

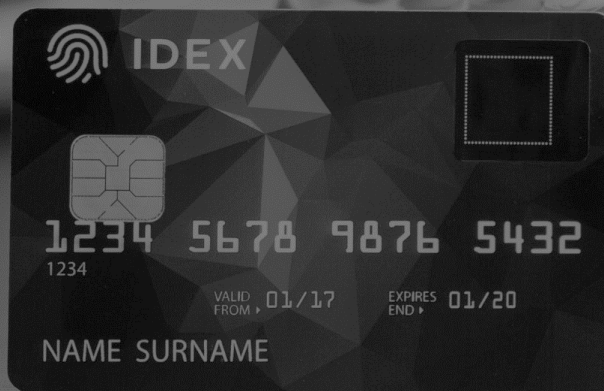


# INVESTOR PRESENTATION DNB TMT CONFERENCE

22 August 2017

Henrik Knudtzon CFO

IDEX.NO



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## Huge addressable market

- **Three target markets, Cards, Mobile & IoT with billion unit potential**

## Unique technology

- **Flexible off-chip fingerprint sensor solutions at competitive cost**

## Established international organisation

- **Leadership team of industry veterans**
- **120\* staff with deep biometrics and display integration expertise**

## Solid financial position

- **Publicly listed on Oslo Børs**
- **Strong balance sheet with ~USD 50 million\*, no debt**

## Extensive IP portfolio

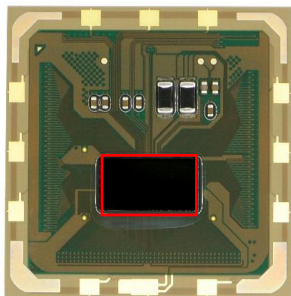
- **221\* granted and pending patents in capacitive fingerprint sensing**

\*as per 30 June 2017

# DIFFERENTIATED OFF-CHIP SENSOR VENDOR



## Unique Differentiation (Off-chip capacitive sensors)



- Fundamental IP – significant barriers to entry
- Small silicon footprint – cost advantage
- IDEX architecture – high image quality
- Enabling system level solutions



## Conventional Solution (Silicon-based capacitive sensors)

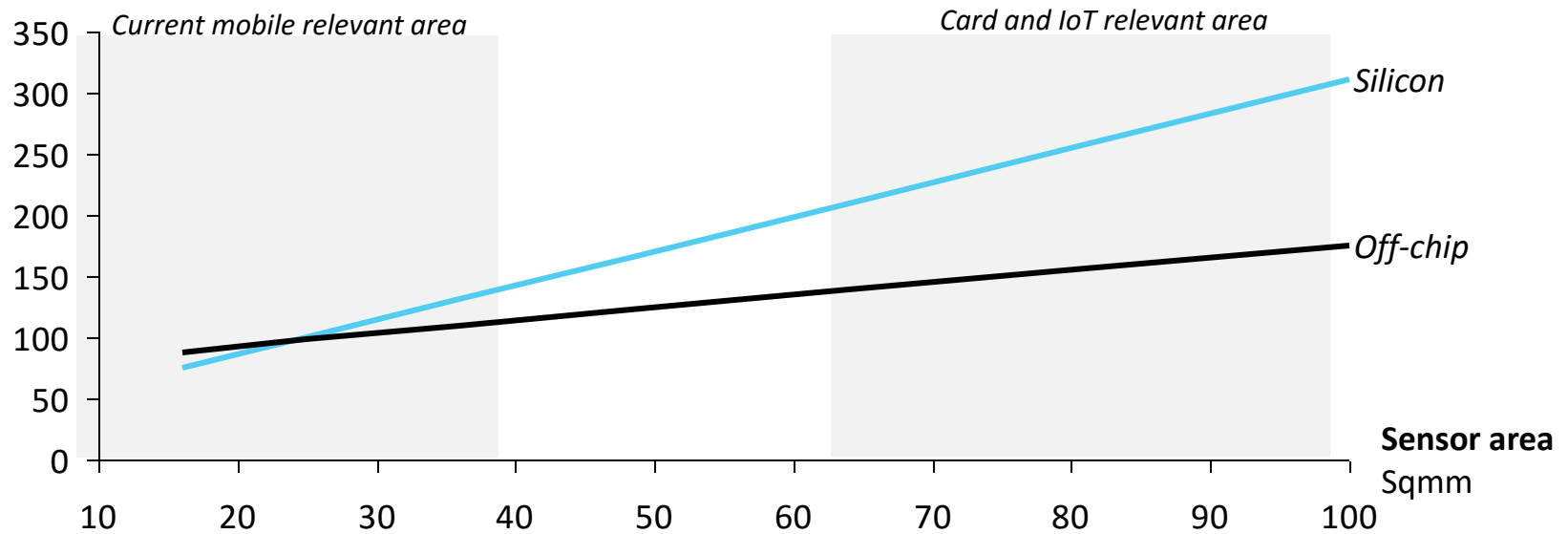


- Lower technology barriers – crowded space
- Competitive for small and rigid sensors
- IDEX Cardinal sensor partnership



## Indicative cost: off-chip vs silicon capacitive sensors

Percent







## **Strong customer pull in emerging market for biometric cards**

- Flexible polymer for ISO form factor and durability
- Larger sensor critical for usability due to limited power



## **Infinity display transition in mobile flagships**

- Larger size sensor enhances performance on back of the handset
- In-display sensing compatible with off-chip polymer technology



## **Fingerprint penetration beyond mobile accelerating in IOT**

- Devices with limited power require larger sensors for usability
- Flexible sensors value proposition for wearable applications

## Cards



## Mobile



## IoT



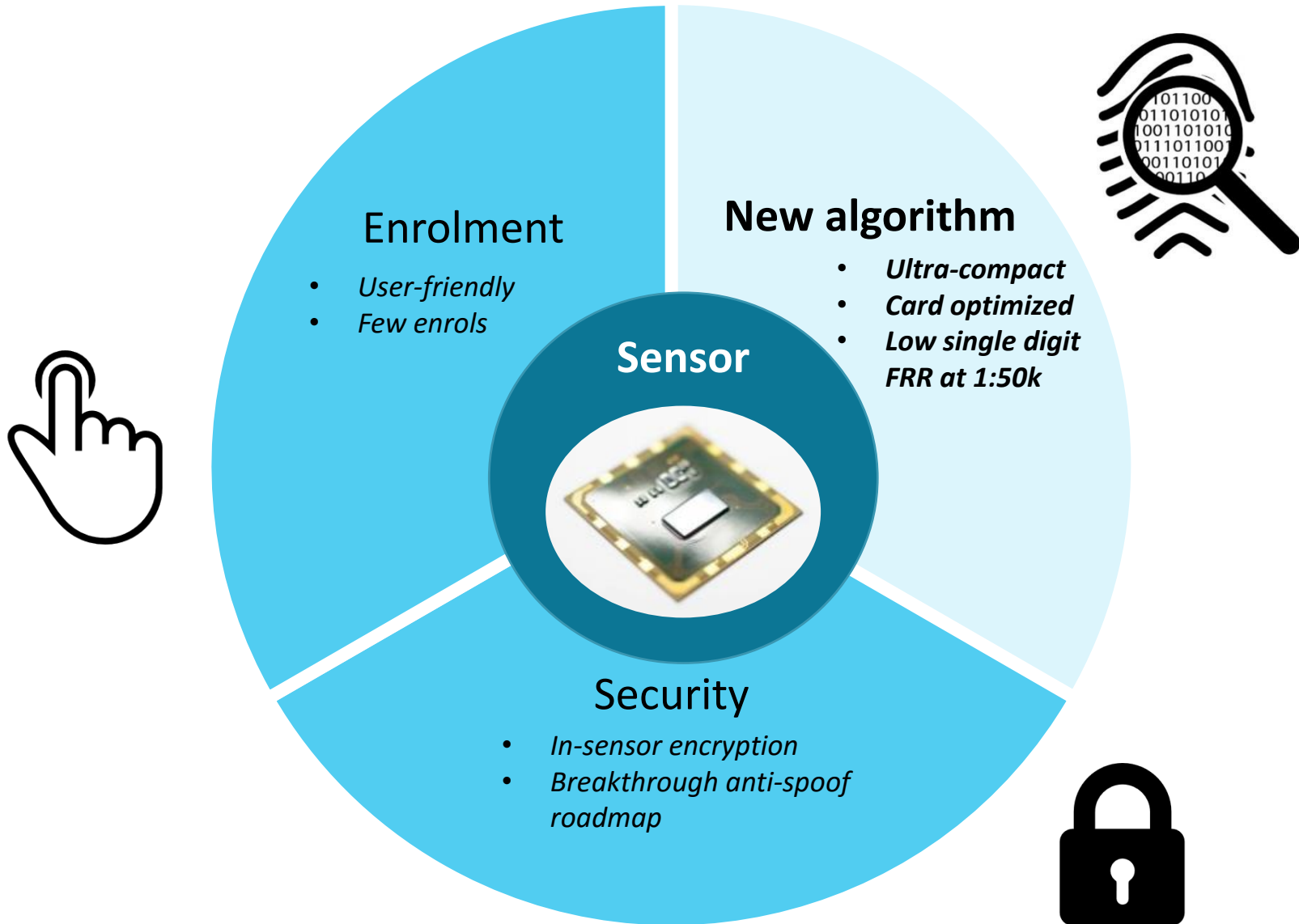
### Platform across target markets

- ASIC fabricated at TSMC foundry - low silicon cost
- Modular software suite - for target applications across markets
- New architecture - simpler packaging to maximise cost benefit

### Accelerated product development

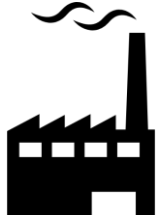
- Grown 64% y-o-y to 120 staff
- Critical mass for in-house key capabilities
- Strong focus on card market

# MOVING BEYOND SENSOR TO FULL BIOMETRIC SYSTEM IDEX





# END-TO-END SOLUTION FOR COMMERCIAL DEPLOYMENT IDEX



**Manufacturing**

Compatible  
with card  
manufacturing  
process



**Bank**

Designed into  
mass  
enrolment  
system



**Retail**

Compatible  
with existing  
point of sales  
terminals



# MOMENTUM ON MASTERCARD BIOMETRIC PROGRAMME



Successful customer trials in Africa and Europe

End-to-end contact solution for commercial deployment with OT-Morpho

High interest from end customers for multiple larger scale pilots 2H 2017

Preparing for final card certification expected to commence Q4 2017

Commercial roll-out target end 2017 following customer pilot approvals

Dual Interface card solution in development leveraging low power ASIC



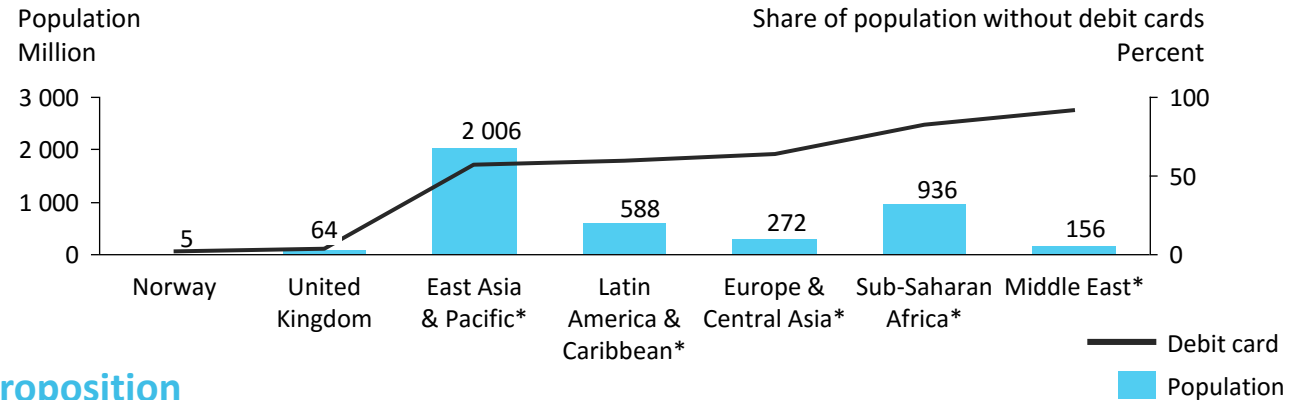


- **High customer activity – in parallel to the Mastercard programme**
  - Initial order from leading Asian security and authentication smart card provider
  - Working with multiple European top tier card and secure element providers
- **Launched ground-breaking sensor for contactless smart cards**
  - Flexible, low power fingerprint sensor
  - Ready for contactless cards operating with standard NFC terminals

# FINANCIAL INCLUSION BIOMETRIC CARD VALUE PROPOSITION



Huge opportunity - more than 2.5 bn people without debit card



## Strong value proposition



End users

- Established identification
- Secure way of receiving entitlements
- Access to credit and banking system



Govt

- Significant reduction of leakages in distribution
- No new infrastructure needed
- Limited incremental costs

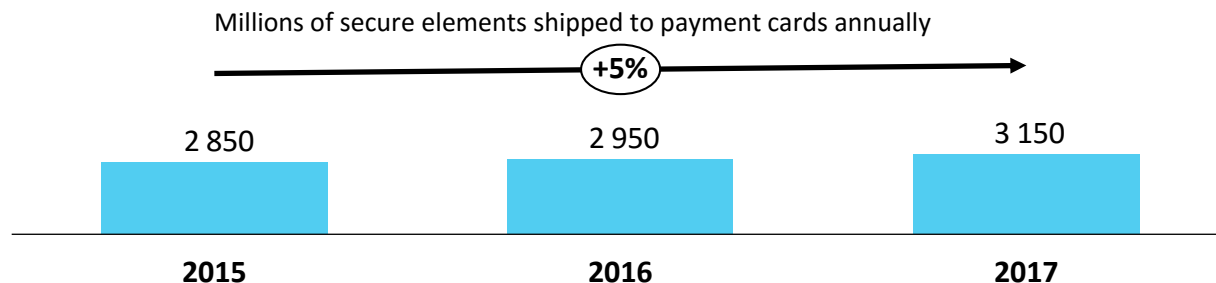


Issuers

- Generating transactions
- Loyalty to brand

Source: The World Bank  
\* Developing countries only

## Three billion Chip cards issued every year



### Strong value proposition



End users

- User friendly – easier than PINs, fingerprint familiarity from mobile
- Increased security



Issuers

- Attractive to become 'top of wallet' card
- Reduced fraud costs in card present situations
- Less forgone revenue due to users not remembering PIN at time of transaction
- Reduced costs with issuing new cards due to wrong PIN entered
- Issuing banks can deepen loyalty by offering differentiated solution

Source: Eurosmart

# HIGHLY ATTRACTIVE CARD OPPORTUNITY



## Large market potential

- Multiple billion unit verticals
- Significant demand for both contact and contact-less
- Expect higher ASPs than mobile given high value add



## First mover advantage

- IDEX furthest ahead in complex card qualification
- Partnered with several tier-one integrators
- Significant momentum with Mastercard



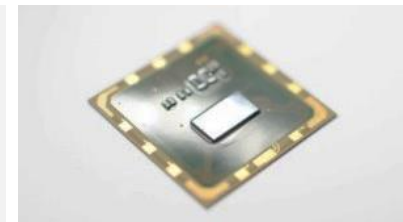
## Superior off-chip technology

- Low cost due to small silicon footprint <13 sq mm
- Thin polymer, not fragile silicon material
- Sensor optimal for card mass manufacturing



## Full biometric system

- Ultra-compact matching algorithm
- Enrolment system
- Best FRR/usability







**Mobile currently dominated by front-mounted silicon sensors...**

**...expected shift to infinity displays and rear mounted sensor**



## **Shift to infinity displays...**

- Lack of space for sensor in the front
- Options are to mount the sensor on the back or integrate in-display

## **...being leveraged by IDEX**

- Marketing off-chip sensor for back of the phone applications (with upgraded SW and cost optimised)
- Roadmap to in-display integrated sensor



- **Huge market opportunity with favorable trends for off-chip technology**

- **IDEX one of two vendors with differentiated off-chip technology**

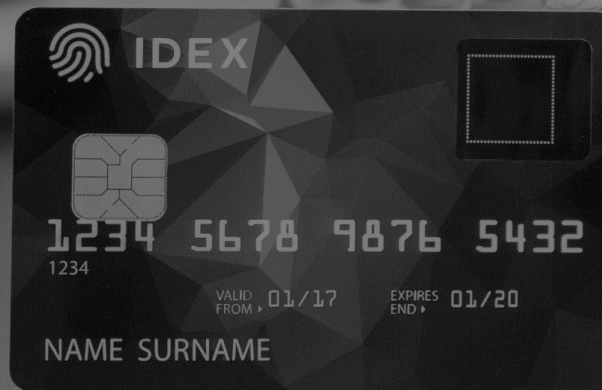
- **End-to-end card system solution securing scalability**





THANK YOU

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