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MOBILE SECURITY

Voice biometrics, Secure elements…

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01

OT

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3
BILLION M2M DEVICES
IN 2013

+ 1 BILLION
PAYMENT CARDS
ISSUED IN 2012

BY 2016,
90%
OF PASSPORTS
WILL BE
ELECTRONIC

5,6
BILLION SMARTPHONES
By 2019, there will be 9,3
billion mobile telephones
around the world, which
60% will be Smartphones.

Mobility is not just a fact of life, it's a way of life

MOBILE PAYMENT
VOLUMES
$ 202 BILLION IN 2012

+ 150 MILLION
CONTACTLESS ID CARDS
ISSUED IN 2012

700
MILLION NFC
PHONES SOLD
BY 2016

Leveraging our expertise in Payment, Telecoms and Identity

PAYMENT

500
MILLION BANKING CARDS PRODUCED

REFERENCES:
MORE THAN 2000 FINANCIAL INSTITUTIONS

IDENTITY

+ 100
REFERENCES

TELECOM

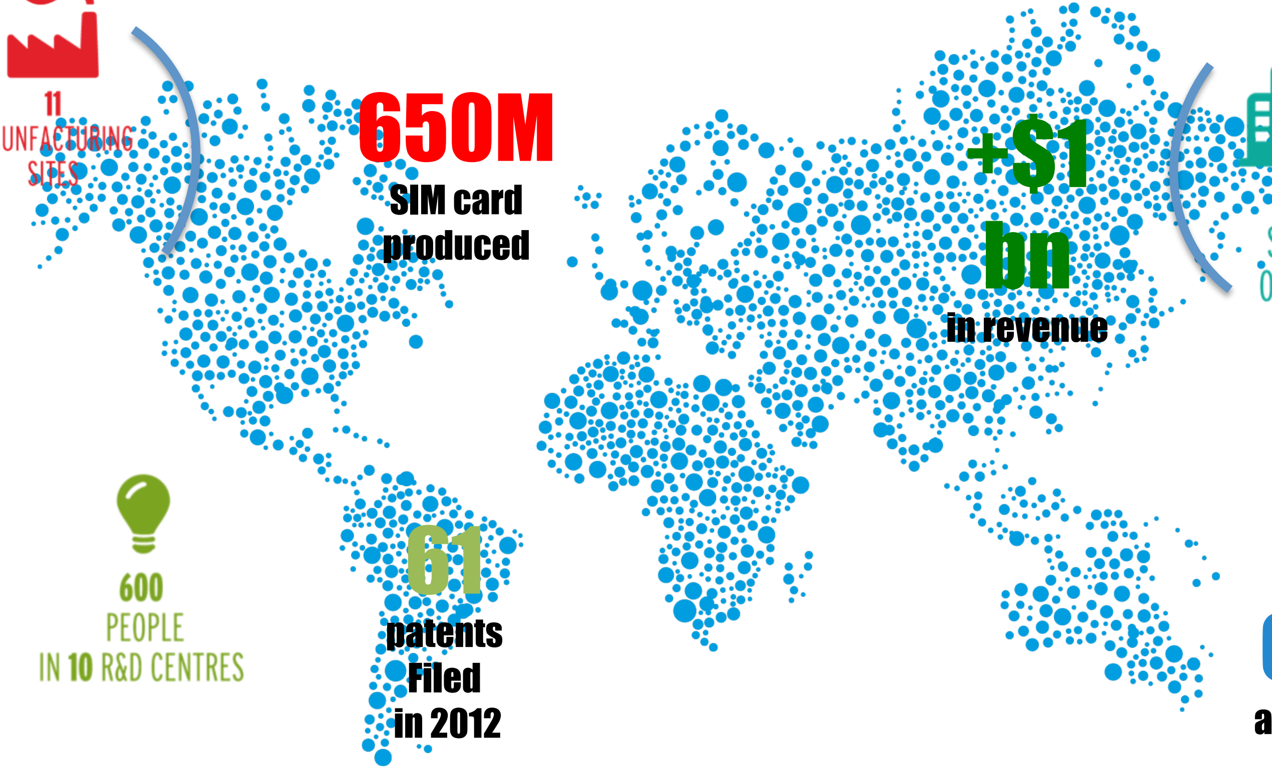
650
MILLION SIM CARDS PRODUCED

REFERENCES:
MORE THAN 400 MOBILE OPERATORS (INCL. 8 OF TOP 10)

ONE-SYSTEM NETWORK OF 39 SERVICE CENTRES

20 YEARS + EXPERIENCE IN PERSONNALISATION SERVICES

OT, an agile worldwide leader



11
MAUNFACTURING
SITES

650M
SIM card
produced

+$1
bn
in revenue

+ 50
SALES
OFFICES

600
PEOPLE
IN 10 R&D CENTRES

61
patents
Filed
in 2012

64 %
are located
outside
Europe

We are transforming ourselves

- Our environment is disrupted by the explosion in mobility
- We develop and manage new digital security solutions to protect digital assets of our customers and their end-users
- We don't just sell security anymore, we sell mobility and that's where the future market value lies

SECURITY IS CENTRAL AND ESSENTIAL

Mobile Operators

Global companies

Device manufacturers

Governments

Banks & other Service Providers

Payment Schemes

Other such as Semi-conductors companies

Retailer, transport …

Mobile security can be achieved with security experts

“ major attack could have a significant impact on market development and public trust

02

MARKET

Security

Google

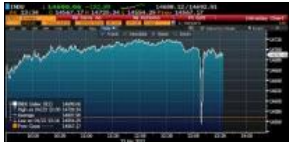
LinkedIn

SONY

ebay

facebook

twitter



Microsoft

Adobe

...

HACKED

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MASSIVE HACK ATTACKS SHOW MAJOR FLAWS IN TODAY'S CLOUD SECURITY

TARGET

110 million shoppers' data

orange™

800 000 personal data stolen

RSA®

40 million employee records stolen

Travelodge

UK database hacked, clients' e-mail addresses and names exposed

ESTsoft

Exposure of names, passwords and other personal information of 35 million Koreans

TRICARE SAIC From Science to Solutions

Medical and financial information of 5.1 million individuals stolen

NASDAQ®

Breach enabled monitoring of boardroom-level communications of more than 10,000 executives

O_2

Customers' phone numbers were logged and exposed to website publishers

LinkedIn

Files containing 6.4 million LinkedIn members passwords were found on hacker websites

PlayStation® Network

77 million e-mail addresses and credit card data stolen

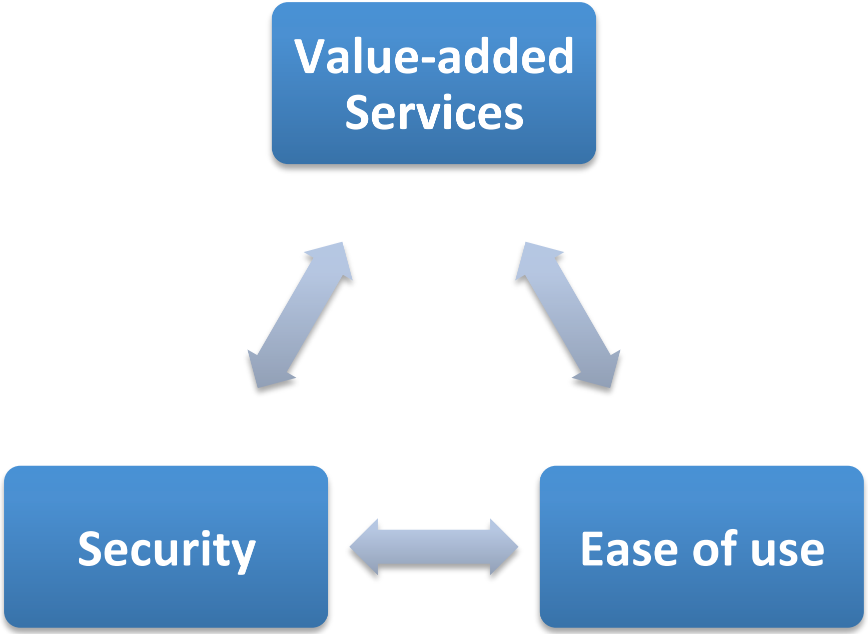
Source: BCG and others

SNAPCHAT HACK

- January, 2014: Hackers have posted account info for 4.6 million users of Snapchat, making usernames and at least partial phone numbers available for download.

> "Our motivation behind the release was to raise the public awareness around the issue, and also put public pressure on Snapchat to get this exploit fixed. It is understandable that tech startups have limited resources but **security and privacy should not be a secondary goal. Security matters as much as user experience does**," the hackers said in a statement to technology blog TechCrunch.

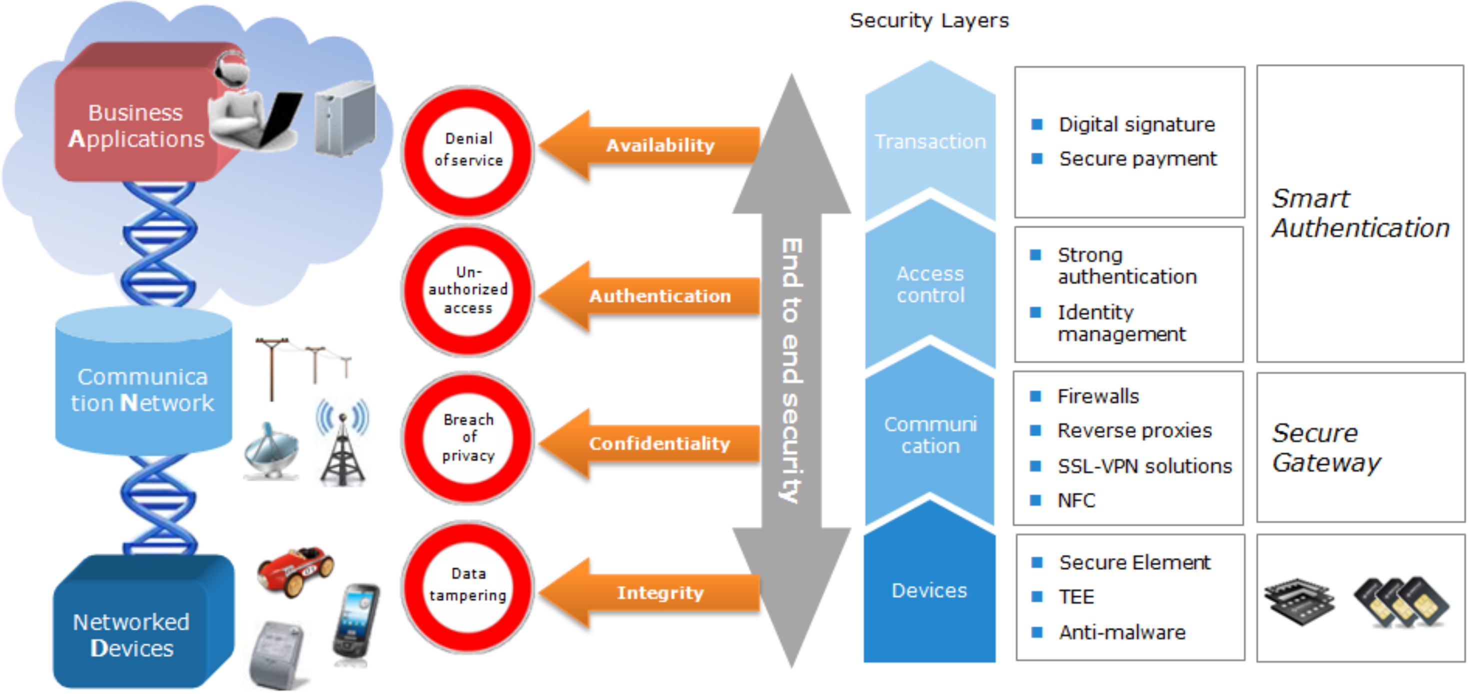
- Data is “the new oil”
- Data protection is the 1st first problem of the Cloud
- Mobile: legitimate device
- Ease of use, biometrics, contactless


Value-added Services

Security

Ease of use

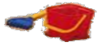
SECURITY THREATS AND RESPONSES



End to end solutions should be **secure by design**

In order to play (safely)…

… An end to end offer is needed

- SE to secure, store what is valuable 

- Execution Environment to play safely (TEE…)

- Solutions to update the toys, clean and change the sand

02

MARKET

Biometrics

IPHONE 5S TOUCHID

Fingerprints

Success

Touch ID is ready. Your print can be used for unlocking your iPhone.

Continue

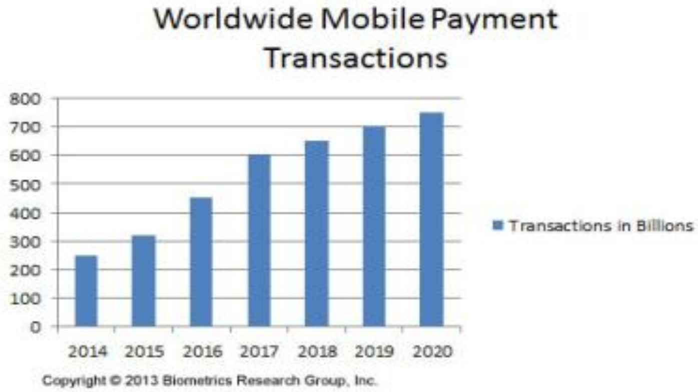
SPOOFED

2014: Over 90 million smartphones with biometric technology will be shipped

(source: Biometrics Research Group)

- September 13, 2013 - Mobile commerce will drive millions of biometric smartphone shipments, billions in transactions. The research consultancy expects that worldwide mobile payment transactions will reach $250 billion in 2014, reaching $750 billion in annual transactions with more than 700 million users by 2020.

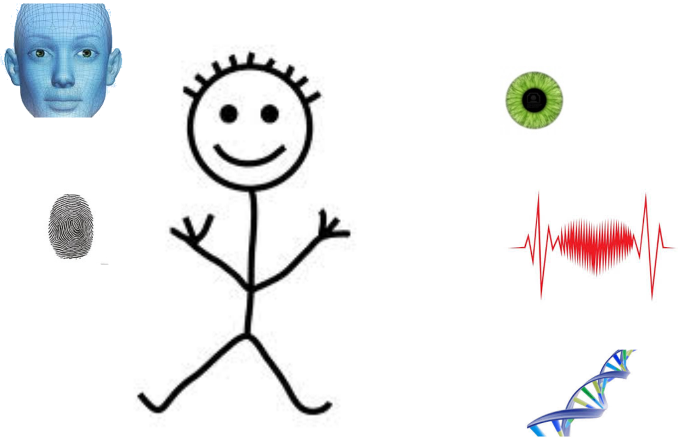
> "A major attack could have a significant impact on market development and public trust



OT IS BIOMETRICS TECHNOLOGY AGNOSTIC

OT supports is agnostic: fingerprint (PIV), voice….

- Physiological features
  - Fingerprint
  - Face recognition
  - DNA
  - Palm print
  - Palm vein
  - Iris recognition
  - Voice recognition
  - Heart rate
- Behavioral features
  - Typing rhythm
  - Gait



OT is biometrics technology agnostic, but Voice is specific

- **It only takes a microphone** - no need for a specific device type (i.e. Smartphone)

  ➔ Banks all over the world are interested!

- **Easy Revocability** - Voice biometrics is a two-factor authentication: voice + passphrase

  ➔ just change the passphrase!

  - When you only have 10 fingers, 2 irises, etc...

- Strong **Anti-Spoofing** capabilities thanks to Agnitio's technology.

  ➔ A recorded voice doesn't work as there is no "blank voice". If there is a change in the chain (recorder, speaker), it is recognized

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03

MOBILE SECURITY

My voice is my password

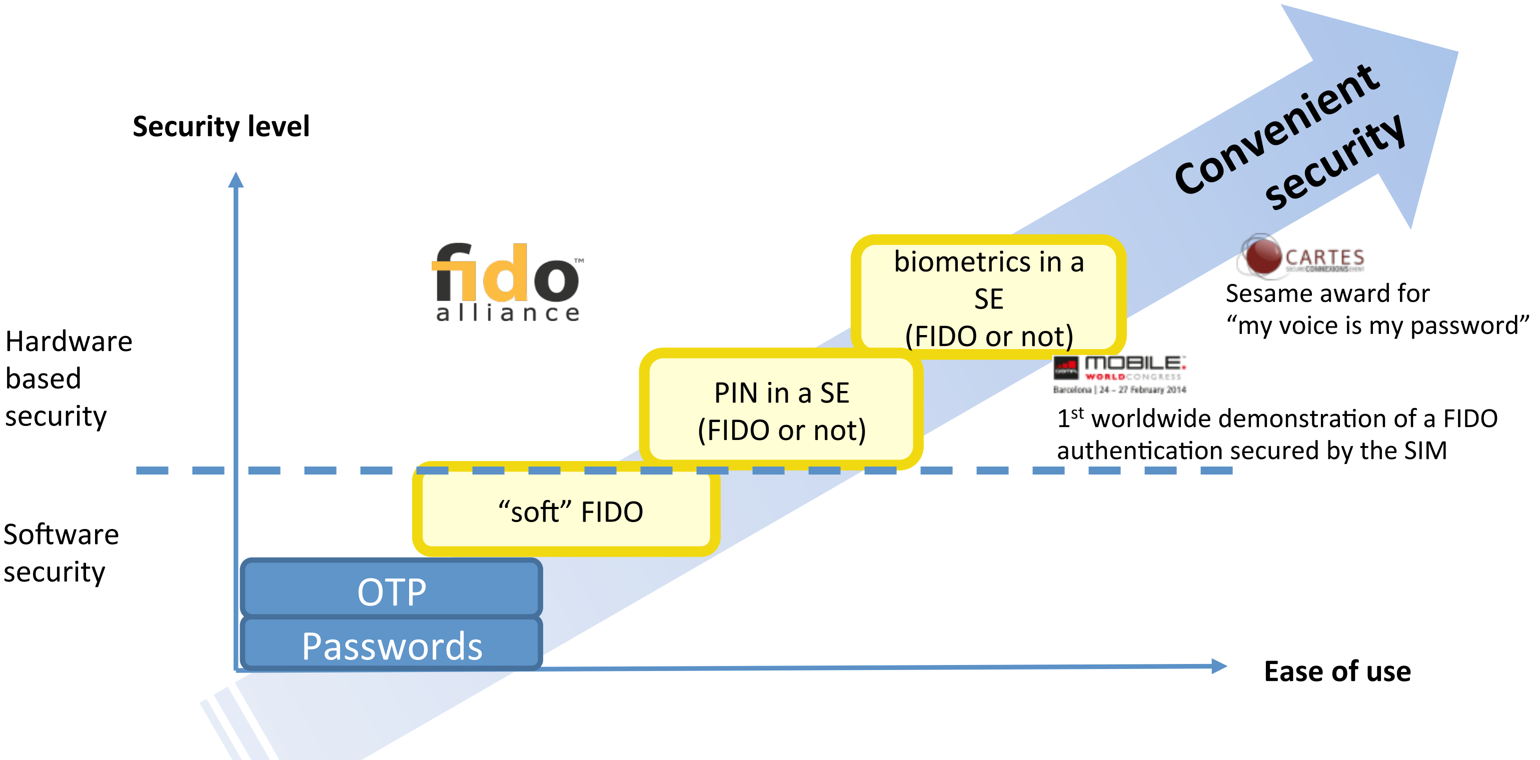
AT&T
6:02 PM
SMS
Text
27
Calendar
Photos
Camera
YouTube
Stocks
Maps
Weather
Clock
Calculator
Notes
Settings
AIM
Mail
App Store
iTunes
Phone
Safari
Apps
iPod
San Francisco
End Call

Is it secure?

ONLY TRUSTWORTHY ELEMENT IN A MOBILE PHONE?

A hardware element

AUTHENTICATION SECURITY LEVEL: USE CASE DEPENDANT



Security level

Ease of use

Hardware based security

Software security

Convenient security

Passwords

OTP

“soft” FIDO

PIN in a SE (FIDO or not)

biometrics in a SE (FIDO or not)

1st worldwide demonstration of a FIDO authentication secured by the SIM

Sesame award for “my voice is my password”

SE: Secure element, FIDO authenticator : SIM, eSE

OT's proposition for a safer Cloud

- OT increases the FIDO framework security thanks to the SIM, the universal trustworthy element in the mobile phone
  - **World's first** Fido authenticator in the SIM: in demonstration at #MWC2014
  - Voice biometrics: "My Voice is My Password" **Cartes 2013 Sesame Winner**
  - Providing end-to-end security (server + client)

Trusted partner,
providing end to end
convenient security, privacy,
data protection services

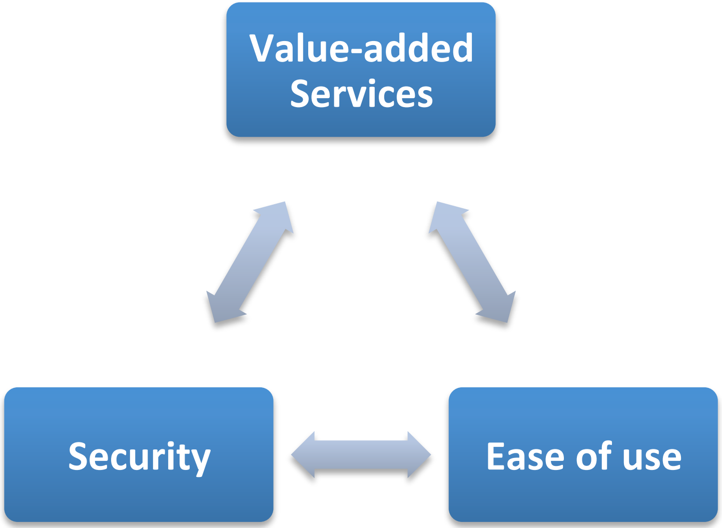
04
CONCLUSION

TRUST IS THE MOST IMPORTANT
ONE QUESTION : WHO HANDLES THE RISK?

fido alliance

natural security

SECURE IDENTITY ALLIANCE



"Security as a service"

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THANK YOU!