Erin Farley: Okay. Great. Good afternoon, everyone. My name is Erin Farley and I'm one of JRSA's research associates. For those of you who may be less familiar with JRSA, it stands for Justice Research and Statistics Association. And we are a national nonprofit organization dedicated to the use of research and analysis to inform criminal and juvenile justice decision-making. And we are comprised of a network of researchers and practitioners which, at the core, include directors and staff from state Statistical Analysis Centers.

Erin Farley: I would like to take a moment to thank our partners at the Bureau of Justice Statistics for helping make this webinar possible. And I would like to introduce our speakers today in our session. So the webinar today is titled Building a Foundation for Analytics. And speaking are Stefanie Lopez-Howard who is the Georgia SAC Director. Also speaking today is Joseph Hogans who's a Solutions Architect and Tasmia Alam who is a Visual Analytics Consultant. And both Joseph and Tasmia work in the Information Management and Analytics practice at Slalom.

Erin Farley: So with that, I welcome everybody to today's webinar. And I will get out of the way and pass the presentation over to Joseph. So passing the magic ball and you should see it any second now. Okay.

Stefanie Lopez-Howard: Great. So actually, this is Stefanie Lopez-Howard, the SAC Director in Georgia. I'm actually going to kick off the presentation. Those are our darling faces on the screen that you see there. I've had the pleasure of working with Slalom for a few years on this initiative and Joseph is the Solutions Architect who helped me come up with our strategy. So I am immensely thankful to him because before we started working with Slalom and really pinning down what exactly it is that I wanted, I was drowning in a sea of data and vendors and aimless ideas.

Stefanie Lopez-Howard: So what I want to go over today with Joseph and Tasmia is why does it matter to do first a business analysis piece to make a determination about how you're going to do data integration, data warehousing, visual analytics for your agency and so on and so forth. From there, Joseph will take over and talk about generally what the information strategy could potentially look like. Tasmia will do a pretty awesome whiz-bang presentation of Power BI which is where we landed for our visualization platform. And then we'll take questions.

Stefanie Lopez-Howard: So why now? One of the things that struck me when I did the presentation on data sharing at the JRSA Eastern Regional Training was that we all were talking in circles around some of the same stuff but we were kind of coming at it from different angles. And a lot of people were focused on how do I make this look pretty and shiny without necessarily thinking about or talking as much ... maybe they had thought about it. It's well-implemented but we weren't talking about it ... the guts behind the bright and shiny object. The bright and shiny object is the visualization tool. Right? We had a Tableau demonstration. Today, we're going to do a demonstration with Power BI. But none of that really matters or is all that useful if your data aren't organized in a way that makes sense.
Stefanie Lopez-Howard: And all of that comes from information management strategy and organization, whether it's a data vault or understanding, at the very least, all of the different sources you're going to connect to and how you present those. It really depends on what's going to work for your organization. But the foundation of all of that is information management strategy which Joseph is going to go over. And when I first started talking about data sharing and data warehousing and data integration, I started talking to a bunch of vendors who make it seem like you can just connect to a bunch of native systems and put together this beautiful dashboard that ultimately makes no sense when you actually turn over a lot of your data and tell them, "Yeah, sure. Give me a demo." So that really made me realize and step back to say, okay, I'm doing something wrong. Something is not making sense or either I'm not communicating myself well or they're not understanding what I want. But I need to figure out how do I tell people what I need.

Stefanie Lopez-Howard: So we engaged with Slalom Consulting first for the business analysis. What did I really want? What was I after? And Joseph really helped me figure that out. And he'll talk about that process in the business analysis piece. But the biggest thing that we really were after is how were we going to pay for this thing. Do we have resources in-house that we can leverage? And if so, how? So what is our current technology state at the Criminal Justice Coordinating Council or whichever organization you're in? How do we build it? What platform is it going to fit on? Are we talking about SQL server because we're a Microsoft shop? Are you an Oracle shop? Is it an Oracle platform and what does that look like? How do we sustain it? What am I going to use to pay for it now? What am I going to use to pay for it in the future? And who's going to use this thing? Is it just for me and my staff? Is it legislators? Is it other people in my organization? Who's going to be using the information that I'm going to be presenting?

Stefanie Lopez-Howard: All right, Joseph/ I think you're up unless I have one more slide. Nope. That's on you.

Joseph Hogans: Sure. So the summary is really what Stefanie just said. But coming out of this session is really three goals. One is to help you define the type of analytics needed to meet your organization's needs. The second, understanding what tools are out there ... As Stefanie said, there is no shortage of analytics and BI tools. But it's important to know how they fit together and which is best for you and understanding how they integrate, and then which can achieve your goal is kind of one of the key points we want to focus on.

Joseph Hogans: We call this Analytics as a Journey. Stefanie said many vendors will say that their product is a one size fits all. You procure some budget, go out, download the software and install it. And then all of a sudden, you have analytics. And it's really more of a journey than that. And part of the real work is defining where you are currently on that journey and then where you want to be.
Joseph Hogans: There's a quote here from Carly Fiorina. It says simply, "The goal is to turn data into information, and information into insight." For the most part, raw data is pretty cryptic. So the whole purpose of analytics and visualizations tools is to turn that raw data into information that has some type of value and then turning that information into insight which can drive some type of decision-making. And it's really that insight piece where analytics comes into play and that's kind of your end goal in your journey.

Joseph Hogans: For most organizations, they move from focusing on what we call descriptive analytics which is just past hindsight to prescriptive analytics which is future foresight. So if you look at the chart on the right-hand side of the slide, you'll see at the lower left corner we have what's called descriptive analytics. That's where most organizations start out at is what happened in the past, counting the number of events or occurrences, requires minimal technology investment and really, it provides minimal value. And this is what traditional business intelligence is focused on.

Joseph Hogans: For organizations that incorporate analytics are those that really move up this graph. So increasing in value and, of course, in difficulty, you move to diagnostic, predictive and what we call prescriptive. So diagnostic is why did it happen. So it's one thing to know what happened. The next step is to do some analysis to understand why it happened. And to do that, you have to go beyond your minimal technology investment. Maybe you're using Excel ... and asking that there's some integration processes to manage these data sets and identify any correlation. And we'll talk about some of the tools that are available for that.

Joseph Hogans: The next step in the journey is what we call predictive analytics. And so that goes a step further and talks about quantifying the likelihood of a future event. So we know what happened in the past. We have an idea why it happened. Now let's use that information to build some type of model that'll predict the probability of that event or occurrence happening in the future. And then the last step in the journey is what we call prescriptive analytics. So we know what happened. We have a good idea of what's going to happen in the future. How can we use this information to influence the future and change future behavior, future events? And that's really kind of the end of the journey.

Joseph Hogans: Now, it looks good to say that we're moving up this scale and we're going to end up to the upper right-hand corner. But not every organization needs to achieve that because as this kind of x-axis indicates, it is pretty difficult to go from hindsight to foresight. But we'll talk about the tools that are available out there to do that.

Joseph Hogans: And with that, we're going to have a quick Power BI demo. And then after that, Tasmia will kind of walk through how this Power BI dashboard incorporates the different components of analytics that we just talked about.
Tasmia Alam: All right. Thank you, Joseph. Let me pull up the report real quick. All right. So I made this Power BI report. I got the data off of the APD website. So this is all of the crime that happened in Atlanta in 2017. And we have it broken down by month. And then I made a few visualizations to sort of highlight how we can look into this data and how it can be useful. So here on the City of Atlanta map, we have all of the neighborhoods in Atlanta. So we can hover over them and sort of see what the crime frequency was per neighborhood. And the lighter colors are the places that there was less crime. And the darker colors are the ones where there was more crime. So specifically, we can see here in downtown Atlanta that there was the most crime because it's the darkest of the red.

Tasmia Alam: So if we click on Downtown, we can filter the entire page to just Downtown statistics. So this is useful specifically so we can see, oh, while there were 834 larceny from vehicle crimes in Downtown out of the 9,000 that happened over the entire year. So we can sort of look at a larger view of this frequency by crime and see what crimes were the most pop ... or not popular but the most frequent in downtown. If we go back to the report, we can also highlight this frequency by month graph and see sort of where the crime occurred the most. So in May, we have the biggest spike in crime whereas in some of the other months, we have a lesser crime. And that might just be because it's warmer out in Atlanta and that's sort of a insight that we can draw from some of this data.

Tasmia Alam: So if we go back and since we saw that all of this was particular to May, let's filter the whole page to May. And we can do that by clicking this May. And I have it set as a bookmark as well so we can move through it a little quicker. So now we see specifically what crimes happened in May. And from that 834 we saw earlier, we now see that 82 of them were in May. So now, another sort of interesting graph I made was this crime by hour. Crime by hour sort of shows us when the crime occurs the most. And we can sort of see where it drops early morning and then picks back up as it gets later in the day. And we sort of see maybe this is a better time to deploy more police officers versus maybe not so many around this time. And we'll be able to look at that more when we go into the sort of the crime analysis.

Tasmia Alam: The other piece is this little table that we have at the bottom which gives us a bigger detailed view and can see what date the crime happened, what time it happened, and then what type of crime. This also gives us the specific location of ... In future, if APD were to use this, they could sort of see which specific streets have the most crime and what types of crime happened in these sort of streets and sort of see what they can do to sort of prevent that in the future.

Tasmia Alam: So this is a basic overview of the City of Atlanta Crime Report. If we move to the next tab which is the Crime Analysis, we can sort of take a deeper dive into what this crime means. So here we have sort of little leading questions. Which neighborhood has the highest crime rate? And we can sort of see the bigger one's Downtown, Midtown, Old Fourth Ward. And then, when are the largest influxes in crime? So, here I took the top times of the day, the top one, two,
three, four, five, six times. And we see 8:00 PM is about the biggest influx of crime occurring. And then here, we can also see which crimes occur the most often. And just as we saw on the previous page, it's the larceny from vehicle.

Tasmia Alam: But what's interesting is if we were to click different neighborhoods, we can sort of see, for example, here at Lenox ... default tape ... all right. I'll just stick to my bookmarks. It looks like this is going a little slower. But if we filter, let's say, to Midtown, we can see where the crimes ... what Midtown crimes happen the most. And then, we can also get this KPI view of the crime rate. So here, we can sort of look at that frequency by crime again at midnight. And it's about 8:00 PM spike. If we go back to the report, we can also see a bigger view of the larceny from vehicle happening the most in Midtown.

Tasmia Alam: So to the left here on this page, I made sort of a how can we use this in the future and sort of predict what would happen. So here, we can pick from any of the neighborhoods. And we already have Midtown selected but we can select it again. And here, all of the neighborhoods are represented. But since we're looking at Midtown, we can sort of see we have a budget of $10,000. These numbers are sort of just made up by me but we can change them to whatever is useful when making the report. And the crime rate is 5%. So if we deployed one more additional officer, how would that affect the crime rate and how would that affect the budget? So the budget would go down to $2,000 and the crime percent would go down by .1%, So this could be useful for APD if they have a certain about of budget and they're trying to target higher crime areas. They can use some form of predictive analytics to sort of see how many officers they can deploy to reduce this crime rate and how will that affect their budget.

Tasmia Alam: So overall, this report can help Atlanta PD sort of figure out what they can do and where the biggest crime rates are and what the biggest types of crimes are and figure out what they can do from there. So if anyone has any questions, feel free to ask.

Joseph Hogans: I want to kind of point out some things. So the fact that, say, larceny from vehicle, X number of these occurrences happen at a certain time, that's what we would consider descriptive events. It's a straightforward what happened. The fact that there's some correlation between crime at a certain time and maybe the number of officers that were in that neighborhood at a certain time, that would be diagnostic. So that's integrating two different data sets to kind of figure out why something happened instead of just counting the number of crimes. You want to identity why it happened. Maybe to your point, we also had great weather data and we know that in May, temperatures increased. It was schools out and crime tends to happen more. So to go from just counting number of crimes to some type of insight, you have to integrate various data sets.

Joseph Hogans: In the last phase, what we call predictive analytics is really that slide or where you have additional officers deployed. To make that really valuable, you have to
come out with some type of statistical model that ties the crime to the number of officers. And that allows you to do this what if analysis. And then you tie in some budget information, maybe some cost of officers per hour to understand, all right, I can decrease crime by adding X number of officers. But that's also going to impact my budget. So for this amount, I can quantify what I expected the crime rate to decrease to. So it's a very nice visualization that tells a story. But I want to point out that it takes a lot of pre-work to get to the point where all these different data sets are integrated. And it's that pre-work that we're going to talk about for the next couple slides.

Tasmia Alam: Thank you, Joseph. And I'll hand the presentation back to you.

Joseph Hogans: All right. So let's talk about the different tools that you need to be aware of to get to the point where you can do prescriptive analytics. So when you're talking about analytics, there are really three main things you need to do. One is integrate and manage the data. So this is access data from various sources and integrate it into a single platform. In this case, it would be crime data, some police, maybe, time sheet data, weather data, information like that. The next step is analyze. So we have this data integrated in one place. Let's build out some type of model or do some type of analysis to identify any correlations. And the last step is probably the most important, that's to tell the story. You can do all the analysis in the world but if you're not able to communicate the results and the so what to your stakeholders, then it really doesn't matter. And we'll go through each of these three items.

Joseph Hogans: So data integration, when it comes to defining kind of what your data integration platform, there are three considerations, three key considerations. Number one, what are the various sources of data and who owns them? Is it very rare that your organization has all the data that's needed internally to do real analysis? So the first step is to identify kind of what are the different data sets that we think will be relevant to our analysis and figure out who owns the data set, and then what level of data is available. In the case of APD, this is publicly available information. Weather data is also publicly available information. Only thing that you probably have to reach out to some one for, and for this example would have been understanding what officers, number of officers deployed and the cost of Officer Alex.

Joseph Hogans: The second is what are your organization's stated governance policies. So many organizations don't have data governance policies. But you really need them, especially nowadays with so much concern around PII, data security, and hacking. Your policies will define how you manage PII, so information that identifies people or any health information. It will also guide you on whether you can use some newer cloud-based solutions or on-premise solutions. In general, cloud-based solutions tend to be cheaper. With on-premise, you have to have a big upfront investment. With cloud-based solutions, you pay as you use it. So instead of paying, let's say, $20,000 to buy database technology, I'm
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just going to pay a $100 a month for the first couple of months. And I can scale up as I use more of the data storage.

Joseph Hogans: Third, what technologies are already available? As Stefanie mentioned, if you’re a Microsoft shop and you have maybe some enterprise agreement with Microsoft, it might make sense to go with SQL Server as opposed to going with a Oracle solution. And you just have to kind of identify what your budget is and what technologies or technology agreements you already have available that you can leverage.

Joseph Hogans: On the right-hand side, we have some cloud platforms that you may have heard of, AWS is Amazon. Azure, Google Cloud, I point these out because, like I said, most cloud offerings are subscription-based. So instead of making a huge upfront investment, you can pay incrementally as you use the services per month. And then below that are some of the database options that are available. This is not an exhaustive list but these are kind of the popular ones or ones that people are most familiar with. Any questions about that before I go to the next step which is the analyze phase?

Joseph Hogans: All right. So let’s say we have our data integrated in one place. We’ve chosen a platform. That data’s sitting there. The next step is to actually look at the data and try to find some insights. So couple key considerations, understanding what level of reporting or analytics is expected by your stakeholders? And you know that by understanding what questions they’re going to ask. If you don’t know what questions are going to be asked, you don’t know what data’s necessary and you won’t know what level of analysis is needed to meet the expectation. Analytics is a pretty vague term. It can be anything from just counting the number of events. It can be coming up with some type of correlation. It can be coming up with some type of machine learning or statistical models. The questions your stakeholders are asking are really going to drive what level of analytics you need.

Joseph Hogans: What is the budget? So a lot of tools will require some upfront investment. Or if you don’t have that much of a budget, you can start out on a cloud platform where you only pay as you use the solution. So instead of making a huge investment in maybe SPSS, you can use some Azure services or AWS services where you just pay per minute for the actually process and power that you use. You also want to take a look at what technologies are already available, and then what skillsets? So even with all these great technologies, if you don’t have the knowledge within your organization or the right people, whether they be statisticians or data scientists, you’re going to have problems. So you definitely want to be aware of where your gaps are, your personnel’s ability to do real analytics.

Joseph Hogans: On the right-hand side, same cloud platforms and then some different analytics solutions, Azure Machine Learning. Amazon has something similar. All you may
have heard of is open source statistical analysis. SAS is definitely not open source but it's a big name in that arena also. And then, of course, IBM, SPSS.

Joseph Hogans: Another quote here from Steven Levitt says, "Data, I think, is one of the most powerful mechanisms for telling stories. I take a huge pile of data and I try to get it to tell stories." So let's assume that you have all of your data in one place. You've done some great analysis. What makes a good visualization good, great, as opposed to a regular one is how you communicate the information or how you tell the story that your analysis has found. And so there are many different analytics tools, many different visualizations tools. And key considerations are who is the audience. So is this just for internal analysis? Do you have external stakeholders? Are they policymakers and some type of government entity? Understanding whether your stakeholders are internal or external is very important because they're different pricing options depending on whether someone is internal to your organization or external.

Joseph Hogans: Also, we want to look at we call the personas of users. So there are some people that are just going to create content and there's some people that are just going to consume your content. And usually, the pricing structure for these different licenses are different based on these different personas. So you need to understand in your organization is it going to be one or two power users who distribute content to everyone else? Or do you want to enable everyone in your organization to create their own content from the different data sources that you've integrated together?

Joseph Hogans: Third consideration is how much of the necessary data integrations and analytics will be done by other tools. Some of the vendors in the visualizations space are really good at storytelling but their tools aren't good for integrating data, whereas other tools are really good at integrating data but the visualizations aren't as nice. So if you have the platform where you've done all the data integration work upstream and you just need a nice tool to tell a story, you may choose something different from an organization that isn't really integrating their data upstream and they need a visualization tool to help do that.

Joseph Hogans: And the last consideration here is what tools are already available. People who work in organizations that are Microsoft shops tend to lean towards Power BI which is a Microsoft tool. It's just important to be aware of what the learning curve may be for the people in your organization for the visualization tools you're considering. I'll take a moment there to stop and see if there are any questions before we move forward.

Stefanie Lopez-Howard: Hey, Joseph. This is Stef. I did want to add to the integration piece and the use of tools to integrate. So I will say this as someone who has fudged around, not necessarily a ton but enough with some tools trying to integrate different data sets that we work with using some of the integration capabilities like that Click has or even that Power BI has or whatever, and probably not any of the
translation tools or whatever. But if I have any advice to give ... and tell me if I'm wrong, Joseph. But I would say to the degree that you can integrate and do your transformation and set up a back-end integrated data warehouse or data vault that then you connect to, life is so much easier because ... and that requires .... and we can talk about it as the webinar progresses. That does require for you to have a developer and for you to have someone who knows how to do ETL, extract, transform load, scripting and all of that good stuff. But what you pay upfront to get it done will save you so much heartache on the backside because trying to do transformations and translations while you're also trying to build a visualization can be maddening.

Joseph Hogans: Yeah. I think you have a valid point there because even doing the visualization will be hard. But if you haven't integrated data upstream, you'll have five different people using the same tool, looking at the same data sets that will come up with different answers because they integrated the data themselves in a different way. So the good thing about doing the work upstream is there's less work for your end-users and you don't have to go through the cycles of identifying, well, how did you connect these data sets? And why is the way you did it different from the way that so and so did it and you all got completely different answers starting from the same data?

Joseph Hogans: All right. I will pass it to Tasmia to go into a little more detail about Power BI which is a tool that we had earlier for the sample.

Tasmia Alam: I guess. Yeah. All right. Thank you, Joseph. So a basic overview of Power BI, it's a part of the Microsoft suite and it was based off of the Excel-based add-ins Power Query and Power Pivot and Power View. And if you've used those, you know you build them off of the Excel sheets and you sort of have them sitting in your sheets. And you can integrate them within SharePoint. So Power BI sort of took some of those concepts and made it into its own visualization tool. So it was first released in 2015. And the nice thing about it is when it first came out, it was lacking a lot of features, but every month, they come out with an update. So they add in more features and they base it a lot off of the Power BI community. So if there's something you want to see, it's likely somebody else wants to see it and you can sort of search for it and vote for it. And that's how they decide what to add next.

Tasmia Alam: So with Power BI, you can add data management capabilities including data prep, discovery and visualizations. So the nice piece on that data prep is that even if your data hasn't been perfectly formatted or transformed, you can pull it into Power BI and make some of those changes yourself.

Tasmia Alam: Another thing is that it integrates with a lot of Microsoft tools. So PowerApps, Flow, you can embed Power BI into your own application that you've made in Visual Studio. And so that makes it pretty flexible.
Tasmia Alam: So next slide ... so a few things about Power BI, so the price point of Power BI is a lot lower than some of its competitors with a $10 per month per user entry fee. If you want to get the Pro license. Now, if you do want to get your entire enterprise onto Power BI, the price does go up. But for most people, the capabilities at the Pro level are all about they need. As I was talking about the data preparation, Power BI has its own little environment where you can do some data modeling and data prep. This is useful so that you don't have to do it in any other software and you can have it all within the desktop application.

Tasmia Alam: So Power BI also works seamlessly with all of the Microsoft suite including Azure. So you can connect to any of the data that you have up in your Azure web space. You can integrate Power BI into all of the Azure cloud services. And then the other part of Power BI is that it includes DirectQuery which then connects to live data and prevents any memory issues. And you can have a better interaction with your Power BI report.

Tasmia Alam: Good. So here are the three types of services that I was originally talking about. So the Basic view of Power BI, that one's free if you have a company email address. All you have to do ... and you can do this now or after this presentation is just sign up for Power BI, download it and you can have access to building any sort of report that you want. But downside to Basic is that although you can publish the report into your own space, you still have to have a license to share it with anybody else in your organization. You can email them the Power BI report that you made so that's a little bit of a workaround if you don't need an entire workspace. But Basic covers everything you need to start getting yourself into Power BI.

Tasmia Alam: So the Pro license is the one that I was also talking about where you can ... It's $10 per user per month and you can share everything you make. You can control your workspaces. So if you make a workspace that you only want certain people in, you can have that. And then you can have a separate workspace for other people. So you can sort of control who sees what. The Pro also allows you to have row-level security so you can keep your data pretty private and secure with that. And then the final tier of the Power BI service is Premium. So this is sort of enterprise licensing and the pricing depends per company. And basically, this is good for larger organizations that have company-wide Power BI needs and capabilities.

Tasmia Alam: So here's sort of the Power BI lifecycle. If you start at the left, you can see that you can connect hundreds of data sources. So in the little icons, you can sort of see SQL and cloud. If you can think of it, it most likely can connect to Power BI. One of the things, though, that Power BI is a little bit limited in is if you do have multiple data sources, you can't connect the same report to multiple data sources. So to get around that, you can definitely create your own views and format your data beforehand and get it into one sort of source. And then you can connect it into the Power BI service.
Tasmia Alam: So as you can see, once you connect to the Power BI service, you can use ... And this little gateway thing you see at the bottom is for Power BI Premium. And that's for your entire organization's data. And that is a higher, more ... I'm trying to think of the right word. But it's more extensive and it's not necessary building off reports and starting initial investigation into your data, basically. So from there, you can publish your Power BI report. You can access it via tablets, phones, and the web. You can also, if you don't want to have it online, you can have it on your desktop and you can see it from there as well.

Tasmia Alam: Is there another slide? And so that is basically the overall Power BI look and feel. And feel free to, if you have any questions in the future, you can always reach out to me. And I'm always available to answer anything you need. I'll hand it back to Joseph.

Joseph Hogans: Yes. Stefanie, you want to talk about the funding options?

Stefanie Lopez-Howard: Yeah. So how did we pay for this, meaning we at the State of Georgia? So we are part of the State Administering Agency. Right? And I think as many of you know and I have preached extensively because I in particular came out of the victim services world and I was for a hot second, a VOCA administrator, I ended up taking with me all of the reporting for VOCA, which bully for us because now there's a ton of VOCA paper stuff. But the discovery work that Slalom did which sounds like it would be a lot and very intensive, it wasn't. I mean, they're the most efficient humans on the planet. I'm convinced of it.

Stefanie Lopez-Howard: But the discovery work that they did was paid for with our State Justice Statistics grant. And specifically, we applied under the expanding access to statistical information where we have impact. So we applied for the funding there to do the discovery work. We actually did it over the course of two years. First and foremost, to figure out what our information management strategy was and how we could go about sharing data. We built a little SharePoint place that our partners could send data to if we wanted to receive data from external sources. And then in the second year, Joseph worked with us to figure out and catalog all of our internal data sources and what those look like and what our share dimensions were, and then help us arrive at a final solution for how we were going to build a data warehouse, what it was going to look like, and then what ultimately visualization tool we were going to use to present those data.

Stefanie Lopez-Howard: So now we're in the implementation phase of this. I have two contractors that I've hired. One of them is a business analyst slash programmer who is working on setting up the data warehouse and all of the infrastructure in Azure. We are an Office 365 shop so we have an enterprise agreement Joseph talked about. Whether or not your agency has an enterprise agreement ... So we have an enterprise agreement with Microsoft which means that we have Microsoft Office 365 in the cloud which gives us Azure for cloud storage which we're leveraging to build our data warehouse. So I've got a programmer slash business
analyst who is working on that. And then I have a developer and data architect actually mapping out what the data warehouse looks like.

Stefanie Lopez-Howard: And all of this is funded with various different sources based on the data source that I’m importing. So for the SAA, we manage all VOVA, all VAWA, [FASVOL 00:39:34], state domestic violence and sexual assault funding, all of victims compensation funding, Byrne JAG. You name most of the criminal justice funding sources formula or otherwise, we manage them. So we’re leveraging a lot of those funds to build the data warehouse and pay for the contractors’ time depending on which fund source it is that they are architecting or doing translations for.

Stefanie Lopez-Howard: I have been steadily chugging along building out my staff to be responsive to these needs. So right now, I am a party of eight hopefully going on 10 soon. And I have very strategically brought in people who have SQL programming, SQL server and ETL skills to be permanent staff on my team because somebody is going to have to babysit and continue to do translations with the data warehouse. And that person is going to have to live on my team. So they are paid for because we have access to all those different fund sources. They’re paid for with VOCA or VAWA or SAF or whatever it is. Based on the data that they’re working on, that’s the fund source that we use to pay for it. We have very little state money. As an organization largely ... and when I say state money, I mean state money for administrative overhead purposes, not for programmatic purposes like the domestic violence and sexual assault money or even our accountability court funds that are state-appropriated. We can only use that for programs. We can’t really use that for administrative stuff.

Stefanie Lopez-Howard: So there’s very little in terms of a state appropriation going into this endeavor. It’s really largely whichever federal fund source this is going to hit, that’s what we’re using to pay for that because ultimately, the people in my organization who are going to use this are grant managers, are victims compensation division, are grant specialists while they’re doing performance reviews or site visits. They can go and find and agency and look at their performance over time because all of those data are going to be in there. And external stakeholders, our hope is that we’ll have access for the Office of Planning and Budget within the State of Georgia so that they can readily go and look at, whether it’s accountability court measures that we produce for them on a regular basis or domestic violence or sexual assault measure that they request of us, that they can look at all of those different things and really be able to share the information that we have in-house that takes hours and hours and hours and hours to churn and produce into these static ad hoc reports into something that is way more dynamic and will hopefully save us a lot of time in the long run with staff.

Stefanie Lopez-Howard: I think at the JRSA Eastern Regional, we talked a lot about getting by with a little help from our friends and data sharing and what does that look like and building relationships. And one of the things that came out of my early and kind of well
thought out efforts at reaching out to agencies in Georgia like the Georgia Bureau of Investigation or the Department of Corrections and what was at the time the State Board of Pardons and Parole ... it still exists but all of the supervisory functions are now this new entity called the Department of Community Supervision ... is that people started to figure out what I wanted to do. And we are a justice reinvestment initiative state. And as we are winding down our justice reinvestment initiative grant, there’s this hanging chad question well, where are you going to put the performance measures? So the JRSA, you have to have performance measures up. And so Department of Community Supervision And Georgia Department of Corrections decided well, we know that Stefanie’s doing this data warehouse thing over there. Why are we going to do something from scratch at either one of our agencies? We’ll just put it over at CJCC.

Stefanie Lopez-Howard: So I wrote for money, for them to give us 200 grand out of the Council State Government subaward that was going to go to them. So we’re under contract with them to produce the JRI metrics and measures interfaces when our data warehouse ... because we already got ... we’re about half of the way there in terms of having the infrastructure set up, knowing what our integration points are, having some sense of how to do the discovery on this thing. So Slalom is going to help us do the discovery on that and set up our KPIs and so on. And then we’ve got my contractors who are already working on the database or on the data warehouse, I should say, do the data architecture and the actual implementation.

Stefanie Lopez-Howard: Sounds overwhelming and it's taken a very long time. And I guess that's the other, I guess, key takeaway that I would leave for folks is don't expect Rome to built in a day. It takes years. I've been working on this since my SJS 2015 award. So it’s not quick and easy but it is well worth the time and the investment for what I expect will be a pretty spectacular end product once we’re done with all of it.

Stefanie Lopez-Howard: Questions?

Erin Farley: Hi, Stefanie. This is Erin. I'm going to keep an eye on the chat box to see if any questions pop up. Jason, in the meantime, do you want to release the poll and give people a couple minutes if they want to ask a question? Begin. Okay.

Erin Farley: So Stefanie, you mentioned in the meantime, you mentioned you guys are [inaudible 00:46:15] in people staff-wise soon?

Stefanie Lopez-Howard: You cut out.

Erin Farley: Oh, I was just saying how you had mentioned you're expanding to 10 people for a staff at your agency?

Stefanie Lopez-Howard: Yeah.
Erin Farley: That's awesome.

Stefanie Lopez-Howard: And I would say that probably not quite half but a good percentage of them are going to be VOCA-funded.

Erin Farley: Oh, great.

Stefanie Lopez-Howard: The administrative dollars because manage the reporting ... So we do all of the PMT reporting for the VOCA administrator. For every single organization, we have over 250 some. So we collect the data, process it, and we submit it to the PMT to produce all kinds of reports and stuff for them around application time. We’re doing a wage analysis, for instance, of all their VOCA applications to help them figure out what’s a living wage in different regions throughout the state. We are going to be the DVAs for a new case management system that we are providing to the domestic violence and sexual assault centers throughout the state. And that DVA’s going to live in my shop because I am tired of getting crappy data. I have made a play and we’re going to get a database administrator position for that.

Stefanie Lopez-Howard: We manage all of the outcome performance measures for all of our victims services sub-recipient. So I've got a programmer that is 100% VOCA-funded that manages all of the data collection tools that we use for our victims services sub-grantees. I've got an analyst that analyzes all the data. Sandra, she will actually be at Colorado Springs. And then the DBA who's coming on, I'm hoping that I will get a second research analyst. We'll be posting for that soon because we have so many sub-grantees and so much data that really, a lot of the ongoing validation and kind of anomalies and all of that stuff we discover when we produce ad hoc reports ... And at that point, it's too late to go back to the agency to say, "Hey, why are you reporting that you served 200 Native Americans this quarter?"

Erin Farley: Oh, it looks like we have a question if you don't mind me interrupting real quick?

Stefanie Lopez-Howard: [crosstalk 00:48:47]

Erin Farley: The question is does Power BI work well with Alteryx? I hope I'm saying that right.

Tasmia Alam: So it depends on what you're trying to do but if you want to connect to Alteryx fro Power BI, you can do it.

Joseph Hogans: Yeah. And I've seen Alteryx kind of used as the ... If you're using Alteryx as a data integration tool, you usually use Alteryx to dump it somewhere. So whether you dump it into a flat file or to a database, and then you connect Power BI to that database is normally how I've seen that used.
But there is also an Alteryx plug-in where you can throw in a data source. There’s a macro, I think, where you can get a bunch of data. And then it’ll generate a Power BI report for you.

Great. Thank you. We only have a few more minutes left. So I also want to take this opportunity to just say thank you all for participating, Stefanie, Joseph, and Tasmia, and also, let everyone who’s participating know that JRSA is in the process of planning the agenda for the Eastern Regional Conference which is going to be in Georgia that was at a site that was volunteered by Stefanie. So that is awesome and we are very appreciative of that and looking forward to that conference. And so that's going to be December 5th to the 7th. And so we'll definitely be giving Stefanie and staff from the Georgia SAC the opportunity to talk more about research that they're doing. It sounds like there's a lot going on. So I'm looking forward to that. But we're working out the agenda right now. So if there's anything, that there's any SACs participating that are interested in participating, get involved in a session. Don't be shy. Reach out to me and we can see if we can put a session together for the conference.

But with that, is there any way that people can get in touch with you if they do have any additional questions after the webinar is over?

Yeah. So on the introduction slide, all of our email addresses and stuff [crosstalk 00:51:11]

Great.

Yeah.

Okay. Great. And yeah, and this will be available on our web page archives so people can go there to get that information and also re-watch it or share it with your friends and family. So, great. Well, I do want to thank everybody again, presenters and also the attendees. And I think that is it. So have a good afternoon and thank you all.

And don't be scared by our crime statistics. Our office is Downtown. It's a bright red spot on the map but I promise I'm here every single day [laughs] and it’s nothing to be afraid of. Totally fine.

Yeah [laughs]. Just lock your car doors. That's all.

Okay. Just lock your car door [crosstalk 00:52:06].

Yeah. All right. Thank you all again. Take care.

All right.

Bye.
Stefanie Lopez-Howard: Talk to you. Thanks.

Erin Farley: Bye.