

TOP
**Innovative
 Industries**

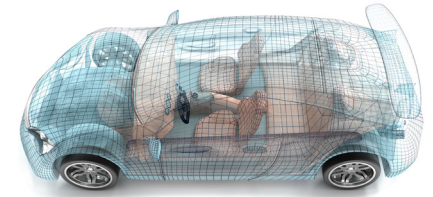
Shaping the Canadian Economy

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The Innovation Hub for Cross Industry Disruption Autonomous Vehicles



The past five years have been marked by tremendous growth in the autonomous vehicle industry. While many jurisdictions continue to jostle for leadership in the space, an even greater number of original equipment manufacturers, technology companies and start-ups are fast-tracking new Connected and Autonomous Vehicle (CAV) technology with an eye to the huge profits to be made.

Regulators Balancing Innovation With Public Protection

Moving forward, legislators will be tasked with balancing several competing needs: protecting the public, safeguarding data and privacy, ensuring safety standards and creating regulatory certainty, while leaving room for innovation in this highly competitive industry.

Following the 2018 introduction of testing guidelines from Transport Canada and the Canadian Council of Motor Transport Administrators, a new and robust regulatory framework will assist in the safe development and deployment of CAVs on Canadian roads.

In Ontario, as of January 1, 2019, the ban on operating CAVs in Ontario has been lifted in respect of vehicles equipped with SAE Level 3 automation. A Level 3 vehicle is in full control of all driving functions in some situations, monitors the road and traffic, and will inform the driver when he or she must take control.

Top AV Takeaways

LEVEL 3 AVs Legal

In Ontario, as of January 1, 2019, the ban on operating AVs in Ontario has been lifted in respect of vehicles equipped with SAE Level 3 automation

AV Testing

Cities and governments are paving the way to deployment of CAVs by supporting testing. The City of Ottawa recently announced L5, a 1,866 acre CAV test environment unique in North America

SINGLE Policy

The Insurance Bureau of Canada endorsed the UK approach when it recently proposed a single policy to cover both human error and automated-technology malfunction, including cybersecurity breaches



Growing

Need to Address Insurance Solutions

The introduction of CAVs is forcing insurers and governments everywhere to reconsider their approach to automobile liability. Notably, the Insurance Bureau of Canada endorsed the UK approach when it recently proposed a single policy to cover both human error and automated-technology malfunction, including cybersecurity breaches. If Canada is to adopt an approach similar the UK model in 2019, collaboration between government, insurers and manufacturers will be key.



Testing, Testing – Levels 1, 2, 3, 4, 5

Many cities, provinces/states and countries are vying to be AV-friendly and a big piece of that is providing support and infrastructure to test this new technology.

In just the last year, autonomous shuttle buses have been tested in the provinces of Alberta and Québec and there are plans for similar tests in Ontario. As of January 1st, the framework for AV testing in Ontario changed significantly, allowing for the possibility of testing fully driverless Level 4 and Level 5 vehicles on Ontario's roads without a driver (or even a passenger) and introducing guidelines for tests in truck platooning, a potential game-changer in the freight industry. Meanwhile, the City of Ottawa has been aggressively promoting the Ottawa AV Cluster and recently announced L5, a 1,866 acre CAV test environment unique in North America.

These regulatory and policy changes illustrate that many Canadian jurisdictions are paving the way for more rapid testing and deployment of CAVs.

Keeping Up with Privacy and Cybersecurity Issues

The more autonomous the vehicle, the more data that it uses and gathers to learn how to drive better. CAVs are equipped with multiple cameras, radar, LIDAR (a radar-like system using lasers), sonar and GPS. The amount of data generated by a self-driving vehicle is astounding – its per-second volume is equivalent to that generated by 10,000 internet users. As the level of automation increases, so too do the data demands of CAVs.

This leads to big questions, like what type of data is being collected? Where and how is it being stored? Who has access to the data and what are they using it for? Do drivers have access to or control over any of the data?

These are critical questions and not just for privacy, but for the continued development of CAV technology. The artificial intelligence at the core of CAV learns from the data so this data is crucial as the technology evolves. In the event of accidents, insurers and relevant parties involved in such disputes, will most likely require information on what the various systems of the CAV and the driver were doing at the time of the accident to understand and apportion responsibility.



The day when you hop into a driverless vehicle without giving it a second thought may be closer than you think.

CAVs and Litigation

Litigation involving CAVs is another area that demands close monitoring, as parties could begin to assert intellectual property rights over related technology. Wider testing and deployment of CAVs could also lead to collisions which will undoubtedly attract attention. While there may be some push to resolve such disputes at the outset these early cases may provide a glimpse of the issues that will face those who proceed to trial on the merits.

Looking Down the Road

With the imminent arrival of autonomous vehicles, stakeholders in this industry will be faced with new legal questions. At BLG, our Autonomous Vehicles Group is at the forefront of this evolving space to better assist our clients in answering these questions.

For more information on how autonomous vehicles may impact your organization, please contact a member of [BLG's Autonomous Vehicles group](#).

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Marketing Cannabis in a Brand-New Regulatory Environment

Canadian cannabis companies are struggling to understand how they can legally market themselves and their products. **What will it take to simplify the process?**

It may be natural to assume that making a profit in Canada's emerging cannabis industry would be simple. After all, the federal government's Parliamentary Budget Officer has conservatively estimated the annual demand for regulated cannabis products at \$5.5 to \$5.8 billion nationally.

But in the days since the *Cannabis Act* (Bill C-45) came into force, industry players have been struggling to find their footing in a new and complex regulatory environment filled with untested and subjective standards. This is especially true when it comes to the rules around cannabis promotional activity and public-facing statements.

A central objective in regulating adult-use cannabis was protecting young Canadians from potential harms associated with it.

Top Cannabis Takeaways

Advertising

Advertising rules are restrictive and prohibit the use of "glamour, recreation, excitement, vitality, risk or daring" when promoting cannabis¹

Uncertainty < interest

Regulatory uncertainty about subjective promotional standards has not curtailed interest in the industry: Companies are still attracting investment and making acquisitions

Patents to profits

Patents will be an important profit generator for cannabis companies

To compete with the illicit market, the regulated industry must rapidly expand in production capacity, product diversity and reach. Gaining market share from the illicit market will require promotional activity. This promotional activity must be balanced with concerns any promotional activity – the traditional tool for boosting market share – could encourage more young people to try cannabis.

This push-pull has created a tension in the regulations that cannabis companies are forced to manage.

The Precedent Problem

Responsible messaging about social consequences of cannabis use or changing public perception about a cannabis company or its stock is not a contravention of the *Cannabis Act*. In contrast, changing beliefs about cannabis products could be. A wrong move could mean hefty fines or worse if Health Canada suspends or revokes a company's licenses to cultivate, process and sell product.

Predicting Health Canada's reaction to infractions is complicated by the absence of regulatory enforcement under the *Cannabis Act*.

Uncertainty about enforcement standards makes it difficult to distinguish a cannabis company and its products in the Canadian marketplace. Currently, cannabis companies can use branding elements on packaging, websites and corporate communications. Yet, at what point does branding become promotion?

When advising in relation to promotional activity, packaging and labelling, we rely on detailed discussion with clients around the purpose, intent and reasonably expected outcome of any proposed communications. Without precedent to rely on, our guidance leans towards a cautionary approach.

Growing

Potential

Every step in producing a cannabis product –

FROM PLANTING SEEDS OR CLONES



THROUGH GROWING AND HARVESTING



TO EXTRACTING, FORMULATING AND PACKAGING CANNABIS OIL



– can be optimized. And all those optimizations are potentially patentable.

Patent Potential

As they concentrate on overcoming these considerable marketing challenges, many Canadian cannabis companies may be sitting on an untapped source of potential profit: new technology.

What is happening in the cannabis sector now is akin to what was happening in the Alberta oil sands a decade ago. For years, that industry focused on recovering a commodity and generating profits. Oil sands companies at the time were also necessarily tech companies: as they created new and better ways to extract bitumen from the ground, they developed valuable technologies and patent protection helped maintain the value of those technologies.

Cannabis companies are similar. As they grow better quality cannabis on a larger scale, they are going to innovate.

We are educating licensed producers on how to establish standing operating procedures to help them recognize when they have created a potentially patentable process or valuable trade secret. We have done this for clients operating in oil and gas, and other industries. Now we are helping clients establish similar protocols and policies for the cannabis sector to capture and protect their intellectual property.

For more information about marketing, patenting or other challenges facing your cannabis-related business, please contact a member of [BLG's Cannabis group](#).

¹ Fact Sheet: The Cannabis Act – Promotion Prohibitions, Health Canada

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Decoding

The Legal Grey Zones
Around Cryptocurrencies



The growth in cryptoassets is causing seismic shifts – and driving opportunity – in the global financial sector. **But will a challenging regulatory framework force homegrown innovators to leave Canada?**

“Disruptive” can be an overused word these days: It seems like every new innovation is heralded as a game-changer – even when it isn’t. But the invention of Bitcoin and its foundational blockchain technology has been called revolutionary for very good reason.

Cryptocurrencies, blockchain and the automated financial transactions they enable, are transforming supply-chain management practices, contracting, payment and banking services, and real estate transactions. New uses for the technology are being developed every day.

Top Cryptocurrency Takeaways

1,658 TO 2,504

The number of available cryptocurrencies jumped to 2,504 in November 2018, up from just 1,658 six months earlier

\$139 B (U.S.)

Near the end of Q4 2018, cryptocurrencies had a combined market capitalization of \$139 billion U.S.

\$1 B (U.S.) INVESTMENTS

2018 investments in blockchain and cryptocurrency start-ups are on track to significantly surpass the \$1 billion U.S. worldwide invested in 2017

Course Code 101

Cryptocurrency
and Blockchain

Cryptocurrency is a secure form of digital money that has been anonymized through the use of cryptography. Any associated transaction and purchase information appears in uncrackable code. Bitcoin was the first cryptocurrency.



Blockchain is a digital ledger that records cryptocurrency transactions.

Moving from Fringe to Mainstream

Early on, cryptocurrencies were the niche domain of tech insiders. They preferred this peer-to-peer, electronic money system over fiat currencies for two main reasons:

- 1 It removed central banking authorities from the creation and control of cash, and
- 2 It drastically reduced service costs by eliminating intermediaries.

But if cryptocurrencies got their start on the fringes of the financial ecosystem, **they are now moving solidly to the mainstream.**

A number of Canada's big financial institutions are looking at the rise of cryptocurrencies and how it has impacted their operations. In response, they are testing blockchain technologies and seeking ways to help their clients transact in cryptocurrencies. Experts believe it is just a matter of time before one of them makes a major move into the cryptocurrency arena.

Even the Bank of Canada is investigating the possibility of creating its own digital currency.

Cryptocurrency developers themselves are beginning to recognize the benefits of having a presence in a more mainstream market, which could boost the credibility of their products. In fact, a growing number of developers see and understand the need for more robust regulations in this space. A regulated environment, they argue, would help remove some of the stigma that has been associated with cryptoassets since their inception.

Can Regulations Keep Up?

However, authorities in Canada and around the world are struggling to regulate cryptocurrencies as new and more innovative blockchain applications emerge. Why the hold up? For one thing, blockchain is a form of technology, and as a rule, laws don't regulate technology, just certain uses.

Then there's the fundamental question of whether cryptocurrencies should be defined as securities. Canadian regulators have yet to take a firm position on that issue, and this is making it difficult for industry players looking to establish cryptocurrency exchanges. The uncertainty has some local developers considering foreign bases of operation.

One thing is for certain, these technologies are not going away, and they will continue to disrupt business and finance in profound and unexpected ways.

A Look to the Future

Regulators will catch up – they have no choice. And as they do, we'll see more and more sophisticated investors moving into this field, including:

- Funds that are vying to offer cryptoasset-backed investment opportunities at both the institutional and retail levels
- Businesses that want to set up exchange platforms for cryptocurrency trading
- Entrepreneurs who are interested in launching initial coin offerings or creating storage and custodial enterprises for digital assets

We are currently advising a wide variety of start-ups and established companies that are exploring ways to enter this new and exciting space. To help ensure their success, we and other corporate law firms should be working with securities commissions and other regulators to pre-emptively identify and address public policy concerns.

One thing is for certain, these technologies are not going away, and they will continue to disrupt business and finance in profound and unexpected ways. The sooner a solid regulatory framework is in place, the easier it will be for Canadian companies to take advantage of all the opportunities at hand.

For more information about cryptocurrency risks and regulations in Canada and internationally, please contact a member of [BLG's Cryptocurrency and Blockchain group](#).

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Unscrambling Digital Laws and Cybersecurity

The rapid rise in data collection means robust cybersecurity solutions are no longer an option, they're an imperative. **What should Canadian businesses be thinking about when it comes to fortifying their defenses?**

An Evolving Landscape

The growing importance of data – as well as recent high-profile security breaches – are pushing many nations, including Canada, to review and bolster data protection laws. This is welcome, but even with improved protections, there are no simple answers when it comes to cybersecurity.

As technology evolves, the laws, regulations and standards that shape its use are also changing. There is a broad array of standards that can inform what an organization must do to be compliant. New legislation, regulations, guidance documents and industry-specific recommendations are coming out all the time in Canada. But cross-border data flows and cloud storage mean that foreign laws may also apply.

This evolving regulatory and risk environment can impact different organizations quite differently. The standards that a charity or university will be held to are likely different from those for a bank. This is why it's critical to take a tailored approach to every security scenario.

Top Cybersecurity Takeaways

Value = **\$35 B** (U.S.)

In 2017, the global big-data market was worth \$35 billion U.S., up from just \$7.6 billion U.S. in 2011

\$100 B (U.S.) BY 2027

It will generate \$100 billion U.S. in revenue by 2027, according to Statista.com

163 zettabytes

By 2025, 163 zettabytes of data will be collected annually¹, according to IDC, a global market research group



Inside the

Mind of a Hacker

To fend off attacks, it helps to understand the security weaknesses hackers look for. BLG works closely with technical and forensic experts who have a presence on the dark web, an unregulated part of the internet that isn't visible to search engines. Stolen data often ends up there, for sale to criminals looking to profit from banking information, credit card numbers, and other personal information.



How Hacks Happen

Data hacks have become one of the biggest risks to an organization hoping to realize the benefits of big data. They can ruin a company's reputation, decimate its stock price and trigger costly legal and regulatory consequences, including class action lawsuits, which are on the rise in Canada.

The good news is that most cyberattacks are relatively unsophisticated. While there have been recent fears about hackers using artificial intelligence to breach cybersecurity defenses, the reality is it doesn't take AI to crack a weak system. A dangerous hack can start with a simple phishing scam, in which an employee is fooled into clicking on a link in an email.

Increasingly, stolen data are being encrypted and held for ransom. If the ransom isn't paid, hackers release the information or destroy it.

Enormous Consequences

The effects of a data breach can be wide-ranging and long-lasting. Yahoo Inc. experienced a number of massive breaches in 2014, including one by a Russian spy agency. Personal data – names, addresses, telephone numbers and encrypted passwords – for 500 million accounts were stolen.

Altaba, the company then operating Yahoo's email and search-engine service, was fined \$35 million U.S. by the U.S. Securities and Exchange Commission. In a settlement reached in a class action lawsuit, Altaba and Verizon, which was in the process of buying Yahoo, agreed to pay \$50 million U.S. to up to 200 million users, with affected individuals getting a maximum of \$375 U.S. each. This is a reminder that the consequences of a data breach can be enormous.



How to Better Protect Data

A holistic approach to cybersecurity is essential. This means implementing both preventative and remedial tactics:



Before an Incident

- Know what “crown jewels” your organization has and what are its key informational assets
- Adopt best-in-class technology and implement all security updates and patches to render your systems reasonably secure and put your organization in a defensible position
- Understand the potential liabilities and evolving standards of care around big data to mitigate the legal risks of data breaches or misuse of information
- Have cybersecurity and incident response plans in place, as well as the requisite expertise (both internal and external) on a fully constituted response team

After an Incident

- Immediately implement the incident response plan and convene the response team
- Retain an experienced cybersecurity lawyer to serve as “breach coach”, manage the response team, and ensure that legal privilege is protected to the maximum extent
- Ensure that evidence of the wrongdoing is preserved in the remediation process
- Be consistent in public communications and reports made to regulators and law enforcement

A breach should be viewed as creating enterprise-wide risk. For that reason, stakeholders from across the organization are often involved in managing it. Their responses need to be coordinated from start to finish. Here’s just one example of why:

If a company’s servers are infected with a virus, the IT department may want to take them offline, wipe them and rebuild them. But in doing so, it may inadvertently destroy evidence that is critical in establishing how the breach occurred and who’s responsible. That evidence could also prove essential in defending against legal and regulatory proceedings.

1 A zettabyte is the equivalent of one trillion gigabytes. So that’s 163 trillion gigs of information, the equivalent of everyone on Earth getting 14,927 newspapers a day for a year.

A harmonized response can be challenging for most businesses, so it’s prudent to rely on knowledgeable experts. BLG has acted as breach coaches in numerous high-profile data breaches in Canada, directing multidisciplinary teams in investigations and remediation to ensure that evidence is properly preserved and handled, and lawyer-client privilege protected.

For more information about cybersecurity solutions for your business or organization, please contact a member of [BLG’s Cybersecurity group](#).





The Canadian Fintech Sector has the Potential to be a World Leader

The fintech sector in Canada has seen significant growth in recent years and has the potential to grow further as collaborations between fintechs and regulated financial institutions continue, new and improved regulations are adopted, **and a growing number of young tech superstars focus their energies on developing technology applications for financial services in Canada and the world.**

Canada is home to a number of financial hubs, including Toronto which is considered a leading international hub. It also has some of the world's top technological talent and the Government of Canada has taken steps to facilitate the relocation of international talent to Canada. Canadians have long been early and enthusiastic adopters of new financial services technology. From the first automated tellers to mobile payment systems, we have always embraced innovative ways to bank and invest.

Canadian financial institutions have so far welcomed innovative technologies and have collaborated with fintech firms to improve efficiencies and product offerings.

According to a PwC 2017 Global FinTech Report, the number of financial institution-fintech partnerships in Canada is much higher than in most other countries. 62% of Canadian financial institutions declared they are actively involved in partnerships with fintechs and 88% said they would increase partnerships going forward.

Top FinTech Takeaways

\$17.4 B Invested

In 2017, more than \$17.4 billion U.S. was invested in fintech globally

China + U.S. lead

China and the U.S. are the largest markets for innovation in this emerging sector

Canada's need:

For Canada to capitalize on fintech opportunities, regulatory regimes need to keep pace with technological change

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The fintech

Brain Drain

Canada’s complicated regulatory environment has already driven some innovators and entrepreneurs outside the country. Case in point, Vitalik Buterin. This Thiel Fellowship winner and University of Waterloo dropout is the inventor of Ethereum, the blockchain-based operating system and distributed computing platform. Since its invention in 2014, Ethereum has become the foundational software for many fintech applications. On the surface, this is a true made-in-Canada success story. But the Ethereum team soon shifted operations to Switzerland to take advantage of that country’s friendlier regulatory environment.

While the FinTech Adoption Index found that Canada lags behind the global average fintech adoption rate of 33 percent, a recent report of the Global Risk Institute in Financial Services titled *An Overview of FinTech in Canada* found that adoption of fintech in Canada has reached the Early Majority Adoption phase and is expected to continue to grow.

How Do We Maximize Our Competitive Advantage?

In some respects, fintech has been around longer than most people realize. For decades, Canada’s big banks have used technology to accelerate workflows, reduce costs and improve the customer experience.

What’s new is the speed at which ground-breaking technologies are coming online. Machine learning, artificial intelligence, big data – they’re reshaping an entire industry. If we’re to achieve our full potential, we need to take a number of steps.

To begin with, we need to ensure that access to private capital and our public markets is sufficiently robust to support the growth of Canadian companies throughout the development cycle. It is not enough to fund successfully the early stage development of fintechs. We need to be sure that they have sufficient access to capital to grow into global enterprises where their mind and management remains in Canada. Governments in Canada have an important role in creating a policy environment that facilitates capital formation for fintechs, including from individual investors, and institutional investors, including pension funds.

In addition, there is no doubt that many of the federal, provincial and territorial regulatory regimes that touch fintech ecosystems can be improved. We need to be sure that regulations that were designed for an earlier time are appropriate for an increasingly digital economy. It is important to note that Governments are actively working on

Adoption of fintech in Canada has reached the Early Majority Adoption phase and is expected to continue to grow.

regulatory reform projects, including reform of federal financial institution and payments legislation that will facilitate activity by both fintechs and financial institutions. In addition, Canadian securities regulators are beginning to take steps to clarify the circumstances in which digital currencies can be launched and developed in Canada, without the requirement to comply with securities laws of general application.

Along with an updated domestic regulatory environment, the fintech sector in Canada will benefit from comprehensive global regulatory standards. Work in that area is getting underway, but until global standards are established, we will need to work hard to encourage fintech developers to continue to use Canada as their base for global expansion and success.

Reasons for Optimism

With the right leadership, Canada can be at the forefront of the new fintech economy. This country is home to brilliant technology developers who are creating game-changing financial services products for a global market.

Canadians have long excelled in the commercializing the risky resource sector. We have every reason to believe that a similar attitude toward extracting the opportunities offered in the emerging fintech space will become an ever increasing reality in Canada.

For more information on how BLG can help your company thrive in the fintech sector, contact a member of [BLG's Fintech group](#).

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Privacy in the IoT Age



The expanding Internet of Things (IoT) represents an outstanding businesses opportunity for Canadian companies. But along with potential gains comes more than a little risk.

What's the best way to prepare?

If you've ever received a notification on your phone telling you it's time to buy more mayo, thank the Internet of Things. This network of internet-enabled devices is making it easier to do a growing list of tasks, be it listening to your favourite playlist, adjusting the thermostat and yes, knowing when it's time to head to the grocery store.

But as we interact with all these smart devices, they are collecting ever-larger amounts of data about us. How that data is secured and used is one of the most pressing policy issues of our time.

Consumers have a growing awareness around the value of data and how it can be manipulated. That realization, coupled with a slew of recent high-profile data breaches, is raising public concern about whether enough is being done by smart-device manufacturers to protect a customer's privacy.

Top Three IoT Takeaways

Business adoption

Almost half of Canada's medium to large businesses have adopted at least one IoT solution

CDN Value = \$21 B

The Canadian IoT market is already worth \$21 billion, a figure that is predicted to grow

By 2020 Global Value = \$8.9 trillion (U.S.)

By 2020, the global value of the IoT could be as much as \$8.9 trillion U.S.



Fridge IQ Test

What Makes a Smart Fridge So Smart?

While internet-enabled machinery is revolutionizing manufacturing, where most of us interact with the IoT is right in our own homes. Smart fridges feature tablet-like screens in the front door and can be controlled remotely using your phone. By scanning barcodes or radio-frequency identification tags, the smart fridge monitors expiry dates and automatically places a grocery order when supplies are running low. It will even suggest recipes based on the ingredients on hand.

A Shifting Regulatory Landscape

The *Personal Information Protection and Electronic Documents Act* (PIPEDA) is the federal law that governs how private sector organizations in Canada collect, use and disclose personal information. Introduced in April 2000 – seven years before the advent of the iPhone – this legislation is not as robust as more recent regulations coming out of Europe.

The General Data Protection Regulation (GDPR), introduced by the European Union in May 2018, aims to return control of personal data to consumers. Canadian media considerably covered the GDPR and its more restrictive approach, so consumers are now expecting higher privacy protection from Canadian companies and organizations. Recent privacy breach scandals have also made consumers more aware of their rights regarding their personal information.

If a company runs afoul of the GDPR, it could be fined up to 20,000,000 EUR or up to 4% of the preceding year's total global annual turnover.

What's more, the GDPR prohibits European organizations from sharing personal data with non-member states that have weaker privacy protection laws. With that in mind, Canadian legislators are taking steps to fortify PIPEDA. Case in point: PIPEDA as it was originally written was a complaint-driven process. That changed November 1, 2018, when new mandatory breach-notification and record-keeping obligations went into effect, with fines of up to \$100,000 for failure to comply. It's expected that by 2020, the Canadian government will do more to bring PIPEDA's consumer protections up to the GDPR standard.

The Issue of Consent

Canadian privacy law, as it stands now, requires that companies obtain the transparent and informed consent of individuals for use of their data. But recent guidance issued by the Office of the Privacy Commissioner of Canada suggests that, even with properly obtained consent, a company could still run into trouble if their data usage does not meet the reasonable expectations and social norms of Canadians. This is a significant potential hurdle for the emerging IoT industry.

On the surface, obtaining consent seems simple enough, but when viewed through an IoT lens, things get more complicated: Your smart fridge is continuously collecting data about your shopping habits – data that could be shared with retailers or other service providers. If they then use that data to send you targeted ads, does that meet the reasonable expectations and norms of Canadians?

Smart cars come with even bigger privacy concerns. Insurance companies could use the driver-related data these cars collect to risk-adjust insurance premiums. But collecting such data without informed consent would likely infringe on a driver's privacy rights. Take this scenario a step further and consider the insurer who might want to increase a customer's rates if they do not consent to sharing their personal driving data. That's the kind of uncharted territory that legal experts can help insurers and other data collectors steer through.

Class Actions Gain Traction

Compared to the U.S., Canada has never been fertile ground for class-action law suits, but when it comes to breaches of data protection laws, that's changing. There are more than 80 class-action suits involving alleged privacy breaches pending or certified in Canada.

In one recent case, the federal government agreed to pay \$17.5 million¹ to 583,000 Canada Student Loan recipients after Human Resources and Skills Development Canada (now Employment and Social Development Canada) lost an external hard drive that contained their personal information. Developments in this area should be followed closely by any company in the IoT field.

What Canadian Companies Should Do Next

As the IoT expands and Canadians become more engaged on the topic of privacy, responsible companies should be redoubling their privacy efforts. Complying with the the Office of the Privacy Commissioner of Canada's new *Guidelines for obtaining meaningful consent* which will be enforced as of January 1, 2019 is an excellent first step.

For more information about Privacy and Data protection laws and risks for your business or institution, please contact a member of **[BLG's Privacy and Data Protection group](#)**.

¹ <https://www.cbc.ca/news/politics/class-action-student-loan-1.4462434>

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Will Changing Political Winds Reshape Renewables?

Policy updates and technological advancements both have a role to play in the **success of Canada's renewable energy sector.**

As growing public demand for greener energy intersects with technological advances that are making renewables increasingly cost effective, the outlook for the clean energy sector should be bright. And it is true, major opportunities exist for renewable energy companies, both here at home and internationally.

But all is not smooth sailing. There have been dramatic shifts in green energy policy in a number of provinces. The sector, if it is to be successful for the longterm, must take great care to understand regulatory regimes that are not only complex, but subject to wholesale change as well.

Top Three Renewables Takeaways

18.9% of energy

Renewables currently provide 18.9 per cent of Canada's primary energy supply, according to Natural Resources Canada

x2 and x3 by 2040

The National Energy Board recently predicted a rapid increase in renewable energy capacity in Canada, with wind doubling and solar tripling by 2040

Increased Investment

This growth in supply and demand will drive up the need for skilled labour and spark increased investment activity



Narrowing the Cost Gap

If you've bought a new laptop recently, you know first-hand that technological advancements mean you can now spend less on a device than you did 10 years ago and still get a better, faster machine. Tech improvements are having the same impact in the renewables sector, where developing wind- and solar-power technologies are expected to narrow the cost-gap with fossil fuels. That could make green energy projects more viable than ever before.



Politics at Play

Starting in the late 1990s, Canada's renewable energy companies enjoyed large-scale government support through tax incentives, subsidies and favourable pricing via feed-in tariffs.

A number of those industry-building policies have since been rolled back. Most notably, Ontario's recently elected Progressive Conservative government has moved quickly to:

- 1 Cancel that province's *Green Energy Act*, introduced in 2009 to grow solar- and wind-generated electricity supply
- 2 Wind down the province's feed-in tariff program that guaranteed wind- and solar-energy providers better prices for their clean electricity
- 3 Terminate 758 renewable energy contracts

One of those cancelled contracts was for the 18.5-megawatt White Pines Wind Project, which had been in development for 10 years. The legislation that terminated it – the *White Pines Wind Project Termination Act* – went two steps further, limiting compensation the province must pay to the developer, German-owned wpd Canada Corporation, and preventing wpd Canada from suing the government. At the point of cancellation, the developer had spent \$100 million on the project.

These unusual moves have reverberated throughout the renewable energy sector, and they raise an important question: **What is the position of the law with respect to the enforceability of contracts after changes of government?**

Growing uncertainty here means it is now more important than ever for renewable energy developers to have skilled, experienced advocates guiding them during complex contract negotiations with governments.

We are telling our clients that there are still excellent opportunities in the renewable-energy sector.

BLG has been ahead of the curve on this subject: In 2016, we wrote an opinion for a foreign investor that was buying into existing renewables projects in Canada. The investor wanted to know what would happen if a government decided to change the rules mid-project. That scenario is now playing itself out.

Renewables Take Hold in Oil Country

The Alberta government's decision to shut down coal-fired electricity plants by 2030 is putting the focus on renewables in that province, as well. Alberta has completed two procurements for 600 megawatts of wind power as part of its Renewable Energy Program and intends to add 5,000 megawatts more in an effort to get 30 per cent of its electricity from renewable sources. According to one government-funded study, that could attract as much as \$8.3 billion in investments for new wind energy projects over the next 12 years.

The Technology Solution

New technology should play a major role in growing our offshore wind industry, as well. There are efforts already being made off the east and west coasts to develop wind projects, though they are not yet commercially viable.

Robust offshore wind development in Germany, the U.K., the Netherlands and Ireland – where some projects are so successful, they are now subsidy-free – could open doors here as well. And then there's Asia. China, the world leader in wind power generation, is looking to increase renewable energy capacity and Taiwan brought in a feed-in tariff program for wind energy a few years ago. All of these advancements bode well for a growing green-energy industry here.

For more information about how BLG can help your business or organization advance in the renewable energy sector, please contact a member of the [Electricity Markets Group](#).

TOP

Innovative Industries

Shaping the Canadian Economy

This series explores industries that are having an impact on Canadian businesses, communities and our overall economy.

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Smart Cities:

Are There Privacy Potholes Ahead?

Technology is making urban areas smarter, safer and more sustainable. **But as cities collect more and more data about their citizens, legal questions are beginning to emerge.**

As urbanization gains momentum around the globe, cities are increasingly looking to technology to improve the lives of their citizens. And the tool they're turning to most often is the Internet of Things. This expanding network of internet-enabled devices collects data in order to optimize city infrastructure and services, be it sewer lines or street lights.

For cities, the benefits are undeniable: fewer redundancies, lower costs and streamlined deployment of staff are just a few. But for the technology companies that collect the data, and the governments and service providers that use it, there are risks that need to be considered.

Privacy

While smart city technology has the potential to solve many urban issues, its implementation has actually created one: **The right to privacy in an era when almost everything we do can be turned into a data point.**

In England, face-recognition technology and vast networks of CCTV cameras help law enforcement quickly identify suspects in crimes. But there is also growing public concern over how the government will use the billions of images it has collected. Can legislators reconcile privacy protection with the public good?

Top Three Smart City Takeaways

34% TO 54%

In 2016, 54 per cent of the world's population lived in cities, up from just 34 per cent in 1960

DEMAND GROWS

As cities grow, demand on municipal resources and services will continue to climb

\$1.7 trillion (U.S.) BY 2019

The Internet of Things – the sensor-driven network that makes it possible for cities to collect, analyze and share data – could be a \$1.7 trillion U.S. industry by 2019, according to Statista.com



How governments, technology companies and regulators come to grips with the challenge of personal privacy in a connected city is still unfolding

The monitoring of real-time data also presents new evidentiary and legal challenges – and may even open the door to new forms of criminal activity. The IoT technologies that optimize water and sewage systems could be vulnerable to cyberattacks designed to cause flooding or even contamination.

Of course, commercial interests have an obvious profit motive in collecting smart city data. If municipalities partner with IoT companies to adopt smart city tools, the government must ensure it has developed both the technical and legal capacity to face any legal challenges stemming from alleged improper data use.

Litigation Could Provide a Path Forward

Increasingly, we get questions from both IoT companies and governments about the legal ramifications of smart city technologies. In the absence of a strong regulatory framework, it may well be litigation in Canadian courts that, to a degree, shapes the guidance and rules needed to protect individuals and businesses as cities become more connected.

This evolving legislative framework means two things for those behind smart city projects and services. First, this is a challenging and exciting time with ample opportunity to influence the city of the future. And second, careful legal guidance is an imperative.

For more information on how smart cities and the Internet of Things may impact your enterprise, contact a member of [BLG's Insurance and Tort Liability group](#).