



Research Priorities

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Gemalto at a glance

€2.4bn

revenue 2013

2bn+

end-users benefit from our solutions

12,000

employees worldwide

110+

patents and patent applications in 2013

86%

customer satisfaction in annual survey

190 countries

where our clients are based

The world of IT /digital security has immense potential

M2M

Connected Devices

Enterprise M2M Connections

2010-2015
26% CAGR¹
4,5 B connected devices⁵

M2M Service Platform

Interface streamlines machine data to customer IT systems

Mobile Communication

Next Generation Networks

1 B LTE connections 2017⁴
28 B\$ Mobile Payment Growth in number of global users

2009 **4.6** billion cellular subscriptions²
2013 **7** billion cellular subscriptions²
14% CAGR

Secure Transactions

Worldwide EMV Migrations

From Magstripe Wealth accumulation Dual Interface

Increases Addressable Market **Improves Product Mix**

only 16% **2012 Global EMV Penetration³**

Security

Electronic Identity

eID extends beyond ePassport

E-ID card owners 2015
2,5 B Global eDocument Penetration⁴

Mobile Financial Services

2012-2016 CAGR **20%**

Mobile payment users² Carrier Billing Banking the Unbanked Mobile Contactless EMV

Cloud Access Security

2012-2013 CAGR⁴ **26%**
Cloud IT spending

Mobile Credential Management

Over-the-Air management needed for handsets and mobile devices

>400 3G networks²

1,5 B TSM users

eBanking and eCommerce

Convenience and security concerns drives demand from:

Banks + eMerchants
34 B\$ e-commerce

2012-2015 CAGR⁴ **16%**

More and more everyday services require trust – by securing identities-a must in smart-cities

Billions of people can communicate, travel, shop, bank, work and play because they know their unique identities are secure



Mobile services



Payment security



Online banking



Secure cloud access



Identity and privacy



Electronic government



M2M applications

Securing smarter payment solutions

Financial Services and Retail



- Payment via contact, contactless and NFC devices
- Payment from Multiple SE
- EMV card programs
- Mobile financial services
- eBanking and eCommerce
- eTicketing for public transport
- Dedicated secure services (remote)



3000+

Financial institutions
use our solutions

Helping public services go digital



Government

- Citizen ID solutions and services
- ePassports, eID cards, eDrivers' licenses, eHealth cards
- eGovernment infrastructure
- Voter registration
- Border and visa management
- Mobile ID



90%+

of passports will have a smart chip by 2016

80+

eGovernment programs

Accessing data securely anytime, anywhere

Identity and Access



- Secure access to digital and physical resources
- eIDs and portable devices
- Online authentication and digital signature
- Single sign-on for Cloud access
- e-ID wallets
- Solutions for healthcare, trading floors, executives and emergency services



80%+

of smartphones
used for work are
employee owned*

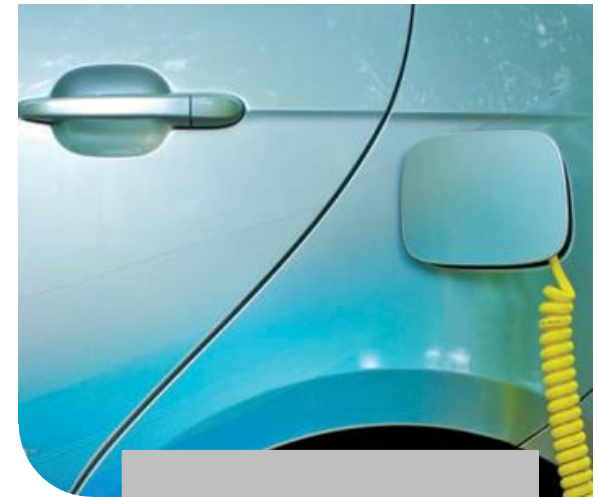
*McKinsey & Co

Bringing intelligence to devices and assets

Machine-to-Machine (M2M)



- M2M solutions for automotive, healthcare, transport, logistics, energy and other industries
- Wireless M2M and Machine Identification Modules (MIM)TM
- Enablement and delivery
- Subscription and device management



4.5bn

connected
machines by 2017*

*Ericsson

New mobile services

Mobile



- Embedded software, products and secure elements , multiple SE support, coexistence with HCE
- User authentication, data protection, service enablement
- mFinance, mCommerce, mMarketing, mID, personal Cloud
- Subscription management, roaming, messaging, quality of experience, operator billing
- Testing, integration, new business models, training and consulting services



450

mobile operator
clients

Major R&D areas for Business Groups



✧ Mobile/

- ✧ NFC : technology and services around TSMs plus TSM
- ✧ LTE infrastructure (UICC, OTA), Capillary Networks, ad-hoc networking security
- ✧ Trusted execution environment and e-SE
- ✧ Mobile services framework and security
- ✧ Tablets and smartphone environment

✧ M2M

- ✧ Module technology
- ✧ Remote management, privacy
- ✧ Device management and On-demand Connectivity
- ✧ Social networks and IoT



✧ On Line Authentication

- ✧ E-Identity management
- ✧ Physical and Logical access control
- ✧ Personal data storage
- ✧ Split/Removable trusted computing



✧ E-Government programs

- ✧ IAS-ECC full ecosystem and Interoperability
- ✧ Next generation passports, e-ID, e-Journey
- ✧ Match on Card Biometry
- ✧ e/m-health

✧ Secure transactions

- ✧ EMV + digital signature
- ✧ Display cards



Cross BL common R&D Activities

✦ Generic

- ✦ Contact-less technologies
- ✦ Cryptography and security technologies (active/passive)
- ✦ Privacy management
- ✦ Formal method for certification
- ✦ ID-related cyber-security

- ✦ Mobile ID and Security
- ✦ Cloud Computing security (e.g. on the top of Openstack, or CF/Docker)
- ✦ Wearable computing

- ✦ New packaging, additional components (displays, passive,..)
- ✦ Physical security characterization
- ✦ Printed electronics

