

# Jesse Hirsh

## ***Additional Presentations***

### ***Agriculture***

#### **The Farm of the Future: Precision Agriculture and the need for Hackers**

Technology is having a transformative effect on the agricultural sector, enabling greater accuracy, responsiveness, and precision when it comes to managing crops and livestock. Sensors, drones, smarter weather forecasts, and data analytics are combining to enable smart farms that are increasingly automated, and result in greater yields. What is the technology driving this change, and what happens if and when it's wrong? Farmers are the original hackers, and in this era of rapid technological change, there's a need to reconnect with and embrace hacker culture so that farmers remain in control of their tools and their farms.

### ***Associations/ Human Resources***

#### **The Big Picture: Smart Associations use Smart Data and Analytics**

We live in a world that is flooded with data, and the difference between success and failure is often what you do with that data. What data are you collecting? How are you analyzing that data? Who has access to it? We've heard buzzwords like engagement, value, and efficiency, but what role can data play in helping to foster these qualities and help you do your job? Can you use data to predict the future? When is data a distraction and when is it wrong? What are algorithms, and why do they matter? How is HR and Associations being transformed by the rise of Cognitive Computing

### ***Auto & Transportation***

#### **Who Hacked My Car and When Is It Going To Fly?**

The Auto Industry is in the early stages of a radical transformation that is, and will continue to happen faster than anyone predicted. Self-driving cars, ridesharing services, and startups like Tesla are presenting a formidable challenge to the auto status quo, and while the big companies are showing signs of change, what will this mean for dealers, drivers, and the broader automotive industry? What's happening now, what will happen next, and what can the industry do to adapt? As technology changes how will you reach and retain your customers amidst a rapidly changing world?

### ***Consumer, food, and retail***

#### **Smart Consumers, Ambient Commerce, and the Danger of Being Creepy**

Smartphones are making it easier for consumers to be smarter and strategic when it comes to what they purchase and consume. Increasingly we tune out advertisements, even use technology to block them, and instead rely upon recommendations from our social networks that influence what we buy. Brands and retailers however have their own arsenal of tools, driven by data, to help target and enable consumer engagement. For example, loyalty marketing

continues to evolve, and predictive analytics offer the elusive opportunity to actually anticipate what people will buy (and when). Yet is there a danger of going too far? Of being too creepy when it comes to targeting your customers? Ambient Commerce is all about anticipating consumers needs and satisfying them the moment we have them. What kind of impact will it have on our economy, and is there a fine line between anticipating and alienating consumers?

## ***Education***

### **Learning at the Speed of Light: How Technology Accelerates Education**

The challenge for organizations and educators in the face of rapidly evolving technology is not only how to keep up with changing tools, but also how to keep up with your employees and students themselves. How do you do more with less, while operating at a speed that makes critical thinking difficult? How do we bridge the digital divide and ensure that everyone has access to the education and empowerment our emerging society requires? What is the connection between attention, learning, and authority? How do we foster a culture of lifelong learning while also creating spaces that are free of bullies and abuse?

## ***Energy & Infrastructure***

### **Energy, Infrastructure, Analytics, and Citizen Science**

The Energy sector is at a crossroads when it comes to the role of technology and their relationship with the public. On the one hand, technology is making it easier to extract and move natural resources, however on the other hand, technology is also making it easier for communities to organize and oppose infrastructure projects that they perceive as risky. This is why the concept of Citizen Science offers an excellent means of engaging communities while also supporting infrastructure projects. It allows for a new kind of community engagement that combines buy-in on the project, and the fostering of long term trust and support. As Big Data and Analytics provide a greater ability to monitor, understand, and share information about the energy sector and infrastructure, so too is there a greater ability to communicate with the public and earn their trust. Companies like Tesla are making (sustainable) energy technology more available and accessible, and as a result public engagement and awareness will inevitably increase.

## ***Pharma and Healthcare***

### **The Future of Health: From eHealth to singularity!?**

As the emergence of eHealth stabilizes and normalizes across Canada, a new era of healthcare is emerging. What shape this takes is up to us to define. We need to articulate a vision to help make it happen. In particular, the explosion of “Big Data” and mobile technology encourages a significant shift towards a patient-centric, customized, distributed and preventative healthcare system. Yet the obstacles that stand between us and a new era of health and longevity are substantive. This presentation will look at our relationship to privacy, the use of surveillance technology, artificial intelligence and the Internet of Things. Institutional change is never easy, and the need for speed when it comes to research, testing and deployment will provide unique challenges.

## *Tourism and Hospitality*

### **Travel, Tourism, and the Sharing Economy**

The Sharing Economy as we know it is certainly a challenge to the traditional tourism industry, however it also provides an opportunity for regional and local players to work together to raise the sector as a whole to new heights. On a basic level, the sharing economy is about empowering consumers, and small players, who are able to use emerging platforms to leverage whatever they have to share. However it also provides an opportunity for more established or larger operators to really leverage their knowledge and reputations in a crowded marketplace. There is a growing desire consumers have to spend money on experiences, and not just stuff. This is one reason why travel and tourism continues to grow, but it also offers an insight into how marketing efforts in the sharing economy are changing. Recommendations and stories are driving how people make decisions. There's much that the tourism sector can do to facilitate this, such as enabling greater consumer sharing, activities, and help creating truly memorable experiences. Combine this with customized marketing and relationship building, driven by artificial intelligence and cognitive computing, and there's lots of reasons to be excited about the emerging Sharing Economy and its impact on Tourism and Hospitality.

## *Manufacturing*

### **Robots Building Robots: Why Manufacturing is Ready for a Massive Resurgence**

The manufacturing sector is experiencing a resurgence as automation and new technology allow for significant productivity gains, lowering of costs, and the return of smaller manufacturers able to compete in local, regional, and global markets. Robots, already a mainstay in manufacturing, are getting cheaper and smarter, as machines like Baxter are able to learn and perform tasks that previously were the exclusive domain of humans. Data and analytics are also playing a growing role in manufacturing as they help increase performance and measure which components or materials are the most effective and durable. 3D printers and CNC machines are making it easier for even the smallest shops to prototype and create unique products and components. All of this is creating a climate in which manufacturers are able to be more agile and responsive to an increasingly dynamic marketplace. However what's missing are manufacturing jobs, which thanks to automation, may never return to 20th century numbers. Instead, what we ought to focus on, and promote, are entrepreneurs, rather than employees, and the rise of a new manufacturing sector that is resilient and diverse.

## *Municipalities/Urban Planning*

### **Will Smart Cities Make for Smarter People?**

Smart communities, smart homes, and hopefully smart people! Technology has become a pervasive and intimate part of our lives, the next step is to use the data that is derived from our love of tech to make better communities, home environments, and experiences. Of course this is already happening, however there is still much to be determined, and these are becoming really important and profound design and political choices we will make in the years and

decades to come. One in particular is our relationship with robots and artificial intelligence. For example FB founder Mark Zuckerberg has created an AI to run his home. Then of course there's self-driving cars, which will have a significant impact on how our cities are configured. As individuals we've been overloaded with information, and many of us, especially young people, are addicted to screens, at the expense of getting out and about and involved in their community. Will this change as devices become smarter, smaller, and even easier to use? If Pokemon Go got (some) kids off the couch and outside, what kind of community centric technologies can do the same when it comes to civic responsibility and social connection?

## ***Financial/Professional Service***

### **Money, Technology, and the Future of Authority**

There are a number of ways in which technology is changing the relationship between financial institutions and their customers. The most significant is the way in which technology is changing our relationship with authority: who we trust, who we listen to, and how we plan for our future. This places even greater emphasis on the ability to personalize and customize communications and services so as to speak directly to each individual client. This began with social media, but is steadily moving into wearables and the kind of data that individuals generate. This data can be part of a larger friendly and consensual surveillance that helps us understand our individual habits, as well as broader social trends. With all the information that is generated about us, should we not benefit from the insights available? Should the financial advisor not be the trusted professional to help us understand that information? The other significant impact technology is having upon society is to disrupt existing business models and displace existing industries. Whether Uber, AirBNB, Google, Amazon, Apple, or Facebook, when these companies decide to enter a sector or market the rules and landscape change immediately. How do we make long term investment decisions in such a turbulent and dynamic market? Where is Uber taking us? What about Facebook, Google, and Amazon, rising monopolies determined to dominate their era? Or is there a company being founded today that within a decade will create and dominate a sector the way Facebook does? And then there's the blockchain. The free and open source concept that drives bitcoin, and as a medium of trust will revolutionize the technology in the financial services sector and beyond. If there's one prediction that can safely be made, the future will be disruptive, and the future is now.

## ***Legal***

### **Cognitive Computing and the Automation of Law**

The legal sector is arguably one of the most conservative when it comes to the adoption of technology and yet it is also the most vulnerable when it comes to disruption. In particular, artificial intelligence and cognitive computing are having a massive impact on the practice of law, in particular the automation of many tasks that lawyers would perform (for high hourly rates). Cognitive computing is poised to transform almost all aspects of our legal system, from clerking, to research, and possibly even judgements. This comes at a time when our traditional justice system is being challenged by a rising court of public opinion that embraces vigilante forms of justice due to their speed, accessibility, and power. What does all this mean for

democracy, or access to traditional justice? What are the emerging legal applications and services that employ artificial intelligence? What impact will they have on the profession as a whole?

## ***Public Sector***

### **Open Data, Open Government, and the Future of Regulation**

Open Government is an exciting innovation in public service, however on its own it will not achieve the transparency or renewal that it promises. Rather it requires a larger culture within the public service, and a focus on literacy within the broader public, but also specifically among the political class (politicians, lobbyists, journalists, and public servants). We are now in the era of algorithms, headed to an era of artificial intelligence, and Open Government is arguably the last and best hope for democracy. For example Uber should be regarded not as a transportation company, but a data company, currently active in the transportation sector, but destined to have a hand across society, especially public policy and even public service. They represent the kind of power emerging in the private sector, and emphasize the need for a strong public sector data and proficiency. In Britain, the Labour Party under Corbyn has proposed an ambitious digital democracy initiative that offers us a glimpse of how Open Government is part of a larger process of democratic innovation and public sector renewal. What will Canada need to thrive and survive the challenges ahead? Open Government is the right approach, but it needs a broader culture to truly succeed.