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Using and Stewarding Customer Data

A Thought Leadership Roundtable on Digital Strategies

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

The Thought Leadership Roundtable on Digital Strategies recently convened for a discussion on using and stewarding customer data. How are corporations leveraging customer data for competitive advantage? What opportunities are emerging to use this data more effectively, and what are the challenges of managing it appropriately? The sessions included academics and business leaders from 3M, Bechtel Group, BMW Group, BT Group, Cisco Systems, Eastman Chemical, Eaton Corp., Hilti Aktiengesellschaft, Johnson & Johnson, the University of Cologne, and the Tuck School of Business at Dartmouth.

Key Insights Discussed in this Article:

The Thought Leadership Roundtable on Digital Strategies (www.tuck.dartmouth.edu/roundtable) publication series is edited by Hans Brechbühl, Executive Director of the Center for Digital Strategies.

Introduction

Customer data is the lifeblood of most corporations, and the key to providing tailored offerings and compelling value to customers. New online innovations are further accelerating opportunities to gather and create value with customer data, and at the same time are creating new data management challenges.

How is the use of customer data changing and what are the biggest opportunities? What does it take from a strategy and organizational perspective to gain competitive advantage from customer data? And what are the implementation issues firms need to get right, from privacy and security to sharing data with vendors and distribution partners?

Using Data to Increase Customer Value

Participants shared examples of areas where their firms have been able to leverage customer data to create value by helping to make sales forces more effective, design new products or services, segment and prioritize markets, and solve a variety of customer problems.

Johnson & Johnson's Don Castle recalled an attempt from his days at Nabisco to translate point-of-sale data into competitive advantage, by packaging it into presentation and planning tools the sales force could use to show retailers that spending more on Nabisco promotions would grow their overall cookie business.

"We could actually sit down with the customers and plan side-by-side," explained Castle, who while acknowledging that there was nothing proprietary about the data or models, said he felt the competitive advantage the company achieved was sustainable. "In the long run when everybody has the data and the analytical techniques, the only sustainable advantage is having the best product," he asserted. "But meanwhile there's a lot of advantage for a lot of years of climbing up that learning curve, keeping ahead of the competition."

Bechtel's Jake MacLeod described how his company has incorporated data as part of its cellular tower construction services to gain advantage over smaller competitors who lack the scale to do so. For each of 100,000 cell sites built for AT&T and Cingular, MacLeod explains, Bechtel has provided 'turnover packages' with a complete inventory of all the unique aspects of that site, from construction diagrams to antennae configurations to copies of relevant zoning permits and signed leases.

"Data sells our value, it makes our clients much, much more efficient," said MacLeod. "If they have a lighting strike on cell site number XYZ, they can just pull up the as-built and find out what kind of coax they're going to need to replace the antennae, the lightening arrestors, poly-phasers, and then send a team to do it, as opposed to three or four truck rolls to the same site."

Hilti North America's Barry Bramlett described his company's efforts to improve the effectiveness of its direct sales force by leveraging customer data to "steer them to the most attractive customers." He acknowledged there'd been pushback from longtime salespeople who felt they knew their territory and didn't need help prioritizing, but added that early successes had started to turn the tide of opinion. "A lot of those mindsets and barriers change quickly when it

starts to pay dividends on calls," he said. "With an outside sales force of roughly 1,200 people, the word gets around pretty quickly."

3M's Bill Smith said he thinks disciplined, data-driven processes like analysis, scoring, and planning are a hallmark of successful sales efforts today, and that the days of treating salespeople as temperamental free agents who can do whatever they want are over. "The big transition we're seeing at 3M right now is to more disciplined processes and the hiring practices that go along with that," he explained. "Can they explain why they go where they go? Then the next step is to say I'm going here because the analytics you've provided tell me this is the place to go."

J&J's Castle remarked that even if star sales performers don't adopt data-driven processes, "it takes the middle 80 percent of our organization and gets them to be almost like those superstars… that's the real power." 3M's Smith agreed, "It's about how you get the middle to reflect the skills of the stars."

Eaton's Jeff Krakowiak described a key data initiative involving personal interviews with over 2,000 customers to gather direct feedback on the company's quality, value, delivery, product development and support. "It wasn't just salespeople going to get the data, it was also engineering, and manufacturing," he recalled. "We have four distinct businesses but as you look into the data you see a lot of common themes, and we've rolled that back out to the organization to develop action plans."

BT Group's Al-Noor Ramji noted that successful data initiatives can be very simple, such as having installers take pictures of customer premise equipment so that if something goes wrong, customers can then take their own pictures and BT staff can compare the two to diagnose the problem. But he added that internal cooperation is needed to make sure data-driven initiatives make sense, recalling a call-center-based up-sell program that drove incremental sales but ended up annoying many customers. "The top line grew for a while but the call length went up six or seven times," he said. "The longer we spent on it the longer it took to repair the damage later."

BMW's Karl Probst recalled that focusing on comprehensive customer demand data had enabled his company to dramatically reduce the delivery time for a custom configured automobile without increasing inventory, and to allow customers to make configuration changes as little as six days before production starts. "We can sell a lot of additional features this way," he explained, "but to accomplish it while keeping inventories down you need to know in advance what the customer might want."

Eastman Chemical's John Thompson said his firm had been able to leverage data to make strategic decisions about which customers to invest in relationships with. "It's not necessarily the high volume customers you're going to grow earnings with," he explained. "We're trying to realign our services and sales force so we have a lower cost model for less valued customers. The key for us is penetration—some customers will allow us to penetrate very deeply into their organization, and others won't."

Eaton's Bill Blausey recalled a successful initiative where his company segmented its customer data base and discovered a large group of small, unsophisticated OEM manufacturing customers who had "disconnects in their supply chain which resulted in our delivery performance to them not being good." Eaton decided to provide supply chain services on-site to those customers. "We

did caissons with them, positioned inventory locally and managed the inventory on their behalf," said Blausey. Delivery performance improved, while total inventory in the supply chain dropped and customer delight increased based on the segmentation-driven services.

Along similar lines, Hilti's Martin Petry recalled that his company's comprehensive tracking of customers' tool usage and repair data led to the insight that customers needed help managing their tool 'fleets.' This has now become a successful new service offering with up to 50 percent penetration in some markets. "Customers were asking 'How many of these tools do I have and when was the last time I bought a tool? How often was that tool in to be repaired?'" Petry explained. "And that is when we started to create new business."

Focusing on Business Value across the Supply Chain

Deriving business value from customer data often involves cooperation across the supply chain, which can be challenging when the data is viewed by vendors or distribution partners as a source of competitive advantage.

Getting customer demand data is a real issue, explained BMW's Probst because "we have a lot of different and separate points of contact with our customer." Dealers traditionally owned the customer relationship, he noted, and the same is true for repair shops. Nowadays, sources like the internet and value-added services give the company access to data that are potentially useful to them, so there is scope for developing mutual benefit by sharing. "We're working hard on that and we haven't yet found the right solution to bring all this different data together."

Eastman Chemical's Frank de Nobriga highlighted the challenge of getting good demand data from large customers in a commodity business like plastics. "Our customers are the large soft drink and water brand owners of the world, with powerful, sophisticated procurement departments," he said. "We could do a much better job supplying them if they'd share information and forecasts, but they use it as leverage, as a stick, so you may get 60 percent of the data but not the additional 30 percent you'd really like so you could take cost out of the system."

On the other hand, de Nobriga added, customers in fast-growing businesses with potential long-term supply shortages are eager to fully share demand information. "We sell to the acetate cigarette filter makers, a market that's growing in China and the Far East," he said. "Those folks understand that it's to their advantage to give us as much information as possible on what demand will be in 2015 because if we have to expand to take care of their needs, that's a five- to ten-year project."

De Nobriga also noted that Eastman, which won the Malcolm Baldridge award in 1994 for customer satisfaction, has backed away from customer surveys and similar data-gathering efforts because "we ended up determining that there wasn't enough value" for our business. "Sixty or seventy percent of our business is commodity," he said, "and the only thing that matters to them is today's price. It took a long time for us to realize that."

Cisco's KC Wu described her company's efforts to electronically share data with its supply chain partners, including contract manufacturers and their component suppliers, plus key distribution and channel partners. "The goal is to link demand directly to supply," she explained, noting that

like BMW, many of Cisco's components are pre-built so they can be customized at the last minute according to customer preferences. "We've shared everything from forecasts to real orders, and there's been huge cycle-time and inventory reductions."

Bechtel's Geir Ramleth said his company provides aggregated market data on commodities pricing and availability back to customers in an effort to create value for them and win their loyalty for future business. But Eaton's Bill Blausey said that although his company has been trying to find ways to share value-added data with distributors, they hadn't yet been able to.

"It's one of our disappointments," he said. "We have mounds of data, but we don't communicate back to the distributors about what products are working in what markets, we don't build it into forecasting and demand models, so we're still doing everything historically." He added, "There's also a lack of knowledge about how to translate it into a meaningful forecast for distributors. Everybody wants point-of-sale data, but what are we going to do with it when we get it?"

University of Cologne's Werner Reinartz echoed this theme: "A lot of companies struggle to take the data they have," he said, "whatever quality it is and whatever data is missing, and forge that into an informed opinion about which services will sell best."

Tuck's Eric Johnson observed that while just getting visibility into good customer data can unlock a lot of value in and of itself, adding intelligence to that data—e.g., through scoring and analytics—is quite another matter. "That's where things get pretty slippery," he said. "Are my salespeople really artists or can we add some science here that really improves what they do?"

Putting strategic data in the hands of sales reps can be dangerous, proposed 3M's Bill Smith, potentially compromising that data in the eyes of the channel. "There's a battleground around data in certain channels," he explained, noting that 3M sales reps no longer call on Wal-Mart any more, but instead a team of 3M analysts shares data to help Wal-Mart be more effective selling and positioning 3M products. "But when we've tried that kind of stuff with other sophisticated distributors in our industrial and medical channels," he said, "it's not been very successful because there's this fear of being disintermediated."

Data Quality and Organizational Issues

Data quality and organizational issues are among the many implementation barriers faced by enterprises seeking to leverage customer data, participants agreed, and enterprise-wide cooperation and focus on the importance of data are crucial to overcoming them.

KC Wu said Cisco tried to standardize terminology across multiple applications and databases, but found the devil to be in the details. "How do you define and calculate a booking? Is this customer account a ship-to or bill-to?" she asked. Getting agreement on quality levels can also be challenging, because marketing, for example, might require 80 percent accuracy while finance might insist on 100 percent, she continued. And a third challenge is accommodating the many different hierarchical views requested by different departments. "We're trying to get to a core view with a hierarchical management structure so different functions can reference back to the core and create their own views," Wu explained.

BT Group has also found it challenging to create global master data files, said Al-Noor Ramji, particularly in migrating customer data from multiple existing legacy systems. "It's a major headache," said Ramji, "not to mention what you do with the transaction processing that's going out in these different systems which are still running?"

Exposing data widely so it can be corrected quickly, across the supply chain, is one key to improving data quality, continued Ramji. And Cisco's Wu proposed that viewing data as a service, with upstream contributors and downstream subscribers, could help enterprises create a tight feedback loop to validate data. "The more you use it, people will automatically tell you what's wrong and then you drive that back upstream," she explained.

But such efforts are often constrained by security and privacy concerns, Ramji noted. "We believe the customer owns the data," he said, "and we struggle with how to get customer approval for sharing to apply to the whole supply chain. That's what's going to lead to industry utilities being formed, I think, around data."

Bechtel's Geir Ramleth said his company donated an employee to help set up an ISO standard for exchanging data among suppliers, builders, and owner/operators within the construction industry, in an effort to improve data consistency. "We got the standard authorized earlier this year, and now we're trying to get the industry to adopt it," he reported.

Hilti's Martin Petry suggested that such efforts take years, and that most companies struggle with having the patience to stick it out. "There's a marathon you need to run," he said, "and you need a good understanding of that across the entire management team."

3M's Jerry Ericksen argued that information technology needs to "get over its all-or-nothing mentality" when it comes to customer data initiatives and its traditional bias that all data is equal and must be 100 percent accurate, which is unrealistic in this era of distributed systems. "We have to identify what data we need from a core point of view, what real strategic elements need to be standardized and high quality," he suggested.

J&J's Don Castle agreed, advocating speed and flexibility in data initiatives, noting that the businesses needs and issues change quickly. "When there's a business issue or need for insight," he said, "IT's reaction has typically been to build this big database to clean the data, and then get everybody using it. But then, the issue changes."

Eastman's John Thompson encouraged participants to pay particular attention to the quality and consistency of customer relationship data, particularly for strategic customer accounts. "Who are the people you're working with, in the customer's business? What are their roles, and who are they working with in your organization?" he asked. "It's about understanding and communicating what does and doesn't add value so we're pulling through the right information and not overburdening our salespeople."

Getting field employees to input clean data to begin with is another key challenge, pointed out Bechtel's Jake MacLeod. "The accuracy of our databases is directly linked to return on investment, but we haven't been successful with employee incentives for high quality data, the discipline just isn't there. You have to put consequences in, either monetary or termination, if discipline isn't followed."

Pushing data back out to the employees who input it, so they can see how it's being used and how it may benefit them, is critical to data quality, said University of Cologne's Werner Reinartz. "The sales force is being asked to enter all this data, but they don't see how it helps them do a better job and close sales," he said.

Investment banks have achieved something close to this, said BT Group's Ramji, because highly paid traders, while initially hesitant to take the time to input their own data, now reap the benefits of real-time, highly accurate self-service data. Plus, banks were able to penalize them monetarily if they entered bad data. "It took ten years," said Ramji, "but eventually the data became clean enough and the financial risks became big enough for them to actually want it."

Participants identified other approaches to getting cleaner data from employees, vendors and distributors via monetary penalities, but agreed that these negative incentives work well only with higher-paid employees. Lower-paid staffers tend to clever find ways around data entry requirements, noted Ramji, such as inputting dummy data.

3M's Bill Smith encouraged the group to think about data management as an HR issue, encompassing hiring, training and rewards systems. Analytical capabilities have become a more important hiring criteria, he said, but data-related skills must be continuously honed and reinforced. "There's been a tendency to train on tools as opposed to training on the use of information as a growth lever," Smith proposed. "And then there's the reward system… how do you reward the right behaviors?"

Tuck's Eric Johnson told of research he'd done with a supermarket chain into bad point-of-sale data where it turned out employees were scanning a single Butterfinger candy bar over and over to speed customers through checkout faster, because that particular brand had a larger, easier-to-scan bar code. "There were less scan errors and the barcode was really good, so they had them underneath the checkout to scan," recalled Johnson. "Of course on the way out of the store, we saw this huge bin of Butterfingers on sale, because it was driving the replenishment system!"

Participants debated the merits of metrics for data quality, and some companies like Cisco said they've started to publish quality standard and audits, but most seemed skeptical about data quality scorecarding. "Within BT Group, we have 44,000 metrics already, and it's a great struggle to stop people from finding new things to measure in an engineering job like ours," said Ramji. "We're deliberately trying to keep away from measuring the worth of anything except what the customer thinks."

Governance: Who Owns Customer Data?

Participants discussed various governance models for customer data initiatives, the need to balance strong corporate leadership with the customer-driven needs of local and functional business units, and the importance of having clear enterprise data policies, for example on data retention.

"You need very strong leadership at a senior level to make these initiatives work, a strong tie across the functional units," proposed Eastman's de Nobriga. "Someone's got to say 'no, you're

not going to keep that corporate data on a separate spreadsheet, it's going to be in a master database someplace where everybody can see it.'"

Hilti's Martin Petry described the big change project his company went through over the past six years, as a by-product of an SAP deployment, to install process owners and teams and allocate responsibility for master and transactional data to them. Each of the seven process owners (e.g., process owner for marketing) became accountable for the quality of a piece of master data.

"The downside is that this is an expensive model because there's a completely new organization with roughly 100 people, plus global process owners and management" said Petry. "But we've gotten tremendous results… a completely different focus on data quality throughout the entire organization."

Cisco's Wu described her company's model where global process owners, often residing in multiple organizations, 'subscribe' to data services provided by IT and stewarded by a business owner. "To use the customer master as an example," she explained, "my team owns the system process policy and customer data services that we provide to different subscribers, but the steward of the data itself is our customer service organization. Those who feel the pain became the steward of that business data."

BT Group's Ramji described a more regional and localized model his company has adopted, which places greater emphasis on lower-level users than on global process owners. "Data quality almost immediately improved because the employee who suffers by not getting the data right is the owner of the data," explained Ramji. "Not some guy in central office, which is what used to happen." The central IT group controls only a bare minimum number of things like customer ID allocation, he said, but most of the data is out in the field.

If one group wants to use another group's data, Ramji continued, they must get permission directly from the customer. "Customers own the data," he added, but quickly figure out that it's in their interest to allow it to be shared across BT to facilitate better service.

Another key governance issue is how to develop key policies such as data retention, to balance the tradeoff between the analytical value of historical data and the legal and management liabilities associated with maintaining that data. "At what point in time do you actually also get rid of data?" asked Hilti's Martin Petry. "We have ten million customer records, of which two to three million are buying customers, and only one million are regularly buying customers."

"This is a frontier for data," said 3M's Bill Smith, "and I think you'll start seeing businesses very rapidly come up with ways of getting rid of old data." He likened data retention to managing dead warehouse inventory. "It doesn't sit around very long because there's cost to it. I think we're starting to move toward viewing data as an asset, a product."

"Investment banks are very aggressive in deleting data, they all have policies of wiping out data automatically so nobody can be accused of ordering the wipeout," noted Ramji. "On the other hand, they don't leave it there for lawsuits." He speculated that most data will stay around "forever," especially PowerPoint files, "because people keep changing the dates on them."

But Tuck's Scott Neslin noted that older data can be useful for understanding customer lifecycles. "If you want to do that, you want really historical databases," he said. To which Hilti's Petry responded that companies just have to be more selective in their retention policies. "What we do now is unstructured collecting," he suggested. "We're not going to go back and talk to a customer about a tool we demonstrated to them ten years ago that we don't even produce anymore."

From Prediction to Insight

New technologies are rapidly expanding the possibilities for garnering business insight from transactional and behavioral customer data, but participants agreed that most companies are just at the beginning of this learning curve.

"We're not there yet," said KC Wu, explaining that Cisco would ultimately like to deliver a real-time, role-based online experience to its customers. "We're counting the clicks to improve the user experience, but not using individual clicks to make buying recommendations." Eaton's Bill Blausey concurred: "I don't think we've really thought through what people are doing when they come to our websites and how we could best use that information to add value at this point."

3M's Bill Smith said his company has gleaned some interesting insights based on "renegade" efforts within individual business units. One group discovered via an online questionnaire, for example, that many of the people buying its adhesives online were hobbyists rather than commercial users. "We identified a market that we hadn't even considered before, that we're now target-marketing to," Smith explained.

BT Group's Ramji said his company captures "every click" on the consumer side of the business, "and most of it is waste, because we don't know what to do with it." But the enterprise side data is much more useful, he said, because customers use BT online portals to manage their businesses and BT knows more about who they are and what they're doing.

BMW's Karl Probst made the case for focusing on differentiated customer data as opposed to commodity third-party data that competitors also have access to. "With differentiated data you can sell a brand," explained Probst, noting that BMW even analyses of phone calls with customers to capture their emotional state of mind—whether they're annoyed, excited, or just seeking information. "How to collect this kind of individual information, get insight into market trends from it, and use it to market to individuals is a challenge," he said.

Tuck's Scott Neslin highlighted the difference between prediction and insight, asserting that the algorithmically-driven predictions many companies make, for example around customer churn or profitability, should not be confused with insight about customer behavior. He recalled a telecom company that had built a model to identify a segment of customers who would be better suited to a different calling plan, and thus churn less. The company notified those customers, and some switched, but total churn actually went up.

"There were 10 percent who they really rescued," Neslin said, "but the other 90 percent were sort of sleeping dogs." As soon as they started thinking about which plan they should be on, they

looked at the competition. "These things can get really subtle," said Neslin. "You can get decent advanced statistical techniques, but you really have to think beyond the prediction."

And Tuck's Hans Brechbühl suggested that although data will often trigger analysis or an action with a customer, far too infrequently does it trigger a conversation, which might be a more effective way to gain insight or "a more holistic view" of the customer and their intent.

University of Cologne's Werner Reinartz questioned the efficacy of even the most high profile predictive efforts, such as Amazon's recommendation system, saying that while they may succeed in upselling some customers, they end up alienating many others. "It works for a certain number of people, while annoying the other 98 percent," Reinartz offered. "So what's the cost of those incremental sales?"

But Bechtel's Ramleth disagreed, arguing that even when Amazon gets its recommendations wrong, "it creates a relationship between me and them, and actually increases my loyalty."

Tuck's Neslin suggested that marketers can create more trust and loyalty if they allow users to see why their predictive algorithms made a certain recommendation, as Amazon does. But he proposed that a bigger opportunity is to "really understand what's happening in the long term to the people for whom the recommendations don't apply, or who may feel manipulated. That's an important issue."

To effectively leverage insight from customer data about future behavior and potential, the organization must be working together as a team, not at cross-purposes. Tuck's Eric Johnson related an experience he had with a major airline where despite being a high-value frequent flier, he was suddenly treated like a cheater when he skipped one leg of a ticketed multi-leg itinerary to avoid a storm, triggering a predictive algorithm that cancelled the other legs.

Johnson chalked up the poor treatment to the unintended consequences of a company gathering customer data for one purpose only to have another internal group use it for a completely opposite purpose. "On the one hand, they're trying to collect data to reward me," Johnson observed, "but there's another part of the organization saying 'we're trying to catch cheaters.'" He likened the experience to buying a fixed-price meal at a fine restaurant and then having a surveillance camera notice that you didn't eat your asparagus.

Privacy, Security, and Regulatory Considerations

Privacy and security issues can affect enterprises' ability to leverage customer data, and various global regulatory inconsistencies can cause cross-border data movement and related infrastructure issues to be challenging.

J&J's Don Castle said privacy issues caused his company to back off a proposed relationship marketing initiative with teenagers, who are important buyers of many J&J products. "You buy as a teenager, and you're very loyal for the rest of your life, so we'd love to learn more about that," explained Castle. "But we just didn't want to cross that line. The concern was about having a database of kids with their contact information."

Ramji noted that although BT possesses all kinds of sensitive consumer data, it's been historically averse to using it, and suddenly faces many new temptations and challenges based on new technology. "You've got to draw the line somewhere," he said. "Because we run the networks, we can find out an awful lot about people and potentially help them. If an eighty-year-old falls down in their house, and we can detect it, should we call the police?"

BMW's Probst said his company would not be allowed to use sensitive data, such as GPS tracking of BMW drivers' locations, but since using this data wouldn't provide the company any competitive advantage, there's no interest in doing so. "If we were allowed to use it, everybody else would be allowed to use it," he explained.

Regulatory considerations in different countries also impact how companies can use customer information, although participants seemed to agree that privacy law variations from country to country were not their overriding consideration. "We get around them by asking the customers permission," said Ramji. "There's a bunch of places in Europe where, strictly speaking, you're not allowed to do lots of things. But you can get around that by getting permission. And in practice, we don't find many American-European differences either."

More consequential, noted participants, are the implications of local data laws on the infrastructure for data management and cross-border data movement.

"It's the simple things," said Eaton's Blausey, "like if we're in an aerospace industry and route email back through a server in the US, it could be considered an export." Or if U.S. infrastructure is being used to accept and process orders for Switzerland, he added, the US government can recognize the revenue for tax purposes as opposed to it being recognized in Switzerland. "There are lots of those kinds of crossovers between the statutory laws and what you can do with equipment and where it's located, that we struggle with," he said.

BT Group's Ramji noted that banks typically avoid storing data in the U.S., to prevent the U.S. government from accessing it. "A lot of companies deliberately avoid certain regions of the world to store data, because it might then violate customer's privacy," he said. Regional laws sometimes also constrain operational efficiency by requiring local storage of employee records, added Bechtel's Ramleth. "So that becomes a question of where do you hire your employees so you can have the rights around the data?"

Participants touched on data security issues, agreeing that internal employee threats loom larger than external attacks and that simple steps like encryption increasingly provide their first line of defense.

"The biggest worry is your own employees," said Ramleth. "People don't realize that they're dealing with privileged information, and they're very willing to share it with each other." There are also more deliberate threats, he added, such as an employee leaving the company and bringing a pile of sensitive data over to a competitor. "We have proposals that might cost $10 million and take twelve months to develop, and they can walk out the door in one file," he said.

Educating employees about what should or shouldn't be shared, and training them on the tools for managing sensitive data, is crucial, said Eaton's Blausey. "Those two kind of go hand-in-hand," he said. Other technology approaches are less effective, he noted, such as outbound

content filtering, because it's too hard to distinguish legitimate outbound content (e.g., engineering documents) from inappropriate sharing.

Several participants said their companies had begun to deploy or already deployed mandatory encryption, especially on laptops and mobile devices, in response to thefts and as a guard against employee carelessness. "We do have people that have customer data, product and pricing data on their PCs," said 3M's Ericksen, so theft can certainly be a very real concern.

Leveraging External Data

Sourcing, aggregating and managing third-party data is an important part of the customer data puzzle, and participants shared experiences in this area and discussed varying approaches.

J&J's Don Castle highlighted the lack of timely, accurate syndicated data in some of his company's markets, notably medical devices. "We'd love to know how many hip, stent, or open heart procedures each hospital runs, and what major products are used in those procedures," he said. "But it's just not economically feasible for one company to gather it—and the data would never be trusted if it's ours."

3M's Bill Smith raised the notion of collaborating on data across the value chain. "I'm not sure we do a great job of that for a number of reasons, but it's a high gain area if you can break through," he said. "The data becomes richer when you have more people participating."

KC Wu explained that Cisco purchases data from so many different companies, she's still trying to get an inventory of what and who they are. And she said it's hard to consolidate all that data internally, and wondered if using an external consolidator might not be a best practice.

Smith said 3M has a small 'insight group' whose mission is to knit together data from external sources and help the businesses understand and get value out of it, avoiding redundant work. "They live in this whole space of managing effectively through data, and they've done some really good things," he said, noting that the group is also helping recruit people into the company with stronger data-related skillsets.

And BMW's Karl Probst stressed the importance of aggregating and interpreting external data internally, rather than outsourcing it. "We're interested in doing our own consolidation on the raw data as much as possible," he stressed. "If you have somebody else doing it who doesn't design cars, you won't understand the trends and get the competitive advantage.

BT Group's Ramji recalled his days in the investment banking world, where traders were masters at quickly consuming and extracting value from multiple external data sources. "They make decisions instantly on the trading floor, looking for patterns and trends" he recalled. "One source will say you are his boss and the other one will say he is your boss. You start with the premise that all data is wrong, and the first person to arrive at some truth wins."

The key, he said, is the amount of effort and resource put into consolidating and interpreting the raw data. "The amount of money companies like Goldman Sachs spend on that is enormous, and the amount of attention to the data, even knowing it's wrong. That mindset doesn't exist in the

telco world—once you mention data, they think you mean some data-entry person keying in something."

Closing Thoughts: Data as a Competitive Advantage

Participants shared thoughts on whether customer data can be leveraged to generate sustainable competitive advantage, and seemed to agree that such advantage lies not in the data itself but in the organization's ability to make use of the data over time.

Bechtel's Geir Ramleth said he believed his company's efforts to provide value-added facility operating data to its large construction customers provided a competitive advantage in the marketplace but "not a sustainable one… I think others can catch up."

BMW's Probst said that product design is a big opportunity area for his company. "Sustainable advantage for us means having the right product in five or six years, because we're starting to design those products now," he explained. "The challenge is to have the right data now, economic, political, social, and so on, to base some alternatives on." Probst added that BMW looks at data as part of the customer lifecycle, having identified eleven discrete "moments of truth" or key contact points with the customer, such as purchase, delivery, and warranty service. BMW is trying to figure out "what kind of data we need for every point of truth," he explained.

Eaton's Bill Blausey said that while customer data isn't a source of competitive advantage today, it's an opportunity. "We need to think differently about how we bring our customers together to take advantage of the collaboration tools that others are using in more progressive industries," he said. His colleague Jeff Krakowiak highlighted the importance of top-level management commitment to leveraging data, and the need to figure out "once you go out and get all this data, what are you going to do with it?"

And Tuck's Eric Johnson reiterated the importance of making the value of the data transparent to the people responsible for collecting it, instead of trying to improve data quality with sticks and/or carrots. "When you think about many of the best cases where people are collecting great data," he noted, "it's because it's easy and transparent to the people who are collecting it. Incentivizing or penalizing people feels much harder."

Cisco's KC Wu said she thinks competitive advantage can accrue from a combination of user experience, growth and productivity, driven by best practices like role-based profile management and data quality. Education and advocacy are crucial to achieving this advantage. "We have to educate people about the value data brings," she said. "You can have a bunch of data but if you don't know how to convert it into knowledge and insight, people won't see the value."

Eastman Chemical's John Thompson highlighted the potential for better data driven decisions as a source of competitive advantage. "The more we learn about and understand the value of our products in our different markets, the better our pricing, segmentation and strategy decisions are becoming," he noted. "I believe it's sustainable because this isn't a slam dunk, there will be some companies who figure out how to do this better than others, and it's a journey."

Hilti's Barry Bramlett agreed. "This isn't a one-time fix, get this clean and running and you're done," he asserted. "This has to become a part of the business and the way we move forward in the future." The cultural issues around data loom large, added 3M's Bill Smith. "For it to be a sustainable advantage, it's not the data; it's the data competency and the culture in your company around the data."

Tuck's Scott Neslin said it surprised him to hear how challenging it is to share data across the supply chain, despite the widespread belief that such partnering should be a win-win. "We talk about various incentives to get it to happen, pricing mechanisms, communication, education, and so on, yet it's not happening as much as you would think it would."

Lack of trust is the reason such sharing is not happening, insisted 3M's Ericksen, because companies fear disintermediation. "It's the same discussion we were having 20 years ago, and I'm not sure we're ever going to get through that," he said. "When everything else is changing so quickly, that basic thing has not."

Tuck's Hans Brechbühl linked the sharing issue back to importance of CEO-level commitment, noting that though there may be a potential data-sharing win-win between two companies, the individuals that the benefits accrue to may not be well matched. "Whirlpool would love to have Lowe's POS data, and Lowe's could benefit from Whirlpool's deep knowledge of washing and drying habits in the Northeast, as it tries to enter those markets," he explained. "But those are very different types of data, so unless the Lowe's and Whirlpool managements say 'we're partners and we're willing to share,' there's no incentive on the part of the people holding the data in either company to do so."

BT Group's Ramji proposed looking at data management issues through the lens of customer satisfaction. "If we can capture how the customer actually feels, and how he's using our product, there's a clear sustainable advantage," he proposed. "For us, it's about getting it right the first time, and shrinking our cycle time, and if we can do those things, it will improve our bottom line. Now whether we can get there is a different issue!"

Bechtel's Ramleth and 3M's Castle capped the discussion by returning to the issue of data competency. "I can go and buy the same golf club as Tiger Woods, but I will not play as well as him," said Ramleth. "I think of the data as the club, and what we do with it is determined by our skill set and how we actually deal with this going forward."

And Castle pointed out that the volume of data and potential insights to be derived from that data will just continue to increase, but that organizational skills around data will result in having the best products, which ultimately win in the marketplace. "The sustainable advantage is getting really good as an organization, not just a few people in your organization, at utilizing data to get insights and to put those to work with your customer."

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Thought Leadership Roundtable on Digital Strategies
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