

# Q2 INVESTOR UPDATE

August 2019



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# Q2 HIGHLIGHTS

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## Significant milestones achieved

- Landmark multi-year, multimillion-dollar commitment for IDEX's dual-interface technology
- Partnerships with key players in Asia to accelerate adoption of biometric smart cards
- Low-cost, go-to-market solution achieved through pre-lam supply agreement with Feitian
- Validation of IDEX Biometrics' dual-interface technology by independent labs to meet multiple global payment schemes' certification requirements
- Comprehensive remote enroll patents granted by the United States Patent and Trademark Office and IP Australia

## Evolution of the biometric smart card market

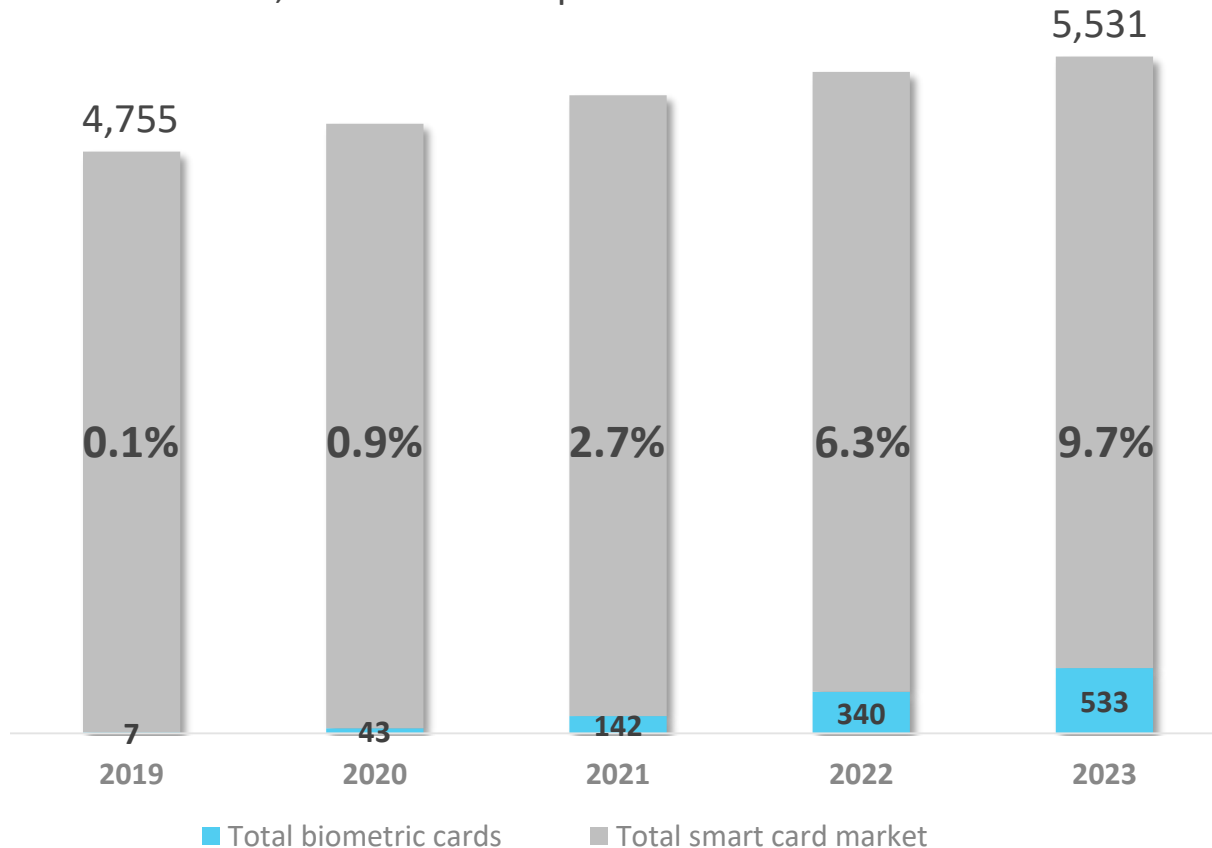
- Growing number of dual-interface pilots by multiple issuers and payment schemes
- Mass manufacturing, high yields are now achievable
- New verticals emerging; logical access, Govt. social security
- Certifications underway



# A GROWING MARKET WITH HUGE POTENTIAL

## Total number of smart cards shipped

Units million; Biometric card penetration rate



- Underlying growth in multiple card verticals is healthy
- Drivers of biometric penetration:
  - Unique security
  - Convenient for end-user
  - Well-used and understood technology
  - Infrastructure already in place
  - Fast authentication speeds

Source: ABI Research Smart Card Technologies; Goode Intelligence; IDEX estimates

# MULTIPLE CARD VERTICALS SUITABLE FOR BIOMETRICS

Expected # of smart cards shipped in 2023 by vertical (millions)

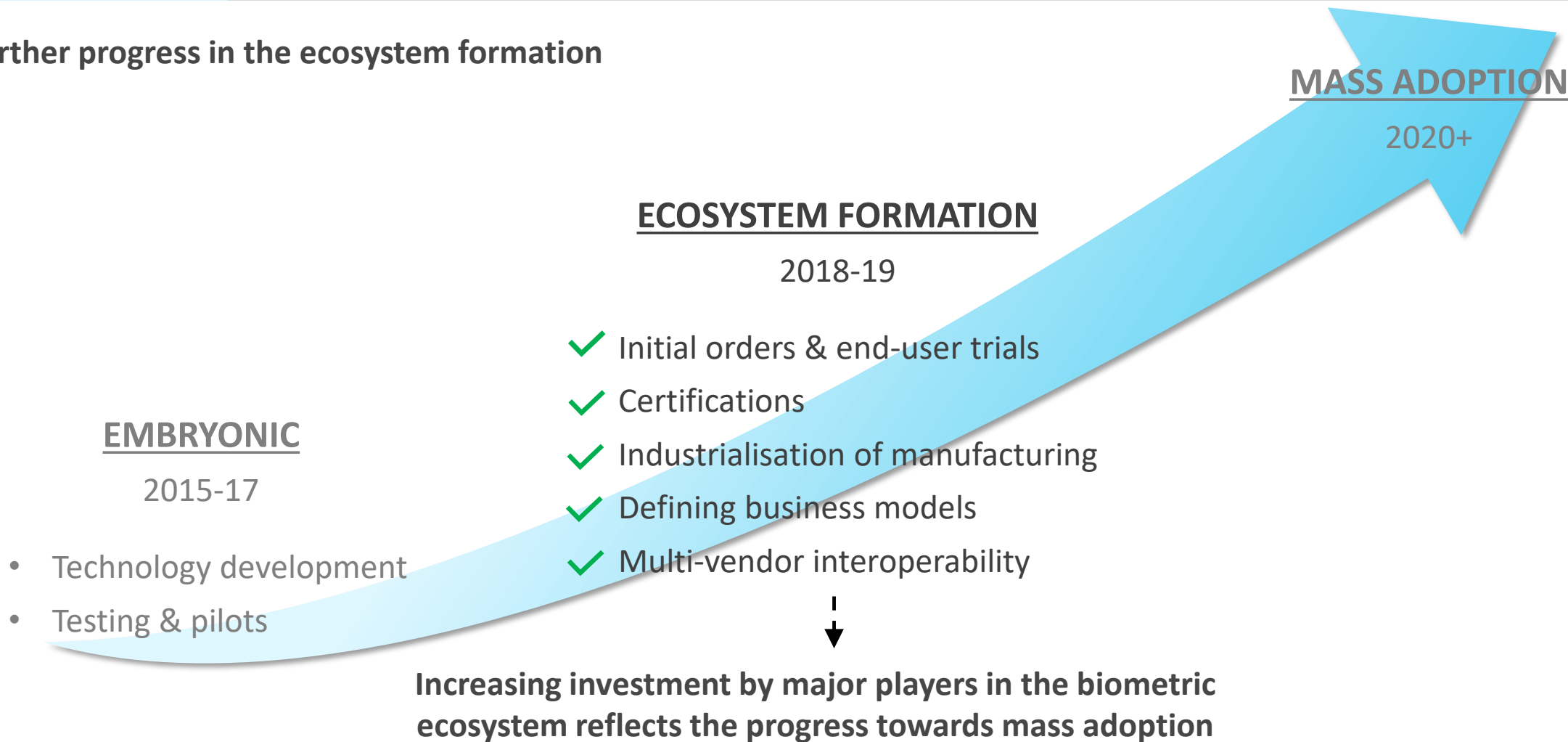


- Banks want to differentiate
- Fraud reduction
- Favorable consumer experience
  
- Financial inclusion
- Secure identification
- Voting
  
- Public transport systems
- Increased mobility
  
- Loyalty cards
- Internet of Things (IoT)
  
- Homeland security
- Access

Source: ABI Research Smart Card Technologies

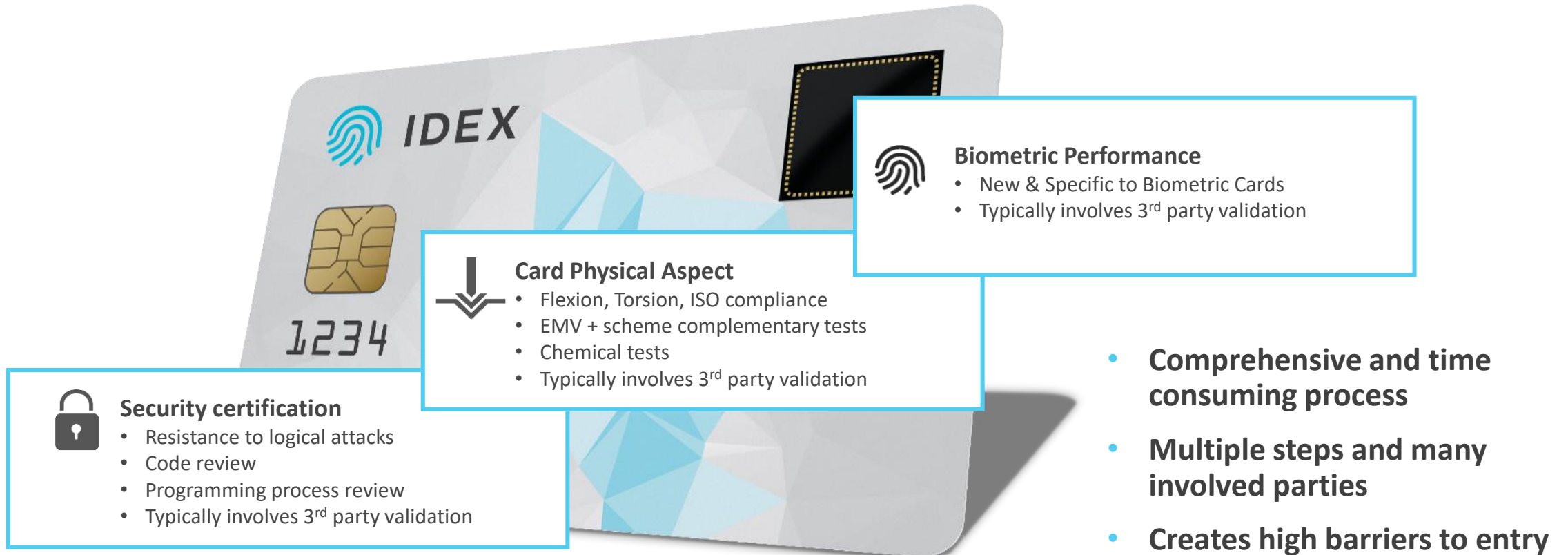
# THE EVOLUTION OF AN EXCITING NEW MARKET

Further progress in the ecosystem formation



# BIOMETRIC SMART CARD CERTIFICATION IS UNDERWAY

## Multiple elements to biometric smart card certification



# PROGRESS TOWARDS MASS MANUFACTURING AND CERTIFICATION

## Mass manufacturing

- Biometric smart cards are complex; require embedded circuitry and specialist expertise to mass manufacture

## IDEX is uniquely positioned to accelerate card integrators' ramp to high volume

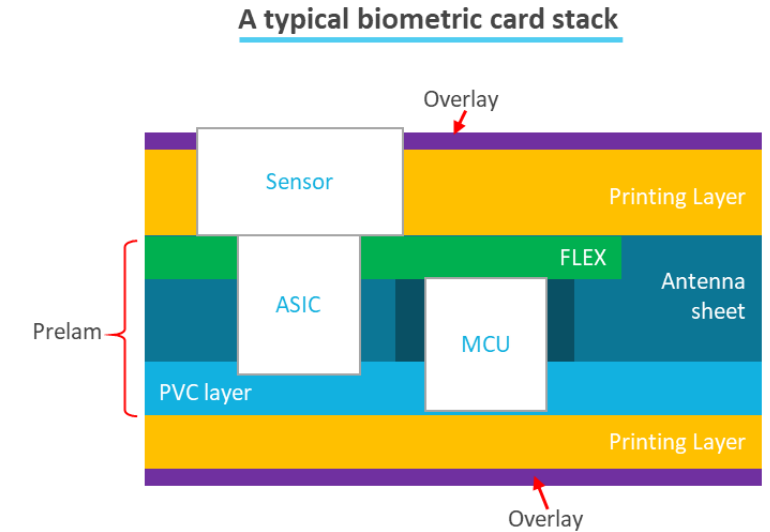
- Off-the-shelf reference design
- Full solution know-how to ensure compatibility between components
- Manufacturing and advanced materials expertise
- Pre-lam supply agreement with Feitian offering cost-effective go-to-market solution for biometric smart card manufacturers

## Certification

- Process for certifying biometric smart cards is relatively new

## IDEX has a long standing and close relationship with Mastercard

- IDEX's contact-based card has been certified
- IDEX's dual-interface technology has been validated by independent labs to meet multiple global payment schemes' certification requirements





# PUBLICLY SHOWCASED DUAL-INTERFACE BIOMETRIC CARDS WITH IDEX SENSORS



Feitian card showcased at the Secure Technology Alliance Payments Summit



Feitian card showcased at RSA Conference



XH Smart Tech demoing IDEX dual-interface card at The Mobile World Congress in Barcelona



Exelsecu biometric card



Hengbao dual-interface card demonstrated at the 2nd Digital China Summit

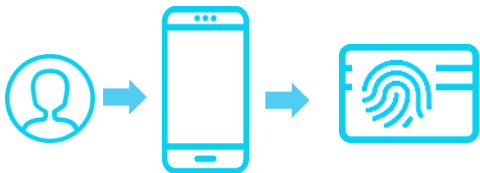
# IDEX IS ENABLING THE MARKET WITH PATENTED ENROLLMENT SOLUTION

Traditional card enrollment is a complex process...

Visit to physical branch

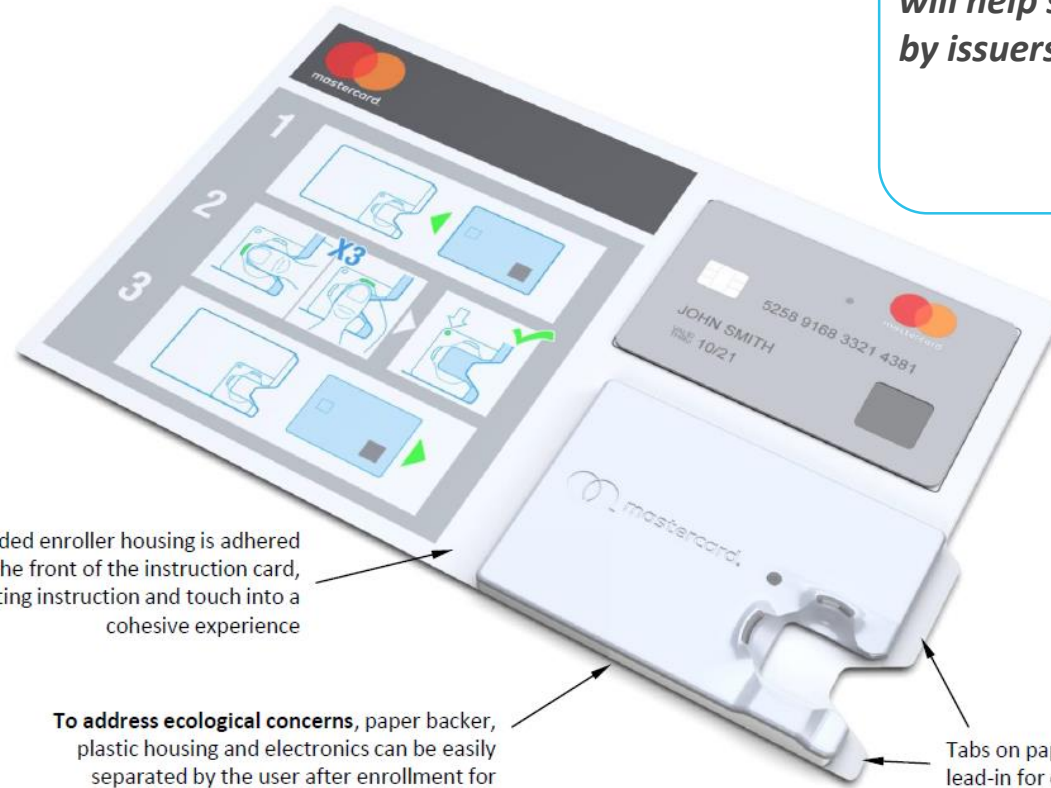


User device with sensor and special software



...IDEX has foundational patents on this revolutionary concept

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



Single sided enroller housing is adhered to the front of the instruction card, integrating instruction and touch into a cohesive experience

To address ecological concerns, paper backer, plastic housing and electronics can be easily separated by the user after enrollment for recycling, return or disposal.

Tabs on paper backer provide lead-in for card insertion

# A PRODUCT ROADMAP TO MARKET 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

2019

### Current biometric solution

- *ASIC with improved performance*
- *Incremental product cost reduction*

2020

### Next generation solution

- *Two-chip biometric cards*
- *Power management and biometric MCU integrated into the sensor*
- *Improved security and performance*
- *Removing card components and complexity*

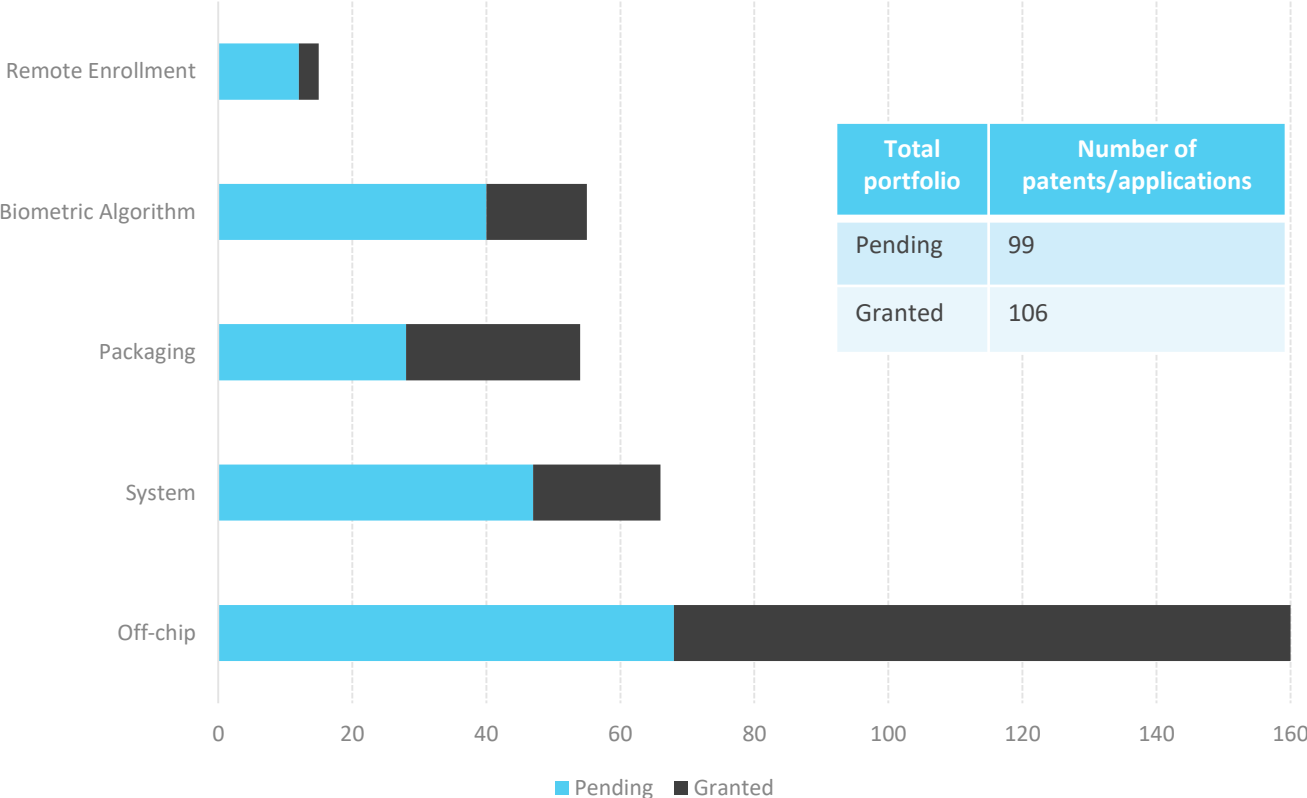
2021+

### Enhanced secure element solution

- *One-chip biometric cards*
- *Step change physical security enhancement for cards*
- *Sensor with display substrates*

# GROWING BREADTH OF INNOVATION

Patent Portfolio By Category



- Patent portfolio reflects increasing innovation capability at IDEX
- Quality of patents over quantity
- Patents beyond simple biometric sensors
- Increasing systems, packaging, algorithms and remote enroll expertise to help overcome complex problems
- Working in collaboration with multiple customers allows IDEX to refine and innovate
- **Patents that will help the evolution of the biometric smart card market**



# SUMMARY

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- **Biometrics are the next generation of security validation**
  - Unique, personalized, increasing consumer acceptance
- **The market for biometric smart cards is considerable and demand is building**
  - By 2021, over 5 billion smart cards estimated to ship globally, and growing
- **The biometric smart card market is happening now**
  - Considerable investments being made by key players; Mastercard, VISA, CUP, banks, card makers, suppliers
- **IDEX is the leader in biometric sensor technology**
  - Unique off-chip technology roadmap
  - More than just a component supplier
  - Breadth of innovation and IP
  - Industry leading expertise

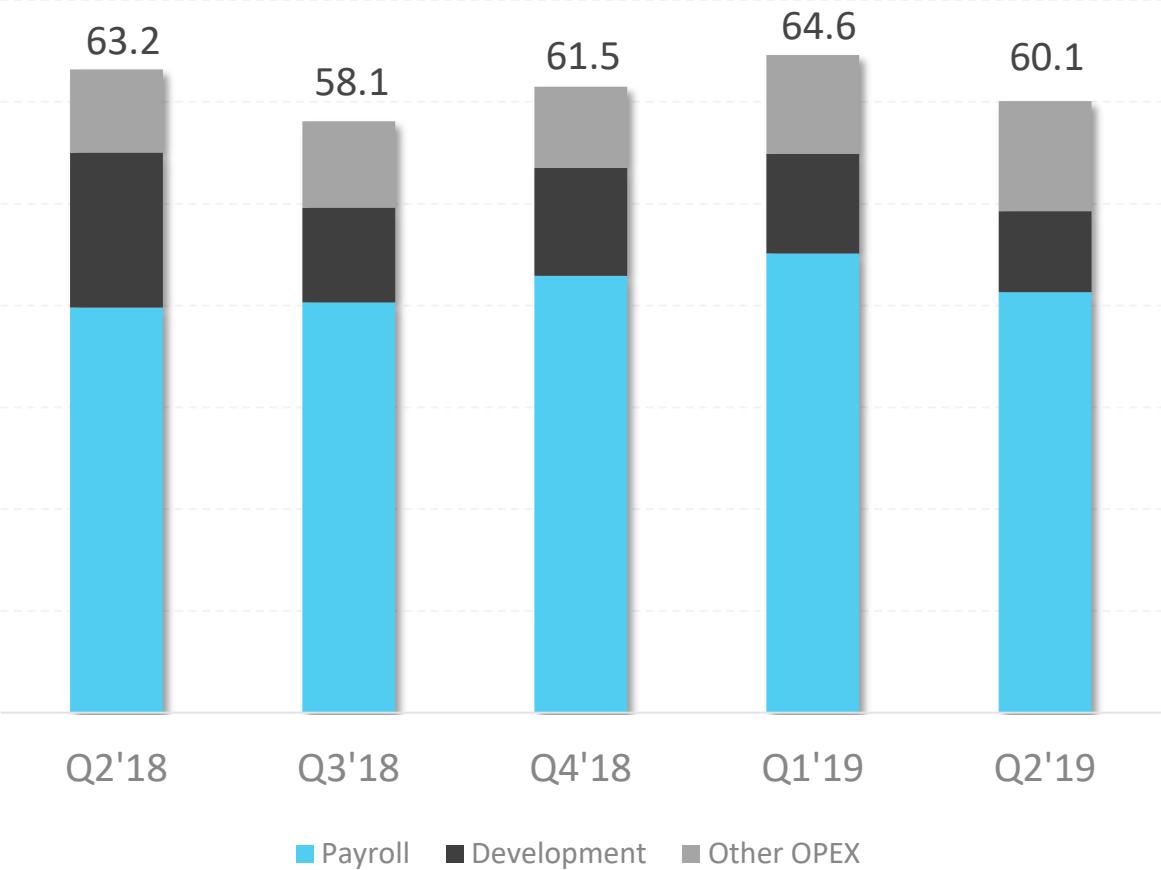


# KEY FINANCIALS



# OPEX OVERVIEW

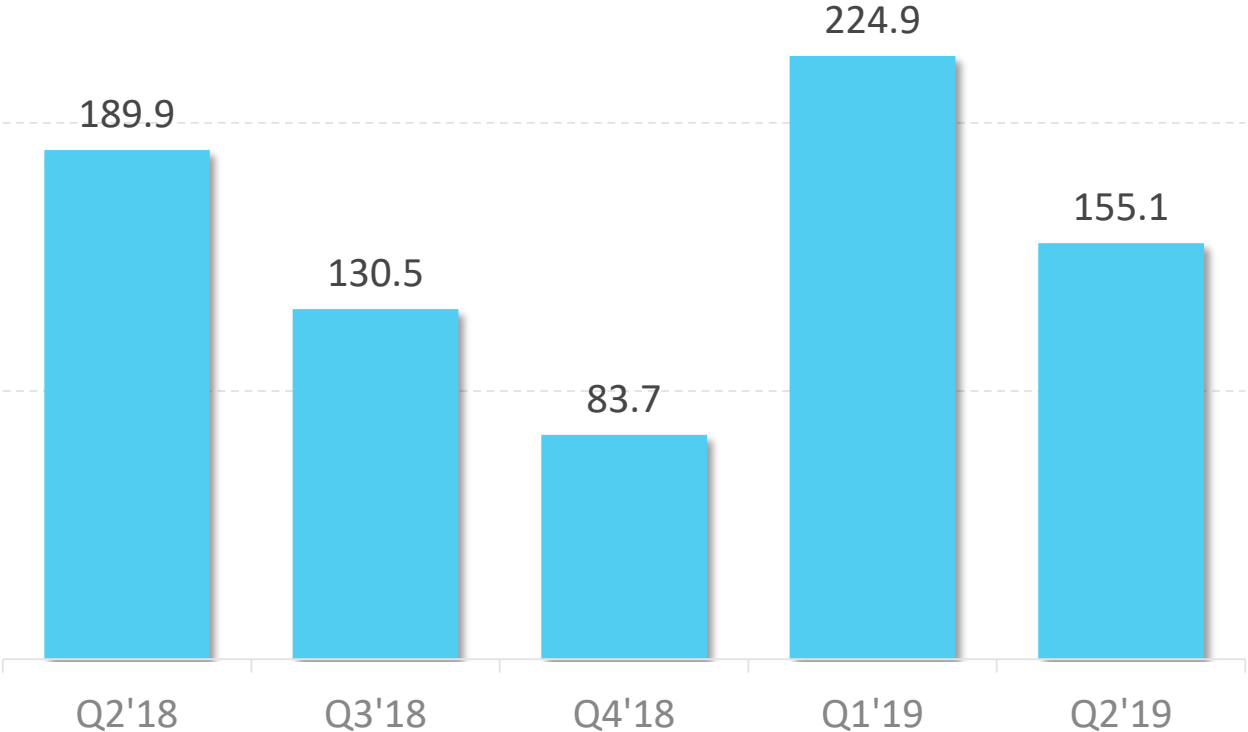
OPEX  
NOK million



- Continue to ship thousands of engineering and customer test units in Q2 at high gross margins
- Q2'19 OPEX excl. share based remuneration of NOKm 54.8; lower than previous quarter
- OPEX levels expected to be stable for remainder of 2019
  - Stable organization size expected

# CASH BALANCE

Cash balance  
NOK million



- Estimated break even at low-double-digit million units shipped
- Stable quarterly cost level expected for 2019
- No financial debt