

Analysis for Your Users: Why One Size Fits All is Not a Strategy for Success

Moderator: Hello and welcome to today's web seminar, titled, "Analysis for Your Users -- Why One Size Fits All is Not a Strategy for Success." In order to better leverage the investments in data and technology, IT departments are being called on to provide a broad range of analytic capabilities to business analysts, managers, and executives. During this afternoon's web seminar, our speakers will look at the breadth of analysis that can be used to drive greater value from an organization's data assets.

Joining us for today's presentation are Mark Smith of Ventana Research, Chris Framel of Albuquerque Water, and Mark Morton of IBM.

Before we get started, there are a couple of housekeeping notes I'd like to go over. We want to make this session as interactive as possible, so first of all, if you need any technical assistance please type your question into the questions box on the left-hand side of your [presentation] console and then click the "Submit" button.

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All lines have been placed into a listen-only mode during the presentation to prevent any background noise, so you will hear us, but we won't hear you. We do, however, encourage your questions at any time during today's event. To submit your question, simply type them into the questions box on the left-hand side of your screen and then click the "Submit" button. We will attempt to answer as many questions as possible during our question-answer session a little bit later in today's event.

I would now like to turn things over -- turn the call over to Mark Morton with IBM. Mark, please go ahead.

Mark Morton: Thank you, Eric. Good afternoon, everyone. The speakers today, as was said to you, will include Mark Smith of Ventana Research. Mark is CEO and CVP of the performance management research area and he's been an analyst at quite a number of organizations for more than 20 years now.

We're also joined -- very pleased to be joined by Chris Framel from the City of Albuquerque Water Authority and he's a long-time Cognos user since 1998, an IT manager today; he's also worked for a number of organizations in IT auditing, accounting, and as an applications manager.

I'll be your host today. I'm Mark Morton with IBM.

Without further ado I want to pass first to Mark Smith. Mark, take it away, please.

Mark Smith: Great, thanks so much, Mark, and I'm glad to be here today to talk about a really important discussion point in organizations today, which is around the styles analysis for providing true business intelligence. It is clear that in organizations today that we've got to do a better job of placing the right kinds of analysis and information to a wide range of both business users and also to IT to work together to meet the aims of what business intelligence is all about. The discussion points around analytics and the needs of helping organizations get better technology and tool sets to support the improving maturity of our individuals on understanding of the organization and processes is all what I'm going to be discussing today.

As we look of the style of analysis in organizations, though, we also have to realize that organizations must also look at how to adapt and support different kinds of roles and also different types of generations of users. As we all look at that, we've got to think about what we are -- aim to accomplish in regards to this important mandate.

As organizations look at how to improve their analysis capabilities, there's a range of requirements that are necessary to drive improvement. No matter if it's making improvements across our strategies and our plans, to our goals and our initiatives, to metrics and then to results, it is clear the organizations realize that time is an important asset, and that we must provide information in the right form, so that decisions and actions can be taken much more swiftly than ever before. It is clear that -- as we look to accomplish this we have to also understand that having a common set of technology that can adapt and meet the different kinds of analysis requirements is really up to all of us to work together and to drive improvements to our current efforts.

Now we must realize also that as part of this that we have to focus on how our organizations can adapt and support the change that's so important to organizations' success. As each individual in an organization have roles and responsibilities that they're held accountable for, we've got to make sure that these organizations have -- and these individuals have -- the information to be able to not just take actions, but coordinate and drive change in a synchronized manner across the organization.

What I mean by that is that in many organizations we are working with dozens of different toolsets, many different copies of data, and we don't have the same set of data or the same tools to collaborate and coordinate our efforts. Our research has found that only 9% of organizations are very well coordinated in driving changes in the organization. In fact, over a third do a really bad job in coordinating. Then there's about half that are mediocre.

We've got a lot of room for improvement to ensure that the kinds of technology and information that we use is actually examined, so that we can actually drive improvements and so that we can coordinate, because organizations don't just operate by individuals operating independently, they operate as part of a broader framework of processes and initiatives and goals that are set out to drive improvements.

To accomplish this, though, the organizations realize that we've got to get back to some of the pragmatic basics of what analysis is all about -- analytics. Analytics, as we see it at Ventana Research, is really the science and technology that applies mathematical computations and models to generate relevant historical and predictive information that can be used to optimize both our business and operational management and individual processes.

This might sound complicated, but analytics is all about taking the analysis that we do in an organization and driving some routine and some rigor to that, and then driving that consistently across the organization. It also means that we've got to have a common set of tools that we can also use to actually perform these calculations, just as we need to make sure that we have high-quality sets of data that we're actually applying these computations to as well.

For many new organizations, analytics is discussed as a set of business tools; for others, it's about the computations that are done within the tools and within our underlying data infrastructure. They all have to work together, frankly, for us to be successful.

But what's really holding us back from reaching that success? As we've found in our research and in our clients that there continues to be a significant amount of use of personal spreadsheets. Many organizations think they're free but they're not, because personal spreadsheets where we all copy and paste our data, put it into our own worksheets, and then send it around via email, store them on our hard disks and such, actually has potential errors that have been and will continue to be an issue in organizations.

In fact, in research that we did around decision-making and performance management, in the analysis, we found that major errors in spreadsheets are found in 48% of organizations. Those are major errors, not minor errors, and these major errors are either found frequently or less frequently. Frankly, any potential error that actually is major is a significant issue for organizations because that error could be important by itself, but it also could be compounded to be a much larger issue as that data that has errors in it is used for other kinds of analysis and is deriving sets of metrics or key performance indicators as part of that analysis.

We have to realize that spreadsheets as stand-alone spreadsheets really need to be eradicated, and we need to look at integrating spreadsheets into what we call enterprise spreadsheets so that if we're going to use spreadsheets in the front end as part of our analysis, we then -- we integrate them into our enterprise BI platforms and into our data so that they are actually using consistent data and then actually it's being safely secured as well. For many organizations, they've begun down this journey, and frankly the technology putting spreadsheets in front of our enterprise systems has been available for well over a decade. and organizations should take note and drive improvements to these efforts.

Now as we look at what we have to do to actually take these analysis capabilities and these analytics to expand business intelligence, we also need to look at what are the kinds of capabilities that we need to have available for the different kinds of roles and generations of users within our organizations. No matter if you're in public sector or you're in the retail or manufacturing, no matter if you're a line of business VP or a line of business data analyst, there needs to be a set of capabilities to support the kinds of stylized analysis that are important for you in where you need to use data as part of your strategic asset and make decisions on it.

As we see these kinds of capabilities, they could range from forecasting, alerting, search, drilling and pivoting, doing what-if, doing root cause analysis, cause and effect, correlations, modeling -- all these kinds of capabilities are necessary and can be brought together into different kinds of role-based access to these tools so that you don't overwhelm particular users who may just want to be able to click on information within a dashboard, compared to analysts, who may have to do a range of analytics functions and may even actually have to do some predictive analytics. Of course, all this should be able to leverage the computational capability of our underlying data and be able to use it as part of overall information management efforts within our organizations.

Of course, part of using the styles analysis is leveraging and harvesting the investments we've made in our data across our ERP, CRM, no matter if it's custom applications and even data that may come across the Internet as well. All these kinds of capabilities should be considered as you start to do some requirements analysis on what's important for your users and your organization.

Now as we look at what is necessary for analysis and decision-making, we've found some pretty important elements for you to consider as you look at what are the styles of analysis that may be necessary for your organization. The research we did around decision-making and analysis actually looked at what kinds of needs, capabilities, are important for management and doing analysis and making decisions.

Frankly, the top five results that came from the research were that management needs to be able to perform quick analysis review. They may need to see something that they want to be able to interact with. It may be drilling or pivoting, it may be setting an alert, may be forwarding a notation for somebody else to look at it, but doing this quick analysis and review is really important, because it's the number one response that we found in our research.

Of course, reviewing up-to-date metrics because people want to come in and see what's changed. So as we look at metrics that may have the up-to-date information from the daily data processing, maybe it's the weekly processing, we want to look at how things may have changed and how those impact our key performance indicators. That was the second-highest response.

The third was looking at the impact of potential changes. Management always needs to look at what if I change this, what will happen, and understand what those things might

be. Then it was followed by implementing changes, and then followed by communicating issues and then what changes are being made.

These are all the kinds of capabilities that people are looking at simplifying how management can interact with data and have the ability to very quickly have technology that meets those needs. These are not the kinds of things that you find as standard sets of functionality inside your typical spreadsheet or presentation or email. They come from dedicated business intelligence tools and analytics that are form-fit for the kinds of styles analysis that you might have in your organization.

Now the other thing that we found, which was looking at what are the most important analyst needs. So we've got to look at both business analysts and data analysts. No matter what line of business area you're in, from finance to operations to sales to marketing, supply chain to manufacturing, we've got to look at what do they need to be able to get their job done.

The number one response, no surprise, is performing analysis itself. You'd be surprised, most organizations still struggle with performing certain kinds of analysis, from doing what-ifs or root cause or cause and effect, or doing trending analysis. Some of these basic analyses are not available and easily performed in maybe legacy tools they're currently using or on their spreadsheets, and so basically you need to have technology that's designed to help them with their analysis.

The second thing was executing actions and decisions. As management makes decisions of what changes, they have to be able to look at and change the particular impact. So if we're launching particular products we need to group those together into different product categories, or we need to look at changes that are being made within a business process, and so we need to update particular maybe calculations of how metrics are being measured and so on.

The third one is conducting these what-if scenarios. As I mentioned, doing what-ifs, there's a standard kind of analysis capability, but still is in need by analysts and was the third largest important item indicated in our benchmark research on decision-making and analysis.

Of course, we shouldn't also forget the need for designing measures and metrics and source information that has to go into our model. These are all important elements of what organizations' analysts have to do, which is I need to actually perform certain kinds of tasks designed to measure metrics, build our key performance indicators, and then I need to be able to source where the information is coming from.

Now, we shouldn't forget that organizations, people connect and they collaborate. They share information, share experiences, they work together as part of analysis steps to determine how to make improvements. This is more so in organizations today as we actually operate much leaner than we did several years ago, with fewer people, less time, fewer resources, and we have to look at how do we actually start to foster better

collaboration -- better collaboration across business, and better collaboration across business and IT, because these requirements and decision flows are essential for working together.

We also need to look at how to provide better self-service capabilities, because we can't expect our analysts to be the never-ending source of responding to data requests and changes, so we need to also have better self-service capabilities for business as well. We also need to look at how to try all different approaches and find the best path forward. Many organizations that we've found have actually found how to service certain types of users with very well-structured dashboards, compared to loosely framed tool sets that may be better for power users who are interacting with the data on maybe a once a day or multiple times a week approach, but are not necessarily business analysts by themselves. Then of course we need to find the methods to facilitate that data efficiently across business, which has become quite a bit issue in organizations as they struggle for getting the data in the right form and then within the right timeframes to respond to our executives' needs.

Of course, this is important to realize as part of what we think about as we look at technology, so that we don't always just look at collaboration as some task of emailing files back and forth, but how we can actually make comments and notations and share and collaborate across a common environment, because that's really what we've got to do in collaboration is actually putting the people to work and having their efforts be part of a larger environment within our organizations today.

Now, as we look at helping organizations and looking at the kinds of evaluation criteria, we also found in our research some prioritization on evaluation criteria, especially around this topic around analysis for your users. When we look at what's important for analysis and business intelligence from the business side of the equation, then the priorities are quite clear. We need to have -- our number one response was usability in 63% of organizations. We've got to have the technology usable by the different levels of users, different generation of workers, and we've got to be able to meet their needs and have it usable, and then have the second most pending requirement, which is functionality at 51% of organizations.

As we get usability and functionality, then we can look at some of the traditional items around reliability, which is important for performance and scalability. We've got to make sure that the things that we're doing and that the software responds, the data's being processed, and that we're not waiting around and heading off to a coffee break, we're actually looking at the information directly in front of us as we do our slicing and dicing or specific kinds of analysis requests.

We've also got to make sure that the cost-benefit ratios are in order, and so that the benefits we achieve on the investments are important. Many organizations think the spreadsheets are free and beyond just that they're not free, because most organizations don't realize it's not just the errors but this is cost of managing different versions of spreadsheets and how they're deployed in notebooks. Nothing comes for free, so we've

got to look at a balanced viewpoint of the cost structure for achieving those benefits that we need. Then of course lastly, really important for IT, manageability of these systems, because we've got to make sure that we can manage these things across large sets of users and make sure they can actually fulfill on the necessary needs of organizations. These are the top five types of requirements that you should consider as you look at what are the kinds of analysis you need for your user classes and also part of the reason why one size doesn't really fit all and is not a strategy for success in your organization.

With that, I am going to introduce both Mark Morton and also bring in a poll for all of you to participate. Mark?

Mark Morton: Thank you, Mark Smith. Wonderful breakdown for the folks.

So the question that we'd like folks that are listening to reply to here is which of the following types of analysis is your BI team called on to provide to your end users? And you can select more than one -- just mark the checkboxes. When you've marked all the ones that you're happy with, push that "Submit Answer" box at the bottom. We'll give that a few moments to collect the information from the people that are listening, and then we'll actually live examine what the results of this survey is just at this time.

I'll also take a moment to remind you that you can type in questions if you want. As Mark was talking, a number sprung to my mind. You can type those in and submit those and we'll get to those a little later in the session today, so that we can respond to the questions that you actually have.

The other thing I will tell you is, a very common question that comes up is to obtain the slides from today's presentation, those will be available to you through email. My folks that look after such things assure me that they'll be available to you. They'll send you something and tell you where to get those, so don't be concerned about that.

So one more time, which of the following types of your analysis is your BI team called upon to provide to your end users? Please check all the ones that apply and then push that "Submit Answer" box if you would be so kind. We'll give that just a few more moments and then what we're going to do is take a look at the results.

So there we go. What we can see is there's a lot of analytical reporting -- 95% more percent, about 84% are doing trending, scenario modeling quite a bit less, and some predictive analysis for about a third. I am personally interested to see those results. We see a lot of stuff and we'll try and -- given that, we'll try and focus things as we proceed forward with that in mind.

So a lot of reporting out there, fair bit of trending, a little less of the scenario modeling, and a little bit more of the predictive analytics. Very interesting. If I go on and -- how do I get -- there we go.

So from the IBM point of view, just at some level, we think of analysis as something that enables guided exploration of information, and it's for all the dimensions of your business. It's for people all throughout your organization. It's not just the slicing and dicing, it's not just your spreadsheets, it's not just -- if people in your organization have questions and they can get answers to them, then that is analysis for them.

Now certainly we think that analysis facilitates the complex types of predictive analytics and the scenario modeling, which your organizations seem to be using widely. But we think that it's the whole enchilada, that whole broad range is what's important. Fundamentally, it's answering why for people -- why is that hump in that chart there? What is it that's contributing to that, what can we do about it?

We do think that the navigation from high trends, because some of the things that Mark Smith pointed out, that management wants a quick view of what is the status of the business, but they also want to be able to then quickly get through and understand well, what are the causative factors? So we think that has to be easy if it's going to be successful in their deployments.

So we think of a breadth of analysis styles and we think of a number of different types of people in your organization that may need information, and we try and think about, imagine for them, what would make it easiest for them? So as most of you do seem to do a great deal -- quite a few are doing analytical reporting, and so you're aware of the idea that it's going to give you your status reports, perhaps a drop-down view, possibly drillable.

If you have an IBM Cognos solution you can click on information. If there's further detail available, it drills down or drills through to make that available to an end user. It can let you sort to get the tops, the bottoms, the largest-selling or the least-selling, the exceptions are easily to get at, and you can actually do a case where you're looking at a high level and then drill through to more detail. Even if it's from a different part of the warehouse, those interconnections are in place for you already with our solution. Call that guided analysis. That's part of the analytical reporting. We think that makes sense for almost anybody in your organization, everyone from the casual users who interact very infrequently but do need to know what do I need to do today, or what have you, in a very easy way.

We also see executives using that type of thing to get a quick view, as Mark Smith had indicated, of what's going on. We know that's a high concern for people. Everyone else, even the statistical analysts, may still need to look at the underlying data and they may well use the analytical reporting tools just to see okay, what information is available to us? How can we then use that to do more sophisticated things?

Now, the next one, which some 80%-odd of you say you're already using to some extent is the trending -- the slicing, the dicing, the drillable, maybe OLAP -- the ability for people to go in and in a more of an ad-hoc fashion interact with information. So this requires fast response times, which is where the OLAP-type tools come into play. There

are a number of those available from IBM, and that's fine. There's a lot of good sources of information of that nature. Or perhaps you structure your warehouse to enable it with what we call dimensionally modeled relational data.

The key here is that information is available in a way that users think about it, so users don't think about, for the most part, tables and facts and things, they think about their customers. They think about the geographies that are at play, the products that are involved. So these dimensional viewpoints and the ability to pivot those, to slice and dice, how do my sales look by color, how do they look by geography? Do we sell more of a particular color in a particular geography? So the intersection of those dimensions becomes important. The ability to rotate and nest information, and whether connected to the Internet or disconnected, people want to have that information at their fingertips.

Now, something that seems to be the least-used at the moment, but something I think you will see more and more, and perhaps it was because of the phraseology in terms of do your BI people do it, but certainly we see a lot of organizations where there are financial analysts and financial modelers who do look at different scenarios for the business. This is a powerful tool -- you can actually imagine using things like our TM1, which is an in-memory, 64-bit OLAP kind of structure that allows you dynamically to restructure. Imagine if we restructured our sales force, if we sold our products based on a geographical breakdown rather than a product tree breakdown or perhaps the reverse -- maybe if we structured our sales force geographically instead of by product or what have you.

If this capability then modeled the business, what would it look like? What would be the impact on our balance sheets and things? It's very powerful in the hands particularly of financial analysts -- those people that the management has asked for, what are the impacts of potential changes? That was one of the things that Mark Smith pointed out as well. A high area of concern for people is yes, what shall we do about changes? What would that mean? This is actually handled by scenario modeling, and the IBM Cognos solution makes that easy for the people of that nature that need that capability -- typically the business and financial analysts.

On the farthest right you have your advanced analytics. This is a very exciting topic that's actually coming to the forefront these days. IBM recently purchased SPSS to help be sure that we offer you the world-leading solution in this area. Okay, this is the ability to really take a look at what exists and use that to help you understand before it's -- even before it's actually happened. What's likely to happen? How can we minimize the risks involved with things? What are the kinds of products that our customers buy at the same time, and how can we put together packages that better suit their needs? What are the kinds of clusters of buying people out there? How do people in a particular age group buy things in a certain way? Can we design things that will work for them? What areas of the city are likely to have crimes, and what kinds of crimes, and when do they happen, and what can we do about those? Now, this usually requires people who do understand statistics to some degree, but you'll see, particularly with some of the newer tools that we

bring into play, the modeling tools SPSS, this is being now opened up to more of the financial and business analysts as well.

All right, so that was a rather long-winded overview. Let's go in and take a little bit -- look in a little more detail each of the various kinds of analysis, the first being analytical reporting. You may think of this as dashboards or scorecards. You can see information on mobile devices. You can have drillable reports. All of this is something, again, it seems a lot of you are using, and this is analysis, but a large number of people, particularly executives or your casual users that aren't interacting on a daily basis.

Now, you'll see you may or may not be able to read those big, long links at the bottom, however, if when you get the slides if you take the trouble to copy and paste that into your browser, this will move you to demos on the web, sometimes interactive, sometimes recorded, but in any case demos so you can actually see the tools in place and how they're used and get a better idea of what that's all about.

Now, Chris Framel, I believe you're on the line as well. I think you use this type of capability in Albuquerque Water Authority. Is that true, and can you tell us about it?

Chris Framel: Yes, we do several different types of analytical reports. We do it for our asset management program, our water program, our wastewater program, and as you can see, here's just a sample of the reports that we do. We analyze usage across various classes and types of customers, various rate structures, meter sizes. We also do the analysis by work orders and the type of work we're doing versus corrective and preventive maintenance, because that can affect the costs that we're doing, that we're having on maintaining our lines, our water lines, our meter boxes and things like that.

So we analyze across just various different ways. The data that you see right here is kind of a summary of about 60 million billing records that -- which is very difficult on a detailed basis to monitor -- but through an analytical cube in Cognos we can look at the data very quickly and then drill into certain areas that we want to.

And then at the bottom there is an example of a metric that we use in metric studio in Cognos to analyze some of the metrics from a high-level analytical standpoint, and then we utilize these across the organization in various operational and financial areas to start with our analysis. Then management takes it from there, and just drill down into further more details.

Mark Morton: So this is in place today across your organization?

Chris Framel: Yes. We've been -- when I used to work at the city, we used PowerPlay, Cognos PowerPlay to analyze crime stats, various operational things, including financials. Being a public sector, we have -- and at the city we had 26 departments, from animal licenses to various things to analyze and we used Cognos PowerPlay to analyze all 26 departments and some of their functions. Now that I'm at water, we've carried that over to now analyze financial records, billing records and water usage, and our asset

management program. So we're carrying it in almost all areas of our organization, wherever we can.

Mark Morton: So as we'd said it typified basically this analytical-type reporting, broad usage, all through your organization and that seems to be your profile for using it in Albuquerque Water Authority as well.

Now a second type of analysis we spoke to was this trending. Again, seems to be widely used in the attendees today, and again, this is the idea of slicing and dicing, pivoting, looking through perhaps OLAP structures graphically or what have you. Oftentimes too management can use this, particularly the line managers who need to answer the questions about why is something going on and stay on top of that. They're able, with our tools, to interact in an easy fashion and get the questions for senior management, get those answers that they require. Again, the links at the bottom will point you to live demos of some sort or a demo of one sort or another.

Once again, Chris, I believe you do use that in the Albuquerque Water Authority context as well. Can you tell us about that?

Chris Framel: Yes, we use trending. We're just beginning to use it in the water authority, but we use it for -- the slide that you're seeing right now, this is for our performance incentive and it provides a trend on our injury hours, our serious injury hours, the work orders closed within a certain period of time, and fuel usage. We provide the trend analysis on our SharePoint site to all the employees so they can see how we're trending in these areas, and then they get a performance incentive based upon whether they meet the goals or not.

We provide this not only on our performance incentives but on how customer service is answering calls and the time they answer the calls on, on water conservation, because as a water utility here in the southwest we have to conserve our water, so we provide trends from prior fiscal year to this fiscal year. Now we're expanding that trend analysis into our asset management program for work orders, how we maintain assets, various locations that we have here in the city, both water and sewer.

Mark Morton: So have you had feedback from people and their incentives are actually -- they're tracking how they're doing against their incentives. Have you had feedback from them? Is this positively viewed or are they worried about, gee, other people are going to see it? What kind of responses have you seen?

Chris Framel: Well, they've been meeting the incentives, so the feedback's been pretty good. But they see it right away. When we update this once a month, they see it right away, so every employee logs in to SharePoint and can see how we're trending. Normally when they have questions on the numbers, we're getting calls immediately to say why did our injury go up, so it is putting the information in front of them in a way that's kind of visually easy to see, and they're aware of what we're trying to do as an

organization. I think that's helped out on meeting our objectives both last year and what we're doing this year.

Mark Morton: That's very -- thank you, that's really good to know the real world, how people respond, it's nice for us to talk about theory but in practice. Now, something, again, people indicated that they don't use quite as much is scenario modeling, and if I had actually known this ahead of time I should have found some way to actually do a live demo.

Mark Smith spoke about spreadsheets and how they are used and the need to have those connect up with your corporate information that has been cleansed and has been -- is trustable or trusted. Now, people use spreadsheets a lot, and the worry is that they go offline and take them off in all kinds of directions, so with IBM Cognos, we provide a number of ways of having you have a spreadsheet-like interface, one where you can do lots of modeling and things, but still have that connect through.

So one of the ways that we talk about is a product called IBM Cognos API Analysis for Microsoft Excel. What this will do is allow you to put your spreadsheet on top of anything in the warehouse -- anything that's dimensionally modeled, like your OLAP sources, or even your relational information, and have that brought right into the spreadsheet environment. Allows you to slice and dice, to expand information and format the way you would, use charts from within the Excel environment if you wish, get that information out. But the key here is when you save that, you can save it back into the portal environment, when you open it at a future date it can automatically update with the new information available through the warehouse. So you don't have to depend on people to go out and dig that back out, it can be just automatically come into place. Another advantage of it is that the security is respected, so if people are not allowed to see information, it won't show up in the spreadsheet if they can't pass that requirement for the security. There's prompting and rules in place to be sure who is allowed to see what information.

Now another way of dealing with this -- so that's one way you might do scenario modeling. You link into that, you use spreadsheets on top of it. Another way would be to use our TM1 product or our planning products. TM1 has a wonderful ability that you can actually write the information back into the central store as well, so it's used to power things like our planning products, our contributions to plans and things like that, but you can also use it as an analysis tool in its own right.

So these two tools definitely appeal to the financial and business analysts in an organization. They're able to work with trusted corporate information but stay within the spreadsheets which typically they're very comfortable with. That's kind of a powerful thing.

Now, another style of analysis we talk about, one that's getting a lot of airplay these days, is the advanced analytics or the predictive analytics, the data mining, and with the acquisition of SPSS, IBM has a wonderful solution to offer now that's very, very

powerful in all kinds of different areas to let you get at. You may see this -- this can be used, as I indicated earlier, to do things like segmentation of your customer base through cluster analysis. It can let you understand process control, all kinds of charting and graphing things to let you do, oh, Q2 charts and all the different kinds of X-bar charts and things that allow you to look and be sure that the processes that you're doing are staying within the control limits that are necessary for them to stay.

In the financial area, certainly you can do risk analytics and take a look at what areas are potential problems. In fact, an example I can talk you through had to do about in a commercial banking environment, account abandonment. So what would happen is banks would allow credit to customers. They could be overdrawn, say, up to \$500, and most people, that would be fine, they would pay up and all would be good. But occasionally, people would walk away from that debt and not pay it, and this was leading to some problems within the bank.

By using the SPSS solution to look at the characteristics of people who had walked away from such loans, they were actually able to then come up with a model and put it into place, so a given bank manager could look within the actual accounts open at their bank, and as you can see, they would see how many people had a balance outstanding, and even it would highlight for them here are the potential ones at risk -- in this case, 37.

They could drill through to those individual ones and an application was written to let them limit. They might move their credit limit from \$500 down to \$200, say. By doing so, they were able to limit the risk. Now for a particular bank, I remember a particular branch, it was something like \$2,500 that they limited the risk by across a number of accounts. If you multiply that by 400 branches that were available that the bank had, there was \$1 million in risk that they very easily took care of. The system was very effective in doing that and it brought down their outstanding risk and made it much better for them.

Now Chris, I think in the city of Albuquerque you don't yet do predictive analytics, but I believe you have a number of initiatives in mind and I'd like you to, if you'd be so kind, tell people a little bit about them.

Chris Framel: What you're seeing here is we do -- as a water utility we have lines, both water and sewer lines across the city, and this is a map of a dirty water pump that's being dropped into our asset management work order program and then being displayed on a map.

Mark Morton: So we're actually looking at areas where there had been problems over the history of time, and it looks like they've classified them into different kinds is what's going on, and they're actually placed on the map. So it's a marriage of your business intelligence with mapping, is that what I'm seeing there?

Chris Framel: That's correct.

Mark Morton: Now as I understand it, then your thing -- the idea was being if I were to pick a particular one and click on it, we might do some sort of drill-through which might then give us more information about that particular incident.

Chris Framel: That's correct, though as you can see there this would go to the details that you could get in a tabular report, but here in a graphical report. So --

Mark Morton: So you have the information tabular today, and you might move it into this other format moving forward?

Chris Framel: That's correct.

Mark Morton: All right. So this would be kind of, if you will, a GIS type of application, BI meets graphing. But then to take it into the predictive domain, I believe there's some thoughts there as well.

Chris Framel: That's correct. What we want to do is we have lots of data that we're gathering on the work we performed on lines and meters in a tabular format, but if we can map that and bring that data into a map and show that we've been doing lots of work for the past six months on these lines around a railroad crossing or by a school or by a hospital, we can maybe take the next steps to go and look in there and say, should we replace a line here? Instead of sending six crews out there every three months to replace certain parts of the line, maybe we should look at it and maybe just replace the entire line and maybe costs a little bit more now, but saves more money down the long run.

Plus as a risk, we don't want to have sewer collapses or sinkholes or water going out around those critical areas, like a hospital or a school or a sewer collapse around a railroad track. So by beginning to map the tabular data on a map as you see right there, we might be able to then better utilize our work force, avoid risk down the road, and save money down the road by investing a little bit more right now for future gains.

Mark Morton: So we do see this type of thing happening in a lot of organizations where people are starting to move from just monitoring what is happening and start to look ahead and say what can we do to prepare ourselves to mitigate risk before things become a problem? I do see the advanced analytics doing that role.

So to summarize from the IBM point of view, we think that information is used by different kinds of users in different ways, and we think to get the most bang for your buck, to get the most effective use of your existing information resources, you need to keep in mind what kinds of users need what kind of functionality, and put that in a form that will be accessible to them in the way that they want it, where they are, and when they need it in the right kind of timeframe.

We have a large breadth of offerings to let you provide what is needed for your different organizations, and of course we have the services organizations and the training and what have you to back all of that up. So overall, we think you get the most out of your

organization by paying attention to what people need and offering it to them in a way that works best for them.

That concludes our prepared material for this presentation. We now would like to turn to question and answers. If you had any questions and you hadn't put them in, now's your chance. We will answer a few at least to just get things started and see what comes through further.

Let me see, I see one here -- someone had asked for can we show TM1 examples on screen, and I'm sorry, the technology, we just weren't set up for that, but certainly again if you'll go to some of those links, we will -- that were in the presentation, you should be able to find -- you will find those online on the IBM website. We'll make sure that we have links in the slides that we send through to people through email after the fact. Hope that'll help at least in that area.

Mark Smith, what styles of analysis do you use at Ventana Research internally?

Mark Smith: Well, we use a range of analysis, actually. We do a range of everything from modeling to analysis. We're actually looking at different kinds of things that are coming up within our research in the data, so we use a broad range of capabilities on some pretty complex data, because it's a lot of research, which is survey, text and numeric, you're cross-tabbing. So we use a broad range of capabilities, actually, because we've -- well, cumulatively, we've probably benchmarked over 12,000 organizations. We have a pretty large knowledge base that we mined for our research facts that I shared today.

Mark Morton: Chris Framel, what do you feel has given you the best return on your investment in this area so far?

Chris Framel: Well, like I mentioned earlier, at the water authority -- for the past year, we've been putting this kind of analytical process in place. But I think the best return we've gotten so far is our injury hours have dropped from about 24,000 hours a year to now we have set a goal of 8,000 hours, and it looks like we're going to be close to that goal of hitting 8,000, so 16,000 hours is quite a bit of savings for us.

Our next area is going to be on analyzing our large meters that are being estimated, and getting those analyzed and going out and fixing those, and probably increasing our revenue quite drastically by reading those meters instead of estimating them each month.

Mark Morton: Mark Smith, what do you think organizations should focus on first in this area?

Mark Smith: Well, what I think they should focus on first is making sure they understand the universe of kind of the roles and the styles analysis they have, and so you can quickly assess kind of your roles and responsibilities and the styles analysis needed, and then look at the intersection of those and then determine how well you need to collaborate

across those different styles analysis, and then start to look at where you've got to make improvements and then not underestimating the need to collaborate across roles as well. So this is really where people want to do a self-assessment, look at where they're at, and then working to make some improvements.

Mark Morton: So it sounds like the attitude is know thyself, and then based on that, figure out where to move from there is kind of words to live by.

Mark Smith: Yes, you know, putting the mirror in front of your own organization is not always -- the reflection may not be what you want it to be, but it's the best place to start.

Mark Morton: It looks like one for me -- how does IBM Cognos handle predictive modeling? Oh, boy. That would be a long answer on some level, but certainly if you can think about there's certainly tools from SPSS that would let you model information, take information from different sources. You might -- that information might be in, for example, in an InfoSphere warehouse, and if it is, InfoSphere already has engines to let you do a lot of data mining and predictive modeling.

If not, there's no problem. SPSS certainly supports, from a number of forms, a number of places, you can take the information and it will do all kinds of advanced analytics on you. Effectively, you go through that, you sample the information, you draw up models, you apply appropriate kinds of algorithms, shades or [inaudible] or what have you to get what you want, whether it's a regression or what have you. Ultimately you then write that information back out to the warehouse, if you will, and you can do BI based with all the standard BI information on that.

I'll refer you -- when you get the slides, do look, there is a link there in fact to a separate webinar on that very topic that focuses in more on the predictive modeling and data mining, and there's a full webinar of this nature on that one topic, so I hope that will answer your needs.

But overall, yes, you're able to model the information with the appropriate tools and then use the BI to put that out, even to the extent that things like the banking example, you can actually have applications. You can imagine certainly where you would have the engine running on the fly to transactions, so you could for example spot a spurious credit card transaction as it's happening in time to indicate to the vendor hang on, pull that card, we don't like the look of it, or challenge further, get better ID, that type of thing. So that's where work is moving in that direction.

I'm going to allow another few moments for any other questions to come through. I think that seems to be where we are there. On that basis, I would like to thank everyone for their attendance and their time today, and we welcome, if you have further questions, by all means please send them through. We will respond further to email -- and oh, someone's saying I might have missed a question, I think, if I've -- ah, sorry, yes, another one has come through while I was trying to segue. Is TM1 an alternative for PowerPlay and Transformer?

No simple answer to that one. So much depends on it. It's not like it's a replacement technology. Both technologies certainly continue to live and be developed. If you don't know, TM1 is the memory-resident, 64-bit engine, it allows write-back. PowerPlay and Transformer is the very – OLAP cubes that are file-based, very portable, very compressed, very widely used as well.

We see both of those technologies advancing as we move forward. We don't see one replacing the other or what have you. But again, a lot more information online about that, if that can help you there.

So we'll call that a wrap for today. We appreciate your questions. I know there are other ones coming in, but rather than go in between, we will answer further questions through email over the next few days.

I'd like to thank Mark Smith from Ventana Research and Chris Framel from Albuquerque Water Authority for their valuable contributions today, and I look forward to more questions online as we move forward. Thanks, everyone.

Moderator: Thank you once again to our speakers and audience for joining us today. This does conclude today's presentation. You may now disconnect your line. I hope everyone has a great day, and take care.