Information and Privacy Commissioner/Ontario
Commissaire à l'information et à la protection de la vie privée/Ontario

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Privacy by Design in the Age of Big Data Report Addresses How Big Data & Privacy Can Successfully Coexist

Dr. Cavoukian, Information and Privacy Commissioner of Ontario, Canada and IBM Chief Scientist and Fellow Jonas Release Report

WASHINGTON & TORONTO, 8 June 2012 – Organizations should act now to address the privacy risks associated with Big Data, and the analytics technologies used to make sense of these vast data sets, before such risks become realities. This, and other key recommendations, are detailed in a new joint report titled *Privacy by Design in the Age of Big Data* authored by Ontario's Information and Privacy Commissioner, Dr. Ann Cavoukian, and IBM Fellow, Jeff Jonas.

The report outlines the transformative nature of *Privacy by Design* when applied to Big Data, and sensemaking systems**,** and the importance of *Privacy by Design,* which shows why and how privacy protections can be embedded directly into technology as a default standard.

Cavoukian and Jonas have each been at the forefront of new approaches to understanding data and addressing privacy.

Dr. Ann Cavoukian is recognized as one of the leading privacy experts in the world. Since the 1990's, she has been advancing *Privacy by Design*, now an international standard, that seeks to proactively embed privacy into the design specifications of information technology, accountable business practices and networked infrastructure. Recently, the U.S. Federal Trade Commission included *Privacy by Design* as one of its three recommended practices for protecting online privacy – a major validation of its significance.

At IBM, Jonas has pioneered next-generation sensemaking technology with embedded privacy-enhancing features. This new technology evaluates new data observations in relation to previous observations – much in the same way that one evaluates a jigsaw puzzle to locate its companion pieces on the table – and use this context-accumulating process to improve understanding about what is happening in real-time.

"*Privacy by Design*, applied to the field of sensemaking, can help create trust and foster confidence in the industries that make use of Big Data. It can shape the future direction of technological development in a way that aligns consumer values concerning privacy. Organizations of all sizes are now able to better leverage their hitherto trapped information assets. This presents us with both opportunities and challenges,"

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said Dr. Ann Cavoukian, Information and Privacy Commissioner of Ontario, Canada. "While organizations and consumers will benefit from more efficient operations, better customer experiences, and less fraud, waste and abuse, new challenges will be faced as the potential for Big Data to seriously erode cherished privacy and civil liberties increases."

"Today, Big Data represents an important new domain for tomorrow's innovations. Navigating this massive volume of information will require us to think about data in new and innovative ways. Making sense of an organization's observational space will become imperative to remain competitive," said Jeff Jonas, Chief Scientist and Fellow, IBM. "To the extent Big Data contains personally identifiable information, increased responsibility and care is required to manage this information. The bigger the pile of data, the greater the value – the value to legitimate business users as well as those with interests in its misuse. We believe it is imperative that with game-changing advances in analytics one should step back and ponder design decisions that will enhance overall security and privacy."

Seen as the next frontier for innovation, competition, and productivity, the term Big Data refers to the volume, velocity, and variety of data – previously beyond the grasp of the average enterprise – that can now be organized and understood. Understanding Big Data enables organizations to make novel discoveries that were previously unattainable. Applying sensemaking technologies to Big Data will help organizations make sense of the world as observations present themselves, fast enough to do something about it while the observations are happening. Sensemaking capabilities of this new technology are inspired by the human decision-making process and how individuals process and relate new observations to previous observations – drawing on this rich context-accumulating process to enhance decision-making.

The *Privacy by Design in the Age of Big Data* report is intended to demonstrate how responsible privacy measures can coexist with Big Data and analytics innovations. Ninety per cent of the data in the world today was created in the last two years, and the pace of data creation continues to increase exponentially. This increasing flood of diversified information brings new challenges – how to make sense and garner insight from Big Data – while simultaneously protecting public privacy and fundamental freedoms.

The report recommendations will be shared during keynote presentations at The Annual Privacy Law Scholars Conference in Washington, DC, and the Future of Energy Summit – 2012, MaRS Discovery District, Toronto.

About the IPC

The Information and Privacy Commissioner is appointed by and reports to the Ontario Legislative Assembly, and is independent of the government of the day. The Commissioner's mandate includes overseeing the access and privacy provisions of the *Freedom of Information and Protection of Privacy Act* and the *Municipal Freedom of Information and Protection of Privacy Act*, as well as the *Personal Health Information Protection Act*, which applies to both public and private sector health information custodians. A vital component of the Commissioner's mandate is to help educate the public about access and privacy issues.

About IBM Big Data & Analytics

IBM has a broad focus on business analytics and optimization, which spans hardware, software, services and research. The company has established the world's deepest portfolio of analytics solutions; grown its business and industry expertise to approximately 9,000 business analytics and optimization consultants, 400

researchers, and created global analytics solution centers in Berlin, Beijing, Dallas, London, New York, Tokyo, Washington and Zurich. IBM has acquired 33 companies to build targeted analytics and information expertise since 2005, and continues to expand its ecosystem, which today consists of more than 27,000 IBM business partners. IBM has also secured hundreds of patents a year in analytics.

These investments have enabled IBM to develop breakthrough technologies like IBM Watson, a new class of industry specific analytical capability that uses deep content analysis, evidence-based reasoning and natural language processing to identify relationships buried in large volumes of data that can be used to improve decision making.

For more information about IBM, Privacy and Data Protection visit: http://ibmprivacy.com/

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