



Disruption the Driver of Innovation

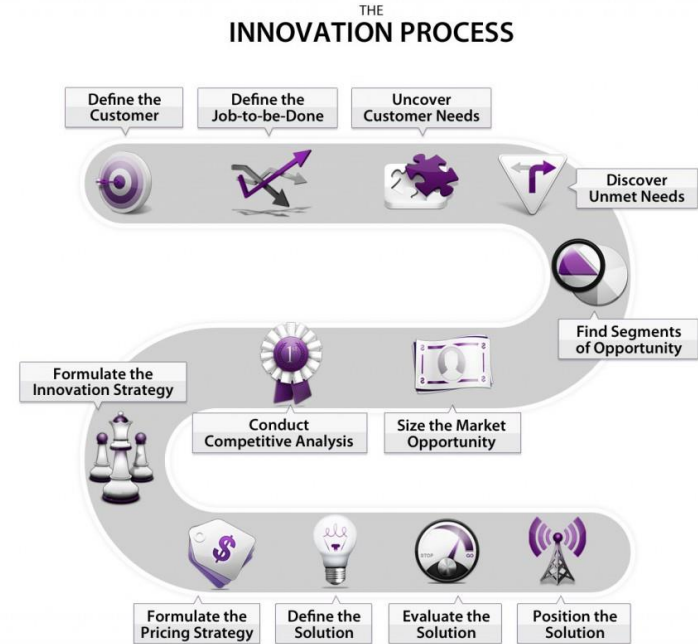
Philip Andreae
Vice President
Oberthur Technologies, North America



Disruptive Innovation Is Our Reality

A disruptive innovation is an innovation that helps create a new market and value network, and eventually disrupts an existing market and value network (over a few years or decades), displacing an earlier technology.

Clayton Christensen - Harvard



Innovation Demands Change



Every revolutionary idea seems to evoke three stages of reaction. They may be summed up by the phrases:

1. It's completely impossible.
2. It's possible, but it's not worth doing.
3. I said it was a good idea all along.

Arthur C. Clarke

An organization's ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage.

Jack Welch

Design the Present as the Past of the Future

“The future of financial services involves dramatic, not incremental, change from the past. As a result of such change, much greater differentiation will develop in the earnings and stock price performance of financial companies...”

Tom Brown Donaldson Lufkin & Jenrette



Our Path Is of Our Own Making

There are no secrets to success. It is the result of preparation, hard work, and learning from failure.

Colin Powell

We are continually faced by great opportunities brilliantly disguised as insoluble problems.

Lee Iacocca

Only the guy who isn't rowing has time to rock the boat.

Jean-Paul Sartre



With Challenges Intended and Imposed





The world has a **PASSWORD PROBLEM**

- ✓ Services/Apps
- ✓ Devices/Platforms



Board Members





USABILITY, SECURITY and **PRIVACY**

Cyber Security National Action Plan

- “America’s economic prosperity, national security, and our individual liberties depend on our commitment to securing cyberspace and maintaining an open, interoperable, secure, and reliable Internet. Our critical infrastructure continues to be at risk from threats in cyberspace, and our economy is harmed by the theft of our intellectual property. Although the threats are serious and they constantly evolve, I believe that if we address them effectively, we can ensure that the Internet remains an engine for economic growth and a platform for the free exchange of ideas.”

President Obama

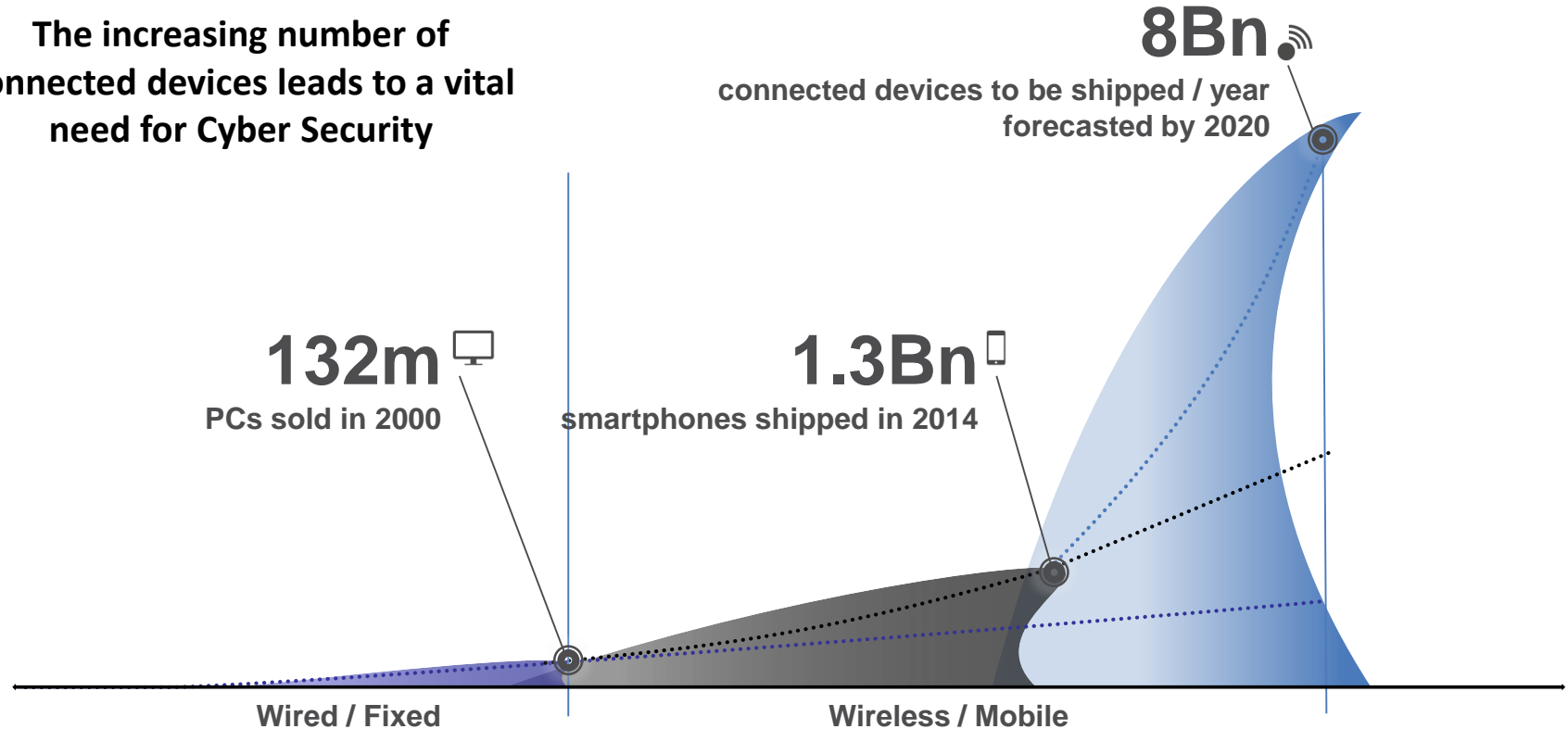
- Five Things to Know: The Administration's Priorities on Cybersecurity

1. Protecting the country's critical infrastructure — our most important information systems — from cyber threats.
2. Improving our ability to identify and report cyber incidents so that we can respond in a timely manner.
3. Engaging with international partners to promote internet freedom and build support for an open, interoperable, secure, and reliable cyberspace.
4. Securing federal networks by setting clear security targets and holding agencies accountable for meeting those targets.
5. Shaping a cyber-savvy workforce and moving beyond passwords in partnership with the private sector.

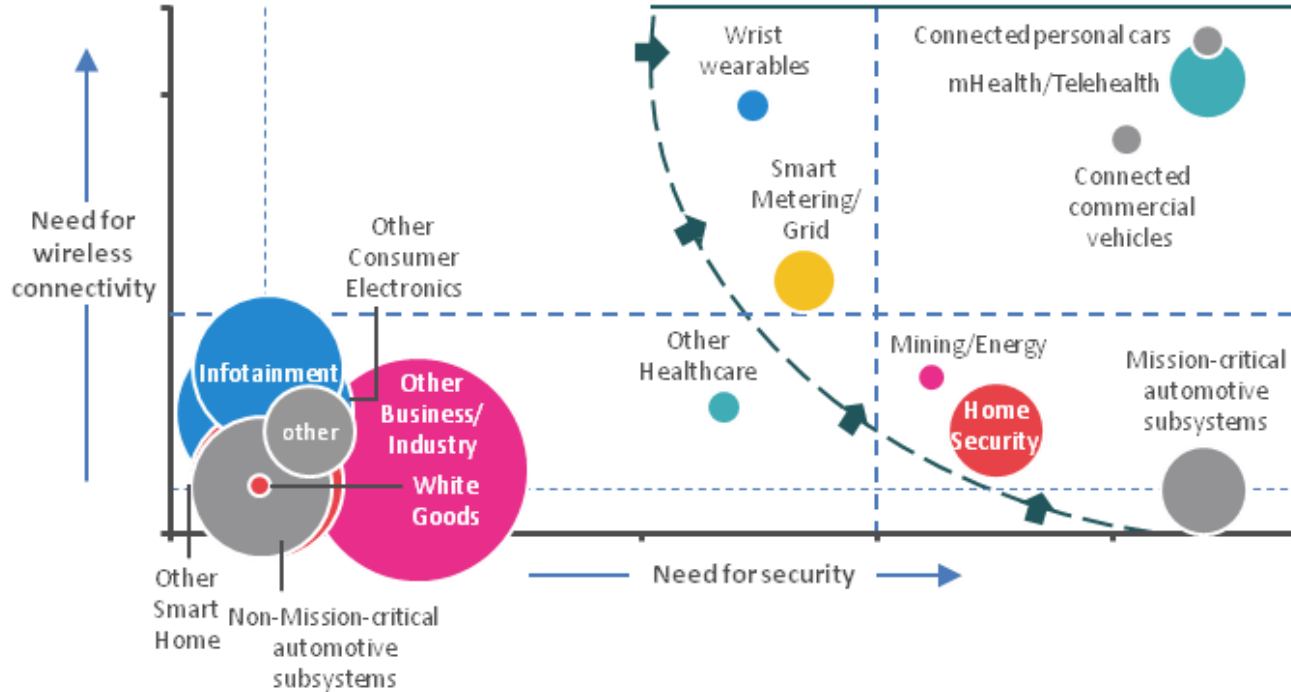
Strive for Multi-Factor Authentication

We Live in a World of Mobile Object and Connected Things

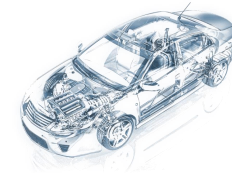
The increasing number of
connected devices leads to a vital
need for Cyber Security



IoT a Market with Emerging Security Requirements



**Some Also Speak of
the Internet of
Payment Things**



Cyber Terrorists, Hackers and Criminals Threaten the World We Live In



Sony PlayStation® breach

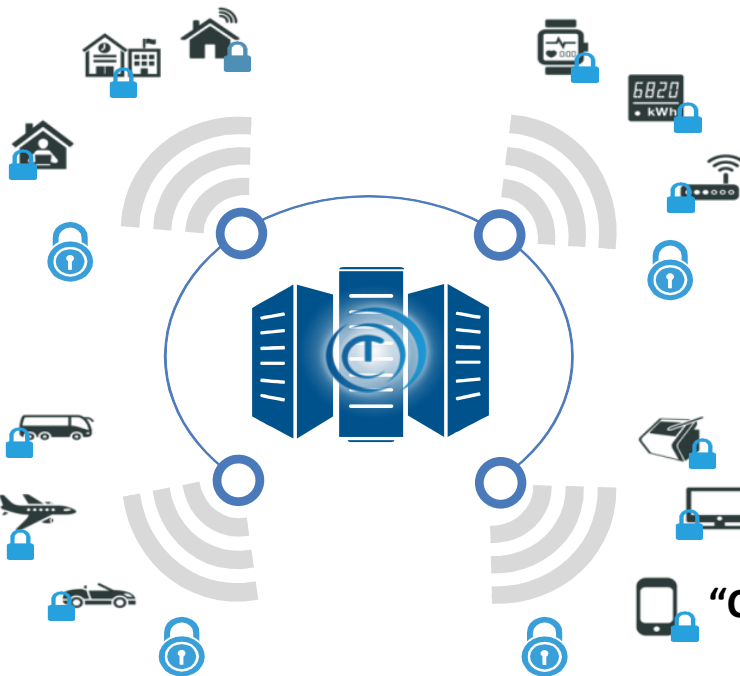
77m user accounts infiltrated by hackers
Walking away with personal information



Target breach

70m customers' personal banking credentials
stolen from one of the leading retailers

Aetna



Connected European Auto Maker hacking

"A security breach left doors
of 2.2m vehicles wide open to hackers"



>45% of fraud linked to
"Card Not Present" Transactions

Connected SUV hacking

"US auto make recalls 1.4m vehicles after two hackers
were able to take control of an SUV over the internet"

OPM

Multi-Factor Authentication

- Something You Have ✓ The Token = Card/Phone
- Something You Know ✓ The Secret = PIN/Password
- Something You Are ✓ Biometric = You

EMV, PIV, ICAO, eID, FIDO ... Require

- ✓ The power of cryptography
- ✓ The flexibility of software
- ✓ The security of hardware

Hologram

Infra Red Ink

Magnetic Stripe

Authentication

What You Have

cvv1/cvc1
&
cvv2/cvc2

Verification

What You Know

Match In
PIN

Online
PIN

Authorization

Are You Able

Credit
Limit

Available
Balance

**The Card Once Acted as
“The Token”**



EMV Restored “The Token”

Circa 1996

EMV Was Not Designed To Assure Merchant Choice



US Debit Card One Account

1. Visa
2. Pulse
3. Shazam
4. Star

**Route and AID
are Linked in
the Payment
Network Rules**

**Consumer
Selection**

PSE – Payment Systems Environment
AID – Application Identifier

10/6/2017

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The EMV Proposed a Framework Solving for Signature or PIN Debit and Supporting Merchant Routing Choice

1. Out of the Box EMV
2. As Today
3. PIN Steering



\$132.95
Pay With?

1. US Debit

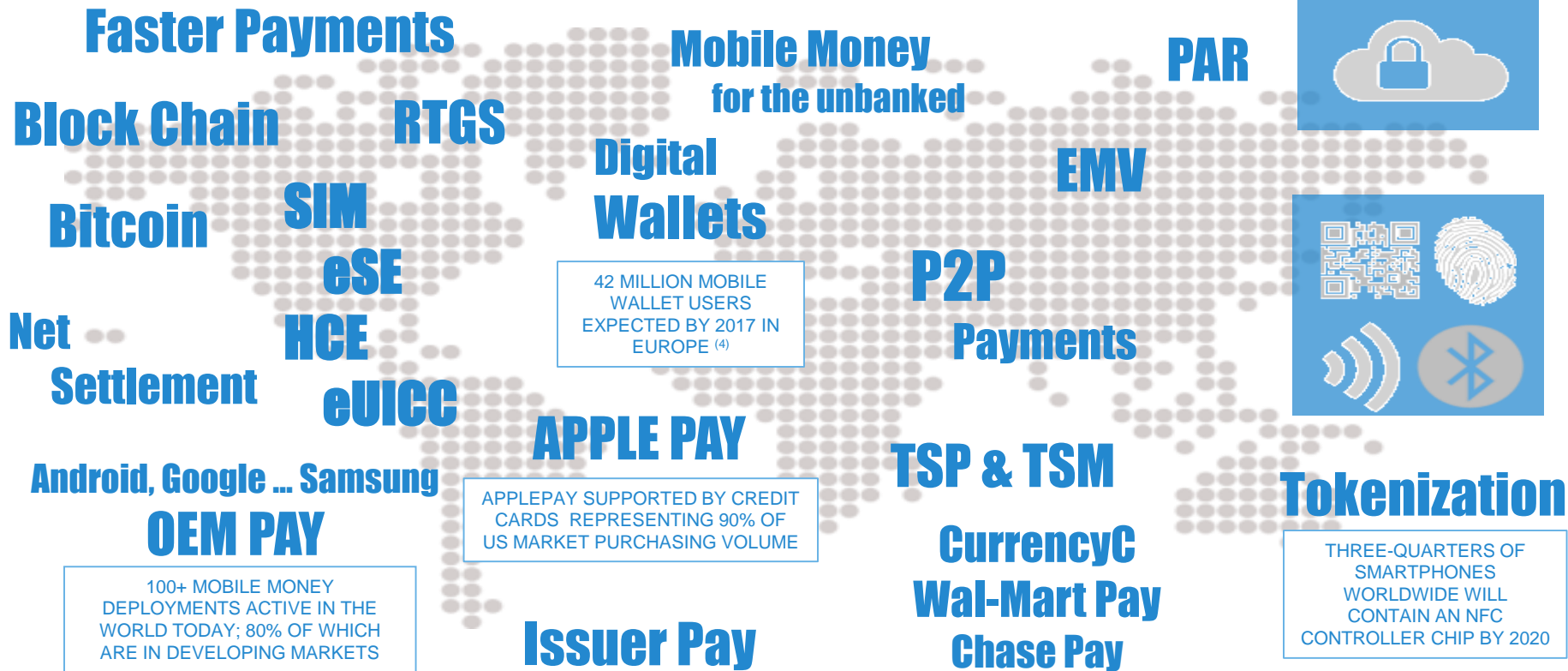
OK?

**Consumer
Selection**

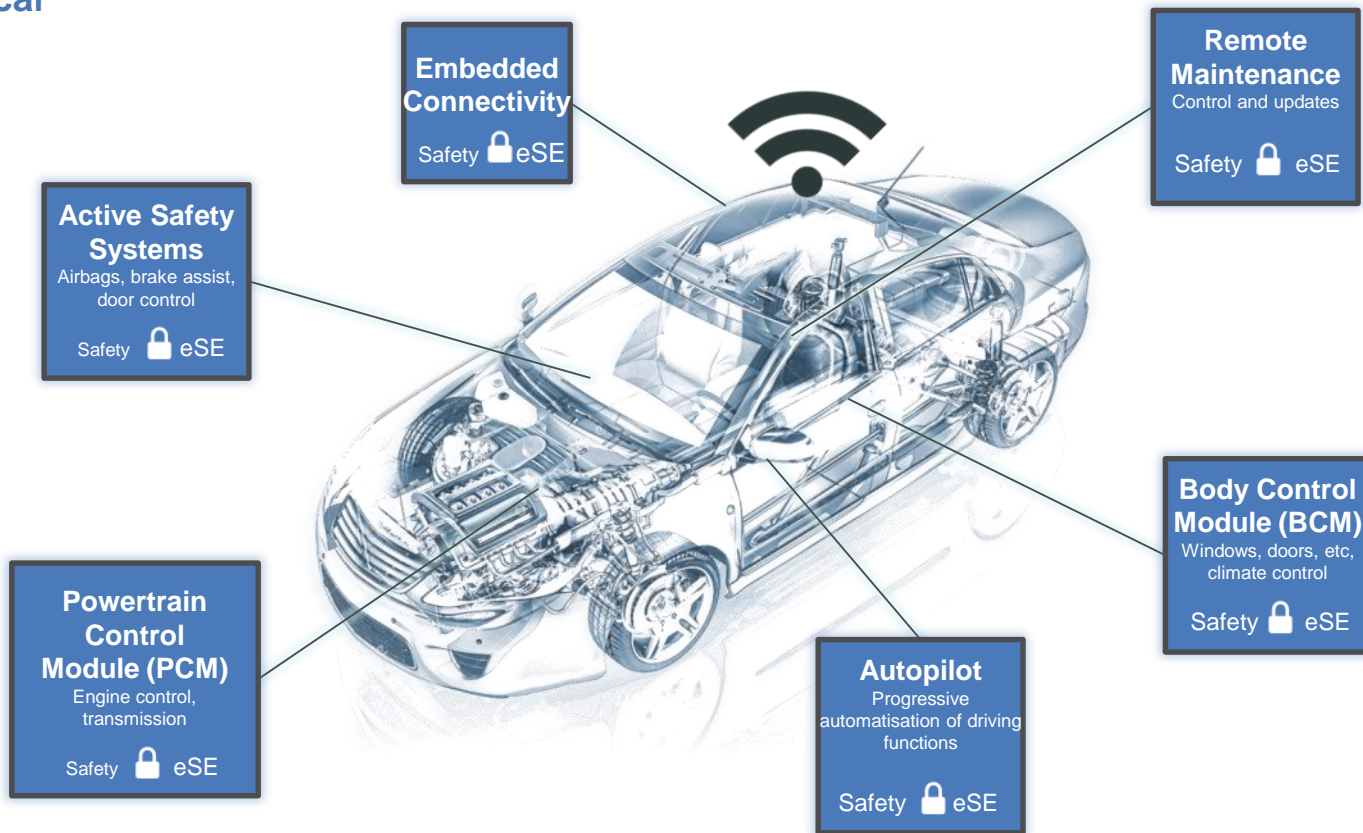
PSE – Payment Systems Environment
AID – Application Identifier

10/6/2017

In Payment Innovation Never Stops



The Car is Already Connecting, Authenticating & Paying



The World Wide Web Broke The Token EMV Protected



**ON THE INTERNET
THE TOKEN IS NOT PRESENTED**

Two Factor Authentication for the Internet

One Time Passwords

COSMO DISPLAY ONE



COSMO DISPLAY TWELVE



Motion Code the DCVx Solution



Motion Code Is an Innovative, Easy to Use, and Efficient Tool to Prevent Online Fraud

50%	MAKE MORE THAN 5 CNP TRANSACTIONS PER MONTH	
61%	WERE VICTIMS OF CNP FRAUD	<i>54% were debited >\$150 52% changed their online shopping behavior afterwards</i>
80%	WOULD BE MORE LIKELY TO USE A MOTION CODE CARD	<i>VS. A STANDARD CARD, FOR ONLINE SHOPPING</i>
60%	ARE READY TO PAY FOR MOTION CODE	

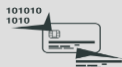
Source: OT survey conducted in December 2015

Motion Code survey conducted in the USA on a sample of 231 people

SECURING PAYMENT DIVERSITY



**All payment
cards**



**Personal
ization**



**OT MOTION
CODE™**



**Mobile
Payment**

Financial Services Institutions

MISSION

- REDUCE PAYMENT FRAUD
- DRIVE EMV MIGRATION WORLDWIDE
- ENABLE SECURE MOBILE PAYMENT SOLUTIONS

MARKET POSITION

#2

SERVES 18 OF TOP 25 FINANCIAL INSTITUTIONS

SAMSUNG
pay



BLUE-CHIP CUSTOMER BASE



HSBC



Westpac

Bank of America



Orange
Cash

Santander

BNP PARIBAS

falabella.



INNOVATION FRONT-RUNNER



SECURING MOBILE CITIZENS' IDENTITY



**CITIZEN
ACCESS
& IDENTITY**



Access cards



ID cards



Driver Licenses



Passports

**Enrollment
system**

Citizen Access & Identity

MISSION

- FIGHT COUNTERFEITING
- PROVIDE GOVERNMENTS INCREASINGLY WITH TURN-KEY SOLUTIONS
- BORDER CONTROL

MARKET POSITION

ONE OF THE TOP 5 GLOBALLY

BLUE-CHIP CUSTOMER BASE



Uzbekistan



INNOVATION FRONT-RUNNER

LASINK 

SECURING THE WORLD OF INTERNET OF THINGS



**Smartphones
(eSE)**



**IoT / M2M
(eUICC)**



**Remote
management
of secure objects**

Connected Device Makers

MISSION

- ENABLE CONNECTED DEVICE MAKERS & SERVICE PROVIDERS TO CREATE & MANAGE THEIR ESTATE OF CONNECTED OBJECTS
- ENABLE EMBEDDED SECURITY TO CRITICAL APPLICATIONS IN THE FIELD (E.G. AUTOMOTIVE)
- PROVIDE SECURITY & CONNECTIVITY FOR APPLICATIONS

MARKET POSITION

LEADING PROVIDER TO
ANDROID SMARTPHONE MAKERS (eSE)
c. 70% eSE market share in the Android ecosystem

BLUE-CHIP CUSTOMER BASE



INNOVATION FRONT-RUNNER



M-CONNECT

SECURING TECHNOLOGIES ENABLING MOBILITY



SIM cards



**Mobile
Money**



**Remote
management
for MNOs**

Mobile Network Operators

MISSION

- SECURE CONNECTIVITY FOR MOBILE COMMUNICATIONS
- DEVELOP NEW TECHNOLOGY TO ENABLE REVENUE STREAMS FROM M2M & MOBILE PAYMENTS

MARKET POSITION

#2

SERVES 8 OUT OF TOP 10 MNOs

BLUE-CHIP CUSTOMER BASE



INNOVATION FRONT-RUNNER

M-CONNECT

OT: Driven to Bring Innovation to Help Our Clients



**FINANCIAL
SERVICES
INSTITUTIONS**



#1

in Payment
Innovation
by ABI Research



**MOBILE
NETWORK
OPERATORS**



M-CONNECT

Among the **1st**
players to
introduce GSMA
compliant solution



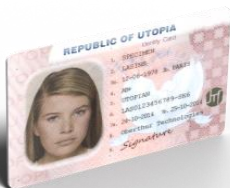
**CONNECTED
DEVICE
MAKERS**



#1
player in eSE with
c. 70% market
share in Android



**CITIZEN
ACCESS
& IDENTITY**



LASINK 

#1

rated product by
Frost & Sullivan

**Services
Enablement
Platforms
(UCP)**



**WE ARE COMMITTED
TO DELIVER THE FULL
POTENTIAL OF MOBILITY
TO OUR CLIENTS.**

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