

Business Intelligence and Analytics

A Roundtable Overview



Roundtable
on Digital Strategies

Business Intelligence and Analytics Thought Leadership Roundtable on Digital Strategies

*An executive roundtable series of the
Center for Digital Strategies at the Tuck School of Business*

The U.S. Chapter convened for a discussion of innovations and best practices in business intelligence and analytics, as a basis to deliver customer insight, service and operating performance. This Roundtable on Digital Strategies was hosted by Time Warner Cable in Charlotte, North Carolina. CIOs were joined by business leaders and colleagues in marketing and strategic planning, in a cross-industry and cross-functional exchange. Executives and academics from Bank of America, Colgate-Palmolive, the Defense Information Systems Agency, Eaton, the Fuqua School of Business at Duke University, IBM, Lowe's Companies, McKinsey & Company, Thomson Reuters, Time Warner Cable, and the Tuck School of Business at Dartmouth participated.

Key Insights Discussed in this Overview:

- Growing amounts of unstructured data generated largely by e-mail, chat and social networks are a major opportunity for improving business performance. But harnessing the data and generating workable taxonomies are a real challenge—consider casting smaller, specific nets to gain sharper insights.....2, 4, 8
- BI/BA is core for learning organizations to experiment and improve: Enlisting both business intuition and analytical discipline is key3, 10, 11
- Leaders see varying value and utility in dashboards, as they try to balance summary visibility with a level of meaningful detail4, 9, 12
- Trees are still falling: Executive behavior is lagging technology, so paper hasn't gone away4
- Your BI/BA landscape, management and governance must be carefully calibrated based on your organizational and commercial context 4, 5, 12-15
- Decide on a few “big rules”, then deliver shared services that make the best of you better: New governance and service models in BI/BA 14-16
- To drive innovation: Accelerate your speed-to-knowledge.....8, 9
- “Amazoning” your employees: Peer level star ratings can successfully be tied into your performance and development plans5, 6
- Yes, it is possible to “peek around the corner”: Predictive modeling, planning and deployment are becoming reality 6, 8, 9, 10-13
- Enlist, or command? Incentives are key to generating and exchanging high quality data.....6, 11

A Framework for the Art of Analysis

The Roundtable convened to discuss a discipline in IT that always seems about to be done fully and well—and which regularly resurges in interest. But in this exchange, the members' interest in effective business analytics and business intelligence (BI/BA) seemed particularly sharp—given the growing volume of unstructured data being generated in e-mail and by social network chat, and in parallel, an increasingly complex array of management and governance challenges.

The day underscored the importance of enlisting both creative judgment and analytical discipline—the left and the right hemispheres of both mind and management—in service to better operating performance.

In that spirit, this session on business analytics was launched with a passage of verse:

*Upon this gifted age, in its dark hour,
Rains from the sky a meteoric shower
Of facts... They lie unquestioned, uncombined.
Wisdom enough to leech us of our ill
Is daily spun; but there exists no loom
To weave it into fabric.*

– Edna St. Vincent Millay

Over the course of the day, the participating business leaders would talk candidly about the analytic frameworks they're putting into place to serve as that loom.

As IBM's Director of Business Analytics Marc Berson put it, "One thing that IBM struggles with is that analytics entails some combination between art and science. It's a balance where you have to make judgment calls sometimes, and alter models based on intuition. We're still honing that skill."

Data, Data Everywhere—But Does it Help Us Think

John Garing, Director of Strategic Planning and Information at the Defense Information Systems Agency (DISA), seemed to speak for everyone when he said, "The data, none of it is structured. It's all over. We have the information; we just can't get at it. It's as if we all have to figure out how to peek around the corner."

Jim Figura, VP for Global Insights for Colgate-Palmolive, agreed. "We have great data, including unstructured data – but we don't have the right way to get it to everyone."

It was clear to the group that the challenge is becoming harder to manage as e-mail and unstructured threads propagate on the web. Much of the conversation centered on how to enlist the tap of continuous unstructured information that's being exchanged between customers and employees, structuring it to make it searchable and useful.

Andrés de Armas—Bank of America's Segments, Products & Channel Analytics Executive—reinforced Garing's point. "The information that is arriving is coming in so quickly that we are still

just trying to keep the loom available for people to walk in and actually run it. And meanwhile everything's piling up and you're getting the institutional equivalent of, "Where do I put this? Where do I put that?"

Bill Blausey, Senior VP and CIO at Eaton, said "We've tried some of the expert tools that interrogate e-mails and try to identify threads of expertise for individuals, but we're still in pilot mode."

Current State of Play: Not Always Playing So Well Together

The leaders began with a quick summary of their best- and least-developed opportunities in applying business intelligence and analytics.

Jim Figura of Colgate-Palmolive, offered "It's not about content. It is about synthesis. So early on we started to link our individual studies and reports – largely unstructured data—to a higher level of learning. For example, in a single package test, you can make a decision about that specific packaging direction. But from 100 package tests, you can learn what metrics are actually meaningful. So for us, creating generalized empirical learning is a focus in every topic area."

Eaton's Bill Blausey said, "We're using Cognos's Metric Studio as our dashboard for the company. So whether it's a functional set of metrics, a balanced scorecard, or operational performance metrics out of our plants or division, it's our foundational tool. We're rolling it out across the company, and it is a pretty solid tool with regard to how you roll up metrics—regionally, by division, by a function across the world. We also have about 25 metrics in IT we look at across the globe, out of Remedy, and then we have a portfolio management tool that we feed into Metric Studio as well.

"Before," Blausey said, "we used basic spreadsheets. So we lost a lot of time consolidating data and bringing it together, based on different slices of data. We've also standardized our operational metrics—for delivery performance, days on hand, comp, customer sat and non-conformance, all the things that we use to measure our operations. The core ones are the same for every facility and every operation, and they're the foundation for our operating reviews at this point.

"These dashboards are actually used," he said. "The more you can do comparisons, the more best practices you can identify about who's really good in a particular area and point others in that direction. We've ended the debates we used to have before we settled on agreed-upon metrics."

Frank Boncimino, CIO for Time Warner Cable, said "From an IT perspective I have everything in Microsoft SharePoint. So I'm able to track all projects, and my directs and theirs are all entering their information, so I can get a really nice dashboard from the project portfolio perspective. I have my Remedy case tickets, so I know where my longer cases are open, for what subject area.

"And across Time Warner Cable," he continued, "we're using a lot of tools. And I think that's a good thing, because it's useful to experiment and see how employees react to different tools. We're a big Cognos user, we're using Query Studio and Analytics Studio, Reportnet PowerPlay, and SBASE because it came with Hyperion. And there's a group of folks that are starting to use

Tableau for its visualization. We stood up an iDashboard environment, and we actually put that in front of all of our senior executives.”

“Sometimes you can end up getting too carried away on the visualization,” Boncimino said, “and find there’s not enough detail there in the dashboards. But all that I’m viewing is part of the maturity level, so we’ve got to keep doing things and figure out what works and what doesn’t work and what tools make sense for who. There’s a lot of learning.”

Sometimes it appeared that line managers’ learning isn’t keeping up with the technology. Joyce Vonada, Senior VP of IT Business Solutions for Lowe’s Companies, said “We’re a big MicroStrategies and Teradata shop, with huge volumes of data for the transactions that we store. We built what we call Dart, basically a dashboard for operations rolled out into the store level. But along with the dashboard, we’ve got to pre-run all these queries and use the old mainframe technology to queue out to the printers, so that they can come in in the morning and their stack of reports is printed, and then they can go in and go online and play. My view is that the technology far surpasses peoples’ ability to change how they operate.”

“We’ll continue to push the envelope with the dashboards,” Vonada said, “but we’ll also continue to print reports. Hopefully someday we’ll turn off the printing.

Thomson Reuters Senior VP and CIO Kelli Crane underscored the challenge of managing coherent systems for a diverse base of companies. “We have two major divisions,” she said, “which are run differently with multiple systems. In our internal systems landscape, we have about 1,000 applications. Our legal division has the most mature data warehouse—it’s very rich, and drives the business, strategy, product launches, online marketing, pricing campaigns, everything.”

“We are trying to leverage that across other business and divisions. But we have lots of issues,” she continued. We don’t have a common customer master. We don’t have a common product master. We have so many different systems feeding both. It’s an interesting challenge for us to think about operating BI/BA across the enterprise, across a very diversified customer base and product base.”

Unstructured Data: The Looming Problem

It was clear that business model and commercial context determine the art of the possible in BI/BA.

Lowe’s Vonada said, “We probably have an easier business model because we grew and built every store. So the consistency of the data is there—we have one central location, even for our international data, so we’ve found it easy to get all of the transactional data in one place.”

“What we’re trying to do, really, is about the expertise of our 235,000 sales associates. How do you leverage all of that expertise, that unstructured content, that knowledge in peoples’ heads, and get that into a taxonomy, get that into a library, that I can search so that the part-time person in the Mooresville store can answer a plumbing question because there’s some expert sitting in Des Moines, Iowa, who is a retired plumber, who knows everything.”

Eaton's Blausey added, "One of my key architects and I, the guy who owns our best practices, were talking about exactly the same problem: how do you take the power of 70,000 people, plus those outside the organization, find those best practices and capture them. For us it's things like: how you manufacture, the lean principle, the inventory policies you put in place, how you go to market."

Paige Atkins, Director of DISA's Defense Spectrum Organization, concurred from a public sector standpoint. "We're moving towards base realignment and closure – and we're literally moving our facility into Maryland, into another state, and we expect a fair amount of attrition. How do we capture all the knowledge of specialized individuals, store it, and share it—making it accessible and usable to the agency at large? That's a key challenge that we face near-term."

Eaton's Blausey said, "There are all kinds of best practices that are being generated," he continued, "but a structure for how you organize that data is a serious challenge. Even with search tools, it becomes really difficult to find something meaningful unless there's some structure around it. We're really struggling with this one."

Crane of Thomson Reuters underscored the common challenge and opportunity presented from the outside in by social media. "We overall have a huge program for global contact centers," she said, "and part of that is figuring out how to incorporate data from social networks, so that we know what is being said about our products and services, and how we can react and do something about it."

"There is some fairly interesting technology now," she continued, "for mining this information and creating campaigns around people that complained about a product and doing something proactively, or finding people that liked a product. And that information isn't in our data today, it's just out there somewhere in Facebook or Twitter. So we plan to harness it and put it to work."

Hans Brechbuhl, Executive Director of the Center for Digital Strategies at the Tuck School of Business at Dartmouth College, noted two other related and conflicting trend lines on this front. "The trend to openness and sharing," he said, "as opposed to the trend of more data to come and much of that data being unstructured—I think those two things are heading in opposite directions. There's a real tension to be resolved there over the next ten years or so."

How Information Technology Becomes Knowledge Technology

The members of the Roundtable were equally focused on harnessing unstructured data and tribal knowledge from within their organizations.

Marc Berson said, "Internally at IBM we reestablished a taxonomy that every one of our employees profile themselves within. They go through a process called their expertise assessment, and that taxonomy has been defined by HR, through a combination of job profiles and skills profiles. And we tie that into search."

"It goes through validation by the management team of the employee," he continued. "We even have star ratings—almost like Amazon. It's tied into skills development plans, tied into hiring and succession. So we can say, 'What is our projection for business analytics experts in terms of our

client needs? How many do we have on staff? Do we put a premium to hiring those in the marketplace?’ and so forth.”

“It’s still an emerging area at IBM,” Berson concluded. “But with a network of 400,000 employees, we need some way to kind of bring people together.”

From her vantage point as a Partner at McKinsey & Company, Janaki Akella had seen this challenge play out in many contexts.

“We have done some analysis of high-performing organizations and their ability to draw on their social network,” Akella said. “We can see the degree of connectivity and who’s talking, by looking at unstructured data and e-mails to determine who is the ‘go-to’ person by looking at that kind of information. And often you’ll find that they’re not even in the expert network—because either they don’t want to contribute, or people come to them anyway.”

Data Quality Incentives: You Want a Carrot With That?

Michael Diamond, Senior VP of Marketing Strategy and Intelligence at Time Warner Cable, said that “As nice as the conversations are, around the tools and the process, around structured and unstructured data, the reality is it’s still human politics and how the stuff gets used. And I always wondered whether we probably just aren’t aligning the incentives well.”

“So often,” he said, “an employee or salesman isn’t compensated based on how other people are using his information—he’s compensated on how much product or how many jobs he sold. So that always seems to me sort of a bit of a missing element.”

Rick Staelin, Professor of Business Administration at the Fuqua School of Business at Duke University, said “Any time you want an exchange of information, you’ve got to provide them with value. You’ve got to set up a system where if I want you to give me information, I’ve got to provide you some incentive and value to do that. Otherwise the information flow stops.”

Why, then—if companies are so carefully calibrated about motivated and rewarding consumers for sharing their information—aren’t they as deliberate about doing so with employees?

Time Warner Cable’s Diamond added, “I think the internal economy is a less-clear one than the external economy. There’s always some kind of exchange of value in a business transaction. I just think internally it’s not so clear.”

Eaton’s Blausey wondered aloud whether “there’s a new recognition that this information, the unstructured content that’s being created, now has such significant value. We know that behaving a certain way about how you manage knowledge should be rewarded. It’s not that we don’t know how; maybe we just haven’t prioritized it in the same fashion in the past.

Crane of Thomson Reuters said, “To me that’s really it. We can all sit here and say, ‘Boy, wouldn’t it be nice to find the expert on X.’ But then you try to ROI-justify the effort and expense.

You can say, ‘I know there’s value there, because it’ll be way better.’ And people go, ‘Pfffft. Forget it. They can search what they have today.’ ”

Tuck’s Brechbuhl agreed, highlighting the same dynamic within and beyond a given company’s boundaries “There’s not a lot going on yet, in terms of companies in the same value chain sharing data for mutual benefit. I think there could still be a lot of room for power in partnerships around data, and creating a different and more motivating set of terms around trade there.”

Drive the Business—Before They Drive Away

There were a few examples of IT helping align interests in information exchange—the best of which was prompted by a question from Eaton’s Blausey to Vonada of Lowe’s.

“Does a store manager in Des Moines,” he asked her, “get incented at all to help the store manager in Timbuktu?”

Vonada answered, “Yes. If there’s a sale involved, yes. That’s something we’ve just launched in the last year, because we couldn’t get people to use our internal Web site to do cross-store orders—so that if something is not in my store, I can order it and have you pick it up at another store or have it shipped. Before, associates wouldn’t do that, because they didn’t get spiffed. They didn’t get the sale credit.”

“Changing that,” she said, “took two weeks of coding. And in the first two weeks after launch we sold \$8 million across stores—because now they’re getting paid for it. So now they’re going to take the time with a customer to sit down and say, ‘It’s in the other store. Do you want to pick it up? Do you want us to ship it to your home?’ Because it was worth their effort to spend that time.”

The Wisdom of Crowdsourcing

All of the IT and business leaders assembled were very focused on learning as much as possible from their customers and prospects—and enlisting any tool that proves effective to do so.

Bank of America’s de Armas said, “With all of our analytic and IT projects, I think the wisdom of crowds really helps us pinpoint things—when we’re smart enough to pick up and respond. We now respond to Tweets about Bank of America. It’s been hugely successful, and takes one associate 40 hours a week to Tweet for the Bank. It’s huge. And it has nothing to do with a \$50m IT project.”

Duke’s Staelin endorsed this wisdom of crowds. “There’s all this information going out there now, with Twitter and Facebook and all of the social networks, where customers are constantly talking about your products and services. Being able to uncover a problem very quickly if you monitor what’s going on seems powerful. It’s reactive. It’s not predictive. But as long as you tell them, ‘We had this problem, and we acknowledge it and we solved it,’ sometimes you have a happier customer than the normal ones.”

The need to enlist and learn from the one-off, point-source pieces of information being generated in social network traffic underscored the importance of flexibility—and a sharper focus on more than monolithic internal datasets typical of traditional BI/BA.

Time Warner Cable's Boncimino said, "Michael and I have been on a great journey together over the last few years. Now we're in a situation where we have an enterprise data warehouse, and we have knowledge management systems for our CSRs. So one of the things that we're working on is how do we cast smaller nets, collect smaller data sets, gain insights and grow."

"How do you continuously figure out the right tools for the right employee and customer exchange of information," Boncimino asked, "that allow you to correlate and gain insights on smaller data sets and grow? We're casting smaller nets now, to get sharper insights. Those are really big problem areas that we have to wrestle with, on this maturity scale and business intelligence field."

How Information Supports Innovation

Sometimes the push for insight through analytics happens from the top down. A recent initiative at IBM, Marc Berson said, "began with our CFO going to the Street and saying, 'We're going to generate 10 or 11 points per share over the next four years.' Then he came back to us and said, 'Let's define the analytics initiatives that would support that level of growth.' We are getting more serious about measuring the continuous contribution of BI/BA initiatives to the achievement of our overall strategy."

Garing of DISA surfaced an example more outside-in and bottom up. "I'm struck by what you said, Frank, about the amount of data, and are we trying to solve the problem on too large a scale. All the research in Starbucks could not come up with this thing called splash stick. But all of a sudden some customer sends in a little thing that he stuck in the cap, so you can stop spilling the stuff in the car. It's a simple thing sometimes, a tweak, a simple idea from a customer that cuts through it all. All these huge problems we conjure up, and yet there's a simple solution sometimes with the crowd sourcing business."

"The data keeps growing and growing and growing," he continued, "and we keep trying to find ways to correlate and synthesize and find it, verify it, and it becomes an impossible task. And yet out of the blue comes MyStarbucks.com and a splash stick, and the little VIA packs that are the instant coffee that people want. We IT people tend to want to connect every wire to every box and correlate it—and the problem becomes so large that it's almost impossible to solve."

Diamond of Time Warner Cable responded, "Yes, innovations can be driven by simple ideas to consumers who walk into a store. They can also be driven by very sophisticated statistical modeling and data mining. It's not an either/or. I'd like to argue for an 'and'."

Jim Figura of Colgate-Palmolive said, "We've institutionalized something like that. Over the years 'speed-to-market', capturing an opportunity earlier, seemed like the key driver of innovation. Then as retailers improved their logistics, people realized you also needed 'speed-to-marketing'. Retailers like Walmart would have the product on shelf a week or two after receiving, and there it

would sit without marketing support for another 2-4 weeks. So starting marketing programs faster became the next dimension of speed.”

“But the limiting factor,” Figura continued, “was always ‘speed-to-knowledge’. Bimonthly audits became monthly audits and scanning changed everything. Now you can get weekly shares if not daily. Organizing to capitalize on speed-to-knowledge is now a critical component. We have created a model, Speed-to-Read (or S2R) that allows us to determine within 8 -16 weeks depending on the market how successful a new entry is likely to be one year out. This allows us to very quickly course-correct if needed, or capitalize on an item that looks like it can exceed its forecast.”

Is BI/BA a Windshield...or a Rearview Mirror?

A recurring question was the degree to which these leaders’ organizations were enlisting BI/BA to generate predictive, forward-looking decision support, rather than historical trend reporting.

Said Diamond of Time Warner Cable, “I just love John Garing’s idea of peeking around the corner. But I’ve found that dashboards typically suffer the same problem reports do. I think of dashboards as just elegant reports—they’re really not much more than that. And one of the challenges is the difference between descriptive and predictive analytics. Most reports or dashboards just tell you what happened. They don’t even draw really simple correlations between factors. Frank and I have been talking about this in terms of data governance and trying to standardize metrics across the company, to figure out what metrics matter.”

Bank of America’s de Armas offered a counter-example. “The last two years notwithstanding, I think financial services has been, as an industry, excellent at predicting things like credit risk, fraud detection, best fit offers. I think that we have great use there, and what we’re trying to test now is whether we can do the same thing predictably with the value of a household relationship.”

Berson of IBM offered another example, saying “Our sales force has a CRM system where they enter all sorts of attributes about an opportunity: deal size, probability of winning, who we’re up against, and so forth. And the sales operations community has done a lot of demographic work about our sales force, ranking results attained by our sales professionals and allocating sellers based on their previous results to the largest opportunities and the best opportunities in the marketplace.”

“So that’s used,” he said, “as a forward planning tool in a dashboard, to understand that if we put these players based on this attainment against these accounts or these opportunities, here’s where revenue will go.”

Lowe’s Vonada offered another example. “We’re just starting with our customer database to really drive some basket analytics,” she said. “We just did a huge promotion on those solar lights that you put in your yard. Now, think about how the company is organized versus how the consumer shops. Lighting is inside the store in aisles X through Y, right? It’s all together as a category.”

“Well,” she said, “we found that when we looked at the basket analysis, the attachment rate between those lights and the amount of perennials and soil we sold out in the garden center was huge. But nobody ever thought, you know, why don’t you stack some of those out in the garden area, because

on a busy Saturday, if I'm coming in to pick up plants, I'm not going to trudge through the store to buy the lights. Just the ability to understand what things are related is very big for us.”

Diamond of Time Warner Cable agreed. “That kind of market basket analysis also lets you look at pricing and packaging. So if you know those things are bought together, is there a way to incentivize the same segment that typically buys them together, but is not buying them together with some kind of bundle promotion. That's what we're trying to look at, driving sales of one product with, you know, the sales of another product.”

Jerry Hope, VP of Technology for Thomson Reuters, said “the forward-thinking versus lagging indicators, I think that's something we experience a lot. Thinking about how the analytics might help drive some alternative opportunities for revenue is, I think, exactly what forward-thinking analytics is all about.”

Left Brain, Right Brain

The executives explored the application of analytical minds to the motivation of hearts and wallets—and their struggles to align longstanding business intuition with evidence-based planning.

Boncimino of Time Warner Cable said, “We still have a lot of business executives that want to lead based on their 30 or 40 years of business intuition. You know, ‘Of course those outdoor lights would work well with the perennials in this section of the store. We know that. We've been in the business for decades, we don't need the data to look at that,’ they might say. Business intuition is good. And, we need to look at the data and see what the data is telling us.”

“That's an important understanding from a business intelligence perspective,” Boncimino continued. “It's about understanding where your senior team is, and how you work with your senior team to weave them in.”

M. Eric Johnson, Director of the Center for Digital Strategies at the Tuck School of Business at Dartmouth, said “We've seen an interesting situation like this with 7-Eleven Japan, where stores with very small footprints are getting replenished multiple times a day. Simple correlation would often lead them wrong. They'd see a run on a particular product, and because they were so quick, they could replenish within a few hours, but oftentimes it would lead them in the wrong direction.”

“So for example, it might be raining, and suddenly it would completely change the traffic pattern to a store and drive demand for different products. And if they reacted too quickly to it, they would completely set up the store wrong for the end of the day. Or there may be a ballgame that would drive a certain set of traffic on that particular day, but that's it.”

“So for years,” Johnson continued, “every single weekend, they would literally bring store managers in from all 10,000 stores for a meeting, where they would sit down and pore through this data, to try to triangulate it in a manual way. It was brute force, but it added a lot of the intelligence that was missing in the data.”

Boncimino of Time Warner Cable confirmed, “To map their intuitive experience against the data, right?”

To which his colleague, Michael Diamond, agreed. “Maybe you can generalize and say what you want from these senior management is that they build a learning culture. So you don’t really mind who’s right or who’s wrong, it’s just that we do this in the spirit of learning. And even the most intuitive marketers presumably—or hopefully—are the ones who are still open to evidence-based learning, marketers who themselves want to be informed.

Boncimino answered, “I like that concept of building a learning culture and just recognizing where you are on that spectrum of pure business intuition versus being a data-driven company. That’s a great CEO discussion. ‘Where do you feel we are? Do we fully understand that spectrum, where we are on it, and where we need to go?’ ”

How Analytics Can Drive Behavior You Do—and Don’t—Want

The executives discussed the prospect of generating internal markets for good behavior through the use of dashboards.

VP of Global IT Infrastructure for IBM William E. McCorey said, “Our developers are a key part of our business—so how do we really measure their productivity? It’s not only lines of code, it’s how many modules or components are we able to reuse. So we make that a competition in our social network within the company, so that these individuals see who is really deemed the expert, you know, in addition to the profile where you check it off yourself. It’s really competition driving performance, earning acceptance from your peers. And so it’s proven to be very effective, both in productivity and finding skill growth opportunities and defining those experts along the way.”

Vonada of Lowe’s countered, “I think there are good examples of that, but you’ve got to be very careful when you put metrics out there that you’re incenting the right behavior. People walk in my office who are not going to make a commitment date because the testing is taking us too long—so they’ll say ‘we have to cut testing so we make our commitment date’. Or they’ll be concerned that their performance review will be impaired if it takes a long time to fill open position. So I get people saying, ‘Well, it’s been open too long, so I’m going to hire the next person that works through the door that can fog the mirror’. They’ll do unnatural things because metrics generate specific scores in their performance review. I’m trying to change peoples’ mentality, saying ‘Do the right thing for the project and do the right thing for the business’. But it’s a real hard shift.”

Atkins of DISA added, “Part of how effective that is depends on the metrics that you’re holding them accountable to, so you aren’t driving the wrong behavior in a way that penalizes the organization in a broader sense.”

Time Warner Cable’s Diamond shared a similar behavioral challenge prompted by BI/BA. “We’ve had all this engineering data,” he said, “tons and tons of it, on this beautiful SharePoint site—it was all there. And every single day I’d get a question like, ‘Can you tell me how many set top boxes are in Cleveland?’ And I’d say, ‘It’s all there.’ And I’d hear, ‘Yeah, but that’s a lot of work. Wouldn’t it be easier if you’d just tell me?’ “

Using BI/BA to Predict—and Organize for—Performance

There was some interesting exchange about how BI/BA could be more fully operationalized, as a tool to predict and manage key aspects of operating performance.

Diamond of Time Warner Cable offered a useful framework for thinking about this. “In his latest book,” he said, “Thomas Davenport has a very nice 2x3 matrix about information and insight, and the different time dimensions to it:

KEY QUESTIONS ADDRESSED BY ANALYTICS

	PAST	PRESENT	FUTURE
INFORMATION	What happened? (Reporting)	What is happening now? (Alerts)	What will happen? (Extrapolation)
INSIGHT	How and why did it happen? (Modeling, experimental design)	What’s the next best action? (Recommendation)	What’s the best/worst that can happen? (Prediction, optimization, simulation)

ANALYTICS AT WORK

Thomas H. Davenport & Jeanne G. Harris

“A lot of dashboarding is information about the past,” Diamond said. “But then there’s this area of optimization, where you generate predictive modeling and forecasting. If you ask analytics people in our company what they do, they run reports for their bosses. They spend almost no time doing any kind of predictive analytics, optimization, forecasting. In fact, they’re probably not even equipped with the tools to do it or the capabilities, but they live under the title of analytics. We’ve convinced a lot of people that reporting is analytics, whereas the reality is, we’re missing that capability.”

Garing of DISA countered, “When I was in the private sector, my experience was just the opposite. In the defense industry the whole focus is in the upper right-hand quadrant up there. Once you win a job you better deliver it. It’s all in the forecasting the revenue, and what are you going to do for the shareholder.”

De Armas of Bank of America offered an example where analytics were having a direct effect on forward deployment of their banking staff. “Out of 6,000 branches,” he said, “there are probably 300 where I really need spectacularly qualified associates to handle higher order jobs. So I use data and analytics to identify what those 500 stores are, and within the geographies, where the wealth opportunities and small business traffic are. So now we can deploy our resources differently to try to take advantage of the analytics that we have on customers from the transactional businesses to know who I can try to cross-sell with.”

McKinsey’s Akella said, “I think the manufacturing industry is slightly different, in that the optimization and operational information is focused on trying to look ahead to see what might go wrong, whether it is maintenance information, or pumps, or whatever. It’s a different kind of optimization that is available to a lot of the operators, and they’re trying to respond. RFIDs and sensors and the ‘internet of things’ all generates a proliferation of data that we have to understand.”

Blausey of Eaton agreed. “It’s a huge amount of information that really is coming from sensors on the devices, whether it’s a UPS, like you said, a pump, a power distribution unit. We can actually predict failure rates.”

Even problems in services may be subject to early detection. Diamond of Time Warner Cable explained, “We have what’s sometimes call ‘protest churn,’ where people just refuse to pay their bills. So we’ve started to build churn propensity models. The classic is what’s called a repeat trouble call. If you call, and you call back within 24 hours, it’s likely that’s going to be a very high churn risk because you have an unresolved problem. There are lots of those indicators, but we’re really just starting to apply statistical process control.”

The executives were similarly focused on enlisting BI/BA in support of their own employees’ performance. Eaton’s Blausey said, “As we measure our organizations, we have to understand the connection between what’s a leading indicator and what’s a lagging indicator in performance management systems, whether in HR or finance or any particular function—and not over-engineer the thought process.”

The question of how to effectively enlist the judgment of front-line employees within defined boundaries, while enlisting the efficiencies of an analytic framework, was a recurring theme.

As Vonada of Lowe’s put it, “You want the CSRs going back to the manager of a call center when a campaign or service approach isn’t working, and make sure they’ll able to say ‘This offer isn’t flying—nobody wants it.’ Or, ‘I’m getting a lot of static with this script—you need to tell somebody this doesn’t work.’ ”

Bank of America’s de Armas raised a cautionary note. “As we’ve tried to make the ecosystem very efficient,” he said, “the amount of emotional intelligence that the associate has off-script dramatically declines—because they’ve never had any latitude to manage in the gray space. So we

see fewer problems that are off-script—but the problems are far more disastrous when they do occasionally come. I think that that’s the eternal struggle: to what extent do you want a learning organization to include a learning customer-facing associate?”

Diamond of Time Warner Cable agreed, “We need to train CSRs to have an attitude of service, to have selling skills, all those kinds of things. You also need to use as much science as you can to make sure the right offer gets in front of the right person and it’s aligned with the profitability of the company and what’s best for the company. But you also need to give people guidelines or guardrails. You’re not running an automaton, or else you might as well just have a machine selling the products and services.”

Governance: By Design, or Default?

The group turned its attention to questions of governance in BI/BA, and how to reconcile the efficiencies of standardization and centralized shared services with the flexibility to support local initiative and customer intimacy.

Said Berson of IBM, “We have a shared service model within our CIO’s organization from the technology enablement perspective of business intelligence. So we took BI-focused technology resources and tied individuals with units and functions that they supported and put them onto a shared services team—and instituted a common platform and a common set of services and governance model around that platform, which we manage centrally.”

Vonada of Lowe’s asked him, “Do you find that you end up with what I’ll call “rogue” behavior—with departments doing their own BI? I mean we struggle with thousands of access databases that pop up—because they can.”

IBM’s Berson answered, “We have less technology debates within IBM than other companies because we know that we’re never going to be able to build a business case to use Oracle when we have competing IBM software. Part of the requirements process is a process owner who works with who we call their advocate, which is the CIO organization’s representative dedicated to supporting that unit or function. The advocate in collaboration with the process owner defines standard metrics definitions, the trusted data sources that those metrics will be sourced from. Once that’s actionable, once they’re ready to exit concept and plan phase into development phase, if it’s a conventional methodology, that’s when they engage the shared services team to implement it.

Asked Jerry Hope of Thomson Reuters, “Do you have an overarching data steward community or data architecture community?”

“It’s too loose right now, said Boncimino of Time Warner Cable. “That’s something that we’re actually thinking through right now, is how to weigh out a better data governance process. You know what our fights are about? Who sets the business requirements for what happens to the data. Does IT set that, does marketing set that, does care set that? Does marketing corporately set it or does marketing regionally set it? It’s that kind of debate about the data.”

Said Thomson Reuters' Crane, "We're at about the same point. We're just setting up master data governance, and we're starting it with what we would call enterprise data, so financial, HR, and really the enterprise owns it. But there's overlap with the divisional data, the customer and product, because that information feeds the financials. And that's where we're setting up the teams so they'll participate in definition and governance.

She continued, "The centralized model that Marc at IBM talks about—we need to leverage that core, and allow the divisions enough latitude to accelerate our path. But we have to start by defining our data and using those fields as per the definition, which we don't do today. So we have multiple fields defined that do the same thing; so we've been a bit lax and we've said, "Okay, time out." But the stewardship will be under me, because the CIO really is the common element to bring this together."

Boncimino answered, "Sometimes people feel it's easier, instead of really talking about and landing on a definition, to just give it a new name. 'It kind of sounds the same, but let's just call it something else.'"

Vonada of Lowes agreed. "Right. You can't let somebody say, 'I measure it differently, so I'll give it a different name and then I'm okay.' "

"If the executive can innovate and keep it to themselves," added Boncimino, "because they're trying to figure out something about their business, that's actually okay. It's only when they bring it to the table with other executives that things get complicated."

Garing of DISA chimed in: "The constant struggle everybody is in, to peek around the corner, is striking to me. I sit here just awestruck by the quality of this conversation. But I am also dumbstruck by the fact there's not a single set of numbers. And I understand the operating of a company and I understand different parts of the business operate differently, but when it comes to the bottom line, you know, the CFE we call him, is the only guy that has the number. And if you don't agree with him, then you're standing in front of the boss explaining why you don't agree with him. And if you don't win that argument, you lose. It's that simple."

Offering one solution, Crane of Thomson Reuters said, "We created what we call 'big rules.' We went to the CFO and we said, 'You know, the reason we have a mess with these enterprise systems is because we don't have rules that we all adhere to. So we're going to follow standard processes and we're going to do it one time and we're going to leverage the platform.' So we actually created big rules."

She continued, "So now when we go into our world and say, 'This is what we're doing,' nobody can really say, 'Well, I don't really want to do that. I need this field.' Then we go back to the big rules that the corporate CFO approved and say, 'Well actually you don't get to do that. All the business CFOs have agreed with this.' We felt if we had to start with a top-down mandate that we're going to run some of our enterprise systems a certain way. And you really don't get a vote. We appreciate your opinion, but we really don't care; this is the way we're going to do it."

Boncimino of Time Warner Cable agreed. "So the only way it works is if one of the big rules is that you can download it to Excel, change the denominator on it, lobby maybe for that to change the

definition enterprise wide, but don't show up to a meeting with our CEO calling it the same thing and talking about it as if it's the same definition, when you know it's not and it takes us six months to figure out what you did."

There was general agreement that IT's role is not to arbitrate or qualify business requirements from an IT, BI/BA or a data perspective—but instead, to facilitate the process of qualifying what's needed.

As Vonada of Lowe's put it, "It's not the same thing as true sharing and innovation, but we're starting to go down the path of putting governance around that? How do you take data architects that are used to structured data, and create the same equivalent role in terms of a content librarian and get the IT controls in there so you can fulfill the business requirements around those items?"

Time Warner Cable's Diamond said, "I will proffer a prognosis that curated content, curated search, editorial aggregation, authorial voice will become more important again, because the complexity of information is so great. Yes, you can search on a thousand million terms and, you know, Google puts out the most relevant searches—but you're still missing the editorial voice.

"I believe that gets missed," he continued. "Yes, you can have Pandora, but we still use individuals to tell us about music. That sense of discovery, which is very charming and very motivating, I think it's also highly complex. And there are certainly a large number of decisions in our life; sometimes you would rather just someone else had made that decision for you. I call that intelligent aggregation."

Hope of Thomson Reuters answered, "Westlaw Next, a product that we just came out with back in January, has exactly that capability. It really is an intelligent search engine that goes out and is able to identify really what the user doesn't really know yet, and it provides information back to them along the lines of fuzzy search-type results, and gives them a little bit more clarity on really what they might be looking for but really don't know yet.

Conclusion

Diamond of Time Warner Cable summed up the Roundtable this way: "For me," he said, "I think the only way to look around the corner is to think a lot more about unstructured data. I loved Marc Berson's comment about some lessons learned about shared service—where he said, 'I'll give you the best of me to make the best of you better.' It's too easy to get distracted by the adversarial framework of a fight for who controls the data. There's some shared aspiration, there. I like that."

All present seemed to share a sense that the focus and effort around BI/BA would continue to be as intense as it is essential to operating performance.

As Vonada of Lowe's put it, "We're doing the 'three yards and a cloud of dust' work that provides such insight to drive the business. I think we just have to get better at it—because the volume of data, the complexity, the pace, the fact that the four walls of your company are now the world and the internet and every person in it at some level—all of that just means that we've got to be more diligent about moving forward effectively.

Participant List
Business Intelligence and Analytics
June 2, 2010

Janaki Akella	Partner McKinsey & Company
Marc Berson	Director, Business Analytics, Office of the CIO IBM
Bill Blausey	Senior VP and CIO Eaton
Frank Boncimino	CIO Time Warner Cable
Hans Brechbühl	Executive Director Center for Digital Strategies Tuck School of Business, Dartmouth College
Kelli Crane	Senior VP and CIO Thomson Reuters
Andrés de Armas	Segments, Products & Channel Analytics Executive Bank of America
Michael Diamond	Senior VP, Marketing Strategy and Intelligence Time Warner Cable
Jim Figura	VP, Global Consumer Insights Colgate Palmolive
John Garing	Director, Strategic Planning and Information DISA
Jerry Hope	VP of Technology Thomson Reuters
M. Eric Johnson	Benjamin Ames Kimball Professor of the Science of Administration Director, Center for Digital Strategies Tuck School of Business, Dartmouth College

Mark D. Lange
(moderator)

CEO
TipMarks, Inc.

William E. McCorey

VP, Global IT Infrastructure COE
IBM

Richard Staelin

Edward and Rose Donnell Professor of
Business Administration
The Fuqua School of Business, Duke University

Joyce Vonada

Senior VP, IT Business Solutions
Lowe's