Biometric cards are here!
Convenient, secure and safe contactless payments
Secure, quick and simple

BIOMETRIC CARDS ARE HERE!
Convenient, Secure and Safe contactless payments

LIVE WEBINAR | 15 July 2020 | 11:00 AM BST
Biometric smart cards represent the biggest single advance so far in smart card technology.
Welcome and introduction
Rules of engagement

1. At any time, you can **type** your questions via the Q&A function.
   We will answer all questions during the Q&A session.

2. During the Q&A session, you can address your questions **orally** by clicking on 'raise hand' button. Questioner will then be unmuted at this point.

3. The presentation and the webinar recording including the Q&A session will be emailed to you afterwards.
1. The biometric imperative and why biometric cards are so important
   11.10am Alan Goode: CEO and Chief Analyst, Goode Intelligence

2. The real benefits of biometric cards for cardholders and card issuers
   11.30am Sara Ellinger: Product Marketing Manager, NXP
   11.35am Jean-François Durix: Business Development Director, Linxens
   11.40am Mandar Kulkarni: Senior Product Manager, Giesecke+Devrient

3. How biometric cards work in practice – from pilot phase to deployment
   11.45am Xavier Vaslin: Head of Payment LAB, Crédit Agricole

4. Open Q&A session
   12.00pm Moderator: Richard Poynder – Chairman, Smartex
   12.30pm Close

5. Coming soon! Workshop in London
Providing the **system architecture** and the **secure processing module** for biometric cards.

Enabling high volume production of biometric cards by **unique assembly and connector technology**.

**Manufacturing** secure biometric payment cards.
The biometric imperative and why biometric cards are so important

Alan Goode
CEO and Chief Analyst
Goode Intelligence
Biometric payment cards

Megatrends

Cashless revolution
Cash use is in decline, largely displaced by contactless payments.

Safe payments
Card user authenticates on card using biometric fingerprint sensor.
Touchless authentication eliminates use of PINpad for limitless in-store transactions.

Secure payments
Helps eliminate lost and stolen card fraud.
Meets PSD2 SCA regulation.
But weren’t mobile payments expected to replace cash and cards?

Slower growth

With the arrival of mobile payments the expectation was that it would rapidly replace both cash and cards for in-store payments.

This hasn’t happened as expected, with slower growth and mobile wallet providers even launching their own plastic cards.
Drivers for adoption

- Safety in age of COVID-19
- Convenience
- Speed at POS
- Security
- WOW factor
- Top of wallet
- Competitive vs. mobile wallet
- Investment from card ecosystem

✔ Secure, quick and simple
Impact of COVID-19
The new normal

• Coronavirus is accelerating a number of key megatrends.
• This is most acute for retail and financial services with physical stores and bank branches being affected. Cash could be a vector for virus.
• The increase in spending limits on contactless payments is probably also helping this upward trend.
• Consumers are reluctant to touch shared devices such as PINpads and touchscreens.
• Safety and hygiene have become critical requirements for physical locations.
• Consumers want an end to contactless spending limits.
Current market status

- More pilots in more regions
- Scaling-up for commercial rollouts (millions of biometric payment cards in circulation)
- Pilots and commercial rollouts
- Certification with card schemes

Secure, quick and simple
The real benefits of biometric cards for cardholders and card issuers
Compliance with the latest privacy regulations (gdpr)

Sara Ellinger
Product Marketing Manager
NXP
Strong security & privacy as basis for biometric authentication

Maximize
Customer convenience
Security

Minimize
Privacy concerns

Secure, quick and simple
Fingerprints loaded by the cardholder

Secure, quick and simple

No central database

Enrolment options

25% 50% 100%

at home via power sleeve
at the bank
mobile enrolment*

at a kiosk
at the ATM

Huge confidence boost to cardholders

*Requires use of an NFC-enabled smartphone
Fingerprints loaded by the cardholder

Secure, quick and simple

- Secure storage
  only in the secure element

- Secure matching
  only in the secure element

No manipulation & misuse by third parties

Compliant with privacy regulation GDPR

No trade-offs with security and privacy
Contactless EMV card on steroids

Jean-François Durix
Business Development Director
Linxens
Secure by design as all contactless EMV cards are

Secure, quick and simple

Increasing confidence for all stakeholders
An even more personal card thanks to the addition of a fingerprint sensor

– Card skimming is not possible
– No more concerns over lost or stolen cards
– Only the genuine cardholder can make a payment with the card

✔ Providing customer reassurance

 ✔ Secure, quick and simple
No need for contactless payment limits anymore

- Fingerprint match is more secure than a 4-digit PIN
- The convenience of contactless and biometrics with the security of chip and PIN

At last, goodbye to PIN entry!
A healthier payment method

Contaminated devices = Infected users

In times of pandemics, only touch your own personal device!
Summarising the benefits: From perso to pilot

Mandar Kulkarni
Senior Product Manager
G+D
Personalized cards and enrolment

**Flexibility**

- **Multiple Printing Technologies**
  - Traditional offset printing with high flexibility to design changes
  - Combination of digital printing and silk-screen printing
  - Traditional offset and silk-screen printing necessary; less flexibility

**Convenience**

- **Multiple Sleeve Options**
  - Sleeves are used to power the biometric cards and provide guidance to user during enrolment
  - Display with customised messages
  - Multiple LEDs
  - Customisable instructions

**Migration to Mobile**

- **Mobile App**
  - Mobile app for NFC-based enrolment
  - Integration in bank app possible
  - Customisable instructions
  - Easy to use

- **Secure, quick and simple**

- **Capturing**

- **Verification**
The pilot package

- Pilot strategy
  - Cooperation with selected scheme
  - Press release and publicity
  - Consumer group(s)/site(s) selection
  - Consumer and stakeholder interviews/feedback
  - Analysis of pilot results
  - Planning of certification and commercial launch
- Bank-specific designs
- Cards delivered with a powered sleeve for self-enrolment at home
- Mobile app-based enrolment for Android phones
- Close working with the bank to provide alternative enrolment kit.

Helping you to develop a successful pilot
Summarising the key benefits for all players

Secure, quick and simple

- Cool **new** technology
- **Fast**, no PIN needed
- **No central database**
- **No cap** for contactless purchases
- **Secure** payments, even for low amounts
- Increased **card usage**
- **ISO / PSD2** compliant solution
- Increased **revenues**
- More customer throughput
- **Less fraud**
- **Less waiting → happier customers**
- Increased **consumer trust & retention**

The foundation of the biometric card is the contactless EMV Card
How biometric cards work in practice – from pilot phase to deployment

Xavier Vaslin
Head of Payment LAB
Crédit Agricole
# Scope of the experiment

**The objectives**

- **Confirm** the choice of **card** (a systematic authorization payment card) and **reader** to register fingerprints into the
- Test the customer support service
- Provide food for thought on the design for the finished product to marketing team and on technical aspects for the industrial solution to tech team

**Our partners**

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**The testers**

> **100 customers involved** from Crédit Agricole Touraine Poitou

**Customer journey**

1. Contract signature & Card delivery
2. Customer footprint registration into the card thanks to a reader, at home or at the bank branch
3. Card activation via a transaction with entry of customer PIN code
4. Customer use of the card

**The timescale**

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<tr>
<td>12/2018</td>
<td>Experiment PREPARATION</td>
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<tr>
<td>06/2019</td>
<td>Experiment LIVE with more than 100 customers</td>
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<tr>
<td>12/2019</td>
<td>Experiment EXTENSION</td>
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<td>03/2020</td>
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**Secure, quick and simple**
Lessons learned

✓ The validations we achieved

1. **Choice** of the card
2. **Choice** of the enrolment device

The plastic enrolment device and the enrolment device with a screen have been acclaimed by the customers

- « Simple and clear »
- « Small, practical, compact size »
- « Robust »
- « Qualitative design »

3. **Optimization** of the enrolment process
4. **Improvement** of card performance throughout the experiment
5. **Go** for a deployment

⚠️ The issues we met

1. **Bad gesture** from some customers:
   - to register their fingerprint
   - to insert the card into the reader or into the POS terminal
   - to pay (finger not fully positioned on the sensor during payment)

2. **At the beginning** of the experiment, **withdrawal was not working.**
   - Solution research has shown that some ATM readers were not compliant to Bulletin 2.02 EMVco (August 2018)

3. Some **POS terminals blocked payments above 30€** (as for mobile payment)
   - Solution research has shown that these POS terminals were « obsolete »

Secure, quick and simple

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## Customer survey results

### Usage

1. At the beginning of the experiment **41% of payments** were made using biometrics, this rate increased significantly to reach **79.5% nine months later**.
2. For **payments above 30€**, customers used biometric authentication in **15%** of cases at the beginning of the experiment versus **43.9% at the end**. Customers have **understood the benefits of the card** (simplicity, speed, security)

### New generation of cards

85% of customers **volunteer** to test the **new generation of cards**. Customers are **motivated**

### Fingerprint registration

84% of customers who used the **standalone reader** to register their fingerprint found it **an advantage**: « avoids going to a bank branch » (46%), « enables to be autonomous » (15%), « avoids time constraints » (12%)

### Customer service

Only 3% of customers **called customer service**. Customers **understood how the card works**

### Security

83% of customers find **biometric authentication simpler** than PIN and **91% more secure**.
Open Q&A session
Physical workshop in the city of London coming soon!

- Free one-day workshop in the heart of the City
- Hands-on with real biometric cards
- Sample sets to take away
- Group and 1-to-1 private sessions
- Full technical and operational information from experts
- Refreshments and buffet lunch provided
- Networking bar afterwards
Webinar brought to you by NXP, Linxens and G+D

Contact
Alastair Thompson
alastair.thompson@gi-de.com
+44 7801 548 622
G+D offers a wide range of products, solutions and services. G+D is thus uniquely positioned for the convergence of the four major areas of payment, connectivity, identities and digital security.

Security
Creating confidence through physical security components and hardening solutions with digital security technology

Sales
2.45 billion Euro

Earnings (EBIT)
148 million Euro

Presence in
33 countries

76 subsidiaries & joint ventures

11,500 Talents worldwide
Linxens

Linxens is a leading technology company providing secure component-based solutions for security and identification.

A world-class specialist in the design and manufacture of Microconnectors for smart cards and RFID Antennas and Inlays, Linxens’ portfolio also includes module packaging.

With over 100 billion Microconnectors and 4 billion RFID Antennas supplied to date, Linxens is the preferred supplier of many of the world’s technology pioneers shaping the markets of telecom, transport, hospitality, leisure & entertainment, financial services, eGovernment, access control, healthcare and IoT.

Linxens is headquartered in Levallois Perret (France) and employs 3,200 people worldwide. It has six R&D centres and 10 manufacturing sites.
NXP Semiconductors

NXP Semiconductors N.V. (NASDAQ: NXPI) is a global semiconductor company creating solutions that enable secure connections and infrastructure for a smarter world. NXP focuses on research, development and innovation across several of NXP’s product lines.

AUTOMOTIVE
Enabling carmakers to develop smarter solutions for complex autonomy, connectivity, and electrification challenges.

INDUSTRIAL
Reducing wasted time, money, and effort by helping business run more efficiently.

MOBILE
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SMART HOME
Solutions that listen, learn, and adapt into the places we call home for more comfort, affordability, safety, and convenience.

SMART CITY
Simplifying how people access and interact with local services to achieve new standards of sustainability, efficiency, mobility, and economic growth.

COMMUNICATION INFRASTRUCTURE
Powering insights and inspiring performance with hardware solutions for handling 5G connectivity across the emerging communications spectrum.

Employees in
30+ Countries
Headquartered in Eindhoven, Netherlands

~29,000 Employees

9,000 Patent Families

$8.88B Annual Revenue

~9,000 R&D Engineers
Alan Goode – Founder and CEO of Goode Intelligence – a research and consultancy company specializing in authentication & identity and biometric technology.

- 13 years of research and consulting experience
- 20+ years of management and security consulting with experience of strategy and deployment
- Experienced information security manager and senior technical consultant:
  - Head of Information Security at T-Mobile UK
  - Security Practice Manager at Atos Origin
  - Head of Identity & Authentication consulting at Schlumberger
  - Network Services
  - Head of Digital Security at De La Rue Identity Systems
  - Payment Security Consulting for Citibank, HSBC and Deutsche Bank
- Expert in authentication, identity, mobile security & biometrics
- Frequent speaker and conference lead including Judge at GSMA GLOMO Awards at Mobile World Congress 2012-2020