



# IDEX Biometrics

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Capital Markets Day  
13<sup>th</sup> September 2022



# Agenda



## PROGRAMME

10:00-10:30	Registration, Coffee and Product Demos
10:30-11:50	IDEX Update and QA
12:00-13:00	Partner Panel Discussion
13:00-13:15	Concluding Remarks
13:15-14:00	Buffet Lunch and Product Demos

# IDEX Biometrics

A complete platform for Biometric Authentication Solutions



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Graziani**

CEO



**Catharina  
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CCO



**Hakan  
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SVP Sales



**Jerome  
Chavanel**

VP Product

(Demo video not included in presentation slide file.)



# IDEX solution strategy



## Payment and digital authentication

Turnkey products to accelerate time-to-market

## Card operating system

Proprietary platform to enable IDEX products and solutions

## Biometric components and software

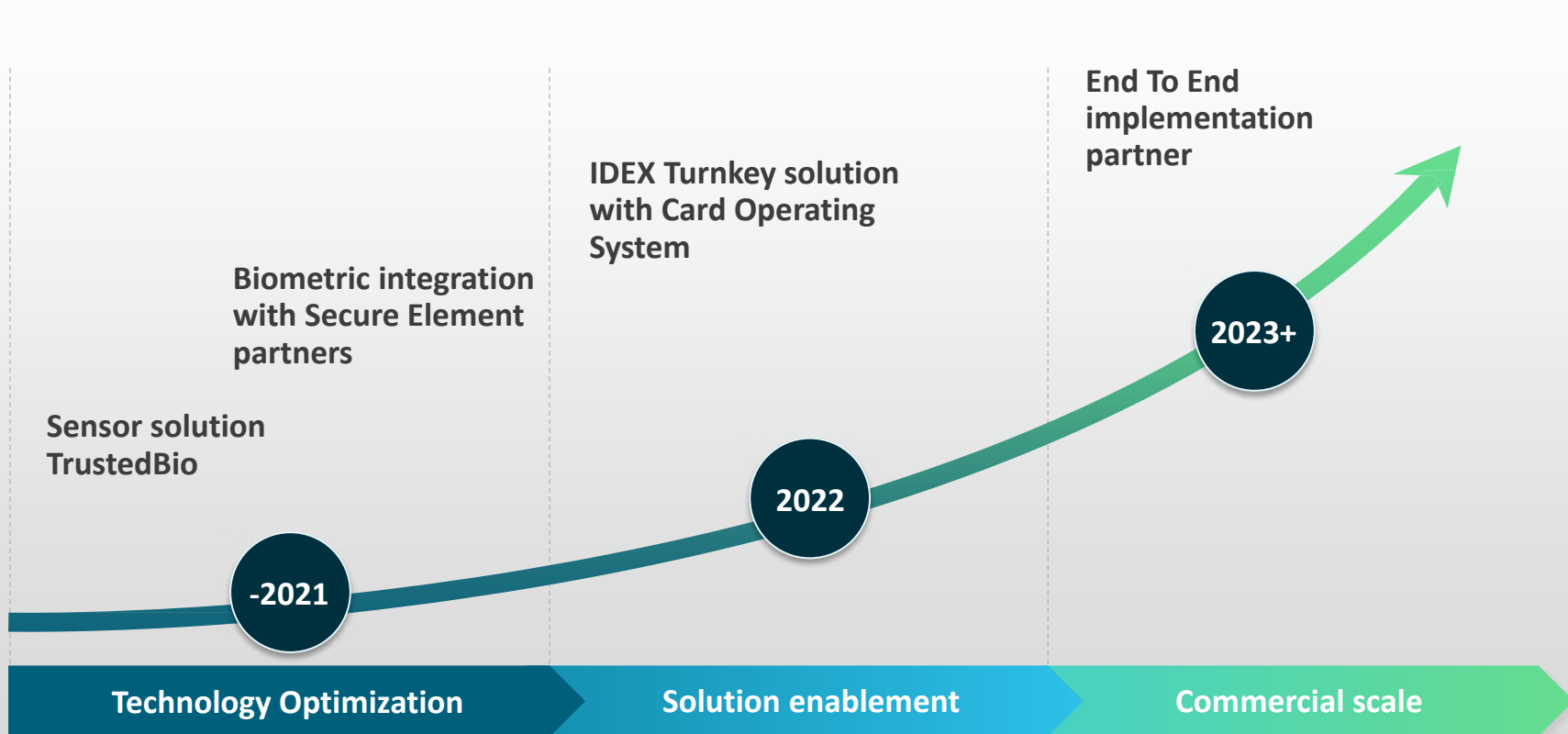
Industry pioneer in biometric authentication solutions



Targeting the massive addressable market for biometric smart card market of

# >3B units per annum

# IDEX company roadmap

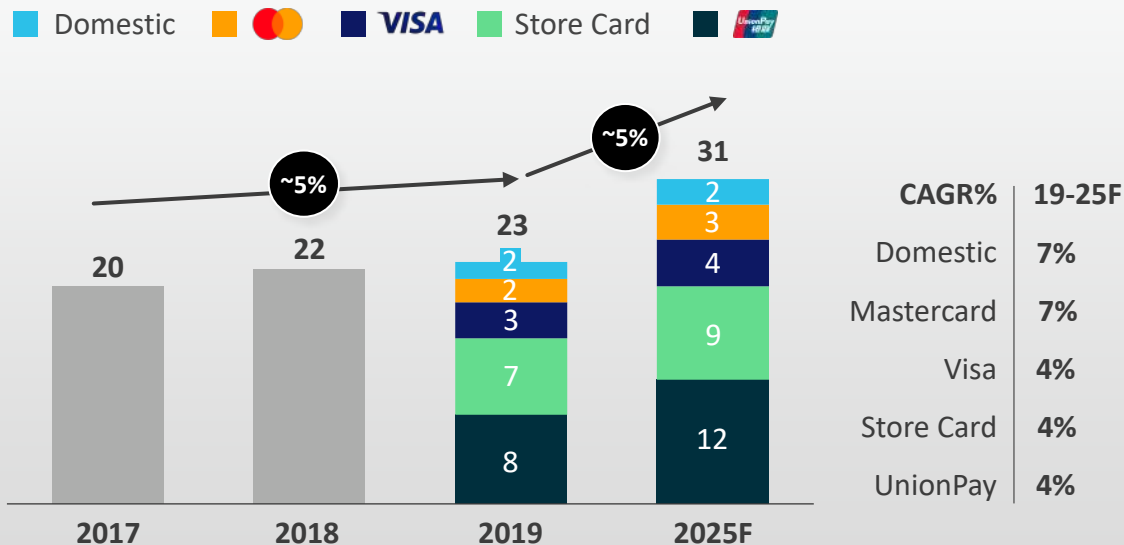


# Cards continue to grow globally



## Payment cards in circulation globally by issuing scheme

BN<sup>1</sup>, 2017-2025F, CAGR %



### Key insights

- Steady growth for payment cards
- 65% of all transactions are in store
- 50% of payments in store with physical cards
- 60% contactless transactions in Europe

1) Number of credit, debit, prepaid and charge cards in circulation worldwide. Domestic-only brands include RuPay (India); Star, Pulse, Nyce, and Accel (U.S.); Elo (Brazil); Mir (Russia); BC Card (South Korea); Shetab (Iran); Eftpos (Australia); Cartes Bancaires (France); and Girocard (Germany). Private label credit, debit, and prepaid products are usable only at particular retail stores | Sources: Nilson Report, Global Payments Report FIS, 2022. ACI Report 2022.

# Stakeholder benefits of biometrics



## Cardholder

- ⌚ Convenience
- ⌚ Peace of mind
- ⌚ Improved security
- ⌚ Safeguarded privacy

## Issuing Bank



- ⌚ Fraud reduction
- ⌚ Customer satisfaction
- ⌚ Top-of-wallet
- ⌚ New customer acquisition

## Merchant



- ⌚ Seamless acceptance for higher purchase amounts
- ⌚ Less friction and declines
- ⌚ Decreased chargebacks

## Acquiring Bank



- ⌚ Improved check-out
- ⌚ Authentication options for merchants



# Global consumer research confirms demand for biometric payment cards



80%+

of consumers across 14 markets find **biometric** cards convenient and secure



Brazil  
88%



Germany  
80%



KSA  
87%



Singapore  
82%



Canada  
81%



Norway  
84%



India  
92%



Australia  
73%



USA  
69%



Sweden  
75%



South Africa  
86%



UK  
70%



Turkey  
85%



Mastercard Research: consumers prefer biometric payment over PIN for security and convenience

# Biometric smart cards

## Market Update



### Addressable market

- ⌚ > 3 BN cards per year
  - >2.4 billion payment cards - CAGR ~5%
  - > 1 billion access and ID cards - CAGR ~10-20%
- ⌚ 40M payment locations fully enabled for biometrics globally



### Market momentum

- ⌚ Consumers confirms the demand for Biometric Payment Cards
- ⌚ Increasing numbers of launches
- ⌚ Manufacturers are investing
- ⌚ Safeguarded supply chain



### Current headwinds

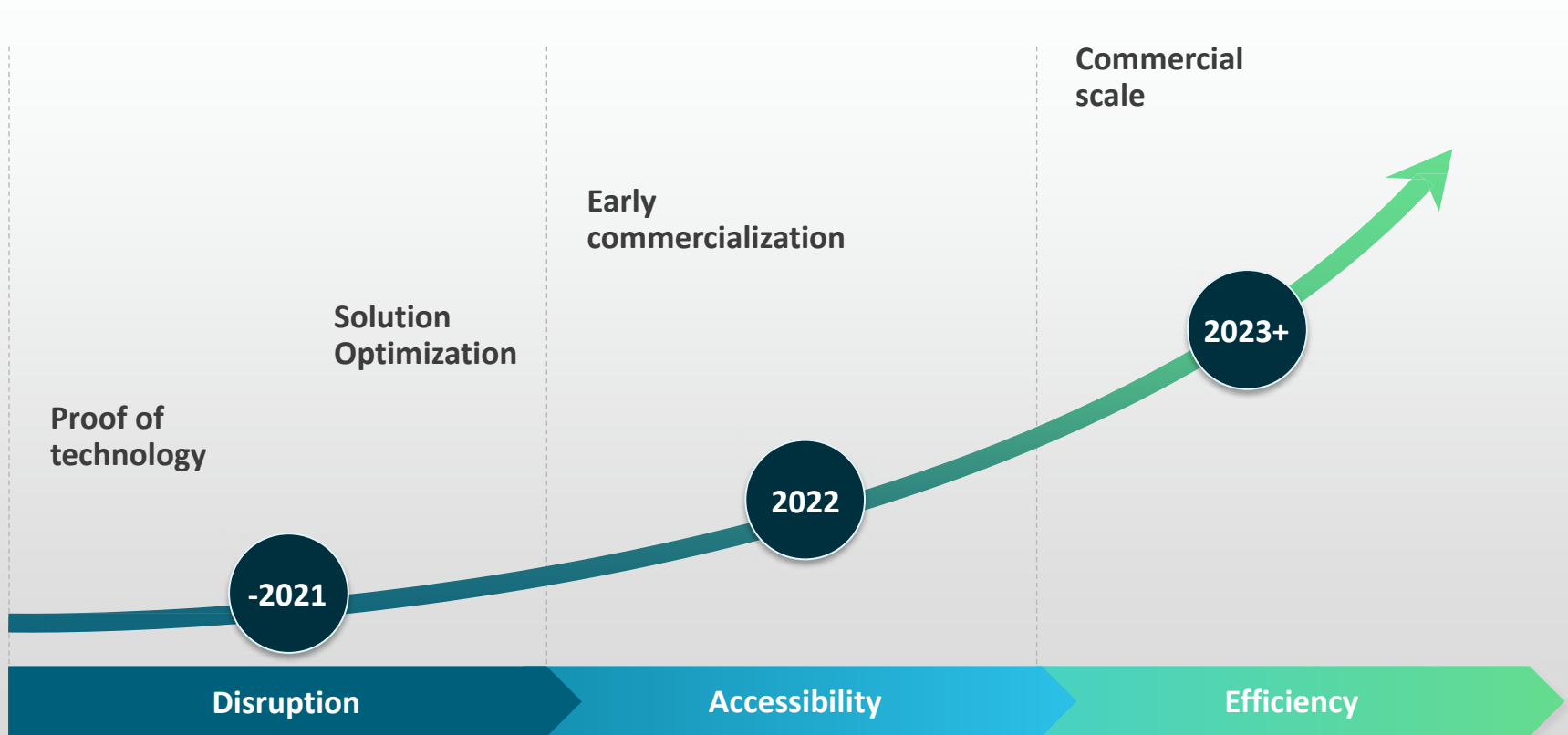
- ⌚ Chip component shortage for dual interface cards
- ⌚ China lockdown – lead times
- ⌚ Geopolitical instability and recession looming



# IDEX solutions enable accelerated market adoption



IDEX positioned for market inflection towards biometric payment cards





# Disruptive products and solutions

A complete platform for biometric authentication solutions

# IDEX product and solutions



## Hardware



Largest sensor in the industry to enable high performance with lowest power

## Software



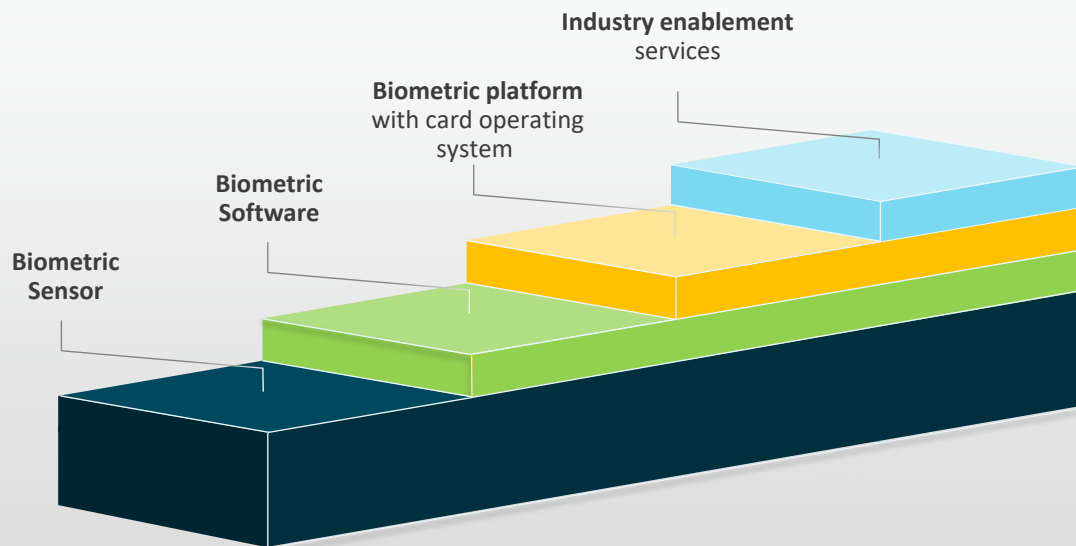
Anti-spoof and matching algorithm outperforming the payment scheme standards

## Services



IDEX Customer Lab, Ready-to-launch solutions and API library

# Evolving IDEX Solution Offering



## Strategic benefits

- ⌚ Leverage core investments
- ⌚ Ensure consistent and secure user experience
- ⌚ Complete solutions for payments and digital authentication
- ⌚ Efficient industry enablement for manufacturers
- ⌚ Accelerated market activation

# IDEX Technology advantage



## Largest Sensor

- >200 patents protecting our core technology
- Image size and industry leading technology drive best user experience



## Fully Integrated Biometric System

- Only Secure Element and Sensor, no additional component required for efficient manufacturability



## Sensor Technology Flexibility

- The IDEX breadth of solutions brings us independence and flexibility
- Unique architecture enables IDEX to select the most relevant silicon technology

# IDEX technology platform enables multiple use-cases



Our biometric technology drives new applications

Payment (card present and card not present)

Digital authentication

Digital access (Physical/Logical)

Digital wallets  
Crypto / CentralBank Digital Currency

Protecting multiple value streams with one card



# Digital authentication represents a \$53 billion market

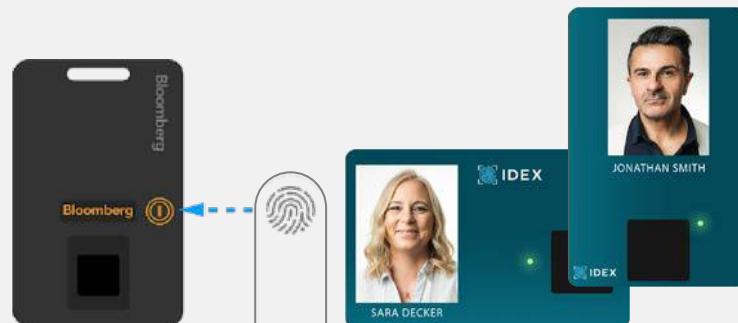


## Opportunity

- **\$172B** is spent on Enterprise Cyber Security in 2022
- Cost from ransomware attacks expected to grow >13x in the next 10 years, from \$20B in 2021
- Cyber threats top the concerns among enterprises
- **19%** of cyber attacks due to **credential thefts**
- **>59%** of organizations have not implemented a ZERO trust strategy

## IDEX Response

- Unique biometric card solutions for digital authentication and step-up security
- Partnering with the worlds most innovative leaders in design and manufacturing of biometric authentication solutions



# IDEX goes to market with innovation leaders



## Digital Access (Including Multi Factor Authentication)



### Digital access

- High value subscription
- Secure access and authentication



## Digital Wallets (Hardware/Token)



### Digital wallets

- Crypto currency
- Digital currency (CBDC)





Commercial acceleration

# Biometric smart card market is building up across regions



## Europe

**23% of the global card payments value  
> 6 bank launches live and foreseen in 2022**

- ➔ Rollouts driven by Tier1 and challenger banks  
90%+ of eligible payments are contactless
- ➔ Leading manufacturers now in production

## Asia-Pacific

**43% of the card payments worldwide, with strong  
mobile payments growth**

- ➔ Strong interest from India, Japan, Korea, Malaysia,  
Vietnam – Manufactures
- ➔ Government ID requirements

## Latin & South America

**Strong growth in payment cards, BR CAGR: +36%**  
Brazil & Mexico planned launches of payment cards

- ➔ Launches coming with traditional banks
- ➔ Fraud and Regulatory policies drive use cases

## MENA

**Strong growth in payment cards, CAGR: +16%**  
**> 10 launches live and foreseen in 2022**

- ➔ Drivers: fraud and convenience
- ➔ Segments: affluent and financial inclusion

# Banks are launching, Europe and Middle East as front runners



IDEX accelerates launches during H2 according to plan

## H1 2022 in Market

- ⇒ **Rocker, Sweden (IDEX)**
- ⇒ **Manager.one, France (IDEX)**
- ⇒ BNP Paribas, France (FPC)
- ⇒ Credit Agricole, France (FPC)
- ⇒ Pocztowy Bank, Poland (FPC)
- ⇒ BMCI BNPP, Morocco (FPC)
- ⇒ JKB, Jordan (FPC)

**H1 2022**  
7 launched  
globally

## H2 2022 in Plan

- ⇒ **Banks in Iraq (IDEX)**
- ⇒ **Bank in Jordan (IDEX)**
- ⇒ **Bank in India (IDEX)**
- ⇒ **Bank in Thailand (IDEX)**
- ⇒ **Bank in UAE (IDEX)**
- ⇒ **Bank in Germany (IDEX)**
- ⇒ **Bank in France (IDEX)**
- ⇒ Banks in US, Morocco and Jordan (FPC)

**H2 2022**  
7 launches  
for IDEX  
planned

# Specific bank customer segments are driving early adoption



## 01 Affluent

Frequent and **high networth customers**, travelling and interested in biometric metal cards



## 02 Tech savvy

**Young pros seeking differentiation** and preferring **challenger banks**



## 03 Corporate

Clients in need of **stronger security** to conduct **high value corporate transactions**



## 04 Special needs

People who **struggle to maintain multiple passcodes & PINs** or **unable to use them**

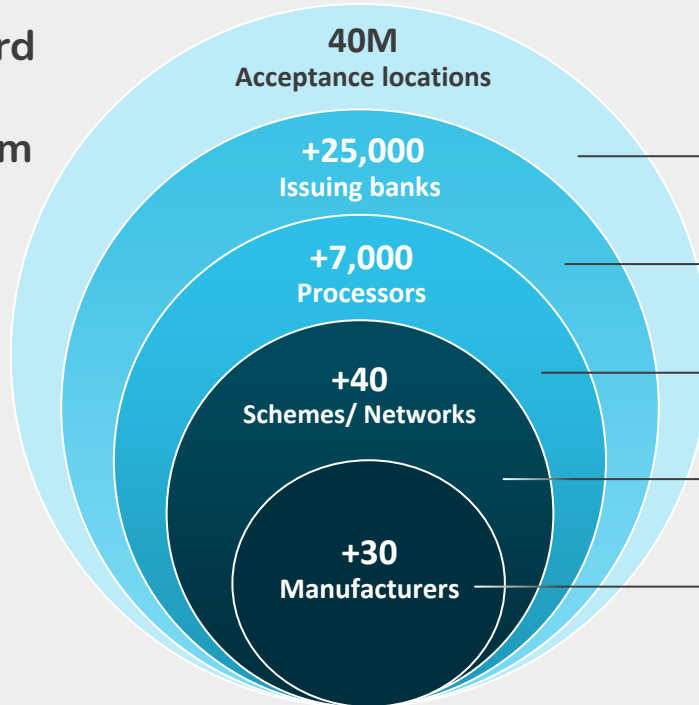


# IDEX engages with all stakeholders in the payment eco-system



Accelerated time-to-market and flawless execution

Global card payments eco-system



IDEX engagement strategy

- Educate the market
- Demonstrate **business case**
- Partner to secure **enablement**
- Ensure **compatibility** & scale
- Sell and facilitate **journey**

# H1 2022 Market specific highlights



## EMEA

- Card manufacturers Tag Systems and E-Kart in implementation
- 3 new card manufacturers, 4 processors in commercial negotiation.
- Advanced biometric card project for combined physical and digital authentication
- Tier 1 and challenger banks launches in motion



## APAC

- China mandates CDBC wallets IDEX uniquely positioned
- Advanced biometric card project for physical and digital authentication
- Launch planned with Tier 1 bank in Japan
- 2 manufacturers in production and launches foreseen late Q4



## Americas

- Strategic partnership for Metal Card with biometrics
- Advanced biometric card project for physical and digital authentication
- Launch with Tier 1 bank in Mexico in progress
- Evaluations in progress with manufacturers in Brazil



# Accelerating card manufacturers

Based on engagement with 20+ card manufacturers



## Key enablers for success

- Pre-certification
- Re-tooling and production enablement
- Component supply assurance
- Program support for issuers and banks

## Prioritized initiatives

- IDEX Turnkey
- Partnerships: equipment makers / component manufacturers
- Secure Element strategic expansion roadmap
- Joint Issuer demand generation



Cardmatix

E-KART



life.augmentec



SHOEI



# IDEX focus market: Turkey



**250 million payment cards**

Largest in Europe



**1.84 million Point of Sales**

Largest in Europe



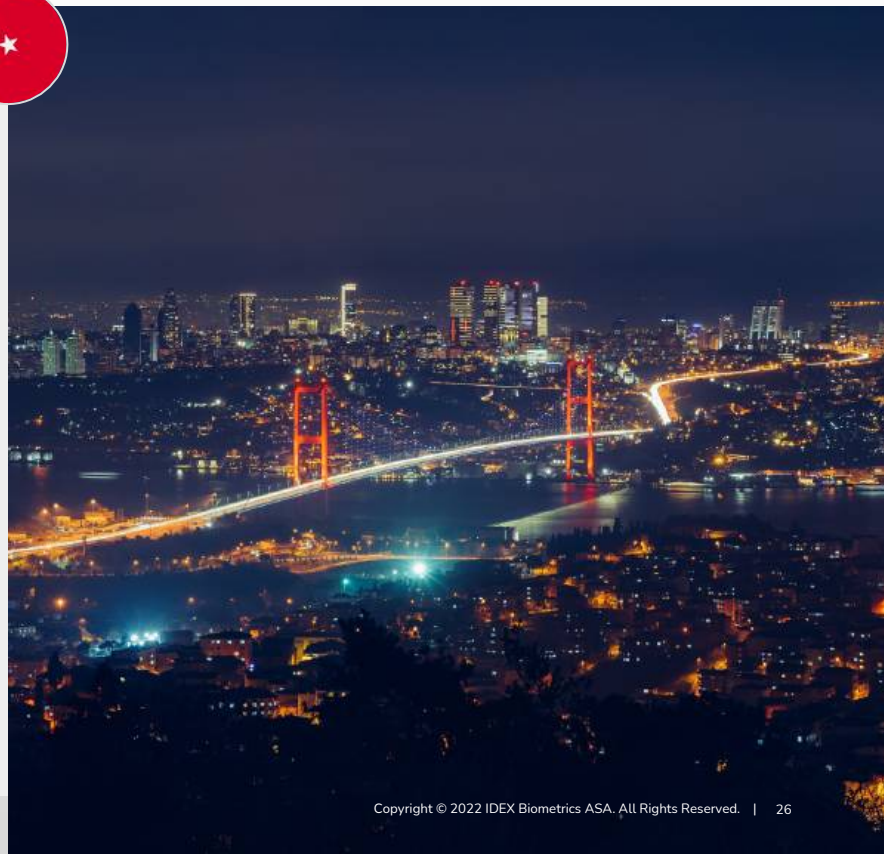
**190 billion purchase volume**

34% of private consumption expenditure

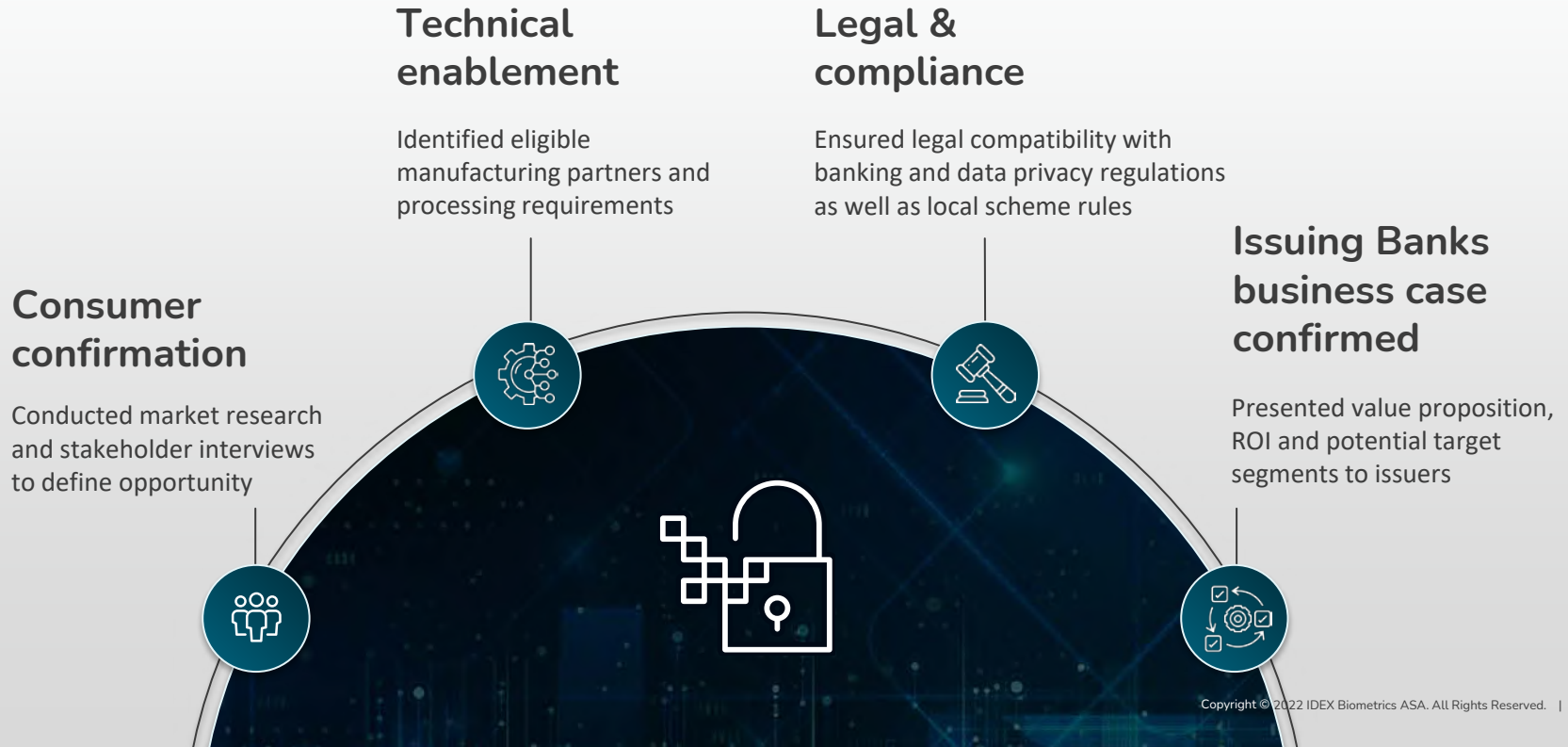


**56%**

Contactless penetration

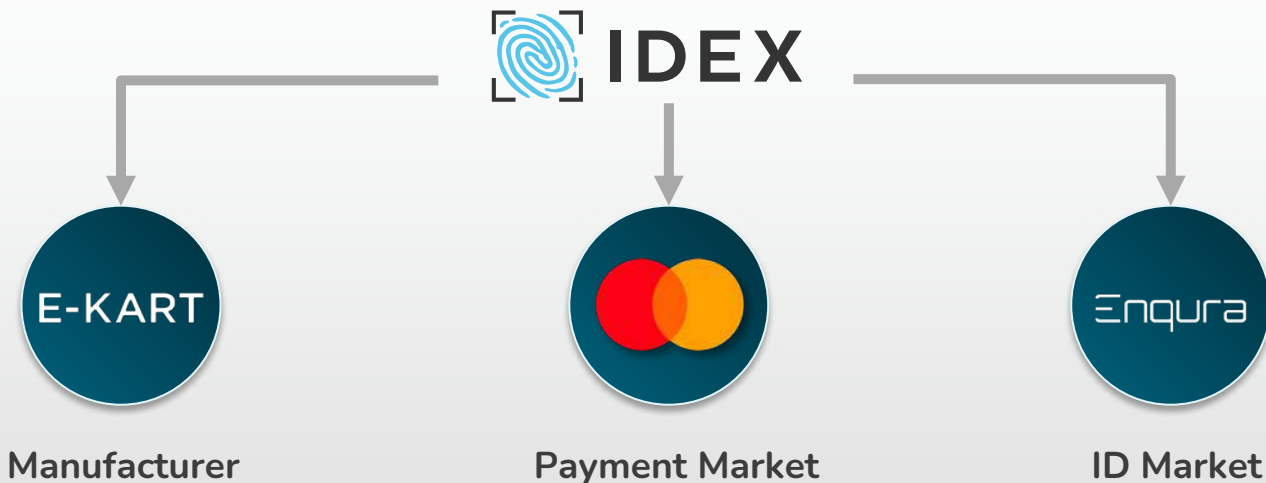


# Unlocking a market with a structured and repeatable go-to-market approach



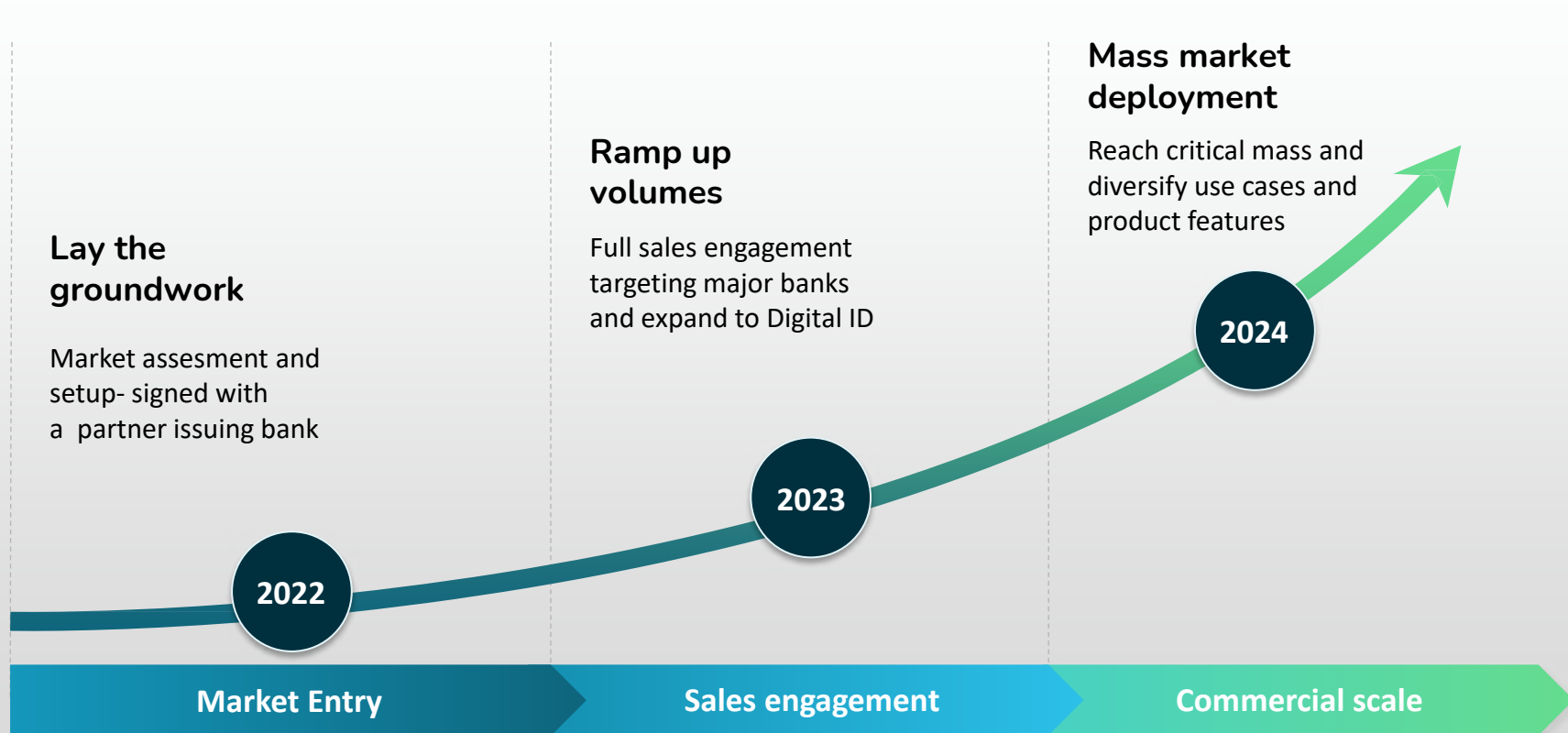
# Establishing an ecosystem

Partnership with key players to accelerate market adoption



**Access to +200 customers and ~400 MN cards across 11 countries in the region**

# Turkey: Market acceleration roadmap





Operating business model

# Strong operating leverage in long-term model



## Potential for extraordinary revenue growth

- Expanding opportunity pipeline
- Rapidly increasing backlog and pending design wins
- Solution sales driving higher margins

## Target operating model at scale:

- Scalable fabless semiconductor model
- Long-term goal of 50%+ gross margins
  - Consistent with fabless model
  - Reflects differentiation and solution cost leadership
- Long-term goal of 30% operating margins
- Scalable for sustained cash flow
  - Concentrated customer base limits channel expenses
  - Low CapEx and leveraged OpEx



Summary:



# Enabling the next generation of payments and authentication

01

**Multi-billion  
market  
opportunity**

02

**Industry leading  
customer  
experience**

03

**Disruptive  
biometric  
solution**

04

**Capturing  
a market  
inflection point**





# IDEX Biometrics

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Thank you