shark:** So, it's great. Okay. Great. Yeah, I want to thank everyone. And I know there was some people who came in a couple of minutes late.

Yes, you will get a link to this as a recording. You'll get the transcript, the slide, whatever you need we want to get the word out. That's our job. And we love doing this. And if all goes as planned, we'll do our mid-year little chat that we usually do in July, and we actually allow more time for discussion right in that format. I wish everyone a Happy New Year as we proceed, and we'll see how close we are to the mark with the predictions that we have made Doug.

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**Doug Robinson:** Yes, yes, thank you, Alan. I want to thank everyone for you for your time today. We appreciate you joining us for this commentary always try to bring you as much valuable being information and insights as we can, and we know that that that that helps all of you in terms of addressing your needs with your particular governments or your customers in the public sector. So, we appreciate you tuning in and listen to us. Go on about all this. We have a good time. Okay.

00:58:41.000 --> 00:59:06.000

**Alan Shark:** We do, signing off from the Doug and Alan show until next time.