

# CARD

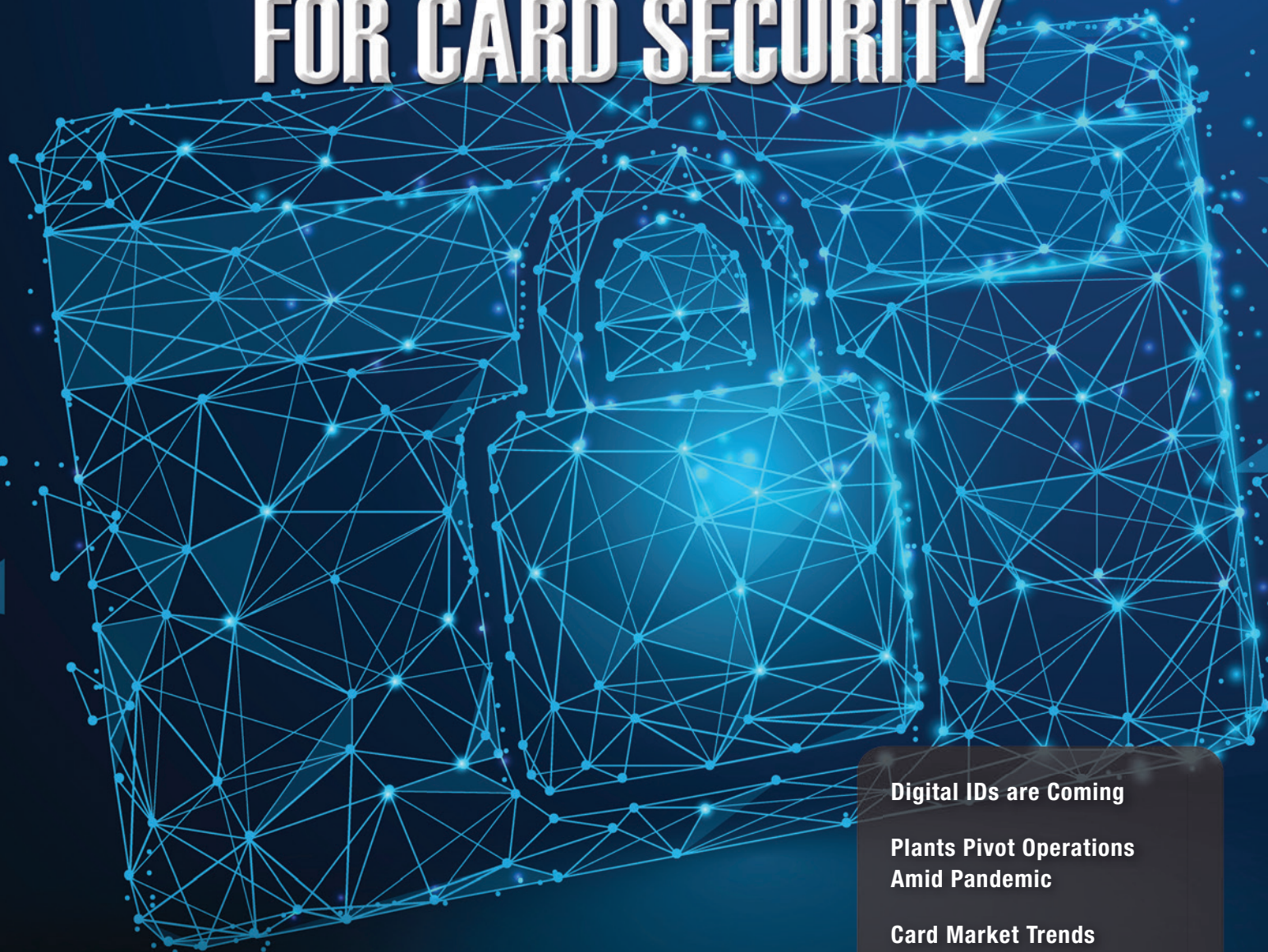
## MANUFACTURING™

The Official Publication of the International Card Manufacturers Association

August 2020

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# INNOVATIVE INK SOLUTIONS FOR CARD SECURITY



**Digital IDs are Coming**

**Plants Pivot Operations  
Amid Pandemic**

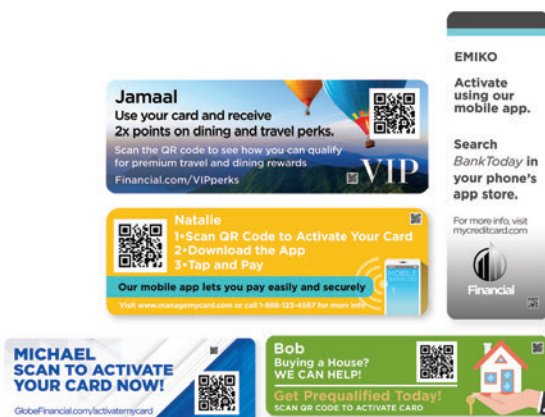
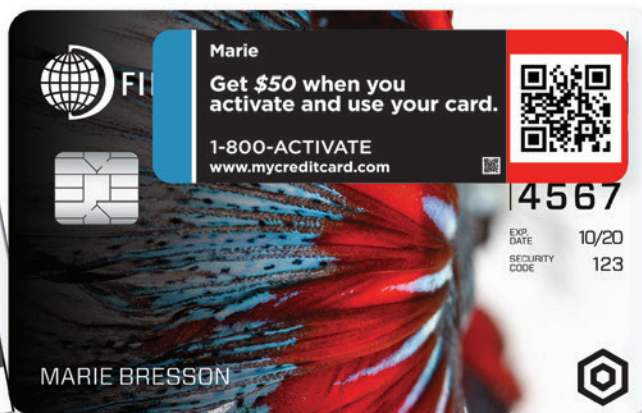
**Card Market Trends  
Beyond COVID-19**

**ICMA Plans Virtual Event**

**New Virtual Training Series  
Launched**



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## founder / executive director

# ICMA Connect: New Virtual Event Set for November

| By Jeffrey E. Barnhart

ICMA will host a new virtual event for our membership this November in place of our 2020 EXPO and CardTREX events, which have been cancelled due to COVID-19 uncertainties.

ICMA will host **ICMA Connect: A Virtual Forum & Tradeshow** November 4-5. This virtual event has been developed to help our members in the short term as we plan for an in-person EXPO next year.

Details involving the online event, which will include virtual trade show booths where exhibitors can feature their products and talk live with visitors, will be announced soon. The virtual event will feature a series of educational panels, presentations and roundtables.

Winners of the 2020 ICMA Élan Awards of Excellence, which celebrate the pinnacle of design innovation, security and technical achievements in the card industry, will be announced during **ICMA Connect**.

ICMA will postpone our 30th anniversary celebration until our 2021 Card Manufacturing & Personalization EXPO, which will take place on May 17-20, 2021 at the Renaissance Orlando at SeaWorld in Orlando, Florida.

Exhibition and sponsorship opportunities are available for **ICMA Connect**. Email [dwebster@icma.com](mailto:dwebster@icma.com) for more information. Stay tuned to [icma.com](http://icma.com) for more details about our virtual event!



## from the ICMA staff



# New Training Opportunity for Marketing, Sales and Customer-Facing Personnel

| By Jennifer Kohlhepp

ICMA has broadened our virtual education offerings with Advanced Card Education (ACE)-Commercial, a one-of-a-kind opportunity for sales, marketing, customer service and other key personnel at your company to learn the fundamentals of card manufacturing.

Others who may find this training beneficial include suppliers and consultants who want to have a deeper understanding of the card industry opportunities and challenges experienced by card providers.

Those who participate in ACE-Commercial training will:

- Receive a high-level overview of the major components of a card manufacturing business.
- Learn about the production of cards.
- Review customer service support and sales issues that arise in the sale and support of card products and projects.
- Review top-of-mind questions that customers purchasing card products may have.

Unlike ICMA's other ACE programs, which require students to pass an exam to achieve a corresponding certification, ACE-Commercial provides employees in customer-facing roles with high-level card industry education without the need to enroll in certification-level curriculum.

For more information about this unique benefit for the card industry, see page 16.



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## THE SPOTLIGHT IS ON ICMA'S DIAMOND, PLATINUM AND GOLD MEMBERS

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### Gold Level

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 **Gtus®**

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# We'd love to hear from you!

*Card Manufacturing* contains feature articles, listings, events, company news, industry announcements, association updates and other information that will influence and grow your business. *Card Manufacturing* also includes messages from key industry executives as well as news and tips from the heart of the association—YOU.

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- Do you have company information or accomplishments you want to share?

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# DIGITAL IDs ARE COMING



David Tushie – Magellan Consulting, Inc.,  
ICMA Standards and Technical Representative

With the recent implementation of social distancing around the world, resulting from the coronavirus pandemic, our digital dependency has become even greater. Individuals are subscribing and logging in to a range of digital services, including payment applications. What is critical in each of these interactions is the role that identity plays in enabling trust and the need to prove who we are, safely and conveniently, wherever we are.

As we accelerate toward more digital interactions and the verification associated with those kinds of transactions, coordinating physical and virtual world credentials becomes increasingly important. Not only does the credential have to verify that you are who you say you are, but the credential itself must be a validly issued document from an authenticated authority. This applies in both spheres, physical and virtual.

In North America, the states, U.S. territories and Canadian provinces are the issuing authorities for driver licenses

that are the defacto government issued IDs for most citizens. In much of the rest of the world, national ID cards are issued by sovereign nations to their citizens, separate from driver licenses.

As reported in prior articles, the ISO Standard effort to bring a useful, universal, mobile (digital) solution to the marketplace is being managed by the ISO/IEC JTC1/SC17/WG10 Motor Vehicle Driver License and related documents group. The standard being developed is ISO/IEC 18013 ISO compliant driving license. Part 5 of this standard defines the mobile driver license (or mDL). Considerable work has ensued over the last year to bring this technology to a published standard. There are high expectations that publication of the issued standard could be completed later this year. A related, additional Part 6 has recently been initiated, which will deal with the test method requirements of this digital credential.

A number of jurisdictions are currently

in a holding period waiting for the ISO Standards to publish before moving further ahead. The American Association of Motor Vehicle Administrators (AAMVA), which has all of the North American jurisdictions as its members, continues to have more and more states move ahead with proof of concept/pilot programs. A major hurdle is ISO Standards work since the states and provinces want to be in compliance and aligned with those documents. European countries are also driving this initiative and likewise continue to focus on assisting members with pilots, noting that challenges being experienced in the United States are also being experienced in other regions of the world as well.

The mDL is seen as the first implementation of an electronic ID (eID). Like financial cards currently, this is seen as requiring a companion card being issued with an mDL application. AAMVA has issued a guidance document to jurisdictions interested in mobile driver





license. The document is available on their public web site.

Another standards initiative is proposing to leverage the commands, protocols and communications of existing ISO/IEC 7816 smart card technology and apply it more broadly to eID applications. This work is being conducted by ISO/IEC JTC1/SC17/WG4 Generic Interfaces and Protocols for Security Devices.

Smart card technologies and solutions are widely deployed around the world, but systems for identity tokens and credentials are quickly changing. In this context, the APDU protocol outlined in the ISO/IEC 7816 series is becoming, in some cases, a hindrance to their integration in environments like mobile phones, handheld devices, connected devices (e.g. M2M, IoT) or other applications using secure elements.


Many of the participants in digital ID's are not familiar with the APDU protocol used by smart cards. They often circumvent its constraints by

requesting an abstraction layer above the eSIM security specifics. Although the security mechanisms of security devices are well defined in ISO/IEC 7816 their implementation and application differ from vendor to vendor and the complexity frustrates most of these application developers.

A common methodology in software development to simplify the usage of complex systems is the definition and application of Application Programming Interface (API) functions to access the eSIM within the devices. Specific knowledge of ADPU protocols and details of the eSIM implementation are no longer necessary.

Importantly, this standard also aims to overcome or mitigate those issues by proposing a new approach that would preserve smart card functionality, as represented by the ISO/IEC 7816 Standard series and allow for seamless smart card portability onto new systems. This is critical in promoting implementations for digital eIDs that have both physical card and

mobile platform components.

It is difficult to project how quickly we will see these kinds of digital IDs in widespread use. However, it is clear that much work is being put into development and standardization of these credentials. With the pandemic pushing our virtual and physical worlds closer together in our everyday activities, an ID credential that allows us to move seamlessly, and securely between the two is highly desirable. 

**About the Author:** ICMA Standards and Technical Representative David Tushie has had a long and continuing career in the card industry working for international companies such as Data-card, UbiQ and NBS Technologies. He has master's degrees in engineering and business, holds U.S. and international patents in measurement and card issuance systems and has had several years of involvement with the ANSI, INCITS and ISO standards process. ICMA is represented at six ISO and ANSI standards meetings through his standards role within the association.



# CARD MARKET TRENDS BEYOND COVID-19

Kimberly Tjounakaris – Public Relations Manager

Rebounding from the COVID-19 pandemic will be gradual for card manufacturers with certain card market segments more impacted than others.

Credit card use has increased and more consumers are charging everyday purchases. For example, grocery store purchases, which are typically card-present transactions requiring a card and a point-of-sale (POS) device, have transitioned into online sales as consumers want to shop from home to protect their health.

Consumers are also reconsidering handling cash and there is a growing demand for touchless transactions, which eliminate tactile contact with POS equipment.





"In the United States, we've seen drastic changes in customer behavior driven by COVID-19," said Jack Jania, vice president of product management and innovation at CPI Card Group. "Card-not-present transactions and the customer shopping experience have completely shifted."

As a result of the pandemic, the U.S. card market, which is five years behind the rest of the world in deploying contactless payments, is now ripe for widespread adoption of these types of transactions.

"The tap-and-go feature of contactless cards is now seen as a health benefit," Jania added. "As a result, we are seeing a shift to contactless, as well as a hybrid product in which a card is not present for a transaction."

The health care and government card market segments have remained stable throughout the pandemic. Meanwhile, the education card market is expected to rebound quickly with a demand for the production of student and staff IDs that was put on hold for the past several months.

"Some markets will rebound stronger than they were prior to the pandemic," said Keith Yeates, CEO of Bristol ID Technologies. "As recovery begins, we are paying careful attention, making sure we have the right levels of inventory on hand so that when certain markets rebound quickly, we will be prepared to meet those opportunities."


However, some card market segments, such as hospitality and event management, will be slow to pick up. For these market segments to rebound, consumers will need to be confident in the new health and safety protocols that are in place for traveling, staying in hotels and attending events.

The transportation sector will also be slow to recover as long as people resist to travel in close proximity to one another on planes, buses and subways.

Prior to the pandemic, the International Card Manufacturers Association 2019 Global Card Market Statistics Report found that among market segments, gift cards showed the strongest volume growth in 2019 with a 7.1% increase over the prior year. Though the effects of the current global crisis on in-store gift card spending remains unknown, gift card manufacturers are hopeful that volume will pick up again when retail stores reopen and the economy begins to gain momentum. The market will likely remain strong where it already has a firm hold and will bounce back in other sectors as recovery from COVID-19 comes.

Some card manufacturers took advantage of the lull in production during the pandemic to anticipate customer needs when the crisis subsides. "We've had more than enough time to think of new products," said Michael Dorner, CEO of Variuscard, a European card manufacturer.

Dorner encouraged card manufacturers to use downtime to develop new product offerings that would help spread business risk out across their product portfolios. Amid the pandemic, Variuscard developed the world's first crypto stamp, which is now being used by the Austrian postal system.

"Opportunities always come from times of adversity and we are looking for the opportunities that will come from this. If we pursue those opportunities, the card industry will emerge stronger," Dorner said. 

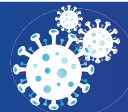
# CARD MANUFACTURING PLANTS

## PIVOT OPERATIONS AMID COVID-19 PANDEMIC

Kimberly Tjoumakaris – ICMA Public Relations Manager







The COVID-19 pandemic has caused business interruptions across the globe and it is likely these disruptions will continue until there is a vaccine or herd immunity.

Some card manufacturing plants have adapted to the new business landscape by restructuring their product offerings to remain operational. Bristol ID Technologies moved beyond producing cards to manufacturing face shields. The company also explored making card sanitization stations for the hospitality industry, as well as microbial card coatings.

Bristol ID Technologies also used downtime during the pandemic to accelerate new projects. “We do not have a designated research and development (R&D) department or equipment,” said Keith Yeates, CEO of Bristol ID Technologies. “We took advantage of the lull in production to use our equipment to work on new R&D projects.”

Similarly, Variuscard, a European card manufacturer, pivoted operations and invested in new hardware, such as a digital cutter, to manufacture face masks and face shields. As of press time early in July, 50% of the company’s revenue could be attributed to non-card products.

Klöckner Pentaplast shifted its operations globally to supply plastic for face shields, virus detecting test equipment, food packaging and signage production.


The pandemic highlighted the necessity for supply chain diversity, which allows card manufacturers to swiftly respond to changing market demands and customer needs. Bristol ID Technologies experienced some supply chain delays with materials coming out of Asia, which forced the company to evaluate inventory levels.

“If there is a strong rebound in certain markets, we want to be prepared,” Yeates said. “To minimize the future impacts due to another crisis or

pandemic, it is so important to have at least one alternative source for every product.”

Similarly, when borders shut down in Europe, card manufacturers had difficulty transporting materials. “We have two suppliers for all of our raw materials. For example, our main PVC supplier is in Italy and our secondary supplier is in China,” said Michael Dörner, CEO of Variuscard. “COVID-19 has taken our risk management strategy to a completely new level. When the pandemic hit the world at the same time—that was something we could not have anticipated. Not having access to certain products, such as isopropyl alcohol, is a very new problem that we haven’t had to tackle before.”

Klöckner Pentaplast ensured raw material sourcing and continuity through its worldwide supply chains. “We have a sophisticated supply chain, which allows us to effectively and efficiently balance purchasing and production throughout our world network,” said John Schneiderhan, product manager, cards/graphics Americas at Klöckner Pentaplast.

Variuscard continues to monitor its stock very carefully with a goal to remain as flexible as possible. “We don’t know how or when the market will rebound,” Dörner said. 

# INNOVATIVE INK SOLUTIONS FOR CARD SECURITY

Jennifer Kohlhepp – Managing Editor, ICMA

Cards used for various purposes need cost-effective security features that provide optimal protection. Cards should enable multi-level authentication for effective authentication under different circumstances. Highly secured solutions for ID applications have to respond to the increasingly sophisticated demands required for identity systems worldwide.

Innovative ink solutions can maximize design freedom while enhancing security against counterfeiting. Expertise in security printing and considerations on design and integration of ink-based security elements are vital, according to *Card Security: Ink Solutions and Trends in Security Features*, a recent webcast presented by Mike Walsh, regional sales director, SICPA.



## Threats to Card Security

Threats to card security include the creation of fake cards, construction of fraudulent card parts using stolen materials, photo substitution, deletion/alteration of variable card information such as personal data, fraudulent use of genuine cards, skimming, theft of card PIN codes, internet and phone banking with stolen card data and all possible scenarios of identity theft.

## The Reality of Fraud

In 2018, \$24.26 billion was lost due to payment card fraud worldwide. That year, the United States led as the most credit fraud prone country with 38.6% of reported card theft losses.

Experts predict that total card losses in the United States could reach up to \$12 billion by the end of 2020.

## Different Cards Have Different Security Needs

Identification cards, driver's licenses and government cards need effective, multi-level authentication and protection with security features dedicated to high-security applications. These types of cards are issued by governments and have an average lifespan of 5-10 years. They are made with PVC or other synthetic substrates and need to be laminated and incorporate overt and covert security features allowing for various levels of authentication. These cards need to fulfill the demands of identity systems worldwide and their variable personal data requires protection.

Bank cards need reinforcement of their existing security measures and additional security features to protect the card owner's personal data. Holograms have been used as a security feature for financial transaction cards (credit and debit cards) for more than 30 years but this technology has matured and now has a high risk of fraud.

Gift cards need basic and instant visual authentication while reinforcing their brand image. Issued by brand owner companies, gift cards, discount cards and VIP promotional cards, need special effects and security inks to allow flexibility in design and color choices while ensuring effective protection.

Access/membership cards validate high-traffic access to protected zones with machine-assisted authentication.

Transportation cards need to enable on-the-spot verification of legitimacy by controlling agents for multi-level authentication. Issued by transport companies, these cards are usually replaced monthly or annually. These cards contain variable

personal data and a photo of the cardholder and need anti-tampering protection. They have overt features to enable authentication by controlling agents. Machine-readable security features can be incorporated for high-speed validation at turnstiles.

Warranty cards need to enhance brand image and quality differentiation, as well as reinforce brand recognition. Their protection can vary from standard to customized solutions depending on the brand and product image differentiation needs.

## How to Tackle Threats

Security solutions should be adapted to the specific needs of different card segments. An effective approach to tackling security threats is to use security features that enable various levels of authentication and exclusive technologies that are reserved for the security industry. Highly secured solutions can respond to the increasingly sophisticated demands required for identity systems worldwide.

## Color-Shifting Inks

Color-shifting inks create an easily recognizable color-shift for secure authentication; produce an obvious shift from one color to another when viewed at different angles. They have excellent color quality and ink adhesion and can be combined with other security features. They are screen printed and work on a variety of different substrates. They are also durable and hard-wearing for long lifecycles.

Color-shifting inks in hot stamp open up robust color-shift security to printers that have not had the technical ability to print before. These inks have an instantly recognizable color shift when viewed at different angles. They do not require an origination fee and their dye is easily changeable for customer needs. They can be combined with other overt, covert and forensic security features.

Color-shifting inks in mag stripe provide an eye-catching visual never seen before on a magnetic stripe. They offer differentiation from the competition and modernization of cards' back sides. These inks provide customizable design that enhances brand identity. Their origination costs are minimal.

## Anti-Duplication Inks

The effects of anti-duplication inks are impossible to photocopy or digitally recreate. They are easy to authenticate with simple tools. They can be added to almost any fixed color visible ink. They are available in offset and screen formulations.

*continued on page 14*



### Infrared (IR) Transparent Inks

The visible ink becomes invisible when viewed through an infrared image viewer. Printed information can be hidden from view when used with an opaque counterpart.

### Fluorescent Inks

They are incandescent under ultra-violet (UV) light. Single, long wavelength (369nm) UV fluorescence is commonly used by itself, printed invisibly or incorporated into another type of ink. Dual UV wavelength invisible fluorescent ink fluoresces one color under short wavelength UV (313nm) and another color under long wavelength UV (366nm).

### Iridescent Inks

Iridescent ink is a translucent, pearlescent ink that creates a unique metallic effect. When viewed at different angles there is a subtle change of iridescent tones that can be seen. The effect can be maximized when printed over opaque inks.

### Machine-Readable Inks

Machine-readable inks have extremely high counterfeit resilience and can create unique and exclusive compositions. They can create highly versatile integration formats and provide efficient readings with detection precision. These inks have multiple detection capabilities. Data can be collected and processed to generate comprehensive information and patterns for monitoring and analytics.

### Microstructure Optical Taggants

Microstructure optical taggants are microscopic pieces of materials that are uniquely distinguishable by structure, size, shape, color, surface description, etc. A low amount of taggants do not interfere with the properties of the ink with which it is mixed. Optical taggants are specific taggants that have been customized with a logo or symbol. They are covert and invisible to the naked eye and are detected with an optical microscope with magnifications from 400x to 1,000x.

### Digital Inks

Digital inks are becoming more common due to their reduced color-matching time. There are no limits on color and they provide full gradation. They are used to print finer, smoother details through higher resolution. These inks offer quick delivery, low cost small volume production flexibility and are environmentally friendly.

### LED-Curing Inks

The use of light-emitting diode (LED)-curing inks is expanding in card markets. Advantages include heat reduction, longer lamp life and no dry times. They provide high resolution and offer a wide variety of colors. They can be applied to non-porous substrates including PVC, Teslin, Tyvek, synthetic, PP synthetic, etc. These inks offer print stability and various finishing options. They save energy and are environmentally friendly.



### An Integrated Approach


Security inks are easy to integrate into new or existing cards, depending on various design needs. With relatively small/restrictive areas, security features should be integrated at the design stage consideration of feature functionality, location and printability. Security inks come in a multitude of colors/styles and they help produce a secure, yet aesthetically pleasing card without dramatically increasing costs. There are limitless design options.

### A Multi-Layered Solution

No one security feature can protect the entire card. When included at the design stage, security features tend to resist counterfeit or forgery more effectively than when adding security to an already existing printed item.

Printers need to collaborate with their clients and ask questions to align security features with their needs, such as:

- What type of card is it?
- What level of security is required?
- What substrate will be used?
- What is the desired card life?
- Who will be authenticating the card?
- How many people will be authenticating the card?
- Are those who are authenticating the card sufficiently educated in security identification?

Printers can advise clients in the creation of cost-effective solutions with targeted security features, designed to defeat specific problems. Security should not limit card creativity and design. Inks offer an infinite variety of colors and design options. Often, security is only considered when a problem has occurred, but successful printers are proactive, not reactive, in offering their clients the latest technology in fraud protection. 



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# ICMA LAUNCHES NEW VIRTUAL TRAINING SERIES

ICMA has expanded its Advanced Card Education (ACE) program to include a new virtual training series. The first training in the series is ACE-Commercial training.

The purpose of ACE-Commercial training is to provide sales, marketing, customer service and other key personnel at your company with the opportunity to learn the fundamentals of card manufacturing. Others who may find this training beneficial include suppliers and consultants who want to have a deeper understanding of the card industry opportunities and challenges experienced by card providers.

Employees who participate in the training series:

- Receive a high-level overview of the major components of a card manufacturing business.
- Learn about the production of cards.
- Review customer service support and sales issues that arise in the sale and support of card products and projects.
- Review top-of-mind questions and topics that customers of card products may have.

Unlike ICMA's other ACE programs, which require students to pass an exam to achieve a corresponding certification, ACE-Commercial is designed to provide employees in customer-facing roles with high-level card industry education without the need to enroll in certification-level curriculum.

Conducted by David Tushie, ICMA's standards and technical representative, ACE-Commercial is taught in two, 2-hour sessions on the same day. There are no prerequisites but the program is only available to current ICMA member companies.

## Upcoming Program Dates

- **Tuesday, September 29 at 8:00 a.m. NY, 12:00 p.m. GMT**
- **Wednesday, October 21 at 8:30 p.m. ET (Thursday, October 22, 12:30 a.m. GMT)**
- **Wednesday, November 18 at 10:30 a.m. NY, 14:30 p.m. GMT**

Private company training is also available at a reduced rate for groups of 10 or more.

**For more information, pricing and to register, visit [ICMA.com](https://www.icma.com).**



## Austriacard Launches Dual-Interface Metal Card

Recognizing the trends in markets and always aware of customers' needs, **Austriacard** has enhanced its product line in metal payment cards. The offer includes full metal, metal hybrid and metal veneer cards.

Trusting its long-lasting experience in providing payment solutions combined with the fruitful cooperation in other card projects, Raiffeisen Banka A.D. Beograd (Serbia) chose Austriacard for the production and launch of the bank's first dual-interface metal card.

Austriacard is proud to be the partner of choice in this new project with the bank, strengthening the company's business relationship even more.

For more information, visit [austriacard.com](http://austriacard.com).

## FIME, Barnes Release New Version of CPV Test Tool

FIME and **Barnes International Limited's** Personalization Validation Tool (PVT) has been qualified against the latest **Mastercard** PVT Release 2020 Requirements v13.1 for the Mastercard Card Personalization Validation (CPV) process. Devices can now be pre-validated prior to submission to Mastercard. The tool enables the same detailed and rigorous tests that are used by Mastercard's certification labs globally to perform certification of cards, smartphones and other devices. This speeds up certification and reduces the delays and high costs associated with qualification failure.

The tool, PersevalPro Issuer from FIME and CPT 3000v3CL PVT from Barnes, enables issuers and card personalization bureaus to analyze and pre-certify their devices against the latest payment scheme chip personalization requirements and product rules. It is used to enhance quality assurance practices and ensure that EMV cards meet stringent payment scheme specifications when sent for formal card personalization validation testing. The tool is reinforced with FIME's laboratory services and both FIME and Barnes support customers with expert technical knowledge and consultancy services to accelerate time to market.

For more information, visit [barnestest.com](http://barnestest.com).

*continued on page 18*

## Revolutionary Inline Production Equipment for MRTD Products



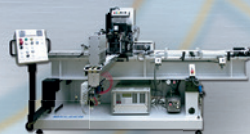
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## CPI Card Group, Unifimoney Collaborate on Recovered Ocean-Bound Plastic Cards

**CPI Card Group Inc.** recently announced a collaboration with Unifimoney Inc. to produce Visa contactless credit and debit cards featuring a core made with recovered ocean-bound plastic. Named Second Wave, the high-quality card from CPI is EMV compliant and dual-interface capable.

According to a CPI Card Group Consumer Insights Study, 94% of consumers say they are concerned about the amount of plastic waste in the oceans. Additionally, 87% of respondents find the idea of an ocean-plastic card appealing, with 53% willing to switch to another financial institution if it offered such cards with the same features and benefits.

Each time Second Wave cards are used by its customers, Unifimoney will contribute to The Ocean Foundation.

For more information, visit [cpicardgroup.com](http://cpicardgroup.com).

## Fingerprint Cards, Digi-Key Expand Business in New Markets

**Fingerprint Cards AB** recently announced a collaboration with the global on-line distributor, Digi-Key Electronics.

This cooperation will strengthen Fingerprints' position and help the company scale into new markets and application areas within IoT and access globally. Fingerprints' BM-Lite Module and Development Kit are currently in-stock and available for immediate shipment from Digi-Key.

For more information, visit [fingerprints.com](http://fingerprints.com).

## Giesecke+Devrient Launches Online Magazine

**Giesecke+Devrient (G+D)** has launched a digital corporate publishing platform, G+D Spotlight.

G+D Spotlight discusses major present-day security questions, offers expert opinions and provides an insight into technological innovations. In addition to specialists from G+D and its subsidiaries, external experts from the scientific and business communities as well as wider society will also be able to have their say. The platform covers a vast range of subjects, including cyber security, digital payment methods, eGovernment, the Internet of Things, 5G, artificial intelligence, biometrics and post-quantum cryptography to name just a few examples.

Alongside traditional formats like reports, interviews and profiles, readers will also find videos and podcasts, as well as easy-to-digest options such as listicles. The platform also offers an extensive selection of features, such as the option to have selected articles read out loud. Users who sign up for the newsletter will receive ongoing updates about the latest posts.

For more information, visit [gi-de.com](http://gi-de.com).

## HID Global Smart Cards Bring Convenience, Security to Office in Indonesia

**HID Global** recently announced that it has been selected by Jakarta-based service office provider, Workspace Indonesia, to power its access control system, allowing several hundred users to access their co-working space conveniently and securely.

Established in 2017, Workspace is one of the fastest growing co-working space providers in Jakarta, and currently serves both startups and established businesses who need professional, reliable and secure working space. Workspace currently operates four offices in Jakarta, at SOHO

Capital, Eiffel Tower PIK, Pluit and Kota Kasablanka. These four locations include private offices, virtual offices, meeting rooms, dedicated desks, co-working hot desks and event areas.

For more information, visit [hidglobal.com](http://hidglobal.com).

## Japan's Digital Garage First to Get IDEMIA Augmented ID Technology

**IDEMIA** has rolled out its MorphoWave Compact contactless fingerprint technology to Digital Garage, its first customer in Japan.

A statement from the company said the installation of the technology at the new headquarters of Digital Garage, located in Tokyo's Shibuya district, had been done along with Japan Aerospace Corp. (JAC). JAC had also done the network configuration for the deployment.

Employees can now authenticate by waving their hands across a sensor. The contactless system is also more hygienic than systems which require one to place one's finger or fingers on a pad.

For more information, visit [idemia.com](http://idemia.com).

## Two-Thirds of Mastercard Transactions in U.K. Now Contactless

As **Mastercard** reveals that 66% of all transactions across the U.K. are now contactless, new research identifies consumer habits and viewpoints that mean this is a consumer change that will stand the test of time.

In the U.K. contactless adoption was already high and Mastercard has recently worked with the industry to enable the limit for contactless payments to increase from £30 to £45 to help people benefit from the fastest and simplest way to pay.

Nearly half (45%) of people in the U.K. admit their use of cash has decreased



throughout the COVID-19 pandemic, with one in five (22%) no longer using cash at all. Four in five (83%) agree contactless payments are a cleaner way to pay.

Forty-three percent of people in the U.K. have used contactless payments more often since the COVID-19 pandemic, while one in 10 (9%) have started to use contactless for the first time as a result of the pandemic.

Three quarters (76%) of Brits say they are very likely to continue using contactless payments after the pandemic ends, with 66% saying contactless payments are now their preferred way to pay when making purchases in-store. A further one in five

(21%) say they have changed which cards they use most frequently specifically to use contactless payments.

The most popular way of paying using contactless technology in the U.K. is with a debit or credit card (90%), followed by mobile phone (21%) and contactless-enabled device such as a Garmin/Fitbit (3%). Grocery stores are the top destination for contactless usage (93%) along with other retail stores (37%) and pharmacies (29%). Sixty-one percent adopted contactless payments as they thought it was a safer way to pay.

For more information, visit [mastercard.com](https://www.mastercard.com).

## NEXT Biometrics Part of Government Program in India

**NEXT Biometrics** recently announced it has received an order for UIDAI and STQC certified fingerprint biometric readers in India with a value of \$750,000. The customer has provided a 20% upfront payment and the first readers are in transit to the customer.

The purchase order reflects increased demand for biometric solutions tied to the Government's Aadhaar program, which continues to provide NEXT with opportunities to expand its share of a growing Indian market. In 2019, NEXT established local presence in India and

*continued on page 20*



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commenced a slow ramp-up of shipments. Into 2020, demand is increasing and NEXT expects to receive additional orders from both existing and new customers.

As part of the program, volunteers will be equipped with NEXT Biometrics' fingerprint readers to deliver government services at the doorstep of all eligible households in the state of Andhra Pradesh.

For more information, visit [nextbiometrics.com](http://nextbiometrics.com).

### SPS Increases Life Span of PVC Cards with Premium S-Lam

**SPS** recently announced it has expanded its product range with the Premium S-Lam, developed in collaboration with Lobra AG. The Premium S-Lam considerably extends the life span of PVC bank cards, while complying with the requirements of the most demanding customers.

Lobra's innovative product is laminated with the etched antenna to form the SPS Premium S-Lam, integrating the SPS eBoost PAY technology. Its resistance to aging has been qualified by extensive tests performed by the Fogra Forschungsinstitut für Medientechnologien Research Institute for Media Technologies, a German-based industry association specializing in evaluating the reliability and physical qualities of plastic products including plastic cards, ePassports and ID Cards.

For more information, visit [s-p-s.com](http://s-p-s.com).

### Visa Says Crisis Could Help Drive \$100B Shift to Debit Cards

The COVID-19 crisis is pushing more purchasing over to debit cards in what could drive a \$100 billion annual shift away from credit cards over time, according to **Visa Inc.**

While U.S. credit-card volume on Visa V, +1.11% cards remained down from a year earlier in May, debit-card volumes were up 12%.

Visa estimates, based on past behaviors, that there could be a \$100 billion annual shift to debit card spending from credit card spending over time. Consumers migrated spending to debit from credit in 2008 and even in late 2018 amid uncertainties around a government shutdown and trade tensions with China.

In the medium and long term, more purchasing is expected to migrate over to debit cards. Visa also predicts that consumers will shift their credit spending to more "pragmatic" options, like low-fee or no-fee cash-back cards rather than higher-end travel rewards cards that have annual fees.

For more information, visit [visa.com](http://visa.com).



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# Historical Success Embracing the Future

## ICMA Celebrates 30th Anniversary at 2021 EXPO

***New Virtual Event Set for November as COVID-19 Uncertainties Cancel 2020 EXPO***

ICMA will postpone its 30th anniversary celebration until its 2021 ICMA Card Manufacturing & Personalization EXPO on May 17-20, 2021 at the Renaissance Orlando at SeaWorld in Orlando, Florida.

ICMA will host a new virtual event for its membership this November 4-5 in place of its 2020 EXPO and CardTREX events, which have been cancelled due to COVID-19 uncertainties. Details involving *ICMA Connect: A Virtual Forum & Tradeshow*, which will include virtual trade show booths where exhibitors can feature their products and talk live with visitors will be announced soon. The virtual event will also feature a series of educational panels, presentations and roundtables.

Winners of the 2020 ICMA Élan Awards of Excellence, which celebrate the pinnacle of design innovation, security and technical achievements in the card industry, will be announced at *ICMA Connect* this fall.

"ICMA's EXPO, which remains one of the card industry's leading-edge events, will adapt to the current business climate," Jeffrey Barnhart, executive director and founder of ICMA said. "We will host a new virtual event in November to help our members in the short-term and plan for an

in-person celebration next year that will feature essential education that global industry leaders rely on, as well as an opportunity to see the latest technology and newest equipment firsthand during dedicated exhibition hours."

Geared toward small businesses and large corporations, ICMA's EXPO is attended by representatives from more than 200 companies from 40 countries worldwide and includes speed networking sessions, dedicated exhibition hours and leading-edge education, as well as presentations on trends, technology and the future of the card industry.

Winners of the 2021 ICMA Élan Awards of Excellence will be announced at ICMA's EXPO May 17-20, 2021. The seven award categories include: Secure Payment Cards; Loyalty, Promotional and Gift Cards; ID and Access Control Cards; Unique Innovation, Personalization & Fulfillment (Product, Service or Project); Best Supplier or Vendor for a New Product, Service or Innovation and the People's Choice.

Sponsorship and exhibiting opportunities for *ICMA Connect* and the 2021 ICMA Card Manufacturing & Personalization EXPO are now available. **For more information, email [dwebster@icma.com](mailto:dwebster@icma.com).**

## NEW BLOGS POSTED ON ICMA.COM

Have you read ICMA's latest blogs?

*Beyond COVID-19: Card Manufacturing Market Trends* reviews the affects the COVID-19 pandemic has had on several card market segments, as well as emerging card market trends such as the widespread adoption of contactless payments.

ICMA members share insights, strategies and projections for adapting to the "new normal" that has emerged out of the COVID-19 pandemic in *Card Manufacturing Shifts Operations Amid COVID-19*.

Card manufacturers discuss how they are gaining a competitive edge by introducing new technologies onto the plant floor in *COVID-19 Magnifies Benefits of Smart Factories for Card Manufacturers*.

To read all of ICMA's latest blogs, visit the blog section of ICMA.com



## Watch ICMA's Latest Webcasts



As a member benefit, ICMA hosts live webcasts featuring industry leaders and experts delivering virtual presentations.

Visit ICMA.com to view our webcasts archives, which includes the recent webcasts, *Card Security: Ink Solutions and Trends in Security Features*, presented by Mike Walsh, regional sales director, Value Document Inks, SICPA Securink and *The Impact of Digital Printing on the Transaction Card Industry* presented by James Gargus, account manager, western USA region, folding carton and transaction card solutions, HP.

To watch all of ICMA's latest webcasts, visit the webcast section of ICMA.com. If your company would like to present a webcast, email an abstract to [jkohlhepp@icma.com](mailto:jkohlhepp@icma.com).



### Amazon to Expand Grocery Stores Across U.S.

Three years after it paid \$13.4 billion for Whole Foods, Amazon is planning to open its second automated-checkout grocery store in Seattle's Eastside neighborhood and is hiring managers for a third store in the city's Capitol Hill district.

Amazon launched the first traditional Go convenience store in Seattle in 2017. Today, there are 26 locations in Seattle, New York, Chicago and San Francisco, though several are temporarily closed.

Last November, Amazon said it planned to open cashierless Amazon Go supermarkets and pop-up stores in 2020 equipped with cameras and sensors that allow the company to bill shoppers through an app for items they pick off shelves, eliminating the need for a checkout line. The

expansion efforts could make Amazon a serious player in the \$900 billion U.S. grocery industry.

Amazon reported its first quarter results had net sales at its 571 Whole Foods and bookstores of more than \$4.6 billion, up 7.7% from a year earlier. That figure does not include online grocery orders that are fulfilled through its physical stores.

### GreenState Introduces Contactless Cards

GreenState Credit Union is one of the first issuers of contactless credit cards in Iowa, the credit union recently announced.

All new and reissued GreenState credit cards and debit cards now include this feature. The cards use radio-frequency identification technology to allow the user to simply hold the card near the card reader to process the transaction.

If the store does not have a contactless reader, the member can use the conventional methods to process the transaction.

### Taiwan Postpones Electronic ID Card Until 2021

The Ministry of Interior (MOI) in Taiwan is postponing the introduction of electronic identity cards (eID) from October until the first half of 2021 due to the COVID-19 pandemic. The pandemic made importing the necessary machinery for the roll out impossible.

The new card will incorporate the National Health Insurance Card and driver's license information. Identification technologies will be applied to deter digital theft, with passwords necessary to access data such as the names of the cardholder's spouse and parents.

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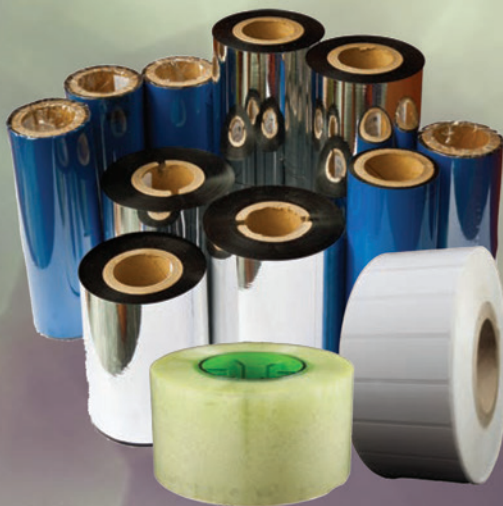
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### Digital Loyalty Program Memberships to Grow by 11 Billion by 2023

A new study from Juniper Research has found that memberships of loyalty programs with a digital element will increase from 37 billion in 2020 to 48 billion in 2023 globally.

The new research, *Digital Loyalty Programmes: Market Trends, Credit Cards & Retailer Readiness 2020-2025*, highlights that as economic challenges remain for both consumers and retailers, digital loyalty will become a prized differentiator as retail markets become increasingly commoditized. The study recommended that retailers adopt digital loyalty solutions that enable them to leverage their abundant customer data to offer omnichannel loyalty experiences, combining offline and online touchpoints. This is critical for brick-and-mortar retailers, which will struggle to recover from revenue lost during lockdowns and increased off-to-online spend migration.

The research also found that the total value of mobile coupons redeemed will grow from \$51.6 billion in 2020 to \$67.6 billion in 2023, driven by increasing QR and app coupon usage. QR coupons will continue to grow strongly in China as QR payments are dominant there, but QR coupon redemption in India and Africa will also grow three- to four-fold in the next five years as the appeal of QR widens.

The research estimates that the value of credit card rewards will exceed \$68 billion in 2023, driven by increasing competition between providers and the ability to link spending to existing loyalty ecosystems. The United States is expected to remain the largest market for corporate card rewards over the next five years, despite a 2020 COVID-related dip, as businesses look for ways to optimize cashflow and harmonize corporate spending.

### Surge in ID Card Demand in Singapore

Following the Election Department (ELD)'s announcement in June about the general election, Singapore's Immigration and Checkpoints Authority (ICA) has experienced a huge surge in demand for Identity Card (IC) services, especially the replacement of ICs, collection of new ICs and change of address. The ICA said demand for these services has surged by between 40% and 140%.

ICA has deployed additional manpower to manage this surge in demand. ICA will also be delivering ICs to the homes of Singapore residents who have made IC applications between January and May to reduce the volume of people turning up at the ICA Building. In addition, ICA will prioritize the processing of applications for the replacement of ICs, which means a corresponding delay in the processing of requests for re-registration of ICs. The former is more important in the context of the upcoming general election, as the IC would be the primary means of identity verification for the purposes of voting.

### Apple Pay Support Coming to Los Angeles Metro's Transit Cards

Apple Pay support has been rolling out to major transit authorities over the last few years, and it looks like it is poised to start operations in another major hub soon.

The Los Angeles Metro has announced that its TAP transit cards will begin supporting Apple Pay later this year. The LA Metro posted to its Twitter account saying that "your TAP card is coming to iPhone and Apple Watch this year."

Adding a TAP transit card to Apple Pay will allow customers of the Los Angeles Metro system to pay for their train or bus rides with their iPhone or Apple Watch instead of having to carry around a physical metro card. In order to pay for a ride,

customers will simply authenticate and hold their device near a TAP card reader. Customers can also turn on Express Transit to remove the need for authentication if they want to make things even quicker.

The LA Metro has been revamping its TAP system and originally planned to roll out support for Apple Pay last year, but that was delayed until "sometime in 2020."

The LA Metro said last year that it was working with Apple to add mobile payment support for iPhones by the end of 2019, but the rollout didn't end up happening and work on the transition continues. In a recent tweet, the LA Metro said that iPhone and Apple Watch support for TAP cards will be coming sometime in 2020.

Chicago, Portland and New York City have already added support for Apple Pay on their transit systems, with many more across the world.

### QR Code-Based Biometric ID Cards for Fishermen

India's Minister for Ports and Fisheries Kota Srinivas Poojari recently stated that the department has decided to issue QR code-based biometric identity cards to fishermen.

The card would enable the authorities concerned to ensure fishermen safety as all their information would be available in it. The card would be made available through the Seva Sindhu portal via the respective district administration or through the Fisheries Department.

The state's coast has 4,585 mechanized fishing vessels, 9,362 motorized boats, 9,097 traditional boats, eight fishing harbors, 26 fish landing points, 128 fishing cooperative societies, two fish sales boards and one fishing development corporation.



## Iris Recognition System to Resolve Face ID Problems Amid Pandemic

As wearing facial masks has become the new normal in people's daily lives amid the COVID-19 pandemic in China, face recognition applications, including its most common use of unlocking mobile phones, have met serious challenges, which in turn could accelerate and promote the wider use of iris recognition technology.

The human iris is one of the most unique biometric characteristics of a human body and it is stable during life, which could be processed as ways to accurately identify phone users and determine if they have access to the terminals. Iris recognition is more accurate and harder to be counterfeited than face recognition, whereas identification data of fingerprints are prone to wear and tear and its collection process involving physical touch could also add to infection risks.

A database containing the biometric iris information of up to 20 million people has also been developed in China, as part of the iris recognition system and platform built by the Beijing Municipal Public Security Bureau and IrisKing.

Chinese researchers have been exploring effective ways to acquire and recognize iris images since the 1990s and accumulated rich theories and methodologies over the past two decades.

## Calgary Transit Rolls Out Mobile Ticketing App

Calgary Transit introduced its long-awaited mobile ticketing system. The new My Fare app allows users to buy and validate adult and youth monthly passes or single-ride tickets on their phones. It can be scanned while boarding the bus or shown to transit officers.

Calgary Transit says it has no plan to eliminate paper tickets. Calgary Transit cancelled two trouble-plagued previous attempts at implementing earlier iterations of a mobile electronic fare payment system.

## Turin Transit Network Accepts Contactless Payments

AEP, an Italian company in the field of electronic ticketing systems and devices for public transport, and SIA, a European

company in the payment services and infrastructures sector controlled by CDP Equity, have created a digital platform enabling tickets to be paid for directly at Gruppo Torinese Trasporti (GTT) terminals installed on the turnstiles at subway stations and on board a number of bus lines in the city of Turin using EMV contactless credit and debit cards.

The system is based on the technological infrastructure of AEP and SIA that allows users to pay for public transport services by simply bringing their card close to the GTT terminals while also benefiting from the best available travel tariff based on the number of journeys made.

The advanced features supporting the development of Smart Mobility permit immediate purchase of the ticket as well as management, authorization, accounting and reporting of payment transactions.

This is a further step forward in the digital transformation of the public transport sector. The new payment system also allows Turin to be one of the cities in Italy and the world possessing the most innovative mobility services.

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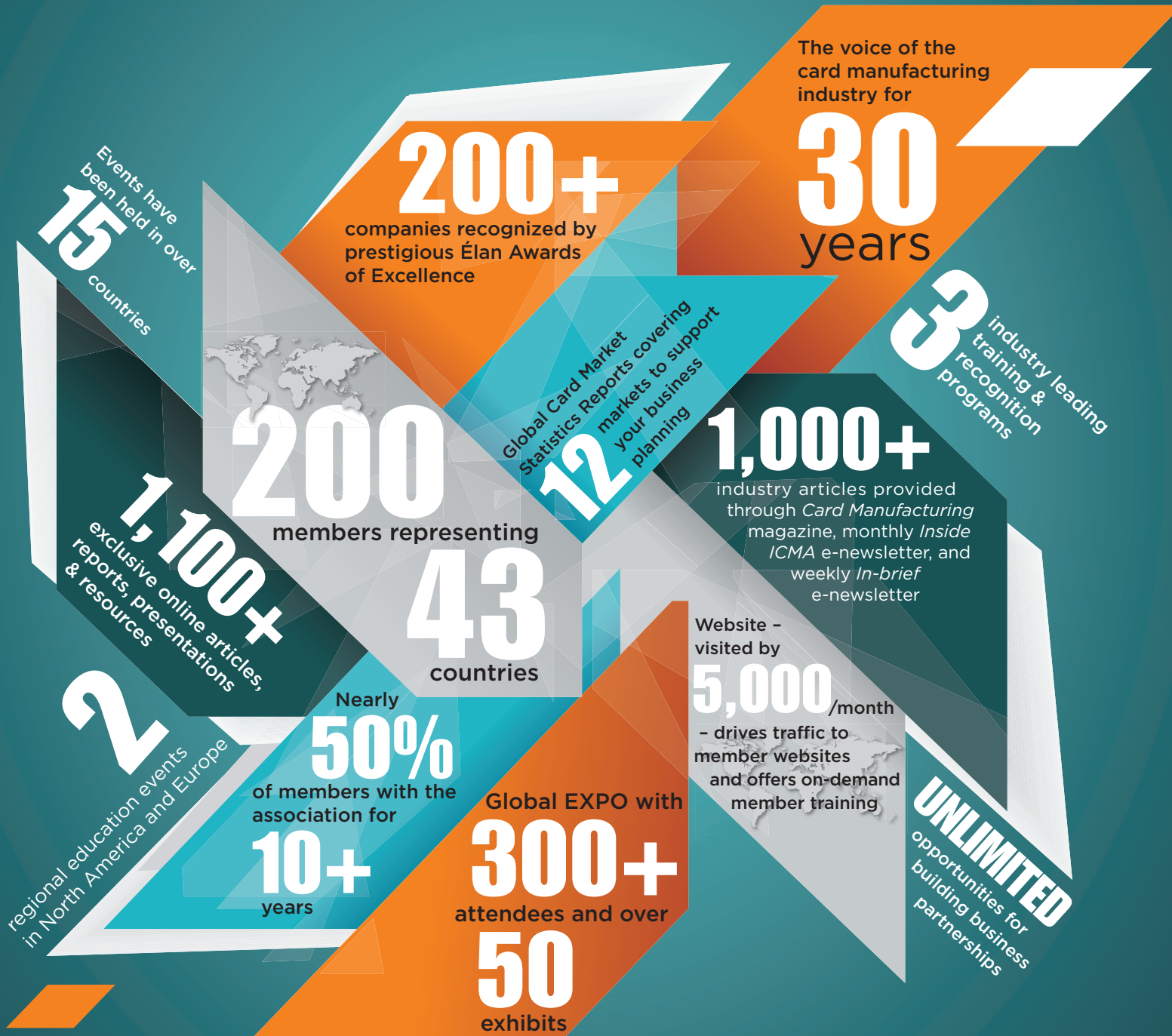
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