



Welcome to the **November** and **December** edition of *ACT News – Driving Insights*. This complimentary service is provided by ACT Canada. Please feel free to forward this to your colleagues.

In This Issue

1. Editorial – ACT Canada: Looking Forward
2. ACT Canada announces new board of directors
3. Privacy watchdog warns of 'critical tipping point' as Canada stakes ground in digital economy
4. Canadian demands for speed and convenience influencing payments innovation
5. CIBC introduces new digital credit and debit card innovations
6. Canada's mandatory breach notification and reporting rules now in effect
7. Accenture opens Canada innovation hub in Toronto to help clients reimagine their businesses for the digital economy
8. Artificial intelligence serving border security
9. Gemalto expands data center footprint in Europe to support cloud-based access management services
10. FCAC recognized for financial wellness by Canada awards for excellence
11. PCI Council publishes updated guidance for securing telephone-based payments
12. Amazon files trademark application for Amazon Pay in Canada
13. MasterCard, Microsoft join forces to advance digital identity innovations
14. PayPal brings Xoom money transfer service to Canada ahead of bigger global expansion
15. Transatel and G+D sign with Scania to provide trucks with machine-to-machine connectivity worldwide
16. Three lessons from three markets: Europe shows retailers how to grow beyond borders
17. City possible: MasterCard launches global network for urban co-development in collaboration with IDEMIA among other companies



- 18.** UnionPay app users will be able to take metro in HK by scanning QR codes
 - 19.** Discover survey suggests financial education courses are helping Americans become more confident with their finances
 - 20.** Blockchain 3.0 and Coti - next generation technology without mining?
 - 21.** Canada's cautious stance on regulating open banking
 - 22.** European merchants would pay 40% less to accept US-issued cards under Visa-MasterCard proposals
 - 23.** CPI Card Group to sell Canadian subsidiary to Allcard Limited
 - 24.** Social media companies believed to be vulnerable, with 61% of consumers saying they pose greatest risk for exposing data, finds Gemalto
 - 25.** Just tap and ride: MasterCard simplifies the daily commute in over 150 global cities
 - 26.** Rise of the millenni-factor: wealthy millennials determined to leave a legacy
 - 27.** Why should you choose an e-commerce platform?
 - 28.** ATM jackpotting: what you need to know
 - 29.** Millennials and gen z cite higher income as leading reason for expected increase in holiday spending thirst for rewards sparks uptick in credit card use this holiday season
 - 30.** MasterCard accredits FIME for biometric evaluation services
 - 31.** Mobile commerce is fastest-growing sales channel in the US
 - 32.** Ontario Caisse merger: stronger together
 - 33.** Veridos launches new color image technology
 - 34.** How to make the most of mobile customers
 - 35.** Fast growing payments system Adyen expands to Canada
-



Articles

Editorial – ACT Canada: Looking Forward

Source: Andrea McMullen, ACT Canada (12/13)

ACT Canada has undergone an extensive transformation and an evaluation of our member programs; we are focusing heavily on education and networking. Our members are concerned about: payments modernisation; open banking; customer experience; data sovereignty and security; digital commerce; AI; fraud; payment friction; and changes to technical specs. Looking forward to 2019, we are concentrating efforts on new education programs and additional networking opportunities:

- Based on member feedback, we are moving the ACT Canada Forum from to September 18th as well as relocating it to MaRS Discovery District in Toronto. It will feature a one-day program with social activities pre and post event. The call for speakers will be released in January, along with sponsorship opportunities
- Our first training session will be held on January 17th, focusing on the threat quantum computing poses on our current infrastructure. The session will include an overview of quantum computing, risk management and the challenges to practical deployment. For more details, please visit <https://www.actcda.com/events-calendar/>
- Our “Ask the expert program” will be a series of interactive lunchtime webinars where we deep dive on pressing topics with subject matter experts. The first of these will be held in February.
- Our first networking session of the year will be held in early March. These sessions will feature guest speakers and will be held in a social setting
- We are working on additional on-demand training and education resources for members; details will be available in Q1

Over the past year we have:

- Held a briefing session and meeting of the Payments Strategic Leadership team to review the issue of PIN on glass and the concerns of various stakeholders
- Held the ACT Canada Forum (formerly Cardware) to provide education and networking opportunities while exploring pressing issues in our industry
- Held an update to the Cannabis Commerce session from the ACT Canada Forum to educate on the changes and the questions that still loomed
- Developed a quantum training program with evolutionQ to explore the threat to our critical infrastructure
- Partnered with leading industry events to provide discounts to our members



The real value of ACT is in bringing people together. There are barriers, issues, opportunities and unintended consequences when changes occur. Discussing these issues helps our members move past them. We continue to deliver programs which line up with members pain points.

We look forward to working with you in the coming year and wish you all the best this holiday season!

2. ACT CANADA ANNOUNCES NEW BOARD OF DIRECTORS

Source: ACT Canada (12/12)

On December 6th at our 2018 Annual General Meeting, the ACT Canada membership passed a motion to reduce the size of its Board of Directors to improve efficiency and effectiveness. As a result, our Board nominees were acclaimed. We are pleased to announce our Board of Directors for the coming year:

- Suzan Denoncourt, Ingenico Canada Ltd., Managing Director
- Greg Feniak, Collabria, Vice President
- Malcolm Fowler, Moneris Solutions, Chief Product and Partnership Officer
- Mia Huntington, Elavon, Sr. Vice President and General Manager
- Gary Locke, Interac Corporation, Head of Acceptance
- Dinaro Ly, MaRS Discovery District, Director Financial Technology
- Andrea McMullen, ACT Canada, President
- Syndi Pak, Advertience Inc., Chief Operating Officer

We look forward to working with our incoming Board to further evolve ACT's offerings to the membership. We would like to thank our outgoing Board for their expertise & contribution over the past year:

Suzan Denoncourt, Ingenico Canada Ltd., Managing Director (Chair); **Doug Macdonald**, Deloitte, Director Payments Strategy (Vice Chair); **Owen Gingras**, Rogers Bank, VP Customer Operations COO (Treasurer); **Carmen Xiao**, CIBC, Senior Manager Payments Innovation (Corporate Secretary); **Christian Ali**, Entersekt, Canada Country Manager; **Kamuran Altinbilek**, Payolog, Chief Marketing Officer; **Jeff Ecker**, TD Merchant Solutions, Head Innovation and Partnerships; **Malcolm Fowler**, Moneris Solutions, Chief Product and Partnership Officer; **Robert Hayhow**, Equinox Payments, VP N.A Business Development; **Brian Hirman**, Gemalto, VP Sales for Secure Transactions; **Mia Huntington**, Elavon, Sr. Vice President and General Manager; Gary Locke, Interac Corporation, Head of Acceptance; **Dinaro Ly**, MaRS Discovery District, Director Financial Technology; **Jonathan Magder**, Accenture Strategy, Canadian Payments Lead; **Wendy Maisey**, ICC Solutions Ltd., Customer Relations Director; **Andrea McMullen**, ACT Canada, President; **Syndi Pak**, Advertience Inc., Chief Operating



Officer; **Craig Reiff**, MasterCard, Vice President Consumer Products; and **Fausto Rossi**.

About ACT Canada

ACT Canada helps its members understand complex issues and filters the truth from market noise with respect to current and emerging commerce trends through a consultative approach. With representation of all ecosystem stakeholder groups, the association is able to provide knowledge and expertise to help members leverage opportunities, confront challenges and advance their businesses in a rapidly changing marketplace. Visit www.actcda.com for more information on membership and our upcoming events.

3. PRIVACY WATCHDOG WARNS OF 'CRITICAL TIPPING POINT' AS CANADA STAKES GROUND IN DIGITAL ECONOMY

Source: CBC News (12/05)

The federal privacy watchdog is warning the Liberal government that it must not trade privacy rights for commercial gain as it strives to position Canada as a global leader in the digital, data-driven economy. In a letter to Innovation Minister Navdeep Bains, Privacy Commissioner Daniel Therrien said the digital revolution is sparking debate on some of "the most fundamental questions of our time." While there are high hopes attached to the power of digital technologies and big data to drive productivity, growth and competitiveness, he warned we've reached a "critical tipping point" in the adoption of these technologies. Therrien said mass digitization is essentially reshaping humanity, putting privacy rights and democratic values at stake.

"Recent events have shed light on how personal information can be manipulated and used in unintended, even nefarious ways," he wrote. "I am growing increasingly troubled that longstanding privacy rights and values in Canada are not being given equal importance within a new digital ecosystem eagerly focused on embracing and leveraging data for various purposes." Therrien said he worries about the fact that, in public consultations, the government is asking how it can increase trust and confidence in data use "while not impeding innovation." That language, he said, suggests to Canadians that innovation is somehow in conflict with privacy, when innovation and privacy should be pursued in tandem. Bains launched a national consultation process on digital and data transformation in June. Its goal, says the government, is to help Ottawa "better understand how Canada can drive innovation, prepare Canadians for the future of work, and ensure they have trust and confidence in how their data is used."



Roundtable discussions were held with businesses, academics, civil society representatives and others, while other Canadians were invited to share their views online. At the time, the government repeated its commitment to ensuring Canadians' personal information would be protected and secure. Contacted by CBC, Bains' press secretary Dani Keenan said the federal government "understands the potential of a data driven economy must be balanced against Canadians' right to have their data and privacy protected.

"We thank the Privacy Commissioner for his insight and contribution to this national conversation."

4. CANADIAN DEMANDS FOR SPEED AND CONVENIENCE INFLUENCING PAYMENTS INNOVATION

Source: Payments Canada (12/11)

Canadian businesses and households are ready for better payment options, according to new data from Payments Canada. The organization's annual Payment Methods and Trends Report, released today, shows that Canadians are increasingly choosing digital payments and adopting new payment channels, demonstrating a growing appetite and readiness for payments innovation.

"The payment experience of customers is more relevant than ever before as it has become a key space for businesses to compete," said Anne Butler, Chief Legal Officer and Head of Research and Policy. "This year's report provides important insights for businesses, financial institutions and new market entrants. Most notably, Canadians are demonstrating a propensity for a faster and more convenient payment experience. That's resulted in the domination of credit cards, but it also indicates a clear opportunity for wider innovation in the payment space, something the industry is enabling through payments Modernization." The 2017 data show that Canadian consumers are opting for faster and more convenient methods of payment, such as tapping a card or phone at point-of-sale, sending funds electronically through INTERAC e-Transfers, making more purchases online and in-app and leaving traditional forms of payment, like cash and cheque, by the wayside.

Businesses too are adopting digital payments, leveraging credit cards, INTERAC e-Transfers, and Electronic Funds Transfers (EFT) more frequently and reducing their use of cheques. Wider adoption of electronic payments by businesses is expected once faster and more data-rich payment options become available through Payments Canada's Modernization program. A deep dive into the 22 billion payment transactions made in 2017 uncovers some data and trends:



- Canadians are choosing to tap their cards or phones at the POS in lieu of using cash, and increasingly in lieu of chip-and-PIN, with 55 per cent growth for both contactless volume and value since 2016.
- Debit card use accelerated in 2017, primarily due to prevalent use of card and mobile tap, a space where Canada continues to claim the top spot.
- With 90 per cent of Canadians owning credit cards, lucrative rewards programs appealing to both consumers and businesses, and preeminence in the expanding e-commerce space, credit cards continued to dominate, with use increasing by 33 per cent since 2012.
- All cards experienced year-over-year growth, accounting for 64 per cent of the volume of payments made at the POS, both in person and online. A key driver of card use is the connection into technologies like mobile phones, game consoles and smart speakers, which are emerging as fast and convenient payment channels.
- Electronic payments thrived in 2017, including a 48 per cent volume increase in online transfers, primarily due to the growing use of INTERAC e-Transfers by both consumers and businesses.
- Electronic funds transfers (EFT), associated with payroll and consumer bill payments, was the dominant payment method for large transactions in Canada, making up 47 per cent of the value of payments in 2017. EFT use continued to increase in both the consumer and business space.
- There has been an accelerating decline in cheque use since 2014. There were 282 million fewer cheques written in 2017 than in 2012 in favour of EFT, credit cards and online transfers. Still, remaining cheques are being written for increasingly higher amounts, indicating a need for a better alternative for higher value, remote payments.
- Cash use continues to decline but less significantly than in the past. While it remains a widely used payment method, consumer preferences have clearly evolved; cash use for lower value lifestyle purchases like buses, taxis, and coffee is down by nearly 20 per cent since 2012 as people convert to mobile and cards.

Payments Canada is a Member of ACT Canada; please visit www.payments.ca

5. CIBC INTRODUCES NEW DIGITAL CREDIT AND DEBIT CARD INNOVATIONS

Source: CIBC (11/16)

CIBC announced today new debit and credit card features to help clients get the most out of their daily purchases. Starting today, clients can get money back on top of any existing card rewards they already receive, while also gaining real-time access and detailed merchant information related to their credit card transactions through CIBC's award-winning digital channels. The additional money



back offer on debit or credit purchases is made possible through a new arrangement with Paymi, a leading Canadian card-linked shopper marketing program. To receive additional cash back rewards, clients can register eligible CIBC credit, debit and prepaid cards online or via the Paymi Mobile App and then shop in-store and online at participating retailers to collect money back on everyday purchases. There's no need to load offers or use coupon codes with Paymi and cash back rewards can be deposited anytime with Interac e-Transfer. From now until June 1, 2019, CIBC clients who register with Paymi receive double the money back on purchases at participating retailers. "CIBC is offering an enhanced experience for clients, putting money in their pockets with Paymi as well as introducing new digital enhancements for how they view their credit card transactions," says Jeff Smith, Vice-President, Client Loyalty Solutions and Partnerships, Cards, CIBC.

A digital banking first among Canada's big five

CIBC is also providing clients new, enriched information about their credit card purchases when viewing transactions online or in-app. A first for a major Canadian bank, CIBC clients can simply tap or click on a credit card transaction to see additional data including merchant name, category, contact information and location, to better help recognize their purchase. "From the time a client makes their purchase or a return, they can easily view credit card transactions including detailed merchant information, offering greater convenience and peace of mind," adds Mr. Smith. "This is another key step in delivering digital innovation that allows clients to bank how they want." CIBC clients can look forward to enhanced transaction data on their debit card in the coming year.

CIBC and Interac Corp are Members of ACT Canada; please visit www.cibc.com/ and www.interac.ca/en/

6. CANADA'S MANDATORY BREACH NOTIFICATION AND REPORTING RULES NOW IN EFFECT

Source: Canadian Credit Union Association (11/7)

On November 1, 2018, new provisions in the Personal Information Protection and Electronic Documents Act (PIPEDA) related to breach of security safeguards came into force along with Breach of Security Safeguards Regulations. A breach of security safeguards is defined in PIPEDA as "the loss of, unauthorized access to or unauthorized disclosure of personal information resulting from a breach of an organization's security safeguards ... or from a failure to establish those safeguards". Credit unions subject to PIPEDA will be required to keep a record of all breaches and when a breach poses a real risk of significant harm, sometimes called the 'RROSH' test, they are required to:



- Notify the affected individual(s);
- Report the breach to the Privacy Commissioner;
- Inform organizations who may be able to reduce the risk of harm.
- The Office of the Privacy Commissioner of Canada has recently released a Guidance on the new breach reporting rules, an overview of what organizations need to know about their obligations.

The Canadian Credit Union Association is a Member of ACT Canada; please visit www.ccu.com/

7. ACCENTURE OPENS CANADA INNOVATION HUB IN TORONTO TO HELP CLIENTS REIMAGINE THEIR BUSINESSES FOR THE DIGITAL ECONOMY

Source: Accenture (11/27)

Accenture today opened its new Canada innovation hub in the heart of Toronto's business and technology district to help clients grow, compete and transform in the digital economy. As part of its investment in Canada, Accenture is also adding 800 new, highly skilled technology jobs by the end of 2020 and expanding its apprenticeship program. The apprenticeship program—inclusive innovation designed to foster inclusive innovation—gives under-represented communities the opportunity to participate in digital-economy jobs. “It is great to see that job creators like Accenture are getting the message that Ontario is open for business,” said Todd Smith, Ontario’s Minister of Economic Development, Job Creation and Trade. “Our government is committed to creating an environment where job creators can continue to grow and thrive. I congratulate Accenture on this great announcement and thank them for investing in Ontario.” The new hub is designed for clients to work side-by-side with their Accenture teams to co-innovate by ideating, rapidly prototyping and then scaling new products and services. Accenture starts with humans at the heart of every challenge, engaging local and global teams of experts and ecosystem partners to leverage the power of innovative and emerging technologies such as artificial intelligence, blockchain and virtual agents to solve clients’ most significant challenges.

“Our experience working with global clients across more than 40 industries has shown that continuous innovation is an imperative to succeed in the fast-changing digital economy,” said Julie Sweet, Accenture’s chief executive officer – North America. “With our network of innovation hubs, we are bringing innovation to our clients’ doorsteps, enabling them to harness the power of emerging technologies to transform their businesses.” Accenture’s innovation hub in Toronto is part of a network of 10 hubs in North America, which are connected to more than 100 Accenture locations around the world that seamlessly bring the best of Accenture’s global investments and insights to clients on the ground. Located in the heart of Toronto’s business district in the iconic Scotia Plaza, the new



innovation hub has an open floor plan designed for collaboration and ideation. Among Accenture's almost 5,000 people in Canada who are driving innovation for clients, there are more than 300 designers, data scientists and innovators in the hub. "Our Canada innovation hub gives our clients the leading edge to evolve in today's global digital economy," said Jeffrey Russell, incoming president of Accenture in Canada. "Our hub will bring the very best of our innovation talent together to lead our Canadian clients toward becoming the disrupters, not the disrupted." Mayor John Tory added, "It's an exciting time for technology growth in Toronto. The number of companies that have invested in the City is a reflection of the access to high quality labour force, a committed business community and a government that embraces new opportunities. The Accenture Innovation Hub represents a new collaborative approach to business and technology. I'm proud to see this hub open in the heart of our city."

Accenture is a Member of ACT Canada; please visit www.accenture.com/

8. ARTIFICIAL INTELLIGENCE SERVING BORDER SECURITY

Source: IDEMIA (11/16)

"With over 3 billion air passengers around the world per year, which is estimated to double over the next fifteen years, border control is becoming a big issue for governments. Countries seek to strike a balance between security measures to protect their countries and an efficient flow and better experience for growing numbers of travelers, who are increasingly mobile and connected. The number of air passengers is expected to double over the next fifteen years. As a result, border control is becoming a big challenge for governments. Discover how IDEMIA helps strike a balance between stringent security measures, efficient passenger flow and a seamless user experience with AI and biometric solutions" Olivier Charlanes, Senior Vice President Marketing and Product Offer – IDEMIA Public Security & Identity Business Unit

Biometrics to control borders

Border Security - Biometric technology IDEMIA Immigration and customs authorities are the first in line to prevent terrorist attacks and combat organized crime and human trafficking. Yet an explosion in numbers of travelers is hampering their task to pinpoint threats without slowing down passenger flows. Recent border security improvements, including use of cutting-edge biometric technology, ensures everyone who enters and leaves a country is safely identified, while providing more accurate details of who is in a country at any given time. Biometric tech does indeed reliably match travelers with their travel documents, thereby providing irrefutable proof of identity. IDEMIA's latest generation solutions, including biometric contactless technology, help immigration officers in their daily



border security tasks. The tech does indeed provide better security, make passenger flows smoother and improve people's travel experience via electronic counters, self-service check-ins and automatic passport controls.

Risk management by anticipating threats

Border Security - Efficient risk management To counter growing threats, systems automatically collecting and analyzing passenger data already exist in many countries to help authorities carry out their duties. Information given before flying (API - Advance Passenger Information) and reservation details (PNR - Passenger Name Record) helps authorities analyze and check passenger data in real time before they enter or leave a country, while improving high data volume processing. Data gathered such as travelers' previous trips abroad, help the authorities pinpoint potentially dangerous travelers and assess risks to passengers with a view to carrying out in-depth checks in the case of a real threat. So threats can be anticipated and manpower saved by concentrating on the small number of really dangerous passengers. Risks are not only reduced because they are identified, anticipated and so dealt with more efficiently, the travel experience is also smoother and enhanced due to shorter waiting times for the vast majority of passengers. Analyzing travel data prior to a flight, which is made easier by latest AI tech, also brings additional resources to security officers. Thanks to biometric passenger identification technology, officers can now concentrate more on investigating dangerous individuals.

Latest generation electronic visas and travel authorizations

Border Control - Electronic visa IDEMIA Managing visa and travel authorizations is nowadays an intrinsic part of modern, integrated border security systems. This is a key factor in improving passenger security and convenience. IDEMIA provides electronic visa and travel authorization solutions to transform and streamline procedures for both the traveling public and the authorities who issue travel documents. IDEMIA's solutions boost efficiency and border security by delivering irrefutable proof of identity underpinned by cross-checking documents with national and international lists prior to travel. The tech also allows easier control of overstays and smoothes arrivals by cutting queues at airports, sea ports and land borders based on forecasting demand.

IDEMIA is a Member of ACT Canada; please visit www.idemia.com/



9. GEMALTO EXPANDS DATA CENTER FOOTPRINT IN EUROPE TO SUPPORT CLOUD-BASED ACCESS MANAGEMENT SERVICES

Source: Gemalto (11/20)

Additional facilities designed to help customers comply with data protection regulations and sovereignty. Gemalto, the world leader in digital security, has today announced it is expanding its delivery footprint for Access Management as a service solutions across the European Union with additional data centers in the region. These newly added facilities will help the company respond to rising demand for its cloud-based authentication and access management solutions while also helping EU customers meet requirements around data sovereignty. As more companies use multiple cloud-based collaboration, infrastructure and storage services that are delivered from data centers around the world, securing data across all cloud platforms while meeting local regulatory mandates has become an increasing challenge. The addition of the new Gemalto data centers will give organizations the ability to take full advantage of Gemalto SafeNet Authentication and SafeNet Trusted Access solutions while ensuring the service is delivered from within the European Union.

"With GDPR and other legislations putting pressure on our EU customers to ensure that their data is secure, we've seen a large increase in demand for control over where cloud services are delivered from." said Francois Lasnier, Senior Vice President of Identity and Access Management at Gemalto. "As our service expands, it's important that we continue to provide our customers with the best means to manage access to multiple cloud services, and provide the flexibility and agility to scale as they require." Major technology highlights of the data center expansion include:

- Data centers and services are ISO 27001 and SOC2 certified;
- Multi-tier, multi-tenancy throughout its access management services, giving organizations more flexibility by being able to share cloud-based authentication and access management services across business units and departments; and
- Stringent Service Level Agreements across all its data centers with 99.99% service availability.

A Global Data Center Expansion

The launch of the new data centers in the EU is part of Gemalto's expansion of its global delivery footprint for its cloud-based security services. Later this year, Gemalto will launch additional data centers in North America, giving international organizations even more choice over service delivery location, and helping them to meet local regulatory and compliance requirements. "Expansion into these data centers clearly reflect the philosophy behind our cloud strategy - to expand our footprint while taking advantage of the latest innovations in cloud service delivery and offering more flexibility to our customers," added Lasnier. "Moreover, our cloud



service architecture also allows managed service partners and resellers to partner with us to offer their own branded cloud-based access management services without having to invest in the infrastructure."

Gemalto is a Member of ACT Canada; please visit www.gemalto.com/

10. FCAC RECOGNIZED FOR FINANCIAL WELLNESS BY CANADA AWARDS FOR EXCELLENCE

Source: Financial Consumer Agency of Canada (11/6)

The Financial Consumer Agency of Canada (FCAC) is pleased to announce that it received a Certificate of Merit in Financial Wellness in Toronto today from Excellence Canada as part of its Canada Awards for Excellence program. Each year, Canada Awards for Excellence recognizes Canadian organizations in all sectors for their outstanding achievements in improving the living and working conditions of their employees. Financial wellness is defined by Excellence Canada as a combination of financial health, financial well-being and financial literacy. Excellence Canada evaluated FCAC and other organizations according to criteria, such as the improvement of organizational performance, the culture of a healthy workplace, and a new standard for financial health. Over 600 outstanding organizations have been recognized so far for meeting the highest standard of quality, excellence, innovation and healthy workplace.

"For me, a healthy workplace is an environment conducive to the psychological, physical and financial health of all employees. A flexible place where we feel respected, supported and valued, and where we have opportunities for both personal and professional growth. To receive this award for the characteristics I value most within a working environment is tremendously gratifying". Lucie Tedesco, Commissioner, Financial Consumer Agency of Canada

"I'm honoured to be receiving this award on behalf of FCAC, especially during Financial Literacy Month. I am pleased that FCAC is being recognized for providing our employees with the proper support to improve their financial wellness, which is essential to our mandate of strengthening the knowledge, skills and confidence of Canadians to help them make good financial decisions. We know that making good financial decisions helps to reduce stress and improve one's overall well-being." Jane Rooney, Financial Literacy Leader, Financial Consumer Agency of Canada

"I would like to congratulate FCAC in supporting and implementing financial wellness related programs in the workplace. The Excellence Canada team was impressed by many of the activities and best practices they witnessed while conducting an on-site assessment. I am pleased that the Agency is one of the first



organizations in Canada to adopt the standards and requirements developed by Excellence Canada. FCAC will serve as a role model for other Canadian organizations in the area of excellence.” Kathryn Cestnick, Vice-President, Excellence Canada

The Financial Consumer Agency of Canada is a Member of ACT Canada; please visit www.canada.ca/en/financial-consumer-agency.html

11. PCI COUNCIL PUBLISHES UPDATED GUIDANCE FOR SECURING TELEPHONE-BASED PAYMENTS

Source: Digital Transactions (11/29)

Online and mobile payments get all the press, but plenty of card-not-present payments still originate from telephone orders. The security threats from such orders are changing, which prompted the PCI Security Standards Council to issue an update Wednesday to guidance it first produced seven years ago for protecting phone-based payments. The guidance does not add to or supersede any current requirements in the Payment Card Industry data-security standard, the PCI Council’s main set of rules for merchants, processors, and other entities that handle general-purpose credit and debit card data. It was developed by one of the council’s so-called special interest groups, which consist of representatives of companies and other organizations concerned with a specific security issue. In this case, the guidance came from the Protecting Telephone-Based Payment Card Data Special Interest Group.

“Since the publication of the original document in 2011, the marketplace for telephone-based payment card solutions has changed from a risk, legal-regulatory, and technology aspect,” Jean-Louis LaMacchia, standards development manager at the Wakefield, Mass.-based PCI Council and the telephone SIG’s chairperson, said in a blog post. “With EMV chip technology securing card-present transactions, criminals are increasingly looking to exploit card-not-present channels such as mail-order/telephone-order and e-commerce. Because telephone-based payments now represent an area of opportunity for fraud, entities need to properly evaluate and protect their telephone-based payment environments.”

LaMacchia said changes in regulations and consumer-protection laws have resulted in more recorded customer conversations, “which may result in unnecessary storage of payment card data information. In general, no payment card data should ever be stored unless necessary to meet the needs of the business.” Unique and changing technology also prompted the SIG to take a new look at how to better protect telephone payments. “Telephone environments often use technologies and solutions not found in other types of environments, such as



voice-masking technologies,” LaMacchia said. “Additionally, traditional analogue-based telephony systems are being phased out by many organizations and replaced by Voice over Internet Protocol (VoIP) technology, and entities need to understand the impact of this evolution.”

New technologies and payment channels developed since 2011 “are increasing the scope of the cardholder data environment—and creating some uncertainty and compliance challenges for contact centers,” said Ben Rafferty, a member of the telephone SIG who is global solutions director at Semafone, a United Kingdom-based data-protection software provider for customer contact centers with U.S. headquarters in Boston. He added in an email message that “we hope to provide clarity on securing these critical payment channels.”

12. AMAZON FILES TRADEMARK APPLICATION FOR AMAZON PAY IN CANADA

Source: Mobile Syrup (11/30)

E-commerce giant Amazon has filed a trademark application for its Amazon Pay online payments processing service in Canada. The application was submitted on November 16, 2018 and formalized on November 21st, 2018. The filing suggests that Amazon plans to bring the platform to Canada in the near future.

Amazon Pay launched in 2007 in the U.S. Its services are similar to PayPal, in which the user can pay with their account on external merchant websites. The idea of using this type of service is helpful to merchants, who can put a button allowing customers to pay with their Amazon account, trying to keep customers from abandoning their carts and speeding up the checkout process. For our neighbours down south, the service charges merchants 2.9 percent + \$.30 per transaction, which is similar to PayPal. Amazon doesn’t reveal how many merchants use its payments platform, but Techcrunch reports that in February 2017 Amazon announced over 33 million customers have used Amazon Pay to make a purchase. Amazon noted that number was up 10 million from April 2016.

13. MASTERCARD, MICROSOFT JOIN FORCES TO ADVANCE DIGITAL IDENTITY INNOVATIONS

Source: MasterCard (12/03)

MasterCard and Microsoft today announced a strategic collaboration to improve how people manage and use their digital identity. Currently, verifying your identity online is still dependent on physical or digital proof managed by a central party, whether it’s your passport number, your proof of address, driver’s license,



user credentials or other means. This dependence places a huge burden on individuals, who have to successfully remember hundreds of passwords for various identities and are increasingly being subjected to more complexity in proving their identity and managing their data. Working together, MasterCard and Microsoft aim to give people a secure, instant way to verify their digital identity with whomever they want, whenever they want. The answer to these challenges is a service that would allow individuals to enter, control and share their identity data their way—on the devices they use every day. That’s MasterCard’s intention, working closely with players like Microsoft.

“Today’s digital identity landscape is patchy, inconsistent and what works in one country often won’t work in another. We have an opportunity to establish a system that puts people first, giving them control of their identity data and where it is used,” says Ajay Bhalla, president, cyber and intelligence solutions, MasterCard. “Working with Microsoft brings us one step closer to making a globally interoperable digital identity service a reality, and we look forward to sharing more very soon.” Access to a universally-recognized digital identity could unlock new and enhanced experiences for people as they interact with businesses, service providers and their community online, including:

- Financial Services: Improve and speed the applicant identification process for establishing a new bank account, loan or payment service account
- Commerce: Enable a more personalized and efficient shopping experience online and in stores, regardless of the payment type, device or service provider
- Government Services: Simplify interactions with government agencies and services – such as filing taxes, applying for passports or securing support payments (e.g., Social Security)
- Digital Services: Streamline and provide easier use of email, social media, movie/music streaming services, and rideshare platforms

“Digital identity is a cornerstone of how people live, work and play every day,” said Joy Chik, corporate vice president, Identity, Microsoft. “We believe people should be in control of their digital identity and data, and we’re thrilled to first work with MasterCard to bring new decentralized identity innovations to life.” This digital identity initiative could also help solve for common challenges:

- Identity Inclusion: More than 1 billion people, a majority of them women, children and refugees, are not officially recognized; a digital identity can improve their access to health, financial and social services.
- Identity Verification: A single, reusable digital identity can help people interact with a merchant, bank, government agency and countless other digital service providers with greater integrity, lower cost and with less friction.
- Fraud Prevention: A single digital identity can help reduce payments fraud and identity theft of various forms.



This initiative will serve as the foundation for new MasterCard services powered by Microsoft Azure and built in collaboration with leaders in the banking, mobile network operator and government communities. Microsoft and MasterCard are bringing together their respective strengths – Microsoft’s expertise in identity technology and MasterCard’s expertise in securely orchestrating digital interactions in a complex multi-stakeholder ecosystem. Additional details on these efforts will be shared in the coming months.

MasterCard is a Member of ACT Canada; please visit www.mastercard.us/

14. PAYPAL BRINGS XOOM MONEY TRANSFER SERVICE TO CANADA AHEAD OF BIGGER GLOBAL EXPANSION

Source: Venture Beat (12/11)

PayPal is opening its Xoom international money transfer service outside the U.S., starting with Canada. Xoom, for the uninitiated, allows you to send money, add credit to mobile phones, or pay bills to anyone in more than 130 countries, with Xoom taking a 3.93 percent cut. Founded out of San Francisco in 2001, Xoom went on to raise more than \$100 million in funding ahead of its IPO in 2013, before being brought back to the private sphere by PayPal, which bought the service for \$890 million in 2015. A year later, PayPal integrated itself with Xoom. So far, Xoom has only been open to payments emanating from the U.S., but its Canada launch today kick-starts a broader international rollout with more markets being added in the coming months. PayPal wouldn’t confirm which markets would be next.

“The traditional methods of sending money abroad are slow, expensive and stressful for both the sender and the receiver,” noted Xoom VP and general manager Julian King. “Senders are often faced with worry about when, or if, their money will reach their loved ones. As a disruptive digital remittance provider, Xoom is helping to eliminate these inconveniences so it’s fast and easy for Canadians to send money abroad for cash pickups, bank deposits, reloading prepaid phones and paying bills for loved ones back home — all from the comfort of their homes or from their mobile devices.”

Remittance

A number of players exist within the international money transfer realm, including established giants such as Western Union and MoneyGram, while several well-funded fintech startups have emerged in recent years to help people send money abroad. Indeed, London-based WorldRemit and TransferWise have raised more than \$700 million between them. The global remittance market — payments made by an individual working abroad to someone in their home country — grew seven percent last year to \$617 billion, according to World Bank data, and



is expected to increase by a further 10.3 percent this year to around \$690 billion. Remittances account for more global payments each year than foreign aid, and play a crucial part in international development.

India tops the remittance recipient market, accounting for some \$80 billion received this year, and Canada is home to one of the biggest Indian diasporas anywhere in the world. Moreover, some \$24 billion is sent from Canada to other countries each year, so opening to Canada makes a great deal of sense as a starting point in Xoom's global expansion. From today, Xoom users in Canada can send up to \$12,500 CAD in a single transaction to any of the 130+ supported countries, either directly to a bank account or as cash for pick-up or delivery. Existing PayPal users in Canada can log in to Xoom with their PayPal credentials.

15. TRANSATEL AND G+D SIGN WITH SCANIA TO PROVIDE TRUCKS WITH MACHINE-TO-MACHINE CONNECTIVITY WORLDWIDE

Source: Giesecke+Devrient Mobile Security (12/3)

Transatel and Giesecke+Devrient Mobile Security (G+D) are making public today their partnership to enable Scania's embedded telematics units with global connectivity. Scania already provides its customers with a telematics service but is now going one step further, as it is looking to deploy worldwide. In this context, Scania needed a fully eUICC-compliant solution (provided by G+D), supported by a global, flexible and secure technical platform (provided by Transatel). Transatel will offer Scania their competitive data prices worldwide, as well their core value proposition for all IoT players: a one-time integration for a global deployment.

Global cellular connectivity for M2M

Thanks to global connectivity, and to the comprehensive connectivity management platform, Scania will be able to offer its telematics services consistently around the world: services such as fleet management, remote control, predictive maintenance and over-the-air software updates. At one end, Scania will be able to better optimize the operational costs of its fleets engaged in leasing contracts. At the other end, Scania's customers will be able to benefit from smart connected services and manage their own fleets with better efficiency.

The global data MVNO approach: a single integration

Transatel provides Scania with its international Mobile Network Operator profile (the MNC 901-37). This profile, combined with agreements with over 140 local operators worldwide, ensures the best prices for data wherever the trucks are sold, and with no additional network integration costs. Scania's telematics services will be therefore be deployed as a turnkey solution, in countries spanning five



continents, all thanks to a single integration. The solution deployed for Scania's telematics services is also re-usable for the truck manufacturer's other projects, in which trucks will be generating and exchanging different types of data flows. Transatel's versatile platform allows for a variety of projects and SIM usages to be operated within the same account and environment, all true to the original integration framework.

Security specific to the automotive sector

Security being one of the major concerns for any truck manufacturer, Transatel further guarantees connectivity security via a private APN and secure authentication. The solution presents built-in, end-to-end security mechanisms compliant with connected car and remote-control services standards. Technically, the profiles are stored in Transatel's SM-DP hosted by G+D Mobile Security and are transferred to the G+D eSIM via the Scania SM-SR platform, also hosted and operated by G+D Mobile Security. Technical integration and initial implementation is to be achieved before end of 2018, thanks to an efficient collaboration between Scania, Transatel, and G+D.

Philippe Vigneau, Transatel VP of Business Development: "We've greatly enjoyed designing the ideal solution with Giesecke+Devrient for the Scania teams, who understand the value that we bring to the automotive market. We're grateful for the opportunity to prove that we're one of the very few telecom companies today truly able to take on global connected car projects, thanks to the mobile operator-agnostic nature of our solution. We're looking forward to an even greater partnership with Scania."

Alois Kliner, Head of the Digital Enterprise Security Division at G+D Mobile Security, adds: "With this project, we are capitalizing on the potential of Transatel's global coverage in combination with G+D's leading eSIM management technology to deliver flexible connectivity solutions for connected trucks."

Giesecke+Devrient Mobile Security is a Member of ACT Canada; please visit www.gj-de.com/en/ca

16. THREE LESSONS FROM THREE MARKETS: EUROPE SHOWS RETAILERS HOW TO GROW BEYOND BORDERS

Source: Global Payments (12/6)

I've spent many years working in Europe and recently returned from a trip to meet with partners, speak with customers as well as accompanying our CEO Jeff Sloan as he talked with media outlets in Barcelona, London and Dublin. Beyond the beauty and energy that is always evident across the continent, I was struck by another constant apparent during our travels and conversations: every



market – and every business – is at a different stage of evolution. Let that sink in for a second. On one hand, you have Spain’s recent tech-driven economic revival and Ireland’s thriving innovation economy. On the other, Brexit’s looming uncertainty in the United Kingdom continues to shake confidence, particularly among retailers whose front-of-house and back-office successes depend on the continued, frictionless flow of goods and services across borders.

"Our customers and partners are greatly concerned about continued and ever-growing complexity." And while our customers and partners are NOT fearing economic collapse or permanently closed borders like years or decades past, they are greatly concerned (and rightfully so) about continued and ever-growing complexity. This is particularly acute for our global retail customers – those that know that the best opportunity for growth is often geographic expansion. Whether the flagship store sits in Madrid’s Golden Mile, on Regent Street in London, or even online, a top challenge for our European customers is navigating a payment ecosystem with varied policies and regulations, numerous fees and currency conversions and many vendors and partners. Through this experience, I’ve identified three key takeaways for how any business – big or small – can reduce complexity to grow globally.

1. Unify. Unify. Unify

Consumers demand a seamless shopping experience on- or off-line, anywhere in the world. Regardless of where they live or how they want to pay, to reach the greatest number of consumers – all while reducing the complexity and costs associated with managing multiple, market-specific vendors – a single, unified commerce platform is always the first and best recommendation.

"To reach the greatest number of consumers while reducing complexity...a single, unified commerce platform is always the first and best recommendation." At Global Payments, our unified commerce platform and single technical integration is a fast, simple and more secure path for processing payments. Whether that’s using AliPay to tap into the growing number of Chinese tourists, or the newest tap-to-pay POS terminal, retailers that employ our unified commerce platform can more easily expand into markets worldwide.

2. Be Local to Grow Global

Despite the perceived ease of a “one Europe” marketplace, business owners looking to expand within the union still face numerous challenges navigating different nations, cultures and governments. It’s critical that any business entering a new country understands local taxes, regulations, cultural customs and consumer habits. This level of complexity can be daunting to a retailer, as well as costly. At Global Payments we are uniquely positioned with the largest geographical footprint of any payments partner, locally serving businesses



in 58 countries, supported by more than 11,000 employees. Our worldwide payment solutions not only removes complexity and cost around the transaction, but our local teams meld in-market relationships with card issuers and payment brands with localized data to give our clients the added intelligence to make cross-border commerce easier.

This real-time perspective on performance across banks, channels, currencies and preferred payment methods helps businesses stay on top of global trends and how they impact local market behavior.

3. Innovation is Everything

As we spoke with Spanish retailers gearing up for the holiday season, they were focused on how best to capture a market opportunity that is expected to grow by almost 10% in the next three years. Consumers and business owners across Spain are leaning into technology more than ever before, with nearly one fifth of Spanish companies selling online. Conversely, Irish merchants worried that any lag in ecommerce innovation would turn off consumers from first-mover markets such as China. While “innovate or die” is a much-overused maxim, in the case of payments, it does ring true. Global consumers are abandoning cash and at record rate: up 10% in 2016 alone and picking up steam, according to Capgemini and BNP Paribas’ 2018 World Payments report. So, recognizing and adopting new payment innovations (such as artificial intelligence) will be key for globalizing businesses that want to reach everyone, everywhere. "Adopting new payment innovations will be key for globalizing businesses that want to reach everyone, everywhere."

Nowhere am I reminded of this fact more than when I’m at our Barcelona Payment Innovation Hub, a Global Payments-led joint venture with some of our key customers and partners, including CaixaBank. Here we are exploring the use of biometric technologies, including the Internet of Things solutions, as well as revolutionary technologies such as Blockchain and Machine Learning to fuel the growth needs of our customers, without the complexity. As global commerce digitizes and democratizes, retailers must be equipped to sell anything, anywhere. This most recent engagement with customers in Europe confirms what I firmly believe: that entering markets seamlessly and keeping the consumer experiences simple and streamlined is more essential than ever.

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17. CITY POSSIBLE: MASTERCARD LAUNCHES GLOBAL NETWORK FOR URBAN CO-DEVELOPMENT IN COLLABORATION WITH IDEMIA AMONG OTHER COMPANIES

Source: IDEMIA (11/14)

As urban leaders from around the world gather for Smart City Expo World Congress this week in Barcelona, MasterCard – supported by IDEMIA – is launching a unique global network for urban co-development. As part of its City Possible program, MasterCard is connecting cities with academia and businesses to identify common challenges that can be best addressed through collaboration.

Sixteen cities to date are becoming founding members of the global City Possible network – representing a diverse mix of geography and size. To meet the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015, “making cities inclusive, safe, resilient and sustainable”, together with the United Nations Global Compact Cities Program, participating cities can access the City Possible network to identify shared challenges and seek sustainable business models to address them. Once key challenges that are shared by cities across the globe have been identified, City Possible will provide a framework for co-creating, testing and scaling solutions – connecting cities with private sector players that are equally committed to people-centered design. By closely collaborating with companies such as IDEMIA (but also Microsoft or HERE Technologies), MasterCard works to address urban challenges in a more holistic way.

“As the global leader in Augmented Identity, IDEMIA has the ambition to provide a secure environment enabling citizens and consumers alike to perform their daily critical activities such as pay, connect, travel and vote in the physical as well as digital space. We look forward to building on our long-standing relationship with MasterCard in order to shape future banking and payment experiences in an increasingly urbanized world.” Nathalie Oestmann, SVP Global Innovation Strategy for Financial Institutions activities at IDEMIA

“The superpower of cities is their freedom to collaborate – allowing them to build on each other’s progress. By bringing together city leaders from across the globe, City Possible promotes the sharing of ideas and best practices – aimed at advancing more connected and inclusive urban communities. What unites all our public, private and academic partners is their commitment to make technology work for all people, and finding scalable solutions for universal needs.” Miguel Gamiño, who heads up global city partnerships for MasterCard

IDEMIA and MasterCard are Members of ACT Canada; please visit www.idemia.com/ and www.mastercard.com/



18. UNIONPAY APP USERS WILL BE ABLE TO TAKE METRO IN HK BY SCANNING QR CODES

Source: UnionPay International (11/22)

UnionPay International announced today that it has reached QR code payment service cooperation with MTR. In the future, UnionPay cardholders will be able to scan QR code via the UnionPay app or the MTR app after binding their UnionPay cards with the apps to take metro in Hong Kong, thus getting a more convenient travel experience. To date, 19 million UnionPay cards have been issued in Hong Kong, and in recent years, UnionPay cards take up more than half of the newly issued credit cards. “UnionPay” is also the only international card brand in Hong Kong that provides mobile payment for debit cardholders. The MTR is the major public transport in Hong Kong with about 5.8 million passengers every working day. Through open tender, UnionPay International was chosen to be a digital payment service provider of MTR.

Cai Jianbo, CEO of UnionPay International, said that relying on the business foundation and innovative products in Hong Kong, UnionPay International will use its innovative products including the UnionPay app and UnionPay QR Code service to provide passengers with multiple payment services. UnionPay will continue to promote the “UnionPay” app in Hong Kong and Macau while constructing acceptance network in local public transport, so as to meet the local residents’ daily payment needs. Meanwhile, we will continue to optimize the convenience payment service for UnionPay app users in the mainland visiting Hong Kong, facilitating the interconnection of the Greater Bay Area. The UnionPay app offers its users one-stop cross-border payment service, and the app started providing services for customers in Hong Kong and Macau since this September. Customers in Hong Kong and Macau can bind their locally-issued UnionPay cards to the app to enjoy its services. Mainland cardholders visiting Hong Kong do not need to download multiple apps, instead, they can simply switch the app to the location of Hong Kong and then take the metro by scanning QR codes.

With the UnionPay app launched in Hong Kong and Macau, UnionPay continues to expand the acceptance scope of its mobile payment services in the Greater Bay Area. So far, the app can be used at thousands of merchants in Hong Kong, and over 10,000 more merchants will be able to accept UnionPay QR code payment by the end of this year. Hong Kong residents can also use the UnionPay app during their travels. To date, UnionPay mobile payment services is accepted in 42 countries and regions, and 9.5 million merchants in mainland China accept UnionPay QR code payment. Taking the public transportation sector as an example, the Hong Kong-Zhuhai-Macao Bridge, which was opened to traffic last month, supports a variety of UnionPay payment services such as UnionPay QuickPass, UnionPay app, and traditional card swiping. Cardholders can also tap their mobile phones to take the Guangzhou-Shenzhen Intercity High Speed Rail via UnionPay mobile QuickPass. Cardholders in Hong Kong and Macau can



purchase train tickets at 12306 by paying with the UnionPay app. In addition, UnionPay QuickPass is accepted at a number of taxis and ramps in Hong Kong, as well as most of the parking lots and all bus lines in Macau.

UnionPay International is a Member of ACT Canada; please visit www.unionpayintl.com/en/

19. DISCOVER SURVEY SUGGESTS FINANCIAL EDUCATION COURSES ARE HELPING AMERICANS BECOME MORE CONFIDENT WITH THEIR FINANCES

Source: Discover (11/1)

Discover Expands Pathway to Financial Success in Schools Program with Discovery Education, Offering Financial Education Curriculum to Middle School Students Across the Country --

Fifty-nine percent of Americans ages 18-26 who have taken a financial education course believe the lessons will save them more than \$10,000 over the course of their lifetimes, according to a new survey from Discover. Discover released the survey results today in conjunction with Discovery Education as the two companies announced their Pathway to Financial Success in Schools program will be extended to a younger age group: middle school students. The program provides comprehensive financial literacy curriculum free of charge through self-paced modules, classroom activities and family extension activities. The two companies launched a financial education curriculum for high school students last November. The survey also revealed more than three quarters (78%) of respondents have taken a financial education course at some point in their lifetimes, and 81 percent of those who took a financial education course in college or as adults report feeling somewhat or very confident in their ability to make smart financial decisions.

“It’s encouraging to see younger Americans investing in their financial futures,” says Matt Towson, Director of Community Affairs for Discover. “It’s important to think of new ways to help Americans of all ages become more financially empowered and capable when it comes to their finances so they can take control of their financial future.” “Our shared goal with Discover is to provide immersive and engaging instruction to promote fiscal responsibility among young students,” said Lori McFarling, senior vice president and chief marketing officer, Discovery Education. “We are excited to expand the Pathway to Financial Success program in order to empower the next generation to make prudent and informed financial decisions.” The survey showed more young consumers (ages 18-22) have taken financial education courses (80%) compared to those just a few years older than them (ages 23-26; 76%), which may suggest more schools may be offering financial education as part of their curriculum compared to a few years



ago. Further, knowledge about whether schools are required to offer financial education courses seems to be increasing over time. The survey found 44 percent of consumers ages 18-22 live in a state where schools are required to offer financial education courses to students, compared to 35 percent of consumers ages 23-26.

“It’s exciting for educators to be empowered to teach students financial literacy and healthy money management habits. Through the ‘Pathway to Financial Success in Schools’ program, Discovery Education and Discover Financial Services are providing students nationwide with engaging tools that make it simple to understand how to make smart financial choices in every aspect of their lives,” said Jacqueline Prester, Business and Technology Teacher, Mansfield Public Schools, Massachusetts. Since its inception in 2017, Pathway to Financial Success in Schools has made a profound impact on high schools across America. It has reached approximately 119,244 students nationwide and continues to empower high school students to achieve better financial futures. Pathway to Financial Success in Schools resources are available at no cost at pathwayinschools.com and are also available through Discovery Education Streaming. For more information about Discovery Education’s digital content and professional development services, visit discoveryeducation.com

Discover is a Member of ACT Canada; please visit <https://www.discover.com/>

20. BLOCKCHAIN 3.0 AND COTI - NEXT GENERATION TECHNOLOGY WITHOUT MINING?

Source: Forbes (Nov 23)

The blockchain is changing with several new protocols currently being tested and which look to be changing the system as we know it. The latest incarnation is what is being termed as 'Blockchain 3.0' A new company called COTI has designed a new block-less and miner-less blockchain which they claim solves the scalability issue of cryptocurrencies and makes bitcoin look slightly backward. Cryptocurrencies were all were introduced to make payments cheaper, faster, secure and easier. Arguably, they’ve done anything but so. The time and money it takes for miners to confirm transactions mean that Bitcoin transactions can conduct 3-5 TPS (transactions-per-second), and Ethereum marginally better at 15 TPS. It’s a clear problem if we expect millions to use cryptocurrencies for their everyday shopping. Not to mention the nightmare of wallet address, and the energy consumption to code.

COTI has architected a new blockchain based on a DAG (Directed Acyclic Graph) protocol. DAG are block-less blockchains where there are no miners or blocks. Graphs are acyclic in nature and flow in a specific direction, which means



that transactions cannot be duplicated and can confirm themselves automatically based on previous transactions. Therefore, there are no miners to spend time and charge fees to code to confirm transactions, allowing for virtually real-time and low-cost crediting of funds to the other party's wallet. Plus, no miners means no coding and no energy consumption for computing. What's more, COTI will store user's funds in 'cold' offline wallets, securing against the recent well documented cyber attacks. Therefore, unlike Bitcoin's 3-5 TPS, COTI is able to process 10,000 TPS. It's bringing what works in the fiat world (i.e. instant payment processes) to the crypto world. COTI is a real business and has not gone through an ICO but has an operating platform with 80,000 users, 4,000 merchants, worth \$15m+ already, and already being used on 250,000 POS terminals in shops across the world.

COTI is run by a team with considerable experience: Greg Kidd (early investor in Twitter, Square, Coinbase, Ripple), Steve Heilbron (CEO of Investec plc) and Dr. Matthew McBrady (CIO of Blackrock), as well as further executives from JPMorgan, Goldman Sachs, HSBC, UBS, KPMG and IBM. I spoke to Shahaf Bar-Geffen who is the CEO of COTI. As already explained, COTI has architected a new blockchain based on DAG (Directed Acyclic Graph) data structure, called the Trustchain. DAG is block-less blockchains where there are no miners or blocks, allowing for virtually real-time and low-cost confirmation of transactions. Shahaf was also co-founder and CEO of WEB3, a digital media and advertising business.

Could you provide an overview of how COTI works and how this is relevant in the light of Blockchain 3.0? "At COTI, we are building the world's first blockchain protocol optimized for decentralized payments, designed for use by merchants, governments, decentralized payment networks, and stable coin issuers. Our DAG-based Trustchain protocol is the next evolution in the blockchain, a truly viable blockchain 3.0 solution that will be particularly fit for specialized use cases". Geffen further states that decentralization is the future and that the Trustchain is the next generation blockchain 3.0 solution, which will bring the world one step closer to achieving the mass adoption of cryptocurrencies. "Our vision is to digitize money and to improve the technology behind it. We see a future in which money is completely digitized and unbound with the limitations money has today". How does COTI improve security for proof of work?

"We achieve Trustchain protocol security in our network by introducing DSP (double spend prevention) Nodes and applying trust to every participant in the network. With COTI, double spending attacks are not possible at all, so we are much safer than any existing blockchain protocol.

Most known solutions to the double spending problem are inefficient or centralized. Geffen claims that their DSP solution consists of adding a handful of highly trusted Nodes to the network with the primary function of reaching consensus on whether the transaction is legitimate or a double spend. When a transaction has more than one-half of the DSP Node signatures, then consensus



is achieved. We take it a step further with the PoT (Proof of Trust) required to validate transactions. In the rare event where an attacker is capable of making many small transactions, the account's Trust Score will decrease, causing an increase in the PoT required to create new transactions and by that blocking such an attack very quickly. Another possible way to launch a similar attack is to flood the network with invalid transactions using many user accounts. In COTI, such attempts will be met with little success because all transactions are verified by Full Nodes.

What are the technical aspects of the coin and how are these game-changing in the space? "We've introduced a high-performance cryptocurrency built atop the base layer protocol. This cryptocurrency will be used as a common means of payment, including all fees and staking inside the COTI ecosystem. There can be voucher tokens, stable coins, dedicated tokens for global companies, or scalability tokens to speed up settlements in other blockchains. Geffen explains that their infrastructure will support a MultiDAG, which is a unique and innovative concept not available on other platforms and which can be used for various purposes and originators. They are also introducing on-chain DAG-based smart contracts, a unique solution that will enable the streamlined deployment of new tokens onto the network. All fees within the COTI ecosystem are paid with the COTI native coin. In this way, all applications and tokens supported on the infrastructure will increase native coin circulation and token value accordingly.

"Our MultiDAG, together with our smart contracts and the possibility of multiple genesis transactions allows for the creation of high-performance stable coins. Most stable coins are essentially ERC-20 tokens, which make them hardly usable for everyday payments. For COTI, the situation is different, as high throughput, quick confirmations, and low fees enable the creation of highly usable stable coins with their own Cluster and confirmation rules", Geffen added. Finally, what are the next steps for COTI? "To date, we have launched the Trustchain AlphaNet protocol, on chain KYC, the trust scoring mechanism and COTI Pay. We also have a lot more exciting developments coming up at COTI in the next few months. At the close of November, we'll be releasing the COTI-X exchange and first white label solution, followed by the rollout of our Arbitration System during our TestNet release on 30 December, 2018. Smart contracts and POS integration will be implemented on the main net in Q2 2019", Geffen concluded.

21. CANADA'S CAUTIOUS STANCE ON REGULATING OPEN BANKING

Source: National Magazine, Canadian Bar Association (11/08)

When it comes to banking, Canadians tend to reach for the familiar. Loyal to a fault, consumers here look to their primary financial institution for most products, even when they suspect they could get a better deal elsewhere. No



surprise then that few have taken notice of the open banking phenomenon sweeping across the globe, particularly in Europe, the U.S. and parts of Asia. What is open banking? It's an emerging model, fashioned by a mix of fintech innovation, changing consumer habits and regulatory forces, in which banks are being pressured to open up their customers' data to third parties. This is done by allowing them to access open APIs, which offer a standard way for programmers to work with code they didn't write, so that they can develop new and useful financial products for consumers. Those products, in turn, remove much of the hassle — known as friction — that comes with signing up new customers, and getting them to complete transactions using data collected by their banks.

For the consumers, the appeal is in getting better rates on lending rates and more transparency on financial products. There's upside for the banks, too, who can remain relevant in a digital environment where they would otherwise risk eventually being disintermediated by fintech upstarts with better offerings and services. But open banking raises concerns about privacy, security and competition policy. So regulators across different jurisdictions are trying to figure out what are the best approaches to balancing innovation with consumer protection. At the moment, the United Kingdom and the EU are leading the way. The EU regulates the sharing of consumers' banking account data with third parties through its revised Payment Services Directive' – known as PSD2 – in force since January. PSD2 forces big banks to open up their data online in a secure, standardized form, to authorized fintech companies. In the UK, regulators imposed open banking in response to PSD2 and a report released by the Competition and Markets Authority (CMA) which found there wasn't enough competition among big banks for customers' business. It's still early days there, and public awareness is still low as the major banks have come under criticism for being slow to embrace open banking reforms. An open banking regime is also scheduled for implementation in Australia next summer.

Predictably, it's in the more fragmented market in the U.S., where banks number in the thousands, that regulators are taking a more hands-off approach and letting market forces shape the direction of open banking. Canada, with its consolidated market in financial services, is taking a wait-and-see approach. "We don't have legislation at this point mandating open banking or providing detail on it," says Ana Badour, a partner at McCarthy Tétrault in Toronto. But the federal government is undergoing a review of open banking to assess its impact on consumers and the risks involved for consumer privacy and data security. There are other ongoing related consultations, including on a new federal oversight framework for retail payment systems. And last year, the Competition Bureau expressed its support for open banking in a market study into innovation in the Canadian fintech sector. According to Badour, we heard echoes of the same argument around the 2016 ruling by the Federal Court of Appeal that upheld an order by the Competition Bureau requiring the Toronto Real Estate Board to remove restrictions on its members' access to home sale prices.



The concern for now, however, is that the absence of regulations opens the door to dubious activities, such as screen scraping to harvest data from websites, which carry legal and security risks for consumers. There are also questions on the privacy front. What standards should be followed, and who in the supply chain of providers need to follow them? What counts for explicit consent and how must it specify specific uses for particular types of data? The EU General Data Protection Regulation (GDPR), in force since May, has addressed this to some extent at least by giving back some control to consumers over how their data is used. Then there is the issue of liability, “which require(s) careful consideration, particularly given that open banking involves both very large entities and small start-ups with limited resources,” says Badour. “What happens if there is a data breach or unauthorized transaction? What if there is an issue with the data being shared? Should there be a requirement that parties participating meet minimum thresholds in terms of insurance or capital requirements?”

But legislative changes will take time, says Badour, as we’ve seen with the modernization of the Canadian payments system. “Constitutional issues need to be considered,” she says. “There are federal and provincial jurisdiction aspects to this.” Meanwhile, key players in the Canadian fintech space are showing signs of impatience. “We need open banking and something similar to [GDPR],” said Paul Desmarais III, the executive chairman of Portag3 Ventures, during his keynote at the Canada FinTech Forum in Montreal last month. Desmarais worries that Canada is falling “quite a bit behind” other countries by not incentivizing banks to share their payment networks. “Until new fintech players can access infrastructure directly rather than via a bank, they will only be able to be as good as their partner who has no real incentive to allow the emerging player to shine,” he said.

With or without regulations though, industry changes seen elsewhere in fintech are likely to spread quickly to Canada, says Badour. “When you have a development that is commercially successful, it tends to filter over to other jurisdictions even if the regulatory framework is not yet well aligned with innovations,” she says. “Open banking creates the ability to build on top of data and innovate on top of things. There’s a lot that can happen at a very accelerated pace.”

Canadian consumers will likely find themselves in unfamiliar territory before long.

22. EUROPEAN MERCHANTS WOULD PAY 40% LESS TO ACCEPT US-ISSUED CARDS UNDER VISA-MASTERCARD PROPOSALS

Source: Digital Transactions (12/04)

European merchants could see their costs to accept Visa Inc. and MasterCard Inc. payment cards issued outside of Europe decline by 40% under separate proposals submitted by the two leading card networks to settle



competition concerns raised by European Union antitrust authorities. The European Commission, the administrative arm of the Brussels, Belgium-based EU, announced Tuesday that it is taking comments on separate proposals by Visa and MasterCard to cap so-called interregional multilateral interchange fees, also known as MIFs, at 0.2% and 0.3% of the value of debit and credit point-of-sale transactions, respectively.

The networks also are committing to cap card-not-present interchange rates at 1.15% for debit card transactions and 1.50% for credit cards, the Commission said. In all, the changes would reduce interregional interchange fees by more than 40%, according to the Commission. Interregional rates apply to transactions in the 31 countries of the European Economic Area (currently still including the United Kingdom) initiated on cards issued outside the EEA, for example, an American tourist's U.S.-issued credit card used at a Berlin hotel.

"The Commission is concerned that interregional MIFs may anti-competitively increase prices for European retailers accepting payments from cards issued outside the EEA and in turn lead to higher prices for consumer goods and services in the EEA," the Commission said in a news release. Should the Commission approve the networks' proposals, the interregional point-of-sale rates would become the same as intraregional rates approved as a result of European Commission challenges to interchange rates that began in 2007. The interregional reductions would be effective for 5.5 years and monitored by a trustee. The networks must publish interchange rates "in a clearly visible manner" on their Web sites, according to the EC. "If a company breaks such commitments, the Commission can impose a fine of up to 10% of the company's worldwide turnover [volume], without having to prove an infringement of the EU antitrust rules," the Commission said. In a regulatory filing MasterCard said "the company took this action in order to avoid prolonged litigation and to gain certainty concerning its business practices." A Visa spokesperson said by email that "European merchants and cardholders continue to enjoy the significant benefits of international card payments, both in store and online, which make an important contribution to European economies. Visa has played a central role negotiating a resolution that achieves the best outcome for all parties."

In a related legal matter, MasterCard said it expects to take a \$650 million charge in the fourth quarter to cover a fine resulting from EC objections to its so-called central acquiring rule. The rule governed which interchange rates would apply within EEA countries, and MasterCard modified it in late 2015 to comply with European regulations. The fine would apply to the period before the modification, MasterCard said.

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23. CPI CARD GROUP TO SELL CANADIAN SUBSIDIARY TO ALLCARD LIMITED

Source: Business Wire (11/16)

CPI Card Group Inc., a global leader in financial and EMV® chip and dual interface card production and related services, today announced that it has entered into a definitive agreement to sell its Canadian subsidiary to Allcard Limited (“Allcard”), a provider of non-secure card solutions to the gift and loyalty sectors. “Divesting our Canadian subsidiary is the next strategic step toward optimizing CPI’s footprint and is consistent with our previously announced plan to better position ourselves to serve customers by focusing on our core businesses including secure card manufacturing, personalization, instant issuance and prepaid,” said Scott Scheirman, President and CEO of CPI Card Group. “With this transaction, we streamline our operations and allocate resources to provide customers with unmatched solutions, innovation and world-class service.”

Mr. Scheirman continued, “We thank the talented employees of our Canadian subsidiary for their contributions to CPI’s success, and we wish them all the best in their future endeavors.” “At Allcard we’ve always positioned our business to be a “one stop shop” and invested accordingly,” said Mark Brown, President of Allcard Limited. “With the acquisition of CPI’s Canadian subsidiary, we are bolstering our offerings and continuing to ensure we have the equipment, experience and technical knowhow to deliver top quality Canadian-made products on time - every time.”

The transaction is expected to close within the first several months of 2019, subject to customary approval and other closing conditions. Some portion of the Canadian secure card business is expected to transition to the Company’s operations in the U.S., and the remaining secure card business will transition out of the Company before the completion of the transaction.

CPI Card Group is a Member of ACT Canada; please visit www.cpicardgroup.com

24. SOCIAL MEDIA COMPANIES BELIEVED TO BE VULNERABLE, WITH 61% OF CONSUMERS SAYING THEY POSE GREATEST RISK FOR EXPOSING DATA, FINDS GEMALTO

Source: Gemalto (12/5)

A majority of consumers are willing to walk away from businesses entirely if they suffer a data breach, with retailers most at risk, according research from Gemalto, the world leader in digital security. Two-thirds (66%) are unlikely to shop or do business with an organization that experiences a breach where their financial



and sensitive information is stolen. Retailers (62%), banks (59%), and social media sites (58%) are the most at risk of suffering consequences with consumers prepared to use their feet. Surveying 10,500 consumers globally, Gemalto found that, across all ages, 93% are placing the blame squarely on businesses and would think about acting against them. Social media sites worry consumers most, with 61% concerned companies in this space don't adequately protect consumer data, followed by banking websites (40%).

Companies held responsible as consumers act

With the rising awareness of data protection and data privacy issues, consumers now believe the majority (70%) of responsibility for protecting their data rests on the company holding it. This has made data protection a major consideration for consumers when interacting with a brand, with 82% wanting organizations to have greater online security measures. These concerns are prompted by 91% believing that there are applications and websites they currently use which pose a risk to the protection and security of their personal identifiable information (PII). Despite consumers placing the responsibility firmly in the hands of organizations, only a quarter feel as though companies take the protection and security of customer data very seriously. Taking matters into their own hands, consumers are not giving businesses anywhere to hide, as the majority of respondents have either already provided organizations with feedback on what security methods they are offering (35%), have considered it (19%) or might in the future (33%).

"Businesses have no choice but to improve their security if they want to address frustrated consumers that don't believe the onus is on them to change their security habits," says Jason Hart, CTO, Data Protection at Gemalto. "Social media sites in particular have a battle on their hands to restore faith in their security and show consumers they're listening – failing to do so will spell disaster for the most flagrant offenders, as consumers take their business elsewhere."

A troubled past and frustrated future for consumers

It's unsurprising that consumers are frustrated with the state of data protection within organizations. A quarter of those surveyed have already been a victim of fraudulent use of their financial information (26%), 19% through fraudulent use of their PII, and 16% of identity (ID) theft. Worse, consumers have no faith that things are going to improve, as two-thirds (66%) are worried that at some point in the future their personal information will be stolen. Even with the fear that they may become victims of a data breach, consumers aren't planning to change their behaviour online as they believe responsibility lies with the companies holding their data. This could explain why over half (55%) of respondents continue to use the same password across different accounts. In addition to switching brands, young people are more prepared to go further and participate in legal action against



brands that lose their data than older generations. Nearly seven in 10 (67%) 18-24-year olds revealed they would take fraudsters and brands that suffered a breach to court, compared to just 45% for 65s and over, with a further 28% of generation z (18-24 year olds) at least considering it.

"This should be a wake-up call to businesses that consumer patience has run out. It's clear they have little faith that organizations are taking their data protection seriously, or that their concerns will be heard, forcing them to take action themselves," Hart continues. "As young people become the big spenders of the future, businesses are risking not only alienating their current and future revenue streams but also their reputation if they continue to give the impression that they don't take data security seriously. Moving forward businesses must start doing the basics properly; protecting their most valuable asset, data, with the correct security controls."

Gemalto is a Member of ACT Canada; please visit www.gemalto.com

25. JUST TAP AND RIDE: MASTERCARD SIMPLIFIES THE DAILY COMMUTE IN OVER 150 GLOBAL CITIES

Source: MasterCard (11/6)

Tapping your card or phone is all it takes to get around a city – this possibility is quickly becoming real for residents and visitors in over 150 global cities, thanks to MasterCard Transit Solutions and the company's banking and technology partners. Following London, Sydney and Vancouver, the latest wave of cities to join the tap and ride revolution includes Mexico City, Milan and Kaohsiung, Taiwan.

Metro systems around the world are carrying close to 170 million passengers each day. As the ranks of daily commuters continue to grow, improving the speed and reliability of transit services is a key concern for a majority (59 percent) of urban residents, according to a new global survey. By enabling tap and ride access to trains and buses, a growing number of cities are working to meet this expectation. The benefits are obvious. No more time wasted waiting in line at the ticket booth or holding up the bus while getting change – and no more funds lost on unused tickets. By offering a contactless or mobile payment option, cities can equip their transit systems to provide better experiences for riders – and realize significant cost savings from more efficient operations, reducing the cost of fare collection by 30 percent or more.

"Everywhere around the world, people have the same need. Getting from Point A to Point B should be as simple as buying your morning cup of coffee", says Hany Fam, executive vice president, enterprise partnerships, MasterCard. "Our technology, insights and partnerships deliver on this expectation – from London to



Singapore, and from Bogota to New York City. As the world becomes increasingly urban, accessible and efficient transit links are a key to unlocking economic opportunity – for individuals and for cities.”

Making Technology Work for People

MasterCard understands that today’s challenges are best solved through collaboration. Partnering with cities, transit agencies and technology companies, MasterCard has been architecting flexible transit solutions for almost a decade – and is leading the next generation of mobility services. By working with partners such as Microsoft, HERE Technologies, Cubic Transportation Systems, Masabi and Vix Technology, MasterCard is paving the way to solving mobility and other urban challenges in a more holistic way. This spirit of partnership is the inspiration behind City Possible, an initiative that brings cities together – and connects them with a united private sector.

Finding the Right Transit Solution for your City

With more people travelling to and from urban areas for work or leisure, cities are looking for better ways to address demand across their public transit networks. Infrastructure, budgets and timeframes vary, which is why, working with its partners, MasterCard helps cities identify the right solution for their specific needs. On www.mastercard.com/transit, transit operators, systems integrators and urban planners can access case studies and other resources to learn more about how MasterCard Transit Solutions are helping make travel across and between cities simpler than ever – using contactless, mobile or dual-application card solutions. Working together with cities and technology partners, MasterCard Transit Solutions are innovating faster and scaling quicker.

Examples of How MasterCard Transit Solutions are Connecting the World

Europe:

- In London, 50 percent of all Tube and rail pay-as-you-go journeys are now regularly made using contactless payment cards or mobile devices, with cardholders representing over 100 countries. Cities across the UK, as well as the national bus network, have also adopted this open-loop approach, helping to make UK one of the leading contactless markets in the world.
- In the Czech Republic, the national railway company has joined the country’s major cities in enabling contactless transit payments.
- In July, Milan became the first Italian city to introduce contactless payments on its metro system.
- Tallinn, the capital of Estonia, has chosen Ridango, a MasterCard Start Path company, to introduce contactless transit payments.



Asia-Pacific:

- In 2017, Singapore chose MasterCard to pilot open-loop payments on its metro system.
- After a successful trial with MasterCard, commuters and tourists in Sydney can now ‘tap and go’ their way across all of the city’s ferries and light railways.
- In early 2019, Kaohsiung, Taiwan will become the first city in North Asia to launch contactless bank card payments on its transit system.
- Bangkok, which was once again named the world’s top destination city, looks to contactless transit as one of the ways to adapt to a growing number of international visitors.

North America:

- Since Vancouver launched a new way to pay in May this year, it took only two months to reach 1 million contactless journeys.
- Following the introduction of mobile ticketing on Metro North and Long Island Rail Road (LIRR) in 2016, ‘tap and go’ payments are expected to become available on New York City’s subway and bus systems as of 2019.
- Over the next two years, Boston will introduce a new fare payment system, including contactless options.

Latin America:

- In 2015, Bogota became the first city in Latin America to enable MasterCard payments on a transit system. This example was soon followed by other cities across Colombia, Brazil and Chile.
- In Mexico City, over 1 million reloadable debit cards have been issued over the last 12 months – in many cases providing unbanked people with their first formal financial tool.

Middle East and Africa:

- As the official payment technology partner for Dubai Expo 2020, MasterCard will help deliver a cashless experience for millions of visitors from around the world.

From November 13 – 15, MasterCard will be participating in Smart City Expo World Congress, an annual global gathering of urban and business leaders. At the event, MasterCard invites delegates to experience City Possible through a series of talks and demos.

MasterCard is a Member of ACT Canada; please visit; www.mastercard.com/



26. RISE OF THE MILLENNI-FACTOR: WEALTHY MILLENNIALS DETERMINED TO LEAVE A LEGACY

Source: TD (11/20)

Are you a wealthy millennial who dreams of changing the world for the better? If so, you are in good company. A profound generational shift in attitude is underway when it comes to making a difference, with three quarters (77 per cent) of high-net-worth millennial benefactors – or "milleni-factors" – surveyed saying they believe it's important to leave a legacy, and nearly two thirds (63 per cent) saying that they feel they have a duty to do so. According to the findings of a new survey conducted by Environics Research Group and commissioned by TD Bank Group, high net worth millennials are more likely to say they believe it's important to leave a legacy through philanthropy or other types of giving than previous generations. By comparison, older generations of high-net-worth individuals are much less likely than these milleni-factors to report the same feelings. For example, just 33 per cent of wealthy Boomers and 42 per cent of wealthy Gen Xers said they feel it's important to leave a legacy.

"High-net-worth Millennials stand out among other demographics for their heightened desire to positively impact the world," says Jo-Anne Ryan, Vice President, Philanthropic Advisory Services at TD Wealth. "This trend indicates that the philanthropic giving landscape in Canada will be reshaped in the years to come, as these milleni-factors look for ways to put their assets to work to change the world for the better." Although the majority of millennial respondents polled expressed a desire to make a positive difference in the world, half (49 per cent) of them don't have a will and less than a third have a will that is up to date (31 per cent). "It doesn't matter how good your intentions are, if you don't have a will, they may never come to fruition," adds Ryan. If you are considering leaving some or all of your estate to charity, the following tips are a good place to start:

- Where There's a Will: If you haven't done so before, now may be the time to make a will. A will can help give you control over how your assets will be divided, shaping what your charitable legacy can be. If you are like many high-net-worth millennials, making a lasting difference is important. A financial advisor can help you maximize the value of charitable donations.
- When Tomorrow Comes: Think about the causes and charities that matter to you and determine which will be relevant to the changing world of tomorrow.
- Heir Transparent: Talk to your heirs, or those who may assume they will be receiving an inheritance from you, to set the expectation that you may be leaving some or all of your estate to a charitable cause.
- Succession Success: If you are an entrepreneur, developing a succession plan may help ensure that any future owners of the business continue to live up to your values and philosophies.



TD is a Member of ACT Canada; please visit www.td.com/ca/en/

27. WHY SHOULD YOU CHOOSE AN E-COMMERCE PLATFORM?

Source: Bambora (11/13)

Cross-border and international purchases are on the rise as seamless payments become commonplace. With the ease of online and mobile shopping, one in two consumers say they bought something online from an overseas retailer in the last six months. Well that sounds good, but what does that mean for my business? Well, in short it means more opportunity. If you are only selling your products through a brick-and-mortar store, your local target audience is capped. It can only get so big. Moving online allows you to expand your audience by reaching similar customers in different regions. With the marketplace flooded with businesses like yours, you need a way to stand out from the rest.

The first step, open up an online store

To begin selling online, you need access to an online store builder. Unless you're a graphic design and coding expert, the store builder will provide you with all the functions you need to get started. You can add some pictures and descriptions of your products, connect to a shopping cart, and you're up and running! Hold up; aren't shopping carts the same as an e-commerce platform? That assumption is not far off. A shopping cart is simply a basket that holds products and can process a transaction. It has a framework that can create a functional e-commerce website but at its most basic level. A shopping cart is a software that can be integrated into your existing website application to avoid additional development work. An e-commerce platform takes the shopping cart to the next level.

So, how can I benefit from an e-commerce platform?

When you start to realize you are spending more time managing your online store than you are running your business. It is time to look into an e-commerce platform. Things like managing sales channels, marketing efforts, inventory, sales reports, and even taxes start to become a burden when all you want to be doing is focus on growing your online store. You need a way to simplify things. This is where platforms shine. An e-commerce platform is a one-stop-shop for all the tools you need for success, as well as the necessary payment integrations. It facilitates online transactions of goods and services and securely captures customer information using an SSL certificate. Purchases are made using a safe payment gateway. You can also automate time-consuming processes like recurring payments, inventory, or order management using an e-commerce platform. As you might expect, no two platforms are the same. You will want to find the one that meets your specific needs.



How do I know what e-commerce platform is right for me?

When deciding on a platform to help run your business, here are a few things to keep in mind:

- The type of support available from the platform: The quality of support you receive from a platform is crucial, especially in times of need. Support should be available through email, but most importantly, a real person should be available to help when needed.
- The platform should be able to grow with you: Scalability is critical when choosing a platform. What happens when you experience rapid growth and have more incoming traffic? Will their tools be able to keep up? A true partner should want to see you succeed not just right now but long-term as well.
- Mobile and desktop friendly: With more than half of website traffic now coming from mobile, you're going to want to ensure that your store is accessible across devices. Each touchpoint should be optimized for different screens, especially your checkout!
- Payment processing options: The backbone of any e-commerce store is payments. A platform should be able to provide a wide range of payment options, from cards to digital wallets.
- Plug-ins and extensions: Having a full arsenal of apps at your disposal means you can automate some of those troublesome tasks and spend more time running your business. A comprehensive marketplace of different plug-ins and extensions can give you access to the tools you need, when you need them.
- No matter what your business is, there is a platform tailored to your market. Looking to start a food order-ahead website? There is a platform that can help with that. Are you wanting to accept donations for your charity online? There is a platform that can help you with that.

Bambora is a Member of ACT Canada; please visit www.bambora.com/en/ca/

28. ATM JACKPOTTING: WHAT YOU NEED TO KNOW

Source: CardTronics (7/11)

ATM jackpotting may sound a bit like a new scratch-off lottery game, but unfortunately it's nothing of the sort. The term "ATM jackpotting" is used to describe the illegal practice in which criminals use a combination of malware and/or hardware to cause an ATM to dispense large sums of cash at will. The image comes to mind of a slot machine spitting out all of its coins when the gambler hits a winning jackpot. After years of these types of attacks in Europe and Asia, this



sophisticated criminal tactic finally made its way onto United States soil during the past year. In fact, in January of this year, the U.S. Secret Service delivered a security warning to many of the nation's leading financial institutions that these attacks were beginning to happen stateside. In the fall of 2017, Diebold, a large ATM manufacturer, became aware that criminals in Mexico were conducting sophisticated ATM attacks using endoscopes and special "black box" hardware. The endoscopes, which are essentially long extension cameras with lights, were used to give criminals a look inside the ATM and enable them to manipulate the computer driving the ATM by attaching black box devices that send commands into the ATM computer, manipulating the cash dispenser to dispense cash on command.

During this same timeframe, the European Association for Secure Transactions (EAST) issued a warning that black box attacks had surged in Europe. During the first half of 2018, there were 114 black box attacks reported in Europe, which represented a three-fold increase from the 28 that were reported during the same period in 2017. Further investigation into these new style of attacks confirmed that the bad actors involved were dressed as ATM technicians. In an alert released about this issue, Diebold stated, "As in Mexico last year, the attack mode involves a series of different steps to overcome security mechanism and the authorization process for setting the communication with the [cash] dispenser," Once the malware was installed, the crook(s) contacted co-conspirators who are able to remotely control the ATMs and force the machines to dispense all of their cash.

The malware used during these attacks was confirmed by Cardtronics to be Plotus.D, a variation of a malware first seen in Mexico back in 2013. Plotus.D is designed to disable security software that is typically installed on an ATM. Once the malware was fully installed, remote commands could be sent to the ATM via SMS to dispense cash. Attackers could then visit the ATM and simply collect the cash as it was dispensed. In many instances, these attacks were perpetrated in broad daylight. Cardtronics' own analysis of such attacks showed it would take thieves approximately 20-25 minutes to completely empty a typical ATM cash load. Once these criminal methods were identified, Cardtronics confirmed the attack vector within our labs and developed a countermeasure solution within a month of the attack's first appearance in market. To prevent future jackpotting attempts, a physical security bracket was designed to effectively prevent all manipulations of the dispenser sensors while using an endoscope. With this design, a metal plate is attached inside the ATM to protect the two controls used to re-sync the machine's cash dispenser through the dispenser's communication port. Our installation of this metal bracket solution is both highly secure and cost-effective, preventing the endoscope-style attacks first seen in Mexico and other geographical locations.



While a path to upgrade most terminals was provided by ATM manufacturers, the upgrades in many cases were costly and placed a heavy impact on ATM resources. As an alternative, the bracket solution deployed by Cardtronics has proven to be extremely effective with zero instances of jackpotting after installation. The security and fraud prevention team at Cardtronics fully anticipates that criminals involved in these attacks will pivot and adjust their methods, and that newer forms of jackpotting will be developed. As a result, we place a heavy emphasis on intelligence analysis in order to direct our defense strategies, working closely with law enforcement, vendors, and others to stay a step ahead and be ready to react with speed when new threats emerge. Whether perpetrating jackpotting schemes or other illicit activity, criminals don't take days off – and neither do we.

CardTronics is a Member of ACT Canada; please visit <http://www.cardtronics.com/>

29. MILLENNIALS AND GEN Z CITE HIGHER INCOME AS LEADING REASON FOR EXPECTED INCREASE IN HOLIDAY SPENDING THIRST FOR REWARDS SPARKS UPTICK IN CREDIT CARD USE THIS HOLIDAY SEASON

Source: Discover (11/14)

Twenty-five percent of consumers plan to spend more this holiday season than they did last year, according to Discover's annual holiday shopping survey. Younger generations are leading the charge, as 35 percent of Millennials and 33 percent of Generation Z report an expected bump in spending, compared to 26 percent of Generation X and 16 percent of Baby Boomers. 25% of consumers plan to spend more this holiday season, according to Discover's annual holiday shop ... 25% of consumers plan to spend more this holiday season, according to Discover's annual holiday shopping survey. The reasons consumers expect to spend more vary between younger and older generations. Gen Z (51 percent) and Millennials (40 percent) say higher wages will fuel increased spending, whereas Gen X (38 percent) and Baby Boomers (36 percent) will boost spending to accommodate more people on their shopping list. The number of those who expect to use credit cards to pay for most of their holiday gifts jumped to 38 percent this year, up from 32 percent in 2017. Less than a quarter, 24 percent, plan to use debit cards to pay for most of their gifts, and 20 percent will primarily use cash. Among those who favor credit cards when making holiday purchases, 54 percent say earning rewards is the driving factor, up from 42 percent last year.

“The holidays are the busiest shopping season of the year and our goal is to make it as simple and seamless as possible for our cardmembers to earn rewards every time they use their Discover card,” said Laks Vasudevan, Discover’s vice president of card programs, strategy and marketing. “Rewards are a major



driver for our cardmembers, which is why we help maximize their earning potential during the holidays by aligning our 5% cashback program with popular seasonal categories like Amazon.com and wholesale clubs.”

Gen Z Leads the Way for Mobile Shopping; Millennials Flip the Script on Wearables, IoT Devices

This marks the first year Discover included Gen Z as its own distinct generation in its annual survey. In doing so, the survey revealed the youngest generation as being tech savvy holiday shoppers. Gen Z led the way with 80 percent planning to use their mobile device to shop for holiday gifts, compared to 73 percent of Millennials, 62 percent of Gen X and 41 percent of Baby Boomers. Among those who plan to shop on their mobile devices, 67 percent of Gen Z say they will do so for all or most of their holiday shopping, compared to 66 percent of Millennials, 56 percent of Gen X and 39 percent of Baby Boomers. Millennials slightly outpace Gen Z when it comes to embracing emerging technologies like wearables and voice-activated devices when holiday shopping. Thirty-six percent of Millennials and 35 percent of Gen Z plan to use a wearable or Internet of Things (IoT) device—for example, a payment-enabled watch or appliance—to make holiday purchases, compared to 24 percent of Gen X and 8 percent of Baby Boomers. Likewise, 29 percent of Millennials and 27 percent of Gen Z plan to use a voice-activated smart speaker to aid in their holiday shopping, compared to 23 percent of Gen X and 8 percent of Baby Boomers.

Concern over Identity Theft Is Down, but Most Consumers Remain Vigilant

More than half of respondents, 55 percent, say they are very or moderately concerned about identity theft or fraud during the holidays, down from 62 percent last year. Concern cuts across all generations, but levels are higher among Baby Boomers and Gen X, with 60 and 56 percent, respectively, saying they are very or moderately concerned, followed by 49 percent of Gen Z and 48 percent of Millennials. The vast majority of survey respondents, 90 percent, say they take some measure to protect themselves from identity theft or fraud, including 62 percent who say they monitor their financial statements, 41 percent who monitor their credit reports and 39 percent who use a credit card with built-in security features. “As consumers embrace new digital technologies while holiday shopping, such as smart speakers and wearable devices, Discover aims to provide peace of mind to its cardmembers by offering a number of free security features on all of our cards, like monitoring every Discover card purchase every day, and offering Social Security number and new account alerts¹ that cardmembers can sign up for,” adds Vasudevan.

Discover is a Member of ACT Canada; please visit <https://www.discover.com/>



30. MASTERCARD ACCREDITS FIME FOR BIOMETRIC EVALUATION SERVICES

Source: FIME (11/19)

Device manufacturers and solution providers can now demonstrate the quality of fingerprint sensors for strong customer authentication. FIME has been accredited by MasterCard to deliver biometric authentication testing services for fingerprint in line with its new guidelines for mobile device sensors. The testing evaluation program enables mobile, wearable and sensor manufacturers to test the performance and accuracy of mobile fingerprint sensors. This enables financial service providers to easily evaluate the hardware and software integrated into devices and have confidence in the quality of the products that are integrating with their payment solutions. Goode Intelligence's second Biometrics for Payments report found that biometrics has become an important tool in the fight against fraud in almost all of the channels that payment is supporting. The report predicts that there will be over 2.6 billion biometric payment users by 2023, driven by desire for more frictionless authentication, fraud reduction, regulation, and standardization.

MasterCard's program provides dedicated hardware performance testing to scrutinize the quality of solutions' matching engines. Vendors and service providers can make use of FIME's consulting, training and testing services to launch reliable mobile payment solutions. "Biometrics have taken the payments world by storm in recent years, delivering consumers greater convenience and security," comments Stephanie El Rhomri, Vice President of Services at FIME. "But in a post-PSD2 and GDPR world, players across mobile and payments are increasingly understanding the importance of performance and quality to ensure customer adoption of new secure authentication solutions. We're proud to be championing this evaluation program, the first of its kind to be fully ISO-compliant, as we continue to support the ever-expanding role of biometrics in payments."

FIME and MasterCard are Members of ACT Canada; please visit www.fime.com/ and www.mastercard.com/

31. MOBILE COMMERCE IS FASTEST-GROWING SALES CHANNEL IN THE US

Source: Worldpay (11/13)

New Worldpay data shows U.S. mCommerce market is second largest in world; global mCommerce is poised to surpass desktop shopping by 2023. Mobile commerce (m-commerce) continues its ascent to dominance among Americans as it is now the fastest growing shopping channel, growing 15 percent annually in the U.S. – according to new data from leading payments technology company, Worldpay. As smartphone ownership continues to grow in the U.S. and around the



world, consumers are pivoting from shopping on desktop computers to their phones. M-commerce is predicted to overtake desktop purchases globally by 2023, according to Worldpay's 2018 Global Payments Report¹.

The report found that m-commerce currently accounts for 38 percent of the more than \$1.3 trillion in global eCommerce sales. M-commerce is set to grow a staggering 19 percent during the next five years. In 2018, the largest markets in the world for m-commerce are China (\$0.75 trillion), U.S. (\$0.21 trillion), UK (\$63.8 billion), Japan (\$34.5 billion) and South Korea (\$28.8 billion). "As new devices hit the U.S. market, smartphone ownership is higher than ever. And with overall better functionality, it's never been easier to make a purchase from the palm of your hand," says Casey Bullock, general manager, North America, Global Enterprise eCommerce at Worldpay. "U.S. consumers are turning from their desktop to their phones to make purchases. Merchants must find ways to optimize their mobile payment and shopping experiences, whether through their mobile app, mobile wallet or an improved mobile checkout."

The rise of m-commerce could also be in part due to Americans' growing preference for eWallets. Although plastic still holds dominance in the U.S., eWallets are set to overtake credit cards as the most popular online payment method by 2020. As the fastest growing payment method among Americans, eWallet usage is increasing 25 percent annually. However, the U.S. still pales in comparison to China's eWallet adoption – led by Alipay and WeChat Pay – which accounts for 65 percent of eCommerce purchases. Other key insights from the Global Payments Report address the biggest trends in payments:

- Millennials: What motivates Millennials culturally, politically and socially also motivates their attitudes about business. Local drivers have the biggest influence on these motivations – meaning merchants must appreciate the extreme diversity of the global Millennial population to truly understand what fuels their purchases and payment behaviors.
- The Now Economy: From binge watching an entire TV series to same-day delivery, greater consumer preference for immediate experiences is clear. This appetite for instant gratification in commerce is extending beyond just delivery and into payments, including "buy now, pay later."
- Invisible payments: Checkout-free in-store shopping, virtual assistants, and connected cars are just some of the latest examples of how invisible payments are making shopping effortless. The purpose of these seamless transactions is convenience, reducing unnecessary friction at checkout while easing the necessary friction of authentication using emerging and biometric technologies.

The Global Payments Report was compiled using a combination of proprietary data and Worldpay experts, supported by of third-party vendors such as GlobalData, Euromonitor, eMarketer and yStats, publicly available data, and Worldpay's experts. This year, for the first time, the report covers not only e-



commerce but also in-store transactions. To learn more about these key insights and trends in global payments, please visit <https://worldpay.globalpaymentsreport.com/>

Worldpay is a Member of ACT Canada; please visit www.worldpay.com/

32. ONTARIO CAISSE MERGER: STRONGER TOGETHER

Source: Desjardins (11/29)

Members from the 11 Ontario caisses populaires and delegates of the Fédération des caisses populaires de l'Ontario (FCPO) voted overwhelmingly in favour of a merger during special general meetings held in late November 2018. The new Desjardins Ontario Credit Union will officially open on January 1, 2020. With 50 branches, a Desjardins Business centre and a Desjardins Signature Service, the new credit union will ensure its 130,000 members have access to services no matter where they are in its vast territory. The new credit union will have nearly 650 employees, 17 board members, and more than \$13.6 billion in assets under management. "We are pooling our strengths to build a large-scale financial cooperative," said Stéphane Trottier, Chair of the Board of Directors at the FCPO. "Our goal is to create a new entity that is both agile and efficient, with a single board of directors that represents all existing caisses. We will also be setting up 11 liaison committees to ensure that the credit union is connected to its members and their local realities."

The initiative will help the credit union become a simple, people-focused, modern, high-performance institution. In addition to offering jobs to all current employees, the new entity promises to be a more attractive employer with a competitive advantage in today's market. It will also be better positioned to help its employees pursue professional development opportunities so they can provide a broader range of specialized financial services. Credit union members can look forward to exceptional service from a committed team. The Desjardins Ontario Credit Union will continue to play an active role in community development across the province, primarily through its donations and sponsorships program and its Community Development Fund. In fact, with an increased capacity to support local initiatives, the new entity is sure to be an important partner in all the Ontario communities it serves.

Next steps

Several important activities will take place between now and the official opening of the credit union in 2020, such as appointing the general management team, developing the business plan and setting up the IT platform. Since each



caisse will keep the same transit number, member services will not be affected and account, credit card and debit card numbers will not change.

Desjardins is a Member of ACT Canada; please visit www.desjardins.com

33. VERIDOS LAUNCHES NEW COLOR IMAGE TECHNOLOGY

Source: G+D Mobile Security (12/10)

World-leading identity solutions provider Veridos has announced the release of a new security feature that will allow governments to apply secure, durable and vibrant color ID photos with high process flexibility. Veridos now offers two color image methods for polycarbonate identity documents: POLYCORE® technology and a new solution to be showcased at this week's APSCA Border Management and Identity Conference. Veridos's new color image technology is called CLIP ID – short for Color Laser Image Protected ID. The solution is being implemented in Bangladesh's new ePassport and will be presented during a joint speech by the Bangladesh Government and Veridos on December 11, at the APSCA Border Management and Identity Conference in Bangkok.

Major General Md Masud Rezwani, Director General of the Bangladesh Department of Immigration and Passport, said: "We are proud to offer our citizens ePassports with high-quality color images. With more than 160 million inhabitants, Bangladesh is the world's eighth most populous country and will provide the highest output of passports with color photos worldwide." Fabiola Bellersheim, Head of Sales Asia at Veridos: "CLIP ID combines laser engraving and color printing within a customized lenticular structure. This guarantees utmost security and long-lasting product lifetime without the need for additional protection layers. It can be applied by any laser engraving and ink-jet printing, making it a very cost-effective technology." The solution is suitable for both centralized and decentralized personalization processes. Customers placing a higher importance on centralized, combined production and personalization, on the other hand, will still be able to rely on the POLYCORE® technology provided by Veridos's shareholder Bundesdruckerei.

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34. HOW TO MAKE THE MOST OF MOBILE CUSTOMERS

Source: Worldpay (12/5)

Around the world, mobile commerce is on the rise. The power and convenience on offer from smartphones have quickly made them the preferred purchase method for millions of people. Frequent travellers, shoppers, gamers and



consumers no longer just use their mobile phone to look for inspiration for their next trips, swag, tips or tunes. Growing confidence and a smoother experience on mobile has led many to follow through to actually book and buy as well. With this growing opportunity comes a range of new challenges. The mobile payment journey is unique, unlike any other customer experience journey out there, and it's growing all the time. As you have seen throughout the year, we've conducted extensive research into the mobile shopping preferences of travel, airline, retail, gambling and digital content consumers in 10 countries around the world. Having surveyed 16,000 smartphone users, we've developed a series of reports to help you navigate these preferences – from an optimisation standpoint, and at a granular, market-based level. Now, we've brought the insights home, to walk you through how all of this information can actually help you to improve your mobile payment journey and what solutions might be available for you to do so.

"The onus is on providers to optimise the payment journey so the traveller can book easily on both mobile browsers and apps." Thomas Helldorff, Vice President of Travel & Airlines Vertical Strategy With mobile shopping only getting more prevalent, it's essential to understand how local consumers are embracing the trend and what they're looking for. In Australia, for example, mobile purchases have increased by 25% since 2016, with 53% preferring to pay in-app, rather than through a mobile browser. This highlights the strong emphasis placed on ease of use, with one-click payment being favoured, while also having to balance constantly-evolving security requirements. When it comes to personal finance, security is the number one priority for the vast majority of users. Keeping funds safe on a device that goes everywhere with a user, and can be relatively easily stolen or misplaced, means steps must be taken to ensure the information within remains safe. In the UK, for example, 50% of UK bettors would not place a bet if they had any security concerns about a mobile payment journey. Getting security right is crucial.

However, security alone is not enough. The main benefit of mobile devices is their accessibility and ease of use. Keeping the mobile payment journey as quick and painless as possible marks the difference between a business facilitating a successful mobile payment and a struggling one. For example, keeping people within an app, rather than redirecting them to a website can make a significant difference. In fact, 59% of US retail customers would stop a purchase if they were forced to redirect.

"With far more choice for consumers, apps need to be clean, well designed and as seamless as possible to stand out. That's why user journeys with one-click payments and advanced security are currently the industry's biggest focus – because if your journey is too complex, or the user has the smallest doubt about the security of your app or mobile website, they can buy an alternative product from a competitor within seconds." - Maria Prados, Vice President for Global Retail & B2B at Worldpay. "With far more choice for consumers, apps need to be clean,



well designed and as seamless as possible to stand out." Maria Prados, Vice President for Global Retail & B2B at Worldpay. Including one-click payment with biometric security, built into the app, is one way to keep the journey quick, painless and encourage impulse decisions. This is also true for subscription services, such as those offered by digital content providers. Once a subscriber is on board, they don't want to have to worry about their payment method again. If a business takes advantage of payment solutions that ensure card details are up to date, even if the original card expires and is replaced, they can keep customers on a more comfortable payment journey. With new challenges, inevitably, comes fresh solutions. As phones develop and provide innovative, exciting must-have features, such as enhanced biometrics, the options available to support mobile payment using these features arrive as well. "To keep users engaged in this competitive space, it's crucial to keep your payment options as stealthy as possible. Not only will this keep customers using your app, it will improve your overall user experience." – Daniel Belda, Vice President of Digital Content and Gambling

"To keep users engaged in this competitive space, it's crucial to keep your payment options as stealthy as possible. Not only will this keep customers using your app, it will improve your overall user experience" Daniel Belda, Vice President of Digital Content and Gambling.

Naturally, each business sector has a different set of customers, with unique wants and needs, so the approach they must take to new technology can vary to suit their customers. Which is why Worldpay has put together guides that introduce the challenges individual industries are facing, along with the solutions and opportunities that will help a business to excel in the growing mobile payment world. These four guides focus on the travel, retail, digital content and gaming sectors, four industries that are set to see major changes thanks to the ever-changing mobile payment journey.

Ready to find out more? The guides are ready to download now. Simply click below on your guide of choice. If you have any further questions or would like help getting started, contact Worldpay.

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35. FAST GROWING PAYMENTS SYSTEM ADYEN EXPANDS TO CANADA

Source: IT Business (10/31)

International payment processor Adyen, which boasts customers like eBay, and Microsoft has expanded its platform into Canada. The Amsterdam-based company announced it is bringing its full-scale unified commerce payment system to the Canadian market, and announced four new customers that will be using



Adyen's payment processor in Canada, including Dollar Shave Club, Adidas, Canada Goose and Busbud. Companies both domestic and international will now be able to access the payment processor company's full suite of tools for online and offline payments.

"We are excited to provide Canadian businesses with a seamless payment experience" said Kamran Zaki, Adyen's president of North America, in a press release, "eliminating boundaries across channels and geographies will help our customers expand within Canada and as they grow abroad. In addition, Canada is now easily accessible for businesses from other countries." Adyen offers a single payment platform, that works across channels, from in-store POS, e-commerce and mobile wallets like Apple Pay and Google Pay and accepts most major credit and debit cards.

The release stated that Canadian-based merchants will now be able to access all of the platform capabilities including:

- Card acquiring for Visa, Mastercard, American Express, JCB, UnionPay, Discover and Diners for digital and in-store payments
- Interac Debit for digital and in-store payments
- All major wallets – Alipay, Apple Pay, Google Pay, Samsung Pay and WeChat Pay

Marketplace capabilities through Adyen MarketPay

Adyen boasts customers like Spotify, Uber, Facebook, Casper, Booking.com and eBay, which switched from PayPal, making the smaller and lesser known Adyen its primary payment processing partner earlier this year. According to a press release from eBay the e-commerce giant made the move to help simplify the end-to-end experience for its buyers and sellers. eBay said it also made the move to give sellers lower costs and more control over the payments system. Adyen's system, said eBay gives sellers a more manageable way to track transactions and data. Adyen also works as a back-end payment system directly for businesses which means unlike PayPal users do not have to sign up for an account before making payments.

The European payment service provider also went public in June launching its initial public offering (IPO) in Amsterdam getting a decent amount of interest according to a report from TechCrunch. With this move into Canada, Adyen expands its global footprint that already extends across North America, Europe, Latin America and Asia Pacific.

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Evolve - Drive positive change in the increasingly complex commerce environment