CIO – IT DEPARTMENT KPIs

At this 06.28.22 WebForum, *NOREX Members discussed metrics shared with Executive Leadership to show IT department's value, common KPIs tracked, performance-level KPIs tracked other than MTTA and MTTR, creating a balanced scorecard for infrastructure, help desk and application development, total tickets vs open tickets, measuring customer satisfaction rates, KPIs and data interpretations of security-related issues, key performance indicators to monitor with Managed Security Service Providers, monitoring the effectiveness of patching program, IT ROI, IT expenses, and identifying your cost breakdown.*

EXECUTIVE SUMMARY

On the topic of metrics shared with Executive Leadership and Board, an EVP / CIO struggles to find the right metrics to present. He finds the only time they pay attention is when something is wrong. He currently shares 1st-call resolution, set ones, and uptime, but still feels the boredom in the room. A CIO spends a great deal of time presenting information and metrics around cybersecurity to his board. He is also making an effort on portfolio management and is getting to where he can present on project execution. A CIO with a water and sewer authority presents a few primary metrics on a monthly basis to the board. With any active projects, he reports on-time budget and on-time schedule performance. He also reports help desk SLA performance rate. He does a quarterly report to the governance committee of the board on cybersecurity where he presents a custom metric of their threat level within the organization. They measure about 15 different things relative to cybersecurity, and those calculate an index that is shared with the board. A VP of Technology likes to keep it short and simple. He gets into cost because a lot of what they do is in Cloud resource consumption, both current and trending. This gives a good picture for budgets. He also presents a quick, high-level overview of the costs of turnover, retention rates, and open positions. There is a labor shortage, and it is affecting his organization. Showing the cost of that really gets the board involved with the dashboard when they start talking about the money going out the door daily.

When discussing disparate areas like infrastructure, help desk, and application development, a Member wondered how best to measure his own department. He questioned if other organizations had put together a balanced scorecard, just one piece of paper that brings it all together. An EVP / CIO stated that his team pulls together a daily dashboard. They have a daily operations meeting where they review a few key jobs. They look at yesterday's SevOne incidents and if there's anything that can be done to prevent those going forward. They also study performance indicators on the database and applications as well as the age of tickets. Tickets over 30 days old are subjected public scrutiny to prod staff to get those taken care of. An IT Manager with a manufacturing organization finds this to be an evolving process. He wishes to have a single pane of glass, Tableau being the choice. They do Cherwell so all of ITSM is coming in that way. The single pane of glass view is looking at an application level and at the different components for that application. They have a monthly review of specific KPIs that identify where their support teams are not doing well. He stressed that you need to make sure that whatever KPIs or metrics you have, the resolver groups, the groups towers, and the service owners are accountable and responsible for moving the needle on those items. You can come up with as many metrics and scorecards as you want, but if you don't get the backing of the people actually doing the work, it is not going to matter.

Additional headline topics:

- **KPIs and Data Interpretations** around security.
- **Comparing IT expenses** to revenue.

TABLE OF CONTENTS

Moderator: Welcome to today's session on CIO IT Department Key Performance Indicators discussion dedicated to our CEO or Senior Level IT leadership.

TOPIC: Metrics shared with Executive Leadership and Board

Moderator: What metrics do you share with the Executive Leadership and Board? What ones do you want them to learn about here? What are you collecting for them? It may be part of your CIO dashboard. We'll get into that in a bit, but Grant, is there something you were looking at specifically?

Grant A.: Some of the struggle that I have is to find the right metrics that they actually don't yawn when I present. And while they're concerned about uptime, the only time I really get their attention is when something is wrong, which is not the kind of attention that I really care to have from them. When I present various metrics it's like okay thanks, but let's get on to the real metrics of the business. Are there any gee whiz or exciting metrics that the board actually leans into or is interested in?

Moderator: Thank you, great explanation. I'm going to show a couple of screens here, like a CIO type dashboard. IT operations or ITSM ones, and then also those that are more related to projects or digital transformation KPIs. Are you talking about most of those Grant? I believe that we've got Roger on too.

CIO Dashboards for IT Operations / ITSM
(Uptime, downtime, maintenance events and costs, etc.)

CIO Dashboards for Digital Transformation KPIs
(ROI on s-ware investment, impact of projects on IT services, objectives met, deadlines, cost of projects, employee productivity indicators, revenue attributable to new digital investments)

Grant A.: I present first call resolution, set ones, uptime, a lot of metrics that I think are important to measuring our IT business and if we're doing a good job. It feels like boredom in the board room and when you present those. We're fortunate enough to where stability of our systems are really fantastic and that probably might be part of it, where if it was more challenging for the business they might have more interest in it.

Moderator: Got it. We'll be taking some polls today. I'm going to start one up while we also take some questions. Grant or Roger did you want to share anything?

Roger P.: From my perspective we have, over the course the last couple of years, I've spent a lot of time presenting information and metrics around cybersecurity certainly to our board, and they're interested in that aspect. And we also have been over the course of the last couple of years really making an effort on portfolio management and so some of the things around project execution we're just getting to the point where we can present on that. But I was really hoping to hear from maybe other leaders what they present to their boards and what their boards really show interest in and find value in learning about what the IT organization is producing.

Moderator: Thank you. I'm going to launch a poll too and then we're going to hear from Tom. ITSM-based KPIs. Just select all that apply for you and what you're reporting on. Go ahead Tom.

Tom K.: We present three primary metrics on a monthly basis to the board. On-time budget performance and on-time schedule performance for projects. Any active projects we're running we report on the percentage of on-time and on-budget. The third one is the help desk SLA performance rate. We also do a quarterly report to our governance committee of our board on cybersecurity where we present basically what is a custom metric of our threat level within the organization. We measure about 15 different things relative to cybersecurity, and those calculate an index that we share with the board on a quarterly basis on cybersecurity.

POLL: ITSM-based KPIs

IT Operations: Uptime	(34/63) 54%
IT Operations: Downtime / MTTA / MTTR	(16/63) 25%
IT Operations: Maintenance events	(14/63) 22%
IT Operations: Maintenance Costs	(8/63) 13%
Security: Incident rates	(26/63) 41%
Security: Incident response times	(13/63) 21%
Security: Average cost / incident	(0/63) 0%
Customer Service: Tech support calls & response times	(38/63) 60%
Customer Services: Customer satisfaction rates	(25/63) 40%
Other / NA	(19/63) 30%

Moderator: Thank you, Tom. Matthew shares quite a few in the chat as well. Security is kind of all of those rolled into cybersecurity on here. Security average cost per incident - that one wasn't selected. I'll share these results with you folks in a moment. Eric is looking for any opportunity, Tom, for you to share your security index calculation. Is that something you could share with the group? Cleansed of course.

Tom K.: I can share the spreadsheet that we use to do the calculation.

Moderator: Thank you we'll follow up with you. That's fantastic.

CHAT:

Matthew W.: IT when it works: What do we pay you for? IT when it doesn't work: WHY IS IT BROKEN?

Aaron A.: We started sharing out Rapid7 vulnerability management scores and the trends as they have been going down steadily since we started our VM program.

Matthew W.: We share Uptime, Phishing & Spam Metrics, Security Awareness Metrics, Ticket Metrics, and Vulnerability Metrics.

Eric R.: It would be good to get Tom's security index calculation.

Jim J.: Our board loves to get the list of phish-test clickers. ☺

Matthew W.: Average cost per incident - hopefully you don't have too many incidents that cost $$$ that you need a dashboard item for that on a monthly basis.

Grant A.: Amen Matthew!

Matthew W.: We usually give the board an overall of what's really important that we did, are doing, and are about to do. Things they care about and not some #s they have no idea what they mean. We're an accounting firm, so if you tell a bunch of accountant's #s that aren't financial they generally have no idea what it is.

Aaron A.: Have to agree. The board of C-Level doesn't usually care about IT or IS numbers (in my experience).

Buzz W.: Good morning, everybody. First off, I'm having terrible internet issues right now, so if I freeze or drop I'm sorry. Everything that I saw on the survey was pretty much operational metrics, and for a couple of conferences I've just recently been to, the theme seems to be *stop* showing the board operational metrics, because they get bored. It's like it doesn't do anything for them. Some things that we do - I'll give this as an example of types of things, not all-inclusive, but there's several companies out there like Recon, and they love sending your senior leaders. We just tested all these things and this is how you score. We do similar things similar to that so that they can take action with them. How are we at encryption? What's our benefit? How do we get better? How are we doing at phishing? How are we doing at email detection? Any of those types of things that we can rate. We give ourselves a score and then to be able to set an objective. Today we're at 80% effectiveness when it comes to the MITRE ATT&CK number four, because we use MITRE, and we have a whole program that comes out with that. The board says great, it looks like people in our industry are 90% or better. What do we need to do to get to that 90% mark? And then that leads into the discussions of what we need to upgrade this, or add this, or spin this, or things of that nature. Things that the board can take action on. We look at things that the board can then take action on that provokes them to think about and make a decision of how they want to address the current risk exposure that we have. And what can be done to decrease it. I only throw Recon out there, because if you look at Recon and you go to look at it they'll show you all these little things. It's a good way to start thinking about types of things to report to the board. Then like said we use MITRE. We picked that as one of our big pieces because it keeps current. It shows what the current threats are and how we manage up against them.

TOPIC: Dashboard Digital Transformation KPIs

Moderator: Thank you. I'm also going to launch this one, which I am calling a dashboard digital transformation KPIs which gets into the project stuff we mentioned and deadlines and it sets your ROI on software investments. Let's launch this poll and also go ahead and get more comments. We also have this next topic being very similar, showing IT Department's value to the organization, maybe not exactly to the board.

POLL: We report on / include the following digital transformation KPIs

KPI	Result
ROI on software investment(s)	(16/69) 23%
Impact of projects on IT services	(28/69) 41%
Objectives met	(38/69) 55%
Deadlines	(24/69) 35%
Costs of specific aspects of projects	(26/69) 38%
Employee productivity indicators	(10/69) 14%
Revenue attributable to new digital investments	(4/69) 6%
Other	(8/69) 12%
NA	(14/69) 20%

Eric R.: I think we're all struggling with this a bit. I totally agree with what one of the other gentleman said regarding it is a bit of a snooze fest, especially things like uptime where now 90+ percent of what we do is Software as a Service, so we're not really even responsible for that uptime. We can't control that uptime necessarily. What I've tried to do as of late is turn some of those metrics into cost analysis. We're a restaurant company. We have 750 restaurants, and if a restaurant is down for a period of time there's obviously dollars associated with an outage. Some are more easily calculable than others, and that's why I asked Tom about that security index. I mean we can throw out all the numbers as to how many phishing attacks and all those pieces. Their eyes just glaze over or they start to panic because there's those numbers can be really big but not necessarily meaningful if you got the right things in place. For me it's a balance of those two things and really trying to put a trend over time, not so much a point in time, to just show continued improvement. The standard metrics we've all talked about for help desk and first call resolution and all that stuff is great. But again, the board's not going to say oh, well based on your numbers, you need to go higher than more people. I think that's where I struggle is to try to tell a better story with the numbers.

Moderator: Eric, thank you. Ivan, your hand is raised.

Ivan G.: I like to keep it short and simple. I also like to get into cost because a lot of what we do is in the Cloud resource consumption, both current and trending. It gives a good picture for budgets. Just with the CFO and everyone else email protection scale, what percentage do we have a phishing attempt? Something else again with cost is turnover and retention rates. What you have within the department, just a quick high level overview. And then with any open positions what's the COV? What's the cost of vacancy that's hitting you per day? Based on those open positions, I don't know if anyone else is experiencing this of course, but labor shortage is a big deal and it's affecting us and showing the cost of that really gets people sort of involved with the dashboard when they start talking about those months that dollar. For me it's also a bias. We've migrated to SharePoint and we're very heavily in the SharePoint realm, and adoption rate for across our business unique visitors per day / week / month is to show our progress as the migration progresses. That's really just sort of what we do and a high level as quick as we can get through it to make sure that we keep the people engaged as much as possible.

TOPIC: Most common KPIs

Moderator: Ivan, thank you for that. I'm going to keep us moving. Roger, Mary, and Ben have this topic. I blended two together. We've been talking about KPIs. What are the most common KPIs other than the meantime to acknowledge or the meantime to recover, repair, respond, etc.? What are you tracking? Is there anything you want to hear that you're looking for more specifically?

Ben M.: Hi. Nothing specific just other than the two that I mentioned.

Roger P.: I think we've already touched on a number of them, but if there are other things that maybe these aren't being reported to the board, but what are some other important KPIs that people are tracking to measure performance of your organization?

Moderator: Bill says in the chat we share phish-click rates, network availability, and un-remediated critical vulnerabilities. Grant's got some in here too - operations support seems to be important to all of us internally. Project objectives, ROI, etc. Tom says unplanned outages. Thank you. Cost savings is one for us, Aaron mentions. We'll keep moving. How do you take disparate areas like infrastructure, help desk application development to recreate a balanced scorecard?

CHAT:

Matthew W.: We hire me (the CIO) to look at those #s and interpret them so they don't have to read a dashboard.

Grant A.: Interestingly, KPIs related to IT operations / support seem to be important to all of us internally. Projects, objectives, ROI and other "business" metrics seem to be more appealing to the Executive level.

Bill M.: We share phish-click rate, network availability, and un-remediated critical vulnerabilities.

Tom K.: Unplanned outages.

Greg M.: We report on results of phishing campaigns and cybersecurity training completion rates.

Aaron A.: Cost savings is one for us. The C-Level likes to see that we are trying to reduce our monthly IT spend / costs.

Sasha J.: Number of help desk tickets closed each week, number of laptops deployed.

Fred K.: Reliability metrics.

Buzz W.: We trend phishing clicks and fake application approval.

Tom K.: # of at risk devices (devices not patched/updated). We are also using Net Promoter Score for completed projects.

Eric R.: I don't think at any point I presented to the board on our IT service metrics. I look at those internal, how do we measure our own business and how we're doing. I certainly reported out how we are doing as an organization, but the numbers themselves not so much. But the genesis of this question was I'm in a unique area. Guest relations is also in IT for some reason. But even infrastructure, help desk application development. I want to be able to measure my own department less about the board, but I'm just curious if people have put together some sort of balanced scorecard taking application development. We don't do much development but they're certainly kind of bug tracking and on-time delivery and projects. And then there's the metrics we've all talked about with help desk and infrastructure. Does anybody put together just one piece of paper that brings it all together? Okay, well I guess people are in the same boat as I am that have not necessarily found a way to put it all together.

Grant A.: What my team has pulled together is a daily dashboard. They have a daily operations meeting where they review some key jobs daily. What time did they finish - because it's critical to the business of being able to operate. We look at of course what yesterday's SevOnes incidents were and if there's anything we can do to prevent those going forward. We look at performance indicators on the database and applications and that's part of the review. Then we look at age tickets, things that are over 30 days old, tickets that are aging. Whether you call it public shaming or whatnot, we call out where we see some aging tickets to prod people to get those taken care of.

Eric R.: I'm just curious from a CIO's perspective when you want to look at your entire organization of app development, infrastructure, help desk, does anybody have a single pane of glass or a report that they put together that puts it together in one place so that you can say where you stand as a department? Not on a daily basis but monthly, quarterly. As a full department, where you stand.

Moderator: That is some kind of a dynamic type of portal?

Eric R.: Well, again I'm not prescriptive on what it looks like. I would just think is there a way that would tell us that in infrastructure I've got these five metrics and they're all green. Again, I think it's almost as old as I have done balanced scorecards back in the day. You have to try to find a way to balance what is the important stuff that you're looking at there. That's where I was coming from here.

Moderator: You bet. Let's go to Ryan.

Ryan S.: Good morning. To what Greg was saying, we do a similar thing. Grant coordinates monthly business reviews with all of his direct reports through there. Obviously I oversee the infrastructure support side of the house. What I do is we consolidated all of our core KPIs and metrics from the help desk to the infrastructure side. We leverage Tableau - we're a Tableau shop. We brought all those into one cohesive report that updates and shows us our trends over time. We look for those anomalies. We stack on top of it our infrastructure availability, our network availability, all of our KPIs within the support side, and then we look for the correlations from within there. If Grant wants to look at a single pane of glass to see how we're doing, we speak to those incidents. We're also surfacing

up a lot of our incidents from PagerDuty where it shows all of our P1, P2, and P3s. We can dig into postmortems from there as well. We do have that single pane of glass and it can be tracked over time as well. That's on top of our daily stand up IT OPS (Operations) meetings that we do, which digs into really just what happened in the last 24 hours.

Tim S.: It's an evolving process. One of the things that we want to look at doing this next year here is to have a single pane of glass, Tableau being the choice. We do Cherwell so all of ITSM is coming in that way. But the single pane of glass view is looking at an application level and looking at all of those different components for that application. You can also call it our product. You can look at different pieces to that and how the health is doing. However, looking at a little bit different view is a monthly review in which we have specific KPIs that we've identified where our support teams are not doing well, some are doing better than others, but targeting these with a KPI that they can concentrate on raising the bar in those areas. Overall, what tends to happen is you got a watermelon, right? It's all green on the outside, but when you dig into it it's all red. I don't want to really concentrate on having a great looking one-pane-of-glass scorecard when I know there's just a hot fire mess going on below the scenes. I think you've got to look at the different levels to it. They have to match together, and you have to keep your eye on the ball. I agree we do a daily review of all the production issues that happened for like SevOnes to go through a review and we have a problem process. But it really comes back to making sure whatever KPIs you have, whatever metrics you have, the resolver groups, the groups towers, the service owners, whatever you want to call them have to be accountable and responsible for making that needle move on those items. You can come up with as many metrics and scorecards as you want, but if you don't get the backing of those people actually doing the work, it's not going to matter.

Moderator: Thank you. Great points, thank you. Let's go now to Fred.

Fred K.: We've adopted more of a product management philosophy. As such, we report on the viability of our products and how they're doing from that perspective. From an operations perspective, we also get the reliability of the products, a little different than an availability is what we report out. It's more about the user experience and understanding what that looks like for each of our products. That's what we report out to the board in terms of what the user experience is, associate that. Someone else mentioned net promoter score rates, and the different way of looking at that analysis. Reliability metrics are a way of internally tracking. A quick example would be like if your site is up but it takes two minutes to load a page, that's not a really good experience right? We want to make sure that we're meeting our objectives when it comes to the reliability of our products versus just the availability of our products.

TOPIC: Metrics on tickets

Moderator: Great points Fred, thank you. Ron is not on, I don't think. Server downtime - do you know why and when it happens? If he's not on, I'll keep us moving. We've been talking about some of the infrastructure stuff already. Roger's on. Total tickets versus open tickets - are you measuring ticket churn over time? And then also KPIs around stale tickets. I don't think Michael's on, but we could cover some of this. Why don't you go ahead Roger?

Roger P.: Pretty straightforward there. Are we tracking the number of tickets coming in? Are we tracking improvements on services that are being delivered? How are people viewing tickets as opposed to reducing tickets?

Tom K.: Yes, we measure the number of tickets that come in based on type and who. We also calculate the average time to close the ticket and compare that against our SLA depending on what

the nature of the ticket is. We also track tickets that are open past that SLA timeframe. As each ticket closes, we have a short survey where people score us on a scale of one to five. Anything that falls below four from a rating perspective goes directly to our Help Desk Manager for follow-up with the customer.

POLL: Total tickets, open tickets / KPIs around stale tickets

We measure ticket churn over time	(37/57) 65%
We have KPIs around stale tickets	(21/57) 37%
We utilize customer satisfaction surveys for tickets and...	(24/57) 42%
Other	(7/57) 12%
Not sure / NA	(11/57) 19%
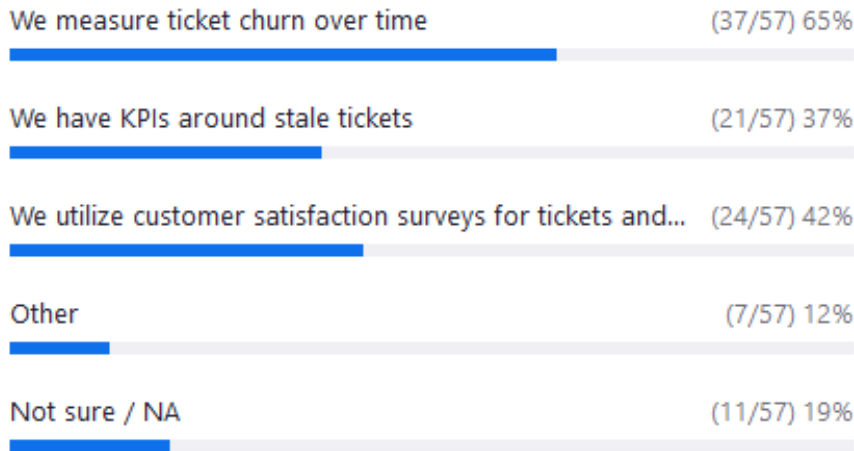
Tim S.: If you're leveraging an MSP vendor to do your basic operations work like we do. We have a couple issues, and that is you have an SLA on your ticket, P1, P2 - P4 and how long it should take. The vendors, at least in our case, push for basically looking at the work time that just goes towards our SLA if it goes into a pending status of I need the user information user to fill out something, I need the vendor to fill out something, third party, etc. Then it goes into pending and it doesn't count against the vendor. And then somehow gets lost in the system so they are saying hey, we're meeting our SLAs but hey look, we have all these aging tickets. We've removed that part where it says pending. We still watch it, but we remove that part. We say how long has a ticket been open from the time was open till it's resolved, and then come up with the averages for each one of those type of tickets. And then compare that against your SLAs that you really want for the different teams. We found out that probably a good two thirds of our tickets are over average. I did an average to prior year and then I did an average for current year, and then what all the open tickets are sitting out there. We noticed a couple things. We've slowed down in 2022 compared to 2021 ticket closure rates. We tend to have open tickets that have all of these anomalies where they're sitting open, they're in the queue, but they're like two years old. And they're skewing all the metrics on being able to get a good end result number. Really going back to that service owner and owning their queues and looking at in and holding their teams accountable, saying clean that stuff up. I'm using "stuff" with air quotes that we can get actual accurate information back and really know how well you are executing on your tickets.

CHAT:

Sasha J.: Jira stories running in 2 week sprints. Shows what's accomplished each two weeks.

Nikolas V.: Does the look and feel of the presentation of KPIs make a difference in Board engagement?

Michelle C.: Types of equipment in use as well as when it will need to be replaced.

Jamie B.: How regularly do you all change which metrics you are tracking and presenting? What are the triggers that cause you to drop some metric and start tracking something else?

Kristina G.: @Jamie, depends on the needs. @Eric, ServiceNow balanced scorecards.

Aaron A.: We have a Google Site where we publish the highlights / KPIs from each part of the IT Department.

Tommy W.: @Ryan, are you using Tableau as a BI dashboard for your metric?

Ryan S.: @Tommy, that is correct. The team pulls in all of the data into a Tableau dashboard which refresh at different intervals.

Scott S.: The important information that your BOD wants to see changes as soon as the next tech article comes out, the next publicized ransomware, or the problems at the other company they sit with. Be flexible.

Matthew W.: As someone who used to work for a MSP 7 years ago, we had a rule that a ticket couldn't sit waiting vendor unless they gave an update to the client DAILY.

Tom K.: We also track repeat calls from the same user.

Matthew W.: We track repeat users as well and sometimes that user gets remedial training if it's a training issue and not an IT issue.

Aaron A.: Our ticketing portal sends out a satisfaction survey after every 5 tickets for internal users receiving IT support.

Matthew W.: We have a survey in the bottom of every ticket. We also send a survey quarterly with Office 365 forms for overall service desk performance regardless if you opened a ticket or not.

Grady W.: What work request system do others use?

Kristina G.: We survey every ticket as well.

Moderator: Thank you, many great points there. And so many good chats. Roger, you good to keep moving?

Roger P.: Yep, thank you.

TOPIC: Customer satisfaction rates

Moderator: How do others measure internal / external customer satisfaction rates? How do others measure the ratio of the IT support staff to incidents, tickets, endpoints, etc.?

Scott E.: My question here is we do customer satisfaction. It's the simple, yes, no, were you satisfied or not. How do you measure that internally, externally? What's a good number, what's not a good number? The second question, is there a magic ratio or magic number that we need to be looking at to try to achieve?

Moderator: Thoughts on this one?

Tim S.: I'm very passionate about metrics and ITSM. We do a CSAT that after every ticket and that's tied to the ticket. We can link in any aspect between how that ticket was handled. I think the second point is probably a little bit harder to do and that is when you have multiple support teams working on tickets and they move between tickets. We do track all the different resolver groups that work on a ticket. You can't really like put your finger on where there's more than one vendor or more than one support team that is working on a ticket, whether they're the ones that caused all the problems in looking at what that area of issue is. If you have it down to there's only one team, one vendor that handles that ticket, yes, you can definitely dive into those support issues. But when there's multiple that's going to take a lot of analysis.

Moderator: Great point. Michael, nice chat here. Survey in the bottom of every ticket.

TOPIC: KPIs and Data Interpretations around Security

Moderator: KPIs and data interpretations around security. The next few topics relate more to security and what you report. We talked about cybersecurity and different things that were reported to the board. Nancy's not on, but Tim - anything you'd add here?

Tim S.: Right now we have really a completely separate security reporting versus everything else with ITSM reporting. It's just a big black box for us. What are some of the things that you've seen either coming in from the help desk or from other areas where it helps to have a little bit better coordination, to really see how things are happening or help resolve things faster?

Tom K.: We have an assessment process for all of our assets in our systems. When a threat comes in or patch comes in, we calculate the time to remediation at the device level. That's one of the metrics that's in our security index that we track. Within that index, we have the total number of assets that we manage and then the percentage of those that have been remediated. And it's part of that index calculation, but we do track based on the threat levels, specific patches, how long it takes to remediate those devices. Then we report those. They get reported out to me as part of that index as well. So that's one of the main things. We also participate in DHS's cyber hygiene program, and they do external penetration testing for us. They measure us against the portfolio companies that actually use that service, and we get a score relative to everyone in that group that gets that cyber hygiene process run against them. It tells you where you measure relative to the entire population. Those are two primary ones from a security perspective that we track.

Moderator: Thank you, and some great chats also where people are pushing out their insights on this question, thank you all. The next topic is Key Performance Indicators to monitor with your MSSPs, your security providers. Are there certain KPIs folks could share or anything from this perspective? Kopiha, good morning.

Kopiha N.: Good morning. I'm hoping to learn more than contribute, but yes, looking forward to the rest of the session.

Moderator: Your specific question on this one was MSSPs and KPIs for them. Does anyone have any insights here? A lot of great chats. Do they relate to the MSSP as well? Jill?

Jill K.: We don't really have any KPIs around this, but we do include ratings in our employee survey for MST.

Kopiha N.: Well that's a good way to do that. I guess we can do that with our IT staff because they are the ones who engage directly with the MSSP.

Moderator: And Christina shared BrightGauge dashboard and looked at some others. I'm going to keep us moving just due to the time and so many great questions. How are you measuring and monitoring the effectiveness of your patching program? More on this one Roger on how well you're patching? What's a good indicator? They may be obvious.

Roger P.: Looking to see how others are presenting that information. And I think I have a question that I submitted that might come up later as well about lead and lag measures. Is it percentage of devices under management, is it how quickly you're getting patches applied, are you looking at the cycle times from patch Tuesday? What are people doing and presenting around the effectiveness of your patching program?

Moderator: Got it. Go ahead Matthew.

Matthew W.: We use Rapid7 for vulnerability InsightVM and we use Ivanti security tools for patching Windows and Linux machines so everything's Red Hat. There's a bunch of dashboards in there, so what are the patches that went out? Did it fail on any machines and we had to re-hit them? Anything that's outstanding, because it's scanning the network constantly to see if there's any patches missed. That's Ivanti. Rapid7 has a nice dashboard they put together that has like machines that are missing patches and then it ranks them based on their criticality from the CVE score. They also do their own internal risk metrics based on what they've seen in the wild exploits because they own the Meta split company too and stuff like that. So we got a dashboard on both sides, from both our patch tool and the Rapid7 side. We know that we're missing stuff if our patch tool is showing it's patched for our vulnerability tool, which scans every six hours is saying hey, this is still out there.

CHAT:

Matthew W.: We use SysAid.

Scott E.: SolarWinds Service Desk.

Greg M.: We use Freshservice.

Aaron A.: ManageEngine ServiceDesk Plus Cloud.

Lance R.: We have scaled back reporting security and patch rate metrics to management. They really don't understand them and we find ourselves needing to explain patch release cycles over and over again to that audience. They just don't get that one month could have 3 patches released and another month 30+.

Bill M.: We use BitSight to get our external, internet visible security score (works like a credit score, based on vulns, systems exposed, etc.) This score could be used a trending metric over time for how the world views our org in the security / risk light.

Scott E.: BitSight and security scorecard are 2 services we use.

Eric R.: Great point @lance.

Matthew W.: We use Rapid7 MDR for security and SentinelOne for MDR on AV. I get the metrics on that through a dashboard and then also any incidents on other systems.

Kristina G.: Ours uses BrightGauge dashboard. We look at CSAT, ASA, aban rate.

Matthew W.: Check your vulnerability scanner agents and the patch dashboard of your patch tools.

Lance R.: Patch success rates out of SCCM works for us. We back-check with tenable to report on patches that have been available for 35+ days, but have not been applied.

Roger P.: We are also using Ivanti for endpoint management/patching.

Aaron A.: Rapid7 Vulnerability Management is the main way we measure how well we are doing with our patching.

Sasha J.: + 1 for Rapid7.

Greg Y.: We use Kenna to get a risk score and compare against our peers to measure out patching against vulnerabilities.

TOPIC: KPIs that impact behavioral changes

Moderator: Thanks Matthew. I know that Nancy is working on an incident, I believe, is what was mentioned by Tim. KPIs that most impact at driving behavioral changes. The most impact on that. Then she also has user experience besides a survey or feedback post. Comments here on most impact that driving behavioral change and then besides a survey or feedback post for user experience?

Tim S.: For example, just like I was saying, where I'm eliminating the time where it's pending on a ticket to looking at just the sheer length of time that has been driving behavior to shorten all of our tickets and to add more communication to the tickets back to the user. Any other things like that, just little "a-has" that you've seen.

Moderator: Thank you. Nikolas?

Nikolas V.: My experience with this in a prior role was more than it was based on the team, the buy-in that changed the behavior came from presenting it to the team and then saying okay what makes sense? In that case I think it's less applicable to this audience, but one of our SLAs was about first contact. The team had the worst first contact and we turned it around and became the best in the organization. It was really based on driving the team and figuring out what's something that meant to them and where did they think they could make a difference? I don't know if that really answers your question, though.

Tim S.: That's what I'm seeing more and more of.

Moderator: Thank you, great tip. Matthew says one of our biggest user experience impacts as users with crappy internet while working remote, so keeping track of that is an important KPI. Those bandwidth sensitive applications can do it. Ok, I'm going to keep us going. IT ROI - are there are easier ways to show value out of your service catalog? How profitable are your investments?

Grant A.: Just a comment on this. We've changed to a product organization as far as delivering our solutions go. That's different from basically keeping the lights on from an infrastructure perspective. Our business partners are really the ones that really have to demonstrate the ROI and justify that on a regular basis. If they want a new system, they have to justify. I always joke I don't need any system other than Jira to keep track of all the incidents. But other than that, a warehouse management

system or anything, that doesn't add value to it, and so, if they want it they need to justify it. Then a year later they need to measure that in fact it continues to demonstrate value.

TOPIC: Profitable IT Investments

Moderator: We're going to jump back to Ian's questions.

POLL: IT ROI: In general, our IT investments are very profitable

Strongly agree	(7/52) 13%
Agree	(12/52) 23%
Somewhat agree	(16/52) 31%
Somewhat disagree	(1/52) 2%
Disagree	(1/52) 2%
Not sure / NA	(15/52) 29%
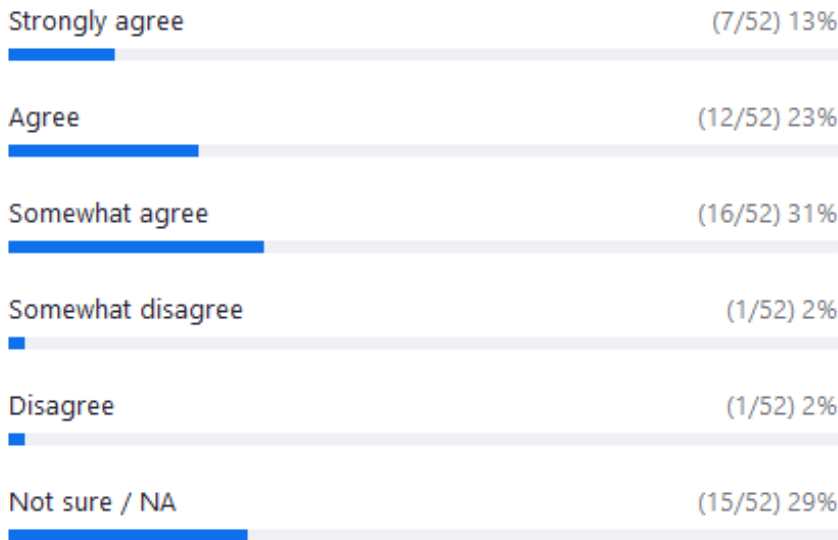
Moderator: Strongly agree and somewhat agree are dominating the most. Of course there's some not sure here, but a lot of folks taking the poll. Matthew mentioned talk to the vendor. They usually have a way to calculate it for you or give you tips.

Matthew W.: I'll chime in on that one. Anytime we do a major IT investment - we're an accounting firm so obviously they care about the ROI because it's all numbers to them. Usually the vendor has a metric of a way to calculate the ROI in my opinion. Like when we change phone systems or we change time and billing systems and we change ERP systems or stuff like that. I've been here seven years. Usually if you talk to the vendor they have a way to just look at these metrics, this is how to calculate the cost and stuff like that. Usually you have to get the vendor involved.

Tim S.: I'm actually going to speak towards an old company that I worked for that was a major healthcare equipment provider. I've presented a few projects to be approved, and it goes back to that ROI. It's like you have to run down and look at what that is. I worked for [name] Healthcare for a long time and from a standpoint of looking at what projects we're going to do, you had a hard and a soft ROI. Almost everything we do is a soft ROI, and I'm like well what's the difference? Being a bit on the green side of the fence of doing that PM work. They said well the hard ROI is when you come to us with a project I want the SSO IDs of the employees that are going to be displaced. And we're like hmm, I think we're more of a soft ROI on this.

CHAT:

Matthew W.: One of our biggest user experience impacts is users with crappy internet while working remote so keeping track of that is an important KPI because we have a lot of bandwidth sensitive SaaS apps.

Aaron A.: I find ROI hard to calculate with IT systems.

Matthew W.: RE: ROI - talk to the vendor they usually have a way to calculate it.

Eric R.: Agreed, especially with hardware replacement due to obsolete gear. While there is some cost reduction in downtime / repair it's hard to see a true ROI.

Jamie B.: For us, ROI is less relevant than cost-of-disruption mitigation.

TOPIC: Smaller Organization KPIs

Moderator: Thank you. I jumped back to Ian. For those companies on the smaller side today, what are the most used or top three KPIs for a 25 FTE division? What cadence to CIOs report out on KPIs? Want to add anything Ian? Who can relate to this size? Could be some talking offline too that we get coordinated.

Ian M.: We're not a big performance management shop. Just trying to establish some good KPIs for a smaller division and how often to report out.

Moderator: Anyone else on that size, that scale?

Eric R.: We're relatively small. We use a lot of outsourced support for help desk and network management. I've had a lot of third parties involved with our own department is about that size. I think the metrics that we were talking about earlier, it's what's most impactful to the business and what are the three things or five things, whatever it is that's most important to them. As we talked about, uptime in our restaurants is key, the ability to take transactions. The metrics that are unique to us will be different from somebody else. I think it's all about finding what the business thinks are the most important things to them and then report out accordingly, whether it's monthly or quarterly would be the way I'd go at it.

Moderator: Thank you Eric. Aaron shared for a small company, employee satisfaction relationships are a huge KPI that may be more a soft skill related one. More good points for you. Tickets per users, tickets aging, affecting production versus office. Okay. Do any CIOs report out on unstructured data? Do they set up workflow processes to capture the data in a structured fashion?

Ian M.: We looked into sentiment analysis, looking over some social media sites. I didn't know if anybody had worked in that space. We often get requests for dashboards where data is not stored yet. Do you just start reporting on them as fast as you can, or do you try to set up applications, develop stuff to really capture and store it properly?

Tim S.: Some of the new tools have some AI in the background that can start telling you that user sentiment. I know ServiceNow has that. We're using Cherwell and I think the later versions have that capability starting. But it's something completely new from our end.
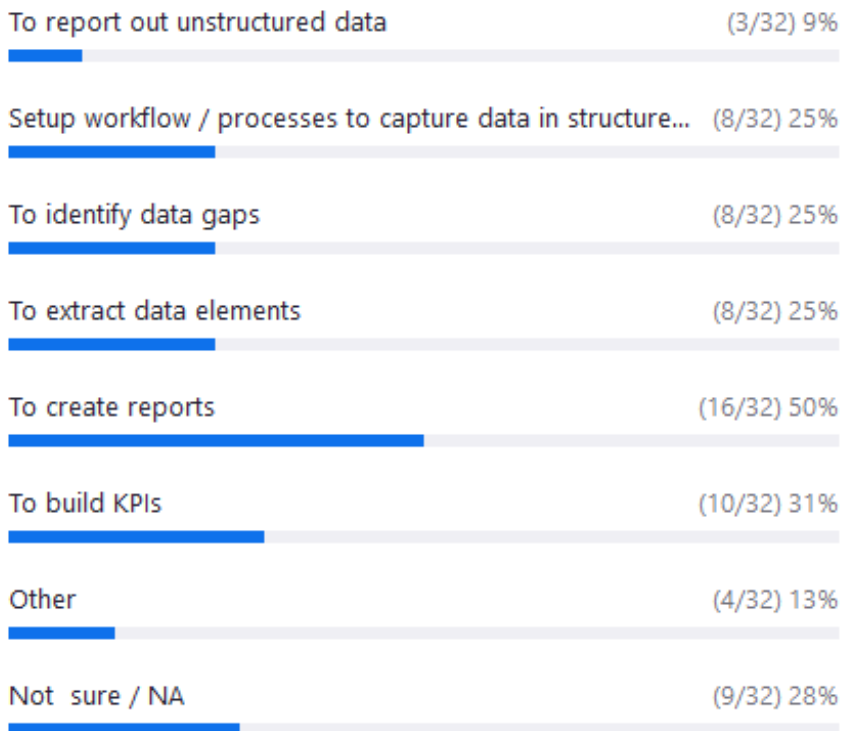
TOPIC: Data analytics and workflow

Moderator: I think this next topic relates as well. When you talk about data analytics program to help set up workflow, systems to capture the data, identify some gaps, extract data elements. Is that sort of on the same wavelength Ian and Grady? Creating reports?

Grady W.: We've tried this a couple different ways. We've had some third parties come and help us try to set up database connections to our EMRs and other things. And the data what we find is either we didn't capture it, we're not capturing it the same way everywhere. You start to really find out process problems, and then that leads to the fact that you can't get good data out sometimes. It's just the fact that we didn't have good capture on the front end. We've really struggled to find a partner who can help us truly build things out like productivity models, just general dashboards for our senior leaders for day-to-day operations and our board to show revenues, etc. We're a hospital, so electronic medical record, and our vendors just aren't real good at data analytics or data production for our business use. We do a lot of stuff to take care of patients, but to truly use that data for business operation decisions that's not their wheelhouse. I just didn't know if anybody found a good partner that you kind of bolted on and they help to build out these reporting models.

Moderator: Anyone else have some insights here? Have you found a third party or a resource to help with this? We took a poll on a combination of these two questions. I'll share those results.

POLL: We use data analytics for the following:

To report out unstructured data	(3/32) 9%
Setup workflow / processes to capture data in structure...	(8/32) 25%
To identify data gaps	(8/32) 25%
To extract data elements	(8/32) 25%
To create reports	(16/32) 50%
To build KPIs	(10/32) 31%
Other	(4/32) 13%
Not sure / NA	(9/32) 28%

Juliette S.: I just heard some of the questions and obviously reporting and data analytics is always a challenge. A lot of it will depend on obviously what ERP systems you're using and what your source of truth of your data is. But one partner that we have been looking at is a company called Board. It's a European company. They're actually built out quite a lot here United States and they're quite powerful particularly for the finance team, which is why our CFO love them. We haven't completed our implementation so I cannot tell you how great they are, but we were just purchased by a European company and they've used them, which is why we are using them. They were very successful. Whoever asked the question - I wasn't sure - you might want to take a look at Board.

Moderator: Thank you Juliette. Power BI is brought up. I know SAP was mentioned in the chat. How do others measure the investments in an ERP system per user? QuickSight's mentioned in the chat. I'll keep us going. If you want to add anything to the chat, please do so. How do you keep your budget
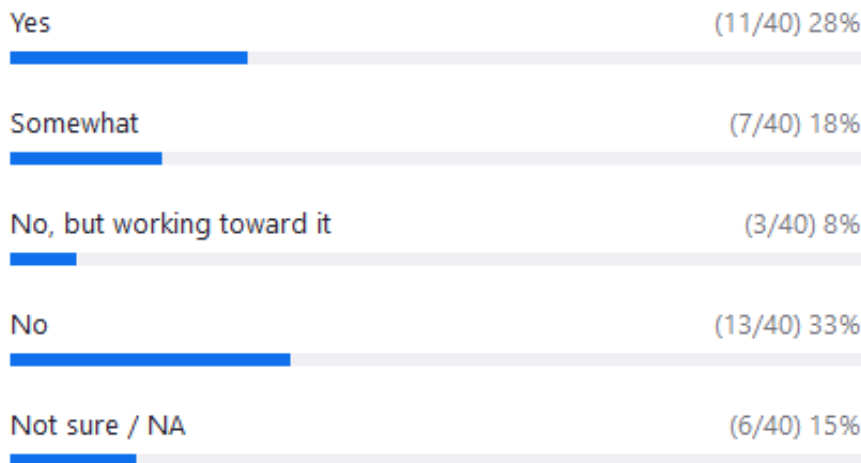
within limits? How efficiently do you deal with unexpected events? Anything you want to add here? Do you compare your IT expenses to your revenue, or are you able to identify your costs breakdown? I created a poll too on this.

Christina M.: Nothing to add. We're typically nonprofit because we're a housing authority. But we're also bifurcated because our funding from HUD continues to dwindle. We are actually now in the business of real estate development. We're trying to figure out how to do this. I do all the purchasing for all of our technology solutions, and I'm having a hard time trying to break it down better, if that's a good way to say it. It may not be the right word.

TOPIC: Comparing IT Expenses to Revenue

Moderator: A two-part poll with your questions on it as well. Yes and somewhat dominates for if you are comparing your IT expenses to your revenue.

POLL: Part ONE: Do you compare your IT expenses to your revenue?

Yes	(11/40) 28%
Somewhat	(7/40) 18%
No, but working toward it	(3/40) 8%
No	(13/40) 33%
Not sure / NA	(6/40) 15%

POLL: Part TWO: Are you able to identify your costs' breakdown?

Yes	(15/40) 38%
Somewhat	(13/40) 33%
No, but working towards it	(4/40) 10%
No	(2/40) 5%
Not sure / NA	(6/40) 15%
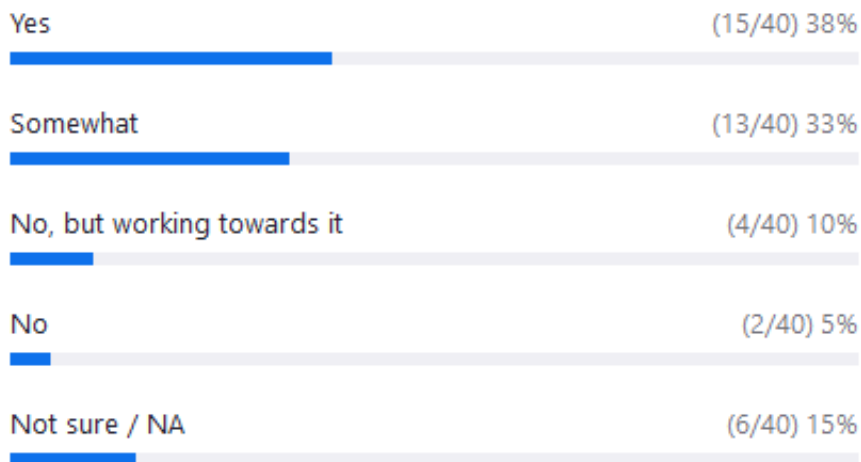
Grady W.: We are also a nonprofit hospital. I'm not asked to compare my expenses to revenue. I'm not sure if I can be helpful there. But identifying cost breakdown, are you referring to what your costs are for your hardware, software, service contracts? What is it you're trying to identify in your cost breakdown?

Christina M.: That's what they're starting to ask us to do, especially in terms of equipment. We have a lot of things that are in the flights, because you know how nonprofits are, they're very cheap. So they tend to wait until things are on their last leg which they are now. We're having a lot of expenditures that are high-ticket, $167,000 here, and $257,000 there. Now that we are bifurcated and we're actually building things, our spend is different because they're building. The newest development is going to be some level of a smart city, so I'm having to do things that we haven't had to do here before. I'm not lost, but I think I am lost because they haven't really identified what they're actually looking for, they meaning the board, and what they're looking for in terms of that.

Grady W.: I put my email address in the chat window Christina if you want to email me I can forward you some spreadsheets that I've used over the years, because I don't have a good budgeting system so that I can track things. I do it in like two or three spreadsheets. I'd be happy to go over that process with you if that helps.

Christina M.: That would be so helpful now that we're doing something different, because it's really hard now that we're actually in a business mode part of our company. Thank you so much!

Moderator: We love to see those live examples live during our discussions. We've got that noted and another one with Juliette as well. A good chat from Bryan. So the results from that poll I've shared. How about this - four disciplines of execution. What have others identified as both lead measures and lag measures for tracking KPIs for improvement in performance? Anyone on this? Should there be a different KPI focus for associations? Is Miranda on? I think we needed a little more insight on that one. How do others measure and track performance productivity across their teams? A lot of people jumped on this one.

Tim S.: We do two things. I run a service owner review monthly in which we actually compare all the KPIs across the teams. Every team presents their output or compliance to what we were looking for, and then there's a Senior Executive level report out shortly after that goes through the summary and every team presents at that also. It's holding them accountable and making sure that everybody is reviewing the same information and working on the same things at the same time.

Moderator: Thank you, great point. One last question - team attrition rate. This was brought up briefly, how people are managing to keep talented employees and how that impacts KPIs and the role of the CIO. Anyone want to share? Christina, how's it going for you?

Christina M.: Well done. We are starting to lose quite a few people. But I think our issue is more so our leadership continuing to vacillate too much in terms of whether they're going to keep the remote working, keep the hybrid, or go back to full time in the building. We're not honestly keeping people right now. We're losing them to companies that are remote first. I've voiced that. I actually manage the operations of the CIO's office. I have voiced that to our leadership. I think they're going to strongly consider keeping the remote and/or the hybrid format. I work in IT, I do work remote. It is unnecessary for me to have space in the building when we can dedicate it to our participants. We are using that as an argument.

Moderator: Can others chime in with comments for Christina and how you can relate to this one? Not many would be strangers to the fact that people may have liked the hybrid approach where it works for your type of industry. Any winning points to keep talented employees?

Juliette S.: Let them work remotely. I'd say it's a big problem and hybrid is a really good answer. As an executive you sometimes need to be with your people, but your people could be all over the country or all over the world, so you probably need to travel to those places. But you do need to have a hybrid work environment. Most of the communications are done via email and via Zoom and video anyway, so I find myself, sometimes in the office on Zoom which is crazy, right?

Nikolas V.: I think building relationships through weekly one-to-ones is a very helpful tool, I mean ultimately I think it's the relationship that helps drive retention. There's other factors certainly, like I bet I lose a lot of people who were vacillating between remote and in-person. But you can keep a person longer than you'd think just by having a decent quality relationship.

Tim S.: I think the hybrid is it. I mean my peers are all over the world. They are already at home when I'm in the office and we're all taking calls, or vice versa. I think it's just an easing of the mentality, the old school mentality needs to happen. But I also don't disagree with, especially for your boss who is in the same area going into the office a couple days a week meeting in person. There's a lot of value to that also. But does it have to be five days a week? No, it doesn't.

Moderator: Got it. Great points. A mindset change, mentioned by Sasha. Of course when it comes to recruitment your net is flowing out a lot farther if you do allow for remote work and you're not just looking in your own areas. Any final comments on team attrition rate?

Christina M.: I can say even though developing relationships is a good point, we have a lot of veterans. I mean 15 years, 17 years, 27 years, 28 years, 32 years, because we are government. Unfortunately for us I think it's the opposite. The fact that government tends to move slower, it tends not to be as innovative or cutting-edge. And now that we're forced to come back, I think the folks who have been there a long time are seeing wow all of these options are in the marketplace. I don't have to do this anymore. I'm trying to think of unique ways to pose to my boss we've got to change and we've got to change quickly. Because we're losing our I hate to say institutional because that word tends to have a negative connotation, but when you lose your institutional knowledge and you have a lot of newbies, it's really hard. Maybe that's what I was looking more for. I'm not sure if I was clear enough.

Moderator: Great points on what you're looking for and some great chats here too. Are there other government on that can relate here?

CHAT:

Aaron A.: For a small company, I think employee satisfaction and relationships are a huge KPI that may be more soft skill related.

Tim S.: Tickets per user (tickets / all user base). Ticket aging, # tickets affecting production vs. office.

Nikolas V.: I completely agree on the importance of soft skills in a small organization.

Jonathan D.: I think you have to have a good Data Governance structure in place with Data Stewards, etc.

Sasha J.: SAP.

Grant A.: Great discussion! I'm going to have to drop off for my next commitment.

Tom K.: We use Power BI extensively and have used Tallan to help us build a data management infrastructure in Azure that is the foundation for a number of operational dashboards. Thanks everyone for your input. Need to drop.

Kyle G.: Unfortunately we are looking forward to our Board contract to expiring. Converting everything to PBI over time.

Geris P.: QuickSight.

Juliette S.: Kyle, interesting to hear why?

Tim S.: Contact Sue G. She may be able to direct you to a good team.

Matthew W.: Our IT budget is roughly 4% of the net revenue and we track budgeted cost vs. actual cost.

Kyle G.: Happy to connect and discuss, Juliette.

Grady W.: Christina, Send me an email.

Bryan B.: Need to start by setting targets with OPEX, CAPEX and full expense (OPEX + capital depreciation). Expenses, particularly the larger ones belong as part of a plan.

Juliette S.: PBI is great. However you need to know what you are looking to do like anything else. PBI is great, I love Qlik the most in terms of the how the reporting is done. Decision support is important.

Nikolas V.: I have run and been a part of 4DX projects. They can be a very focusing tool. We used them for an OS upgrade process one year.

Juliette S.: @ kyle I will email you.

Bryan B.: Nikolas, did you integrate 4DX beyond just a singular focus, and more a part of IT organizational management?

Sasha J.: Mindset change within the old school leadership. Hybrid goes a long ways.

Juliette S.: Kyle, I emailed you.

Matthew W.: We can work from anywhere here so Hybrid is the way for us to go. Most new hires want remote a few days a week. The existing employees in the help desk want to work remote so we are letting them as well on a rotating schedule.

Bryan B.: I would caution organizations to avoid thinking that there is only one answer to way of working. Different organizations and different roles have different requirements. Traditional in-person approaches to management should not be one of them. Leaders need to be as innovative as they expect of their teams.

Daryl C.: Hi. I used to work in the government space. I used to work at the sewer district, and we faced the same challenges where our leadership refused to allow for flex work day or week. I ended up leaving for that simple reason. In fact, in the month of June I think we had close to 30 or 40 people leaving. Not only just Managers or Directors, but contributors. The CEO had to really look at it hard, because not only were you losing contributors, you are losing your team. The people there are supposed to help you achieve your goals. I would paint it in this picture, because when I first got to the sewer district before there was a flex week, I was from the private industry. I was taught IT can be anywhere. Whenever I asked about why people were not in the office, I would turn the question around on like, why do you think they need to be there? As long as they're hitting the metrics that we have set for our teams, as long as they're delivering projects online on time and on budget, why do you need to see them on a daily basis? That's how I was able to get away with it prior to COVID, because my Director at the time could not challenge those questions. That would be just my food for thought.

Moderator: Great points Daryl. I don't think that question and food for thought is going to go away. I think it seems to be growing when we listen to our membership. I want to thank everyone. Looking forward to hearing from you, seeing you and listening to you on another conversation in the near future.

End of discussion

Contributed Document:

CYBER RISK PROFILE TEMPLATE. This template displays common cyber risks and color codes the severity. 2 Pages (20-1183)

Products / Vendors / Technologies shared in this WebForum

4DX	ASA
Azure	BitSight
BrightGauge	CAPEX
Cherwell	CSAT
CVE score	dashboard
Digital transformation	Freshservice
InsightVM	ITSM
Ivanti	Kenna
ManageEngine	MDR
MITRE ATT&ck	OPEX
Patch	PBI
Power BI	Qlik
QuickSight	Rapid 7 MDR
SCCM	Security scorecard
SentenalOne	ServiceNow
SLA	SolarWinds
SysAid	Tallen
Vulnerabilities	

Appendix A: All Poll Results

ITSM-based KPIs

IT Operations: Uptime   (34/63) 54%

IT Operations: Downtime / MTTA / MTTR   (16/63) 25%

IT Operations: Maintenance events   (14/63) 22%

IT Operations: Maintenance Costs   (8/63) 13%

Security: Incident rates   (26/63) 41%

Security: Incident response times   (13/63) 21%

Security: Average cost / incident   (0/63) 0%

Customer Service: Tech support calls & response times   (38/63) 60%

Customer Services: Customer satisfaction rates   (25/63) 40%

Other / NA   (19/63) 30%

We report on / include the following digital transformation KPIs

ROI on software investment(s)	(16/69) 23%
Impact of projects on IT services	(28/69) 41%
Objectives met	(38/69) 55%
Deadlines	(24/69) 35%
Costs of specific aspects of projects	(26/69) 38%
Employee productivity indicators	(10/69) 14%
Revenue attributable to new digital investments	(4/69) 6%
Other	(8/69) 12%
NA	(14/69) 20%

Total tickets, open tickets / KPIs around stale tickets

We measure ticket churn over time	(37/57) 65%
We have KPIs around stale tickets	(21/57) 37%
We utilize customer satisfaction surveys for tickets and...	(24/57) 42%
Other	(7/57) 12%
Not sure / NA	(11/57) 19%

IT ROI: In general, our IT investments are very profitable

Strongly agree	(7/52) 13%
Agree	(12/52) 23%
Somewhat agree	(16/52) 31%
Somewhat disagree	(1/52) 2%
Disagree	(1/52) 2%
Not sure / NA	(15/52) 29%

We use data analytics for the following:

To report out unstructured data	(3/32) 9%
Setup workflow / processes to capture data in structure...	(8/32) 25%
To identify data gaps	(8/32) 25%
To extract data elements	(8/32) 25%
To create reports	(16/32) 50%
To build KPIs	(10/32) 31%
Other	(4/32) 13%
Not sure / NA	(9/32) 28%

Part ONE: Do you compare your IT expenses to your revenue?

Yes   (11/40) 28%

Somewhat   (7/40) 18%

No, but working toward it   (3/40) 8%

No   (13/40) 33%

Not sure / NA   (6/40) 15%

Part TWO: Are you able to identify your costs' breakdown?

Yes   (15/40) 38%

Somewhat   (13/40) 33%

No, but working towards it   (4/40) 10%

No   (2/40) 5%

Not sure / NA   (6/40) 15%