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# BIG DATA WORLD

The Ins and Outs of Big Data  
with Teradata



To get involved in Big Data World Canada, contact Sara Zaremba at +1 646 619 1810 or [sara.zaremba@terrapinn.com](mailto:sara.zaremba@terrapinn.com).

# “Competition is always good as it validates the market size and greater awareness for Big Analytics”

As Big Data World Canada gets closer, we've been glad for the chance to get to know some of our more high-profile sponsors who are all leading solution providers in the data gathering and technology industry.

One of these solution providers is Teradata - a global leader in analytic data platforms, marketing and analytic applications, and consulting services. Randy S. Lea, Vice President of the Aster Data Center of Innovation within Teradata Corporation, was able to share with us his insights into the data industry.

Continue on to find out what Randy had to say regarding:

- Big data's relationship to social influence
- The importance of cooperation between a company's CIO and CMO
- How data can optimize your market strategy
- Outsourcing versus internal development of data software
- Challenges facing data structure and diversity
- The effect of increased competition in the big data space

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# Randy S. Lea, VP of Aster Data Center of Innovation



Randy S. Lea is Vice President for the Aster Data Center of Innovation within Teradata Corporation. In this role, Randy is responsible for the sales and execution of big data analytics projects for Teradata in North America. This includes setting strategy, field-based innovation, and overall integration of the Aster Data field organization.

Randy was previously Vice President of Product Marketing & Management for Teradata, responsible for marketing Teradata products (database, platform, and utilities), Teradata services (professional and customer services), and setting product customer requirements, plus technical field sales support teams.

Randy has 29 years of experience with NCR Corporation and Teradata Corporation. Since moving into the Teradata organization in 1995 he has held positions as Director of Product Management for Retail Data Warehouse Applications, Director of Scalable Data Warehouse Marketing, Assistant Vice President of Teradata Marketing, Vice President of Teradata Channel Partner Sales, Retail Regional Sales Director, and Vice President of Teradata Global Sales Support. He holds a Bachelor of Science degree from California State University at Fullerton and is a graduate of the Executive Professional Development Program from the California State University at San Diego.



## What is the big deal about big data?

Big Data is often discussed around the data characteristics of volume, velocity, and variety. However, the “V” that’s the big deal in Big Data is “Value” as in business value from new insights. At Teradata, we actually focus on Big Analytics rather than data size or other data characteristics.

## Is big data just big hype?

Big Data has been over hyped as it primarily focused on technology enablers and leads many customers, primarily IT groups, doing science experiments rather than solving business problems. This has created disappointment in business units and many in the C suite.

## What are 3 recent developments that currently affect enterprises utilizing big data?

1. Core data management processes (transformations, metadata, master data, security, etc.) don’t go away with Big Data and are often exposed in greater detail.
2. The challenge of finding skills and maintaining programs developed in complex application code written in Java, C++, Pig, SQL, No-SQL, Hive, Impala, .....
3. Companies are now realizing they need “business” Data Scientists rather than “programmer” Data Scientists. People are hard to scale and can be very expensive depending on the skill required. Choosing a technology that scales in its analytics and ease of use is allowing customers to take their savvy business analyst and make them “Data Scientists”



## What are some of the biggest issues or challenges you come across regarding data structure or data diversity?

Much of the discussion around data structure and data diversity is focused on “unstructured” data when in fact almost all data has structure of some sort. Quite often it is not whether the data has structure or not, but whether the data is being analyzed independently or joined with other data. Most data modeling is done where repetitive analytics are needed and modeling is done balancing performance with ease of access.

## What are the driving benefits in solving these challenges?

You want to look at a technology where data can be lightly structured and leverage late binding where it makes sense while able to leverage structured modeling where needed. The Teradata Aster solution has an SQL engine, a MapReduce engine, and a Graph engine allowing customers to not only leverage their modeling technique of choice but also leverage execution in all three calculating engines within a single SQL statement.



## How is increased competition in the big data space affecting your product?

Competition is always good as it validates the market size and greater awareness for Big Analytics. At Teradata we're driving to create a new analytical environment that every company should deploy called a Discovery Platform. A Discovery Platform should be able to 1) analyze both structured and unstructured data, 2) require minimal modeling to do analytics, 3) allow the analyst to use the best analytical method such as SQL, MapReduce, statistical, text and graph analytics as well as executing two or more in a single execution, and 4) be easy enough for a data analyst to use and powerful enough for the most sophisticated data scientist to exploit.

## In your opinion, is it better to organize your data structure around KPIs from the beginning of design or let the data influence your structure?

We believe best practices are around a layered data architecture with different user access to each of the layers. Layer 0 is the landing of source data as is. Layer 1 is the integration layer modeled at the lowest granularity. Layer 2 is the calculation layer or where KPIs are built for enterprise consistency. Layer 3 is the aggregation layer for business unit rollups or performance optimization, Layer 4 is the application view layer, and level 5 is the sandbox or prototype layer. Data Scientists should have access to all layers, power users should have access to layers 1-5, and business analysts should have access to layers 2-5.



**Without naming names, what is the most interesting story you've heard about data mining for better customer engagement? i.e. reducing customer credit limits based on demographic information.**

One of the strengths of our Teradata Aster technology is to be able to track customer behavior over time and across multiple channels. A customer of ours told us about a spike in calls into the call center from customers inquiring if their payment had been “processed”. In almost all cases the customers “payment” had been received. Call center call costs vary between companies, but when you have millions of customers at \$10-\$15 per call a large spike can cost 10’s to 100’s of thousands of dollars. In an effort to reduce the numbers of calls into the call center to verify their payment had been “processed” our customer would send a text or emails when “payments” were received via on-line, cell phone or call center. However, the call volume continued into the call center to verify payment had been “processed”.

Having just deployed Aster, our customer was able to look at the path of all customers who had called the call center and look at all activity prior to them calling the call center. It was clear that customers were making payments by cell phone, on-line and the call center. What they also noticed that was common for almost all of the individuals was an email was sent to them. Upon investigating the email, it was a “last notice” email saying their cell phone service would be cut off unless they made a “payment” within 24 hours. However, upon closer examination the email also communicated the payments would be “processed” within 48 hours.

As you can imagine, their customers were calling the call center to confirm not only “payment” but also that the payment was “processed” so that their cell phone service wouldn’t be cut off. A simple change to the email dramatically reduced the calls into the call center saving the customer 100’s of thousands of dollars. This is just one of many “patterns” customers find to discover fraud, churn and next best offers.



## To buy or to build: when is it better to outsource your data architecture or software, versus develop it internally?

Many companies outsource their operational applications as most are repeatable, don't change, and often don't provide competitive differentiation. Many companies have experimented with outsourcing their analytical applications but the majority are keeping their analytics in-house as it is often their only competitive differentiation in the market. A CRM solution is very effective in deploying offers to multiple channels and customers but unless the offers are differentiated many companies simply deploy more ineffective offers to more customers at a higher cost and lower conversion rate.

## As a marketer, should I be concerned about big data?

Marketing should be concerned about Big Analytics, not about the size of data. Quite often the data needed is only 3-6 months of customer behavioral data which is rather small. So it's not about data size but rather analyzing the behavior of their customer interactions across multiple channels including social media, on-line, in-store, call center, etc.

## How can data optimize my marketing strategy?

Big Analytics (Big Data) helps marketing organizations in 2 big ways; 1) getting new insights into customer interaction behavior to develop personalized offers or reduce churn and 2) help optimize digital marketing spend with digital marketing attribution clearly identifying the effectiveness of marketing spend.



## Why is it important that the CIO and CMO work in alignment within a given company?

Historically CIO's have been pressured to focus on "keeping the lights on" and reducing costs while CMO's have been outsourcing their data and analytics, due to frustration with IT, to 3rd party companies. This has led to huge expense shipping data to outside 3rd parties and getting "generic" analytics that the 3rd party provides to all customers, including competitors. So it is critical that companies take control back of their data and their marketing analytics. I have seen many companies recently where Big Analytic (Big Data) projects have actually brought the CMO and CIO together working side by side. It has been said that many CMO's will have a larger IT budget than the CIO in the future. I personally believe that this will lead to disaster as more and more outsourcing will be done for analytics. Working together CMO's and CIO's can drive immediate analytical differentiation and drive bottom line results.

## In what ways should they be collaborating?

Big analytics is about solving business problems, not deploying neat technology. It all starts with the business and then collaboration in the implementation and execution.

## What is big data's relationship to social influence?

I think the jury is still out on the effectiveness of social media and social influence to many companies. There are obvious winners, but we see the real value of merging the social behaviors with transaction data to truly understand the customer behavior to purchase. After all, companies are in business to transact and it is even better to transact with your more profitable customers. So the value of social influence greatly enhances when you can clearly see how it drives to purchase.



# We'd love to hear your views on all of this...

## Join the conversation



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# We'd love to meet you too...

We're hosting Big Data World Canada this March in Toronto and would love to see you there.

The leading heads of data, technology, security, and customer intelligence will be there to:

- Learn how to build flexibility and security into Big Data storage
- Discover how to identify and interpret key data that will forge greater customer engagement and trust
- Acquire a better understanding of how big data and loyalty marketing can exponentially augment a business
- Get a better understanding of how to reconnect with lost customers through Big Data
- Explore how to leverage analytics and insights to strengthen segmentation capabilities

**Last year's speakers included data experts from:**

Research in Motion, Electronic Arts, Hewlett-Packard, Allstate, Dell, Xerox, and more.

**Want to speak to someone about the event?**

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