Beyond the Hype: Drivers of Big Data Success

Our Observations and Perspectives - Big Data Toronto Conference

By Dextro Insights - June 2016

Introduction

WHAT:
Big Data Toronto Conference held at the Metro Toronto Convention Centre June 14–15, 2016.

WHO:
Big Data Toronto attracted more than 2,000 attendees, including 50+ speakers from several industries—financial services, banking, academia, media and entertainment, and technology. The event also attracted a wide range of technology players, including DELL, IBM, SAS, and pure analytics and management consulting companies, such as Dextro Analytics and Deloitte.

At Big Data Toronto, Manmit Shrimali, founder of Dextro Analytics, presented "From Analytics to Decision Making." The session revealed the blind spots of big data, best practices for big data analytics, and ways to bridge the gap between big data and decision-making. If you missed the session, please email at insights@dextroanalytics.com for a copy of the presentation.

ABOUT US:
Dextro Analytics is a fast-growing analytics provider that blends analytics, technology, intuition, and behavioural science to help organizations make better decisions and solve complex business problems. Dextro Analytics helps companies:

- Uncover discriminating knowledge from big and complex data
- Find better—and different—answers to complex business problems
- Create intelligent ecosystems to see the business and customers as never before

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The event showcased examples and pragmatic solutions on how leading organizations are not only transforming their businesses with big data and analytics but also uncovering new value within their industries to remain competitive.

Our observations and perspectives can be summarized in essentially three areas:

How to Gain a Competitive Advantage Through a Big Data Strategy

How to Build a Data-driven Culture

How to Leverage Big Data Technologies

How to Gain a Competitive Advantage Through a Big Data Strategy

In today's business environment, big data is no longer just hype or a novelty. Most companies recognize that they have opportunities to use data and analytics to increase productivity, improve decision-making, and gain a competitive advantage. Big data users, management, analytics consulting companies such as Dextro Analytics, and technology providers such as IBM and Dell, showcased examples of how analytics is defining the difference between proactive and reactive companies. Shown below are a few tips on how companies can gain a competitive advantage through a big data strategy.

1. **BIG DATA JOURNEY IS COMPLEX BUT IT'S WORTH:** Collecting, managing, processing, and transfer ming big data into intelligence for decision-making is much easier said than done. Through several engagements across industries, from crafting the big data journey to a data-to-decision road map, we have learned that it is a complex and resource-intensive process. In our successful engagements, we learned you need to do three things:

   - Ask the right questions and identify the right problems to solve
   - Aim for small wins and share use cases across organizations
   - Build an enterprise-wide strategy around data, governance, transparency, and collaboration across business functions, information sharing, and a structured approach to connect the data with decisions

Companies committed to this journey share wins across different areas, including understanding their customers through a sharp new lens, reaching their customers faster, making the right offers at the right time, and improving operational efficiencies to drive productivity. For example, Vandana Saini of TD Bank Group shared how big data is empowering financial analysis, trading, and fraud detection.

2. **DON'T LET THE SIZE OF THE DATA OVERWHELM YOU:** Big data is often defined by volume, velocity, veracity, and variety, but big data is best measured by its depth, not its size. Manmit Shrimali, founder of Dextro Analytics, explained, "Big data on its own is not big insights. It requires tremendous amounts of unique skills, resources, management buy-in, asking the right questions, and a structured approach to getting better and different answers to profit from big data."

3. **FROM COMPLEXITY TO SIMPLICITY:** Einstein stated, "Everything should be made as simple as possible, but not simpler." This concept certainly applies to extracting insights from big data. It is very easy to fall into the trap created by massive volumes of data, hundreds of tools, and thousands of techniques. Manmit Shrimali explained that in order to leverage data for decision-making the focus should be on converting complex data into simple insights but not necessarily simpler or generic insights. Executives care less about algorithms and more about how these translate into business solutions and impact.

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4. **HYPOTHESIS FIRST:** Begin with a hypothesis before mindlessly exploring the data. It is very intimidating to start mining the data and expecting insights or answers to magically appear, and it's a surefire way to fail in any big data initiative. "Businesses should first formulate a hypothesis before venturing into a big data journey. Companies need both an insight strategy and a data strategy to make the most out of big data." - *Dextro Analytics presentation on "From Analytics to Decision Making"*

5. **UNCOVER LATENT INSIGHTS:** Some companies cited that they are leveraging a wide range of data, including IoT, data generated from human interactions, and geospatial data, to uncover hidden patterns and insights. Such data is not only helping businesses make better decisions but also helping them build smart cities and alleviate poverty.

How to Build a Data-driven Culture

1. **SHOW THE IMPACT TO DRIVE CHANGE:** It is rightly said that change is hard at first, messy in the middle, and gorgeous at the end. Analytics leaders should not only focus on building a data strategy but also on creating a road map for how their organization will embrace the change. Have clear answers on how analytics will drive revenue and/or reduce cost when senior management asks, "Why do we need to do this?"

2. **COLLABORATE TO ASK THE RIGHT QUESTIONS:** To sell the cure, one first needs to know the disease. Instead of struggling alone, engage executive involvement and collaborate at all levels to ask the right questions and to understand short- and long-term pain points.

3. **CENTRAL DATABASE:** To achieve a holistic view of both the business and the customer, first create a central database following the product and services life cycle. Second, allow access to power users, and third, gradually expose everyone to the data gold mine. Get people excited about seeing numbers.

4. **DATA SCIENTIST:** Virtually all agree that sourcing data-science talent is becoming more challenging. Simply running traditional models, such as regressions, is not data science. Don't underestimate the effort and investment required to retain, train, and scale a data science team. While many companies do have such teams, they are also using external vendors and management consulting companies to help them partner on their data science journey.

5. **EVANGELIZE ANALYTICS:** Analytics leaders also have to sell the analytics across the organization. Create and promote a culture where every data and analytics initiative is tied back to a business context.

6. **DATA GOVERNANCE:** While gleaning insights from big data is very exciting, it is equally important to establish data governance and privacy standards to gain trust and credibility. Increase trust in data by increasing transparency.

How to Leverage Big Data Technologies

1. **SCALABILITY & OPEN SOURCE:** Think about scalability and how much time it will take to demonstrate a return on investment (ROI). Many organizations are moving to open-source platforms to help scale internally and access to a wide range of tools and techniques. Learning the lessons the hard way, companies realize that to find pearls, you have to dive deeper. There is no shortcut. You need to get your hands dirty to get it right. Don't be fooled by claims that data science does not require data scientists. Tools cannot replace the art and science of gaining insight.

2. **360° ARCHITECTURE:** Create a data-to-decision architecture—from transactions, streaming, and backend ingestions to querying and analytics engines—and create a simpler way to enable users to visualize the intelligence. Start collecting and processing the existing data first. Don't wait for "perfect" data.

3. **DATA ON CLOUD:** More and more companies are moving to the cloud for data management, processing, and queuing. Additionally, novel tools, such as graph databases, go beyond traditional SQL-based database querying. Many companies are still on legacy systems, which are deeply rooted across business functions. There are approaches that allow old technologies to coexist with new ones, minimizing disruption and preserving value while enabling cutting-edge approaches.

4. **TECHNOLOGIES:** Use of Hadoop was frequently cited. Companies are embracing Apache Spark at a much faster pace. Although "IT" still owns the data, the journey to insights requires collaboration from both the IT and business functions.

5. **NEW DATA:** Companies are trying to determine how to integrate the new varieties of data, particularly IoT and geospatial data. Storing, processing, and converting into insights is a tall order even for large and established companies, but having more data is not enough. Knowing how to use it is equally if not more important, said Manmit Shrimali. Nick Necsulescu of PC Financial summarized it nicely - "Pulling powerful insights from data requires a deep understanding of the difference between predictive and prescriptive analytics."

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