



Big Data could transform commerce as much as the industrial revolution did in its time.

Cracking the code on data

Businesses that embrace the advance of data-driven commerce will prosper

Of the myriad opportunities facing enterprise in the coming decade, few match the potential for radical change that data analytics – or Big Data – will deliver.

From point-of-sale transactions to website navigation, manufacturing output to employee performance tracking, data is allowing businesses across all sectors to collect an unprecedented abundance of information about their operations, analyze it to glean the kind of insights that were the stuff of science fiction just a few years ago, then make real-time strategic or tactical improvements to drive bottom-line performance.

“(Data) is changing everything and it really doesn’t matter what industry you’re in,” explains Pat Finerty, vice-president of alliances and business development with enterprise software firm SAS Institute Inc. “Analytics and monetizing data is affecting our clients across industry and the public sector. The enterprise and IT folks are realizing this isn’t a science experiment ... the movement to (data) being an enterprise asset is huge.”

Organizations are now able to fine-tune sales and marketing efforts at a granular level, analyzing customer activities to predict future behaviour in order to customize customer experience and boost satisfaction, brand allegiance and sales. Most companies will now be able to achieve this without ever meeting their customers in person, interacting instead via apps or websites.

A 2011 report by management-consulting firm McKinsey and Company predicted that retailers that adroitly leverage data can improve profit margins by as much as 60 per cent, while manufacturers can reduce product development and assembly costs by 50 per cent. Factor in the emerging Internet of Things – in which businesses can process operational data about everything from industrial production lines to consumer appliances via the Web – and the potential for change is massive.

Data has the potential to transform enterprise just as the industrial revolution did in centuries past. But that leap forward will come with challenges that risk overwhelming even the most progressive business leaders. “Companies want to continuously collect better

data,” explains Murat Kristal, director of the Master of Business Analytics program at York University’s Schulich School of Business. “But someone has to think about how to use it and what predictions to make. Companies have not cracked the code on that yet.”

A global study of senior enterprise executives by data and cloud-computing giant EMC Corp. confirms that business leaders are struggling to understand and capitalize on Big Data’s potential. Fully 96 per cent of executives surveyed agree that new technologies have changed the way they do business and expect the process will continue to accelerate. And 49 per cent acknowledge they often struggle to turn data into actionable information.

Without exception, executives see the opportunity that data provides, but need further insight to determine how best to leverage it. That process will involve massive organizational change as analytics departments become integral to operations ranging from product development to marketing, changing the way that leaders set strategy and budgets.

“In the past, a lot of people would have seen IT as a support function, but now data is starting to be seen differently because it gives a strategic advantage,” Prof. Kristal says. “Now all decisions will be based on data. That changes how you do business. It’s changing people’s processes and perceptions, and that’s a slow-moving process.”

He adds that companies need to build data teams proactively. “You need someone who can collect, interpret and analyze data the right way,” Prof. Kristal points out. “The hardest thing is finding people who can do that. If you’re looking for ERP software, you push a button and get the answer. Big Data is not like that. It’s not user-friendly. That’s because real analysis takes time and you need to be trained in that field.”

Prof. Kristal predicts that employees such as sales

representatives and marketers will soon act as de facto data specialists, integrating data analysis into their daily work. Even tech professionals who previously were limited to data collection and IT tasks will be called upon to provide business insights that help their organization achieve performance targets.

Prof. Kristal stresses that presenting data in a highly user-friendly way with the help of data visualization designers will be integral to helping leaders interpret information, and then use it to shape their business plans. “This is a design and presentation problem, not just a numbers problem.”

DEVELOPING GLOBAL EXPERTISE IN

Big Data

- Schulich launched one of the world’s first Business Analytics programs in 2012, profiled by the Financial Times of London in the article “Business analytics takes centre stage at Schulich.”
- Graduates from Schulich’s one-year Master of Business Analytics Program are hired before they even graduate by companies such as Deloitte and CIBC.
- SAS Canada furnished the program with a comprehensive package of data analysis software that allows users to efficiently consolidate data and analyze it for use in data-driven decision-making, including statistical analysis, forecasting, econometrics, optimization, scheduling and simulation, quality improvement and seamless data integration.

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