gemalto
security to be free

Sustainability Report 2016

Trust in a connected world

About
Gemalto

Our approach
to sustainability

Business &
Customers

People

Governance &
Compliance

Society &
Community

Environment

Our
performance

Welcome

...to our eighth Sustainability Report, which mainly relates to our activities in 2016. We hope you find it informative. As part of our commitment to transparency, we are committed to sharing this with you and we look forward to receiving your feedback.

**For more information
visit our website**

www.gemalto.com

How to use this interactive PDF

– Select the navigation tabs at the top of each page to jump to the start of that section
– Select from the contents list or highlighted text throughout the report, to jump to that page or web link

Go to main contents page

About this report

Report scope and profile

This report describes our sustainability performance in the calendar year 2016. It covers all Gemalto's activities and sites including acquisitions closed by December 31 unless otherwise stated. Safety and environmental data don't include Safenet and Trub 2015 acquisitions and supply chain data don't include Trub. You can find details of Gemalto's management structure and countries of operation in our Annual Report 2016.

We report on a yearly basis. You can access reports from previous years at:
www.gemalto.com/companyinfo/sustainability/documents

Change in scope

Social data include the Company Buzzinbees acquired in 2016.

Energy data and emissions reporting

We use an electronic process to gather our data. In the majority of countries, energy usage data is based on invoices from our energy suppliers. In some countries, these bills are based on estimated readings. Where data does not exactly match our reporting period, we forecast this information. For sites where energy invoices are unavailable, we extrapolate this information based on typical site consumption.

Global Compact

We are a long-term signatory of the United Nations Global Compact. This report represents our annual Communication on Progress.

For questions regarding this report contact us at:
http://communication.gemalto.com/sustainability-contact-us/

Report published May 2, 2017

Our sustainability ratings and recognitions

Our customers and investors increasingly wish to assess our CSR maturity through questionnaires and audits. We are proud to share some of the ratings and recognitions achieved in 2016.

Sustainability ratings

Gold rating for CSR performance
In 2016, and for the fourth successive year, we received the Ecovadis Gold CSR rating, scoring 80/100 (versus 70 last year). This placed us within the top 5% best-performing companies assessed by Ecovadis in all categories.

Climate change transparency
Since 2008 we have participated in the annual CDP climate change questionnaire and, in 2016, we achieved a C level which places us ahead of our industry average D level.

Oekom corporate rating
Oekom provides ratings to international institutional investors and financial service companies to inform their investment decisions. From December 2016 our rating was upgraded from C to C+, so we are classified as 'Prime' and we qualify for responsible investment.

Sustainability recognition

We were also recognized in two ways:

Extended CSR Report
In 2016 we received an 'Extended CSR Report' rating by FIRA Platform, an independent third party. FIRA verifies CSR information of companies and institutions and enables CSR dialogue based on reliable information.

Strong ESG practice
Inclusion in the FTSE4Good Index Series which identifies companies demonstrating strong Environmental, Social and Governance (ESG) practices as measured against globally recognized standards.

CEO's message **Providing trust for everyone**

> **"I'm proud to introduce our 2016 sustainability report, my first as CEO. We've established a firm foundation over the years at Gemalto upon which we build our reputation as a trusted and responsible company. It's this trust, and the responsibility we take for our actions, that drives our success and our role in society."**

Philippe Vallée
Chief Executive Officer

A vital building block in our business

We've brought trust to digital services since 2006 and, as the world is getting even more connected, so our responsibility grows. Sustainability is vital to building collaborative and trusting relationships with customers as we work together to deliver shared priorities. It inspires us to create solutions by engaging and innovating together, in turn attracting talented people to our workforce. People who want to make a positive difference and who believe in our purpose and values. Not least, the business and financial benefits of improving our sustainability which are clear as we reduce our environmental impacts – by decreasing raw material and energy use, and their associated costs.

Redefining our commitments

Over the past year, we've re-focused our priorities and approach to ensure we're responding to the most important issues both for society and for our business. We're committed to the UN Global Compact and its ten principles, which shape our reporting and approach. We've also used the outcomes of our last materiality analysis to define 20 sustainability priorities across five domains: business and customers; people; governance and compliance; society and community; and environment. As a result, a number of issues which were already key to Gemalto have been prioritized – namely data privacy, crisis management, investment in R&D, and business resilience. We've developed action plans for improvement across all our priorities and, in 2017, we'll further strengthen certain priorities in line with our next multi-year strategic development plan.

Particular highlights for me over the past year include new measures introduced to ensure even more stringent data privacy standards when we process personal data, as well as simulation exercise training for our crisis management leaders to bolster business resilience. We are challenging and helping our suppliers to improve their sustainability level focusing on risk areas such as the respect of human rights and labor rights throughout our supply chain. And we are also continuing to see positive momentum in terms of gender diversity. For example, membership in our internal women's professional network, Gemalto Connected Women, which builds awareness and shares best practices, almost doubled in 2016.

Cementing our place in society

Looking ahead, I'm committed to continuing the good work that has been done while leading us to further develop Gemalto's positive role in society. We must build trust in digital society, combating cyber-fraud and other challenges to protect people and businesses. As the pace of change increases, we must engage collaboratively with our stakeholders and work closely with our customers to deliver innovative products and services for the future. I believe the more we build together in a sustainable way, the more we'll all benefit.

Finally, I see it as my personal responsibility to ensure we say what we do, and do what we say. This means ranking our priorities and developing and implementing the right tools and programs to deliver them. It means regularly checking our progress and communicating it transparently and honestly to answer people's questions – including customers, investors and employees. I look forward to the challenge.

Phillippe Vallée Chief Executive Officer

Who we are

As the global leader in digital security, Gemalto brings trust to an increasingly connected world.

Our clients are based in over 180 countries – so our global presence is a vital asset. We can share our international experience locally, provide solutions adapted to specific conditions and be on hand to offer a personalized service.

119 nationalities of our employees

30 research and software development centers

3,000+ R&D engineers

112 offices worldwide

48 countries where we are based

180+ countries where our clients are based

19 production facilities

43 personalization and data centers

Key

● Gemalto sites

✳ Head office
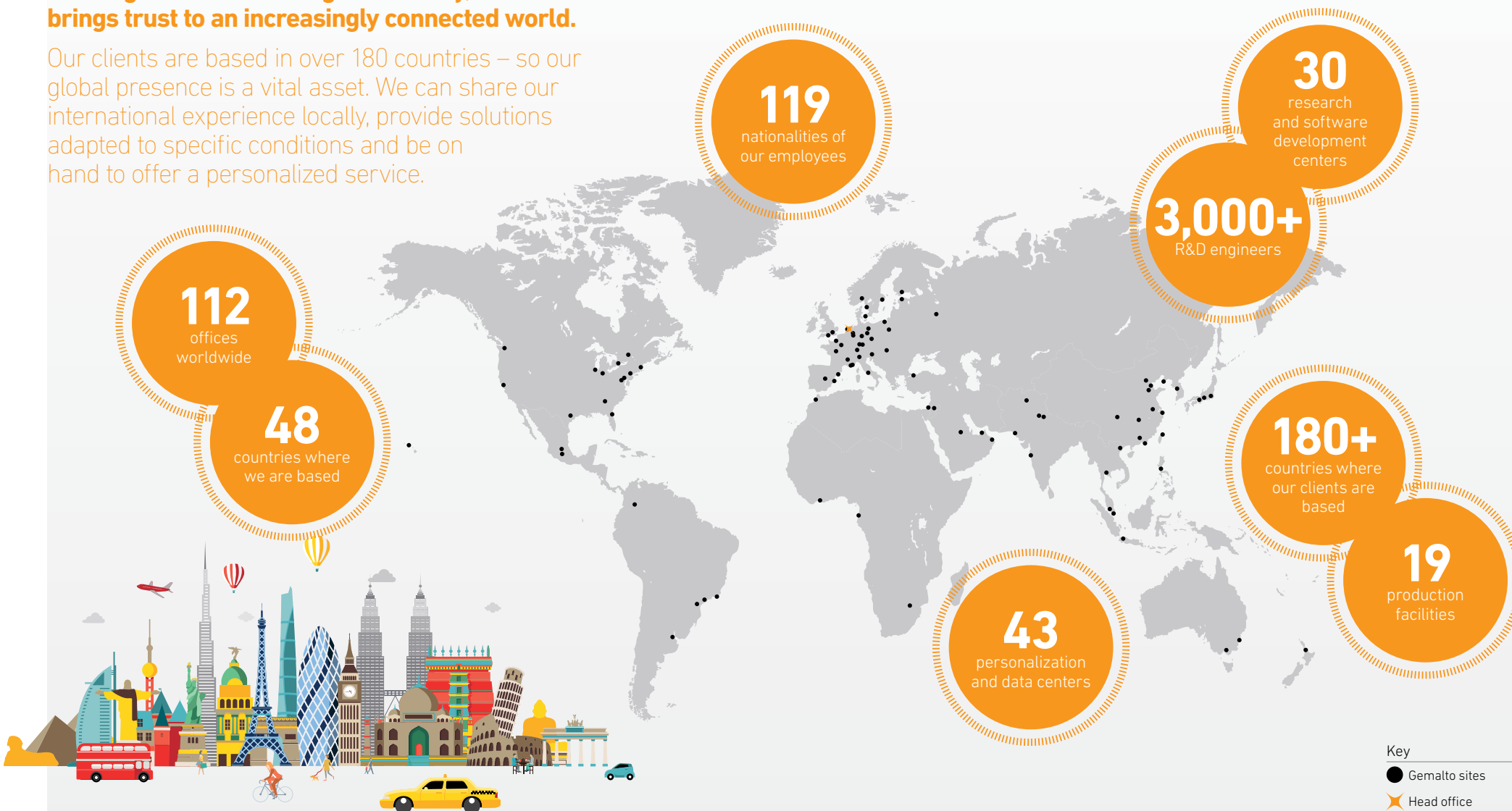
What we do

Our technologies are based on two essential, interlocking processes: authenticating people and things, and protecting data by encrypting it.

Our core technology has evolved over the years to serve new markets with better user experience while maintaining the right level of security.

Our technology...

enables trusted exchanges | develops secure software | delivered as products, software and/or services

Billions of people and things with unique, protected IDs

Businesses and governments with digital assets

Authenticate
We embed secure software in devices and objects to authenticate people and things.

Protect
We run secure software on platforms to protect and encrypt data across networks.

Trusted devices & documents
Embedding secure software in smart devices and identity documents used to identify people and things – e.g. ePassports, Payment Cards, eSIMs etc.

Identity Enrollment & Issuance
Enrolling people & things to schemes and services and issuing strong identities and keys across multiple channels (hardware, devices, mobiles etc.) – e.g. National Identity programs, payment, transport ticketing etc.

Identity Authentication
Hardware and software authenticators that allow access to network resources. Combined with platforms to authenticate them and grant access – e.g. eBanking, eGovernment, Enterprise network services etc.

Data Protection
Encrypting data to ensure privacy, as well as creating value, even in shared environments like the cloud – e.g. Enterprise Security, Inter-bank fund transfers, Software licensing etc.

Powering contactless payment user experience from cards, mobile phones, wearables and more

PASSPORT

Cutting identity fraud by checking whether official ID documents are genuine or fake

Securing access to mobile banking and encrypting trillions of dollars of inter-bank fund transfers

Protecting valuable data for enterprises so that it is unusable in the event of a breach

Reducing digital fraud risk and creating value for shareholders and customers

About Gemalto

Our approach to sustainability

Business & Customers

People

Governance & Compliance

Society & Community

Environment

Our performance

A sustainable business for responsible, long-term growth

Being a leader in digital security, our solutions touch billions of people's lives every day. Ensuring these solutions are sustainable in the way they are made and used, and create maximum value for all our stakeholders, is central to our approach.

Our approach to sustainability

Our material issues

In 2015, we carried out an extensive analysis to identify and re-prioritize the topics that are important to Gemalto and our stakeholders. You can find full details of how we conducted this analysis in our 2015 Sustainability Report.

Key findings included:

– We are well in line with our stakeholders' concerns

– Business ethics and human resources are increasingly important, while environmental issues are perceived to be of lower importance

– Data security and privacy are ranked as the most important of our CSR topics.

The results are shaping how we now organize, report and communicate about sustainability. While all the topics have some importance for Gemalto, we have used our clearer view of what matters most to structure our actions around 20 topic areas. Our 2016 progress and reporting support these 20 priorities (see next page).

For each priority, we monitor related activities, projects and initiatives across our business, and regularly assess results and performance.

Topics grouped by importance rating

Importance to stakeholders — Very high / High / Moderate / Less

Importance to Gemalto
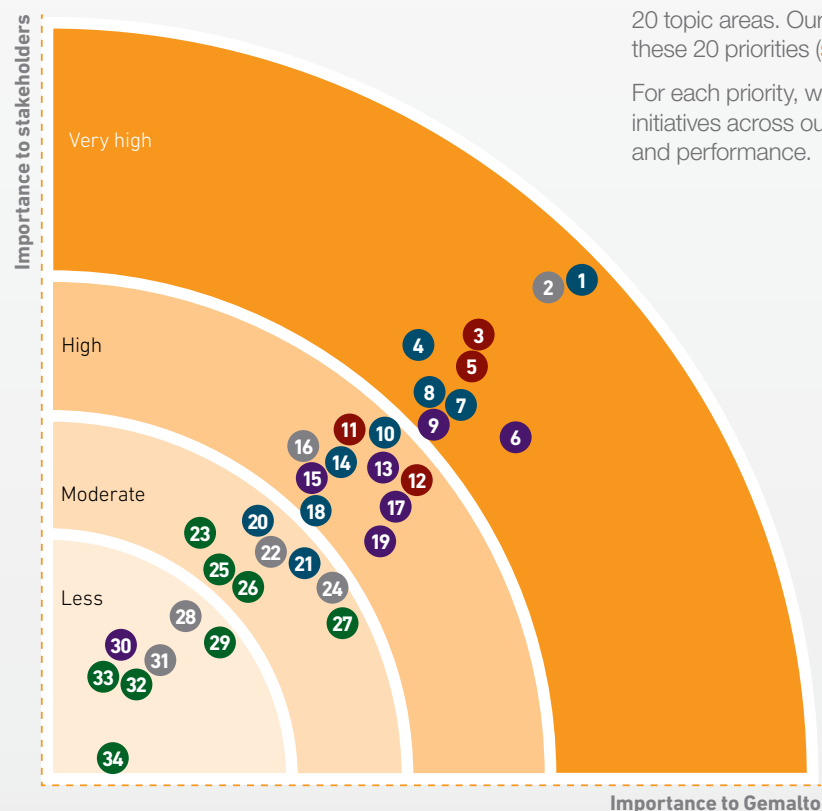
Business & Customers

1 **Data security**
4 **Crisis management**
7 **Investment in R&D**
8 **Business continuity management**
10 Supply chain disruption management
14 Risk assessment, audits and verification of Gemalto's supply chain
18 Environmental and social practices of Gemalto's suppliers
20 Gemalto's practices towards suppliers
21 Tax and other fiscal requirements

People

6 **Attracting talent**
9 **Developing and retaining existing employees**
13 Wellbeing and work-life balance
15 Occupational health and safety at Gemalto
17 Equal opportunity and inclusion
19 Diversity
30 Employee representation

Society & Community

2 **Data privacy and confidentiality**
16 Environmental and social impacts of Gemalto's products and services
22 Engagement and communication with stakeholders
24 Partnerships
28 Environmental and social footprint and labeling
31 Community actions

Environment

23 Green IT and electronic waste
25 Energy and greenhouse gas emissions
26 Resource efficiency
27 Transportation of products
29 Impacts of climate change related regulations
32 Increased extreme weather events affecting Gemalto's operations
33 How Gemalto's operations impact climate change
34 Biodiversity

Governance & Compliance

3 **Changing regulations on data privacy and security**
5 **Anti-bribery, anti-corruption, anti-fraud and ethical behavior**
11 Roles, responsibilities and oversight of Gemalto's Board and Senior Management
12 Compliance with regulations on fair competition and export controls

Select the material topic above to find out more.

Bold denotes Gemalto's most material topics.

Our priorities and performance

Our priorities	2016 Highlights		What's next? (2017 and more)	
Business & Customers – **Data security** – **Developing innovation** – **Crisis and business continuity management** – **Reliable and responsible supply chain**	– Cyber Excellence data protection program: security tools deployed and awareness sessions conducted – Crisis management leaders training: simulation exercises and assessment of Crisis management plan development – All employees from acquired companies joined the Technical Ladder program	– Reviewed key suppliers' business continuity plans (BCP) and further supported 12 of them to build suitable BCPs including action plans where necessary – Implemented a new IT tool to ensure all participants sign our Purchasing CSR Charter for any RFQ – 87% customer satisfaction (annual customer satisfaction survey)	– Sustain resilience of our data protection through *Cyber Excellence Program* – Promote a culture of collaborative approaches and user-centered methodologies to boost innovation – Continue to enhance our business continuity planning with a focus on IT recovery planning	– Deploy a comprehensive risk management process to further improve our supply chain sustainability and communicate vigilance points on purchasing activities – Integrate the Technical Ladder process into the HR information system to enhance access to our experts and related technologies – Introduce an innovative DIY training for local crisis management teams
People – **Talent attraction and employee development** – **Wellbeing and work-life balance** – **Occupational health and safety** – **Equal opportunity, inclusion and diversity**	– Promoted our employee referral program – which represented one quarter of all successful new hires – to attract new talent – Successfully integrated employees from recently-acquired companies – Implemented our well-being and work-life balance program using best practices from our different sites	– Expanded the Gemalto Connected Women mentoring program – Actively participated in several women's networks (i.e. Inter'elles, Professional Women's Network) – 82% employee satisfaction (annual employee satisfaction survey)	– Continue integration of digital learning content using our global Learning Management System – Deploy the new well-being program with a focus on remote working and full support of local initiatives	– Adhere to the United Nations Women's Empowerment Principles (WEP) – Reduce the accident ratio per employee by 10% for 2015-2017 and disseminate a set of safety best practices for managers
Governance & Compliance – **Regulations on data privacy and security** – **Ethical behavior** – **Governance management** – **Control and compliance**	– Implemented technical and organizational measures to ensure that the processing of personal data is performed in compliance with the new EU General Data Protection Regulation – Completed anti-fraud awareness presentations across ten sites	– Held Trade compliance and export control awareness sessions. – 91% positive response by employees to ethics related question in our employee survey	– Manage the deployment of tools, systems and processes already in place to support a holistic approach to the processing and governance of our customers' and employees' personal information – Continue the anti-fraud awareness program on sites	– Monitor the evolution of the whistleblower procedure – Increase development of the Trade compliance champions network and sustain awareness through eLearning
Society & Community – **Data privacy and confidentiality** – **Solutions with social purposes** – **Engagement with stakeholders and promoting partnerships** – **Support for communities**	– More than one billion people worldwide now have access to our Mobile financial services – Funded 54 charitable activities involving 890+ employees	– Shared CSR materiality analysis results with questionnaire participants; organized one-to-one meetings with stakeholders (customers, suppliers, shareholders) to get their feedback	– Focus our 2017 internal Sustainable Development Day on Data Privacy – Strengthen our contribution to improve trust in the digital world – Continue to support Financial Inclusion with our solutions	– Monitor annual stakeholder engagement programs (customer and employee surveys) – Launch Your World 2017, our annual community program
Environment – **Eco-products** – **Energy, Green IT and electronic waste** – **Resource efficiency** – **Greenhouse gas**	– Deployed bio-sourced cards for two new banks – Conducted a Green IT best practices employee awareness campaign – Implemented site-specific actions to reduce energy consumption	– Implemented an HSE structured system across ten sites – Introduced new CSR selection criteria for all freight supplier tenders	– Sustain eco-design: smallest form factors and alternative materials – Prepare a sustainable IT strategy and promote electricity saving practices	– Enlarge the deployment scope of the HSE directive and sustainability reporting tool – Consolidate multiple orders to reduce carbon footprint related to transportation of products by air and truck

Managing sustainability

At Gemalto, sustainability is managed from Boardroom to site level. Everyone, at every level in the organization, plays a part in creating a responsible business.

Our values

Our approach to sustainability builds on our Company core values, which underpin all our activities:

Customers
We put their needs at the center of all we do, develop partnerships and exceed their expectations.

People
We value their diversity, encourage teamwork and conduct ourselves with integrity.

Innovation
We continually develop valuable new ideas and creative approaches to business and technology.

How we manage sustainability, day to day

The Board of Directors
Gemalto's Board is ultimately responsible for our sustainability vision, strategy and performance.

The Sustainability Board
Chaired by our CEO, the Sustainability Board is an annual meeting for Gemalto's Executive Vice-Presidents to review our sustainability strategy, policies and performance and discuss next steps.

The Sustainability Steering committee
The Sustainability Steering committee includes members of the Sustainability Board as well as representatives from key business functions. They work together to identify and implement our sustainability priorities and action plans, and to monitor and assess our performance.

Site managers and corporate departments
Site managers and corporate departments (i.e. Human Resources, Purchasing, etc.) are responsible for implementing relevant sustainability policies and action plans within their areas of the business, and for reporting on their performance at the Group level.

Engaging with our stakeholders

Our stakeholders have their own priorities, concerns and understanding of sustainability. Being transparent about our priorities, performance and management processes helps us to build trust and identify opportunities for improvement.

We regularly engage with a wide range of individual and organizational stakeholders to consult their views, build partnerships and communicate our actions and performance. Here we focus on our key stakeholders – those with the greatest influence on our performance.

Our stakeholders	How we engage with them
Our customers	We are in constant dialog with our customers to identify common interests, meet mutual objectives, understand sustainability requirements and develop solutions. Our annual customer survey, 'Tell Me', gives us a deep understanding of their views on our business (see page 16). We also engage with end-users through our consumer advice website, JustAskGemalto.com.
Our employees	Our annual 'PeopleQuest' survey is designed to track employee satisfaction globally. Our annual Sustainable Development Day enables employees to share and learn about each other's views on cultural, social and environmental issues. Every year, we share the priorities of our HSE and sustainability agenda and invite employee feedback on our Sustainability Report. We also provide a confidential whistleblower hotline to enable them to raise concerns (page 31).
Our suppliers	Our CSR Purchasing Charter explains what we expect of our suppliers and has now been signed by the most important ones. We include discussions on sustainability in our quarterly business review meetings, and carry out supplier audits to get a realistic view of their practices. If needed, we share concerns and explore solutions to address the issues raised (see page 19).
Our investors	We use a wide variety of media to keep in contact with our investors. These include our Annual Report, Sustainability Report, press releases and investor website. We organize events including our Annual General Meeting of shareholders, roadshows, conference calls and face-to-face meetings. These help us understand and take account of their opinions in our policy making.
Our communities	We get involved in many of our local communities through our 'Your World' employee volunteering program (page 39). We also encourage initiatives such as developing alternative ways of commuting to work (e.g. car-pooling and cycle-ways) and promoting sustainability awareness among local organizations and residents. Our recruitment and training programs enable us to engage with communities where we operate.
Our partners	We have a wide variety of partnerships which support our business and CSR objectives, including those with universities, schools, research bodies and industrial organizations. These support our recruitment and strengthen our research and innovation processes (see page 17). We are a member of major federations and consortia in our industry and beyond (e.g. Eurosmart, SIMalliance, etc.).

Building trust through effective crisis management

"Reputation is key when it comes to earning customer and supplier trust. As Operations Director at our Burlington site, I have also been appointed as a Crisis Management Leader, completing a crisis training program in October 2016. Using the fictional scenarios elaborated during this session, I have been able to enhance Gemalto Canada's annual training exercises, ensuring that the local response team is prepared to handle any crisis efficiently and effectively."

Tomas Velaniskis
Operations Director
(Burlington, Canada)

Business & Customers

Introduction

Our approach

We strive to offer secure and innovative solutions that improve people's connected lives. To do this, we're constantly developing our business – working with our customers to meet their evolving needs over the long term. Our relationships are based on trust. We place a high priority on responsible purchasing, effective risk management and ensuring the integrity of our customers' data.

Key figures

Customer satisfaction
87%

Invested in R&D
€249m

Crisis management leaders across the business
140

Main suppliers who have signed our Purchasing CSR Charter
99%

18 supplier CSR audits

What's next?

Sustain resilient data protection through the *Cyber Excellence Program*

Promote a culture of collaborative approaches and user-centered methodologies to boost innovation

Integrate the Technical Ladder process into the HR information system to enhance access to our experts and related technologies

Introduce an innovative DIY (do-it-yourself) training for local crisis management teams

Continue to enhance our business continuity planning with a focus on IT recovery planning

Deploy a comprehensive risk management process to further improve our supply chain sustainability and communicate vigilance points on purchasing activities

Data security

Since 2013, almost 6 billion personal and financial records have been compromised[1]. For most organizations operating in this rapidly evolving environment, breaches are not a matter of 'if' but 'when' and data encryption technology has become a universal necessity.

Our management systems and technologies are constantly reviewed and upgraded to retain their effectiveness against an increasing range of threats.

Our approach to security

Our approach focuses on two main areas: the physical security of our premises and the digital security of our data and information. It encompasses both our own data (relating to our businesses) and our customers' data (relating to services they offer to their end-users).

Security is fundamentally important to our success, and to that of our customers who trust us to manage their sensitive assets with absolute integrity. This responsibility is embedded in our products and solutions and processes and practices. It's well understood and appreciated by our stakeholders that security represents a core value in our offer and that it's a critical success factor for our business.

In this rapidly changing digital world, security risks are never static. We constantly review and upgrade our management systems and technologies to retain their effectiveness against an increasing range of threats. This applies as much to updating our processes as it does to training our personnel. Besides having robust tools and processes in place, the personal behaviors, diligence and vigilance of our employees is of critical importance to data security.

Security and privacy

In this context, 'security' relates to the protection and integrity of data and 'privacy' relates to its use and control. We address the topic of data privacy on page 36 of this report.

Our Security Management System

Gemalto's Security Management System (SMS) is designed to ensure:

– the confidentiality, integrity and availability of data;
– the protection of networks; and
– the physical security of our sites, equipment, transport and personnel.

The SMS is managed and controlled by the Company's governance and management protocols, right up to our Board of Directors. The protocols demand:

– regular Enterprise Risk Assessments (ERA);
– systematic penetration tests and permanent vulnerability scanning;
– frequent internal and external security audits, including our subcontractors; and
– continuous improvement of current practices.

A worldwide network of security officers assures implementation of the SMS. It is supported by corporate and regional security departments and regular employee training.

Ultimately, we deliver security management through our robust system of policies and practices which are regularly tested to address identified risks and ensure we meet regulatory requirements. As a confirmation of our exemplary standards, we're regularly granted security certifications by third parties including ISO 27001, PCI-CP, GSM SAS, etc.

[1] Source: Breach Level Index.

Data security continued

Security focus

Gemalto's Security Management System (SMS) focuses on three key areas:

① Prevention
Preventing **attacks and intrusions** through:

robust policies, processes and tools
e.g. developing sophisticated data encryption and constantly strengthening our network architecture;

appropriate organizational practices
e.g. deployment of security officers, segregation of duties and training of employees.

② Detection
Systems and procedures that enable us to detect an attack very rapidly and therefore limit impact.

③ Reaction
Intervening rapidly and expertly in the event of an incident through:

A global **Computer Security Incident Response Team (CSIRT).**

Robust **crisis management techniques**, broadly deployed through our crisis management framework and tested through regular training.

End-to-end protection
Our goal is to ensure that data sent to us by our clients is never compromised. We work with our clients to manage data in five steps designed to safeguard the data throughout its life-cycle:

1. Reception
2. Processing in our sites
3. Personalization
4. Retention and storage
5. Destruction

Each step is governed by specific security procedures that are identified and agreed with the client.

Acquisitions and security
To support our active policy of acquisitions, we maintain a strong security focus on the training and development of employees of acquired companies. Where they can help us to reinforce our own practices, we integrate acquired companies' technologies and best practices into our business.

Cyber Excellence Program
Our Cyber Excellence Program focuses on customer data protection. In 2016 we deployed several security tools, practices and awareness sessions across departments and locations throughout the Company.

We progressed in further improving the robustness of our IT infrastructure during the year thanks to the implementation of improved detection and reaction systems, as well as the strengthening of existing IT networks.

In 2017 we plan to obtain our Computer Security Incident Response Team (CSIRT) certification and improve our Security Operations Center (SOC).

Our customers and innovation

As one of our three core values, innovation is at the heart of everything we do. Our proactive innovation program continues to deliver award-winning results. We're constantly researching and developing new ideas to deliver better solutions for our customers – through new technologies that enhance people's digital security and have a positive impact on society.

In 2016, we collected feedback from 450 customer accounts, representing the majority of our worldwide revenue. 87% of those interviewed said they were either 'satisfied' or 'very satisfied' with Gemalto. According to Why Consulting, this is a world-class rating.

A relationship based on trust

Our relationship with customers is based on trust. It's essential to everything we do and is central to our future business growth. Our clients know they can trust us to manage their digital data and the personal information of their customers – including subscribers, citizens, bank account holders and employees.

'Tell Me' survey

People's trust in our ability to deliver high-quality products and services is crucial and we work hard to earn and maintain this trust designing our strategy and operations around customer needs and communicating with customers in an open and transparent way.

Every year, we commission a customer listening program, the 'Tell Me' survey. This uses methodology and metrics developed by Why Consulting, an independent third party. Through interviews, customers rate their satisfaction with various aspects of Gemalto's business and provide feedback on their own vision and challenges. The wealth of data we receive helps us to measure our performance and shapes our strategic direction, including our approach to sustainability.

Meeting our customers' needs

In our consumer-driven world, customers rely on high standards of market intelligence and innovation to meet their end-users' evolving needs. Gemalto's innovative research and collaboration service enables its clients to gain the insights they need to ensure their offerings are a success.

Our central market research team examines consumer topics that are of compelling interest to our customers. They focus on both upstream research – providing insights into end-users' specific needs before a product is developed – and research to inform the adaption of existing products and services in response to market demands and behaviors.

In 2016, Gemalto's Ideas Hub, an online community gathering of UK and US consumers, tested new concepts to generate in-depth consumer insights. We engaged members to explore end-users' appetites for a wide range of innovative solutions focused on mobility, security and payment.

In future, we plan to extend the co-creation approach with our B2B customers and will involve them in the evolution of our offer.

Our customers and innovation continued

Enabling our people to generate new ideas

We have over 3,000 engineers working in 30 research and software development centers around the world. Thanks to their expertise and dedication, we submit a large number of patent applications for new innovations every year.

We also support and develop the creativity of Gemalto's entire workforce and fostering innovation is a key element of our Human Resources training and development program (see page 25). All employees are encouraged to submit ideas and suggestions through the Business Innovation Garage (BIG), which provides a structured process to funnel, nurture and retain our people's best ideas. Rather like start-ups going through venture capital selection, hundreds of ideas go through a stringent selection process every year. The best of them become incubation cells for future development. We also organize innovation events – such as Hackathons – to boost creativity and accelerate the development of innovative offers. Since it was launched in 2009, BIG has facilitated the development of several innovative solutions, some of which have gone on to become part of Gemalto's core business stream.

Industry collaboration and co-operation

We collaborate with leading research bodies, universities, NGOs and industry partners through co-operative projects that aim to promote technological innovation and new digital concepts. But developing new technology is only half of the story. We also work with others to create global infrastructure and standardization that ensure our customers' digital solutions work in the field, wherever they operate.

Through a process of open innovation that pools expertise and allows shared learning, we develop solutions that tackle many difficult challenges facing society. The process enables us to share best practices, standardize approaches and leverage funding.

In 2016, we worked on several co-operative projects covering Telecommunications, Machine-to-Machine, Payment systems, Government programs and other areas such as Cloud Security and Wearable computing. About half were funded through international schemes (EUREKA clusters, ECSEL Joint Undertaking and the H2020 Framework Programme of the European Union) and half by national programs. Gemalto's investment in these activities represents a significant focus of our expert community.

One example is the International EUREKA CATRENE H20 project, a Gemalto-led consortium of 16 partners from France, Ireland, Portugal and the Czech Republic whose goal it is to develop a human-centric architecture that puts people in control of the smart objects that surround them or her. One of our aims is to develop modular architecture that will ensure the privacy and security of the rapidly emerging wearable computing and Internet of Things (IoT) markets. The project will investigate 'Human to Object' interactions in different application areas of the IoT domain such as smart buildings, transportation, e-health, e-retail and smart cities. The purpose of this work is to study and implement advanced architecture concepts and technology bricks that are currently missing for the deployment of efficient and secure wearable computing solutions.

In France, we're an active participant in a number of 'Competitiveness clusters'. These bring together businesses, research bodies and educational institutions in a specific region to develop co-operation around a set of shared themes and roadmaps. We're also taking part in several initiatives linked to the French National Government's 'Programme des Investissements d'Avenir (PIA)'. In 2016, we were involved in more than ten innovative projects linked to this program, including homomorphic cryptosystems (a form of encryption), connected car security, the security architecture for 5G Networks, cyber security, energy harvesting for connected devices, and privacy and security protocols. This work will continue throughout 2017.

Open Standards – access for all

Gemalto is committed to making secure web technologies accessible to everyone. We're a member of the World Wide Web Consortium (W3C) and the FIDO Alliance, which aim to make patent-free standards available to all developers of web applications. Our role is to ensure these standards are trusted and secure.

The challenge is to provide solutions that enable developers to meet their very specific security needs, while being flexible enough to operate around the world. In 2016, we continued to support the definition of a 'one-click button' for developers' basic security operations, easy integration of online payment means in W3C, and easy online authentication as part of the FIDO Alliance. We continue to support other open standards projects such as Open Web Application Security (OWASP).

In 2017, we'll maintain our focus on supporting online authentication through W3C and the FIDO Alliance, sharing our know-how with the web community.

3,000+ engineers based in 30 research and software development centers

€249m invested in R&D

Managing our business

We have a core responsibility to our stakeholders – including our customers, their end-users, investors, employees and others – to operate an effective risk management system. This is integral to our service and our culture, and it is fundamental to building trust in our ability to provide secure solutions. We make it a priority to ensure the operational security, integrity and continuity of all our operations around the world.

Risk management

Risk assessment is carried out at Group, business, function, domain and site management levels. We explain our principal risks and mitigation steps on pages 36-38 of our 2016 Annual Report.

We've developed five dedicated risk management processes across the organization:

– budgeting, planning and reporting;

– risk assessment and mitigation;

– crisis and business continuity management;

– fraud risk management; and

– transfer to insurance.

Crisis management and business continuity

We will never control all the risks we face, so we have robust crisis management and business continuity response plans in place to ensure our resilient response to unforeseen events. Our crisis management framework encompasses basic escalation and communication rules, action guidelines and clear roles and responsibilities for managing a crisis.

Gemalto has a worldwide network of close to 140 crisis management leaders who are regularly trained through simulation exercises. In 2016, we continued to update and refine our crisis management framework and improve the Company's preparation level. In particular, the Corporate Risk Management team assessed the maturity of crisis management plans submitted by the crisis management leaders and provided guidelines for improvement.

To enable Gemalto to respond to service-disrupting events and to minimize disruption to our customers, we've embedded a robust business continuity approach which follows a global framework to ensure consistency. We continuously maintain and improve the tools which support this framework.

Governance and oversight of business continuity is the responsibility of the Business Continuity Leadership team who champion the main elements of business continuity planning; such as:

– Suppliers – ensuring continuation of material supply;

– IT infrastructure – identification of critical services;

– Human resources – identification of skills required; and

– Production and delivery activities.

Business Continuity development and progress updates are actively supported by Senior Management teams across all our businesses.

In 2016, we continued to focus on education and awareness across the Company, along with promoting the framework and its associated tools. Purchasing remained a key area of focus (see below 'Supply chain disruption management') and Manufacturing and Information Solutions and Services (ISS) also received specific attention. For Manufacturing, the emphasis was on the formalization of business continuity planning for all manufacturing sites. Low-level simulation exercises were identified as a need/carried out at strategic manufacturing sites. A number of live, planned disaster recovery exercises were undertaken to test and develop the resilience of our ISS infrastructure.

In 2017, we will review and enhance business continuity planning with a focus on IT recovery planning. We will also continue improving the conformity of our Business Continuity and Crisis management plans with their respective frameworks.

Supply chain disruption management

We regularly review our exposure to risks and identify mitigating actions that will secure the resilience of the supply of our key materials and components. To reduce our dependency on any single supplier, we've developed multi-sourcing strategies for all such components and materials, wherever possible, and have built-up safety stocks where necessary. In addition, we undertake detailed reviews and audits of our key suppliers' Business Continuity Plans.

Our supply chain

We work closely with our suppliers to develop a high-quality, reliable supply chain that supports our business objectives and meets our high ethical standards. Everyone at Gemalto who is involved in purchasing follows a well-established social responsibility evaluation process that supports the delivery of purchasing CSR objectives.

18
supplier CSR audits carried out around the world in 2016

Responsible purchasing

Our responsible purchasing policies set out the environmental, social, ethical and supply chain management criteria upon which we base our purchasing decisions. These criteria are derived from UN Global Compact best practices for the electronics industry.

We follow a four-step process:

1. Securing commitment to our Purchasing CSR Charter

99% of our main suppliers (representing more than 80% of Gemalto's spending worldwide) have agreed and signed up to the Gemalto Purchasing CSR Charter. This ensures they understand and adhere to the same values as us.

In 2016, we implemented a new IT tool which makes it mandatory for all suppliers to sign the Purchasing CSR Charter for any Request for Quotation (RFQ). We also updated our CSR charter, committing to source only conflict-free minerals for all products delivered to Gemalto and to ensure suppliers provide basic living needs through fair and reasonable wages without excessive working hours. We include a CSR clause which sets out our expectations and required standards (including ILO convention, Human Rights and UN Global Compact Principles) in all new contracts.

2. Evaluating our main suppliers' CSR maturity

Our CSR risk analysis, delivered by an independent third party, involves supplier self-declaration of social, ethical, environmental and supply chain policies. In 2016, the process covered around 81% of Gemalto's worldwide spending. More than three quarters of suppliers re-evaluated by desktop audit in 2016 improved their CSR score.

3. Developing our suppliers' CSR performance

The CSR performance of our suppliers varies depending on their location, size and organization. Site audits are undertaken by an international third party to help ensure we retain the best suppliers and support them to meet our high CSR standards. In 2016, we carried out 18 audits around the world with a particular focus on subcontractors and sensitive activities.

We aim to work collaboratively with our suppliers, helping them to improve performance through detailed corrective action plans. These are followed up with progress checks and additional site visits whenever required.

4. Training in continuous improvement

We require our suppliers to undertake eLearning sessions to improve their CSR maturity. In 2016, we trained our purchasing corporate team on conflict-free mineral sourcing. We also identified all procurement risks – including those associated with CSR issues – and defined associated best practices to be further deployed in 2017.

Our supply chain continued

Supplier awareness of anti-fraud and anti-corruption

We require all our suppliers to comply in full with anti-fraud and anti-corruption laws around the world, as set out in our CSR Charter, our purchasing General Terms and Conditions, and our CSR clause.

Sourcing minerals

Gemalto is committed to use only conflict-free minerals to manufacture its products. We require the very small number of relevant suppliers to guarantee that the minerals we purchase through them originate from 'conflict-free' sources, based on the Electronic Industry Citizenship Coalition (EICC) definition. All relevant suppliers have confirmed their compliance.

Treating our suppliers fairly

As we encourage our suppliers – and their own suppliers – to integrate our core CSR principles and values into their business practices, it's important we demonstrate similarly ethical standards of behavior ourselves. It all starts with our sourcing process, which ensures calls for tender are based on fair competition rules and the strict application of our Ethical Purchasing Charter. This is followed by a comprehensive Supplier Relationship Management process which begins with regular Management Business and Scoring reviews to identify, address and resolve issues. We then provide suppliers with ongoing support and follow-up to drive continuous improvement that will sustainably enhance their efficiency and provide us with ever better products and services.

According to feedback from our suppliers about our processes and business practices, we're generally considered to be a fair and reasonable partner, while often being more demanding than average about CSR topics.

We require our suppliers to comply in full with anti-fraud and anti-corruption laws around the world, as set out in our CSR Charter.

Ensuring we find and keep the best talent

"**Attracting and retaining talent is key in competitive markets in Asia, like China and others. We need to be agile and creative. In 2016, we deployed several actions to keep our people motivated: a program for managers to develop employee engagement; an event to support internal mobility and share professional opportunities; and a remote working program in Beijing. We also renewed our 'All Stars Plan', a success-sharing and recognition program offering free Gemalto shares to all employees worldwide.**"

People

Lian-Yun Yang
Human Resources Manager
for Greater China & Korea
(Beijing, China)

Introduction

Our approach

Gemalto's success is built on the ingenuity and well-being of its people. The way we manage and develop them is critical to our future growth. We strive for a strong ethical foundation and a culture of innovation, enabling us to attract and retain the most talented recruits.

Key figures

Total employees

15,000+

Proportion of women in our workforce

38%

Satisfaction in our annual employee survey

82%

Percentage of our top 460 managers promoted from within

96.6%

What's next?

Continue to integrate digital learning content using our global Learning Management System

Deploy the new well-being program with a focus on remote working and fully support local initiatives

Reduce the accident ratio per employee by 10% for 2015-2017 and disseminate a set of safety best practices for managers

Adhere to the United Nations Women's Empowerment Principles (WEP)

2,300+
new recruits
in 2016

Our approach to Human Resources

Our approach to managing Human Resources is based on '8 Pillars', which put people at the heart of our business. The '8 Pillars' form the foundation on which everything else is built – serving our employees' needs and supporting our long-term business objectives.

Management by objectives
Every employee meets with their manager annually to assess progress against objectives and set new targets for the year ahead. This annual performance review process supports people throughout their careers and enables us to identify talent and development needs. The data we gain also helps us monitor outcomes that are critical to our business. We continually review the performance management process to ensure goals remain relevant.

Ethics and well-being
The Gemalto Code of Ethics governs all our relationships with clients, suppliers, stakeholders and colleagues (see page 31). Through our community program, 'Your World', we encourage our employees to play an active role in their local community through supporting environmental and humanitarian activities (see page 39). In 2016, we added the aspect of well-being to our Ethics pillar as an essential aspect of employee development and success.

Mobility
To help our future leaders develop the in-depth understanding of the business they need, we provide wide-ranging opportunities for employees to move around within the Company. Schemes like the Young Transfer Program encourage geographical and functional mobility and support our strategy to develop leaders, managers and technical experts in key markets.

Learning
Our learning programs are designed to help people to excel every day and to build successful careers for tomorrow. They provide the knowledge, skills and creativity our employees need to achieve Gemalto's vision and meet their own career aspirations.

Recruitment
We base our recruitment strategy on fair and ethical criteria to identify the best available talent for the Company. In 2016, we reinforced the talent and diversity of our workforce by recruiting employees from 44 different countries.

Compensation and benefits
Our compensation and benefits strategy provides a very precise method for determining how we reward employees. It is benchmarked internally and externally to ensure fairness, transparency, consistency and competitiveness.

Promotion from within
Internal promotion and talent management is fundamental to our sustainable leadership model and long-term development. We believe people who are trained, challenged and in control of their careers are best placed to take us into the future.

Diversity
We depend on a diverse and open-minded workforce to respond to the rapid and complex changes in our customer base, markets and technologies. Our emphasis on diversity gives us a clear competitive advantage by promoting international networks and shared learning, and shaping fair and equal employment practices.

Diversity · Management by objectives · Ethics and well-being · Mobility · Learning · Recruitment · Compensation and benefits · Promotion from within

15,000+ employees in 48 countries

Attracting the best people

Being the leader in digital security – and a business inspired by continuous innovation – we need to hire the best engineers and the most creative people to develop the solutions of tomorrow for our customers.

Global competition in our industry is fierce, so we have developed an ambitious talent acquisition strategy that is closely aligned with our business strategy. In 2016, we recruited over 2,300 people, 44% of whom were women. Our four main focus areas for attracting and developing the best people are:

Refer!
91% of employees who responded to the employee satisfaction survey consider Gemalto a good company to work for, and many are happy to recommend their friends to join us. Our employee referral program, 'Refer!', attracted one out of four new recruits in 2016.

University relations program
Through this program, Gemalto 'ambassadors' work to develop long-term relationships and recruitment initiatives with universities in several different countries.

Social media
We use social media as a global recruitment tool. Our growing online presence is fast becoming a significant channel for recruitment.

Online
We post vacancies and advice on our candidate-friendly careers website – www.gemalto.com/companyinfo/careers

Induction
We make it a priority that everyone who joins Gemalto feels welcomed from day one and is supported to understand the business as they develop into their role. Our comprehensive employee induction program consists of three stages:

Gemalto Newcomer Orientation
The Gemalto Newcomer Orientation is attended by everyone in their first month as an employee. It introduces them to their role, explains how their part of the business operates, and clarifies relevant HR policies and procedures.

Gemalto Connection Program
The two-day Gemalto Connection Program is attended by selected exempt* employees, once they have been with us for between three to six months. It is designed to broaden people's understanding of the business through meeting other employees and Senior Managers from their region.

Gemalto University – Discovery Program
The four-day Gemalto University – Discovery Program brings people together from around the world to build their appreciation of our values and mission, meet our management team and deepen their understanding of our global business in digital security. Our 2016 session, held in New Delhi, India, was attended by 130 participants of 29 nationalities.

91% consider Gemalto a good company to work for

83% employees who responded to the employee satisfaction survey

* Exempt employees
'Exempt' employees are those who, because of their responsibilities and level of authority, are exempt from overtime provisions. As in other organizations, they are expected to work the time needed to accomplish their goals. They are most often found in managerial, supervisory, professional, administrative and other leadership roles.

Non-exempt employees
'Non-exempt' employees are those who, because of the type of duties they perform, their level of authority and method of payment, are subject to overtime provisions. They are therefore paid for all overtime hours worked.

Developing our people

In the rapidly changing digital landscape, we depend on our employees to anticipate the needs of customers and markets, respond quickly to new challenges, and adapt to developments in technology. Investing in their skills and knowledge is one of our most important objectives.

80%
overall employee satisfaction with training

Learning and development programs

We offer a wide range of learning opportunities. The Gemalto University is our global leadership development program, which includes a number of targeted programs:

– Discovery Leadership Program – held every two years for new recruits.

– Emerging Leadership Program – developing a cross-functional, international network of outstanding people with a key focus on digital security.

– Executive Learning Expedition – an opportunity for management teams to learn through benchmarking and best practice sharing from different industries.

In 2016, we launched a new worldwide learning management system, Go-Learning. This highly interactive and user-friendly tool is designed to increase efficiency in our processes and expand the delivery of pertinent and timely content to our employees. The platform will allow us to continue managing our knowledge and expertise with up-to-date information about our products and our offers across our diverse businesses. Whether we're creating and delivering in-house modules for Government Programs, Internet of Things, Enterprise Security or Banking & Payment, our employees will be able to find the learning they need, when they need it.

In 2016, 85% of exempt employees* said that they had the opportunity to learn and grow during the year. Overall satisfaction for training was 80% among all employees. At the end of 2016, 96.6% of our top 460 managers had been promoted from within – reflecting our success in supporting people's mid- to long-term career development.

Developing a culture of innovation

We believe innovation is the key to meeting society's future needs and securing our long-term business success (see page 16). The 'Gemalto Technical Ladder' is designed to provide structured opportunities for our technical experts to develop their international careers across different business groups. Security was a core focus in the Technical Ladder and we deployed high-level extensive training programs in 2016. We also continued to expand our 'innovation cafés' which see experts present their technical work at different Gemalto sites – promoting internal knowledge sharing and encouraging innovation.

* Exempt employees
'Exempt' employees are those who, because of their responsibilities and level of authority, are exempt from overtime provisions. As in other organizations, they are expected to work the time needed to accomplish their goals. They are most often found in managerial, supervisory, professional, administrative and other leadership roles.

Looking after our people

Ensuring we provide a safe environment for all our employees and visitors is vital. Our Human Resources and Health and Safety management systems are designed to reduce risks and ensure continuous improvement. We use OHSAS 18001 certification to gain external assurance of our standards.

7%
reduced accident ratio per employee since 2015

We're exploring the opportunities offered by technology to promote more flexible working options.

Living well – working well

We recently added the notion of well-being to our Ethics pillar, as we believe it plays a critical role in the performance and competitiveness of our business. To support this notion, we implemented various initiatives across our sites in 2016 – from employee yoga in Dubai to working from home opportunities in China and sporting participation in the US.

We've been also exploring the opportunities offered by technology to promote more flexible working options. These include remote working pilots in several countries to enable employees to work from home one day a week. After a one-year pilot in France, the remote working initiative was fully adopted in 2016 following an agreement with staff representatives. Many employees now have the opportunity to work from home for one or two days per week.

Focus on safety

While our operations are relatively low risk, we strive to comply with the highest safety standards and controls. Our safety risks mainly relate to four areas:

– commuting and business travel;

– production equipment;

– ergonomics issues in our production sites and musculoskeletal disorders (MSD); and

– hazardous substances, compounds and chemicals used in production.

Most of our production areas and our two main administrative sites are certified OHSAS 18001, covering 54% of our employees. We challenge our practices and performance through external benchmarking and independent assessment.

Our target for 2015-2017 is to reduce our accident ratio per employee by 10%, compared with the previous three-year period.

In 2016, the accident ratio per employee remained stable.

In 2016, we lost 1,120 working days as a result of injuries. The total number of injuries resulting in at least one day lost increased to 76 – a ratio of 6.8 accidents/1,000 employees.

This was mainly attributed to a greater number of sites reporting incidents as well as same-level falls which resulted in an increased number of sick days.

Commuting and business travel

19% of our total days lost due to injuries in 2016 were associated with commuting, including road accidents. To prevent road accidents, we run a Defensive Driving program to train our business drivers on how to anticipate dangerous situations caused by adverse conditions or other people and reduce the risk of collision.

To ensure the safety and security of our employees while traveling on Company business, we also apply rigorous principles including a travel validation process, pre-trip information and support, and 'security champions' at all our locations.

Ergonomics and musculoskeletal disorders (MSD)

Our main ergonomics risks relate to the movement of materials at our production sites. MSDs are mainly linked to repetitive movements in production areas, and to seating positions in offices. To build understanding and reduce the risks, we run regular awareness and training programs for employees. We also share experience from across the business – including details of accidents, investigations and preventive actions – so that each site can improve its prevention plans.

Managing hazardous substances

We use chemicals such as inks and solvents that can be flammable, irritating or toxic. To reduce the risk of accidents, we communicate with our suppliers and customers and maintain a comprehensive list of reportable substances in our products, based on worldwide regulations and market requirements. As a result of regular employee training, internal procedures and audits, we have not had any chemical-related accidents since 2010. In 2016, we continued our proactive program of identifying and exploring potential alternatives for the most dangerous substances – health or environmental – that are used in our production plants.

Respecting our people

By understanding and respecting our people's values and aspirations, we create a professional environment where everybody thrives. We want Gemalto employees to feel proud to be part of a company that provides more than just a day job.

+40%
increase in membership to Gemalto's Connected Women
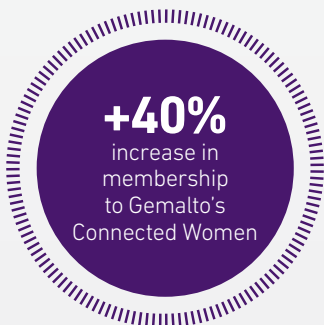
Promoting diversity

With 119 nationalities represented in our workforce, we're proud of our diversity. We recruit employees from a wide range of cultural and educational backgrounds and we always aim to be fair and inclusive in our recruitment and promotion decisions. In 2016, we recruited over 2,300 people of 76 nationalities across 44 countries.

Gemalto is an engineering-based company. It's an industry which has historically tended to attract more men than women. Today, women represent 29% of our exempt employee population. To create more balance, we focus on attracting female candidates (for example by promoting careers in engineering and emphasizing our diversity program) and supporting their development and promotion into Senior Management positions. In 2016, women represented 32% of our new exempt recruits, and 36% of participants in our 'Gemalto University' leadership development program were women. Furthermore, two of our 14 Senior Management team members are women and two of our ten Board members are women.

'Gemalto Connected Women' is our internal professional network which aims to promote gender diversity by building awareness, taking action and sharing best practices among Gemalto's women. The network keeps growing, with more than 1,000 registered members worldwide in 2016, an increase of 40% compared to 2015. There were active networks in 23 Gemalto locations. In 2016, we also launched an internal Gemalto Connected Women mentoring program, beginning with 55 mentor-mentee partnerships.

In France, we signed a second three-year agreement covering the period from 2016-2018 to encourage the employment of people with disabilities. By the end of the first agreement covering 2013-2015, we had increased the employment rate of people with disabilities at our Gemalto France locations from 2.50% to 4.73%.

Employee engagement

Our annual 'People Quest' survey tracks employee satisfaction so that we can continue to meet their high expectations and identify areas for improvement.

In 2016, 83% of employees completed the survey, demonstrating the value people place in its results for improving their working lives and the success of the business. 82% said they were satisfied with Gemalto, equaling our result for 2015.

To gain as much as we can from the survey, we communicate the results by region, site and department – helping to build a deeper understanding of strengths and weaknesses and promoting accountability for action.

Following the 2015 survey, a number of action plans were implemented worldwide in 2016. These included:

– events and conferences around well-being in the workplace;
– collective and team building initiatives to foster collaboration; and
– highlighting key internal mobility to give perspectives for career opportunities.

* Exempt employees
'Exempt' employees are those who, because of their responsibilities and level of authority, are exempt from overtime provisions. As in other organizations, they are expected to work the time needed to accomplish their goals. They are most often found in managerial, supervisory, professional, administrative and other leadership roles.

Minimizing our import and export risks

"Ensuring that legislations and regulations related to our import and export activities are met is vital. The strategic nature of our products — due to their cryptographic functionalities — as well as the volume of countries we serve requires us to carry out regular checks and updates, and to train our employees. In 2016 we created the Gemalto Incoterms policy which sets out guidelines to optimize flows while reducing customs, tax, logistics and insurance risks and maintaining the best level of service."

Governance & Compliance

Nathalie Collignon
Corporate Trade
Compliance Manager
(Meudon, France)

Introduction

Our approach

Our business is built on trust, so it's critical we conduct our activities with honesty and integrity, comply with best practices and meet the highest standards of corporate governance. We have a number of codes and charters which underpin our management practices and professional standards.

Key figures

Positive response by employees to ethics related questions in our employee survey

91%

Percentage of employees covered by ISO 9001 certification

62%

Sites ISO 9001 certified

31

What's next?

Manage the deployment of tools, systems and processes already in place to support a holistic approach to the processing and governance of our customers' and employees' personal information

Continue the anti-fraud awareness program on sites

Monitor the evolution of the whistleblower procedure

Increase development of the Trade Compliance champions network and sustain awareness through eLearning

3,000+
people trained in trade compliance since 2010

Corporate governance

Gemalto is a Dutch company listed on Euronext Amsterdam, our market of reference, and on Euronext Paris.

The Gemalto Board is committed to meeting the highest standards of corporate governance as a central measure to securing our long-term success.

Governance

Our corporate governance structure is based on the requirements of Dutch corporate law, the Dutch Act on Financial Supervision and the Dutch corporate governance rules. The Dutch *Autoriteit Financiële Markten (AFM)* – the Authority for Financial Markets – is our supervising authority. Where applicable, we also follow the regulations of the French *Autorité des Marchés Financiers (AMF)* – the Financial Markets Authority – as well as our own complementary internal procedures.

The Gemalto Board is committed to meeting the highest standards of corporate governance as a central measure to secure our long-term success. The Board has ultimate responsibility for the management, general affairs, direction and performance of the Company. The CEO is responsible for day-to-day management and the Board is accountable to the shareholders. In discharging its role, it is guided by the interests of the Company and its affiliated enterprises, taking into consideration the interests of the Company's stakeholders.

For more information on Gemalto's governance structure see pages 51-57 of our 2016 Annual Report. For more information on how Gemalto manages sustainability of this report.

Internal audit

Our Internal Audit team of ten people is responsible for assessing Gemalto's risk management and internal control systems. Its work conforms to the International Standards for the Professional Practice of Internal Auditing, as published by the Institute of Internal Auditors (IIA), and is certified accordingly. The team has direct and unlimited access to Group operations, documents and employee records. To guarantee his independence, the Internal Audit Director reports directly to the Chief Financial Officer and has an open, independent line of communication to the Chairman of the Audit committee and the CEO. He also holds private sessions with the Audit committee at least annually.

Ethical conduct

Gemalto's Code of Ethics, anti-fraud framework and policy of responsible financial management help to ensure the integrity and sustainability of the Company.

267
key personnel received training on anti-fraud, anti-bribery, anti-trust & ethics in 2016

Our Code of Ethics

The Gemalto Code of Ethics ensures we meet high ethical and professional standards wherever we operate, whether or not they are imposed by law. It guides everything we do and how we work with others and each other. All new employees, including those brought into the Company through acquisitions, are expected to sign the Code of Ethics as part of the induction process. We've also developed additional bespoke Codes of Ethics for specific teams, namely Purchasing and Internal Audit.

Anti-fraud, bribery and corruption

Gemalto's anti-fraud framework is designed to prevent, detect, deter and respond to fraudulent activities. It is overseen by the anti-fraud commission, which comprises six senior managers and is responsible for the continuous assessment of fraud risks and development of anti-fraud policy. Managers must inform the commission of any suspicion of fraud. Additionally, employees are encouraged to use the Gemalto whistleblower hotline to raise any concerns about financial irregularities. In 2016, 19 of our internal audits were focused on fraud risk or were partially motivated by fraud concerns. We trained some 267 key people in anti-fraud, anti-bribery, anti-trust and ethics and some 1,585 employees in CFIUS (Committee on Foreign Investment in the United States) and trade compliance topics.

We extend our anti-fraud focus to relevant third parties. Our Purchasing CSR Charter clearly states obligations relating to identifying, addressing and monitoring corruption concerns or verified practices (). In some locations, we work with agents and other intermediaries who promote our solutions and services. Our Agents Policy categorically prohibits us from dealing with those who have used, or are suspected of using, corrupt practices or behaviors to gain or retain business.

Financial responsibility

Gemalto follows a deep-rooted policy of responsible and sustainable financial management. As well as meeting the expectations of our clients, it's fundamental to the way we run the Company and it ensures our long-term resilience.

As a company with dual listings in Amsterdam and Paris, we comply with relevant market regulations and financial control requirements in both the Netherlands and France. These include a review of our reporting and accounts by our Audit committee and Board, and examination by external independent auditors. Gemalto's Audit committee Chairman is a specialist in audit activities and compliance and, like the other non-executive Board members, is independent.

The Audit committee assists the Board in addressing financial risks, including foreign exchange, interest rate, liquidity and credit risks. Our conservative management approach and metrics are described in the Annual Report.

In 2014, Gemalto shifted its funding policy from a net cash position to a still conservative financial structure after issuing a €400 million seven-year public bond without financial covenants to fund its acquisitions, particularly SafeNet. In 2015, we issued €150 million of US Private Placements with maturities ranging from five to 15 years with sale legal conditions.

Gemalto pays all taxes due in the countries where it operates, based on a transparent transfer pricing policy and an open description of its shareholding organization. Details of this and local compliance measures are provided in the 2016 Annual Report.

Control and compliance

Gemalto is committed to full compliance with international, regional and local customs and trade control laws, regulations and directives wherever it does business.

Trade compliance

We have a dedicated network of 22 Trade Compliance champions who operate under the leadership of the Corporate Trade Compliance Manager. The Trade Compliance department organizes regular local and global training sessions, as well as eLearning modules to improve awareness. We concentrate on training specific employee groups who have contact with external parties such as sales, purchasing, customer service, tender, legal, finance and logistics teams. Since 2010, some 3,000 employees have received training.

Gemalto is aware that, in exceptional and unforeseeable circumstances, its products and solutions could potentially be redirected from their originally intended purpose. We have strict procurement, due diligence and ethics policies and safeguards in place to counter this eventuality. We are also compliant with the international 'Wassenaar Arrangement' relating to 'dual use' goods (defined as items or technologies normally used for civilian purposes but which could theoretically have military applications). Within Gemalto, this applies to products containing specific cryptographic functionalities. Our Trade Compliance department declares all such products to local export control authorities in each country where they are exported and obtains an export license if necessary.

Moreover, official regulations oblige Gemalto to screen the companies and individuals we work with, to ensure they are not listed as a 'denied party' (persons and companies with whom trade is prohibited by law – lists are provided by government agencies) and therefore restricted or prohibited from engaging in transactions. In order to facilitate the necessary verifications, we have introduced an application for screening parties. The interface regroups information provided by several authorities and countries, providing access to the most complete and regularly updated database. Each employee in contact with an external party must consult the tool at each respective step of the transaction or process as the updates are frequent and the regulatory environment changes constantly.

2016 saw the creation of the Gemalto Incoterms policy. It sets clear principles and guidelines for reducing our customs, tax, logistics and insurance risks while optimizing the efficient flow of goods and ensuring the best service levels. The policy has been validated by the top management and sponsored by the CFO. The Authorized Economic Operator ('AEO') certification was also successfully renewed.

RoHS, REACH and WEEE compliance

We continuously work to ensure that our products comply with relevant industry directives and regulations, including:

RoHS (Directive on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment): we use accredited third-party laboratories to provide chemical analysis of our smart card and reader products and we ask suppliers to assess their own compliance.

REACH (Registration, Evaluation, Authorization and restriction of Chemicals): we optimize our processes and tools to improve compliance monitoring, with regulations relating to certain substances identified by the European Chemical Agency (ECHA). Our buyers and Health, Safety and Environment (HSE) managers worldwide have access to our central database.

WEEE (Waste Electrical and Electronic Equipment) regulation: we ensure a robust compliance process by subcontracting the declaration of sold quantities and eco-tax payments to external experts, such as the European Recycling Platform (ERP).

Control and compliance continued

Quality and reliability

To maximize quality for our customers, we create bespoke products tailored to their needs and timescales through a 'make-to-order' process. We source our raw materials according to customer requests and make components based on functional specifications rather than generic characteristics. In 2016, we maintained our focus on the quality, reliability and service of our Government program products.

Our global 'World Class Enterprise' team is dedicated to continuous quality improvement. It comprises some 60 people who have undergone comprehensive training enabling them to anticipate forthcoming standards to ensure Gemalto is always in line with best practice and fully compliant with regulations.

Our annual 'Operations Excellence Award' scheme identifies the best contributions to customer satisfaction, quality, service and cost improvements. In 2016, 45 projects were submitted by teams from over 30 sites. The Gold award winner was a mass card redevelopment and redeployment project for co-branded Payment Cards in the United States, which uses an innovative inkjet personalization process and has an extremely short lead time.

Our focus for 2017 will be on strengthening service level agreements (SLAs), improving the quality of product personalization and developing associated e-services.

Human rights

Gemalto supports and complies with The United Nations Universal Declaration of Human Rights and the International Labor Organization (ILO) standards. As a signatory of the United Nations Global Compact, we benchmark our policies and results against world-class performers and review them annually against the Global Compact's Ten Principles. Our own HR rules usually exceed local rules and regulations, helping to ensure we avoid potential risks wherever we operate.

Data privacy and security regulations

Our annual 'Operations Excellence Award' scheme identifies the best contributions to customer satisfaction, quality, service and cost improvements from across the business.

Managing data privacy

"In using our solutions, our clients often ask us to process large amounts of data relating to their end-users. To comply with the General Data Protection Regulation in the European Union, we implement appropriate technical and organizational measures to ensure personal data processing is performed in accordance with these regulations. Our data privacy by design program, launched in 2016, is founded on the principle of data minimization. This means our products and solutions collect and use only the minimum required amount of data."

Society & Community

Jean-Pierre Mistral
Data Privacy Director
(Austin, USA)

Introduction

Our approach

Our solutions touch billions of people's lives every day, giving them confidence in the solutions offered by their service providers. Since this often involves processing large amounts of personal data, we have highly developed controls to ensure its privacy. Many of our solutions have wider social benefits in areas such as financial inclusion, health, welfare and safety.

Key figures

People reachable through our mobile financial services worldwide

1.05bn

Employee projects funded by our 'Your World' program

54

What's next?

Focus our 2017 internal Sustainable Development Day on data privacy

Strengthen our contribution to improving trust in the digital world

Continue to support financial inclusion with our solutions

Monitor annual stakeholder engagement programs (customer and employee surveys)

Launch 'Your World' 2017, our annual community program

We have demonstrated our commitment to personal data privacy by establishing a global privacy program which uses the GDPR as a standard.

Data privacy and confidentiality

As the world becomes increasingly digital, our opportunities continue to expand. But with them come ever-more complex challenges, such as how to keep personal data private and secure – including when it moves across borders.

We aim for complete transparency in the way we process and manage the data our clients entrust to us.

Data privacy and confidentiality

Data protection is about safeguarding an individual's right to privacy. It is enshrined in international and regional laws and conventions. The ratification of the General Data Protection Regulation (GDPR) by the European Union has significantly impacted the data protection regime, not only in the EU but around the world. In this context, only companies committed to complying with the safeguarding of personal data can legitimize the processing of personal data.

Gemalto and data privacy

In using our solutions, our clients often ask us to process large amounts of data relating to their end-users. To do so, we must first secure our services. This is a vital step in ensuring privacy and is fundamental to all our activities (for more on data security see page 14).

The changing regulatory environment

Data privacy protocols around the world address the control people have over their personal data and the means of protecting it from unwanted or harmful uses – especially unforeseen secondary exploitation such as sales to third parties. While data privacy laws have been enacted in more than 100 countries, we have demonstrated our commitment to personal data privacy by establishing a global privacy program which uses the GDPR as a standard for protecting personal data in all locations around the world.

Data privacy in action

Gemalto has a well-established framework of controls that ensure the privacy and security of the data it holds.

Our Director of Global Data Privacy reports directly to our EVP General Counsel. He is responsible for ensuring Gemalto has adequate institutional knowledge of laws and regulations, for providing training, advising and implementing policies and practices, for strengthening our management of privacy risks and promoting privacy protection.

In complying with the GDPR, we implement appropriate technical and organizational measures to ensure personal data processing is performed in accordance with the regulations. Our data privacy by design program, launched in 2016, applies data minimization as the founding principle. This means our products and solutions collect and use only the minimum required amount of data.

Engaging with our customers

We aim for complete transparency in the way we process and manage the data our clients entrust to us. Given the wide range of demands involved, we believe data privacy is best dealt with on a contract-by-contract basis. We include a data privacy form in all of our customer contracts and data processing terms and security guidelines to provide assurance of how we manage privacy and data protection obligations within the Gemalto corporate group. Furthermore, we include clear information on our website about how we use data from people accessing our online services, and an email address to answer questions: privacy@gemalto.com.

Solutions with a social purpose

Our solutions have diverse social benefits beyond their immediate use. In particular, our technology for the Internet of Things is making waves in many areas, from the home to fleet management. This kind of smart, connected technology can help tackle challenges such as reducing emissions or bringing much-needed connectivity to developing nations.

Energy efficiency

In the next two decades, the world's population is expected to reach 8.7 billion. That's approximately 1.6 billion more people living on our planet than today. It's no surprise that global energy demand is also expected to grow dramatically – increasing by 37% between 2013 and 2035. In a resource-constrained world, the challenge is to improve energy efficiency and reduce GHG (greenhouse gas) emissions, especially in light of the Paris Agreement resulting from the COP 21 negotiations. There's no single solution, but moving towards more renewable energy production, and improving the efficiency of energy distribution networks can make an important contribution. Smart grids help utility companies improve energy efficiency by reducing energy losses and better integrating distributed power generation and renewable supplies. At home, smart meters help consumers track and reduce their consumption and associated costs.

TAURON, one of the largest energy suppliers in Poland, embarked on an ambitious project to rollout 330,000 smart meters and 2,250 industrial grade smart city hubs in Wroclaw. TAURON tapped the expertise of Gemalto, ANDRA (a leading ICT system integrator) and Orange (Poland's leading mobile network operator) to develop a communication infrastructure that seamlessly integrates different communication protocols ranging from cellular to Power Line Communication (PLC). With the sunset of 2G and 3G technologies on the horizon and while 4G rollouts are ongoing, ANDRA relied on Gemalto to deliver an LTE connectivity solution that can provide seamless handoff to 2G and 3G cellular networks where 4G is not yet available.

The solution uses installed smart meters and routers to send real-time power ecosystem data to TAURON's backend, where it is processed and transformed into actionable intelligence. TAURON uses that data to optimize power production, make critical decisions regarding load shifting to efficiently manage the grid. Consumption data is shared with consumers via web portal so they can make informed decisions to improve power consumption. The advanced system provides reliable, high speed IP connectivity that stakeholders can count on for the decade ahead. It greatly improves efficiency across the energy supply chain, from producer to consumer, enabling cost savings, improved energy conservation and ultimately preventing blackouts.

Renewable energy deployment

More than one billion people around the world live without access to electricity. In response, the UN recently launched an initiative to support its Sustainable Development Goal #7: universal access to sustainable energy. In developing countries, it is often too expensive to build the roads, lay the cables and develop the infrastructure needed for traditional power grids. The International Energy Agency says that two-thirds of the population of sub-Saharan Africa lives 'off-the-grid'.

Solarkiosk, a German company, designs and supplies solar-powered energy and retail outlets to off-the-grid communities. In addition to delivering clean energy, the mobile Solarkiosk E-HUBB units provide cellular connectivity, education, healthcare services, clean water and financial inclusion. First launched in 2012, each of the E-HUBBs is powered by at least 2kWp of photovoltaic capacity, enough to charge about 150 mobile phones every day, power small appliances such as laptops and run solar refrigerators containing perishables and medicines. They are equipped with Gemalto's secure Cinterion® wireless connectivity modules, allowing consistent monitoring and reporting on the performance of each unit. By the end of 2016, Solarkiosk operated 150 projects in 11 countries, providing approximately 1.5 million people with energy services. They are deployed where people are most in need such as in remote rural areas in Sub-Saharan Africa as well as in refugee camps in the Middle East[1].

[1] Source: http://solarkiosk.eu/2016/10/solarkiosk-speaks-at-world-energy-council-2016-in-istanbul/

Solutions with a social purpose continued

Road safety

Our road safety solutions include smart card-based technology for the European Digital Tachograph (EDT) – a sophisticated control system that records and monitors commercial driver and vehicle activity such as speed, driving time and breaks. The EDT is mandatory for all new trucks and buses in EU countries. It offers an exceptionally high level of security, making it much harder to commit and conceal fraudulent manipulation of the technology. As the first interoperable cross-border system of its kind, the EDT allows for better enforcement of a range of social legislation, improved road safety, better working conditions for drivers and fair competition between transport companies. Gemalto has contributed to numerous tachograph projects that now extend to 34 different countries.

Other road safety solutions we are part of include eCall, a pan-European service which increases road safety by improving emergency service response times via automatically established, secure two-way links. We also provide secure eDriving licenses. The European Commission makes a strong link between fake driving licenses and an increased risk of road accidents[1]. Our eDriving license is now used in France, India, Australia, Ireland, the Netherlands and Mexico.

Greener and safer driving

Thanks to the Internet of Things (IoT), connected cars and vehicle technology are creating a greener and safer experience for drivers. A successful 2016 pilot program by Gemalto, telematics provider, Lightfoot, and Exeter City in the UK provided drivers with real-time feedback to encourage the greenest, safest and most efficient driving techniques.

The Lightfoot dashboard device connects to the Engine Control Unit (ECU) of the vehicle to continuously monitor engine indicators. The device, which includes a Cinterion wireless module from Gemalto, enabling reliable mobile connectivity and communication, gives drivers real-time information and prompts to improve safe driving habits and engine efficiency, thereby helping to reduce emissions.

[1] http://europa.eu/rapid/press-release_IP-13-25_en.htm

Key results from the trial included:

– Car efficiency increased by approximately 16%, providing an equivalent average savings in fuel consumption and reductions in harmful CO_2 emissions.

– 60% of drivers achieved 'Elite Driver' status every week (up from just 3% previously), which was awarded for hitting target efficiency levels.

– Time spent in the dangerous red zone, where harsh acceleration and risk are at their highest, was reduced by over three quarters.

Health and welfare systems

New solutions are urgently needed to meet the increasing healthcare demands of a growing and aging population. It is predicted that by 2020 there will be one billion people in the world over age 60, and increasing urbanization is leading to scarce healthcare provisions in rural areas.

Telehealth and mHealth solutions are leveraging Machine-to-Machine technology to deliver innovative health services in an efficient, accessible way. For example, by providing real time, remote monitoring for chronic illnesses such as diabetes, sleep apnea or heart disease, mHealth solutions can improve well-being, avoid hospitalization and reach people who live in isolated areas. Gemalto Cinterion technology provides secure cellular connectivity that allows telehealth solutions to automatically send updates to doctors and healthcare providers, while improving communication between patients and their care teams.

Connected wearable devices like smartwatches are also improving the way people monitor health and wellness. For instance, TIM recently launched the Samsung Gear S2 Classic 3G smartwatch to customers in Italy. An integrated Gemalto embedded SIM (eSIM) allows users to instantly connect to the TIM mobile network without being tethered to a smartphone. This means people can track steps, monitor their heart rate or their stopwatch no matter where they roam.

Within the mobile ecosystem, wearables present an exciting opportunity to transform the way we live, driving growth in many different areas, from sports to lifestyle to business. The introduction of the eSIM, enabling On-Demand Connectivity, and untethered connectivity is a game changer supporting the evolution and expansion of the marketplace.

Beyond this, our solutions support eHealthcare programs that provide multiple benefits for governments, patients, health insurers and health professionals. By linking secure personal eID with connected IT systems, eHealthcare programs reduce the heavy administrative burden on public healthcare. They also help to prevent fraud, streamline prescription processes, improve quality of care and simplify record management.

Gemalto currently supports eHealthcare systems in Algeria, Azerbaijan, China, Finland, Gabon, Germany, Mexico, Puerto Rico and Slovenia.

Financial inclusion

Financial inclusion is key to the economic and social development of entire countries. Having a bank account makes it easier for people to save, access cash, pay bills, receive payments and develop a business. It also provides links with vital public and private services such as healthcare.

However, at least 2.5 billion adults globally still do not have bank accounts[2]. For most, formal banking services are not available, affordable or reachable. Many lack the formal identification papers required to open a bank account, some live in rural areas without access to retail banking, and others have too low an income to be serviced by traditional financial institutions. Strikingly though, most unbanked people do have access to a mobile phone which presents a valuable opportunity to address the issue.

Gemalto enables its customers to provide mobile financial services to more than one billion people. Our services are available to consumers using any type of mobile handset across all mobile infrastructures, maximizing reach and engagement.

[2] Source: The Global Findex database.

Working with our communities

We aim to contribute to the communities where we are located. Gemalto and its employees help address local needs and build our reputation as a positive local employer.

Supporting our employees' charitable activities

Launched in 2008, 'Your World' is our annual program of employee involvement in community projects. Employees can apply for 'Your World' funding for humanitarian and environmental projects individually or as part of a team. Applications are assessed by a panel of local managers and employees who look for projects that demonstrate strong personal involvement and, for group projects, team-building benefits.

'Your World' also encourages employees to give their time to the local community through volunteering events and campaigns. Individual Gemalto sites enable employees to support other activities that target local issues by giving time, money or donations in kind.

'Your World' in 2016

In 2016, Gemalto supported 54 diverse projects involving more than 890 employees. These included:

– tree planting in Noida (India);

– running for Breast Cancer awareness in Paris (France);

– painting a new training room for an organization that supports underprivileged families in Cuerrnavaca (Mexico); and

– helping to build a new home for a family in need in Burlington (Canada).

Disaster relief

Gemalto's disaster relief policy guides our response to sudden natural catastrophes such as earthquakes, tsunamis and floods. We respond to these types of disasters by providing technical help and guidance and matching our employees' donations. We only make donations to reputable not-for-profit or non-governmental organizations.

Supporting end-users

As a leader in digital security, we have an important responsibility to help end-users understand the digital world and how they can get the most from the opportunities it offers. We provide advice and practical guidance in all areas of digital security through our consumer advice website – JustAskGemalto.com. Available in three different languages, it provides information on basic consumer issues and answers specific questions posted by users.

890+
employees involved in 54 projects supported by Gemalto in 2016

Supporting green practices to reduce our footprint

"Since implementing our energy efficiency program in Curitiba in 2014, our energy consumption has decreased by 26%. In 2016, we segmented our lighting to allow more individual control, created a shutdown checklist to optimize the use of our infrastructure and ran an employee awareness campaign encouraging people to switch off devices when not in use. We also succeeded in signing a new energy contract that will increase renewable energy in our electricity consumption from 90% to 100%. We are all proud of this here in Brazil!"

Marcelo Schneider
Facilities and Industrial
Maintenance Coordinator
(Curitiba, Brazil)

Environment

Introduction

Our approach

Our goal is to reduce our environmental impact and associated costs, while performing in a way that meets our customers' high expectations. To do that, we focus on three main elements:

– applying eco-design principles in developing our products;

– supporting resource efficiency and environmental protection with our solutions; and

– continuously reducing the environmental impact of our activities.

Key figures

Sites with ISO 14001 certification

24

Water consumption per employee

$19m^3$

Workforce based at sites with ISO 14001 certification

59%

What's next?

Sustain eco-design: smallest form factors and alternative materials

Prepare a sustainable IT strategy and promote electricity-saving practices

Enlarge the deployment scope of the HSE directive and sustainability reporting tool

Consolidate multiple orders to reduce carbon footprint related to transportation of products by air and road

84.5%
valorized waste[1]

[1] See page 44.

Eco-products and solutions

Our strategy is to reduce the environmental impact of our products by applying eco-design principles and using fewer or more sustainable materials. This also answers growing demand from our customers to help them reduce the environmental impact of the products and services they deliver to their end-users.

Life-cycle assessment

We use life-cycle assessment (LCA) and carbon footprint measurement tools to evaluate the environmental impact of our activities and products. This enables us to identify the main sources of impact and define eco-design principles for new products.

Alternative materials: Bio-sourced cards

We're constantly looking for alternative materials to support our solutions. In 2012, we issued the first bio-sourced banking card made from PLA (poly-lactic acid), a corn-derived polymer. In 2014, we issued a dual interface version (contact and contactless). This has a reduced environmental impact compared with traditionally used petroleum-based polymers and offers great potential for further development. In 2016, two additional customers – Bank of Åland and Banco Popular Dominicano – selected our bio-sourced card.

Reduced weight: eco-friendly sim cards, card readers and packaging

For mobile network operators, we offer a range of eco-friendly SIM card bodies. These include half-sized bodies as well as SIMs with no extra card body that can be plugged directly into a handset. They represent 21% of our SIM card sales. We've developed new manufacturing technologies to produce these cards. We've also extended the principle of developing smaller products and using eco-friendly materials to the creation of new lines in card readers and packaging.

Eco-labels, paper

Our main use of paper and cardboard is for office purposes and product packaging. To reduce our environmental impact, we use lighter materials and recycled and eco-labeled products. Our objective is to reduce the weight of paper we use overall by 5% per year. Our main actions include reducing the number of printers, printing on both sides of the paper automatically, and running employee awareness campaigns.

Most of our communications are digital. Where printed documents are necessary, we use recycled paper. Our print-on-demand platform enables employees who need to publish a commercial brochure to order the exact quantity they need, when they need them, avoiding the waste of over-ordering.

For our customers, we've developed a 'PIN by SMS' offer which avoids paper printing and postage and speeds up the service to cardholders by delivering instant access to the PIN code.

21%
eco-friendly SIM card sales

Preserving natural resources

We're always working to minimize the use of resources in our operations, creating efficiencies and generating savings.

We aim to reduce Company-wide energy consumption by 5% year-on-year.

Gemalto continues to deploy its HSE management system at all new sites and maintains ISO 14001 certification for its most important sites. In 2016, 24 sites were ISO 14001 certified and ten others began to implement their HSE management system, achieving a global coverage of 76% of our employees.

Green IT

We work to measure and reduce the environmental impact of IT products and services for both internal and business use. In 2014, we defined Green IT metrics which include electricity consumption, carbon footprint and printed paper usage. These are now measured annually. We also monitor the quality of our employees' computers. As of the end of 2016, 94% of computers had received an eco-label.

Our internal IT organization is continuously enlarging its scope to involve more entities and promote a wider adoption of best practices throughout the Company. In 2016, we organized a new employee awareness campaign to promote best practices in Green IT such as turning off computers overnight, define appropriate printing properties, uninstall unnecessary softwares and using videoconferencing instead of business trips.

Finally, a Green IT clause focusing on effective use of energy and carbon consumption is included in all new procurement contracts associated with external data centers.

Energy

Gemalto's main energy use is to power the air-conditioning and heating installations across our sites and the machinery in our production facilities. We have long prioritized energy reduction, with some of our sites being ISO 14001 certified for a decade. Our target is to achieve a 5% year-on-year energy reduction in ratio Company-wide, and we monitor energy usage in line with our corporate plans. Over the past ten years, our main progress has come through improvements to operational processes. Having introduced many successful measures, it is now becoming increasingly challenging to meet our annual reduction target. In addition, Gemalto's growing commercial success has resulted in increased orders and production, pushing up our overall energy use.

In 2013, we introduced an energy audit program which is supported by external energy efficiency auditors. Sites now benefit from expert insights for improving their energy monitoring and action plans. In 2016, we continued to work on a variety of site-specific actions to reduce energy consumption.

Total energy consumption in 2016 was about 136 GWh across 37 sites (2015: 130 GWh across 29 sites).

Preserving natural resources continued

Water consumption

Our main water use is for sanitary purposes, maintaining green spaces and washing printing frames in some production facilities. Our policy is to reduce Company-wide water consumption by 5% per year in ratio. In 2016, our total water consumption across 34 sites was about 188,000 m^3.

Waste reduction and valorization

We aim to reduce and valorize (through recycling or incineration for energy recovery) our waste. We focus on three key waste streams:

– non-hazardous waste (plastic and module residues containing epoxy and metal);

– standard office waste (paper, print cartridges and toners); and

– hazardous waste (including inks and solvents).

In 2016, we generated about 6,537 tons of waste across 31 sites.

Our objective is to reduce overall waste by 5% in ratio per year and to achieve a 75% valorization rate. As a result of continuous improvement, including separation for recycling of both plastic and lead-frame skeleton waste in our manufacturing processes, our valorization rate is currently 84.5%.

Supporting biodiversity

Although our sector does not have a significant direct impact on biodiversity, many of our sites have implemented actions to preserve nature. At our Paris headquarters, we have installed bees hives on the roof. At most of our sites, green spaces provide habitat for local species and allow rainwater infiltration. Many employees also support voluntary activities that promote biodiversity, for example beach cleaning, tree planting and vegetable gardening ().

Our response to climate change

Our industry has a relatively low impact in terms of carbon emissions. As a result, we're not subject to mandatory climate change regulations other than reporting our greenhouse gas emissions in France. However, we recognize the importance of addressing climate change. We have developed an ambitious voluntary program to measure our footprint and implement carbon reduction activities worldwide.

7.2 million
carbon offset cards sold in 2016
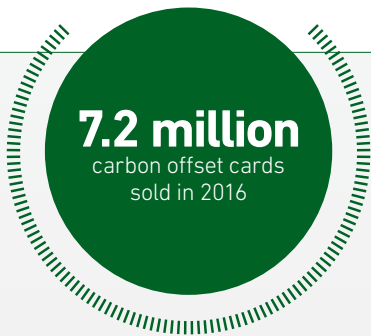
Transportation of products

We've used our carbon measurement tool to calculate CO_2 emissions from freight since 2011. This covers our principal logistics suppliers who transport goods between Gemalto sites and deliver products to our customers.

Our policy is to promote low-emission modes of transport as much as possible, including:

– sea-based freight transportation;

– choosing road over air when appropriate; and

– using consolidated trucks as opposed to dedicated trucks.

In 2016, we introduced a Corporate Social Responsibility (CSR) selection criteria for all freight supplier tenders.

Measuring our global footprint

In 2012, we completed the measurement of our carbon footprint across all our sites. Our total Group-wide footprint was around 700,000 tons of CO_2 equivalent. Our most significant impact comes from raw materials in our production activities which account for over half of our emissions. The manufacturing of microprocessor chips is the single biggest contributor. Beyond this, product freight represents around 12% and business travel and energy consumption each account for around 10% of our total impact.

When calculating our total environmental footprint, we looked at tons of CO_2 for all six greenhouse gases (GHGs), following the French 'Bilan carbone' rules and the guidelines of the Carbon Disclosure Project (CDP). While we do not measure our total global carbon footprint every year, we do measure our scope 1 and 2 emissions and some scope 3 emissions annually (as declared in CDP). In future, we plan to measure all our main sources of emissions annually to improve the monitoring of GHG savings.

Carbon offset

Our global carbon measurement program has been in place since 2006, enabling us to develop a carbon footprint modeling tool for our products. This helps our customers to calculate the CO_2 emissions associated with a product and to identify possible improvements.

Our customers can easily offset the CO_2 emissions associated with a product through our partnerships with CO2Solidaire® and the Carbon Neutral Company®. The latter supports projects that improve living conditions in developing countries, while reducing greenhouse gas emissions. Since its launch in 2009, this offer has allowed us to offset more than 20,000 tons of CO_2 eq (the equivalent of the emissions from powering 10,000 UK homes for a year). In 2016, we sold 7.2 million carbon offset cards.

Carbon reduction actions

Having a clear overview of our carbon footprint has enabled us to tackle our most significant emissions through a range of actions:

– Microprocessor chips: our purchasing teams now request updated information from suppliers on the amount of CO_2 per product.

– Transportation: we include a footprint calculation tool in all standard supplier reports.

– Business travel: we target reductions in professional travel, mainly through promoting IT communication solutions such as instant messaging and video-conferencing.

– Product eco-design: we have provided training to our Research & Development and marketing teams to develop lower impact products.

– Energy consumption: local action plans and our corporate energy audit program help us to identify energy efficiency opportunities.

– Waste and recycling: a range of local actions to reduce waste production and increase valorization (recycling or incineration with energy recovery) of our waste.

– Commuting (travel from home to work): local actions to promote low-carbon modes of transport such as public transit, ride-sharing, cycling, walking and working from home.

Every year, we measure our performance against targeted objectives, evaluate the results and set new action plans.

Our performance

Performance indicators	**47**
Glossary	**51**

Performance indicators

Business and customers

	GRI G4 references	2014	2015	2016
Customer satisfaction				
Customer survey results				
Confidence index (out of 1,000)	G4 – PR5	705	715	706
% of satisfied and very satisfied customers in 'Tell Me' survey	G4 – PR5	84	86	87
Supply chain				
Commitment				
% of suppliers who have signed the Purchasing CSR Charter among key suppliers. These suppliers represent more than 80% of our purchasing spending	G4-EN33 G4-LA15 G4-HR11	100	100	99
CSR on-site audits				
Number of suppliers' initial on-site audits that have been conducted on CSR topics during the year	G4-EN33 G4-LA15 G4-HR11	20	23	9
Number of suppliers' re-audits due to the lack of CSR maturity during their initial audit	G4-EN33 G4-LA15 G4-HR11			9
Number of Zero tolerance items highlighted during CSR audits	G4-EN33 G4-LA15 G4-HR11	0	1	1*
Number of main weaknesses highlighted during CSR audits and addressed with supplier through improvement actions plan	G4-EN33 G4-LA15 G4-HR11	15	39	17

*   Emergency fire exit locked (rapidly resolved).

Business and customers continued

	GRI G4 references	2014	2015	2016
CSR evaluation				
Number of suppliers assessed for CSR performance via an external third party (desktop audit)	G4-EN33 G4-LA15 G4-HR11		277	301
% of purchasing spending done with suppliers assessed for CSR performance via an external third party	G4-EN33 G4-LA15 G4-HR11	69	77	81
Number of suppliers re-evaluated via a desktop audit due to lack of maturity during initial evaluation	G4-EN33 G4-LA15 G4-HR11		45	65
Number of on-site re-audits due to the lack of CSR maturity during initial audit	G4-EN33 G4-LA15 G4-HR11		5	9
Security				
ISO 27001 certification				
Number of certified sites		10	15	14

Note

All measurements are metric.

Performance indicators continued

People

	GRI G4 references	2014	2015	**2016**
Headcount distribution %				
in Asia	G4 – 10	26	27	27
in EMEA	G4 – 10	52	48	49
in America	G4 – 10	22	25	24
Number of different employee's nationalities	G4 – LA12	116	117	119
% of women (worldwide)	G4 – 10	39	38	38
% of employees having permanent contract (worldwide)	G4 – 10	96	96	96
Turnover rate %				
Turnover rate for 'exempt employees' (worldwide)	G4 – LA1	7.7	10.2	10.2
Recruitment and diversity				
Number of people recruited	G4 – LA1	1,837	2,082	2,363
Number of nationalities recruited	G4 – LA12	64	75	76
Recruitment by gender				
Men %	G4 – LA1	61	64	56
Women %	G4 – LA1	39	36	44
% of expatriates within exempt population		4	3.5	3,3
% of exempt employees working outside their country of origin	G4 – LA12	23	18	17

People continued

	GRI G4 references	2014	2015	**2016**
Training				
Training satisfaction (%)		79	80	80
Average hours of training per person trained (worldwide)	G4 – LA9	28	29	24
% of Gemalto employees trained during the year (worldwide)	G4 – LA10	73	71	76
% of employees who received training with CSR content among all those trained during the year	G4 – LA10	14	31	18
Health and safety				
OHSAS 18001 certification				
Number of certified sites	G4 – LA5	18	19	20
% of covered employees	G4 – LA5	62	55	54
Employees' accidents/injuries (2014: 30 sites; 2015: 35 sites; 2016: 43 sites)				
Number of injuries with lost time (LTI) worldwide	G4 – LA6	66	67	76
Number of lost working days (LWD) worldwide	G4 – LA6	731	943	1120
Hazardous substances				
Number of hazardous substances concerned by REACH regulation (at end of year)		161	168	173
Appraisal				
% of exempt employees with annual interviews (worldwide)	G4 – LA11	96	94	95
Employee satisfaction survey %				
Answer rate		83	82	83
Satisfaction rate		82	82	82

Exempt employees
'Exempt' employees are those who, because of their responsibilities and level of authority, are exempt from overtime provisions. As in other organizations, they are expected to work the time needed to accomplish their goals. They are most often found in managerial, supervisory, professional, administrative and other leadership roles.

Non-exempt employees
'Non-exempt' employees are those who, because of the type of duties they perform, their level of authority and method of payment, are subject to overtime provisions. They are therefore paid for all overtime hours worked.

Key

Asia: Asia Pacific.
EMEA: Europe, Middle East and Africa.
Latam: Latin America.
Noram: North America.

Performance indicators continued

Governance and compliance

	GRI G4 references	2014	2015	**2016**
Internal audit				
Internal audits focused on fraud risk or partially motivated by fraud concerns	G4 – 58	17	16	19
Number of significant internal audit missions	G4 – 58	48	41	36
Employee training				
Employees trained in fraud related matters		427	221	241
Employees trained in Code of Ethics, UK Bribery law, etc.			615	1,611
Employees trained in awareness of Contract Basics, Authority Limits, Authorized Signatories and Sexual Harassment			1,016	1,618
Quality				
ISO 9001 certification				
Number of certified sites	G4 – PR4	30	32	31
% of covered employees	G4 – PR4	74	66	62
% of increase/reduction in significant customers' claims compared to previous year	G4 – PR5		+9.7	+12.5

Society and community

	GRI G4 references	2014	2015	**2016**
Consumers				
Social benefits of our products				
Number of people reached by our Mobile Financial services (millions)		999	1,070	1,070
'Your World' corporate funding program				
Number of 'employee-community' projects funded	G4 – SO1	62	73	54
in Asia	G4 – SO1	10	14	10
in EMEA	G4 – SO1	19	24	18
in Latam	G4 – SO1	21	17	20
in Noram	G4 – SO1	12	18	6
Number of Gemalto employees participating in 'Your World' program	G4 – SO1	538	1,326	893
Total amount of social investment (in €)	G4 – SO1	88,823	100,156	92,247

Key

Asia: Asia Pacific.
EMEA: Europe, Middle East and Africa.
Latam: Latin America.
Noram: North America.

Performance indicators continued

Environment

	GRI G4 references	2014	2015	**2016**
ISO 14001 certification				
Number of certified sites	G4 – PR4	24	26	24
% of employees covered (worldwide)	G4 – PR4	70	63	59
Energy (electricity, gas and fuel) consumption (MWh)				
Total consumption (2014: 21 sites; 2015: 29 sites; 2016: 37 sites)	G4 – EN3	118,118	130,325	136,747
Per employee	G4 – EN3	13.06	13.30	13.16
Per million of produced items	G4 – EN3	16.7	17.9	18.1
Waste management (metric tons)				
Total waste generated (2014: 21 sites; 2015: 26 sites; 2016: 31 sites)	G4 – EN23	5,167	6,108	6,537
Valorized waste		4,145	4,930	5,524
Non valorized waste		1,022	1,178	1,013
% of valorized waste (reused or recycled including energy recovery)	G4 – EN23	80	81	84.5
Hazardous waste	G4 – EN25	338	470	299
Non hazardous waste		4,829	5,638	6,237

Environment continued

	GRI G4 references	2014	2015	**2016**
Water consumption (m^3)				
Total consumption (2014: 21 sites; 2015: 27 sites; 2016: 34 sites)	G4 – EN8	145,003	176,726	187,968
Consumption per employee	G4 – EN8	16.03	18.87	19.13
Carbon footprint				
Transport				
Total CO_2 eq tons emissions linked to products transportation (outgoing freight)	G4 – EN30	56,957	54,365	58,103
% of transportation expenses covered by CO_2 reporting	G4 – EN30	50	46	42
Energy (2014: 21 sites; 2015: 29 sites; 2016: 37 sites)				
CO_2 eq emissions, linked to energy consumption (scope 1 & 2) in certified sites (tons CO_2)	G4 – EN15 G4 – EN16	48,627	52,337	57,039
Products				
Number of carbon compensated cards produced (millions)	G4 – EN18	10	9	7.2
Small SIM cards as % of total SIM card sales		14	10	21

Glossary of digital security terms

3G (Third Generation): The broadband telecommunications systems that combine high-speed voice, data and multimedia.

4G: The 4th generation of wireless standards offering a comprehensive, secure all-IP based mobile broadband solution to smartphones, laptop computer wireless modems and other mobile devices.

Authentication: The process or action of verifying the identity of a user or process.

Back-end: Here, describing a remote platform or server that stores and processes data without direct access by the user; whereas 'front-end' refers to an application or interface accessed directly by the user.

Big data: A collection of data sets so large and complex that they are difficult to process with traditional applications.

Biometrics: The science of analyzing physical or behavioral characteristics specific to each individual (e.g. fingerprint, iris, voice, etc.) in order to be able to authenticate their identity.

Cell/cellular: Indicates the way any mobile network covers a geography, by cells, each cell being covered by a tower. A mobile phone keeps hopping on and off each contiguous cell, as it moves.

Client: A software application that runs on a personal device and relies on a server to perform some operations (see 'thin client').

The Cloud/Cloud computing: Computing by using servers, storage and applications that are accessed via the Internet.

Contactless: A device that communicates by means of a radio frequency signal, eliminating the need for physical contact with a reader.

Cryptography: The creation of written or generated codes that allows information to be kept secret.

DDA (Dynamic Data Authentication): An authentication technology that allows banks to approve transactions at the terminal in a highly secure way.

DevOps: This term is a compound of 'software **DEV**elopment' and 'information technology **OP**eration**S**'. It refers to a set of practices that emphasizes the collaboration and communication of both software developers and IT professionals while automating the process of software delivery and infrastructure changes.

DI (Dual-Interface): A device that is both contact and contactless.

Digital signature: An electronic signature created with a public-key algorithm that can be used by the recipient to authenticate the identity of the sender.

eBanking: Accessing banking services via the Internet.

eCommerce: Buying and selling goods and services via the Internet.

eDocument: Any of a range of electronic documents, including electronic ID cards, Drivers' Licenses, Health cards, etc.

eGovernment: The use of digital technologies (often via the Internet) to provide government services. Second generation eGov 2.0 programs aim to increase efficiency, lower costs and reduce bureaucracy.

eID: Personal identification using a variety of devices secured by microprocessors, biometrics and other means.

EMV: The industry standard for international debit/credit cards established by Europay, MasterCard and Visa.

Encryption: The process of encoding messages or information in such a way that only authorized parties can access it.

ePassport: An electronic passport with high security printing, an inlay including an antenna and a microprocessor, and other security features.

eSIM: The embedded SIM (also called eSIM or eUICC) is a new secure element designed to remotely manage multiple mobile network operator subscriptions and be compliant with GSMA specifications.

General Data Protection Regulation (GDPR): Is a regulation by which the European Parliament, the European Council and the European Commission intend to strengthen and unify data protection for individuals within the European Union (EU).

GSM (Global System for Mobile communications): A European standard for digital cellphones that has now been widely adopted throughout the world.

GSMA (GSM Association): The global association for mobile phone operators.

HSM (hardware security module): A physical computing device that safeguards and manages digital keys for strong authentication and provides cryptoprocessing.

Glossary of digital security terms continued

IoT (Internet of Things): The network of connected objects and devices that are embedded with software so they can collect and exchange data.

IP (Internet Protocol): A protocol for communicating data across a network; hence an IP address is a unique computer address using the IP standard.

Keys: In cryptography, a key is a variable value that is applied using an algorithm to a string or block of unencrypted text to produce encrypted text, or to decrypt encrypted text. The length of the key is a factor in considering how difficult it will be to decrypt the text in a given message.

LTE (Long-Term Evolution): The standard in advanced mobile network technology, often referred to as 4G (see above).

M2M (Machine-to-Machine): Technology enabling communication between machines for applications such as smart meters, mobile health solutions, etc.

mBanking (mobile banking): Conducting various banking and financial transactions through a mobile device connected to the Internet.

MFS (Mobile Financial Services): Banking services such as transfer and payment available via a mobile device.

MIM (Machine Identification Module): The equivalent of a SIM with specific features such that it can be used in machines to enable authentication.

MNO (Mobile Network Operator): A company that provides services for mobile phone subscribers.

mPayment (mobile payment): Using a mobile handset to pay for goods and services.

NFC (Near-Field Communication): A wireless technology that enables communication over short distances (e.g. 4cm), typically between a mobile device and a reader.

OEM (Original Equipment Manufacturer): A company that builds products using components from other companies.

OS (Operating System): Software that runs on computers and other smart devices and that manages the way they function.

OTA (Over-The-Air): A method of distributing new software updates to cellphones which are already in use.

PIN (Personal Identification Number): A secret code required to confirm a user's identity.

PKI (Public Key Infrastructure): The software and/or hardware components necessary to enable the effective use of public key encryption technology. Public Key is a system that uses two different keys (public and private) for encrypting and signing data.

Platform: A system's underlying software that enables a service.

Server: A networked computer.

SIM (Subscriber Identity Module): A smart card for GSM systems.

Thin client: A software application designed to be especially small so that the bulk of the data processing occurs on a central server. By contrast, a fat client does as much local processing as possible.

Tokenization: In mobile payment services tokenization consists of replacing card credentials with a token. It is only the token data which is then stored in the mobile device – protecting the real card number from misuse.

TSM (Trusted Service Manager): A third-party enabling mobile operators, mass transit operators, banks and businesses to offer combined services seamlessly and securely.

UICC (Universal Integrated Circuit Card): A high-capacity smart card used in mobile terminals for GSM and UMTS/3G networks.

UMTS (Universal Mobile Telecommunications System): One of the 3G mobile telecommunications technologies which is also being developed into a 4G technology.

USB (Universal Serial Bus): A standard input/output bus that supports very high transmission rates.

VPN (Virtual Private Network): A private network often used within a company or group of companies to communicate confidentially over a public network.

Wearables: The terms 'wearable technology', 'wearable devices', and 'wearables' all refer to electronic technologies or computers that are incorporated into items of clothing and accessories which can comfortably be worn on the body.

Wireless module: An industrial-grade radio chip that enables communication on cellular networks as part of the IoT.

Inspired to know more?

If you'd like to know more, we'd be pleased to hear from you. And with employees of 119 nationalities in 48 countries around the world, we're probably close by and speak your language.

You can find full details at **www.gemalto.com** or on these social networks:

gemalto
security to be free