In an increasingly connected society, Gemalto is the leader in making digital interactions secure and easy.
“In the very adverse 2009 economic environment Gemalto further improved its profitability. Strong focus on value creation for our customers and operational efficiency translated into meaningful gross margin improvements. We again demonstrated our ability to generate strong cash flows. The return to a positive trend in the fourth quarter is a good sign for the start of our 2010-2013 Development Plan. And at the 2010 shareholders’ meeting, we are proposing the first dividend distribution in our history.”

Olivier Piou
Chief Executive Officer
Gemalto is at the heart of our evolving digital society. The freedom to communicate, travel, shop, bank, entertain and work – anytime, anywhere, and in ways that are convenient, enjoyable and secure – has become an integral part of what people want and expect. Gemalto meets these growing demands of millions of people worldwide by offering our products and services through the following segments:

<table>
<thead>
<tr>
<th>Segment</th>
<th>Solutions</th>
<th>Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Communication</td>
<td>• A unique portfolio of Subscriber Identity Module (SIM) and Universal Integrated Circuit Card (UICC) based solutions for Mobile Network Operators (MNOs) and ‘virtual’ operators.</td>
<td>Telecommunications: the world’s leading supplier of SIM cards, software and services to the mobile industry, we deliver a vast range of solutions to address the increasingly complex ecosystem of digital communications that now serves nearly 5 billion subscribers.</td>
</tr>
</tbody>
</table>
| Secure Transactions   | • Innovative and secure payment solutions for financial institutions and retailers.  
                        | • Rapid, convenient, contactless eTicketing solutions for public transport.  
                        | • Pay TV subscriber authentication and rights management solutions.  | Financial services and retail: the leading player in this sector, we deliver a wide range of chip card solutions and services to banks and other issuers with hundreds of millions of end-users.  
                        | Transport and Pay TV: we provide eTicketing solutions to governments and mass transit authorities; plus a range of Pay TV solutions to secure access service providers. |
| Security              | • Highly secure, durable products, solutions and services for Government Programs.  
                        | • Identity and Access Management (IAM) solutions for enterprises and other organizations. | Government: the world’s leading supplier of ePassports, we also provide secure electronic documents and services for eID, eHealth, eDriving license and other eGovernment programs.  
                        | Enterprise and eBanking: we provide secure Identity and Access Management solutions for enterprises and other organizations; plus a range of secure eBanking services. |
| Others                | • Point-of-Sale terminals and services for retailers.  
                        | • Phone cards for Public Telephony operators. | We provide POS terminals (including embedded software and related servers), technical support and maintenance services to restaurants, petrol stations and other retailers.  
                        | We sell a vast range of pre-paid cards and solutions for Public Telephony. |
### Highlights

- **Resilience in a cautious market with some customers delaying innovative projects.**
- **Software & services revenue up 15% at constant exchange rates.**
- **Gross margin improved, reflecting focus on value-selling and efficiency.**
- **Tight control on operating expenses offset consolidation of new activities.**

- **Return to growth in the fourth quarter.**
- **Special provision of €11m related to situation in Germany identified in January 2010.**
- **Increase in gross margin in the second semester due to improvements in product mix and personalization efficiency.**
- **Tight controls on operating expenses offset consolidation of new activities.**

- **Double-digit growth in revenue, driven by eID and eBanking.**
- **Significant gross margin improvements from better industrialization and stronger patents contribution.**
- **Security turned to profit for the full year, demonstrating operational leverage.**

- **POS terminals delivered solid growth.**
- **Public Telephony revenue declined in line with expectations and market trends, as mobile telephony progressively replaces public telephony around the world.**

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**Adjusted financial information** is a set of non-GAAP measures defined as IFRS financial information adjusted for reorganisation charges, amortization & depreciation of intangibles resulting from acquisitions, and acquisitions-related costs. Please refer to page 151.
Our vision

Our business model

Gemalto’s expertise spans the entire process for creating digital security solutions. We buy microprocessors, develop operating systems and software, and produce and personalize secure devices – of which we have already delivered 11 billion worldwide. We continue to innovate with new forms and architectures, and expand our software and services offering for operators who want to provide secure, convenient services to consumers.

Research & Development

Solutions, software and services

Value-added services

Software and services
Gemalto’s expertise and experience in the field means we are uniquely placed to offer a range of services around identity and security management. We design and implement entire solutions that include software, hardware, training and support. We also help clients to exploit the increasingly powerful capabilities of our SIM, UICC and smart cards with additional services delivered over the useful life of each device.

R&D centers

11

Digital scientists

1,400

Gemalto’s internationally renowned team of security and cryptography experts leads the way in the design and implementation of new anti-fraud solutions certified to the highest standards.

Personalization facilities

30

Personalized devices
Gemalto is a trusted partner for the individual personalization of millions of secure personal devices daily, certified to the best security level practices. Our issuance and post-issuance services oversee each step in delivering them all the way to the end-user, as well as replacing and upgrading them once in the field.

Production sites

18

- Complete range of smart cards, banking cards, identity documents, etc.
- Point-of-Sale (POS) terminals, USB dongles and other hardware.

Generic cards

32

Number of publicly funded research projects Gemalto participated in during 2009.

103

New inventions first filed in 2009. (2008: 80)

4,500

Patents and patent applications in our patent portfolio, representing about 1,200 patent families.

Licensing of intellectual property
We continue to innovate with new forms and architectures, and provide complete solutions for secure, convenient services.

Partner network

www.gemalto.com

Technology partners:
Develop products (hardware and/or software) that are complementary to Gemalto’s. Technology partners and Gemalto commit to making their products interoperable and engage in co-marketing activities.
Our vision

Annual Report 2009

Gemalto

Solutions, software and services

Markets

Gemalto leverages its business model in a wide variety of markets

- Telecommunications
- Finance services and retail
- Transport and Pay TV
- Government
- Enterprise

Consumers

1.4 billion
Secure devices produced and personalized in 2009.

350 million+
People currently carry a Gemalto EMV card worldwide.

120 million+
Contactless travel cards supplied to date worldwide.

2 million+
POS terminals sold to date in more than 25 countries.

Original Equipment Manufacturers: Companies that embed and resell Gemalto technologies in their own products with their own branding.

Business partners: Resell and market Gemalto products and services.

Solution partners: Develop solutions based on Gemalto products and technologies using Gemalto development tools and references.

EMV: EuroPay, MasterCard, Visa: the industry standard for international debit/credit cards.

www.gemalto.com
Gemalto’s global presence is key to the way we serve our clients, with our sites and facilities strategically spread across every continent. Beyond this, it’s our employees of some 90 nationalities, and our worldwide network of partners, who make the difference. So wherever our clients are based, we’re not far away and we speak their language.

**Key figures**

- **77** Sales and Marketing offices
- **90** Nationalities
- **10,000** Employees
Europe and CISMEA

Europe
- Belgium: Brussels
- Czech Republic: Prague
- Denmark: Ballerup, Copenhagen
- Finland: Vanta
- France: LaCiotat/Gemenos, Meudon/Versailles, Poit-Audemer, Sophia-Antipolis, Tours
- Germany: Filderstadt, Ismaning, Overath
- Hungary: Budapest
- Ireland: Dublin
- Italy: Agrate Brianza, Milan, Rome
- Netherlands: Amsterdam
- Norway: Oslo
- Poland: Tczew, Warsaw
- Spain: Barcelona, Madrid
- Sweden: Stockholm
- UK: Fareham, Ferndown, Havant, London, Warrington

CISMEA
- Egypt: Cairo
- Kazakhstan: Almaty
- Oman: Muscat
- Pakistan: Lahore
- Russia: Moscow, Saint-Petersburg
- Senegal: Dakar
- South Africa: Cape Town, Johannesburg
- Turkey: Istanbul
- United Arab Emirates: Dubai

Asia
- Australia: Sydney, Melbourne
- Bangladesh: Dhaka
- China: Beijing, Changsha, Guangzhou, Hong Kong, Shanghai, Taipei, Taiwan, Tianjin, Zuhai
- India: Bangalore, Mumbai, New Delhi, Noida
- Indonesia: Jakarta
- Japan: Tokyo
- Korea: Seoul
- Malaysia: Kuala Lumpur
- Philippines: Makati
- Singapore: Singapore
- Thailand: Bangkok
- Vietnam: Hanoi

For full details of each of our locations, www.gemalto.com
Chairman’s statement

Against a difficult economic backdrop, Gemalto delivered strong results in 2009. This underscores the success of the Company’s strategy and is a tribute to the hard work and creativity of its management and employees.

“A strong performance

I’m delighted to report that Gemalto performed well during 2009 despite a highly challenging environment. The fact that the business has expanded profitability against this dismal economic backdrop is a significant achievement.

Although the Company has delivered improved margins and impressive cost control, growth remains a major priority. We are targeting organic opportunities both through innovation and higher sales in our existing operations. Acquisitions will also enable us to expand quickly into new areas. In addition, we will continue to build on the expertise, experience and leadership of our world-class management team which recognizes that this kind of growth is essential to maintaining the Company’s momentum.

A sign of the quality in this team is the way it has intelligently navigated the challenges of the past year. Gemalto is a truly global player, and part of our strategy has been to take strong positions in markets that have been resilient during the tough economy. Equally important, we have a wide range of services to offer our customers – and that has helped ensure we could stay on course despite the difficult economic conditions.

Winning new business

During 2009 Gemalto won significant new business with some of the world’s largest and most influential companies, due in no small part to this ability to provide mission-critical technology across a range of digital security needs. Our people’s willingness to apply their technological leadership to help clients move forward in their own markets has been reflected by excellent scores in our independent customer survey.

Paying a dividend

As a sign of our confidence in the Company’s development, in 2009 we announced our intention to pay a dividend for the first time. Although we should see improvements in most economies around the world during 2010, it’s unlikely to be a rapid or predictable recovery. But the Company is the leading player in an increasingly important sector, and it is well-placed to grow aggressively around the world. These are all hallmarks of a successful business with strong and effective leadership.

Finally, let me re-emphasize that this positive progress in testing times has only been made possible by our customers, employees, managers and supportive shareholders – so my most sincere thanks go to them all.

Alex Mandl
Chairman
Chief executive’s review

Gemalto’s performance in 2009 showed the value of our strategy and its resilience in turbulent times. Thanks to our strong relationships with our customers, and the skills and dedication of our people, we are well-placed to exploit the robust growth expected in the digital security market.

“Our objective remains simple: to grow and be the clear leader in digital security. We want to make it convenient and safe for people to live in the increasingly digital, wireless world.”

Passing the test

Gemalto is a successful, innovative company – the world leader in a digital security market that’s growing in size and importance. Last year we delivered on the objective we set for ourselves at the end of 2005: ‘over 10% adjusted EBIT in 2009.’ Throughout the tough economic environment of recent times we continued to improve our efficiency through a sound management-by-objectives approach, and, most importantly, a constant focus on customer satisfaction.

Our growth opportunities

Growth is a critical driver for our 2010-2013 Development Plan and a key management priority.

Because our markets are developing fast, organic growth is a key driver for Gemalto’s performance. We are seeing wireless capabilities embedded in an increasingly wide variety of devices. Our development of software and services for the wireless business space, building on our extraordinarily large installed base of remotely manageable SIM cards, is just beginning. Less than 20% of bank cards worldwide currently have embedded chips – at a time when fraud concerns make a compelling case for EMV. Consumer demand for convenient, secure eBanking and wireless access to financial services is vocal in many countries. Network access and rights management, particularly at the dawn of cloud computing, is another potentially powerful growth market, addressed by our Identity and Access Management solutions. And of course government agencies, now confident in their ability to manage secure digital documents and citizens’ digital credentials, are poised to extend the initial ePassport roll-outs to eID applications. These bring both significant cost reductions to agencies and convenience to citizens.

So there are many areas ripe for our organic growth. At the same time we continue to seek out bolt-on acquisitions. We look for new technologies, expert teams and new services to enrich the Gemalto offering. Our experience in integration, our global distribution channels and our excellent customer relationships enable us to develop these businesses quickly. Multos, for example, has already almost doubled in size since we acquired it in 2008. In 2009 we made several acquisitions to benefit our different segments: Trusted Logic and O3SIS are helping our Telecom business; Serverside strengthens Secure Transactions; and XIRING will reinforce our eBanking offer in Security.

Sustainability for business success

Trust is fundamental to what we sell. Since our solutions are usually mission-critical for our customers, they need to know that we will be there for them when they need us, and for many years down the road. A responsible attitude is therefore a must externally – and internally too. As an innovative company, we
need our people to develop a wide variety of skills in order to imagine and drive forward our offerings for customers. So we ensure that they are clear in their roles, have structured career progression, intellectual freedom to create and propose – and enjoy their work!

Sustainability, more generally, is embedded in Gemalto processes as the best way for us to be successful. Lean manufacturing, innovative biodegradable products, customer listening and satisfaction, prudent risk management and an ethical approach to conducting business, to name but a few, are essential parts of our offer. Our customers and their end-users expect that behavior and leadership from us, so it is both ethically sound and smart for our business. We are building the Company for the long term. That’s what our customers want, and what our shareholders want too.

Our businesses in 2009

In 2009, our Mobile Communication segment maintained its good level of profitability by delivering innovative products and services for its customers, and winning important contracts around the world. For example, a major operator in the US that did not previously use SIM cards, took the decision to adopt our UICC* technology for the roll-out of its 4G broadband network. That’s a huge breakthrough for Gemalto, and for the industry. Yet interestingly, a large number of innovations were first adopted in the new economies, like mobile money in Africa and mobile digital life-style services in Latin America. Our successes in these regions could not fully offset the significant reduction in spending by telecom operators in the most developed economies, but it bodes well for the near-term future.

Our Secure Transactions segment had to handle the crisis faced by its customers in financial services and retail. At the end of 2008 we had limited visibility on what the banking industry would look like just a few months down the line. Prudent management and close proximity with our customers allowed us to get safely through the turmoil, despite the uncertainty, with revenue even slightly increasing at constant exchange rates.

Our Security segment continued to do well, particularly Government Programs which posted a revenue increase of 18% in 2009. Identity and Access Management resisted well, focusing its efforts on the promising eBanking market. The segment reached break-even earlier than we expected, and was profitable in both semesters.

We continued to build on our now established foundations in software and services, and this helped us maintain momentum against the headwinds. Our achievements were acknowledged by many third parties in 2009, including our customers who accorded us record satisfaction ratings and Business Week which added Gemalto to its InfoTech 100 ranking of the world’s top IT companies.

There were many other notable successes too, including our POS terminals where sales grew 40% in 2009. And our cash management results, which enabled us to help some of our suppliers, invest in equipment for improved productivity, continue our share buy-back program, pay for six acquisitions and still add to our cash pile. All this was possible thanks to our particularly efficient inventory and receivables management, and of course to our strong generation of operational profit. We ended 2009 with €381 million of net cash, compared to €344 million at the end of 2008.

Our strategy

Our objective remains simple: to grow and to be the clear leader in digital security. Thanks to the internet, and to the many objects that simplify our daily lives, the world is already deeply digitalized – and it is also increasingly wireless. We want to make it convenient and safe for people to live in this world and make the most of it.

To do this we will grow beyond the products and services we already offer. That’s why a large part of our strategy is about software and value-added services. Gemalto’s primary business model was historically ‘sell and forget’: a cycle of repeated product sales. Of course we will continue to invent, enhance and sell our products in very large volumes worldwide, including in new fields like machine-to-machine (M2M) communication, and with new form factors. But we are now adding ‘life-cycle management’ software and services for the devices and applications users interact with daily. This will enable us to expand our revenue by building on our unique installed base, on our expertise to develop secure compact software and on our ability to deploy specific services for our customers, on a massive scale. These include Trusted Services Management, secure post-issuance download and activation of applications on cards and devices, and Over-The-Air remote management services for consumer data and for configuration of objects that are already deployed in the field.

We talk a lot about our customers in Gemalto, so a particularly rewarding moment for me in 2009 was receiving the results of our independent customer satisfaction survey, ‘Tell Me’. Our remarkably high scores in all segments and regions clearly place Gemalto in the ‘world-class’ category. Great credit goes to our people for embracing our customer-focused strategy so wholeheartedly.

With this year-end momentum, and management now focused on both revenue growth and profit expansion, I look forward to a period of strong progress for our new 2010-2013 Development Plan.”

Olivier Piou
Chief Executive Officer

* UICC = Universal Integrated Circuit Card

With this year-end momentum, and management now focused on both revenue growth and profit expansion, I look forward to a period of strong progress for our new 2010-2013 Development Plan.”

Olivier Piou
Chief Executive Officer
When Axalto and Gemplus combined in June 2006 (the ‘Combination’), we set ambitious targets for the new company. The objective was to have Gemalto fully integrated and delivering for shareholders, customers and employees by 2009. In three years we have not just completed the Combination – we have created the world leader in digital security.

<table>
<thead>
<tr>
<th>Target for 2009</th>
<th>What happened?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve EBIT margin above 10%.</td>
<td>• EBIT margin was 10.3% in FY 2009.</td>
</tr>
<tr>
<td></td>
<td>• Our target was reached one year early, with 10.1% EBIT in FY 2008, after operating income for the year doubled to €169m.</td>
</tr>
<tr>
<td></td>
<td>• All segments are now reporting profits, as a result of strong focus on value creation for our customers, operational efficiency and well-contained operating expenses.</td>
</tr>
<tr>
<td>Realize €85m of net synergies.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Target quickly achieved thanks to effective cost reduction measures and benefits of scale.</td>
</tr>
<tr>
<td>Open up higher-value revenue streams.</td>
<td>• Digital Security business transformed beyond smart cards in key high-value markets, not a commodity.</td>
</tr>
<tr>
<td></td>
<td>• Our internal start-up business, Security, developing high-value solutions for governments and enterprises, reported double-digit growth CAGR over the three years, reaching €248 million in revenue and turning to profit in 2009.</td>
</tr>
<tr>
<td></td>
<td>• Software and services grew significantly, reaching €144 million in 2009 or 10% of the Company revenue.</td>
</tr>
<tr>
<td>Reinforce operational excellence and efficiency.</td>
<td>• Successful consolidation of operations maximizes efficiency of our rationalized global footprint.</td>
</tr>
<tr>
<td></td>
<td>• Applied best practice in production cost control and sales optimization.</td>
</tr>
<tr>
<td>Create a unified organization driven by motivated teams.</td>
<td>• ‘One company’ culture successfully created, in part due to rapid post-combination integration program.</td>
</tr>
<tr>
<td></td>
<td>• Employee satisfaction continues to improve; low attrition rate post-combination means we retain key skills and relationships.</td>
</tr>
<tr>
<td></td>
<td>• Gemalto brand established as a legitimate global leader in digital security markets.</td>
</tr>
<tr>
<td></td>
<td>• Independent survey shows very high levels of customer confidence in our products; our Government Programs business is particularly highly regarded by customers.</td>
</tr>
</tbody>
</table>
Our vision

Our strategy: extending the boundaries

Having delivered on our Combination ambitions, we announced our 2010-2013 Development Plan in November 2009.

Our mission remains unchanged

To provide trust and convenience to the wireless, digital world.

Our objective

Through revenue growth and margin expansion, our objective is to expand our profit from operations\(^*\) by more than 50% to €300 million in 2013:

\[
\begin{array}{c|c}
\text{Year} & \text{Profit from operations (€m)} \\
\hline
2009 & €183m \\
2013 & \text{Target: €300m} \\
\end{array}
\]

Our strategy

We will achieve our objective by leveraging our core assets to address a larger total market, through five key strategic priorities for profitable growth:

<table>
<thead>
<tr>
<th>Strategic priorities</th>
<th>Commentary</th>
</tr>
</thead>
</table>
| We will actively replicate successful models across geographies. | • Our core markets are far from being saturated.  
• We have brought to market solutions with global appeal. |
| We will capture more value with remote services. | • Gemalto UICC and over-the-air and post-issuance capabilities play an important role in operators’ mobile services strategy. |
| We will speed up commercialization of innovations. | • We will continue to invest in and commercialize new technologies.  
• We will gain access to, and rapidly assimilate, external technologies. |
| We will leverage our unique position to serve customers with converging needs. | • Our technology plays a role in industry convergence. |
| We will leverage our efficient base and expand through bolt-on acquisitions. | • We have established an efficient base with strong cash generation.  
• We will complement our base plan with disciplined bolt-on acquisitions. |

\(^*\) Profit from operations is a non-GAAP measure defined as IFRS operating income adjusted for amortization and depreciation of intangibles resulting from acquisitions, all share-based compensation charges, and restructuring and acquisition-related costs. In 2009, profit from operations differs from the adjusted EBIT by keeping out the equity-based compensation charges (€12m).

Gemalto Investment Conference 2009 presentation slides. Slide 14 sets out the key assumptions and potential growth accelerators underpinning our plan. For full details on the Development Plan please refer to: www.gemalto.com
Our plan

Our plan is about extending the boundaries to enable us to operate in a significantly larger total market.

- We expect each business segment to grow over the period, with a double-digit revenue increase in Security.
- We also expect a double-digit revenue increase in software and services.
- Growth will be generated by:
  - Developments in wireless offers with new devices and remote services
  - Steady worldwide expansion of payment cards
  - Global spread of new government projects and authentication solutions.
- Further margin improvements will be driven by Secure Transactions and Security.
- We plan to continue to generate strong levels of operating cash flows, which we will re-invest to fuel organic growth and fund bolt-on acquisitions. They will also enable us to enhance return to shareholders via a combination of share buy-back and the newly initiated dividend distribution.
- We plan to continue to tightly manage capital employed, with further ambitions to increase our Return on Capital Employed (ROCE).
Our vision

The digital security market

Changes in end-user behavior, new business opportunities, technological advances and new threats to identity and security are driving significant growth in both the variety, scope and value of digital security services.

Over 4.4 billion
SIM/UICC installed base(1)
worlwide end of 2009

(1) SIM: Subscriber Identity Module;
UICC: Universal Integrated Circuit Card

1.9 billion
EMV cards supplied by all providers over three years to 2009
Source: Eurosmart

500 million
Secure eGovernment documents supplied by all providers over three years to 2009

Driving forces

Demographic trends
Society is increasingly populated by digital natives. People born after the late 1980s have grown up with cashless transactions, mobile communications and virtual reality. They are at home in a digital world, sharing information and projecting their identities online.

In fact, for these people – and for many members of older generations who straddle the digital divide – everything is online. They expect a seamless digital experience. They gravitate towards brands and activities that are consistent with, and respect, their digital lives.

Globalization
Rapidly emerging economies offer massive organic growth potential in digital security and identity. Indeed, many parts of the developing world are actually leading in digital innovation, leapfrogging ‘developed’ nations. Adoption of high-speed wireless communications and digital services is a logical choice in large countries where alternative infrastructures are more costly. Many states are moving directly to ePassports. And in parts of Africa, for example, entrepreneurial users of relatively basic technology – such as 2G mobile phones – have created innovative approaches to mobile finance.

Organic growth potential

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Mobile subscribers</th>
<th>Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>307m</td>
<td>282m</td>
<td>92%</td>
</tr>
<tr>
<td>China</td>
<td>1,339m</td>
<td>728m</td>
<td>54%</td>
</tr>
<tr>
<td>India</td>
<td>1,157m</td>
<td>496m</td>
<td>43%</td>
</tr>
<tr>
<td>Brazil</td>
<td>199m</td>
<td>175m</td>
<td>88%</td>
</tr>
</tbody>
</table>

Source: CIA World Factbook 2009; Informa 2009
Technological advances
More than a decade after the mass adoption of the World Wide Web, we are still seeing an explosion of digital services, communities and devices. Technology is allowing a range of services, from banking to media, to converge around each individual’s digital identity rather than a particular device such as an ATM or TV. We want the provision of all those services to be coordinated and seamless.

Developments in Identity and Access Management (IAM) technology also promise to propel growth in this market. And while contactless card systems have proven invaluable in mass transit systems, their application in other smart card arenas is also growing rapidly. As the size of smart card chips shrinks and their power increases, their value grows for businesses, governments and end-users. High-speed mobile data and multi-function smartphones, for example, are creating demand for more advanced SIM cards allowing users secure access to a host of new applications in sensitive areas such as banking and retail.

Market opportunities
These drivers combine to create significant opportunities in the digital security market. For this world to function, individuals must be able to identify themselves, as well as feel that their privacy is protected in an increasingly exposed environment.

That’s why it’s simplest to describe our markets in terms of end-users – our customers’ customers. Their needs and demands create opportunities for us to help our own client businesses grow and add value.

These markets concern far more than just smart cards. The convergence of different technologies, the need for brands to offer their customers a seamless experience and consumer demand for innovative offerings means that ‘digital security’ now encompasses a range of hardware (chips, cards and readers), software (particularly encryption and authentication systems) and services (from personalization of cards to consultancy around secure access).

Increasingly, these markets are also demanding solutions that can be updated and upgraded over time to meet changing consumer needs and security threats.

Wireless activity soars, even in ‘mature’ markets
Voice – US cellphone talk time

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1,500,000</td>
<td>2,200,000</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
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<td>3</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
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</tbody>
</table>

Source: CTIA

Data – US mobile data revenues

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6,000</td>
<td>32,300</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
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<tr>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: CTIA

Multimedia messages

<table>
<thead>
<tr>
<th>Year</th>
<th>Picture and video messages sent in the UK</th>
<th>SMS (text) messages sent in the UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>336m</td>
<td>41,800m</td>
</tr>
<tr>
<td>2008</td>
<td>553m</td>
<td>78,900m</td>
</tr>
</tbody>
</table>

Source: Mobile Data Association Trends Report

Our vision
“Identity theft and fraud via internet transactions will drive adoption of identity assurance and digital security in the coming years. The need for digital security applies across all industries, verticals and regions worldwide.”

IDC ’Event Flash’ September 2009
Our vision • The digital security market

Global smartcard shipments

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009 (est)</td>
<td>5.1bn</td>
</tr>
<tr>
<td>2012 (forecast)</td>
<td>8.8bn</td>
</tr>
</tbody>
</table>


Global IAM market value

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 (actual)</td>
<td>$3.4bn</td>
</tr>
<tr>
<td>2013 (forecast)</td>
<td>$4.8bn</td>
</tr>
</tbody>
</table>


and their contents. The SIM card is the only universal and secured application platform working with 100% of handsets.

Financial services and retail
There are already around 800 million EMV cards – banking cards with a microchip – in circulation. Some of the fastest-developing economies in the world (such as Brazil, South Africa and Turkey) already have EMV in place. But huge potential markets such as China, central and eastern Europe and Latin America remain largely untapped.

And there are signs that US issuers – with a base of more than 700 million credit cards and 460 million debit cards – are being won over by chip payment cards’ anti-fraud and user benefits, especially as internet and mobile banking become the norm. In the UK, for example, banks such as Barclays are supplying customers with plug-in readers to authenticate their EMV cards on their own computers.

In February 2009, American Express became the fourth member of the EMV consortium, massively expanding its reach. And the Single Euro Payments Area (SEPA) initiative in Europe, designed to encourage easier payments within the Eurozone, could also drive higher uptake, even in this more mature market.

Aside from enhanced security, convenience and transaction costs are key drivers for EMV. Contactless cards and faster, more reliable authentication are delivering in-store efficiencies that create real competitive advantage for retailers.

Identity and access management
Cloud computing – data and applications that are accessed via the internet or virtual private networks – is growing rapidly. IDC expects spending on IT cloud services to reach $42 billion in 2012; by then, it will represent 25% of IT spending growth and nearly a third of growth the following year.¹

But freedom of access places a huge additional burden on security. It’s essential to verify the identity of authorized users without hampering the convenience and efficiency of cloud computing.

At the same time, complex software tends to have more security vulnerabilities, not fewer. This is increasing demand for ‘strong’ (two- or even three-factor) authentication. For example, a user might need a password as well as a physical component like a fingerprint; or an ultra-secure one-time password generated by a smart card and reader.

Compliance with data protection regulations (which IDC estimated to be responsible for 75% of maintenance revenues for IAM in 2007) and the principles of good corporate governance are also pushing both private and public sector organizations to invest in access control, encryption and identity management.

800 million EMV cards in circulation in countries such as Brazil, South Africa and Turkey as well as Europe.

Potential markets: China, Central & Eastern Europe, Latin America and US.

Government programs

Governments need systems that offer efficient interactions with their citizens – who in turn demand security and convenience from their authorities. That’s why nations around the world are investing heavily in digital identity systems. More than 100 countries already have an ePassport system in place, including the US, Russia, Japan, Nigeria and all the EU states. ePassports offer compelling benefits including enhanced security and greater convenience for travellers and airlines.

Regulatory pressures – for instance, the visa waiver scheme to gain entry to the US, which now mandates biometric passports – are also driving growth in this market. And because they are accredited for fixed periods, there is predictable churn in ePassports, allowing for digital security enhancements as well as maintenance revenues.

ID card schemes go a stage further: here, every citizen, not just international travellers, needs to carry a smartcard. Many governments and other bodies are already deploying them for access to health and social security services, as drivers’ licenses, for student ID – and, in many cases, combining functions to derive even more efficiency and convenience for users. The potential here is immense. For example, India, with a population of 1.2 billion, has initiated a scheme to provide multipurpose national identity cards (MNIC) to every citizen by 2011.

Outside the use of digital ID cards, government technology investment is moving increasingly online in an attempt to find similar cost and efficiency benefits as the private sector. A White House report in May called for a transformation of federal IT in the US with the widespread adoption of the cloud delivery model, for example. That will further drive the adoption of an integrated digital identity approach. And in November, Ministers from the EU and EFTA approved a declaration recognizing that eGovernment ‘increases efficiency and effectiveness...to constantly improve public services’ and setting priorities to be achieved by 2015.

Convergence

All the driving forces in the digital security market – technology, demographics, globalization – are pushing services and products together. We are already tantalizingly close to a society where a single device, perhaps a smartphone, acts alongside biometrics and passwords as a universal authenticator. This could allow the user to make payments at a retail outlet, confirm a secure online banking transaction, access a healthcare service, gain entry to a public transport system and securely log on to a corporate network from a public computer.

It’s already clear that digital identification is moving away from discrete functions or providers and is now centering on the individual. Consumers demanding mobile banking services, for example, are not interested in whether their bank or their phone provider owns the digital security for their transactions. They simply need it to work.

The opportunity here is for trusted service management that specializes in authentication and digital security to handle identity services for end-users on behalf of their banks, retailers and service providers. Convergence will create both fresh demand for existing digital security offerings – and, crucially, open up brand new markets that offer both businesses and their end-users extremely high utility services.

“The government and identification segment is expected to explode over the near to medium future. The introduction of contactless technology has sparked the convergence of various applications... Having one card for a number of activities is believed to continue to grow, saving issuers’ time and money.”

Frost & Sullivan, World Smart Card Market, December 2008