

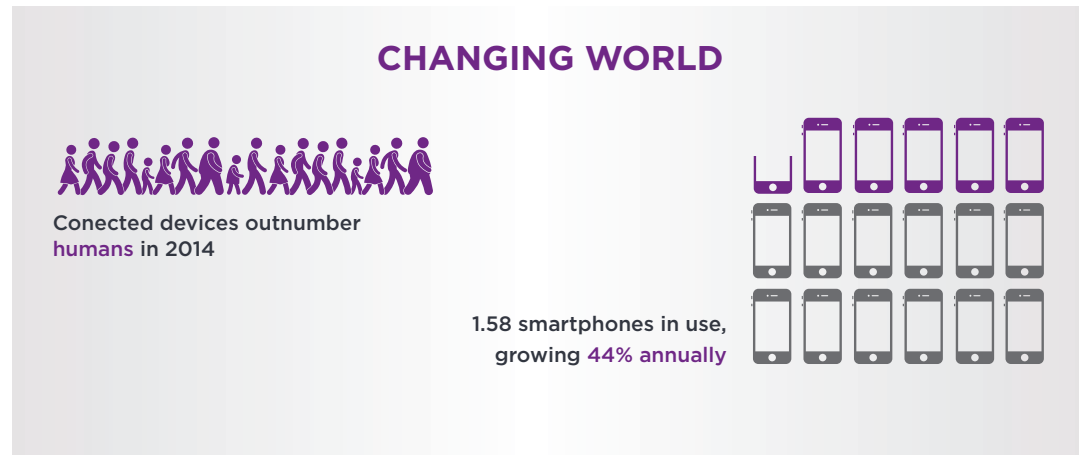


STRENGTHENING TRUST & SECURITY IN A HIGHLY CONNECTED WORLD



INTRODUCTION: THE CHALLENGES OF A CONNECTED WORLD

Connectivity is growing at an exponential rate. Connected devices, which already outnumber human population, will grow to 30 billion by 2017 — including more than 10 billion mobile devices¹ The impact of this proliferation is evident everywhere. It is driving global eCommerce to more than over \$2 trillion², leading a worldwide shift to e-government service delivery, and fueling the growth of a mobile workforce that now includes 1 in 3 employees — nearly 1.3 billion worldwide.³



We now lead lives that are truly connected in every way. As consumers, we increasingly expect *anytime-anywhere* access and personalized service, whether online at home, on-the-go with mobile devices, or in a store or branch location. As citizens, we expect our governments to function with the same connectedness — and offer the same convenience — as our favorite retailers, whether we are traveling across borders or accessing e-government portals. As employees, we take advantage of mobile technologies and applications to access information and collaborate in more productive ways. These shifts have been happening gradually for more than a decade, with many subtle changes in the ways we interact with our world occurring without us hardly realizing. Today, connectivity has reached a critical tipping point, with the changes growing faster and the impacts more critical and more complex.

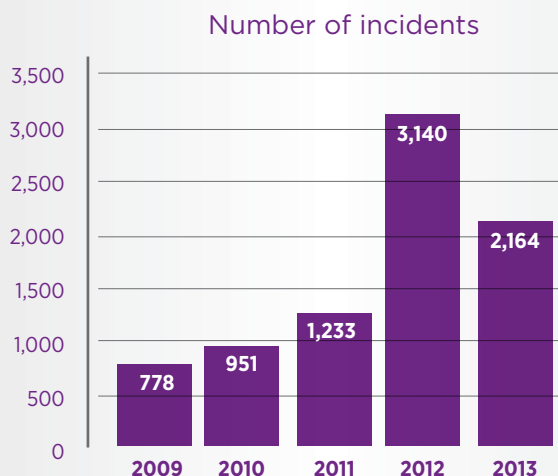
¹ PewResearch

² BigCommerce

³ International Data Corporation

Accelerating connectivity also presents new challenges, as organizations of all kinds strive to provide the convenient access we have come to expect, while ensuring security for sensitive data. Struggling to balance these demands, we see cybercrime increasing 78 percent annually — at great costs to both organizations and the consumers they serve. The average data breach costs an organization almost \$4 million, and the global cost of cybercrime will top \$650 billion by 2017.⁴

Data Breaches on the Rise

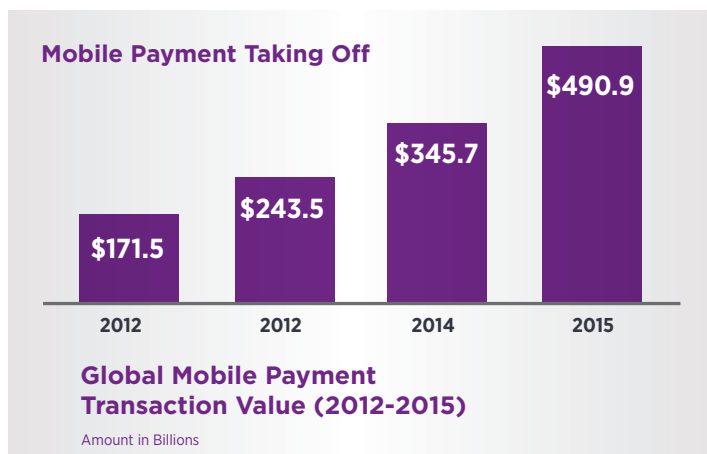


In this evolving environment, combined demand for secure identification of citizens, consumers and employees is expected to grow by 18 percent annually, as organizations in every industry work to develop solutions that maximize convenience and productivity while minimizing risk. These new demands are changing the way we think about security and creating the need for end-to-end secure solutions. Just as the connectivity of our world is transforming the way we live and work, this new understanding of security is impacting the very core of how organizations operate.

⁴ Ponemon Institute

INDUSTRY DYNAMICS: BANKS AND CONSUMERS

Today's consumers expect more speed, more personalization and greater reliability. For those in the financial services and retail industries, delivering an exceptional consumer experience means being flexible enough to meet those high expectations for a diverse consumer base. As organizations work to meet this and other challenges, including the ubiquity of mobile services, the increasing threat of cybercrime and data breaches, and the gradual global shift to EMV "smart" cards, a new set of principles for success are emerging.



Provide a 1:1 Consumer Experience

To gain and retain consumers, organizations must provide a personalized, one-to-one interaction with their brands and services. This means harnessing the immense power and potential of consumer data through effective CRM, loyalty and membership programs. These programs capture valuable consumer data — from basic consumer preferences to detailed, predictive data — to allow retailers to offer customized coupons and rewards, as well as deliver personalized service online, on-the-go and in stores or branches.

Become the Consumer's Advocate

Today's consumers are accustomed to negotiating with service providers to get a good deal — and often just to obtain the basic services they need. Financial institutions and retailers can quickly and clearly differentiate themselves by acting as the consumer's advocate, providing convenience that fits the consumer's life and developing personalized solutions. The recent growth in instant and hybrid (central + instant) card issuance models is one example of consumer advocacy in practice. Whether providing initial card issuance or re-issuance in the event of a lost/stolen/compromised payment or loyalty card, a hybrid issuance model allows consumers to choose the solution that is most convenient for their lives: immediate in-branch issuance or simple and secure home delivery.

The “Omnichannel Experience” brings a consistent, quality experience whether at home, on-the-go or in-branch.

Elevate Trust with Seamless Security

Consumers, merchants and financial institutions are all experiencing more and more data breaches. In particular, one in four consumers received a data breach notification in the last 12 months.⁴ With the growing reality of breaches, 70 percent of consumers are significantly more concerned about security than they were just one year ago.⁵ Financial institutions are elevating security within their brand stories and highlighting end-to-end security features, such as instant issuance and secure card delivery, to take consumer trust to a new level. They are also turning to sophisticated transaction-monitoring services, in an effort to enable consumers to protect themselves and mitigate opportunities for fraud.

Provide Anytime, Anywhere Access

The most obvious way to court today’s “instant society” is to provide *anytime-anywhere* access that allows consumers to transact where they want, when they want and in the way most convenient for their lives. For financial institutions, this means offering convenient issuance of physical cards, a robust online banking platform, and sophisticated mobile banking and mobile payment services. Critically, this entire spectrum of channels must offer the consumer a consistent, quality experience with the brand, creating what Ernst & Young calls the “Omnichannel Experience.”

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⁴ Ponemon Institute

⁵ KRC Research

INDUSTRY DYNAMICS: GOVERNMENT AND CITIZENS

Heightened expectations in the “instant society” have conditioned demanding consumers to expect much more from their governments. Record-high global travel, the increase in usage of e-government portals and other similar trends have led to more frequent citizen-government interactions. The modern citizen expects two key qualities in their increasing interactions with their government: convenient access and a seamless experience.

Convenient Access

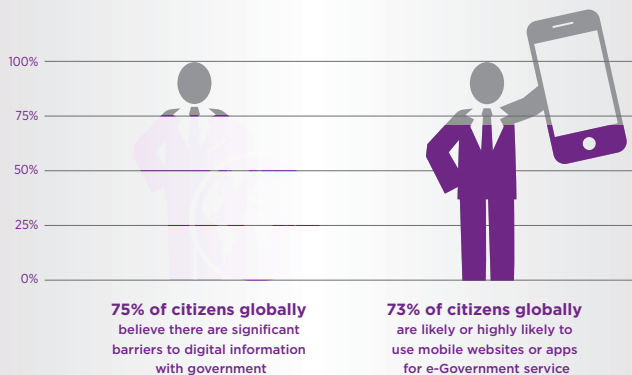
Accustomed to the *anytime-anywhere* access offered by their favorite retailers, citizens expect to access government services in convenient ways that fit their lifestyles. This expectation has driven many governments to shift to online and mobile options for enrollment and delivery of public services, including a dramatic global increase in electronic benefits transfer. Handling of border control is held to the same standard. Traveling for business or pleasure, citizens expect sensible border control operations that allow them to move efficiently and without hassle across borders and around the globe. At the same time, they expect their governments to protect and secure borders to keep them safe.

Seamless Experience

With innovators like Apple, Google and Facebook driving the interconnectedness of personal and social activities, citizens now expect the same seamless experience from their government. That means integrating the enrollment and management of government-issued credentials, such as drivers' licenses, national IDs and passports, as well as a government healthcare system that talks with the social security administration to coordinate seamless benefits delivery.

Governments around the world recognize these challenges, as well as the changes and solutions that must be implemented. But these are high-stakes initiatives — highly visible projects in which leaders stand to gain or lose a great deal, and a government stands to greatly impress or seriously disappoint its citizens. With so much on the line, the challenge is finding a trusted partner to guide the successful implementation of these solutions.

Citizens Want e-Government



INDUSTRY DYNAMICS: THE CONNECTED ENTERPRISE

Mobile technologies greatly simplify and expand the power of everyday tasks — from chatting with friends on the other side of the globe, to ordering groceries, to managing our children’s extracurricular activities. When we commute to the office, we expect that same *anytime-anywhere* access and convenient operation from our devices — and the same intuitiveness and productivity-boosting functionality from our applications.

BYOD, BYOA and Cloud Computing

These trends are leading mobile and non-mobile employees to use their personal connected devices (Bring-Your-Own-Device or BYOD), and driving the popularity of third-party browser-based applications tailored for specific functionalities (Bring-Your-Own-Application or BYOA). Enterprises are also realizing the immense cost savings and enhanced access offered by cloud storage. The increasing connectivity of all devices, applications and processes (termed “The Internet of Everything”) is exponentially increasing the data in need of protection, as well as the risks for costly security breaches. Enterprises are faced with

the difficult task of empowering a connected generation of workers and mitigating the additional vulnerabilities created by BYOD and BYOA environments.

Identity-Centric Security

The enterprise space presents the most diverse set of use cases — spanning a variety of vertical markets and end users — but the common thread is the search of identity-centric solutions that enable convenient and secure access to networks and other valuable resources. However, enterprises must also address the needs of diverse decision-makers and stakeholders. Facility managers and security service providers are focused on badging solutions to control physical access, while CIOs and IT administrators are focused on certificate-based infrastructure solutions to secure device connectivity and user authentication. Searching for a solution that meets these diverse needs, more enterprises are recognizing the value of a single, seamless identity solution, providing end-to-end identity/credentialing that governs both physical and logical access.

The Growing Mobile Workforce

BY 2015



1.3B mobile workers worldwide



Represents 37% of the workforce

EVOLVING TO THRIVE: WHAT ORGANIZATIONS CAN DO NOW

Connectivity trends and the dynamic challenges they present are likely familiar themes for your organization — you likely have efforts underway to address these challenges and prepare for success in this rapidly evolving environment. No matter your organization's unique challenges, here are several key focal points for developing effective solutions:

- **Focus on simplicity:** Across all industries and end users, it is critical to focus on simplicity. Break down the complexities and redundancies of your environment and you discover effective ways to transform the experience for end users.
- **Evaluate legacy card and credential programs:** Examine the overall infrastructure of your secure identity program, as well as the issuance and authentication tools you have in place.
- **Identify specific security needs:** An effective security assessment will likely include processes and technologies for securely identifying people and devices, securing access to mobile or browser-based applications, securing transactions and securing the issuance process for the credentials that govern all of these identity-based efforts.
- **Mitigate risk:** Specifically, minimize any risk associated with safeguarding consumer and citizen information. This will help establish and maintain strong credibility, which is extremely important as you implement an enhanced identity-centric security solution. It also makes your end users more amenable as you remedy inevitable hiccups along the way.
- **Optimize efficiency:** The connected life is an efficient life. Whether you're a consumer, a citizen or an employee, connected technologies are helping us streamline responsibilities — and allowing you to work smarter, not harder. An effective security solution enables the full efficiency-boosting power of these technologies, and allows for the future flexibility to change and adapt as technologies advance and new use cases emerge. Flexible solutions are efficient solutions.
- **Remain relevant:** A solid relevancy strategy consists of two simple parts: Keep a finger on the pulse of today's consumer to understand their evolving expectations. Then develop solutions that fit those changing needs.

In an environment where change is accelerating, it can be daunting to see through the blur to identify a solution. But by staying focused on these key points, you can ensure that the program you develop is positioned to offer valuable outcomes that enhance end-user satisfaction, drive growth and protect your customers' investments — both today and into the future. That's the power of enabling the connected end-user.

ABOUT ENTRUST DATACARD

Consumers, citizens and employees increasingly expect anywhere-anytime experiences — whether they are making purchases, crossing borders, accessing e-gov services or logging onto corporate networks. Entrust Datacard offers the trusted identity and secure transaction technologies that make those experiences reliable and secure. Solutions range from the physical world of financial cards, passports and ID cards to the digital realm of authentication, certificates and secure communications. With more than 2,000 Entrust Datacard colleagues around the world, and a network of strong global partners, the company serves customers in 150 countries worldwide.

For more information, visit www.entrustdatacard.com.