

3RD QUARTER 2018 PRESENTATION

CEO, Stan Swearingen
CFO, Henrik Knudtzon

Oslo, Norway, 8 November 2018



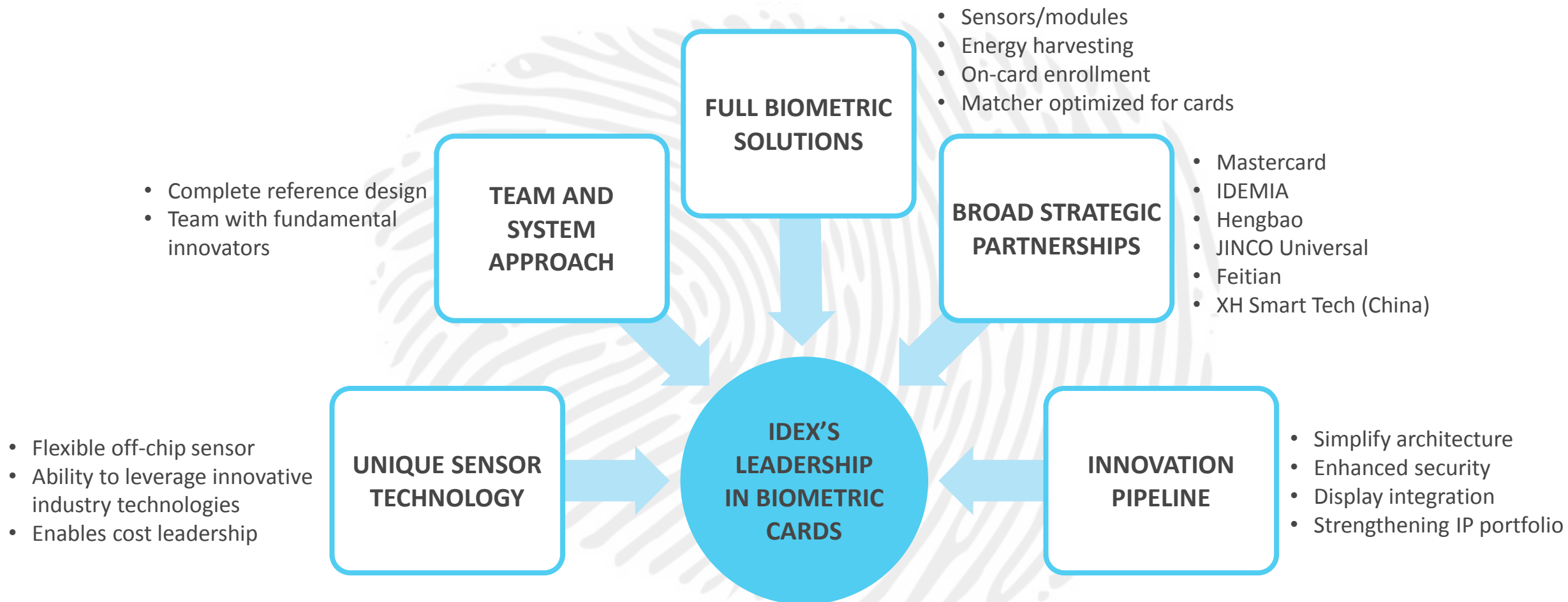
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BIOMETRIC CARD MARKET AT INFLECTION POINT

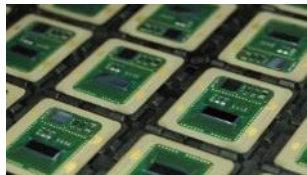


IDEX'S LEADERSHIP IN BIOMETRIC CARDS



RECENT HIGHLIGHTS VALIDATING IDEX LEADERSHIP POSITION IN THE BIOMETRIC CARD MARKET

Landmark world first order announced



Strong commercial traction



Sensors for dual-interface and contact-based ready



Development of market enabling remote enroll complete



IDEX WITH LANDMARK FIRST ORDER

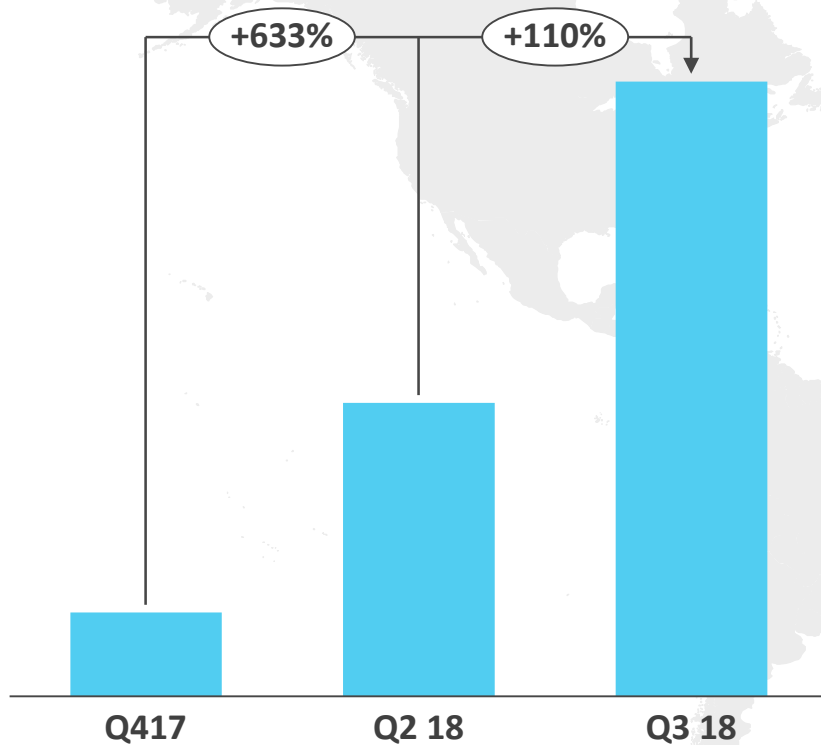


- IDEX announced world's first production order of biometric fingerprint sensors for payment cards
- IDEX commenced shipping against the order in Q3
- The customer is a major global card integrator
- Additional orders expected

MARKET INFLECTION DRIVING EXPANDED OPPORTUNITY PIPELINE

IDEX customer pipeline growing significantly

Number of active opportunities



- Strong interest globally from integrators, card schemes and issuers
- Broad market interest from multiple verticals, including payment, ID, access control and other
- High confidence in ability to convert leads to orders

IDEX'S STRATEGIC PARTNER MASTERCARD DRIVING COMMERCIALIZATION OF BIOMETRIC CARDS



Promotional video of biometric card and remote enroll released

BIOMETRIC-CARD_2018_07_25

Presentation with value proposition to issuers and end-users

Mastercard® Bio
Innovative security

User-friendly technology that adds security with every in-person transaction

Trials & market research confirm – easy of use and value

Biometric Card Test Results
9 out of 10
86%

Potential benefits are threefold

Building on success

Advancing Product Availability*

| Asia Pacific | Europe | Latin America | Middle East Africa | North America |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| • Australia • China • Hong Kong • India • Japan • Malaysia • Singapore • South Korea • Taiwan | • Albania • Armenia • Austria • Belgium • Brazil • Bulgaria • Canada • Czech Republic • Denmark • France • Germany • Greece • Hungary • Ireland • Italy • Netherlands • Norway • Poland • Portugal • Romania • Russia • Serbia • Slovakia • Spain • Sweden • Switzerland • Turkey • United Kingdom | • Brazil • Chile • Colombia • Costa Rica • Cuba • Ecuador • El Salvador • Guatemala • Honduras • Mexico • Nicaragua • Panama • Paraguay • Peru • Uruguay • Venezuela | • Egypt • Jordan • Kuwait • Lebanon • Libya • Morocco • Oman • Saudi Arabia • South Africa • United Arab Emirates | • Canada • United States |

Content about biometric cards posted on Mastercard global website

BeyondTheTransaction

Stories that Matter

Pointing the Finger at Biometric Card Misperceptions
October 1, 2018

Chances are you know someone who uses a fingerprint to unlock his or her mobile device or maybe you use the technology to pay for in-store purchases. That's because fingerprint authentication – once the realm of science fiction and James Bond – is now a reality. This technology uses biometrics – in this case a fingerprint – to identify a unique characteristic about you that no one else can have. Like a snowflake, no two are alike – and that's exactly what makes it so secure.

Now biometric cards are being added to the payment mix. With these cards, you can use your thumbprint as an alternative to a PIN or signature at the same in-store chip or contactless terminals you use every day. Mastercard develops the biometric card, combining chip technology with fingerprints to conveniently and safely verify cardholder identity for in-store purchases. Introduced in 2017, the Mastercard biometric card has been piloted in Africa, Europe and the Middle East with additional countries being added this year.

Source: Mastercard



FRANSABANK IN LEBONON LAUNCHED BIOMETRIC CARD TO CUSTOMERS

Payment Cards

[EXPLORE FRANSABANK AS](#)[INDIVIDUAL](#)[BUSINESS](#)[FEED VIEW](#)

Home > Business Activities > Consumer Banking > Payment Cards > Revolving Cards > Gold Biometric Card

AA

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- Accounts
- Consumer Loans
- Insurance & Savings
- Payment Cards
 - Accessibility Cards
 - Access 24 Cards
 - Debit Platinum Card
 - Internet Prepaid Card
 - Prepaid Youth Card
 - PaynRoll Card
- Revolving Cards
 - Business Card
 - Classic Card
 - Euro Card
 - Gold Card
 - Gold Biometric Card
 - Internet Credit Card
 - Internet Euro Card
 - PayPass Card

Gold Biometric Card



APPLY NOW

Fransabank launched the first Mastercard Biometric Credit card in Lebanon, the most advanced authentication technology available. This Innovative Card has an embedded fingerprint sensor, which eliminates the need for cardholders to rely on their pin code or signatures to complete a purchase. When making a purchase in-store, cardholders simply insert their card into the retailer's Chip terminal, in Lebanon and Worldwide, while placing their finger on a special sensor embedded on the card. The fingerprint must match exactly with the one on the cardholder's records, to ensure successful transaction.

Click here to view the fingerprint enrollment and usage tutorial

How can you benefit from our Gold Card?

A World of Flexibility, Safety and Convenience

- You can settle monthly payments as low as 5%, with a minimum of USD 25
- You can use it for purchases at more than 22 million Points of Sale around the world
- You can use it for cash withdrawals from over 1 million ATMs worldwide
- You can benefit from our Cash Back Reward Program by redeeming 1% Cash on any amount spent on your card at your convenience

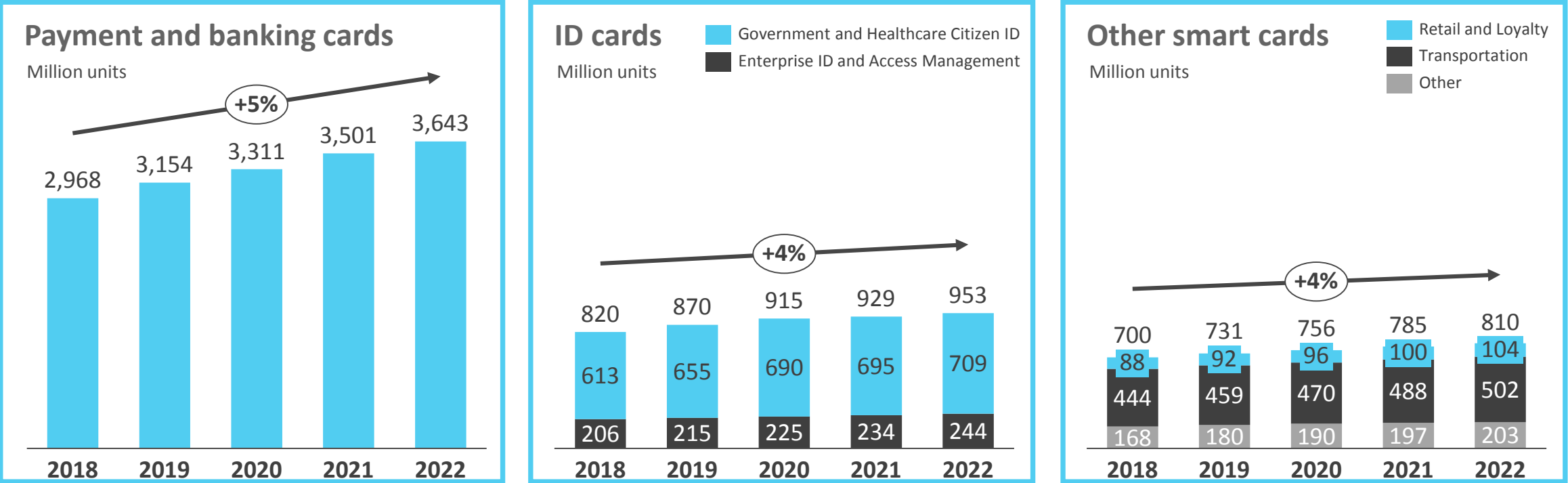
A close-up photograph showing a hand inserting a gold-colored credit card into a payment terminal. The card has the Mastercard logo and the word 'biometric' printed on it. The terminal is a grey and black device with a keypad and a small screen.

Source: Fransabank

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The IDEX logo, featuring a stylized fingerprint icon to the left of the word 'IDEX' in a bold, sans-serif font.

BIOMETRIC CARD MARKET EXPECTED TO GROW TO HUNDRES OF MILLIONS OF UNITS



«...By 2023, nearly 579 million biometric payment cards will be used globally to enable frictionless customer authentication for higher-value contactless transactions...»

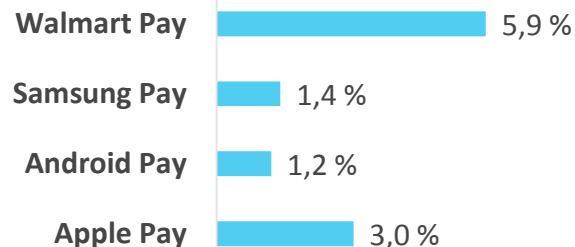
Goode Intelligence

Source: ABI Research Smart Card Technologies; Goode Intelligence; Adoption of biometrics in mobile devices by Esmeralda Kadëna and Lourdes Rui

BIOMETRIC CARDS WITH STRONG VALUE PROPOSITION

Low penetration of mobile payments

Percentage of respondents using mobile wallets

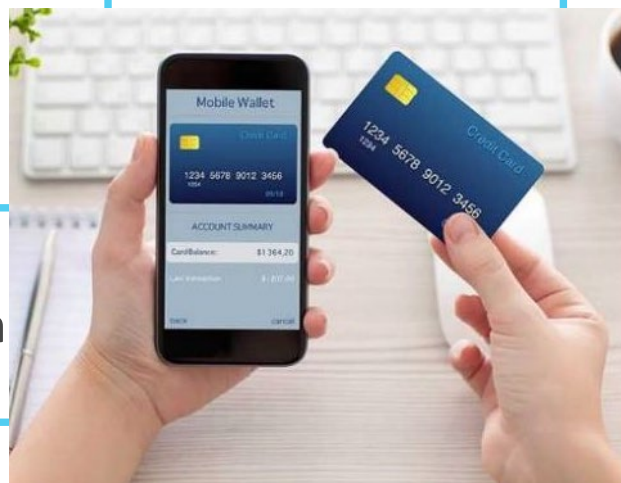


Source: pymnts.com/infoscout

High growth of cards in China with high adoption of mobile payments

“... Year-on-year growth of issued cards in China at 9.3% in 2017...”

Source: China Union Pay – Report on the Development of China’s Bank Card Industry



Drivers of biometric card payments

- **Convenience**
 - No cap on value/number of transactions
 - No battery
 - Always available – no PIN to remember
 - Card payments are habituated
- **Security**
 - Biometric card not connected
 - Biometrics increase security level
- **Other**
 - Card is banks’ last physical link to customers
 - Improved customer confidence in security leads to greater spending
 - Biometrics is differentiating value add feature

IDEX ROADMAP ENABLES 'WORLD'S SAFEST CARD'

- Dynamic CVC addressing both card-present and card-not-present fraud
- Sensitive data never leaves the card when enrolling or verifying
- End-to-end encryption ensuring data integrity
- Matching in the Secure Element
- Secure at home/remote enrollment



ON-CARD ENROLLMENT IS A FOUNDATIONAL DRIVER FOR MASS ADOPTION

”

“...Simplifying the registration process will help speed adoption of biometrics by issuers and consumers alike ...”



”

“...considering most cards are currently mailed by issuers and activated by phone, the requirement of in-person enrollment creates a barrier to adoption...”

VISA

IDEX pioneering industry leading solutions

- Through early pilots with Mastercard the need for user friendly and cost effective enrollment was identified
- IDEX developed the concept and has multiple patents pending across key territories
- Continued innovation around the concept



EXPECTED MARKET RAMP UP – IDEX EXPECTS MARKET LEADERSHIP

Key drivers

End user pull

- Convenience (and unlocking the potential of the contactless payment)
- Security
- Used to biometrics from mobile

Benefits for issuers

- Reduced card-present fraud
- Reduced customer servicing costs from forgotten PINs
- Can use existing infrastructure

Benefits for governments

- Reduced fraud
- Ongoing proof of identity
- Insights into verified recipient spending

PILOT

RAMP UP

AT SCALE



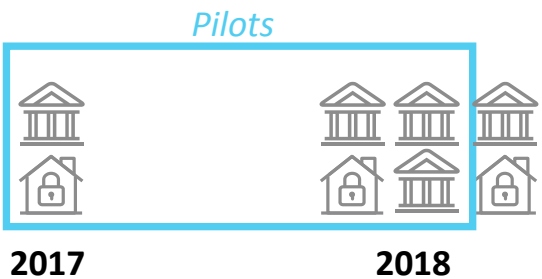
Banking and payment



Government/healthcare ID and enterprise ID and access



Retail/loyalty/transportation and other



Market size (units) – order of magnitude

Up to 100k

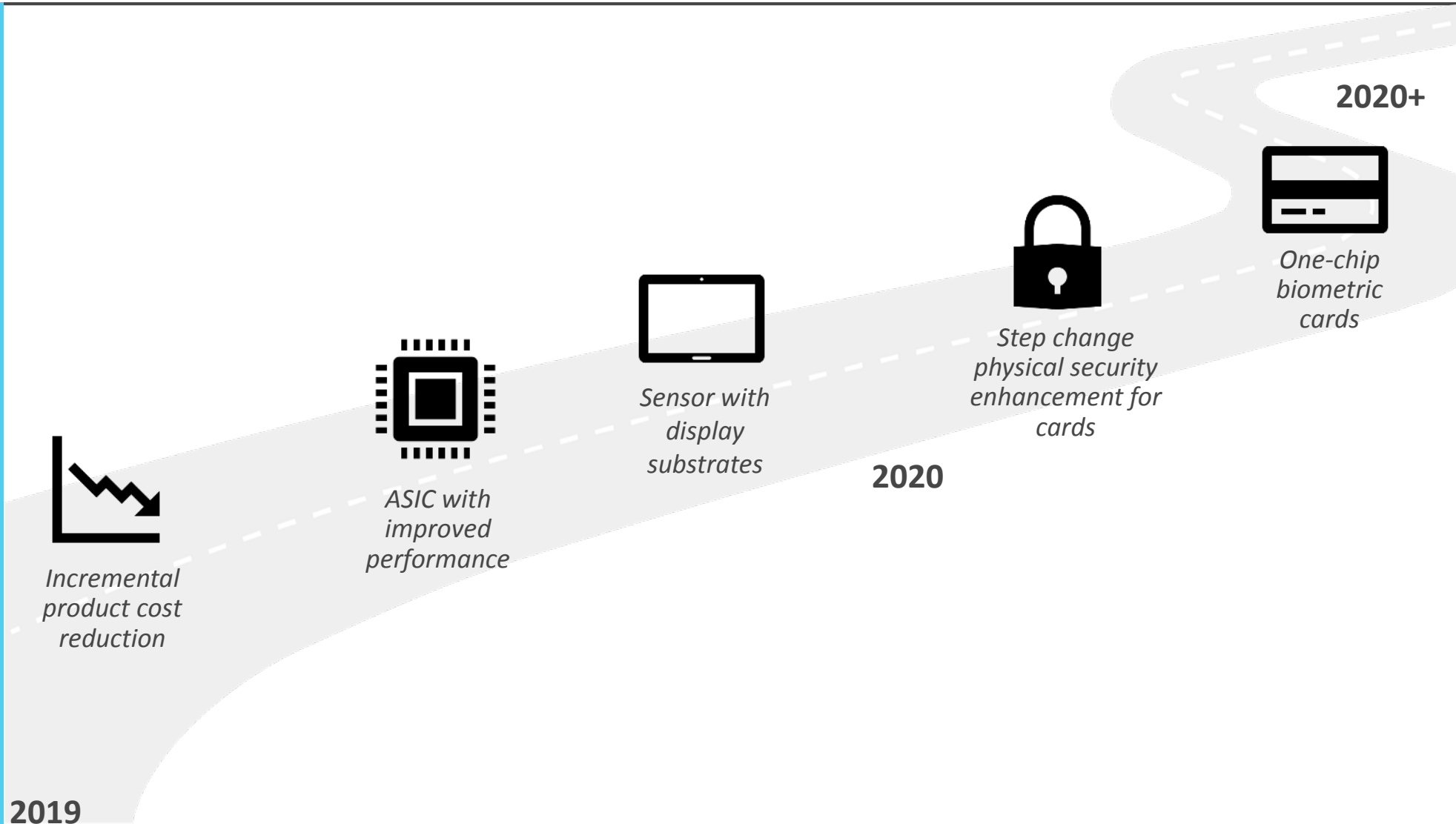
10s of millions

Hundreds of million

ROADMAP DESIGNED TO RETAIN BIOMETRIC CARD LEADERSHIP

Objectives

1. **Significantly reduced cost** - architecture and leverage display technology
2. **Increased value in sensor** - consolidate smart card elements into biometric ASIC
3. **Enhanced security** - encryption , match on secure element

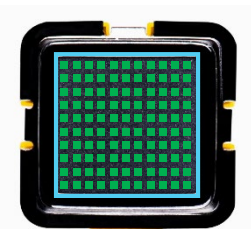
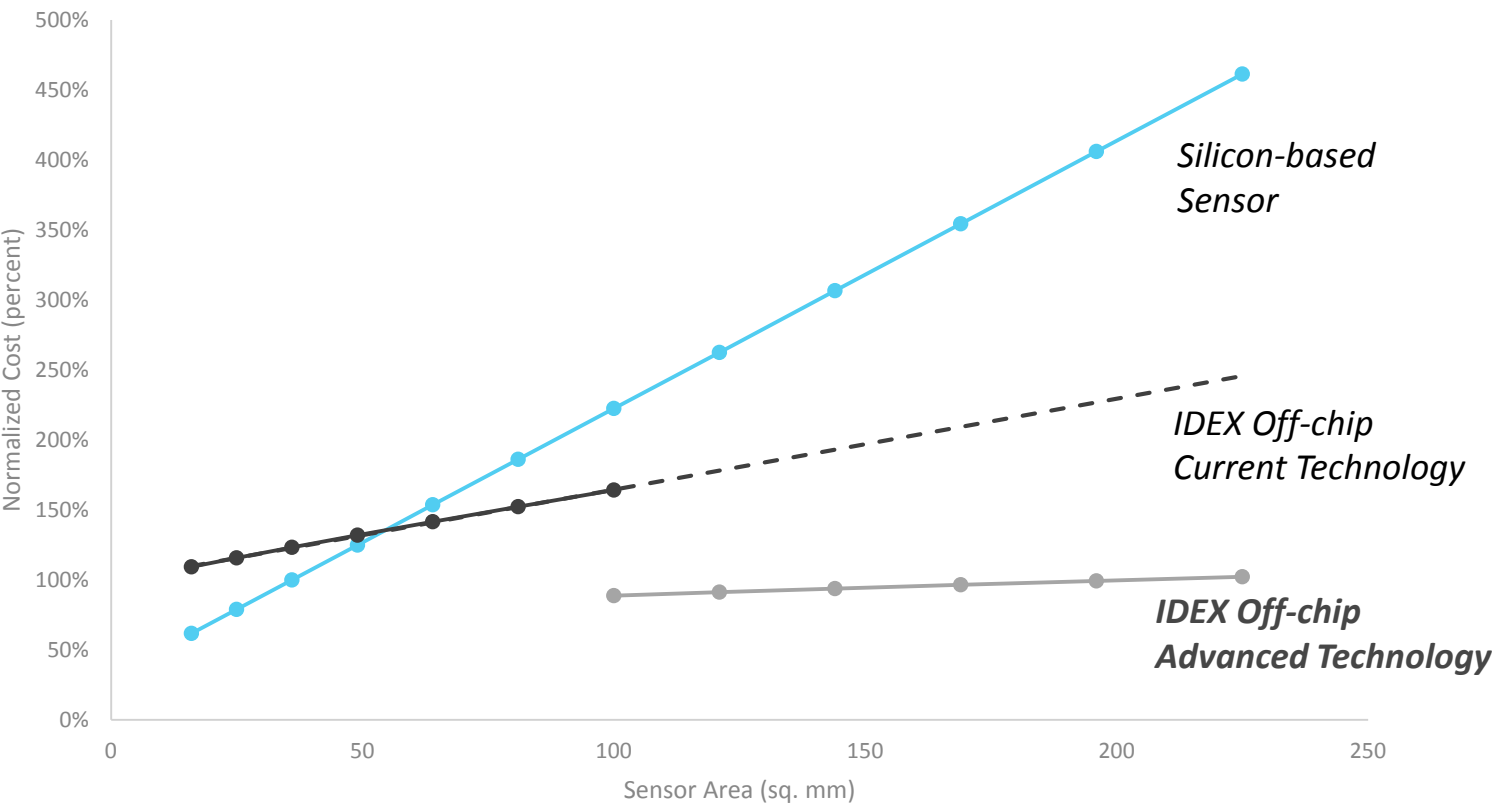


FUNDAMENTAL ADVANTAGE OF OFF-CHIP SENSING: COST

Indicative cost: off-chip vs silicon capacitive sensors

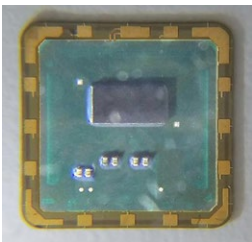
Percent

Normalized Cost versus Area



Silicon

- Silicon footprint linear with increase in size
- Silicon most costly component of sensor

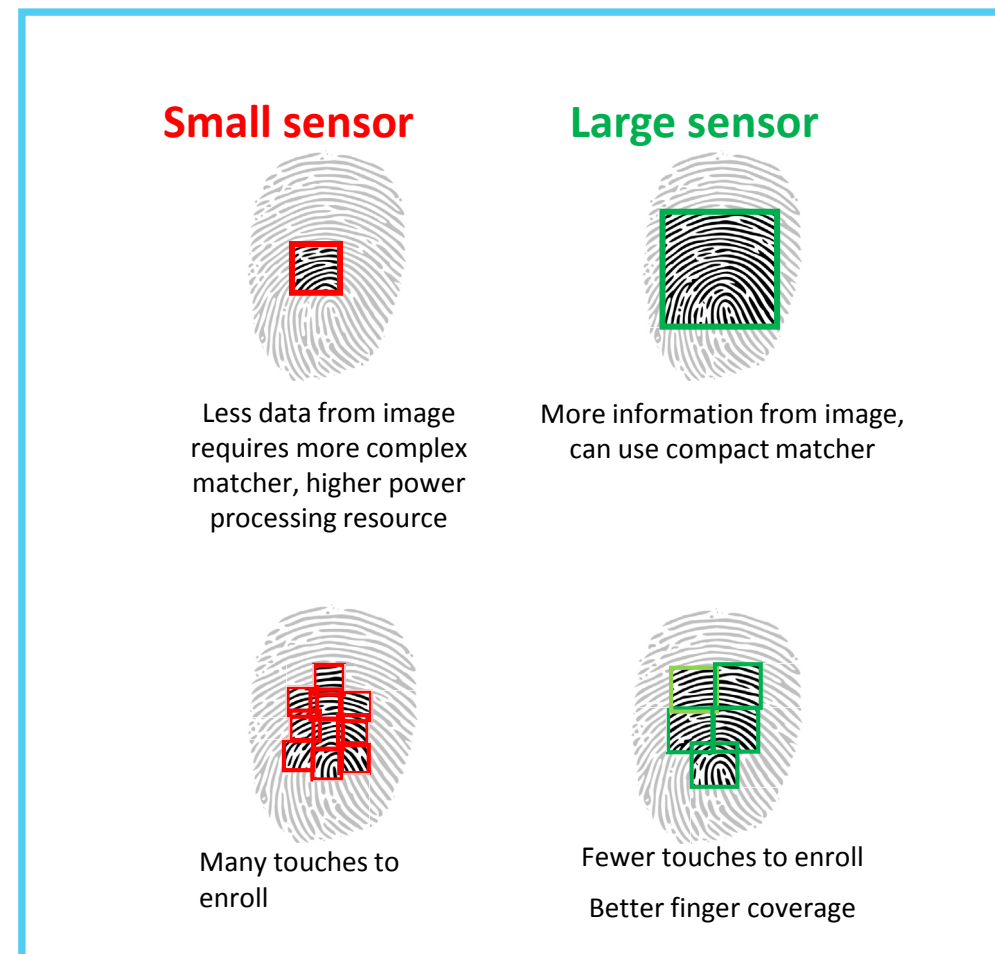
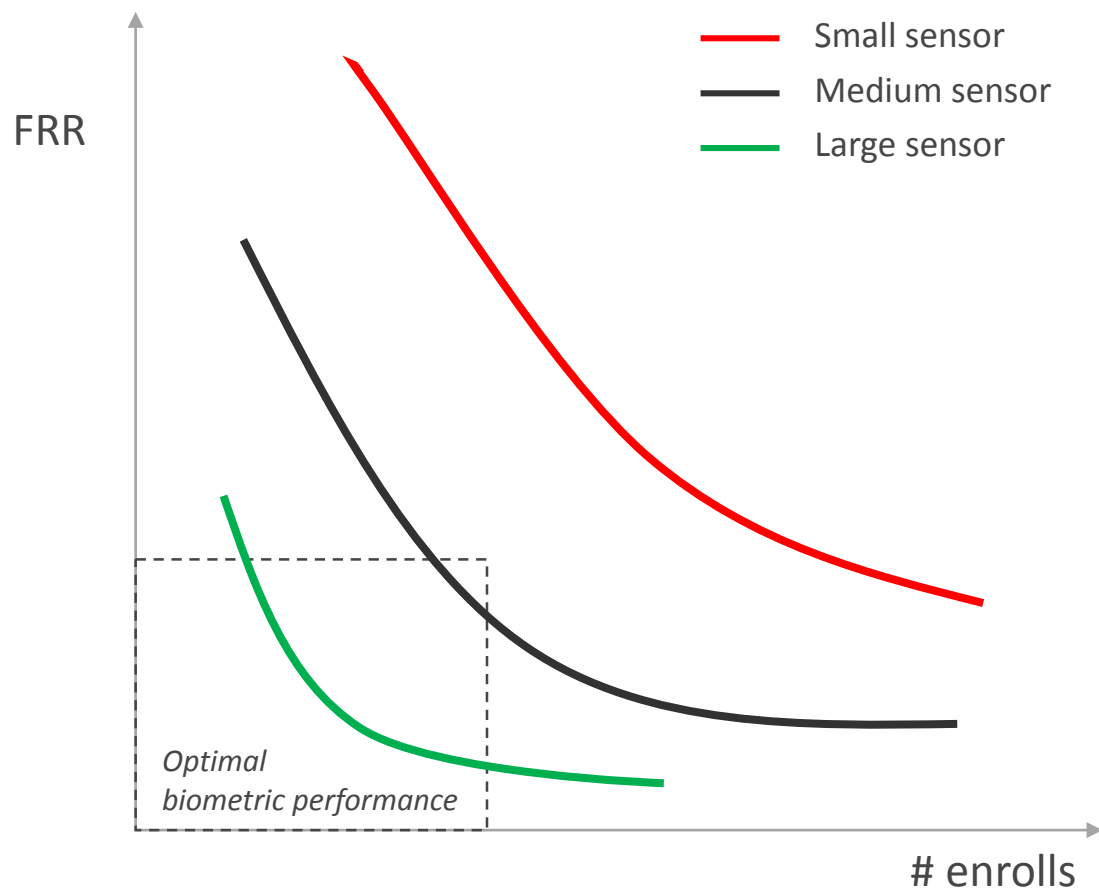


Advanced Off-chip Sensor

- Silicon footprint constant, common ASIC for all sensor sizes
- Reduced component count
- Optimized sensor technology enables larger sensors at even lower-cost

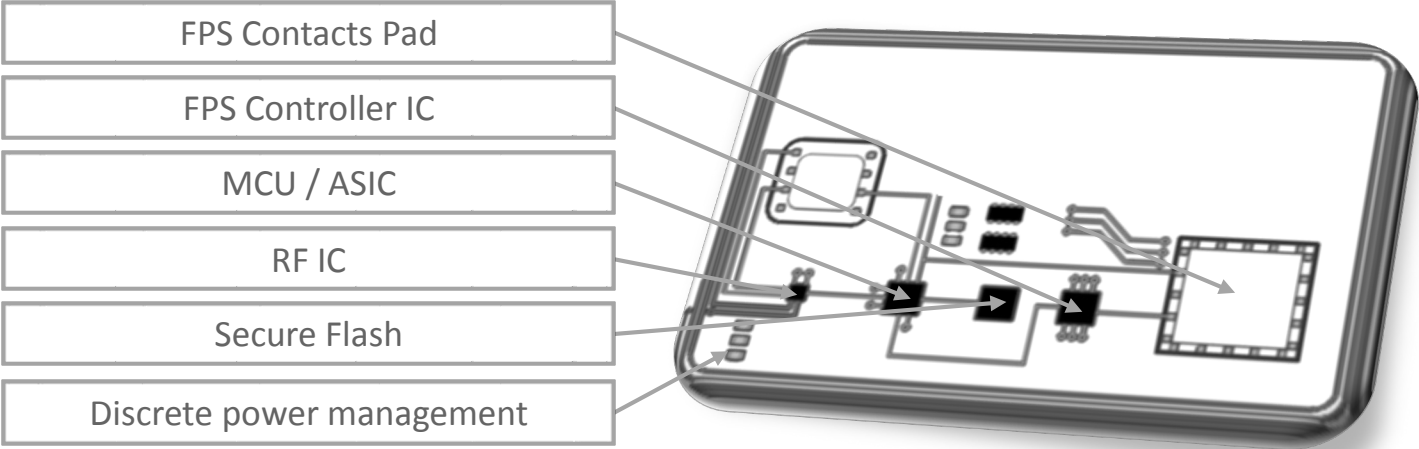
SENSORS SIZE DRIVES PERFORMANCE AND USABILITY

Illustrative biometric performance in smart cards



FUNDAMENTAL ADVANTAGE OF OFF-CHIP SENSING: CARD SYSTEM INTEGRATION

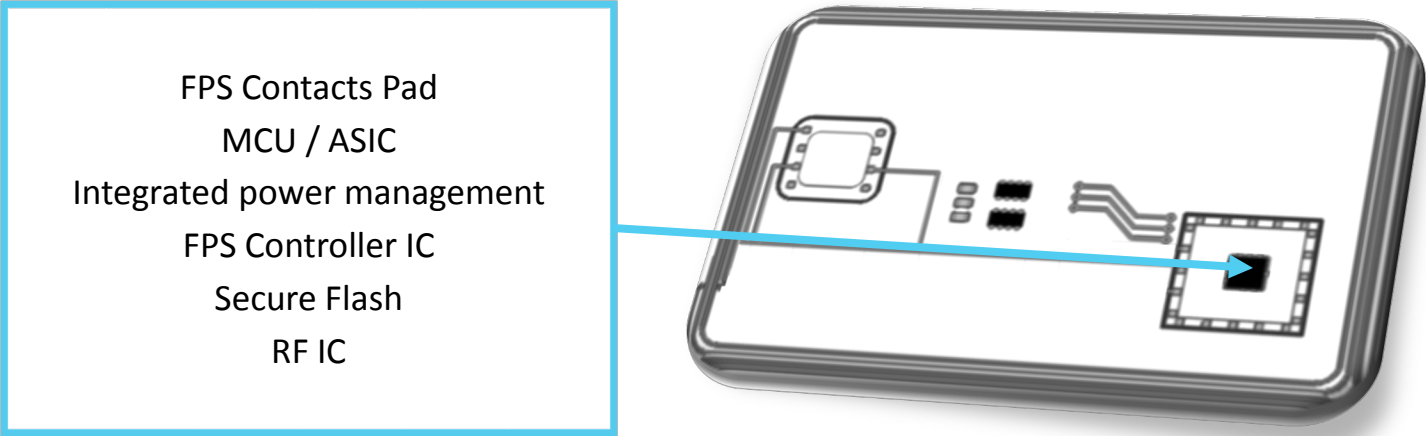
Conventional
silicon sensor



Discrete silicon sensing component

- Large number of supporting components
- Design complexity
- Complicates manufacturing
- Higher total cost

IDEX
off-chip
sensor



Integrated system solution

- Fewer components
- Simplified manufacturing
- Optimized biometric performance
- Optimal power efficiency
- Lower total solution cost by several dollars

SUMMARY AND OUTLOOK

Biometric card market at inflection point

- Rapidly increasing customer demand following successful pilots
- Pioneered and solved 'remote enroll' - critical enabler for mass adoption
- High capacity supply chain ramping for volume shipments
- Leading card ecosystems and payments schemes rapidly expanding commercial deployments

Key expected milestones in Q4

- Additional shipments in support of production order
- New customers and eco-system partners in multiple verticals
- Multiple pilots of dual-interface cards
- Commercial launch of remote enroll
- Continue to strengthen our intellectual property position
- Confident in dual-interface 'certification' and volume delivery by mid-2019



KEY FINANCIALS

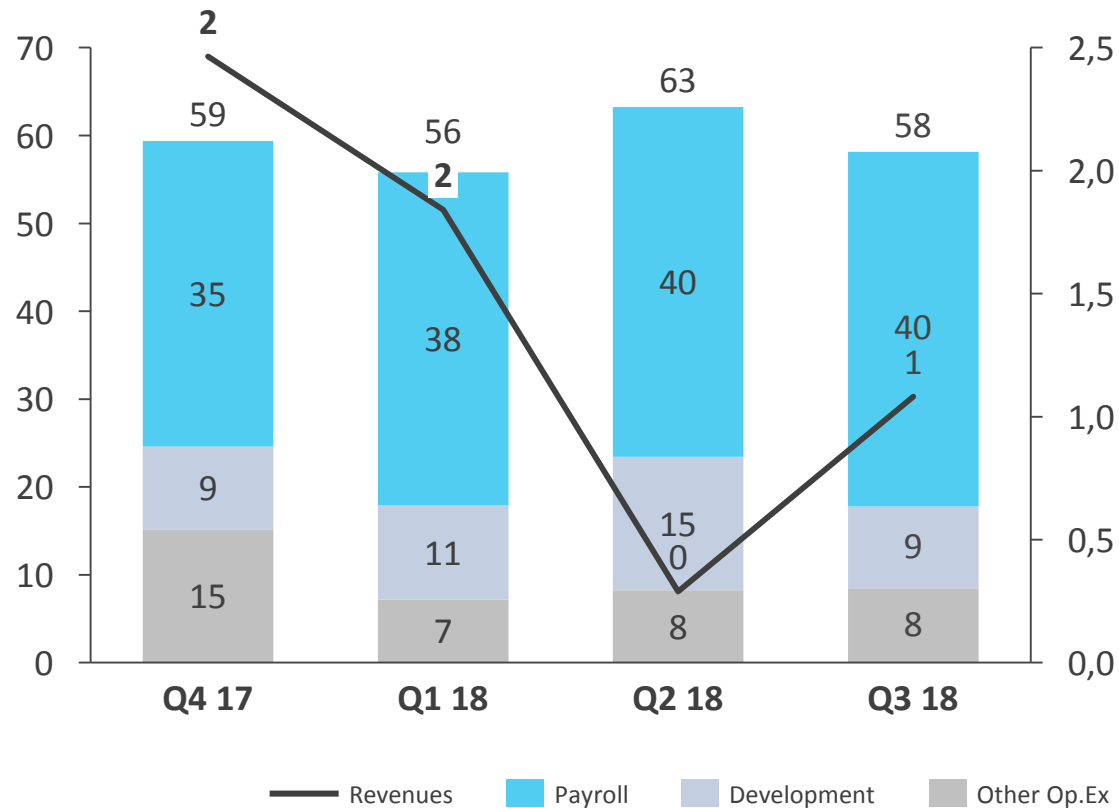
Henrik Knudtzon, CFO



3RD QUARTER 2018 KEY FINANCIALS

Key financials

NOK million



Card revenues expected to grow significantly in 2019

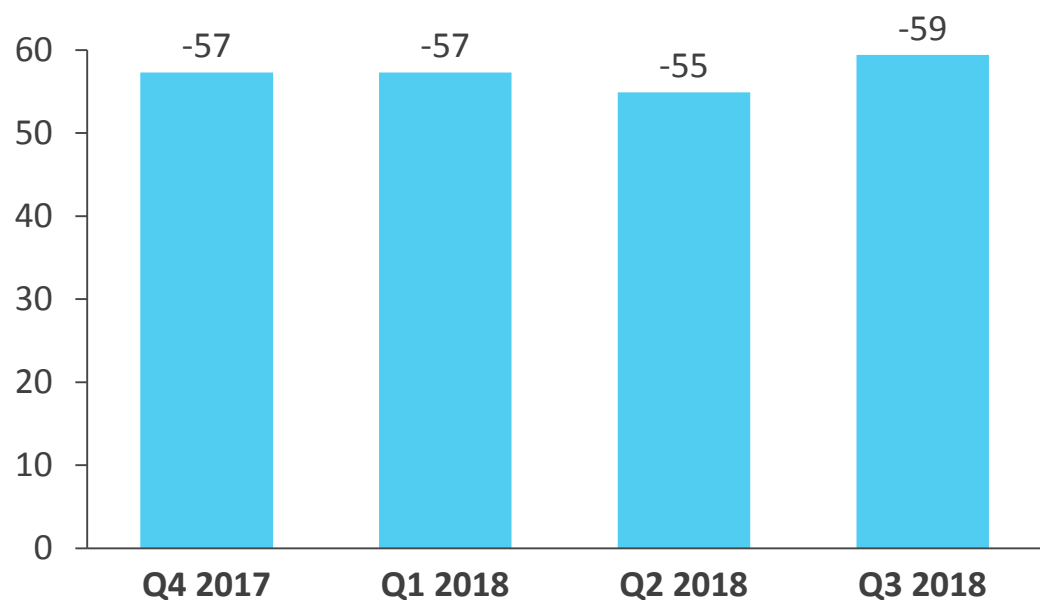
Stable OPEX level – expect similar level going forward

- Underlying payroll costs stable and non-cash share of payroll totaling NOK 7.7 million in Q3
- Development spend driven by project timing
- Other OPEX fairly constant

CASH FLOW

Stable quarterly cash flow

NOK million



Includes CAPEX of NOK 6.8 million for high volume tester/prober

**Cash position of NOK 130 million (USD 16),
no financial debt**

Quarterly cash flow fairly close to OPEX level

**Expected to break even at low double digit million
units shipped**

Q&A

Welcome back for IDEX's presentation of fourth quarter 2018 results on 27 February 2019

